

RE: 400399 Lot 94 MN MiTek USA, Inc. 16023 Swingley Ridge Rd Chesterfield, MO 63017 314-434-1200

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 8.2 Wind Speed: 115 mph Floor Load: N/A psf

This package includes 50 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	I41208980	A1	7/8/2020	27	l41209006	H1	7/8/2020
2	l41208981	A2	7/8/2020	28	141209007	H2	7/8/2020
3	I41208982	A3	7/8/2020	29	l41209008	H3	7/8/2020
4	l41208983	A4	7/8/2020	30	l41209009	J1	7/8/2020
5	l41208984	B1	7/8/2020	31	l41209010	J2	7/8/2020
6	l41208985	B2	7/8/2020	32	l41209011	J3	7/8/2020
7	l41208986	B3	7/8/2020	33	l41209012	J4	7/8/2020
8	l41208987	C1	7/8/2020	34	l41209013	J5	7/8/2020
9	l41208988	C2	7/8/2020	35	l41209014	J7	7/8/2020
10	l41208989	C3	7/8/2020	36	l41209015	J8	7/8/2020
11	l41208990	C4	7/8/2020	37	l41209016	J9	7/8/2020
12	l41208991	C5	7/8/2020	38	l41209017	J10	7/8/2020
13	l41208992	C6	7/8/2020	39	l41209018	J11	7/8/2020
14	l41208993	D1	7/8/2020	40	l41209019	J12	7/8/2020
15	l41208994	D2	7/8/2020	41	l41209020	J13	7/8/2020
16	l41208995	D3	7/8/2020	42	l41209021	J14	7/8/2020
17	l41208996	D4	7/8/2020	43	l41209022	J15	7/8/2020
18	l41208997	D5	7/8/2020	44	l41209023	J16	7/8/2020
19	l41208998	D6	7/8/2020	45	l41209024	J17	7/8/2020
20	l41208999	D7	7/8/2020	46	l41209025	LAY1	7/8/2020
21	141209000	E1	7/8/2020	47	l41209026	LAY2	7/8/2020
22	I41209001	E2	7/8/2020	48	l41209027	LAY3	7/8/2020
23	I41209002	E3	7/8/2020	49	l41209028	LAY4	7/8/2020
24	I41209003	E4	7/8/2020	50	l41209029	LAY5	7/8/2020
25	I41209004	G1	7/8/2020				
26	I41209005	G2	7/8/2020				

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: Liu, Xuegang

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.



Liu, Xuegang



RE: 400399 Lot 94 MN MiTek USA, Inc. 16023 Swingley Ridge Rd Chesterfield, MO 63017 314-434-1200

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1	l41208980	A1	7/8/2020	27	l41209006	H1	7/8/2020
2	l41208981	A2	7/8/2020	28	l41209007	H2	7/8/2020
3	l41208982	A3	7/8/2020	29	l41209008	H3	7/8/2020
4	l41208983	A4	7/8/2020	30	I41209009	J1	7/8/2020
5	l41208984	B1	7/8/2020	31	l41209010	J2	7/8/2020
6	I41208985	B2	7/8/2020	32	l41209011	J3	7/8/2020
7	I41208986	B3	7/8/2020	33	l41209012	J4	7/8/2020
8	I41208987	C1	7/8/2020	34	l41209013	J5	7/8/2020
9	I41208988	C2	7/8/2020	35	l41209014	J7	7/8/2020
10	I41208989	C3	7/8/2020	36	l41209015	J8	7/8/2020
11	I41208990	C4	7/8/2020	37	l41209016	J9	7/8/2020
12	I41208991	C5	7/8/2020	38	l41209017	J10	7/8/2020
13	I41208992	C6	7/8/2020	39	l41209018	J11	7/8/2020
14	I41208993	D1	7/8/2020	40	l41209019	J12	7/8/2020
15	l41208994	D2	7/8/2020	41	l41209020	J13	7/8/2020
16	l41208995	D3	7/8/2020	42	l41209021	J14	7/8/2020
17	l41208996	D4	7/8/2020	43	l41209022	J15	7/8/2020
18	l41208997	D5	7/8/2020	44	l41209023	J16	7/8/2020
19	l41208998	D6	7/8/2020	45	l41209024	J17	7/8/2020
20	l41208999	D7	7/8/2020	46	l41209025	LAY1	7/8/2020
21	141209000	E1	7/8/2020	47	l41209026	LAY2	7/8/2020
22	I41209001	E2	7/8/2020	48	l41209027	LAY3	7/8/2020
23	141209002	E3	7/8/2020	49	l41209028	LAY4	7/8/2020
24	I41209003	E4	7/8/2020	50	l41209029	LAY5	7/8/2020
25	l41209004	G1	7/8/2020				
26	I41209005	G2	7/8/2020				

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: Liu, Xuegang

My license renewal date for the state of Missouri is December 31, 2020. 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.



Liu, Xuegang



Scale = 1:29.9



I	<u>2-0-0 3-10-8</u> 2-0-0 1-10-8	<u>8-0-0</u> 4-1-8	12	<u>2-1-8</u> -1-8	14-0-0	16-0-0				
Plate Offsets (X,Y)	[2:0-3-8,Edge], [2:0-0-7,0-5-2], [2:0-0-4	,0-0-9], [4:0-6-0,0-2-6], [6:	0-6-0,0-2-6], [8:0-0-4,0-0	-9], [8:0-0-7,0-5-2], [8:0-3-8,Edge]					
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 0.71 BC 0.90 WB 0.30 Matrix-S	DEFL. in Vert(LL) -0.18 Vert(CT) -0.32 Horz(CT) 0.19 Wind(LL) 0.15	(loc) l/defl 13 >999 3 13 >587 2 8 n/a 13 >999 2	L/d 360 240 n/a 240	PLATES MT20 Weight: 65 lb	GRIP 197/144 FT = 10%			
LUMBER- TOP CHORD 2x6 SF 4-6: 2x BOT CHORD 2x4 SF WEBS 2x3 SF 15-16, WEDGE Left: 2x3 SPF No.2, Ri	P DSS *Except* 44 SPF No.2 PF No.2 PF No.2 *Except* 10-11: 2x4 SPF No.2 ght: 2x3 SPF No.2		BRACING- TOP CHORD BOT CHORD	Structural wood she except 2-0-0 oc purlins (2- Rigid ceiling directl 8-8-0 oc bracing: 1	eathing directly ap 7-12 max.): 4-6. y applied or 8-6-1 1-12	pplied or 4-6-11	l oc purlins, Except:			
REACTIONS. (size) 2=0-3-8, 8=0-3-8 Max Horz 2=-35(LC 30) Max Uplift 2=-218(LC 4), 8=-218(LC 5) Max Grav 2=1158(LC 1), 8=1158(LC 1)										
FORCES. (lb) - Max. TOP CHORD 2-3=	Comp./Max. Ten All forces 250 (lb) c -689/134, 3-4=-2896/541, 4-5=-3507/67	r less except when shown. 1, 5-6=-3507/671, 6-7=-28	97/540,		Ē					
BOT CHORD 3-15 7-11	=-471/2707, 14-15=-471/2707, 13-14=- =-469/2707	172/2738, 12-13=-470/273	8, 11-12=-469/2707,			NUI	MBER			
WEBS 4-14	=-12/394, 4-13=-155/863, 5-13=-373/17	9, 6-13=-155/863, 6-12=-1	3/394			O. E-2	29713			
NOTES- 1) Unbalanced roof live 2) Wind: ASCE 7-16; \ MWFRS (envelope) artin DOL 4.00	e loads have been considered for this d /ult=115mph (3-second gust) Vasd=91 gable end zone; cantilever left and righ	esign. nph; TCDL=6.0psf; BCDL= t exposed ; end vertical lef	6.0psf; h=25ft; Cat. II; E t and right exposed; Lun	xp C; Enclosed; nber DOL=1.60 plate		ESS/ON	VALENGIN			
 3) Provide adequate d 4) This truss has been 5) * This truss has bee will fit between the t 	rainage to prevent water ponding. designed for a 10.0 psf bottom chord li in designed for a live load of 20.0psf on pottom chord and any other members.	ve load nonconcurrent with the bottom chord in all are	any other live loads. as where a rectangle 3-6	6-0 tall by 2-0-0 wide	1	NIN XUE	ANG LIU			
6) Provide mechanical joint 8.7) This truss is designed	connection (by others) of truss to bear	ng plate capable of withsta	nding 218 lb uplift at join	it 2 and 218 lb uplift : 02.10.2 and	at	10	198			
 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. B) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord. B) Graphical purlin representation device(s) shall be provided sufficient to support concentrated load(s) 78 lb down and 62 lb up at 3-10-8, 84 lb down and 62 lb up at 10-0-12, and 78 lb down and 62 lb up at 12-1-8 on top chord, and 225 lb down and 71 lb up at 12-0-12 on bottom chord. The design/selection of such connection 										
10) In the LOAD CASE	E(S) section, loads applied to the face c	f the truss are noted as fro	nt (F) or back (B).				May 6,2020			
Continued on page 2	dord						• - •			
WARNING - Verify Design valid for use of a truss system. Befor building design. Brac is always required for fabrication, storage, of Safety Information	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 <u>ANSI/TPH Quality Criteria, DSB-89 and BCSI Building Component</u> Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldoff, MD 20601 16023 Walde from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldoff, MD 20601									

Job		Truss	Truss Type	Qty	Ply	Lot 94 MN
						141208980
400399		A1	HIP GIRDER	1	1	
						Job Reference (optional)
Wheeler Lumber	, Wave	erly, KS 66871			3.240 s Ma	r 9 2020 MiTek Industries, Inc. Tue May 5 16:20:19 2020 Page 2
ID:Lek3CAANj_gYbKvtCQHtmQzKvNM-J6tKhwiBR9XflaKEGUSN5e0YTcqLOm\						

LOAD CASE(S) Standard

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

Uniform Loads (plf) Vert: 1-4=-70, 4-6=-70, 6-9=-70, 2-16=-20, 11-15=-20, 8-10=-20 Concentrated Loads (lb)

Vert: 4=-42(F) 6=-42(F) 14=-225(F) 13=-34(F) 5=-42(F) 12=-225(F) 17=-42(F) 18=-42(F) 19=-34(F) 20=-34(F)





L	2-0-0 5-10-8		10-1-8	14-0-0	16-0-0						
Plate Offsets (X,Y)	[2:0-0-8,0-1-4], [3:0-4-15,0-1-9], [6:0-4-1	5,0-1-9], [7:0-0-8,0-1-4], [,0-1-4]	2-0-0						
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 0.34 BC 0.72 WB 0.09 Matrix-S	DEFL. in Vert(LL) -0.09 Vert(CT) -0.17 Horz(CT) 0.17 Wind(LL) 0.07	(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: 54 lb FT = 10%						
LUMBER- TOP CHORD 2x4 SP 4-5: 2x BOT CHORD 2x4 SP WEBS 2x3 SP 14-15,1 WEDGE Left: 2x4 SP No.3, Righ	UMBER- OP CHORD 2x4 SPF 2400F 2.0E *Except* 4-5: 2x4 SPF No.2 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (5-1-5 max.): 4-5. IOT CHORD 2x4 SPF No.2 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing. Except: 10-0-0 oc bracing: 11-12 VEDGE VEDGE										
REACTIONS. (size) 16=0-3-8, 9=0-3-8 Max Horz 16=-32(LC 13) Max Uplift 16=-95(LC 8), 9=-95(LC 9) Max Grav 16=779(LC 1), 9=779(LC 1)											
FORCES. (lb) - Max. TOP CHORD 2-3=- 2-16= BOT CHORD 3-14=	FORCES. (lb) - Max. Comp./Max. Ten All forces 250 (lb) or less except when shown. TOP CHORD 2-3=-260/56, 3-4=-1415/147, 4-5=-1265/160, 5-6=-1415/148, 6-7=-260/45, 2-16=-785/118, 7-9=-785/113 POT CHORD 2-4=-745/118, 7-9=-785/113 POT CHORD 2-4=-74/271, 42.42, 75/(1274, 4.24)										
 NUMBER E-29713 Whokan a contract the first the first the first the first term of term of first t											

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



MiTek 16023 Swingley Ridge Rd Chesterfield, MO 63017



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May 6,2020







Plate Offse	ts (X,Y)	[2:0-0-10,0-1-4], [18:0-0-0),0-1-4]										
LOADING TCLL TCDL BCLL BCDL	(psf) 25.0 10.0 0.0 * 10.0	SPACING- Plate Grip DOL Lumber DOL Rep Stress Incr Code IRC2018/TP	2-0-0 1.15 1.15 YES 12014	CSI. TC BC WB Matrix	0.12 0.07 0.05 x-S	DEFL. Vert(LL) Vert(CT) Horz(CT)	in -0.00 -0.00 0.00	(loc) 1 1 10	l/defl n/r n/r n/a	L/d 120 120 n/a	PLATES MT20 Weight: 67 lb	GRIP 197/144 FT = 10%	
LUMBER- BRACING- TOP CHORD 2x4 SPF No.2 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins,													

 BOT CHORD
 2x4 SPF No.2
 except end verticals.

 WEBS
 2x3 SPF No.2
 BOT CHORD
 Rigid ceiling directly applied or 10-0-0 oc bracing.

 OTHERS
 2x4 SPF No.2
 BOT CHORD
 Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. All bearings 17-10-8.

(lb) - Max Horz 18=-78(LC 13)

Max Uplift All uplift 100 lb or less at joint(s) 18, 10, 15, 16, 17, 13, 12, 11

Max Grav All reactions 250 lb or less at joint(s) 18, 10, 14, 15, 16, 17, 13, 12 except 11=310(LC 22)

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

4) All plates are 2x4 MT20 unless otherwise indicated.

5) Gable requires continuous bottom chord bearing.

6) Gable studs spaced at 2-0-0 oc.

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

8) * 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.9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 18, 10, 15, 16, 17, 13, 12, 11.

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



16023 Swingley Ridge Rd Chesterfield, MO 63017



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

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



16023 Swingley Ridge Rd Chesterfield, MO 63017







Job	Truss	Truss Type	Qty	Ply	Lot 94 MN				
					141208987				
400399	C1	GABLE	1	1					
					Job Reference (optional)				
Wheeler Lumber, Way	erly, KS 66871		8	8.240 s Ma	r 9 2020 MiTek Industries, Inc. Tue May 5 16:20:27 2020 Page 2				
		ID:VxWg?v	ID:VxWg?wA2R3MakUkj2l0tcxyD2rv-4eMLMgoCYcYWGpxmkAcFQKL_jrhWGF7LAkagBwzJVD ^v						

NOTES-

9) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 21.

10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 21, 31, 33, 34, 35, 36, 37, 38, 29 except (jt=lb) 40=486, 30=144, 39=150.

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.

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









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 and properly incorporate this design into the overall 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/TPI Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

16023 Swingley Ridge Rd Chesterfield, MO 63017

MiTek



ARXING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MILEX REFERENCE PAGE MIL-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

Mitek[®] 16023 Swingley Ridge Rd Chesterfield, MO 63017







fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TP11 Qu Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

16023 Swingley Ridge Rd Chesterfield, MO 63017



16023 Swingley Ridge Rd Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 94 MN
					141208993
400399	D1	Roof Special Girder	1	1	
					Job Reference (optional)
Wheeler Lumber,	Waverly, KS 66871			8.240 s Ma	ar 9 2020 MiTek Industries, Inc. Tue May 5 16:20:37 2020 Page 2

ID:VxWg?wA2R3MakUkj2l0tcxyD2rv-oZy7S4wUChp5TLiiKGnbqRleYtzPck?pTI?CXLzJVDO

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, 4-6=-70, 6-9=-70, 9-10=-70, 11-21=-20 Concentrated Loads (Ib)

Vert: 22=-229(F)





	10 200 0101	001		001	000	000				
Plate Offsets (X,Y)	[3:0-5-0,0-2-8], [12:Edge,0-6-13], [12:0-2	2-12,0-0-0], [13:0-2-8,0-2-8],	[20:Edge,0-6-13]	, [20:0-2-12	,0-0-0]					
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 0.94 BC 0.71 WB 0.70 Matrix-S	DEFL. Vert(LL) -C Vert(CT) -C Horz(CT) C Wind(LL) C	in (loc) 0.25 18-19 0.48 18-19 0.10 12 0.13 18	l/defl L/d >999 360 >910 240 n/a n/a >999 240	PLATES MT20 Weight: 150 lb	GRIP 197/144 FT = 10%			
LUMBER- TOP CHORD 2x4 SP BOT CHORD 2x4 SP 15-17: WEBS 2x3 SP 2-20,10	F No.2 F 2100F 1.8E *Except* 2x4 SPF No.2 F No.2 *Except*)-12: 2x6 SPF No.2	i	BRACING- TOP CHORD BOT CHORD WEBS	Structu 2-0-0 c Rigid c 1 Row	ural wood sheathing oc purlins (3-7-11 m eiling directly appli at midpt	g directly applied, except nax.): 3-4. ied or 10-0-0 oc bracing. 4-18, 5-16, 7-16	end verticals, and			
REACTIONS. (size) 20=0-3-8, 12=0-3-8 Max Horz 20=-143(LC 6) Max Uplift 20=-240(LC 8), 12=-223(LC 9) Max Grav 20=1789(LC 2), 12=1792(LC 2)										
FORCES. (lb) - Max. TOP CHORD 2-3=- 7-9=-	Comp./Max. Ten All forces 250 (lb) or 2756/316, 3-4=-2435/314, 4-5=-2780/33 2548/308, 9-10=-2788/316, 2-20=-1722/	less except when shown. 7, 5-6=-2023/299, 6-7=-2019 251, 10-12=-1688/248	9/312,			S XUE	GANG			
BOT CHORD 19-20 12-1)=-243/457, 18-19=-478/3198, 16-18=-20 3=-93/448	62/2419, 14-16=-101/2217, 1	13-14=-208/2425,			=*	LIU *=			
WEBS 3-19=-75/1096, 4-19=-1376/224, 4-18=-844/234, 5-18=0/636, 5-16=-994/268, 6-16=-155/1426, 7-16=-725/234, 7-14=0/388, 9-14=-296/138, 2-19=-109/2042, 10-13=-116/1992										
NOTES- 1) Unbalanced roof live 2) Wind: ASCE 7-16; V MWFRS (envelope) grip DOL=1.60	e loads have been considered for this de ult=115mph (3-second gust) Vasd=91m gable end zone; cantilever left and right	sign. sh; TCDL=6.0psf; BCDL=6.0 exposed ; end vertical left ar	Dpsf; h=25ft; Cat. I nd right exposed;	ll; Exp C; Er Lumber DO	nclosed; L=1.60 plate	11,855101	VAL ENGINI			

- 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) 20=240, 12=223.
- 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.







 12-13=-90/421

 WEBS
 3-19=-21/981, 4-19=-1036/120, 4-18=-642/172, 5-18=-31/654, 5-16=-954/263, 6-16=-144/1414, 7-16=-719/235, 7-14=0/383, 9-14=-299/138, 2-19=-22/1822, 10-13=-118/2022

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) 20=240, 12=223.

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.



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

ONALE 111111 May 6,2020





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3	-3-0 5-3-0	11-5-9	19-6-0	24	-0-8	29-6-6		34-2-9	36-8-14	
3	-3-0 2-0-0	6-2-9	8-0-7	4-	6-8 '	5-5-14		4-8-3	2-6-5	
Plate Offsets (X,Y)	[3:0-5-0,0-2-8], [10:Ec	dge,0-3-8], [13:0-2-	8,0-1-8], [20:Edge,0-5-13	3], [20:0-1-12,0-0-0)]					
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 sr YES B/TPI2014	CSI. TC 0.51 BC 0.85 WB 0.93 Matrix-S	DEFL. Vert(LL) Vert(CT) Horz(CT) Wind(LL)	in (lc -0.27 16- -0.49 16- 0.15 0.15	nc) l/defl 18 >999 18 >896 11 n/a 14 >999	L/d 360 240 n/a 240	PLATI MT20 Weigh	E S GRIP 197/14 t: 161 lb FT =	4
LUMBER- TOP CHORD 2x4 SF 4-6: 2x BOT CHORD 2x4 SF 7-15: 2 WEBS 2x3 SF 10-11,	PF No.2 *Except* (4 SPF 2100F 1.8E, 6- PF 2100F 1.8E *Excep 2x3 SPF No.2, 15-17: 2 PF No.2 *Except* 2-20: 2x4 SPF No.2	9: 2x6 SPF No.2 t* 2x4 SPF No.2		BRACING- TOP CHOR BOT CHOR WEBS	D Stru exc D Rig 1 R	uctural wood s ept end vertic id ceiling dire ow at midpt	sheathing dir als, and 2-0- ctly applied c 5	ectly applied 0 oc purlins (or 9-8-5 oc bra -16	or 3-4-15 oc purli 3-9-10 max.): 3-4 acing.	ns, , 9-10.
REACTIONS. (siz: Max H Max U Max G	e) 11=Mechanical, 2 lorz 20=174(LC 8) Jplift 11=-197(LC 9), 2 Grav 11=1696(LC 2), 2	20=0-3-8 0=-238(LC 8) 20=1767(LC 2)							EOFMIS	SOUT
FORCES. (lb) - Max. Comp./Max. Ten All forces 250 (lb) or less except when shown. XUEGANG TOP CHORD 2-3=-2620/302, 3-4=-2339/294, 4-5=-3001/368, 5-6=-2029/284, 6-7=-2692/426, 7-8=-2725/313, 8-9=-3544/386, 9-10=-360/39, 2-20=-1715/237 XUEGANG BOT CHORD 19-20=-227/338, 18-19=-562/3434, 16-18=-364/2648, 7-14=-357/198, 13-14=-306/3152, 12-13=-469/41771, 11-12=-459/4157 XUEGANG WEBS 3-19=-74/1056, 4-19=-1658/254, 4-18=-832/209, 5-18=0/609, 5-16=-1113/298, 6-16=-61/551, 14-16=-103/1694, 6-14=-281/1356, 8-14=-905/212, 8-13=0/459, 9-13=-1034/165, 9-11=-4012/433, 2-19=-166/2051 NUMBER E-29713										
 NOTES- Unbalanced roof live loads have been considered for this design. Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=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 Provide adequate drainage to prevent water ponding. 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 10.0 psf 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. Refer to girder(s) for truss to truss connections. Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 11=197, 20=238. This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TP1 1. Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord. 										

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MITEK[®] 16023 Swingley Ridge Rd Chesterfield, MO 63017



- 2-21: 2x4 SPF No.2 **REACTIONS.** (size) 12=Mechanical, 21=0-3-8 Max Horz 21=185(LC 5)
 - Max Horz 21=185(LC 5) Max Uplift 12=-201(LC 9), 21=-245(LC 8) Max Grav 12=1702(LC 2), 21=1769(LC 2)
- FORCES.
 (lb) Max. Comp./Max. Ten. All forces 250 (lb) or less except when shown.

 TOP CHORD
 2-3=-1888/208, 3-4=-1724/196, 4-5=-3534/428, 5-6=-2728/348, 6-7=-2000/290, 7-8=-2727/431, 8-9=-2741/311, 9-10=-3533/370, 2-21=-1717/209

 BOT CHORD
 19-20=-679/4059, 18-19=-483/3140, 16-18=-297/2375, 8-14=-386/212, 13-14=-323/3143,
- WEBS 3-20=-103/767, 4-20=-2736/401, 4-19=-952/204, 5-19=0/469, 5-18=-871/211, 6-18=-29/661, 6-16=-952/263, 7-16=-99/596, 14-16=-111/1692, 7-14=-295/1404, 9-14=-868/177, 9-13=0/531, 10-13=-623/150, 10-12=-3860/475, 2-20=-164/1690

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) All plates are MT20 plates unless otherwise indicated.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

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

- 7) Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 12=201, 21=245.
- 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 11) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 115 lb down and 36 lb up at 1-3-0 on top chord, and 6 lb down and 7 lb up at 1-3-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

Odition the the dod a SE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).





ſ	lob	Truce		Otv	DIV	Lot 94 MN	
	500	11035	iluss iype	QUY	гту		
						1412	208999
	400399	D7	Roof Special Girder	1	1		
						Job Reference (optional)	
	Wheeler Lumber, Wave	erly, KS 66871		8	.240 s Ma	9 2020 MiTek Industries, Inc. Tue May 5 16:20:45 2020 Pag	je 2
			ID:VxW	q?wA2R3	MakUkj2l0	tcxyD2rv-Z6R98p0VJ8pzQaJEoywT8751A5k5UMz?JYxdptzJV	DG

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, 4-7=-70, 7-10=-70, 10-11=-70, 15-21=-20, 12-14=-20 Concentrated Loads (lb)

Vert: 20=2(B)





	 	5-5-9		11-5-9	1	17-6-0		22-0-8		27	7-6-6		34-8-14	
Plate Offse	ts (X Y)	5-5-9 [10 [.] Edge 0-2-	8] [18:0-2	-8 0-2-8] [19·Fd	ge 0-6-13] [1	<u>6-0-7</u> 9:0-2-12 0-(0-01	4-6-8		5-	5-14		7-2-8	
		[10:2030;0 2	5],[:0:0 2	0,0 2 0],[10.20	go,o o .oj, [.	0.0 2 .2,0 0								
LOADING TCLL TCDL BCU	(psf) 25.0 10.0 0.0 *	SPACI Plate C Lumbe Rep St	NG- irip DOL r DOL ress Incr	2-0-0 1.15 1.15 YES	CSI. TC (BC (WB (0.48 0.71 0.87		DEFL. Vert(LL) Vert(CT) Horz(CT)	in -0.21 -0.38 0.12	(loc) 12-13 12-13 11	l/defl >999 >999 n/a	L/d 360 240 n/a	PLATES MT20 MT18H	GRIP 197/144 197/144
BCDL	10.0	Code	RC2018/T	PI2014	Matrix-	S		Wind(LL)	0.10	12-13	>999	240	Weight: 157 lb	FT = 10%
LUMBER- TOP CHORD 2x4 SPF No.2 *Except* 6-9: 2x6 SPF No.2 BOT CHORD 2x4 SPF No.2 *Except* 7-14: 2x3 SPF No.2, 11-13: 2x4 SPF 2100F 1.8E WEBS 2x3 SPF No.2 *Except* 2-19: 2x6 SPF No.2 REACTIONS. (size) 11=Mechanical, 19=0-3-8							BRACING- TOP CHOR BOT CHOR WEBS	RD RD	Structu except Rigid co 1 Row	ral wood end vertie eiling dire at midpt	sheathing dir cals, and 2-0- ctly applied c 5	ectly applied or 3-3-11 0 oc purlins (6-0-0 ma r 10-0-0 oc bracing. -15, 9-11	oc purlins, ux.): 9-10.	
REACTION	IS. (size Max He Max U Max G	e) 11=Mech orz 19=146(L plift 11=-20(L rav 11=1603	anical, 19= C 5) C 9), 19=-3 LC 2), 19=	:0-3-8 30(LC 8) :1678(LC 2)									INTE OF	MISSO
FORCES. TOP CHOP	(lb) - Max. RD 2-3=-: 8-9=-:	Comp./Max. 1 2587/40, 3-5= 3298/25, 2-19	en All fo -2319/59, =-1580/58	rces 250 (lb) or 5-6=-1793/85, 6	less except w -7=-2490/131	/hen shown. , 7-8=-2508	/50,						XUE	GANG
BOT CHOP	RD 18-19 11-12 3-17=	9=-134/477, 1 2=-77/3675 =-313/74, 5-17	'-18=-87/2	288, 15-17=-22/ 15=-720/107, 6-	2035, 7-13=-3 15=-21/460, 1	378/126, 12∙ 13-15=0/151	-13=0 5.	/2930,					P. NU	MBER
	6-13=	-100/1349, 8	13=-870/6	3, 8-12=0/485, 9	-12=-813/82,	9-11=-3810)/90, 2	2-18=0/1857					-0 E-2	29713
NOTES- 1) Unbalan 2) Wind: A MWFRS	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): cantilever left and right exposed : end vertical left and right exposed: Lumber DOL=1.60 plate grip DOL=1.60													
 Provide All plates This trus 	adequate dr s are MT20 j ss has been	ainage to pre plates unless designed for a	ent water otherwise i 10.0 psf t	ponding. ndicated. oottom chord live	e load noncon	current with	anvo	other live loa	ıds.				IN UEC	BANGL
6) * This tru will fit be	uss has been etween the b	n designed for ottom chord a	a live load	l of 20.0psf on the of 20.0psf on the of 20.0psf on the other states and the other states are states a	he bottom cho h BCDL = 10.	ord in all are .0psf.	as wh	nere a rectan	igle 3-6	i-0 tall b	y 2-0-0 wi	de	Jun to	ENSED
8) Provide9) This trus reference	mechanical ss is designe	connection (b d in accordan ANSI/TPI 1.	 v others) of ce with the 	f truss to bearin 2018 Internatio	g plate capabl nal Residentia	le of withsta al Code sec	nding tions	100 lb uplift R502.11.1 a	at join and R80	t(s) 11, ²)2.10.2 a	19. and		19	9198
10) Graphi)) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.													

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



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	5-5-9	11-5-9	17-6-0	22-0-8	1	34-8-14	-	_
	5-5-9	6-0-0	6-0-7	4-6-8	<u> </u>	12-8-6		·
Plate Offsets (X,Y)	[9:Edge,0-2-12], [10:0-2-7	7,0-1-4], [11:0-2-8	<u>,0-1-8], [16:0-2-8,0-2-8</u>	3], [17:Edge,0-5-13], [17:	:0-1-12,0-0-0]			
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/TP	2-0-0 1.15 1.15 YES 12014	CSI. TC 0.54 BC 0.62 WB 0.62 Matrix-S	DEFL. ir Vert(LL) -0.14 Vert(CT) -0.25 Horz(CT) 0.07 Wind(LL) 0.10	n (loc) l/de 12-13 >99 515-16 >99 710 n/ 015-16 >99	fl L/d 9 360 9 240 a n/a 9 240	PLATES MT20 Weight: 154 lb	GRIP 197/144 FT = 10%
LUMBER- TOP CHORD 2x4 SPF No.2 BRACING- TOP CHORD TOP CHORD Structural wood sheathing directly applied or 3-0-9 oc purlins, except end verticals. BOT CHORD 2x6 SPF No.2 *Except* 14-17: 2x4 SPF No.2 BOT CHORD BOT CHORD Rigid ceiling directly applied or 9-9-15 oc bracing. WEBS 2x3 SPF No.2 *Except* 2-17: 2x4 SPF No.2, 9-10: 2x6 SPF No.2 BOT CHORD Rigid ceiling directly applied or 9-9-15 oc bracing.								
REACTIONS. (size) 17=0-3-8, 10=Mechanical Max Horz 17=155(LC 8) Max Uplift 17=-216(LC 8), 10=-190(LC 9) Max Grav 17=1619(LC 1), 10=1545(LC 1)								
FORCES. (lb) - Max. TOP CHORD 2-3=- 8-9=-	. Comp./Max. Ten All for -2523/312, 3-5=-2231/301 -2546/308 2-17=-1557/24	ces 250 (lb) or les , 5-6=-1728/283, (3_9-10=-1441/21	ss except when shown 6-7=-1700/290, 7-8=-2 9	2139/288,			S XUE	GANG
BOT CHORD 16-1 10-1	7=-238/433, 15-16=-359/2 1=-108/644	177, 13-15=-233/	1920, 12-13=-90/1816	i, 11-12=-211/2196,			=*	.IU ★ Ξ
WEBS 3-15: 7-12:	=-339/144, 5-15=0/327, 5- =-34/374, 2-16=-122/1773	13=-694/238, 6-1 , 9-11=-103/1558	3=-156/1129, 7-13=-6 , 8-12=-476/180	94/229,			PPR NUM	MBER
NOTES.							- C - 2	9/10
 Unbalanced roof live Wind: ASCE 7-16; \ MWFRS (envelope) arin DOI =1.60 	 Unbalanced roof live loads have been considered for this design. Unbalanced roof live loads have been considered for this design. Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=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 							ALENGIT
 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) Before to girder(a) for true to true concentration. 							ANG LIU	
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 17=216, 10=190.							ENDED	
This truss is designed	ed in accordance with the 3	2018 Internationa	I Residential Code sec	ctions R502 11 1 and R8	02 10 2 and			1

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.



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1	8-5-10	15-3-0	1 2	22-0-7	29-6	3-0 I
I	8-5-10	6-9-6		6-9-7	7-5	-9
Plate Offsets (X,Y)	[2:0-1-7,Edge], [8:Edge,0-5-13], [8:0-1-	12,0-0-0], [9:0-2-8,0-1-8]				
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. DB TC 0.65 Ve BC 0.83 Ve WB 1.00 Ho Matrix_S WM WM	EFL. in ert(LL) -0.15 ert(CT) -0.35 orz(CT) 0.08 ind(L) 0.11	(loc) l/defl 2-12 >999 2-12 >999 8 n/a 2-12 >999	L/d PL 360 M ⁻ 240 n/a 240 W(ATES GRIP [20 197/144 eight: 105 lb ET = 10%
BODE 10.0		Wattix-S	IIId(LL) 0.11	2-12 2333	240	
LUMBER- TOP CHORD 2x4 4-7: BOT CHORD 2x4 WEBS 2x3 6-8:	SPF 2100F 1.8E *Except* 2x4 SPF No.2 SPF No.2 SPF No.2 *Except* 2x4 SPF 2100F 1.8E	BF TC BC WE	RACING- DP CHORD DT CHORD EBS	Structural wood s except end vertic Rigid ceiling direc 1 Row at midpt	sheathing directly app als. ctly applied or 10-0-0 3-11	lied or 3-5-7 oc purlins, oc bracing.
REACTIONS. (s Max Max Max	ize) 2=0-3-8, 8=0-5-8 Horz 2=142(LC 8) Uplift 2=-192(LC 8), 8=-183(LC 9) Grav 2=1386(LC 1), 8=1386(LC 1)					NE OF MISSO

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

TOP CHORD 2-3=-2318/277, 3-4=-1550/236, 4-5=-1541/240, 5-6=-2099/249, 6-8=-1312/222

BOT CHORD 2-12=-274/1961, 11-12=-274/1961, 9-11=-123/1774, 8-9=-169/605

WEBS 3-12=0/340, 3-11=-830/262, 4-11=-80/869, 5-11=-630/224, 6-9=-26/1172

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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=192, 8=183.

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.



XUEGANG

LIU





BOT CHORD

BCLL BCDL	0.0 * 10.0	Rep Stress Incr YES Code IRC2018/TPI2014	WB 0.17 Matrix-S	Horz(CT) 0	.00 18	n/a	n/a
LUMBER	t- DRD 2x4 SF	PF No.2		BRACING- TOP CHORD	Structu	ral wood	sheat
BOTCH		PE No 2			excent	and varti	cale

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

REACTIONS. All bearings 29-6-0.

(lb) - Max Horz 2=143(LC 8)

2x3 SPF No.2

2x4 SPF No.2

Max Uplift All uplift 100 lb or less at joint(s) 18, 2, 27, 28, 29, 30, 31, 32, 24, 23, 22, 21, 20, 19 Max Grav All reactions 250 lb or less at joint(s) 18, 2, 26, 27, 28, 29, 30, 31, 24, 23, 22, 21, 20, 19 except 32=283(LC 21)

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 qualified building designer as per ANSI/TPI 1.
- 4) All plates are 2x4 MT20 unless otherwise indicated.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 2-0-0 oc.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) * 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.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 18, 2, 27, 28, 29, 30, 31, 32, 24, 23, 22, 21, 20, 19.
- 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



ALLIN

FT = 10%

Weight: 136 lb

16023 Swingley Ridge Rd Chesterfield, MO 63017



Plate Offse	ets (X,Y)	[2:0-0-8,0-1-4], [10:0-0-8,	0-1-4], [12:0-0	0-0,0-1-4], [20):0-0-0,0-1-4]								
LOADING TCLL TCDL BCLL	(psf) 25.0 10.0 0.0 *	SPACING- Plate Grip DOL Lumber DOL Rep Stress Incr	2-0-0 1.15 1.15 YES	CSI. TC BC WB	0.06 0.04 0.03	DEFL. Vert(LL) Vert(CT) Horz(CT)	in -0.00 -0.00 0.00	(loc) 10 10 12	l/defl n/r n/r n/a	L/d 120 120 n/a	PLATES MT20	GRIP 197/144	
BCDL	10.0	Code IRC2018/TF	912014	Matri	x-R						Weight: 63 lb	FT = 10%	
LUMBER-	RD 2x4 SF	PF No.2				BRACING- TOP CHOR	D	Structu	ral wood	sheathing di	rectly applied or 6-0-0	oc purlins,	

 BOT CHORD
 2x4 SPF No.2
 except end verticals.

 WEBS
 2x3 SPF No.2
 BOT CHORD
 Rigid ceiling directly applied or 10-00 oc bracing.

 OTHERS
 2x4 SPF No.2
 BOT CHORD
 Rigid ceiling directly applied or 10-00 oc bracing.

REACTIONS. All bearings 17-4-0.

(lb) - Max Horz 20=53(LC 8)

Max Uplift All uplift 100 lb or less at joint(s) 20, 12, 17, 18, 19, 15, 14, 13 Max Grav All reactions 250 lb or less at joint(s) 20, 12, 16, 17, 18, 19, 15, 14, 13

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) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) 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 2-0-0 oc.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) * 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.
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 20, 12, 17, 18, 19, 15, 14, 13.
- 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.



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



May 6,2020



BOT CHORD 2x4 SPF No.2 WEBS 2x3 SPF No.2 OTHERS 2x4 SPF No.2

except end verticals. BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS. All bearings 12-2-8.

Max Horz 16=35(LC 8) (lb) -

Max Uplift All uplift 100 lb or less at joint(s) 16, 10, 14, 15, 12, 11 Max Grav All reactions 250 lb or less at joint(s) 16, 10, 13, 14, 15, 12, 11

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

- 4) 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 2-0-0 oc.

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

* 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) 16, 10, 14, 15, 12, 11,

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.



ALLIN





16023 Swingley Ridge Rd Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 94 MN	
					14120900	08
400399	НЗ	ROOF SPECIAL GIRDER	1	3		
				U U	Job Reference (optional)	
Wheeler Lumber, W	verly, KS 66871		8	3.240 s Ma	r 9 2020 MiTek Industries, Inc. Tue May 5 16:20:56 2020 Page 2	

ID:VxWg?wA2R3MakUkj2l0tcxyD2rv-kDcJSa8OjWCPEGfLxmd25R2qIXUEZR5crl6iikzJVD5

LOAD CASE(S) Standard

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

Uniform Loads (plf) Vert: 1-3=-70, 3-5=-70, 1-8=-20, 6-8=-20, 5-6=-20

Concentrated Loads (lb)

Vert: 9=-1619(B) 10=-1619(B) 11=-1621(B) 12=-1527(B) 13=-1525(B) 14=-1531(B)









				200			0 10	0			
				2-0-0	1		1-10-	·8	1		
sets (X,Y)	[2:0-0-8,0-1-4], [8:0-0-0,0)-1-4]									
G (psf)	SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
25.0	Plate Grip DOL	1.15	TC	0.18	Vert(LL)	-0.01	6	>999	360	MT20	197/144
10.0	Lumber DOL	1.15	BC	0.14	Vert(CT)	-0.02	6	>999	240		
0.0 *	Rep Stress Incr	YES	WB	0.01	Horz(CT	0.01	5	n/a	n/a		
10.0	Code IRC2018/TF	PI2014	Matri	k-S	Wind(LL	0.01	6	>999	240	Weight: 13 lb	FT = 10%
	ets (X,Y) (psf) 25.0 10.0 0.0 * 10.0	ets (X,Y) [2:0-0-8,0-1-4], [8:0-0-0,0] g (psf) SPACING- 25:0 Plate Grip DOL 10.0 Lumber DOL 0.0 * Rep Stress Incr 10.0 Code IRC2018/TI	Figure 1 Figure 2 Figure 2	ets (X,Y) [2:0-0-8,0-1-4], [8:0-0-0,0-1-4] (psf) SPACING- 2-0-0 CSI. 25.0 Plate Grip DOL 1.15 TC 10.0 Lumber DOL 1.15 BC 0.0 * Rep Stress Incr YES WB 10.0 Code IRC2018/TPI2014 Matrix	SPACING- 2-0-0 25.0 Plate Grip DOL 1.15 10.0 Lumber DOL 1.15 0.0 * Rep Stress Incr YES 10.0 Code IRC2018/TPI2014 WB	Space Space <th< td=""><td>Space Space CSI. DEFL. in 25.0 Plate Grip DOL 1.15 TC 0.18 Vert(LL) -0.01 10.0 Lumber DOL 1.15 BC 0.14 Vert(CT) -0.02 0.0 * Rep Stress Incr YES WB 0.01 Horz(CT) 0.01 10.0 Code IRC2018/TPI2014 Matrix-S Wind(LL) 0.01</td><td>Image: Second state state</td><td>Sector SPACING- 25.0 2-0-0 1-10-8 25.0 Plate Grip DOL 1.15 TC 0.18 Vert(LL) -0.01 6 >999 10.0 Lumber DOL 1.15 BC 0.14 Vert(CT) -0.02 6 >999 0.0 * Rep Stress Incr YES WB 0.01 Horz(CT) 0.01 5 n/a 10.0 Code IRC2018/TPI2014 Matrix-S Wind(LL) 0.01 6 >999</td><td>Space Space Control Co</td><td>Spacing Spacing 2:0-0 1:10-8 ets (X,Y) [2:0-0-8,0-1-4], [8:0-0-0,0-1-4] PLATES b (psf) Spacing 2:0-0 CSI. DEFL. in (loc) I/defl L/d PLATES 25:0 Plate Grip DOL 1.15 TC 0.18 Vert(LL) -0.01 6 >999 360 MT20 10.0 Lumber DOL 1.15 BC 0.14 Vert(CT) -0.02 6 >999 240 MT20 10.0 Code IRC2018/TPI2014 Matrix-S Wind(LL) 0.01 6 >999 240 Weight: 13 lb</td></th<>	Space Space CSI. DEFL. in 25.0 Plate Grip DOL 1.15 TC 0.18 Vert(LL) -0.01 10.0 Lumber DOL 1.15 BC 0.14 Vert(CT) -0.02 0.0 * Rep Stress Incr YES WB 0.01 Horz(CT) 0.01 10.0 Code IRC2018/TPI2014 Matrix-S Wind(LL) 0.01	Image: Second state	Sector SPACING- 25.0 2-0-0 1-10-8 25.0 Plate Grip DOL 1.15 TC 0.18 Vert(LL) -0.01 6 >999 10.0 Lumber DOL 1.15 BC 0.14 Vert(CT) -0.02 6 >999 0.0 * Rep Stress Incr YES WB 0.01 Horz(CT) 0.01 5 n/a 10.0 Code IRC2018/TPI2014 Matrix-S Wind(LL) 0.01 6 >999	Space Space Control Co	Spacing Spacing 2:0-0 1:10-8 ets (X,Y) [2:0-0-8,0-1-4], [8:0-0-0,0-1-4] PLATES b (psf) Spacing 2:0-0 CSI. DEFL. in (loc) I/defl L/d PLATES 25:0 Plate Grip DOL 1.15 TC 0.18 Vert(LL) -0.01 6 >999 360 MT20 10.0 Lumber DOL 1.15 BC 0.14 Vert(CT) -0.02 6 >999 240 MT20 10.0 Code IRC2018/TPI2014 Matrix-S Wind(LL) 0.01 6 >999 240 Weight: 13 lb

TOP CHORD2x4 SPF No.2BOT CHORD2x4 SPF No.2WEBS2x3 SPF No.2

BRACING-TOP CHORD BOT CHORD

Structural wood sheathing directly applied or 3-10-8 oc purlins, except end verticals. Rigid ceiling directly applied or 10-0-0 oc bracing.

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

Max Horz 8=70(LC 8) Max Uplift 4=-53(LC 8), 8=-23(LC 8)

Max Grav 4=112(LC 1), 8=263(LC 1), 5=80(LC 3)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown. TOP CHORD 2-8=-250/46

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) 4, 8.
- 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.

FMIS

0

4

l/defl

>999

n/a

>999

except end verticals.

5

5 >999

3

5

L/d

360

240

n/a

240

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

PLATES

Weight: 6 lb

MT20

Structural wood sheathing directly applied or 1-9-7 oc purlins,

GRIP

11111

0

MI

197/144

FT = 10%

1-9-7 1-9-7

> in (loc)

-0.00

-0.00

-0.00

0.00

DEFL.

Vert(LL)

Vert(CT)

Horz(CT)

Wind(LL)

BRACING-

TOP CHORD

BOT CHORD

5

3x6 ||

CSI.

0.06

0.02

0.00

тс

BC

WВ

Matrix-R

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

Max Horz 5=38(LC 5) Max Uplift 3=-27(LC 8), 5=-32(LC 4)

[2:0-0-8,0-1-4], [5:0-0-0,0-1-4] SPACING-

Plate Grip DOL

Rep Stress Incr

Code IRC2018/TPI2014

Lumber DOL

Max Grav 3=41(LC 1), 5=164(LC 1), 4=31(LC 3)

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

0-6-0

2-0-0

1.15

1.15

YES

NOTES-

Plate Offsets (X,Y)--

25.0

10.0

0.0

TOP CHORD 2x4 SPF No.2

2x4 SPF No.2

2x3 SPF No.2

10.0

LOADING (psf)

TCLL

TCDL

BCLL

BCDL

LUMBER-

WEBS

BOT CHORD

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) 3, 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.

		1		
LOADING (psf)	SPACING- 2-0-0	CSI.	DEFL. in (loc) I/defl L/d	PLATES GRIP
TCLL 25.0	Plate Grip DOL 1.15	TC 0.03	Vert(LL) -0.00 1 n/r 120	MT20 197/144
TCDL 10.0	Lumber DOL 1.15	BC 0.02	Vert(CT) 0.00 1 n/r 120	
BCLL 0.0 *	Rep Stress Incr YES	WB 0.00	Horz(CT) -0.00 4 n/a n/a	
BCDL 10.0	Code IRC2018/TPI2014	Matrix-P		Weight: 4 lb FT = 10%
I UMBER-		1	BRACING-	

TOP CHORD

BOT CHORD

LUMBER-

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

WEBS 2x3 SPF No.2

REACTIONS. 4=1-6-0, 2=1-6-0 (size) Max Horz 2=28(LC 5) Max Uplift 4=-14(LC 8), 2=-27(LC 4) Max Grav 4=59(LC 1), 2=93(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) 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) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) Gable requires continuous bottom chord bearing.

4) Gable studs spaced at 2-0-0 oc.

- 5) 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 6) will fit between the bottom chord and any other members.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4, 2. 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and
- referenced standard ANSI/TPI 1.

11111 MIS

0

Structural wood sheathing directly applied or 1-6-0 oc purlins,

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

except end verticals.

			1	1-6-0
LOADING	(psf)	SPACING- 2-0-0	CSI.	DEFL. in (loc) I/defl L/d PLATES GRIP Vert(LL) -0.00 2 >999 360 MT20 197/144
TCLL	25.0	Plate Grip DOL 1.15	TC 0.02	
TCDL	10.0	Lumber DOL 1.15	BC 0.02	Vert(CT) -0.00 2 >999 240
BCLL	0.0 *	Rep Stress Incr YES	WB 0.00	Horz(CT) -0.00 4 n/a n/a
BCDL	10.0	Code IRC2018/TPI2014	Matrix-P	Wind(LL) 0.00 2 **** 240 Weight: 4 lb FT = 10%

TOP CHORD2x4 SPF No.2BOT CHORD2x4 SPF No.2WEBS2x3 SPF No.2

REACTIONS. (size) 4=Mechanical, 2=0-3-8 Max Horz 2=28(LC 5) Max Uplift 4=-13(LC 8), 2=-28(LC 4)

Max Grav 4=57(LC 1), 2=94(LC 1)

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

BRACING-TOP CHORD BOT CHORD

Structural wood sheathing directly applied or 1-6-0 oc purlins, except end verticals. Rigid ceiling directly applied or 10-0-0 oc bracing.

		[=:= = =;= : :]										
LOADIN	G (psf)	SPACING- 2	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	ТС	0.27	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)	-0.00	4	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI20	014	Matrix	k-R	Wind(LL)	-0.01	4-5	>999	240	Weight: 15 lb	FT = 10%
LUMBER	2-					BRACING						

TOP CHORD

BOT CHORD

LUMBER-

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

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

Max Horz 5=112(LC 5) Max Uplift 4=-42(LC 8), 5=-89(LC 4) Max Grav 4=174(LC 1), 5=310(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) 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) 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.

VIII * Phil XUEGANG LIU NUMBER D E-29713 C JNAL JUEGANG LICEN LIU CENSED 19198 E min May 6,2020

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Structural wood sheathing directly applied or 4-10-0 oc purlins,

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

except end verticals.

Plate Offsets (X V) [2.0-0-2 0-1-4] [0.0-0-0 0-1-4]

LOADING (psf) TCLL 25.0 TCDL 10.0 BCLL 0.0 *	SPACING-2-0-0Plate Grip DOL1.15Lumber DOL1.15Rep Stress IncrYES	CSI. TC 0.06 BC 0.03 WB 0.02	DEFL. in (loc) l/defl L/d PLATES Vert(LL) -0.00 1 n/r 120 MT20 Vert(CT) -0.00 1 n/r 120 Horz(CT) -0.00 6 n/a n/a	GRIP 197/144
BCDL 10.0	Code IRC2018/TPI2014	Matrix-R	Weight: 1	17 lb FT = 10%
LUMBER- TOP CHORD 2x4 S	PF No.2		BRACING- TOP CHORD Structural wood sheathing directly applied or	5-0-0 oc purlins,

BOT CHORD

except end verticals.

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

BOT CHORD 2x4 SPF No.2 WEBS 2x3 SPF No.2 OTHERS 2x4 SPF No.2

REACTIONS. All bearings 5-0-0.

(lb) -Max Horz 9=94(LC 5)

Max Uplift All uplift 100 lb or less at joint(s) 6, 9, 8, 7 Max Grav All reactions 250 lb or less at joint(s) 6, 9, 8, 7

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) 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) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) Gable requires continuous bottom chord bearing.
- 4) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 5) Gable studs spaced at 2-0-0 oc.
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 6, 9, 8, 7.
- 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

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			5-0-0				
LOADING (psf) SPAC TCLL 25.0 Plate TCDL 10.0 Lumb BCLL 0.0 * Rep 3 BCDL 10.0 Code	Cling- 2-0-0 Grip DOL 1.15 er DOL 1.15 itress Incr YES IRC2018/TPI2014	CSI. TC 0.20 BC 0.12 WB 0.17 Matrix-R	DEFL. ir Vert(LL) -0.01 Vert(CT) -0.02 Horz(CT) 0.01 Wind(LL) 0.00	(loc) 4-5 4-5 7 4-5	l/defl L/d >999 360 >999 240 n/a n/a >999 240	PLATES MT20 Weight: 15 lb	GRIP 197/144 FT = 10%

BRACING-TOP CHORD

BOT CHORD

LUMBER-

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

REACTIONS. (size) 5=0-3-8, 7=Mechanical Max Horz 5=72(LC 5) Max Uplift 5=-74(LC 4), 7=-46(LC 8)

Max Grav 5=294(LC 1), 7=179(LC 1)

FORCES. (Ib) - Max. Comp./Max. Ten. - All forces 250 (Ib) or less except when shown. TOP CHORD 2-5=-261/110

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, 7.
- 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 5-0-0 oc purlins,

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

except end verticals.

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Plate Offsets (X,Y)	[4:Edge,0-2-8]								
LOADING (psf) TCLL 25.0 TCDL 10.0 BCLL 0.0 * DCDL 10.0	SPACING- 2-0-0 Plate Grip DOL 1.15 Lumber DOL 1.15 Rep Stress Incr YES	CSI. TC 0.31 BC 0.19 WB 0.28	DEFL. Vert(LL) Vert(CT) Horz(CT)	in -0.02 -0.05 0.01	(loc) 4-5 4-5 7	l/defl >999 >999 n/a	L/d 360 240 n/a	PLATES MT20	GRIP 197/144
BCDL 10.0	Code IRC2018/TPI2014	Matrix-R	Wind(LL)	0.01	4-5	>999	240	Weight: 18 lb	FT = 10%
LUMBER-	SPE No 2		BRACING-	ר ר	Structu	ral wood	sheathing di	rectly applied or 6-0-0	oc purlins

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

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) 5=0-3-8, 7=Mechanical

Max Horz 5=81(LC 5) Max Uplift 5=-79(LC 4), 7=-57(LC 8) Max Grav 5=338(LC 1), 7=225(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown. TOP CHORD 2-5=-300/123

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) 5, 7.
- 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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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 0.07 BC 0.05 WB 0.02 Matrix-S	DEFL. Vert(LL) -0.0 Vert(CT) -0.0 Horz(CT) -0.0 Wind(LL) 0.0	ín (loc) 0 7 10 7 10 11 10 7	l/defl >999 >999 n/a >999	L/d 360 240 n/a 240	PLATES GRIP MT20 197/144 Weight: 18 lb FT = 10%
LUMBER-			BRACING-				

TOP CHORD 2x4 SPF No.2 BOT CHORD 2x4 SPF No.2 WEBS 2x3 SPF No.2 OTHERS 2x4 SPF No.2 TOP CHORD Structural wood sheathing directly applied or 5-0-0 oc purlins, except end verticals. BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 9=2-3-8, 8=2-3-8, 11=Mechanical Max Horz 9=72(LC 5) Max Uplift 9=-38(LC 4), 8=-62(LC 8), 11=-22(LC 4) Max Grav 9=161(LC 1), 8=215(LC 1), 11=97(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) 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) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 4) Gable studs spaced at 2-0-0 oc.
- 5) 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 6) will fit between the bottom chord and any other members.
- 7) Refer to girder(s) for truss to truss connections.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 9, 8, 11.
- 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

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			I	3-0-0	
	(psf)	SPACING- 2-0-0 Plate Grip DOI 1.15	CSI .	DEFL. in (loc) l/defl L/d PLATES GRIP Vert/(1) -0.00 4-5 >999 360 MT20 197/444	
TCDL	10.0	Lumber DOL 1.15 Rep Stress Incr YES	BC 0.04	Vert(CT) -0.00 4-5 >999 240 Horz(CT) -0.00 7 p/a p/a	
BCDL	10.0	Code IRC2018/TPI2014	Matrix-R	Wind(LL) -0.00 7 $10a$ $10a$ Wind(LL) -0.00 5 >999 240 Weight: 11 lb FT = 10%	

 TOP CHORD
 2x4 SPF No.2

 BOT CHORD
 2x4 SPF No.2

 WEBS
 2x3 SPF No.2

 OTHERS
 2x3 SPF No.2

REACTIONS. (size) 5=0-3-8, 7=Mechanical

Max Horz 5=68(LC 5) Max Uplift 5=-54(LC 4), 7=-33(LC 8) Max Grav 5=207(LC 1), 7=94(LC 1)

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, 7.
- 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.

NUMBER E-29713 VIEGANG E-29713 VIEGANG LIU PD NUMBER E-29713 VIEGANG LIU ICENSES 19198

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May 6,2020

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

BRACING-TOP CHORD BOT CHORD

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

	2-					BRACING	_					
BCLL BCDL	0.0 * 10.0	Rep Stress Incr Code IRC2018/TF	YES PI2014	WB Matr	0.01 ix-R	Horz(CT)	-0.00	5	n/a	n/a	Weight: 12 lb	FT = 10%
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	-0.00	2	n/r	120		
TCLL	25.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	-0.00	2	n/r	120	MT20	197/144
	- ()							()	.,			

TOP CHORD

BOT CHORD

LUMBER-

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

REACTIONS. (size) 7=3-0-0, 5=3-0-0, 6=3-0-0

Max Horz 7=89(LC 5) Max Uplift 7=-54(LC 4), 5=-11(LC 5), 6=-38(LC 8) Max Grav 7=162(LC 1), 5=20(LC 1), 6=138(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) 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) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) Gable requires continuous bottom chord bearing.
- 4) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 5) Gable studs spaced at 2-0-0 oc.
- 6) 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 7) will fit between the bottom chord and any other members.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 7, 5, 6.
- 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

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Structural wood sheathing directly applied or 3-0-0 oc purlins,

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

except end verticals.

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OADIN	G (psf)	SPACING- 2-0-	-0 CSI .		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
CLL	25.0	Plate Grip DOL 1.1	15 TC	0.08	Vert(LL)	-0.00	4-5	>999	360	MT20	197/144
CDL	10.0	Lumber DOL 1.1	15 BC	0.03	Vert(CT)	-0.00	4-5	>999	240		
CLL	0.0 *	Rep Stress Incr N	IO WB	0.00	Horz(CT)	-0.00	3	n/a	n/a		
SCDL	10.0	Code IRC2018/TPI2014	4 Matriz	x-R	Wind(LL)	0.00	4-5	>999	240	Weight: 8 lb	FT = 10%

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

BRACING-TOP CHORD BOT CHORD

Structural wood sheathing directly applied or 2-6-5 oc purlins, except end verticals. Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 5=0-4-9, 3=Mechanical, 4=Mechanical Max Horz 5=60(LC 7)

Max Uplift 5=-101(LC 6), 3=-41(LC 12), 4=-1(LC 19) Max Grav 5=81(LC 1), 3=29(LC 1), 4=33(LC 3)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) 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) 3, 4 except (jt=lb) 5=101.
- 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) 16 lb down and 6 lb up at -1-2-14, and 16 lb down and 6 lb up at -1-2-14 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=-24(F=-12, B=-12)
- Trapezoidal Loads (plf)
 - Vert: 1=0(F=35, B=35)-to-6=-16(F=27, B=27), 6=0(F=35, B=35)-to-2=-7(F=31, B=31), 2=-7(F=31, B=31)-to-3=-50(F=10, F B=10), 5=-2(F=9, B=9)-to-4=-14(F=3, B=3)

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BRACING-

TOP CHORD

BOT CHORD

LUMBER-

TOP CHORD2x4 SPF No.2BOT CHORD2x6 SPF No.2WEBS2x4 SPF No.2

WEB3 2X4 3F

REACTIONS. (size)

Max Horz 5=56(LC 5) Max Uplift 5=-113(LC 8), 4=-83(LC 5) Max Grav 5=583(LC 1), 4=249(LC 1)

5=0-3-8, 4=Mechanical

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) Provide adequate drainage to prevent water ponding.

- 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) 4 except (jt=lb) 5=113.
- 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.

9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 33 lb down and 62 lb up at 1-10-8 on top chord, and 622 lb down and 126 lb up at 0-8-4, and 3 lb down and 3 lb up at 1-10-8 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

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: 6=-622(F) 7=1(B)

ALLIN

Structural wood sheathing directly applied or 2-7-8 oc purlins,

except end verticals, and 2-0-0 oc purlins: 2-3.

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

OADIN	G (psf)	SPACING- 2	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
CLL	25.0	Plate Grip DOL	1.15	TC	0.10	Vert(LL)	-0.00	5	>999	360	MT20	197/144
CDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	-0.00	5	>999	240		
CLL	0.0 *	Rep Stress Incr	NO	WB	0.00	Horz(CT)	-0.00	3	n/a	n/a		
3CDL	10.0	Code IRC2018/TPI20	014	Matrix	k-R	Wind(LL)	0.00	5	>999	240	Weight: 6 lb	FT = 10%

 TOP CHORD
 2x4 SPF No.2

 BOT CHORD
 2x4 SPF No.2

 WEBS
 2x3 SPF No.2

BRACING-TOP CHORD

BOT CHORD

Structural wood sheathing directly applied or 1-7-11 oc purlins, except end verticals. Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 5=0-4-9, 3=Mechanical, 4=Mechanical

Max Horz 5=46(LC 7) Max Uplift 5=-119(LC 6), 3=-17(LC 8)

Max Grav 5=55(LC 9), 3=26(LC 1), 4=23(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=119.
- 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) 1 lb down and 0 lb up at -1-2-14, and 1 lb down and 0 lb up at -1-2-14 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=-1(F=-1, B=-1) Trapezoidal Loads (plf)
 - Vert: 1=0(F=35, B=35)-to-2=-23(F=23, B=23), 2=-23(F=23, B=23)-to-3=-50(F=10, B=10), 5=-6(F=7, B=7)-to-4=-14(F=3, B=3)

ALLIN

Plate Off	sets (X,Y)	[2:0-0-10,0-1-4], [5:0-0-0,	,0-1-4]									
	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	0.07	Vert(LL)	-0.00	5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.01	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/TF	PI2014	Matri	x-R	Wind(LL)	0.00	5	>999	240	Weight: 5 lb	FT = 10%

TOP CHORD2x4 SPF No.2BOT CHORD2x4 SPF No.2WEBS2x3 SPF No.2

BRACING-TOP CHORD BOT CHORD

Structural wood sheathing directly applied or 1-3-0 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=36(LC 5) Max Uplift 5=-21(LC 8), 3=-19(LC 8), 4=-1(LC 8) Max Grav 5=149(LC 1), 3=14(LC 1), 4=21(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.

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

2x4 SPF No.2

TOP CHORD BOT CHORD

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

REACTIONS. All bearings 8-1-2. Max Horz 1=-108(LC 4) (lb) -

Max Uplift All uplift 100 lb or less at joint(s) 1, 5 except 8=-151(LC 8), 6=-151(LC 9) Max Grav All reactions 250 lb or less at joint(s) 1, 5, 7, 8, 6

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, 5 except (jt=lb) 8=151.6=151.

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.

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Job	Truss	Truss Type	Qty	Ply	Lot 94 MN	
						41209026
400399	LAY2	GABLE	1	1		
					Job Reference (optional)	
Wheeler Lumber. Wa	verlv. KS 66871			3.240 s Ma	r 9 2020 MiTek Industries, Inc. Tue May 5 16:21:09 2020 F	age 1

ID:Lek3CAANj_gYbKvtCQHtmQzKvNM-sjuDA1IYfWrZIG9rC?M57B4BTm7R6QbXqHlufUzJVCu

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

Scale = 1:38.9

10 9 85x7 //

Fiale Olisels (A, f)	[8.0-1-6,0-1-1], [9.0-1-1,0-1-6]	1	
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	CSI. TC 0.35 BC 0.04 WB 0.12 Matrix-P	DEFL. in (loc) l/defl L/d PLATES GRIP Vert(LL) n/a - n/a 999 MT20 197/144 Vert(CT) n/a - n/a 999 MT20 197/144 Horz(CT) 0.00 5 n/a n/a Weight: 44 lb FT = 10%
LUMBER- TOP CHORD 2x4 S	PF No.2		BRACING- TOP CHORD 2-0-0 oc purlins: 1-5, except end verticals.

BOT CHORD

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

- --

REACTIONS. All bearings 7-9-7.

Max Horz 10=-199(LC 6) (lb) -

Max Uplift All uplift 100 lb or less at joint(s) 10, 9, 7, 6 except 5=-108(LC 5), 8=-144(LC 6) Max Grav All reactions 250 lb or less at joint(s) 10, 5, 8, 9, 7, 6

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) 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) Provide adequate drainage to prevent water ponding.

3) All plates are 2x4 MT20 unless otherwise indicated.

4) Gable requires continuous bottom chord bearing.

- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 10, 9, 7, 6 except (jt=lb) 5=108, 8=144.
- 8) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 5, 7, 6.
- 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

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May 6,2020

MiTek 16023 Swingley Ridge Rd Chesterfield, MO 63017

3x4 // 1-8-12 7-9-7 ⊢ 1-8-12 6-0-10 LOADING (psf) SPACING-2-0-0 CSI. DEFL. L/d PLATES GRIP in (loc) I/defl 25.0 Plate Grip DOL тс Vert(LL) 999 197/144 1.15 0.42 n/a n/a MT20 10.0 Lumber DOL 1.15 BC 0.05 Vert(CT) n/a 999 n/a 0.0 Rep Stress Incr YES WB 0.13 Horz(CT) 0.00 5 n/a n/a Code IRC2018/TPI2014 10.0 Matrix-P Weight: 45 lb FT = 10%

BRACING-

TOP CHORD

BOT CHORD

2-0-0 oc purlins: 1-5, except end verticals.

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

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LUMBER-

TCLL

TCDL

BCLL

BCDL

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

REACTIONS. All bearings 7-9-7.

(lb) -Max Horz 10=-215(LC 6)

Max Uplift All uplift 100 lb or less at joint(s) 10, 8, 7, 6 except 5=-116(LC 5), 9=-201(LC 6) Max Grav All reactions 250 lb or less at joint(s) 10, 5, 9, 8, 7, 6

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) 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) Provide adequate drainage to prevent water ponding.

3) All plates are 2x4 MT20 unless otherwise indicated.

4) Gable requires continuous bottom chord bearing.

5) 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 6)
- will fit between the bottom chord and any other members. 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 10, 8, 7, 6 except
- (it=lb) 5=116, 9=201. 8) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 5, 8, 7, 6.

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

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

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MiTek 16023 Swingley Ridge Rd Chesterfield, MO 63017

		0-9-4	3-8-15	1	
LOADING (psf) TCLL 25.0	SPACING- 2-0-0 Plate Grip DOL 1.15	CSI. TC 0.13	DEFL. in Vert(LL) n/a	(loc) l/defl L/d - n/a 999	PLATES GRIP MT20 197/144
TCDL 10.0	Lumber DOL 1.15	BC 0.03	Vert(CT) n/a	- n/a 999	
BCLL 0.0 *	Rep Stress Incr YES	WB 0.04	Horz(CT) 0.00	4 n/a n/a	
BCDL 10.0	Code IRC2018/TPI2014	Matrix-P			Weight: 24 lb FT = 10%

BRACING-

TOP CHORD

BOT CHORD

2-0-0 oc purlins: 1-4, except end verticals.

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

LUMBER-

 TOP CHORD
 2x4 SPF No.2

 BOT CHORD
 2x4 SPF No.2

 WEBS
 2x4 SPF No.2

 OTHERS
 2x4 SPF No.2

REACTIONS. All bearings 4-6-3.

(lb) - Max Horz 7=-130(LC 6) Max Uplift All uplift 100 lb or less at joint(s) 7, 4, 6, 5

Max Grav All reactions 250 lb or less at joint(s) 7, 4, 6, 5

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) Provide adequate drainage to prevent water ponding.

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) 7, 4, 6, 5.
- 7) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 4, 5.
- 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

16023 Swingley Ridge Rd Chesterfield, MO 63017

Job		Truss	Truss Type	Qty	Ply	Lot 94 MN
						141209029
4003	99	LAY5	GABLE	1	1	
						Job Reference (optional)
Wh	eeler Lumber, V	averly, KS 66871		8	.240 s Mai	r 9 2020 MiTek Industries, Inc. Tue May 5 16:21:12 2020 Page 1

4-6-3

8.240 s Mar 9 2020 MiTek Industries, Inc. Tue May 5 16:21:12 2020 Page 1 ID:Lek3CAANj_gYbKvtCQHtmQzKvNM-GIaMp2LRyRD89kuQt7volpim1z8PJotzWF_YFpzJVCr

9-9-1

2-0-0 oc purlins: 1-4, except end verticals.

6-0-0 oc bracing: 4-5.

Rigid ceiling directly applied or 10-0-0 oc bracing, Except:

Scale = 1:21.9

2x4 🖩-7-4 4-6-3 1.7./ 2-10-15

	(psf)	SPACING- 2-0-0	CSI.	DEFL. in (loc) I/defl L/d PLATES GRIP
TCLL	25.0	Plate Grip DOL 1.15	10 0.07	Vert(LL) n/a - n/a 999 MT20 197/144
TCDL	10.0	Lumber DOL 1.15	BC 0.02	Vert(CT) n/a - n/a 999
BCLL	0.0 *	Rep Stress Incr YES	WB 0.03	Horz(CT) 0.00 4 n/a n/a
BCDL	10.0	Code IRC2018/TPI2014	Matrix-P	Weight: 21 lb FT = 10%

BRACING-

TOP CHORD

BOT CHORD

LUMBER-

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

REACTIONS. All bearings 4-6-3.

(lb) -Max Horz 8=-99(LC 6)

Max Uplift All uplift 100 lb or less at joint(s) 4, 6, 7, 5

Max Grav All reactions 250 lb or less at joint(s) 8, 4, 6, 7, 5

3-9-7

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) 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) Provide adequate drainage to prevent water ponding.

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) 4, 6, 7, 5.

7) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 4, 5.

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

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

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May 6,2020

