



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

Re: 2714890 C&H/24 Osage

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

Pages or sheets covered by this seal: I45272434 thru I45272478

My license renewal date for the state of Missouri is December 31, 2021.

Missouri COA: Engineering 001193



March 19,2021

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







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- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 9=289, 2=275.
- 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) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- 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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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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Mitek[®] 16023 Swingley Ridge Rd Chesterfield, MO 63017



L	7-7-13	15-0-0		20-4-0	25-11-8	
	7-7-13	7-4-3	1	5-4-0	5-7-8	
Plate Offsets (X,Y)	[2:0-0-0,0-0-14]					
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 0.53 BC 0.91 WB 0.98 Matrix-AS	DEFL. in Vert(LL) -0.37 Vert(CT) -0.76 Horz(CT) 0.07	(loc) l/defl L/d 8-9 >833 240 8-9 >408 180 8 n/a n/a	PLATES GRIP MT20 197/144 Weight: 100 lb FT = 20%	
LUMBER- TOP CHORD 2x4 SF BOT CHORD 2x4 SF WEBS 2x4 SF REACTIONS. (siz: Max H Max U Max G	PF No.2 PF No.2 PF No.2 e) 8=0-3-8, 2=0-3-8 lorz 2=228(LC 11) lplift 8=-272(LC 8), 2=-291(LC 8) prav 8=1161(LC 1), 2=1224(LC 1)		BRACING- TOP CHORD BOT CHORD WEBS	Structural wood sheathing di 2-0-0 oc purlins (4-6-9 max.) Rigid ceiling directly applied. 1 Row at midpt	rectly applied, except end verticals, and : 5-7. 3-8	i
FORCES. (lb) - Max. TOP CHORD 2-3=- BOT CHORD 2-11= WEBS 3-9=-	Comp./Max. Ten All forces 250 (lb) oi -2598/579, 3-5=-1664/412, 5-6=-1500/4: =-730/2388, 9-11=-730/2388, 8-9=-335/: -950/320, 6-9=-157/688, 6-8=-1298/398	less except when shown. 23 993				
NOTES- 1) Unbalanced roof liva 2) Wind: ASCE 7-16; V MWFRS (envelope) Interior(1) 19-2-15 to	e loads have been considered for this de /ult=115mph (3-second gust) Vasd=91m gable end zone and C-C Exterior(2E) -(o 25-9-12 zone: cantilever left and right	usign. hph; TCDL=6.0psf; BCDL=4.2p)-10-8 to 2-1-8, Interior(1) 2-1-{ exposed : end vertical left and	sf; h=25ft; Cat. II; E: 8 to 15-0-0, Exterior(right exposed:C-C fo	κρ C; Enclosed; 2R) 15-0-0 to 19-2-15, or members and forces		

& MWFRS for reactions shown; 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 8=272, 2=291.

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) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

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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L	6-7-13	13-0-0		19-4-0		25-11-8	
I	6-7-13	6-4-3	1	6-4-0	1	6-7-8	
Plate Offsets (X,Y)	[2:0-0-11,0-1-8]						
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. TC 0.55 BC 0.73 WB 0.58 Matrix-AS	DEFL. in Vert(LL) -0.14 Vert(CT) -0.28 Horz(CT) 0.07	(loc) l/defl 9-11 >999 9-11 >999 7 n/a	L/d 240 180 n/a	PLATES MT20 Weight: 103 lb	GRIP 197/144 FT = 20%
LUMBER- TOP CHORD 2x4 SF BOT CHORD 2x4 SF WEBS 2x4 SF WEDGE Left: 2x4 SP No.3	PF No.2 PF No.2 PF No.2 PF No.2		BRACING- TOP CHORD BOT CHORD	Structural wood 2-0-0 oc purlins Rigid ceiling dir	I sheathing dir (4-4-14 max. ectly applied.	rectly applied, except 6): 4-6.	and verticals, and
REACTIONS. (siz Max H Max U Max G	e) 7=0-3-8, 2=0-3-8 orz 2=199(LC 11) plift 7=-270(LC 8), 2=-294(LC 8) rav 7=1161(LC 1), 2=1224(LC 25)						
FORCES. (lb) - Max. TOP CHORD 2-3=- BOT CHORD 2-11= WEBS 3-9=-	Comp./Max. Ten All forces 250 (lb) or 2654/590, 3-4=-1898/477, 4-5=-1355/39 -731/2446, 9-11=-731/2446, 8-9=-512/1 759/256, 4-9=-41/437, 4-8=-457/164, 5-	less except when shown 90, 5-6=-1353/388, 6-7=- 1726 8=-515/212, 6-8=-395/15	1096/308 89				
 NOTES- 1) Unbalanced roof live 2) Wind: ASCE 7-16; MWFRS (envelope) Interior(1) 17-2-15 tk & MWFRS for reacti 3) Provide adequate di 4) This truss has been 5) Provide mechanical 7=270, 2=294. 6) This truss is designer referenced standard 7) This truss design re- sheetrock be applied 8) Graphical purlin rep 	e loads have been considered for this de (ult=115mph (3-second gust) Vasd=91m gable end zone and C-C Exterior(2E) - 0 25-9-12 zone; cantilever left and right e ons shown; Lumber DOL=1.60 plate grip ainage to prevent water ponding. designed for a 10.0 psf bottom chord liv connection (by others) of truss to bearin ad in accordance with the 2018 Internation (ANSI/TPI 1. quires that a minimum of 7/16" structural d directly to the bottom chord. resentation does not depict the size or th	sign. ph; TCDL=6.0psf; BCDL= -10-8 to 2-1-8, Interior(1) exposed ; end vertical left o DOL=1.60 e load nonconcurrent with g plate capable of withsta onal Residential Code sea I wood sheathing be appli- ne orientation of the purlin	=4.2psf; h=25ft; Cat. II; E 2-1-8 to 13-0-0, Exterior and right exposed;C-C for h any other live loads. anding 100 lb uplift at join ctions R502.11.1 and R80 ied directly to the top cho h along the top and/or bot	xp C; Enclosed; (2R) 13-0-0 to 17 or members and t(s) except (jt=lb, 02.10.2 and rd and 1/2" gyps tom chord.	7-2-15, forces) um	STATE OF STATE OF ANI THO JOH	MISSOUR REW MAS NSON

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



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	5-7-13 5-7-13	-	11-0-0 5-4-3	<u>17-6-0</u> 6-6-0				24-0-0 6-6-0	25-11-8 1-11-8
L OADING (psf) TCLL 25.0 TCDL 10.0 BCLL 0.0 BCDL 10.0	SPACING- Plate Grip DOL Lumber DOL Rep Stress Incr Code IRC2018/TF	2-0-0 1.15 1.15 YES Pl2014	CSI. TC 0.60 BC 0.74 WB 0.38 Matrix-S	DEFL. Vert(LL) -0 Vert(CT) -0 Horz(CT) 0	in (loc 15 8-9 1.31 8-9 1.07) l/defl) >999) >981 3 n/a	L/d 240 180 n/a	PLATES MT20 Weight: 103 lb	GRIP 197/144 FT = 20%
LUMBER-				BRACING-					

TOP CHORD

BOT CHORD

TOP CHORD 2x4 SPE No 2

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

REACTIONS. (size) 8=0-3-8, 2=0-3-8 Max Horz 2=201(LC 9) Max Uplift 8=-270(LC 12), 2=-298(LC 8)

Max Grav 8=1154(LC 1), 2=1228(LC 1)

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

TOP CHORD 2-3=-2711/598, 3-4=-2105/519, 4-5=-1843/481, 5-6=-1843/481

BOT CHORD 2-12=-753/2478, 10-12=-753/2478, 9-10=-574/1933, 8-9=-174/522

WEBS 3-10=-573/192, 4-10=-29/356, 5-9=-551/223, 6-8=-1183/331, 6-9=-357/1528

NOTES-

 Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 11-0-0, Exterior(2R) 11-0-0 to 15-2-15, Interior(1) 15-2-15 to 25-9-12 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

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.

 Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 8=270, 2=298.

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

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



Structural wood sheathing directly applied or 3-0-13 oc purlins,

except end verticals, and 2-0-0 oc purlins (3-7-7 max.): 4-6.

Rigid ceiling directly applied or 6-9-14 oc bracing.







REACTIONS. (size) 8=0-3-8, 2=0-3-8 Max Horz 2=202(LC 11) Max Uplift 8=-271(LC 12), 2=-294(LC 8) Max Grav 8=1161(LC 1), 2=1224(LC 1)

- FORCES. (Ib) Max. Comp./Max. Ten. All forces 250 (Ib) or less except when shown.
- TOP CHORD 2-3=-2584/611, 3-4=-2359/582, 4-5=-2474/601, 5-6=-2474/600

BOT CHORD 2-11=-743/2376, 9-11=-643/2222, 8-9=-341/1205

WEBS 4-11=-59/315, 4-9=-41/277, 5-9=-547/218, 6-8=-1514/426, 6-9=-304/1406

NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed;
- MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 9-0-0, Exterior(2R) 9-0-0 to 13-2-15, Interior(1) 13-2-15 to 25-9-12 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 8=271, 2=294.
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1	7-0-0	13-4-4	I	20-0-0	25-11-8
	7-0-0	6-4-4		6-7-12	5-11-8
Plate Offsets (X,Y)	[2:0-0-11,0-1-8], [6:0-0-13,0-1-8]				
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. TC 0.71 BC 0.79 WB 0.88 Matrix-AS	DEFL. in Vert(LL) -0.23 Vert(CT) -0.43 Horz(CT) 0.11	(loc) I/defl L/d 9 >999 240 9-11 >716 180 7 n/a n/a	PLATES GRIP MT20 197/144 Weight: 97 lb FT = 20%
LUMBER- TOP CHORD 2x4 SPF No.2 BOT CHORD 2x4 SPF No.2 WEBS 2x4 SPF No.2 WEDGE Left: 2x4 SP No.3		BRACING- TOP CHORD BOT CHORD WEBS	Structural wood sheathing 2-0-0 oc purlins (2-5-10 ma Rigid ceiling directly applie 1 Row at midpt	directly applied, except end verticals, and _(x.) : 3-5. d. 5-7	
REACTIONS. (siz Max H Max U Max 0	e) 7=0-3-8, 2=0-3-8 Horz 2=202(LC 11) Jplift 7=-271(LC 12), 2=-294(LC 8) Grav 7=1161(LC 1), 2=1224(LC 1)				

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

TOP CHORD 2-3=-2678/618, 3-4=-3228/769, 4-5=-2233/511

BOT CHORD 2-11=-720/2471, 9-11=-723/2464, 8-9=-785/3226, 7-8=-500/2202

WEBS 3-11=0/253, 3-9=-164/817, 5-7=-2357/557, 5-8=-43/502, 4-8=-1060/302

NOTES-

 Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 7-0-0, Exterior(2R) 7-0-0 to 11-2-15, Interior(1) 11-2-15 to 25-9-12 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 7=271, 2=294.

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

6) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

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







	5-0-0	9-2-13	13-7-7		18-0-	0		21-10-0	25-11-8	
Plate Offsets (X,Y)	[2:0-4-0,0-2-10], [4:0-3-8,	0-1-8], [6:0-6-0	,0-2-0], [10:0-3-8,0-2-8],	[12:0-3-8,0-2-0]		,		0 10 0	410	
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/TF	2-0-0 1.15 1.15 NO Pl2014	CSI. TC 0.97 BC 0.85 WB 0.65 Matrix-MS	DEFL. Vert(LL) Vert(CT) Horz(CT)	in -0.48 -0.85 0.12	(loc) 12-13 12-13 9	l/defl >646 >364 n/a	L/d 240 180 n/a	PLATES MT20 MT20HS Weight: 120 lb	GRIP 197/144 148/108 FT = 20%
LUMBER- TOP CHORD 2x4 SP 3-6: 2x6 BOT CHORD 2x6 SP WEBS 2x4 SP	F No.2 *Except* 4 SP 2400F 2.0E F 2100F 1.8E F No.2			BRACING- TOP CHOF BOT CHOF WEBS	RD RD	Structu except Rigid co 1 Row a	ral wood s end vertic eiling dire at midpt	sheathing dir als, and 2-0 ctly applied o 4	rectly applied or 1-10-1; -0 oc purlins (2-1-2 ma) or 6-11-9 oc bracing. I-14, 6-10, 7-9	3 oc purlins, ĸ.): 3-6.
REACTIONS. (size Max H Max U Max G	e) 2=0-3-8, 9=0-3-8 orz 2=200(LC 24) plift 2=-524(LC 4), 9=-400 rav 2=2132(LC 1), 9=170	6(LC 8) 00(LC 1)								
FORCES. (lb) - Max. TOP CHORD 2-3=- BOT CHORD 2-14= 9-10=	Comp./Max. Ten All for 5507/1295, 3-4=-5086/12 1273/5196, 13-14=-188 438/2023	ces 250 (lb) or 30, 4-5=-7865/ 1/7865, 12-13=-	less except when shown. 1858, 5-6=-8357/1939, 6 -1958/8355, 10-12=-1427	5-7=-2179/479 7/6005,						
WEBS 3-14= 7-10=	=-240/1342, 4-14=-2978/6 =-389/1930, 7-9=-2538/60	77, 4-13=-8/50 6, 6-12=-571/2	0, 5-13=-524/90, 6-10=-4 526	1366/1085,						
NOTES- 1) Wind: ASCE 7-16; V MWFRS (envelope) grip DOL=1.60 2) Provide adequate dr 3) All plates are MT20 [4) This truss has been 5) Bearing at joint(s) 9 capacity of bearing s 6) Provide mechanical 2=524, 9=406. 7) This truss is designer referenced standard 8) Graphical purlin repr 9) Use Simpson Strong truss(es) to front facc (10) Fill all nail holes wf	fult=115mph (3-second gu gable end zone; cantileve ainage to prevent water p plates unless otherwise ir designed for a 10.0 psf b considers parallel to grair surface. connection (by others) of ed in accordance with the ANSI/TPI 1. resentation does not depin J-Tie LUS26 (4-10d Girde e of bottom chord, skewe here hanger is in contact to	ust) Vasd=91mp er left and right of honding. hdicated. btom chord live in value using At truss to bearing 2018 Internatio ct the size or the r, 3-10d Truss, d 0.0 deg.to the with lumber.	bh; TCDL=6.0psf; BCDL= exposed ; end vertical lef e load nonconcurrent with NSI/TPI 1 angle to grain f g plate capable of withsta nal Residential Code sec e orientation of the purlin Single Ply Girder) or equ e right, sloping 0.0 deg. d	=4.2psf; h=25ft; Ca ft and right expose formula. Building anding 100 lb uplif ctions R502.11.1 a along the top and ivalent at 12-11-4 own.	at. II; Ex ads. designe t at joint and R80 I/or bott from th	er should (s) exce (s) exce (2.10.2 a om chor e left er	closed; _=1.60 pla d verify ept (jt=lb) and rd. rd. rd to conn	ect (STATE OF STATE OF AND THO JOIN	MISSOLA REW MAS SOLATION
 11) "NAILED" indicates 12) Hanger(s) or other 5-0-0 on bottom ch 13) In the LOAD CASE 	 3-10d (0.148"x3") or 3-1 connection device(s) sha ord. The design/selection (S) section loads applied 	2d (0.148"x3.25 Il be provided s n of such conne	5") toe-nails per NDS guid ufficient to support conce action device(s) is the res	dlines. entrated load(s) 32 ponsibility of othe upt (E) or back (B)	28 lb do rs.	wn and	104 lb up	at	PE-201	AL ENGLISH

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

LOAD CASE(S) Standard Continued on page 2

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March 19,2021

Job	Truss	Truss Type	Qty	Ply	C&H/24 Osage	
						145272445
2714890	A12	Roof Special Girder	2	1		
					Job Reference (optional)	
Builders FirstSource (Valley	Center), Valley Center, K	S - 67147,		8.430 s Fe	b 12 2021 MiTek Industries, Inc. Fri Mar 19 09:19:35 2021	Page 2

8.430 s Feb 12 2021 MiTek Industries, Inc. Fri Mar 19 09:19:35 ID:udRtORcuhHEFwmaU34jv6Hzcgaz-?2Q6CFHOv_R3TCojfTnrZY0TC4iUjs6wJWPC1azZPu6

LOAD CASE(S) Standard

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

Uniform Loads (plf) Vert: 1-3=-70, 3-6=-70, 6-8=-70, 9-15=-20

Concentrated Loads (lb)

Vert: 3=-84(F) 14=-328(F) 4=-84(F) 13=-43(F) 18=-84(F) 19=-84(F) 20=-43(F) 21=-43(F) 22=-654(F)







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



BOT CHORD

Rigid ceiling directly applied.

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

REACTIONS. 1=Mechanical, 5=0-3-8 (size) Max Horz 1=163(LC 11) Max Uplift 1=-120(LC 8), 5=-141(LC 8) Max Grav 1=577(LC 1), 5=577(LC 25)

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

1-2=-1085/292, 2-3=-1084/379 TOP CHORD

BOT CHORD 1-6=-444/974

WEBS 2-6=-388/250, 3-5=-540/344, 3-6=-325/900

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=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-0 to 3-0-0, Interior(1) 3-0-0 to 11-0-0, Exterior(2E) 11-0-0 to 12-9-12 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

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.

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

6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 1=120, 5=141.

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) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

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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MiTek 16023 Swingley Ridge Rd Chesterfield, MO 63017





MiTek 16023 Swingley Ridge Rd Chesterfield, MO 63017



	7-0-0 7-0-0			12-11-8					
Plate Offsets (X,Y)	[4:Edge,0-1-8]	•			0110				
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 0.47 BC 0.40 WB 0.61 Matrix-AS	DEFL. in Vert(LL) -0.05 Vert(CT) -0.11 Horz(CT) 0.02	(loc) l/defl 6-9 >999 6-9 >999 5 n/a	L/d 240 180 n/a	PLATES MT20 Weight: 43 lb	GRIP 197/144 FT = 20%		
LUMBER- TOP CHORD 2x4 SP BOT CHORD 2x4 SP WEBS 2x4 SP	F No.2 F No.2 F No.2		BRACING- TOP CHORD BOT CHORD	Structural wood 2-0-0 oc purlins Rigid ceiling dire	sheathing direc (6-0-0 max.): 3 ctly applied.	ctly applied, except -4.	end verticals, and		
REACTIONS. (size Max H Max U Max G	 2=0-3-8, 5=0-3-8 2=110(LC 11) plift 2=-165(LC 8), 5=-134(LC 8) rav 2=640(LC 1), 5=574(LC 1) 								
FORCES. (lb) - Max. TOP CHORD 2-3=- BOT CHORD 2-6=- WEBS 3-6=0	Comp./Max. Ten All forces 250 (lb) or 973/326 393/859, 5-6=-395/850)/281, 3-5=-853/381	less except when shown.							
NOTES- 1) Unbalanced roof live 2) Wind: ASCE 7-16; V MWFRS (envelope) Interior(1) 11-2-15 tc & MWFRS for reaction 3) Provide adequate dr 4) This truss has been 5) Provide mechanical 2=185 5=124	e loads have been considered for this de ult=115mph (3-second gust) Vasd=91m gable end zone and C-C Exterior(2E) -0 12-9-12 zone; cantilever left and right e ons shown; Lumber DOL=1.60 plate grip ainage to prevent water ponding. designed for a 10.0 psf bottom chord liv connection (by others) of truss to bearin	sign. ph; TCDL=6.0psf; BCDL= b-10-8 to 2-1-8, Interior(1) ; exposed ; end vertical left a b DOL=1.60 e load nonconcurrent with g plate capable of withstar	4.2psf; h=25ft; Cat. II; E: 2-1-8 to 7-0-0, Exterior(2 and right exposed;C-C fo any other live loads. nding 100 lb uplift at join	xp C; Enclosed; R) 7-0-0 to 11-2- or members and f t(s) except (jt=lb)	15, orces				
6) This truss is designe referenced standard	d in accordance with the 2018 Internation ANSI/TPI 1.	onal Residential Code sect	tions R502.11.1 and R80	02.10.2 and		FE OF	MISSO		
 I his truss design red sheetrock be applied 	quires that a minimum of 7/16" structural directly to the bottom chord.	i wood sheathing be applie	ed directly to the top cho	rd and 1/2" gypsu	m	BAT AN	DREW		
8) Graphical purlin repr	esentation does not depict the size or the	ne orientation of the purlin	along the top and/or bot	tom chord.	(THU IN			







	5-0-0 5-0-0	ł	8-10-0 3-10-0	-	<u>+ 12-11-8</u> <u>4-1-8</u>		
LOADING (psf) TCLL 25.0 TCDL 10.0 BCLL 0.0 BCDL 10.0	SPACING-2-0-0Plate Grip DOL1.15Lumber DOL1.15Rep Stress IncrNOCodeIRC2018/TPI2014	CSI. TC 0.39 BC 0.47 WB 0.62 Matrix-MS	DEFL. in (loc) l/d Vert(LL) -0.06 7-8 >9' Vert(CT) -0.11 7-8 >9' Horz(CT) 0.02 6 r	efi L/d 99 240 99 180 n/a n/a	PLATES GF MT20 19 Weight: 53 lb	IP 7/144 FT = 20%	

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

BRACING-TOP CHORD

BOT CHORD

Structural wood sheathing directly applied or 3-8-13 oc purlins, except end verticals, and 2-0-0 oc purlins (3-9-7 max.): 3-5. Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 2=0-3-8, 6=0-3-8 Max Horz 2=78(LC 7) Max Uplift 2=-263(LC 4), 6=-287(LC 4) Max Grav 2=1012(LC 1), 6=1117(LC 1)

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

TOP CHORD 2-3=-2226/531, 3-4=-2049/522, 5-6=-287/123

BOT CHORD 2-8=-486/2074, 7-8=-434/1847, 6-7=-434/1847

WEBS 3-8=-8/333, 4-7=0/267, 4-6=-1923/452

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=4.2psf; 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) Brovide adoguete drainage to provent water pending
- 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=263, 6=287.
- 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) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 8) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.
- 9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 328 lb down and 104 lb up at 5-0-0 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: 1-3=-70, 3-5=-70, 6-9=-20

Concentrated Loads (lb)

Vert: 3=-84(F) 5=-122(F) 8=-328(F) 7=-43(F) 4=-84(F) 12=-84(F) 13=-84(F) 14=-43(F) 15=-43(F)











March 19,2021





MWFRS for reactions shown; 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 5=109, 7=121.

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

6) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.













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

5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 5=109, 7=121.

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) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.



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5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 6=117, 2=125.

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) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.



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March 19,2021



3x4 =

	<u> </u>							
LOADING (psf) TCLL 25.0 TCDL 10.0	SPACING- 2-0-0 Plate Grip DOL 1.15 Lumber DOL 1.15	CSI. TC 0.60 BC 0.64	DEFL. in (loc) l/defl L/d PLAT Vert(LL) -0.15 8-11 >543 240 MT20 Vert(CT) -0.26 8-11 >305 180	ES GRIP 197/144				
BCLL 0.0 BCDL 10.0	Rep Stress Incr NO Code IRC2018/TPI2014	WB 0.01 Matrix-MP	Horz(CT) 0.02 2 n/a n/a Weigt	nt: 20 lb FT = 20%				

TOP CHORD

BOT CHORD

LUMBER-

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

REACTIONS. 7=Mechanical, 2=0-4-9 (size)

Max Horz 2=80(LC 7) Max Uplift 7=-75(LC 8), 2=-120(LC 4)

Max Grav 7=314(LC 1), 2=401(LC 1)

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

NOTES-

1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; 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) Refer to girder(s) for truss to truss connections.

4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 7 except (jt=lb) 2=120

5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and

- referenced standard ANSI/TPI 1.
- 6) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidlines.

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

LOAD CASE(S) Standard

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

Uniform Loads (plf) Vert: 1-4=-70, 4-5=-20, 6-9=-20 Concentrated Loads (lb)

Vert: 8=-16(F=-8, B=-8)





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

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

except end verticals.





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=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-10-8 to 1-10-0, Exterior(2N) 1-10-0 to 5-10-0, Corner(3R) 5-10-0 to 8-10-0, Exterior(2N) 8-10-0 to 12-6-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- 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 1-4-0 oc.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 10, 16, 17, 18, 14, 13, 12.

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.







6) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.







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Job	Truss	Truss Type	Qty	Ply	C&H/24 Osage	
						145272462
2714890	D3	Common Girder	2	2		
				_	Job Reference (optional)	
Builders FirstSource (Valley	Center), Valley Center, K	S - 67147,		8.430 s Fe	b 12 2021 MiTek Industries, Inc. Fri Mar 19 09:19:57 2021	Page 2

ID:udRtORcuhHEFwmaU34jv6Hzcgaz-MHlQqnYBjkCx6aUyx5A?SBwQzyFWtub9NxkNoIzZPtm

LOAD CASE(S) Standard Concentrated Loads (Ib)

Vert: 6=-691(B) 13=-698(B) 14=-698(B) 15=-691(B) 16=-691(B)





10

11

539

BRACING-

TOP CHORD

BOT CHORD

8

except end verticals.

7

Structural wood sheathing directly applied or 5-3-8 oc purlins,

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

9

	5-3-8	
LOADING (psf)SPACING- 2-0-0TCLL25.0Plate Grip DOL1.15TCDL10.0Lumber DOL1.15BCLL0.0Rep Stress IncrYESBCDL10.0Code IRC2018/TPI2014	CSI. DEFL. in (loc) l/defl L/d TC 0.11 Vert(LL) -0.00 1 n/r 120 BC 0.02 Vert(CT) -0.00 1 n/r 120 WB 0.03 Horz(CT) -0.00 7 n/a n/a	PLATES GRIP MT20 197/144 Weight: 23 lb FT = 20%

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 5-3-8. (lb) -

Max Horz 11=99(LC 9)

Max Uplift All uplift 100 lb or less at joint(s) 11, 7, 10, 8 Max Grav All reactions 250 lb or less at joint(s) 11, 7, 9, 10, 8

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=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-10-8 to 2-1-8, Exterior(2N) 2-1-8 to 2-7-12, Corner(3E) 2-7-12 to 5-1-12 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

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

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

5) Gable requires continuous bottom chord bearing.

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

Gable studs spaced at 1-4-0 oc.

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

9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 11, 7, 10, 8.

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.







LUMBER-

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

BRACING-TOP CHOR

TOP CHORD BOT CHORD Structural wood sheathing directly applied, except end verticals. Rigid ceiling directly applied.

REACTIONS. (size) 6=0-3-8, 4=0-3-8 Max Horz 6=-84(LC 8) Max Uplift 6=-29(LC 13), 4=-29(LC 12) Max Grav 6=225(LC 1), 4=-225(LC 1)

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

NOTES-

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

2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

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

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

5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and

referenced standard ANSI/TPI 1.
6) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum

6) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.







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.







	5-0-0							
LOADING (psf) SPA TCLL 25.0 Plate TCDL 10.0 Lum BCLL 0.0 Rep BCDL 10.0 Cod	CING- 2-0-0 e Grip DOL 1.15 iber DOL 1.15 Stress Incr YES e IRC2018/TPI2014	CSI. TC 0.33 BC 0.22 WB 0.00 Matrix-AS	DEFL. Vert(LL) Vert(CT) Horz(CT)	in (loc) 0.04 4-7 0.06 4-7 0.01 2	l/defl >999 >999 n/a	L/d 240 180 n/a	PLATES MT20 Weight: 13 lb	GRIP 197/144 FT = 20%

BRACING-

TOP CHORD

BOT CHORD

Structural wood sheathing directly applied.

Rigid ceiling directly applied.

LUMBER-

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

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

Max Horz 2=83(LC 8) Max Uplift 3=-68(LC 12), 2=-77(LC 8)

Max Grav 3=154(LC 1), 2=289(LC 1), 4=90(LC 3)

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

NOTES-

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 4-11-4 zone; cantilever left and right
- exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

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

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

- 4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 2.
- 5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and
- referenced standard ANSI/TPI 1.
- 6) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.







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LUMBER-
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TOP CHORD 2x4 SPF No.2 BOT CHORD 2x4 SPF No.2 BRACING-TOP CHORD BOT CHORD

Structural wood sheathing directly applied or 2-10-15 oc purlins. Rigid ceiling directly applied or 10-0-0 oc bracing.

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

Max Horz 2=55(LC 8)

Max Uplift 3=-38(LC 12), 2=-62(LC 8) Max Grav 3=83(LC 1), 2=199(LC 1), 4=51(LC 3)

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

NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed;
- MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 2-10-3 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

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

- 4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 2.
- 5) 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.







5-0-0 5-0-0

BCLL 0.0 BCDL 10.0	Rep Stress Incr NO Code IRC2018/TPI2014	WB 0.00 Matrix-MP	Horz(CT) 0.01	1	n/a	n/a	Weight: 17 lb	FT = 20%
TCDL 10.0 BCLL 0.0	Lumber DOL 1.15 Rep Stress Incr NO	BC 0.83 WB 0.00	Vert(CT) -0.11 Horz(CT) 0.01	5-8 1	>540 n/a	180 n/a		
LOADING (psf) TCLL 25.0	SPACING-2-0-0Plate Grip DOL1.15	CSI. TC 0.47	DEFL. in Vert(LL) -0.06	(loc) 5-8	l/defl >957	L/d 240	PLATES MT20	GRIP 197/144

BOT CHORD

except end verticals.

Rigid ceiling directly applied or 8-4-5 oc bracing.

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

REACTIONS. (size) 1=0-3-8, 5=Mechanical

Max Horz 1=75(LC 24) Max Uplift 1=-191(LC 4), 5=-160(LC 8)

Max Grav 1=869(LC 1), 5=674(LC 1)

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=4.2psf; 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) 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) 1=191, 5=160.
- 5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 6) Use Simpson Strong-Tie LUS24 (4-10d Girder, 2-10d Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 1-0-12 from the left end to 3-0-12 to connect truss(es) to back face of bottom chord.
- 7) Fill all nail holes where hanger is in contact with lumber.
- 8) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard

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

Vert: 1-2=-70, 2-3=-20, 4-6=-20 Concentrated Loads (lb) Vert: 8=-557(B) 9=-551(B)







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

TOP CHORD 1-2=-393/326, 2-3=-278/234

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=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-4-1 to 3-4-1, Interior(1) 3-4-1 to 8-0-4, Exterior(2R) 8-0-4 to 12-3-3, Interior(1) 12-3-3 to 19-8-11 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Provide adequate drainage to prevent water ponding.
- 4) All plates are 2x4 MT20 unless otherwise indicated.
- 5) Gable requires continuous bottom chord bearing.
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 13, 17, 14, 15, 16, 18, 19, 20 except (jt=lb) 21=140, 22=131, 23=129.
- 8) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 13, 14, 15, 16.
- 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.



16023 Swingley Ridge Rd Chesterfield, MO 63017



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

TOP CHORD 1-2=-662/583, 2-3=-539/485, 3-5=-406/377, 5-6=-290/272

NOTES-

 Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) 0-4-1 to 4-7-0, Exterior(2R) 4-7-0 to 11-8-7 zone; cantilever left and right exposed ; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

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

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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 9, 10 except (jt=lb) 1=144, 11=120, 12=133, 13=132, 14=128.

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.









BOT CHORD

9

7

6

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

8

BOT CHORD2x4 SPF No.2WEBS2x4 SPF No.2OTHERS2x4 SPF No.2

REACTIONS. All bearings 7-9-3.

(lb) - Max Horz 1=305(LC 9)

Max Uplift All uplift 100 lb or less at joint(s) except 1=-126(LC 10), 6=-102(LC 11), 7=-138(LC 12), 8=-133(LC 12), 9=-125(LC 12), 8=-133(LC 12), 9=-125(LC 12), 8=-133(LC 12), 8=-133(LC

Max Grav All reactions 250 lb or less at joint(s) 1, 6, 7, 8, 9

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

TOP CHORD 1-2=-558/553, 2-3=-447/447, 3-4=-325/335

NOTES-

 Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) 0-4-1 to 4-7-0, Exterior(2R) 4-7-0 to 7-7-7 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

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

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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 126 lb uplift at joint 1, 102 lb uplift at joint 6, 138 lb uplift at joint 7, 133 lb uplift at joint 8 and 125 lb uplift at joint 9.
- 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.







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 0.09 BC 0.06 WB 0.03 Matrix-P	DEFL. ir Vert(LL) -0.00 Vert(CT) 0.00 Horz(CT) -0.00	n (loc) l/defl L/d 1 n/r 120 1 n/r 120 7 n/a n/a	PLATES GRIP MT20 197/144 Weight: 31 lb FT = 20%
LUMBER- TOP CHORD 2x4 SF BOT CHORD 2x4 SF WEBS 2x4 SF	2F No.2 2F No.2 2F No.2	I	BRACING- TOP CHORD BOT CHORD	Structural wood sheath except end verticals.	ing directly applied or 6-0-0 oc purlins,

2x4 SPF No.2
2x4 SPF No.2
2x4 SPF No.2
2x4 SPF No.2

REACTIONS. All bearings 8-11-8.

(lb) - Max Horz 2=141(LC 9)

Max Uplift All uplift 100 lb or less at joint(s) 7, 2, 8, 9, 10 Max Grav All reactions 250 lb or less at joint(s) 7, 2, 8, 9 except 10=258(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=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 8-9-5 zone; cantilever left and right

exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

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) All plates are 2x4 MT20 unless otherwise indicated.
- 4) Gable requires continuous bottom chord bearing.
- 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 7, 2, 8, 9, 10.
- 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.







 Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 8-9-12 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

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

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

4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=118, 5=101.

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

6) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.







		3-11-8										
LOADING	(psf)	SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.20	Vert(LL)	-0.01	4-7	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.13	Vert(CT)	-0.02	4-7	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCDL	10.0	Code IRC2018/TP	12014	Matri	x-MP						Weight: 12 lb	FT = 20%

LUMBER-

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

 TOP CHORD
 Structural wood sheathing directly applied or 3-11-8 oc purlins, except end verticals.

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

REACTIONS. (size) 4=Mechanical, 2=0-3-8 Max Horz 2=69(LC 11) Max Uplift 4=-42(LC 12), 2=-75(LC 8) Max Grav 4=165(LC 1), 2=240(LC 1)

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

NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed;
- MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 3-9-12 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) Refer to girder(s) for truss to truss connections.
- 4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4, 2.
- 5) 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.







Max Holz 1=-00(LC 10) Max Uplift 1=-44(LC 13), 3=-54(LC 13), 4=-7(LC 12) Max Grav 1=190(LC 1), 3=190(LC 1), 4=281(LC 1)

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

NOTES-

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

2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed;

MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-4-13 to 3-4-13, Interior(1) 3-4-13 to 4-0-15, Exterior(2R) 4-0-15 to 7-0-15, Interior(1) 7-0-15 to 7-9-1 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

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

6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and









REACTIONS. (size) 1=4-6-1, 3=4-6-1 Max Horz 1=-41(LC 8) Max Uplift 1=-24(LC 12), 3=-24(LC 13) Max Grav 1=169(LC 1), 3=169(LC 1)

Max Grav 1=169(LC 1), 3=169(LC 1)

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

NOTES-

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

2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed;

- MWFRS (envelope) gable end zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right
- exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

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

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







11	IMF	R	-
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TOP CHORD	2x4 SPF No.2
BOT CHORD	2x4 SPF No.2
WEBS	2x4 SPF No.2
OTHERS	2x4 SPF No.2

BRACING-TOP CHORD

 Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
 Pied opiling directly applied or 10.0.0 oc brasing.

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

REACTIONS. All bearings 7-0-1.

(lb) - Max Horz 1=88(LC 9)

Max Uplift All uplift 100 lb or less at joint(s) 1, 5, 6, 7

Max Grav All reactions 250 lb or less at joint(s) 1, 5, 6 except 7=325(LC 1)

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

WEBS 2-7=-252/333

NOTES-

 Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) 0-10-13 to 3-10-13, Exterior(2N) 3-10-13 to 6-10-5 zone; cantilever left and right exposed; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60

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 1-4-0 oc.

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

6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 5, 6, 7.

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.







2x4 =

2x4 ||

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

LOADING (psf) TCLL 25.0	SPACING- 2-0-0 Plate Grip DOL 1.15	CSI. TC 0.11	DEFL. in (lo Vert(LL) n/a	oc) l/defl L/d - n/a 999	PLATES GRIP MT20 197/144
TCDL 10.0 BCLL 0.0	Lumber DOL 1.15 Rep Stress Incr YES	BC 0.06 WB 0.00	Vert(CT) n/a Horz(CT) 0.00	- n/a 999 3 n/a n/a	
BCDL 10.0	Code IRC2018/TPI2014	Matrix-P			Weight: 8 lb FT = 20%
LUMBER-			BRACING-		
TOP CHORD 2x4 SF BOT CHORD 2x4 SF	PF No.2 PF No.2		TOP CHORD Strue	uctural wood sheathing dir cept end verticals.	ectly applied or 3-8-1 oc purlins,

BOT CHORD

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

REACTIONS. 1=3-7-5, 3=3-7-5 (size) Max Horz 1=39(LC 9) Max Uplift 1=-24(LC 8), 3=-29(LC 12) Max Grav 1=116(LC 1), 3=116(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=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

2) Gable requires continuous bottom chord bearing.

- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
- 5) 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.





