

Trenco 818 Soundside Rd Edenton, NC 27932

Re: 20060093-01 108 Crossings at Anderson Creek-Kessler B-Roof

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Carter Components (Sanford, NC)).

Pages or sheets covered by this seal: E14527061 thru E14527079

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

North Carolina COA: C-0844



June 18,2020

Gilbert, Eric

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.



Design valid for use only with MiTekle 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 we band/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 **ANSUTPH Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

818 Soundside Road Edenton, NC 27932

Job	Truss	Truss Type		Qty	Ply	108 Crossings at A	nderson Creek-Ke	essler B-Roof	E14527062
20060093-01	T5SE	Roof Special Structural Gable		1	1	lah Deference (ent	ional)		E14327002
Carter Components (Sanford	l), Sanford, NC - 27332,			8.	330 s May	6 2020 MiTek Indu	ional) Istries, Inc. Thu J	un 18 11:43:38 202	20 Page 1
	-0 _t 10 ₇ 8 6-7-12	13-0-0	ID:hvcBh 17-0-0	N021MZMz 21-0-0	2DW2EtV1	1bpzbl2v-Mlm5?QoE 27-4-4	3rDXOwohmcPLf5 34-0-0	QjzgibXXCAvW9c 34 ₁₀₁ 8	GJcz5393
	0-10-8 6-7-12	6-4-4	4-0-0	4-0-0	I	6-4-4	6-7-12	0-10-8	
			4x6						Scale = 1:77.5
Ţ		12.00 12	2 5		43				
				<u>\</u>					
		4x5 📁				<			
		4	42	/ //	6 4x5 ~				
	6.00 12		* //	$\langle \rangle$		<			
11-6-(3x5 📁 📲	\$	1/4	1	3x!	5 📚		
q		40 ³					45		
J-7	5×6						The second secon		
	1 2			//				8 g	
			4	\					
	19 18	17 ¹⁶ 1	5 46	47	14 ¹³	12	11	10	
		4x5 = 4x5 =	:	5	ix8 =	4x5	=		
	3-7-8 6-7-1	2 13-0-0	3 = 21-0-0		4x5 =	27-4-4	30-4-8 34-0-0	n .	
Plate Offects (X X) [2:0	<u>3-7-8</u> <u>3-0-</u>	4 6-4-4	8-0-0			6-4-4	3-0-4 3-7-8		
LOADING (psf)	-3-0,0-1-12], [8.0-3-0,0-1-12]								
TCLL (roof) 20.0	SPACING- Plate Grip DOL	2-0-0 CSI. 1.15 TC	0.65	DEFL. Vert(LL)	in -0.26	(loc) l/defl 14-15 >999	L/d 240	PLATES MT20	GRIP 244/190
TCDL 10.0	Lumber DOL Rep Stress Incr	1.15 BC YES WB	0.78	Vert(CT) Horz(CT)	-0.46 0.05	14-15 >694 10 n/a	180 n/a		
BCLL 0.0 * BCDL 10.0	Code IRC2015/T	PI2014 Matrix	-MSH	11012(01)	0.00	10 11/4	n/a	Weight: 266 lb	FT = 20%
LUMBER-	_		BRACIN	IG-					
TOP CHORD 2x4 SP No. BOT CHORD 2x4 SP No.	2		TOP CH BOT CH	ORD ORD	Sheathe Rigid cei	d or 3-7-5 oc purlir iling directly applie	is, except end ve d or 10-0-0 oc bra	erticals. acing.	
WEBS 2x4 SP No. 7-12.3-17.2	2 *Except* 2-19.8-10: 2x4 SP No.3		WEBS		1 Row a	t midpt	5-14, 5-15		
OTHERS 2x4 SP No.	.3								
REACTIONS. All bearin	gs 3-11-0 except (jt=length)	8=0-3-8, 11=0-3-8.							
(lb) - Max Horz Max Uplift	19=-175(LC 13) All uplift 100 lb or less at joi	nt(s) 19, 10							
Max Grav	All reactions 250 lb or less	at joint(s) 18, 11 except 19=1	210(LC 2), 10=12	10(LC 2)					
FORCES. (lb) - Max. Con	np./Max. Ten All forces 250	(lb) or less except when she	own. 7- 1670/457						
7-8=-189	3/475, 2-19=-1228/381, 8-10:	=-1228/381	r=-1073/437,						
WEBS 5-14=-514	75/272, 17-18=-175/272, 15- 4/1408, 6-14=-997/466, 7-14	=-301/194, 5-15=-513/1406,	12-14=-317/1617 4-15=-997/465,						
3-15=-30	1/194, 2-17=-231/1449, 8-12:	=-232/1449							
NOTES-	ds have been considered for	this design							
2) Wind: ASCE 7-10; Vult=	130mph (3-second gust) Vas	d=103mph; TCDL=6.0psf; B	CDL=6.0psf; h=25	it; Cat. II; E	Exp B; En	closed;			
and forces & MWFRS fo	r reactions shown; Lumber D	OL=1.60 plate grip DOL=1.3	and vertical left and 3	right expo	ised;C-C	for members		minnin.	
 Truss designed for wind Gable End Details as ap 	loads in the plane of the trus plicable, or consult qualified I	s only. For studs exposed to ouilding designer as per ANS	wind (normal to th SI/TPI 1.	ne face), se	e Standa	ard Industry	""ATT	CARO	111
 TCLL: ASCE 7-10; Pr=20 roof snow: Lumber DOL: 	0.0 psf (roof live load: Lumbe =1 15 Plate DOI =1 15) [.] Cate	r DOL=1.15 Plate DOL=1.15 gory II: Exp B: Fully Exp : Ct	5); Pg=20.0 psf (gro =1 10	ound snow); Pf=13.9	9 psf (flat	A Still	ESSON	Vin
5) Unbalanced snow loads	have been considered for thi	s design.	maa flat roof lood a	f 12 0 pof	on overh	-	UQI	Jag	14
non-concurrent with othe	er live loads.			113.9 psi	on overn	angs	E (SEAL	Ξ
7) All plates are 2x4 MT208) Gable studs spaced at 2	unless otherwise indicated. -0-0 oc.						C	36322	i E −
9) * This truss has been de will fit between the bottom	signed for a live load of 20.0pm m chord and any other memb	osf on the bottom chord in all ers. with BCDL = 10.0psf.	areas where a rec	tangle 3-6	-0 tall by	2-0-0 wide	夏人に		1 3
10) Provide mechanical co	nnection (by others) of truss t	o bearing plate capable of w	ithstanding 100 lb	uplift at joi	nt(s) 19, ⁻	10.	1. 10 . 1	GINEER	43
							1110	A GILBE	1111
							1111		
								June 18,20	20

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 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 **ANS/TP11 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.





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.



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Edenton, NC 27932



TRENCIO AMITEK Affiliate 818 Soundside Road

Edenton, NC 27932

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		3-7-8			1-4-8		1-0-0	
Plate Offsets (X,Y) [3:0-5	-0,Edge], [4:0-4-0,Edge]							
LOADING (psf) TCLL (roof) 20.0 Snow (Pf/Pg) 18.9/20.0 TCDL 10.0 BCLL 0.0 * BCDL 10.0	SPACING-2-0-0Plate Grip DOL1.15Lumber DOL1.15Rep Stress IncrNOCodeIRC2015/TPI2014	CSI. TC 0.27 BC 0.71 WB 0.03 Matrix-MP	DEFL. Vert(LL) Vert(CT) Horz(CT)	in (k -0.09 7- -0.18 7- 0.02	loc) l/defl -10 >766 -10 >393 2 n/a	L/d 240 180 n/a	PLATES MT20 Weight: 50 lb	GRIP 244/190 FT = 20%
LUMBER- TOP CHORD 2x4 SP No.2 2.4: 2x10 SP	*Except*	BR. TO	ACING- P CHORD S	Sheathed o	or 6-0-0 oc pu	rlins, except	end verticals, and 2-0	-0 oc

 3-4: 2x10 SP 2400F 2.0E
 purlins: 3-5.

 BOT CHORD
 2x4 SP No.2
 BOT CHORD
 Rigid ceiling directly applied or 6-0-0 oc bracing.

 WEBS
 2x4 SP No.3
 BOT CHORD
 Rigid ceiling directly applied or 6-0-0 oc bracing.

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

(SLC) b=iviechanical, 2=0-3-0 Max Horz 2=26(LC 10) Max Uplift 6=-9(LC 8), 2=-41(LC 7) Max Grav 6=376(LC 29), 2=428(LC 31)

FORCES. (Ib) - Max. Comp./Max. Ten. - All forces 250 (Ib) or less except when shown. WEBS 3-7=-264/41

NOTES-

1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:

Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc, 2x10 - 2 rows staggered at 0-9-0 oc. Bottom chords connected as follows: 2x4 - 1 row at 0-9-0 oc.

Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.

2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.

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

4) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.33

5) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15; Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0; Min. flat roof snow load governs. Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.

6) Unbalanced snow loads have been considered for this design.

7) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.

8) Provide adequate drainage to prevent water ponding.

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

- 11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 6, 2.
- 12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

13) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 61 lb down and 33 lb up at 4-0-12 on top chord, and 118 lb down and 23 lb up at 2-0-12, and 24 lb down at 4-0-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

Continued on page 2

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Job	Truss	Truss Type	Qty	Ply	108 Crossings at Anderson Creek-Kessler B-Roof	
						E14527066
20060093-01	T1GR	Roof Special Girder	1	ົ		
				_	Job Reference (optional)	
Carter Components (Sanford), Sanford, NC - 27332,		8	.330 s May	6 2020 MiTek Industries, Inc. Thu Jun 18 11:43:23 202	0 Page 2
		ID:hvcl	3hN021MZ	MzDW2E	V1bpzbl2v-ItMRrHcnOceWcV2tEma8 FbVUfUAWcvi3JU	JzIzz539I

LOAD CASE(S) Standard

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

Vert: 1-3=-48, 3-4=-58, 4-5=-138, 6-8=-20

Concentrated Loads (lb)

Vert: 11=-38(B) 12=-118(B) 13=-24(B)

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	2-1-12		3-7-8			6-0-0		
	2-1-12	I	1-5-12			2-4-8		
Plate Offsets (X,Y) [4:0-5-0,Ed	dge], [5:0-4-0,Edge]							
LOADING (psf) TCLL (roof) 20.0 Snow (Pf/Pg) 18.9/20.0 TCDL 10.0 BCLL 0.0 BCDL 10.0	SPACING-2-0-0Plate Grip DOL1.15Lumber DOL1.15Rep Stress IncrNOCode IRC2015/TPI2014	CSI. TC 0.09 BC 0.11 WB 0.02 Matrix-MP	DEFL. Vert(LL) -0.0 Vert(CT) -0.0 Horz(CT) -0.0	in (loc) 1 8 1 7-8 0 2	l/defl >999 >999 n/a	L/d 240 180 n/a	PLATES MT20 Weight: 51 lb	GRIP 244/190 FT = 20%
LUMBER- TOP CHORD 2x4 SP No.2 *Exc 4.5: 2x10 SP 240	ept*	BR/ TO	ACING- CHORD Sheat	hed or 6-0	-0 oc pu	lins, except	end verticals, and 2-0-	-0 ос

4-5: 2x10 SP 2400F 2.0E BOT CHORD 2x4 SP No.2 2x4 SP No.3 BOT CHORD 2x4 SP No.3 REACTIONS. (size) 7=Mechanical, 2=0-3-0, 9=0-3-8

Max Horz 2=26(LC 10) Max Uplift 7=-6(LC 12), 2=-48(LC 48), 9=-5(LC 11) Max Grav 7=201(LC 30), 2=104(LC 31), 9=390(LC 31)

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

NOTES-

 2-ply truss to be connected together with 10d (0.131"x3") nails as follows: Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc, 2x10 - 2 rows staggered at 0-9-0 oc. Bottom chords connected as follows: 2x4 - 1 row at 0-9-0 oc. Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.

2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.

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

4) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.33

5) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0; Min. flat roof snow load governs. Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.
6) Unbalanced snow loads have been considered for this design.

7) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.

8) Provide adequate drainage to prevent water ponding.

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

11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 7, 2, 9.

12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
13) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 61 lb down and 33 lb up at 4-0-12 on top chord, and 24 lb down at 4-0-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

Continued on page 2

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[Job	Truss	Truss Type	Qty	Ply	108 Crossings at Anderson Creek-Kessler B-Roof	
							E14527067
	20060093-01	T1GRA	Roof Special Girder	1	2		
					_	Job Reference (optional)	
	Carter Components (Sanford), Sanford, NC - 27332,		8	.330 s May	/ 6 2020 MiTek Industries, Inc. Thu Jun 18 11:43:24 202	0 Page 2
			ID:hvcBhN	V021MZMz	DW2EtV1	bpzbl2v-m3wp3ddP8wmNEfd4nT5NXT8j53_mF3FrIzDW	qPz539H

LOAD CASE(S) Standard

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

Vert: 1-4=-48, 4-5=-58, 5-6=-138, 7-10=-20

Concentrated Loads (lb) Vert: 13=-38(F) 14=-24(F)

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- 8) Refer to girder(s) for truss to truss connections.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 6, 2.
- 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) 101 lb down and 41 lb up at 4-10-4 on top chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15 Uniform Loads (plf) Vert: 1-3=-48, 4-5=-98, 6-8=-20 Concentrated Loads (lb)

Vert: 3=-90



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Edenton, NC 27932



	2-0-0 2-0-0	+ <u>5-0-0</u> 3-0-0	<u> </u>
LOADING (psf) TCLL (roof) 20.0 Snow (Pf/Pg) 18.9/20.0 TCDL 10.0 BCLL 0.0 * BCDL 10.0	SPACING-2-0-0CSI.Plate Grip DOL1.15TCLumber DOL1.15BCRep Stress IncrNOWBCodeIRC2015/TPI2014Matrix	DEFL. in (loc) l/defl L 0.37 Vert(LL) -0.01 8-11 >999 2: 0.36 Vert(CT) -0.01 8-11 >999 1: 0.12 Horz(CT) 0.00 2 n/a r	/d PLATES GRIP 40 MT20 244/190 30 v/a Weight: 23 lb FT = 20%
LUMBER- TOP CHORD 2x4 SP No.2		BRACING- TOP CHORD Sheathed or 6-0-0 oc purlins,	, except end verticals, and 2-0-0 oc

BOT CHORD

purlins: 4-7, 4-5.

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

TOP CHORD

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

REACTIONS. (size) 6=Mechanical, 2=0-3-0, 8=0-3-8 Max Horz 2=49(LC 12) Max Uplift 6=-11(LC 15), 2=-35(LC 11) Max Grav 6=278(LC 2), 2=241(LC 35), 8=179(LC 35)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown. WEBS 5-7=-138/291

NOTES-

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

2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) -0-10-8 to 5-10-4 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=1.33

3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0; Min. flat roof snow load governs. Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4. 4) Unbalanced snow loads have been considered for this design.

5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.

6) Provide adequate drainage to prevent water ponding.

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

- 8) Refer to girder(s) for truss to truss connections.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 6, 2.
- 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) 90 lb down and 37 lb up at 4-10-4 on top chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15 Uniform Loads (plf) Vert: 1-3=-48, 4-5=-98, 6-9=-20 Concentrated Loads (lb) Vert: 3=-80



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Edenton, NC 27932



Plate Offsets $(\Lambda, f)^{}$ [3.0-5-0,0	J-Z-4]								
LOADING (psf) TCLL (roof) 20.0 Snow (Pf/Pg) 18.9/20.0 TCDL 10.0 BCLL 0.0 *	SPACING- 2-0-0 Plate Grip DOL 1.15 Lumber DOL 1.15 Rep Stress Incr NO	CSI. TC 0.07 BC 0.06 WB 0.03	DEFL. Vert(LL) Vert(CT) Horz(CT)	in (-0.00 -0.00 0.00	(loc) 9 6 5	l/defl >999 >999 n/a	L/d 240 180 n/a	PLATES MT20	GRIP 244/190
BCDL 10.0	Code IRC2015/TPI2014	Matrix-MP						Weight: 15 lb	FT = 20%
LUMBER-		BR	ACING-						

TOP CHORD	2x4 SP No.2	TOP CHORD	Sheathed or 3-7-8 oc purlins, except end verticals, and 2-0-0 oc
BOT CHORD	2x4 SP No.2		purlins: 3-4.
WEBS	2x4 SP No.3	BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 2=0-3-0, 5=Mechanical

> Max Horz 2=23(LC 10) Max Uplift 2=-32(LC 7), 5=-3(LC 7)

Max Grav 2=224(LC 31), 5=138(LC 30)

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

NOTES-

1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed;

MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.33 2) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0; Min. flat roof snow load governs. Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4. 3) Unbalanced snow loads have been considered for this design.

- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- 5) Provide adequate drainage to prevent water ponding.
- 6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 7) Refer to girder(s) for truss to truss connections.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 5.
- 9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 10) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 37 lb down and 36 lb up at 2-0-0 on top chord, and 14 lb down and 14 lb up at 2-0-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others
- 11) 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 + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15 Uniform Loads (plf) Vert: 1-3=-48, 3-4=-58, 5-7=-20 Concentrated Loads (lb) Vert: 6=-7(F)



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			3-7-8					
LOADING (psf) TCLL (roof) 20.0 Snow (Pf/Pg) 13.9/20.0 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 IRC2015/TPI2014	CSI. TC 0.18 BC 0.12 WB 0.00 Matrix-MP	DEFL. Vert(LL) - Vert(CT) - Horz(CT)	in (lo -0.01 4 -0.01 4 0.00	oc) l/de 4-7 >99 4-7 >99 3 n/	fl L/d 9 240 9 180 a n/a	PLATES MT20 Weight: 12 lb	GRIP 244/190 FT = 20%

```
LUMBER-
```

TOP CHORD 2x4 SP No.2 BOT CHORD 2x4 SP No.2 BRACING-TOP CHORD BOT CHORD

Sheathed or 3-7-8 oc purlins. Rigid ceiling directly applied or 10-0-0 oc bracing.

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

Max Horz 2=33(LC 11) Max Uplift 3=-22(LC 15), 2=-28(LC 11)

Max Grav 3=92(LC 2), 2=20(LC 1)Max Grav 3=92(LC 2), 2=201(LC 2), 4=44(LC 2)

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

NOTES-

- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) 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=1.33
- 2) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10; Min. flat roof snow load governs.
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with 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) Refer to girder(s) for truss to truss connections.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 2.



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DEFL.

Vert(LL)

Vert(CT)

Horz(CT)

in (loc)

-0.00

0.00

0.00

CSI.

TC

BC

WB

0.19

0.10

0.00

BCDL	10.0	Code IRC2015/TPI2014	Matrix-R			Weight: 13 lb
LUMBER-			BR	ACING-		
TOP CHORD	2x4 SP No.2		TC	P CHORD	Sheathed or 3-7-8 oc purlins, except e	end verticals, and 2-0-0 oc
BOT CHORD	2x4 SP No.2				purlins: 3-4.	
WEBS	2x4 SP No.3		BC	OT CHORD	Rigid ceiling directly applied or 10-0-0	oc bracing.

2-0-0

1.15

1.15

NO

I/d

120

120

n/a

l/defl

n/r

n/r

n/a

5

REACTIONS. (size) 5=3-7-8, 2=3-7-8 Max Horz 2=22(LC 8) Max Uplift 5=-3(LC 7), 2=-32(LC 7)

20.0

10.0

0.0

18.9/20.0

Max Grav 5=138(LC 30), 2=224(LC 31)

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

SPACING-

Plate Grip DOL

Rep Stress Incr

Lumber DOL

NOTES-

LOADING (psf)

TCLL (roof)

TCDL

BCLL

Snow (Pf/Pg)

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

2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed;

- MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.33
- 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) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0; Min. flat roof snow load governs. Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.
- 5) Unbalanced snow loads have been considered for this design.
- 6) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- 7) Provide adequate drainage to prevent water ponding.
- 8) Gable requires continuous bottom chord bearing.
- 9) Gable studs spaced at 2-0-0 oc.
- 10) * 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.
- 11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 2.
- 12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 13) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 37 lb down and 36 lb up at 2-0-0 on top chord, and 14 lb down and 14 lb up at 2-0-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- 14) 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 + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (plf)

Vert: 1-3=-48, 3-4=-58, 2-5=-20

Continued on page

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PLATES

MT20

GRIP

244/190

FT = 20%



[Job	Truss	Truss Type	Qty	Ply	108 Crossings at Anderson Creek-Kessler B-Roof		
							E14527072	
	20060093-01	J2GRA	Half Hip Girder	1	1			
						Job Reference (optional)		
	Carter Components (Sanford), Sanford, NC - 27332,		8	.330 s May	/ 6 2020 MiTek Industries, Inc. Thu Jun 18 11:43:18 202	0 Page 2	
		ID:hvcBhN021MZMzDW2EtV1bpzbl2v-yvZYoaYeZ4?EWk9wRC_zlCuh2exbrM2yw2mCcm						

LOAD CASE(S) Standard Concentrated Loads (Ib) Vert: 6=-7(B)

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

Max Horz 2=22(LC 11) Max Uplift 3=-11(LC 15), 2=-29(LC 11)

Max Grav 3=47(LC 2), 2=144(LC 2), 4=21(LC 2)

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

NOTES-

- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) 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=1.33
- 2) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat
- roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10; Min. flat roof snow load governs. 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with 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) Refer to girder(s) for truss to truss connections.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 2.



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			2-8-7					
LOADING (psf) TCLL (roof) 20.0 Snow (Pf/Pg) 13.9/20.0 TCDL 10.0 BCLL 0.0 *	SPACING-2-0-0Plate Grip DOL1.15Lumber DOL1.15Rep Stress IncrYES	CSI. TC 0.13 BC 0.04 WB 0.00	DEFL. in Vert(LL) 0.00 Vert(CT) -0.00 Horz(CT) 0.00	(loc) 7 4-7 3	l/defl >999 >999 n/a	L/d 240 180 n/a	PLATES MT20	GRIP 244/190
BCDL 10.0	Code IRC2015/TPI2014	Matrix-MP					Weight: 10 lb	FT = 20%
LUMBER-		BR	ACING-					

TOP CHORD

BOT CHORD

Sheathed or 2-8-7 oc purlins.

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

TOP CHORD 2x4 SP No.2 BOT CHORD 2x4 SP No.2

REACTIONS. (size) 3=Mechanical, 2=0-3-14, 4=Mechanical

Max Horz 2=21(LC 11)

Max Uplift 3=-14(LC 15), 2=-44(LC 11) Max Grav 3=61(LC 2), 2=197(LC 2), 4=27(LC 2)

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

NOTES-

- 1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) 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=1.33
- 2) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10; Min. flat roof snow load governs.
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with 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) Refer to girder(s) for truss to truss connections.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 2.



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TOP CHORD

BOT CHORD

Sheathed or 4-11-0 oc purlins.

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

LUMBER-

2x4 SP No.2 TOP CHORD BOT CHORD 2x4 SP No.2 OTHERS 2x4 SP No.3

REACTIONS. (size) 2=3-9-10, 4=3-9-10, 6=3-9-10

> Max Horz 2=-43(LC 11) Max Uplift 2=-10(LC 14), 4=-13(LC 14)

Max Grav 2=110(LC 2), 4=110(LC 2), 6=113(LC 2)

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 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) 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=1.33
- 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- 5) Gable requires continuous bottom chord bearing.
- 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) 2, 4.
- 8) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.



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

NOTES-

- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) 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=1.33
- 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.
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10; Min. flat roof snow load governs.
- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- 6) All plates are 2x4 MT20 unless otherwise indicated.
- 7) Gable requires continuous bottom chord bearing.
- 8) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 9) Gable studs spaced at 2-0-0 oc.
- 10) * 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.
- 11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 16, 9, 13, 10, 11, 12, 15.
- 12) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 9, 13, 10, 11, 12, 14, 15.



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non-concurrent with 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) Refer to girder(s) for truss to truss connections

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

7) Bearing at joint(s) 7 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.

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



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



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