

Trenco  
818 Soundside Rd  
Edenton, NC 27932

Re: B0620-2458  
Vantage A

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Comtech, Inc - Fayetteville.

Pages or sheets covered by this seal: E14462944 thru E14462956

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

North Carolina COA: C-0844



June 2, 2020

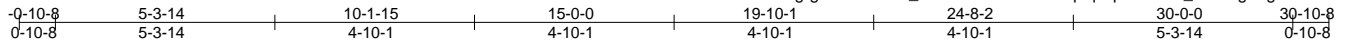
Gilbert, Eric

**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.

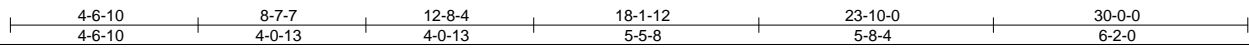
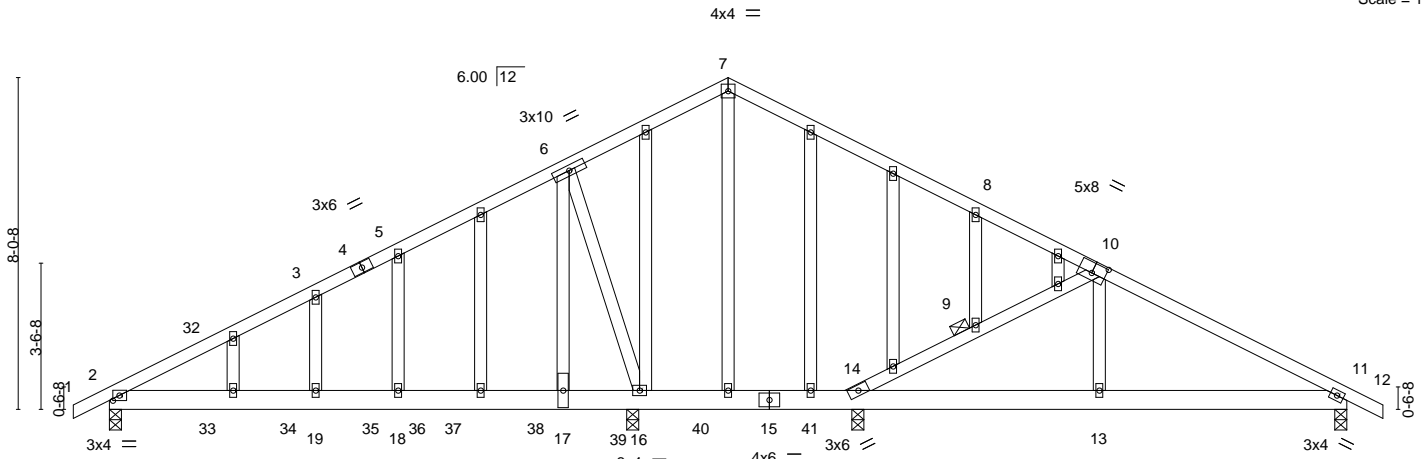
Job B0620-2458	Truss A1	Truss Type GABLE	Qty 1	Ply 1	Vantage A	E14462944
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Comtech, Inc., Fayetteville, NC - 28314,

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 1 16:06:59 2020 Page 1  
ID:Wu6AUPOZbrU4SgrgbEwhBtzeN\_9-8FHPL6mBdrE6qFqtwp2NIOoQ\_6wwwEgAvgaR37zAbuA



Scale = 1:55.9



<b>LOADING</b> (psf)		<b>SPACING-</b>		<b>CSI.</b>		<b>DEFL.</b>		<b>PLATES</b>		<b>GRIP</b>		
TCLL	20.0	Plate Grip DOL	1.15	TC	0.63	Vert(LL)	-0.22	19	>682	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.88	Vert(CT)	-0.42	19	>360	240		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.85	Horz(CT)	0.02	11	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.31	19	>497	240		
											Weight: 213 lb	FT = 20%

**LUMBER-**  
**TOP CHORD** 2x4 SP No.1 \*Except\*  
 10-14: 2x4 SP No.2  
**BOT CHORD** 2x6 SP No.1  
**WEBS** 2x4 SP No.2  
**OTHERS** 2x4 SP No.2

**BRACING-**  
**TOP CHORD** Structural wood sheathing directly applied or 5-11-8 oc purlins.  
**BOT CHORD** Rigid ceiling directly applied or 9-5-9 oc bracing.  
**JOINTS** 1 Brace at Jt(s): 9

**REACTIONS.** All bearings 0-3-8.  
 (lb) - Max Horz 2=161(LC 9)  
 Max Uplift All uplift 100 lb or less at joint(s) except 2=207(LC 8), 16=377(LC 8), 11=186(LC 28), 14=226(LC 9)  
 Max Grav All reactions 250 lb or less at joint(s) except 2=837(LC 1), 16=952(LC 21), 11=669(LC 1), 14=618(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
**TOP CHORD** 2-3=845/152, 3-5=756/197, 5-6=740/238, 6-7=361/205, 7-8=366/168, 8-10=334/68, 10-11=949/242, 9-14=646/364, 9-10=528/278  
**BOT CHORD** 2-19=123/674, 18-19=123/674, 17-18=123/674, 16-17=123/674, 14-16=0/298, 13-14=120/765, 11-13=118/770  
**WEBS** 10-13=0/258, 6-17=450/1195, 6-16=1399/642

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TC DL=6.0psf; BCDL=5.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; Lumber DOL=1.60 plate grip DOL=1.60
  - 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.
  - Provide adequate drainage to prevent water ponding.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - Gable studs spaced at 2-0-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 40.0psf 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.
  - Solid blocking is required on both sides of the truss at joint(s), 14.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 207 lb uplift at joint 2, 377 lb uplift at joint 16, 186 lb uplift at joint 11 and 226 lb uplift at joint 14.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 48 lb down and 48 lb up at 2-4-12 on top chord, and 20 lb down at 2-4-12, 69 lb down and 43 lb up at 4-4-4, 69 lb down and 43 lb up at 6-4-4, 69 lb down and 43 lb up at 8-4-4, 69 lb down and 43 lb up at 10-4-4, 69 lb down and 43 lb up at 12-4-4, and 69 lb down and 43 lb up at 14-4-4, and 69 lb down and 43 lb up at 16-4-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.



Continued on page 2

**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 **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

**ENGINEERING BY**  
**TRENCO**  
 A MiTek Affiliate

818 Soundside Road  
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Vantage A	E14462944
B0620-2458	A1	GABLE	1	1	Job Reference (optional)	

Comtech, Inc, Fayetteville, NC - 28314,

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 1 16:07:00 2020 Page 2  
 ID:Wu6AUPOZbrU4SgrgbEwHBTzeN\_9-cRfch7Oyww5k\_q0ReLHvWxzANR9fhvJ8KK?cZzAbu9

**NOTES-**

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

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

Uniform Loads (plf)

Vert: 1-7=-60, 7-10=-60, 10-12=-60, 2-11=-20

Concentrated Loads (lb)

Vert: 32=-8(F) 33=-14(F) 34=-69 35=-69 37=-69 38=-69 39=-69 40=-69 41=-69

**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 **ANSI/TPI1 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 B0620-2458	Truss A2	Truss Type COMMON	Qty 3	Ply 1	Vantage A	E14462945
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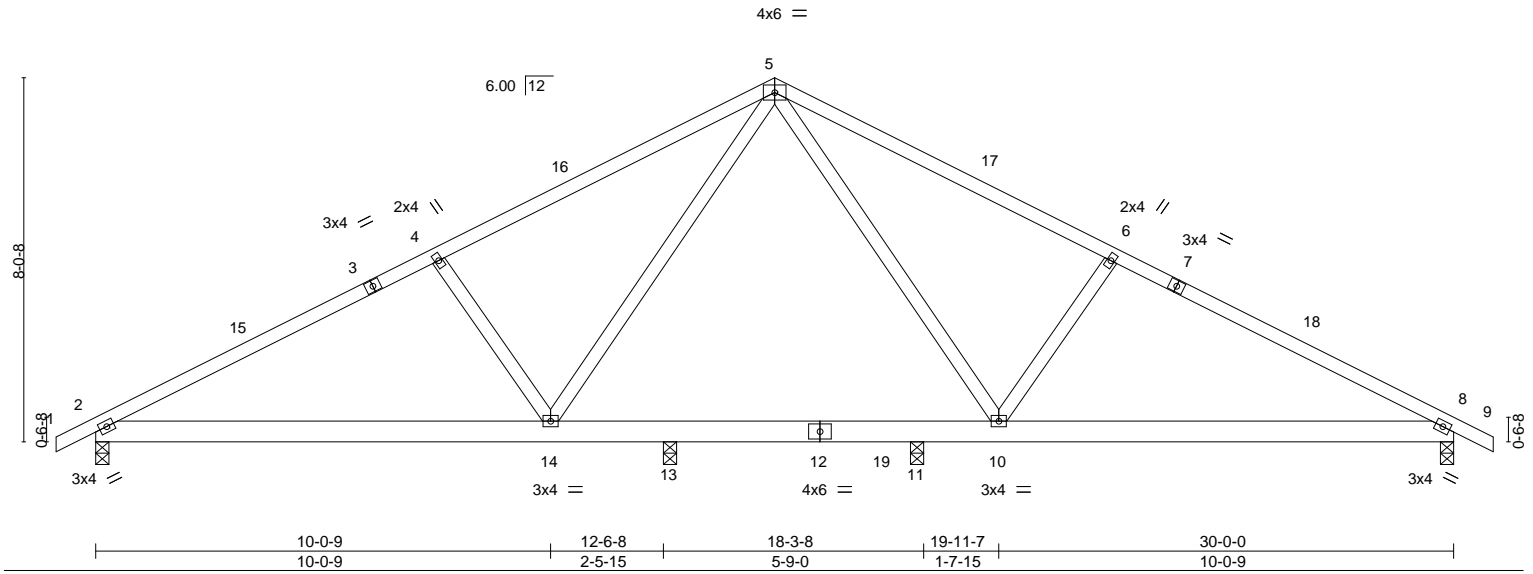
Comtech, Inc., Fayetteville, NC - 28314,

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 1 16:07:00 2020 Page 1

ID:Wu6AUPOZbrU4SgrgbEwHBtzeN\_9-cRrfch7Oyww5k\_q0ReLHvWx\_SNYJfsUJ8KK?cZzAbu9

0-10-8 0-10-8	7-6-14 7-6-14	15-0-0 7-5-2	22-5-2 7-5-2	30-0-0 7-6-14	30-10-8 0-10-8
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Scale = 1:50.9



<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	2-0-0	TC 0.54	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.42	Vert(LL) -0.09 8-10 >999 360		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.18	Vert(CT) -0.23 8-10 >612 240		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.03 8 n/a n/a		
	Code IRC2015/TPI2014		Wind(LL) 0.07 8-10 >999 240	Weight: 162 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.1	TOP CHORD Structural wood sheathing directly applied or 4-5-10 oc purlins.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.2	

**REACTIONS.** All bearings 0-3-8.  
 (lb) - Max Horz 2=103(LC 8)  
 Max Uplift All uplift 100 lb or less at joint(s) 11 except 2=108(LC 10), 8=103(LC 11)  
 Max Grav All reactions 250 lb or less at joint(s) except 2=1035(LC 1), 8=974(LC 1), 13=333(LC 16), 11=488(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-4=-1562/476, 4-5=-1311/484, 5-6=-1166/435, 6-8=-1417/427  
 BOT CHORD 2-14=-288/1300, 13-14=-72/814, 11-13=-72/814, 10-11=-72/814, 8-10=-245/1173  
 WEBS 5-10=-66/340, 6-10=-431/276, 5-14=-121/524, 4-14=-426/274

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TC DL=6.0psf; BCDL=5.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -0-10-8 to 3-6-5, Interior(1) 3-6-5 to 10-7-3, Exterior(2) 10-7-3 to 19-4-13, Interior(1) 19-4-13 to 26-5-11, Exterior(2) 26-5-11 to 30-10-8 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 40.0psf 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.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 11 except (jt=lb) 2=108, 8=103.



Job B0620-2458	Truss A3	Truss Type COMMON	Qty 19	Ply 1	Vantage A	E14462946
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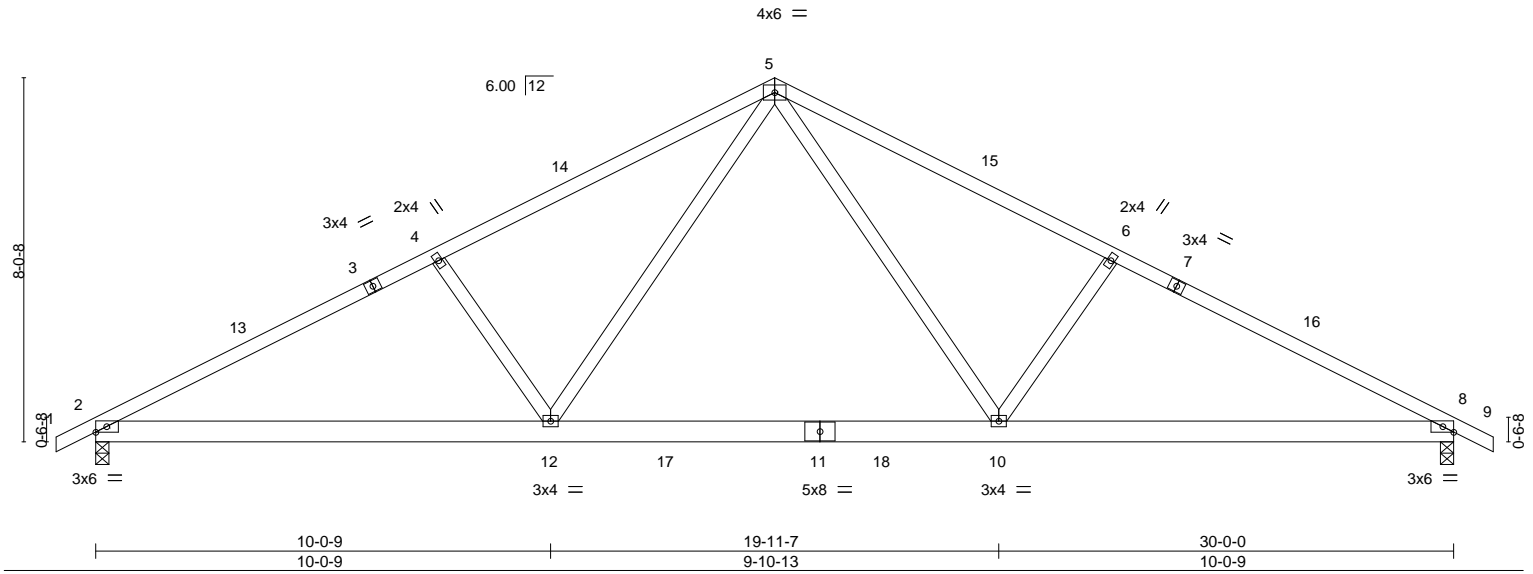
Comtech, Inc., Fayetteville, NC - 28314,

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 1 16:07:01 2020 Page 1

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0-10-8 0-10-8	7-6-14 7-6-14	15-0-0 7-5-2	22-5-2 7-5-2	30-0-0 7-6-14	30-10-8 0-10-8
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Scale = 1:50.9



<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	2-0-0	TC 0.60	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.53	Vert(LL) -0.23 10-12 >999 360		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.22	Vert(CT) -0.32 10-12 >999 240		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.04 8 n/a n/a		
	Code IRC2015/TPI2014		Wind(LL) 0.06 8-10 >999 240	Weight: 162 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.1	TOP CHORD Structural wood sheathing directly applied or 3-8-2 oc purlins.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.2	

**REACTIONS.** (size) 2=0-3-8, 8=0-3-8  
 Max Horz 2=-103(LC 8)  
 Max Uplift 2=-115(LC 10), 8=-115(LC 11)  
 Max Grav 2=1250(LC 1), 8=1250(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-4=-2135/588, 4-5=-1929/597, 5-6=-1929/597, 6-8=-2135/588  
 BOT CHORD 2-12=-387/1857, 10-12=-156/1238, 8-10=-387/1816  
 WEBS 5-10=-153/799, 6-10=-411/269, 5-12=-153/799, 4-12=-411/269

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCdL=6.0psf; BCDL=5.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -0-10-8 to 3-6-5, Interior(1) 3-6-5 to 10-7-3, Exterior(2) 10-7-3 to 19-4-13, Interior(1) 19-4-13 to 26-5-11, Exterior(2) 26-5-11 to 30-10-8 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 40.0psf 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.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=115, 8=115.

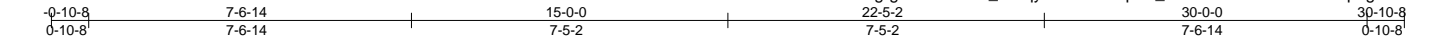


June 2, 2020

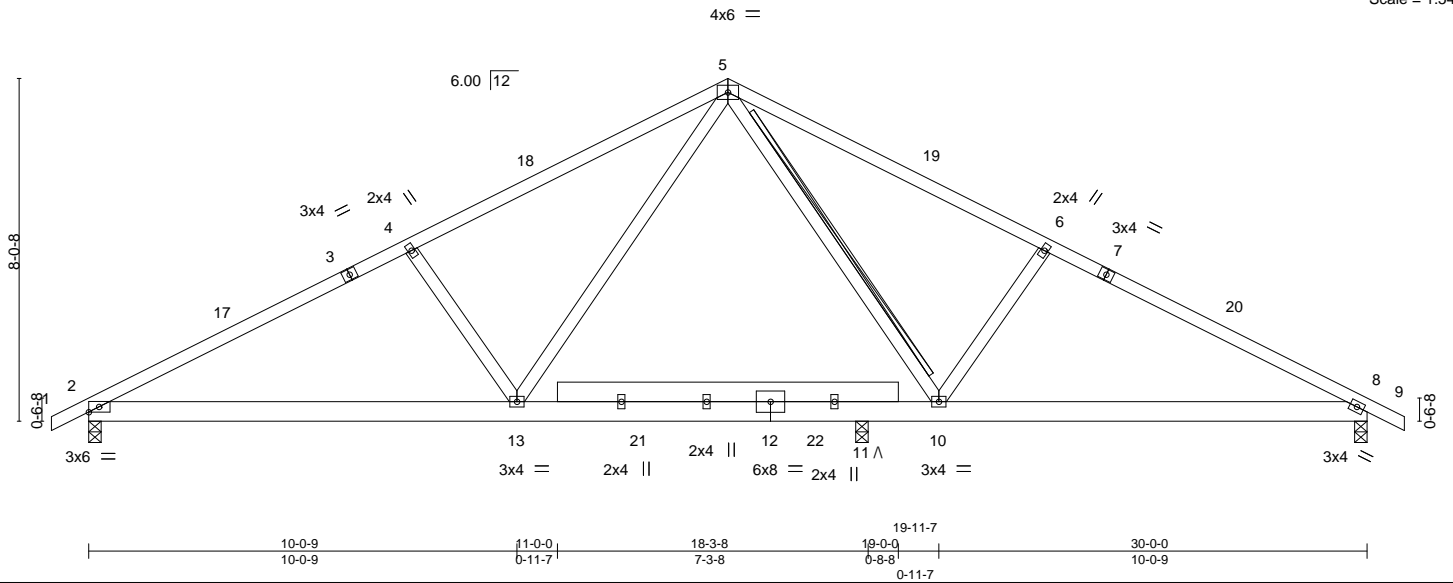
Job B0620-2458	Truss A3-P	Truss Type COMMON	Qty 4	Ply 1	Vantage A	E14462947
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Comtech, Inc., Fayetteville, NC - 28314,

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 1 16:07:02 2020 Page 1  
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Scale = 1:54.1



LOADING (psf)	SPACING-	2-1-8	CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.71	Vert(LL)	-0.10	8-10	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.64	Vert(CT)	-0.25	8-10	>572	240		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.24	Horz(CT)	0.03	8	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S	Wind(LL)	0.07	8-10	>999	240		
									Weight: 181 lb	FT = 20%

**LUMBER-**  
 TOP CHORD 2x4 SP No.1  
 BOT CHORD 2x6 SP No.1  
 WEBS 2x4 SP No.2 \*Except\*  
 14-15: 2x6 SP No.1

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 4-2-2 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
 WEBS T-Brace: 2x4 SPF No.2 - 5-10  
 Fasten (2X) T and I braces to narrow edge of web with 10d (0.131"x3") nails, 6in o.c., with 3in minimum end distance.  
 Brace must cover 90% of web length.

**REACTIONS.** (size) 2=0-3-8, 8=0-3-8, 11=0-3-8  
 Max Horz 2=110(LC 8)  
 Max Uplift 2=123(LC 10), 8=123(LC 11), 11=REL  
 Max Grav 2=1130(LC 1), 8=1024(LC 1), 11=750(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-4=-1738/625, 4-5=-1472/634, 5-6=-1216/634, 6-8=-1483/625  
 BOT CHORD 2-13=-411/1449, 11-13=-165/881, 10-11=-165/881, 8-10=-411/1226  
 WEBS 5-10=-162/319, 6-10=-458/286, 5-13=-162/691, 4-13=-449/286

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TC DL=6.0psf; BCDL=5.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -0-10-8 to 3-6-5, Interior(1) 3-6-5 to 10-7-3, Exterior(2) 10-7-3 to 19-4-13, Interior(1) 19-4-13 to 26-5-11, Exterior(2) 26-5-11 to 30-10-8 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 40.0psf 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.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=123, 8=123.
  - "A" indicates Released bearing: allow for upward movement at joint(s) 11.
  - Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.



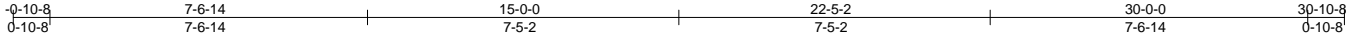


Job B0620-2458	Truss A4-P	Truss Type COMMON	Qty 2	Ply 1	Vantage A	E14462948
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Comtech, Inc., Fayetteville, NC - 28314,

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 1 16:07:03 2020 Page 1

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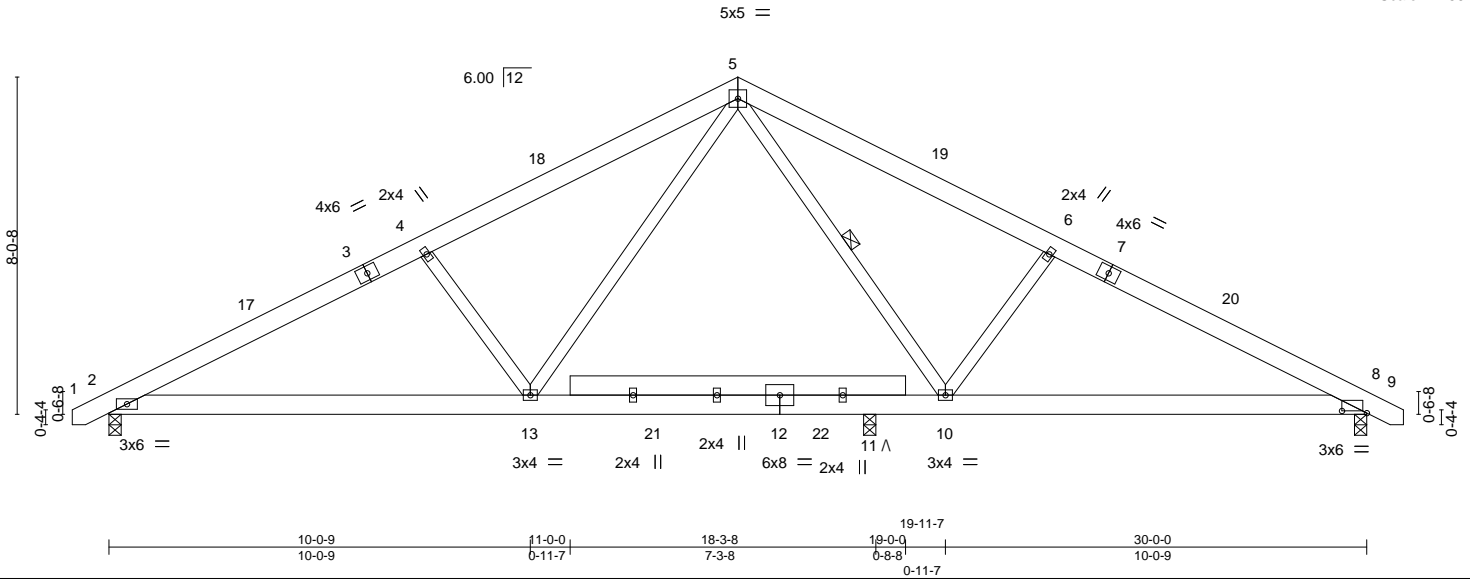


Plate Offsets (X,Y)-- [8:0-7-2,0-0-10]

<b>LOADING</b> (psf)	<b>SPACING-</b>	2-1-8	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL	1.15	TC 0.30	Vert(LL)	-0.09	8-10	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.59	Vert(CT)	-0.21	8-10	>673		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.23	Horz(CT)	0.03	8	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S	Wind(LL)	0.06	8-10	>999		
								Weight: 211 lb	FT = 20%

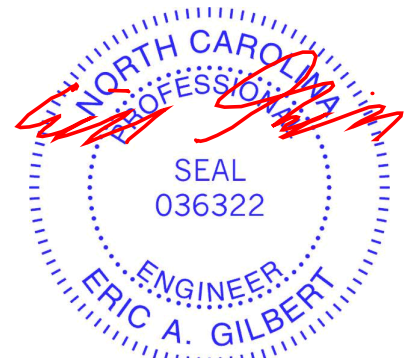
**LUMBER-**  
 TOP CHORD 2x6 SP No.1  
 BOT CHORD 2x6 SP No.1  
 WEBS 2x4 SP No.2 \*Except\*  
 14-15: 2x6 SP No.1

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 5-6-13 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
 WEBS 1 Row at midpt 5-10

**REACTIONS.** (size) 2=0-3-8, 8=0-3-8, 11=0-3-8  
 Max Horz 2=109(LC 9)  
 Max Uplift 2=-120(LC 10), 8=-120(LC 11), 11=REL  
 Max Grav 2=1138(LC 1), 8=1041(LC 1), 11=704(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-4=-1792/642, 4-5=-1537/643, 5-6=-1299/643, 6-8=-1556/642  
 BOT CHORD 2-13=-434/1534, 11-13=-173/923, 10-11=-173/923, 8-10=-434/1327  
 WEBS 5-10=-167/359, 6-10=-490/299, 5-13=-167/704, 4-13=-480/299

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TC DL=6.0psf; BCDL=5.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-8-10 to 3-8-3, Interior(1) 3-8-3 to 10-7-3, Exterior(2) 10-7-3 to 19-4-13, Interior(1) 19-4-13 to 26-3-13, Exterior(2) 26-3-13 to 30-8-10 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 40.0psf 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.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=120, 8=120.
  - "A" indicates Released bearing: allow for upward movement at joint(s) 11.



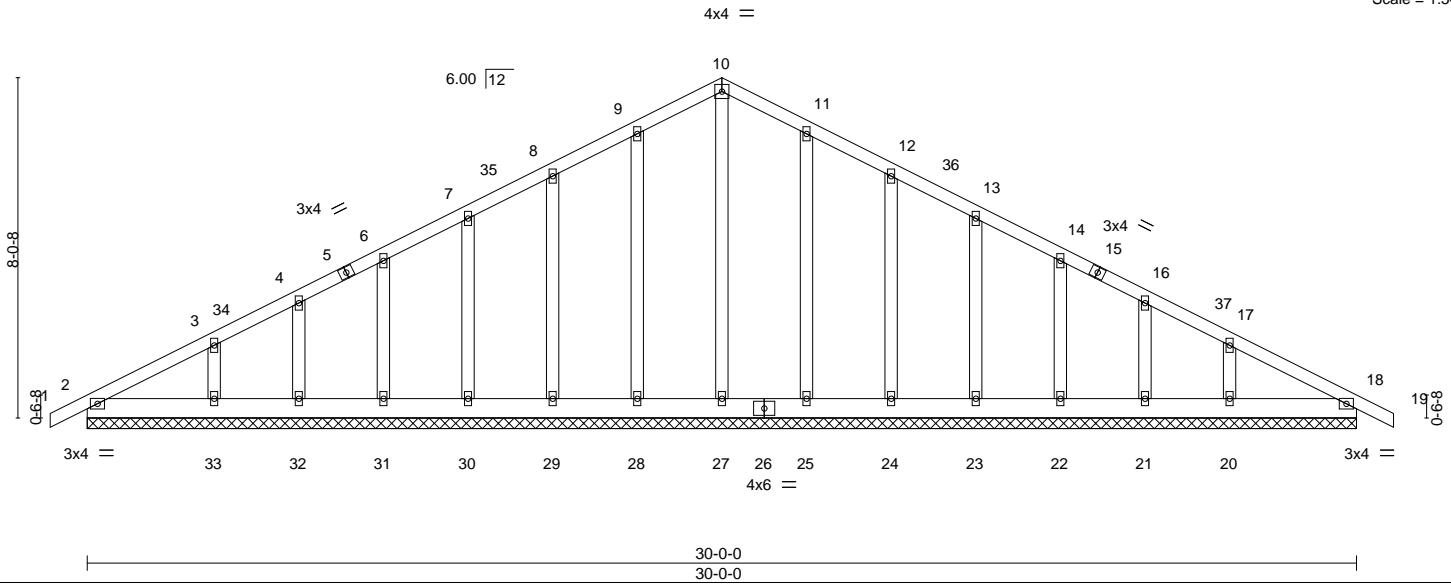
June 2, 2020

**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 **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

ENGINEERING BY  
**TRENCO**  
 A MITEK Affiliate  
 818 Soundside Road  
 Edenton, NC 27932

Job B0620-2458	Truss A5	Truss Type GABLE	Qty 1	Ply 1	Vantage A	E14462949
Comtech, Inc., Fayetteville, NC - 28314,					8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 1 16:07:04 2020 Page 1	
-0-10-8 0-10-8					15-0-0 15-0-0	
30-0-0 15-0-0					30-10-8 0-10-8	

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 1 16:07:04 2020 Page 1  
 ID:Wu6AUPOZbrU4SgrgbEwHBtzeN\_9-UD4AS3Av09TXCb7ngTPD4M5nl?0Jbfzv3yICILzAbu5



<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	2-0-0	TC 0.08	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.04	Vert(LL) 0.00 18 n/r 120		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.15	Vert(CT) 0.00 18 n/r 120		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.00 18 n/a n/a		
	Code IRC2015/TPI2014			Weight: 202 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6'-0-0 oc purlins.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10'-0-0 oc bracing.
OTHERS 2x4 SP No.2	

**REACTIONS.** All bearings 30'-0-0.  
 (lb) - Max Horz 2=-161(LC 15)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 18, 28, 29, 30, 31, 32, 25, 24, 23, 22, 21 except 33=-117(LC 10), 20=-114(LC 11)  
 Max Grav All reactions 250 lb or less at joint(s) 2, 18, 27, 28, 29, 30, 31, 32, 33, 25, 24, 23, 22, 21, 20

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 9-10=-98/326, 10-11=-98/326

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=5.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) -0-10-8 to 3-6-5, Exterior(2) 3-6-5 to 10-7-3, Corner(3) 10-7-3 to 19-4-13, Exterior(2) 19-4-13 to 26-5-11, Corner(3) 26-5-11 to 30-10-8 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - Gable requires continuous bottom chord bearing.
  - Gable studs spaced at 2'-0-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 40.0psf 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.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 18, 28, 29, 30, 31, 32, 25, 24, 23, 22, 21 except (jt=lb) 33=117, 20=114.



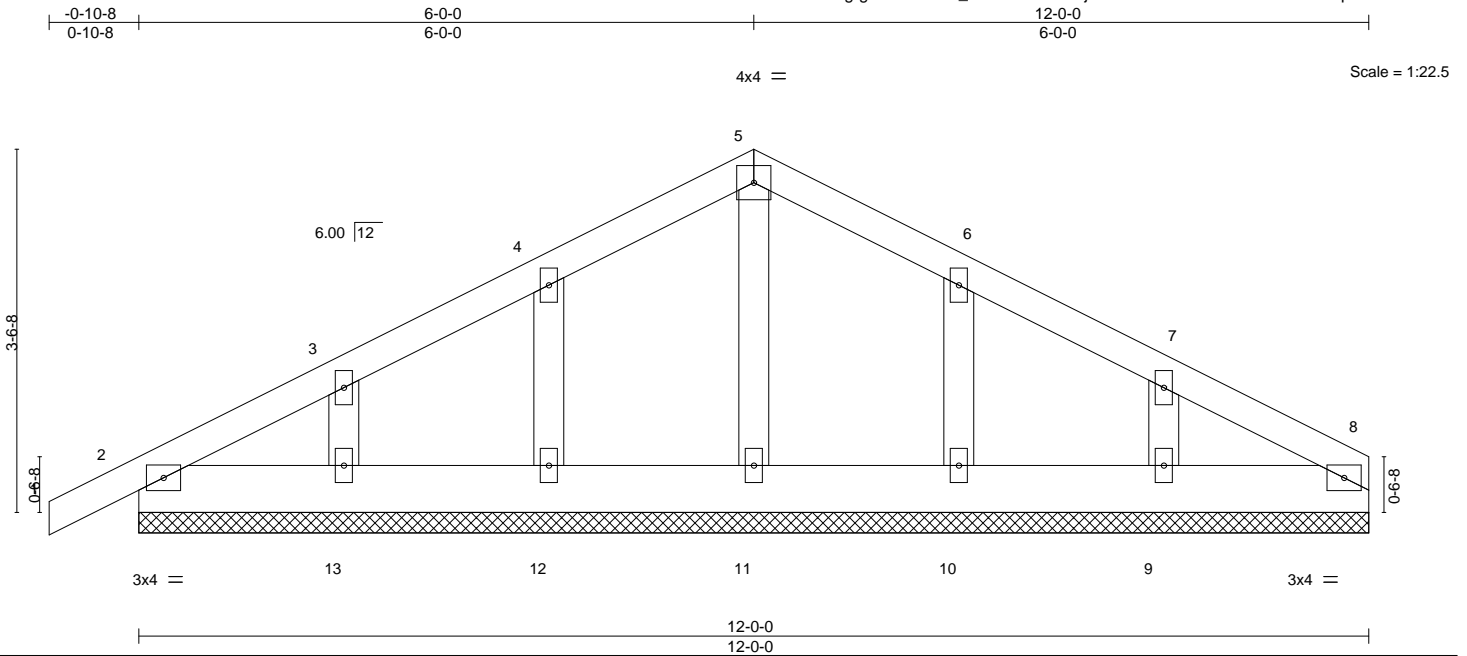
June 2,2020



Job B0620-2458	Truss B1	Truss Type COMMON SUPPORTED GAB	Qty 1	Ply 1	Vantage A Job Reference (optional)	E14462950
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Comtech, Inc., Fayetteville, NC - 28314,

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 1 16:07:06 2020 Page 1  
ID:Wu6AUPOZbrU4SgrgbEwhBtzeN\_9-RbCxtkC9YmjFSvHAnuSh9nB7coh43b7BWGnJpDzAbu3



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP	
TCLL 20.0	Plate Grip DOL	1.15	TC 0.05	Vert(LL)	-0.00	1	n/r	120	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.02	Vert(CT)	-0.00	1	n/r	120		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.04	Horz(CT)	0.00	8	n/a	n/a		
BCDL 10.0	Code	IRC2015/TPI2014	Matrix-S						Weight: 62 lb	FT = 20%

#### LUMBER-

TOP CHORD 2x4 SP No.1  
BOT CHORD 2x6 SP No.1  
OTHERS 2x4 SP No.2

#### BRACING-

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

#### REACTIONS.

All bearings 12'-0-0.  
(lb) - Max Horz 2=75(LC 10)  
Max Uplift All uplift 100 lb or less at joint(s) 2, 12, 13, 10, 9  
Max Grav All reactions 250 lb or less at joint(s) 8, 2, 11, 12, 13, 10, 9

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

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCCL=6.0psf; BCDL=5.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2'-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 40.0psf 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 12, 13, 10, 9.
- Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 8.



June 2, 2020

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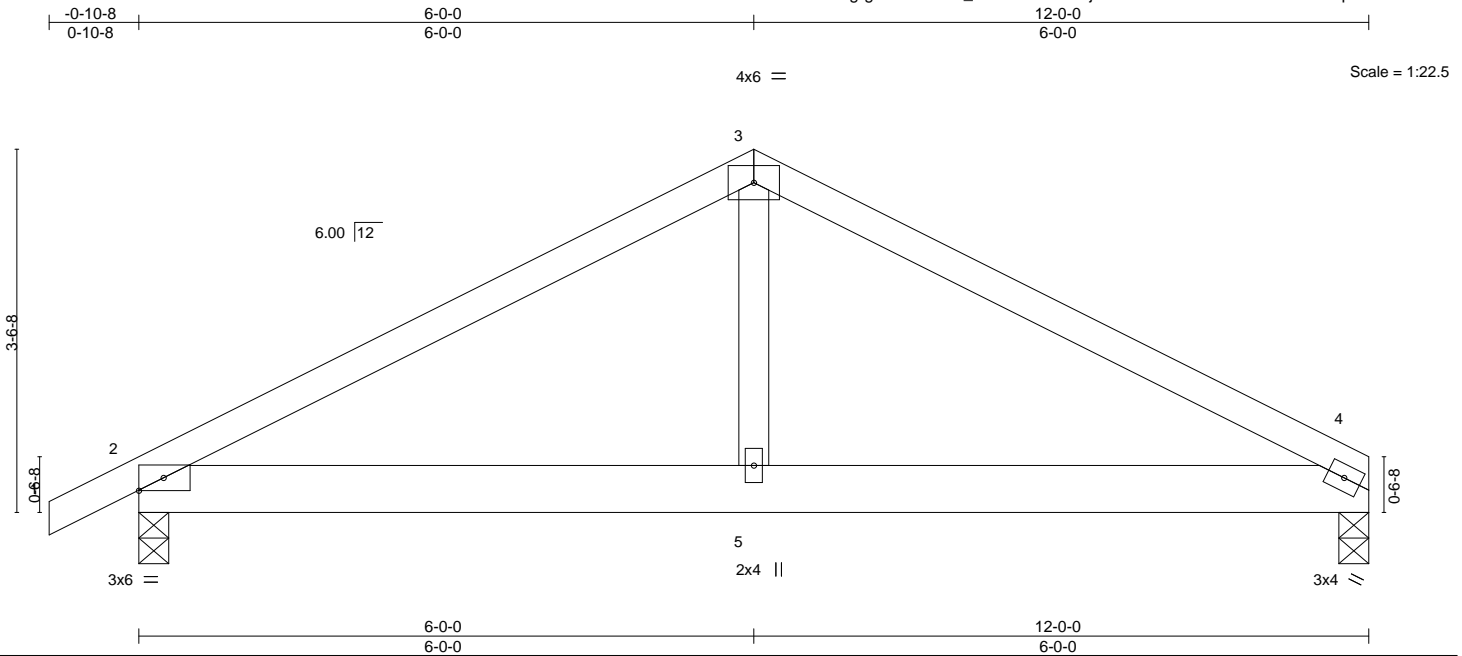
ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932

Job B0620-2458	Truss B2	Truss Type COMMON	Qty 1	Ply 1	Vantage A	E14462951
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Comtech, Inc., Fayetteville, NC - 28314,

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 1 16:07:06 2020 Page 1  
ID:Wu6AUPOZbrU4SgrgbEwHBtzeN\_9-RbCxtkC9YmjFSvHAnuSh9nB2sofo3ahBWGnJpDzAbu3



LOADING (psf)	SPACING-	CSL	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.15	TC 0.36	Vert(LL) -0.01	2-5	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.16	Vert(CT) -0.03	2-5	>999	240		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.07	Horz(CT) 0.01	4	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-S	Wind(LL) 0.01	2-5	>999	240	Weight: 54 lb	FT = 20%

#### LUMBER-

TOP CHORD 2x4 SP No.1  
BOT CHORD 2x6 SP No.1  
WEBS 2x4 SP No.2

#### BRACING-

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

#### REACTIONS.

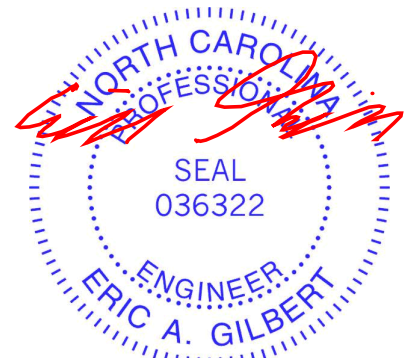
(size) 4=0-3-8, 2=0-3-8  
Max Horz 2=46(LC 7)  
Max Uplift 4=-39(LC 11), 2=-54(LC 10)  
Max Grav 4=466(LC 1), 2=532(LC 1)

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

TOP CHORD 2-3=-653/276, 3-4=-649/271  
BOT CHORD 2-5=-134/499, 4-5=-134/499  
WEBS 3-5=0/296

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCCL=6.0psf; BCDL=5.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 40.0psf 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4, 2.



June 2, 2020

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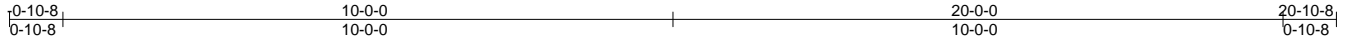
818 Soundside Road  
Edenton, NC 27932

Job B0620-2458	Truss G1	Truss Type GABLE	Qty 1	Ply 1	Vantage A	E14462952
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Comtech, Inc., Fayetteville, NC - 28314,

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 1 16:07:08 2020 Page 1

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4x4 =

Scale = 1:37.8

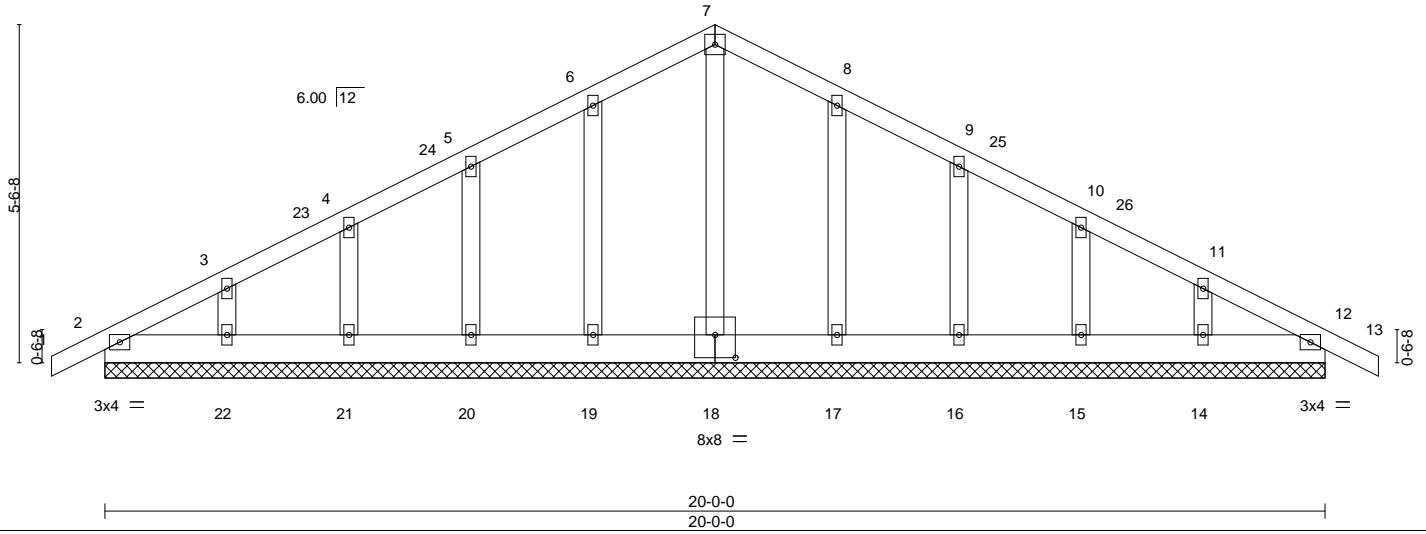


Plate Offsets (X,Y)-- [18:0-4-0,0-4-8]

<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL	1.15	TC 0.06	Vert(LL)	-0.00	12	n/r	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.02	Vert(CT)	-0.00	12	n/r		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.05	Horz(CT)	0.00	12	n/a		
BCDL 10.0	Code	IRC2015/TPI2014	Matrix-S						
								Weight: 118 lb	FT = 20%

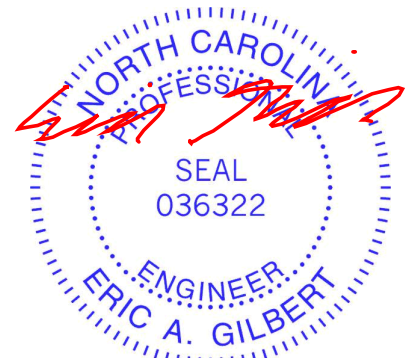
**LUMBER-**  
 TOP CHORD 2x4 SP No.1  
 BOT CHORD 2x6 SP No.1  
 OTHERS 2x4 SP No.2

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

**REACTIONS.** All bearings 20-0-0.  
 (lb) - Max Horz 2=110(LC 14)  
 Max Uplift All uplift 100 lb or less at joint(s) 12, 2, 19, 20, 21, 22, 17, 16, 15, 14  
 Max Grav All reactions 250 lb or less at joint(s) 12, 2, 18, 19, 20, 21, 22, 17, 16, 15, 14

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

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=5.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) -0-10-8 to 3-6-5, Exterior(2) 3-6-5 to 5-7-3, Corner(3) 5-7-3 to 14-4-13, Exterior(2) 14-4-13 to 16-5-11, Corner(3) 16-5-11 to 20-10-8 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - Gable requires continuous bottom chord bearing.
  - Gable studs spaced at 2-0-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 40.0psf 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.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 12, 2, 19, 20, 21, 22, 17, 16, 15, 14.



June 2, 2020

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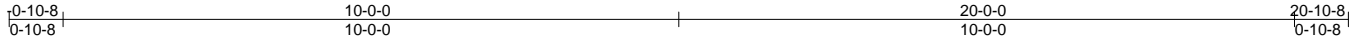
ENGINEERING BY  
**TRENCO**  
 A MiTek Affiliate  
 818 Soundside Road  
 Edenton, NC 27932

Job B0620-2458	Truss G2	Truss Type Common	Qty 5	Ply 1	Vantage A	E14462953
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8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 1 16:07:08 2020 Page 1

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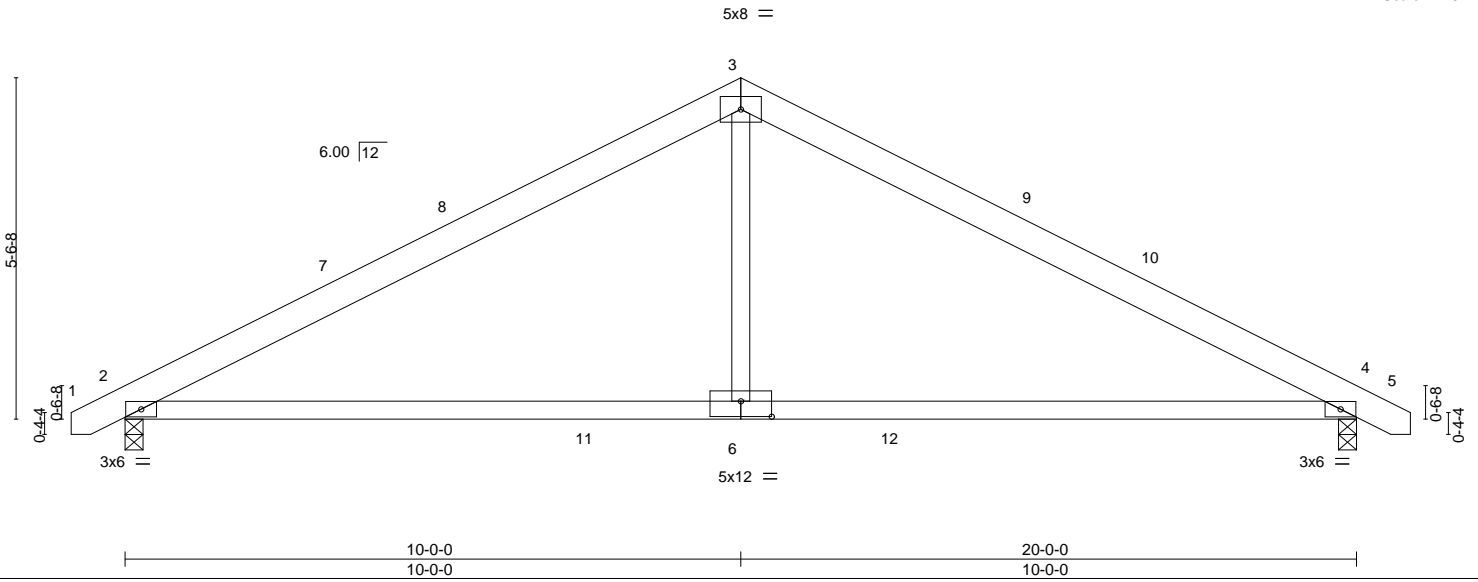


Plate Offsets (X,Y)--	[6:0-6-0,0-3-0]
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LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.15	TC 0.58	Vert(LL) -0.17	2-6	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.76	Vert(CT) -0.36	2-6	>659	240		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.14	Horz(CT) 0.03	4	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-S	Wind(LL) 0.06	2-6	>999	240		
							Weight: 94 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 5-8-14 oc purlins.
BOT CHORD 2x4 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.2	

**REACTIONS.** (size) 4=0-3-8, 2=0-3-8  
 Max Horz 2=-70(LC 8)  
 Max Uplift 4=-79(LC 11), 2=-79(LC 10)  
 Max Grav 4=882(LC 2), 2=882(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1252/350, 3-4=-1252/350  
 BOT CHORD 2-6=-151/1048, 4-6=-151/1048  
 WEBS 3-6=0/612

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TC DL=6.0psf; BCDL=5.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -0-8-10 to 3-8-3, Interior(1) 3-8-3 to 5-7-3, Exterior(2) 5-7-3 to 14-4-13, Interior(1) 14-4-13 to 16-3-13, Exterior(2) 16-3-13 to 20-8-10 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 40.0psf 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.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4, 2.

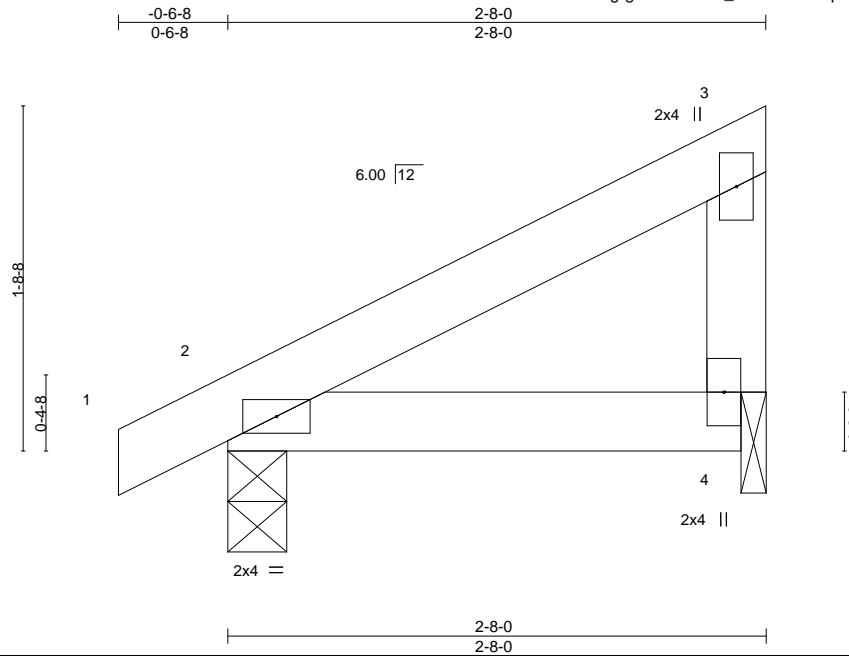


June 2, 2020

Job B0620-2458	Truss J3	Truss Type Jack-Open	Qty 7	Ply 1	Vantage A	E14462954
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8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 1 16:07:09 2020 Page 1  
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Scale = 1:11.4

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.06	Vert(LL)	-0.00	2-4	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.05	Vert(CT)	-0.00	2-4	>999		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.02	Horz(CT)	0.00		n/a		n/a
BCDL 10.0	Code IRC2015/TPI2014		Matrix-P	Wind(LL)	0.00	2	****	Weight: 11 lb	FT = 20%

**LUMBER-**

TOP CHORD 2x4 SP No.1  
BOT CHORD 2x4 SP No.1  
WEBS 2x4 SP No.2

**BRACING-**

TOP CHORD Structural wood sheathing directly applied or 2-8-0 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.**

(size) 2=0-3-8, 4=0-1-8  
Max Horz 2=49(LC 10)  
Max Uplift 2=-12(LC 10), 4=-23(LC 10)  
Max Grav 2=142(LC 1), 4=89(LC 1)

**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; TC DL=6.0psf; BCDL=5.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; 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) \* This truss has been designed for a live load of 40.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) Bearing at joint(s) 4 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 5) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 4.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 4.



June 2, 2020

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Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

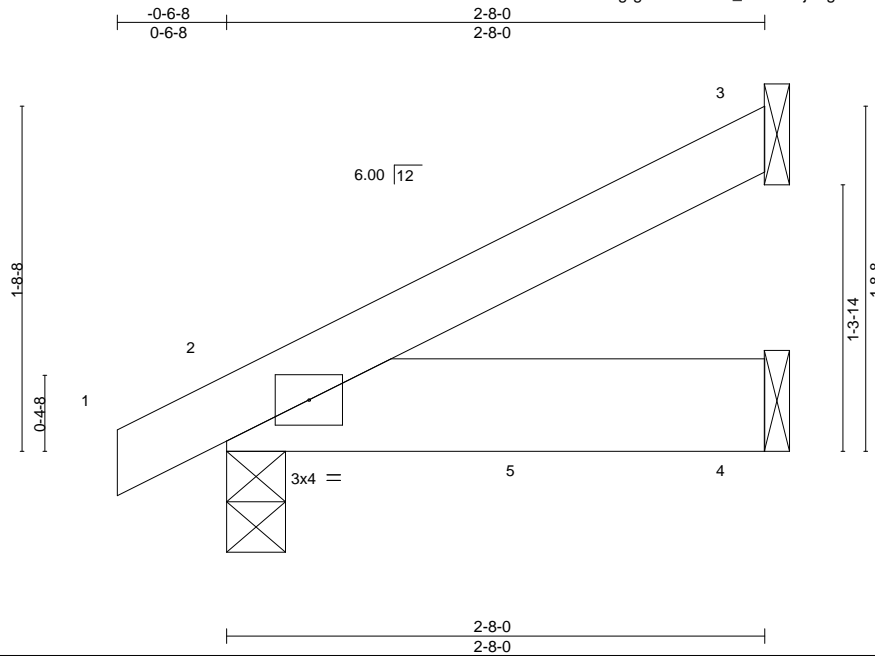


818 Soundside Road  
Edenton, NC 27932

Job B0620-2458	Truss J4	Truss Type Jack-Open Girder	Qty 1	Ply 1	Vantage A	E14462955
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Comtech, Inc., Fayetteville, NC - 28314,

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 1 16:07:10 2020 Page 1  
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LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.08	Vert(LL)	-0.00	2	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.03	Vert(CT)	-0.00	2-4	>999		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.00	Horz(CT)	-0.00	3	n/a		
BCDL 10.0	Code	IRC2015/TPI2014	Matrix-P	Wind(LL)	-0.00	2	>999	Weight: 12 lb	FT = 20%

**LUMBER-**

TOP CHORD 2x4 SP No.1  
BOT CHORD 2x6 SP No.1

**BRACING-**

TOP CHORD Structural wood sheathing directly applied or 2-8-0 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.**

(size) 3=Mechanical, 2=0-3-8, 4=Mechanical  
Max Horz 2=49(LC 8)  
Max Uplift 3=-35(LC 8), 2=-12(LC 8)  
Max Grav 3=68(LC 1), 2=153(LC 1), 4=54(LC 3)

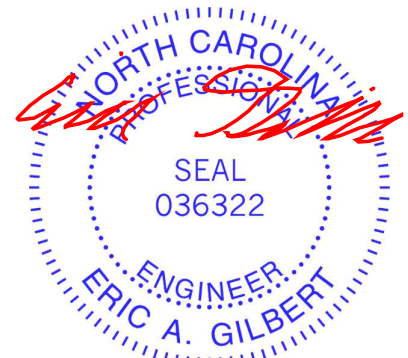
**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

**NOTES-**

- 1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=5.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 40.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 2.
- 6) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 20 lb down at 1-6-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- 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: 1-3=-60, 2-4=-20  
Concentrated Loads (lb)  
Vert: 5=-17(B)



June 2, 2020

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Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



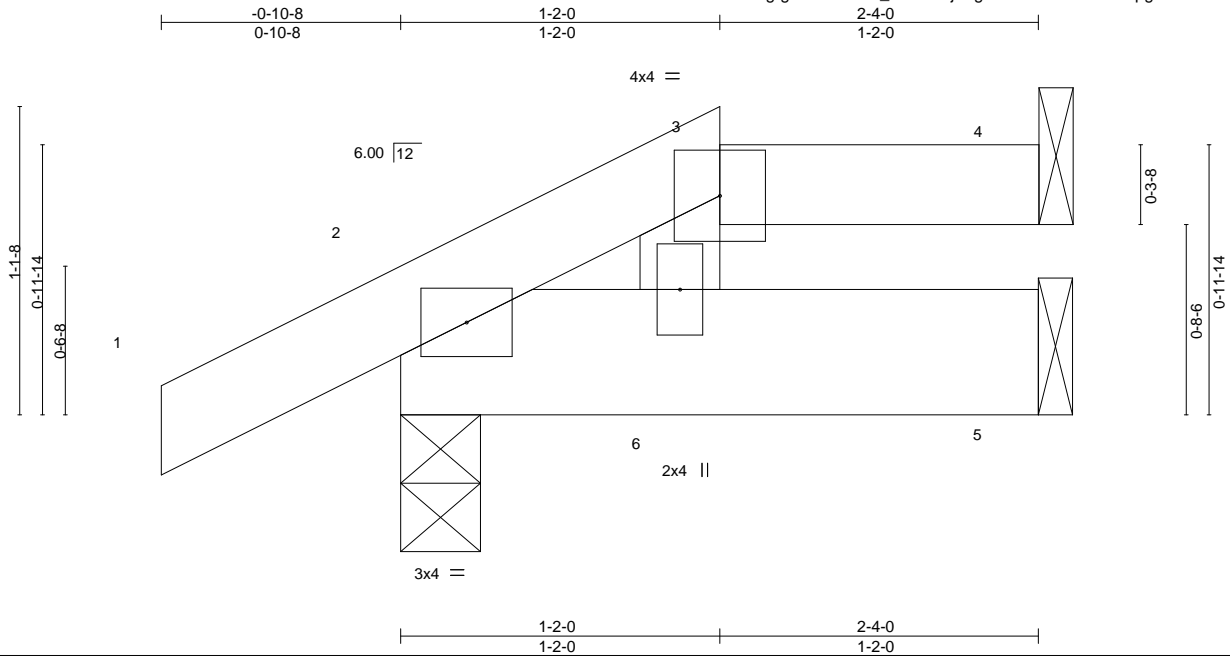
818 Soundside Road  
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Job B0620-2458	Truss J5	Truss Type Half Hip	Qty 1	Ply 1	Vantage A	E14462956
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8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 1 16:07:10 2020 Page 1  
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Scale = 1:8.4

LOADING (psf)	SPACING-	CSL	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.05	Vert(LL) -0.00	6	>999	360	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.02	Vert(CT) -0.00	6	>999	240		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.01	Horz(CT) 0.00	4	n/a	n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-P	Wind(LL) 0.00	6	>999	240	Weight: 11 lb	FT = 20%
	Code IRC2015/TPI2014							

**LUMBER-**

TOP CHORD 2x4 SP No.1  
BOT CHORD 2x6 SP No.1  
WEBS 2x4 SP No.2

**BRACING-**

TOP CHORD Structural wood sheathing directly applied or 2-4-0 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

**REACTIONS.**

(size) 4=Mechanical, 2=0-3-8, 5=Mechanical  
Max Horz 2=28(LC 10)  
Max Uplift 4=-11(LC 6), 2=-23(LC 10)  
Max Grav 4=33(LC 1), 2=161(LC 1), 5=48(LC 3)

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

**NOTES-**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCCL=6.0psf; BCDL=5.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 40.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4, 2.



June 2,2020

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**

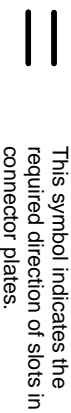
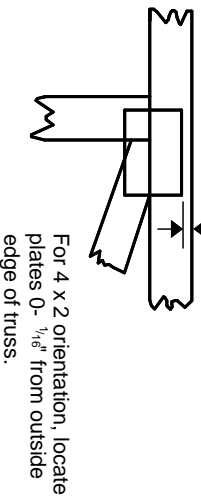
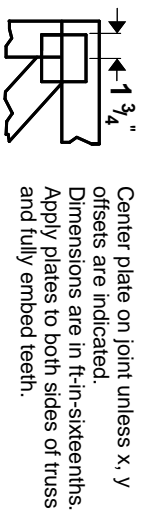
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall 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 **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

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# Symbols

## PLATE LOCATION AND ORIENTATION



\* Plate location details available in **MITrak 20/20 software or upon request.**

## PLATE SIZE

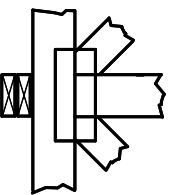
**4 X 4**

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

## LATERAL BRACING LOCATION



## BEARING

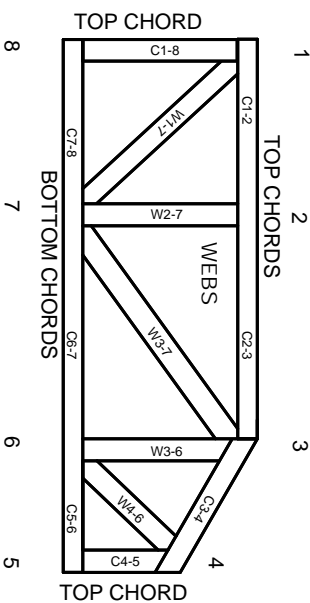


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

## Industry Standards:

ANSI/TPI 1: National Design Specification for Metal Plate Connected Wood Truss Construction.  
DSB-89: Design Standard for Bracing.  
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

# Numbering System



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

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

## PRODUCT CODE APPROVALS

ICC-ES Reports:

ESR-1311, ESR-1352, ESR1988  
ER-3907, ESR-2362, ESR-1397, ESR-3282

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

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

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MITek Engineering Reference Sheet: MII-7473 rev. 10/03/2015



# General Safety Notes

**Failure to Follow Could Cause Property Damage or Personal Injury**

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TPI 1 Quality Criteria.