

RE: B0419-1974
Topsail A

Trenco
818 Soundside Rd
Edenton, NC 27932

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

Design Code: IRC2015/TPI2014
Wind Code: ASCE 7-10
Roof Load: 40.0 psf

Design Program: MiTek 20/20 8.1
Wind Speed: 130 mph
Floor Load: N/A psf

This package includes 13 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date
1	E12828932	a01	3/21/2019
2	E12828933	a04	3/21/2019
3	E12828934	a05	3/21/2019
4	E12828935	a06	3/21/2019
5	E12828936	a09	3/21/2019
6	E12828937	a10	3/21/2019
7	E12828938	b01	3/21/2019
8	E12828939	b02	3/21/2019
9	E12828940	b03	3/21/2019
10	E12828941	m01	3/21/2019
11	E12828942	m02	3/21/2019
12	E12828943	m03	3/21/2019
13	E12828944	v01	3/21/2019

The truss drawing(s) referenced above have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Comtech, Inc - Fayetteville. Truss Design Engineer's Name: Gilbert, Eric My license renewal date for the state of North Carolina is December 31, 2019. North Carolina COA: C-0844



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 TRENCO. Any project specific information included is for TRENCO customers file reference purpose only, and was not taken into account in the preparation of these designs. 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 B0419-1974	Truss A01	Truss Type GABLE	Qty 1	Ply 1	Topsail A	E12828932
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Comtech, Inc., Fayetteville, NC 28309

8.130 s Mar 11 2018 MiTek Industries, Inc. Wed Mar 20 16:57:31 2019 Page 1

ID:WeU20_wZYqtA5MeulVrNlzoaVc-KWao0uaauuM_cN0NxMIX1yPJABd63WMT3RGyP8zZ_4o

0-10-8 15-3-0 30-6-0 31-4-8
0-10-8 15-3-0 15-3-0 0-10-8

4x4 =

Scale = 1:66.3

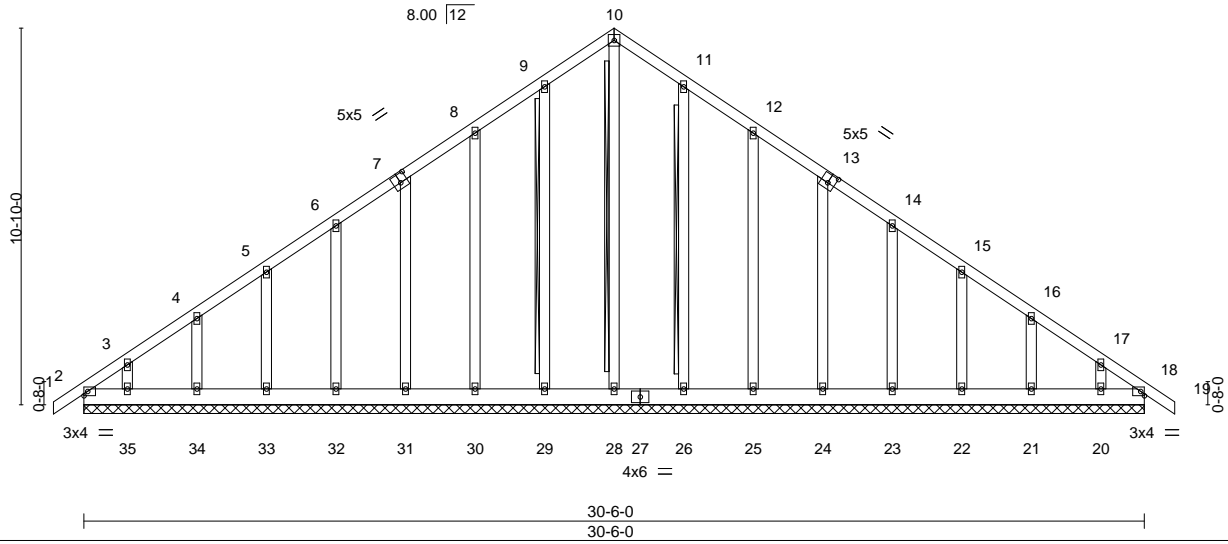


Plate Offsets (X,Y)-- [7:0-2-8,0-3-0], [13:0-2-8,0-3-0]

LOADING (psf)	SPACING-	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	18	n/r	120	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.03	Vert(CT) -0.00	19	n/r	120		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.20	Horz(CT) 0.01	18	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-S						
							Weight: 244 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.1
BOT CHORD 2x6 SP No.1
OTHERS 2x4 SP No.3 *Except*
10-28: 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.
WEBS T-Brace: 2x4 SPF No.2 - 10-28, 9-29, 11-26
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. All bearings 30-6-0.
(lb) - Max Horz 2=-359(LC 8)
Max Uplift All uplift 100 lb or less at joint(s) 18, 29, 32, 26, 23 except 2=-117(LC 6), 30=-121(LC 10), 31=-105(LC 10), 33=-108(LC 10), 34=-111(LC 10), 35=-149(LC 10), 25=-122(LC 11), 24=-105(LC 11), 22=-108(LC 11), 21=-111(LC 11), 20=-139(LC 11)
Max Grav All reactions 250 lb or less at joint(s) 2, 18, 29, 31, 32, 33, 34, 35, 26, 24, 23, 22, 21, 20 except 28=284(LC 20), 30=254(LC 17), 25=256(LC 18)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-412/277, 3-4=-302/229, 9-10=-257/298, 10-11=-257/298, 17-18=-346/233
BOT CHORD 2-35=-176/302, 34-35=-176/302, 33-34=-176/302, 32-33=-176/302, 31-32=-176/302, 30-31=-181/304, 29-30=-181/304, 28-29=-181/304, 26-28=-181/304, 25-26=-181/304, 24-25=-181/304, 23-24=-176/299, 22-23=-176/299, 21-22=-176/299, 20-21=-176/299, 18-20=-176/299

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=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) 0-10-8 to 3-3-0, Exterior(2) 3-3-0 to 10-10-3, Corner(3) 10-10-3 to 15-3-0, Exterior(2) 19-7-13 to 26-11-11 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 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 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) 18, 29, 32, 26, 23 except (jt=lb) 2=117, 30=121, 31=105, 33=108, 34=111, 35=149, 25=122, 24=105, 22=108, 21=111, 20=139.
- Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.



March 21, 2019

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.

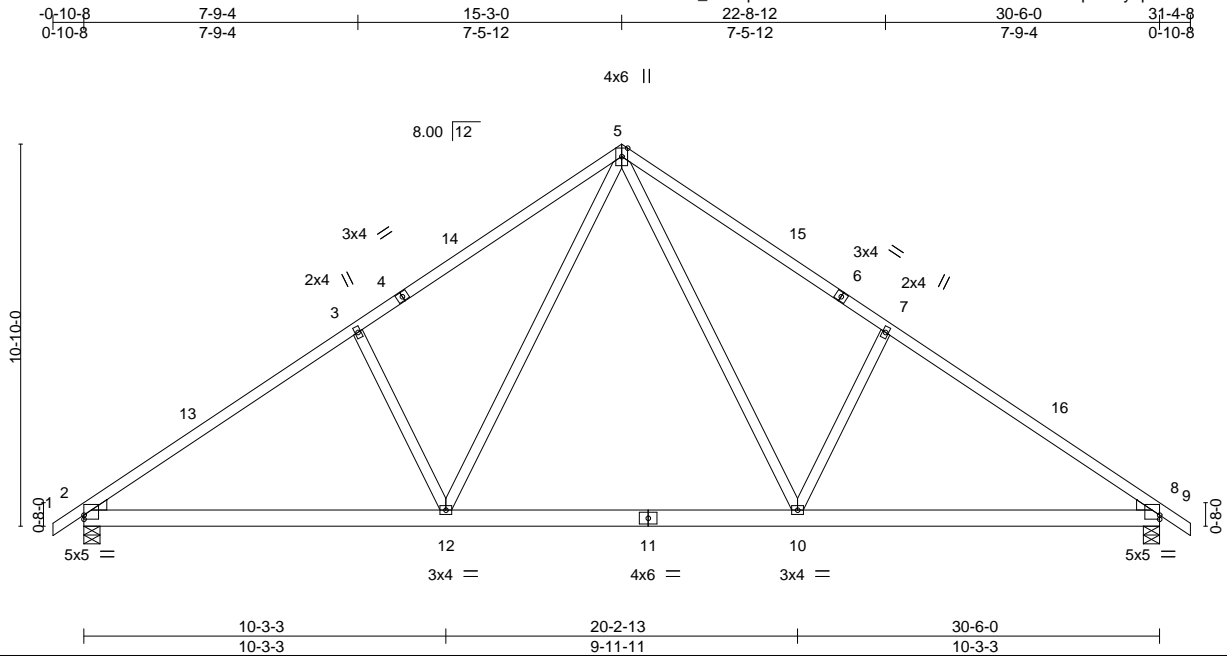


818 Soundside Road
Edenton, NC 27932

Job B0419-1974	Truss A04	Truss Type COMMON	Qty 6	Ply 1	Topsail A	E12828933
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Comtech, Inc., Fayetteville, NC 28309

8.130 s Mar 11 2018 MiTek Industries, Inc. Wed Mar 20 16:57:32 2019 Page 1
ID:WeU20_wZYqtTA5MeulVrNlzoaVc-oi8BEEbCfCUrEXaZV3pma9yLpbsZouFdH50WxbzZ_4n



Scale = 1:65.3

Plate Offsets (X,Y)--	[2:0-0-0,0-1-6], [8:0-0-0,0-1-6]				
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 0.58	Vert(LL) -0.17 10-12 >999 360	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.40	Vert(CT) -0.23 10-12 >999 240		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.54	Horz(CT) 0.03 8 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-S	Wind(LL) 0.06 2-12 >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*
 7-10,3-12: 2x4 SP No.3

WEDGE

Left: 2x4 SP No.3, Right: 2x4 SP No.3

REACTIONS.

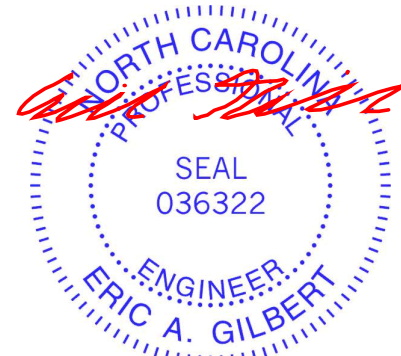
(lb/size) 2=1268/0-5-8, 8=1268/0-5-8
 Max Horz 2=287(LC 9)
 Max Uplift 2=-159(LC 10), 8=-159(LC 11)
 Max Grav 2=1336(LC 17), 8=1336(LC 18)

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

TOP CHORD 2-3=-1832/513, 3-5=-1681/617, 5-7=-1681/617, 7-8=-1833/513
 BOT CHORD 2-12=-251/1590, 10-12=-9/1042, 8-10=-251/1398
 WEBS 5-10=-230/860, 7-10=-500/332, 5-12=-230/860, 3-12=-500/332

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=25ft; 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 10-10-3, Exterior(2) 10-10-3 to 15-3-0, Interior(1) 19-7-13 to 26-11-11 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 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 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=159, 8=159.



March 21, 2019

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.

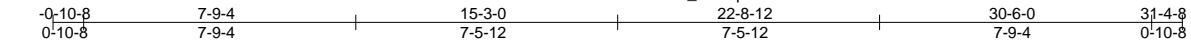


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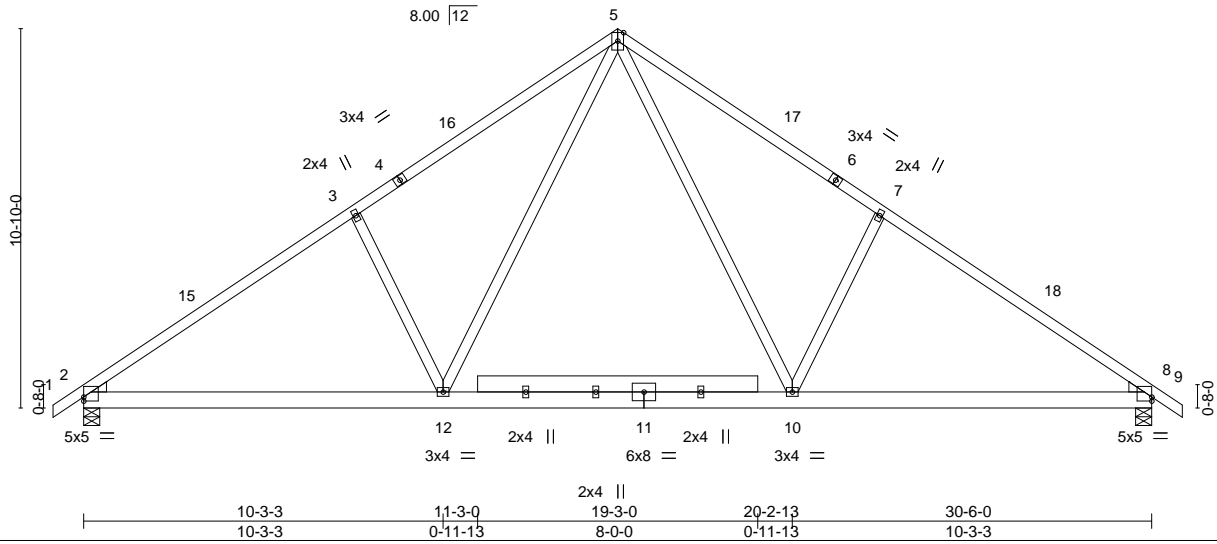
Job B0419-1974	Truss A05	Truss Type COMMON	Qty 4	Ply 1	Topsail A	E12828934
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Comtech, Inc., Fayetteville, NC 28309

8.130 s Mar 11 2018 MiTek Industries, Inc. Wed Mar 20 16:57:33 2019 Page 1
ID:WeU20_wZYqtTA5MeulVrNlzoaVc-GuIZRabrQWcIrh9l3mK?6NUWZ?CoXLVmWll3U1zZ_4m



Scale = 1:65.8



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 0.58	Vert(LL)	-0.17	10-12	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.40	Vert(CT)	-0.23	10-12	>999		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.54	Horz(CT)	0.03	8	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S	Wind(LL)	0.06	2-12	>999		
								Weight: 200 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x4 SP No.2 *Except*
7-10,3-12: 2x4 SP No.3, 13-14: 2x6 SP No.1

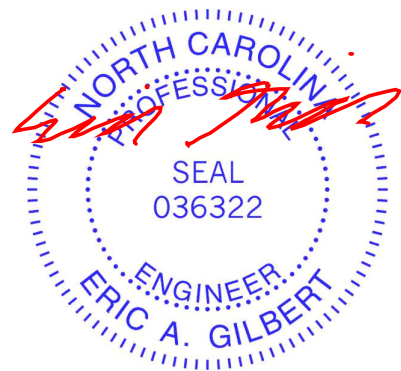
BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-11-6 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

WEDGE
Left: 2x4 SP No.3, Right: 2x4 SP No.3

REACTIONS. (lb/size) 2=1268/0-5-8, 8=1268/0-5-8
Max Horz 2=287(LC 9)
Max Uplift 2=-159(LC 10), 8=-159(LC 11)
Max Grav 2=1336(LC 17), 8=1336(LC 18)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1832/513, 3-5=-1681/617, 5-7=-1681/617, 7-8=-1833/513
BOT CHORD 2-12=-251/1590, 10-12=-9/1042, 8-10=-251/1398
WEBS 5-10=-230/860, 7-10=-500/332, 5-12=-230/860, 3-12=-500/332

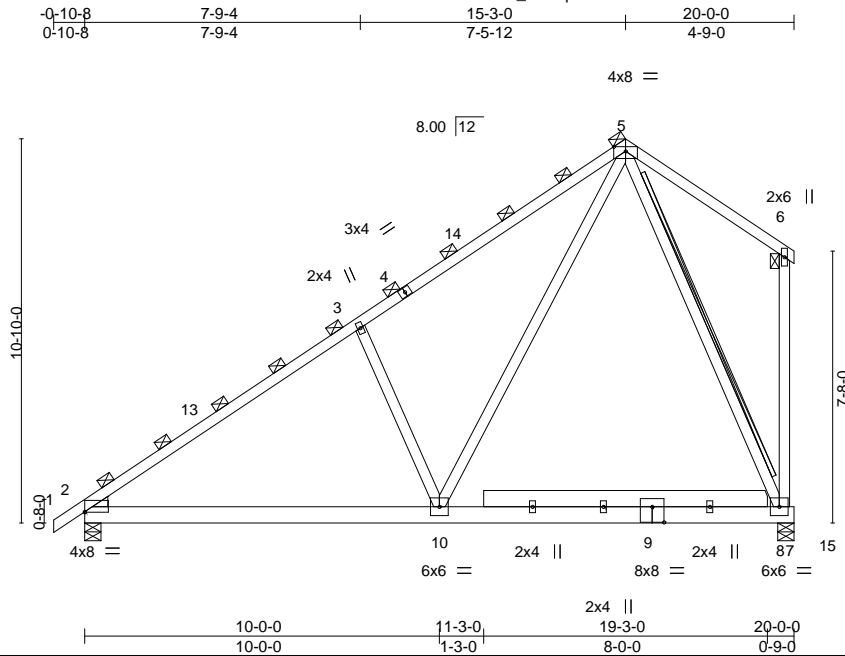
- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCCL=6.0psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) and C-C Exterior(2) -0-10-8 to 3-6-5, Interior(1) 3-6-5 to 10-10-3, Exterior(2) 10-10-3 to 15-3-0, Interior(1) 19-7-13 to 26-11-11 zone; 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) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members, with BCDL = 10.0psf.
 - 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=159, 8=159.



Job B0419-1974	Truss A06	Truss Type COMMON	Qty 2	Ply 1	Topsail A	E12828935
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Comtech, Inc., Fayetteville, NC 28309

8.130 s Mar 11 2018 MiTek Industries, Inc. Wed Mar 20 16:57:33 2019 Page 1
ID:WeU20_wZYqtA5MeuIVrNlzoaVc-GuiZRabrQWcirh9l3mK?6NUUv?4xXF9mWII3U1zZ_4m



Scale = 1:65.0

Plate Offsets (X,Y)-- [2:0-0-0,0-0-2], [9:0-4-0,0-5-4]

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 0.75	Vert(LL)	-0.23	8-10	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.90	Vert(CT)	-0.41	8-10	>569		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.95	Horz(CT)	0.01	8	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S	Wind(LL)	0.16	8-10	>999		
								Weight: 156 lb	FT = 20%

LUMBER-

TOP CHORD 2x4 SP No.1
 BOT CHORD 2x6 SP No.1
 WEBS 2x4 SP No.3 *Except*
 5-10,5-8: 2x4 SP No.2, 11-12: 2x6 SP No.1
 WEDGE
 Left: 2x4 SP No.3

BRACING-

TOP CHORD 2-0-0 oc purlins (4-8-10 max.), except end verticals
 (Switched from sheeted: Spacing > 2-0-0).
 BOT CHORD Rigid ceiling directly applied or 8-0-15 oc bracing.
 WEBS T-Brace: 2x4 SPF No.2 - 5-8
 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.

(lb/size) 8=1271/0-5-8, 2=1047/0-5-8
 Max Horz 2=339(LC 10)
 Max Uplift 8=241(LC 10), 2=113(LC 10)
 Max Grav 8=1492(LC 17), 2=1088(LC 17)

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

TOP CHORD 2-3=-1458/322, 3-5=-1318/450
 BOT CHORD 2-10=-455/1223, 8-10=-134/417
 WEBS 3-10=-556/367, 5-10=-395/1396, 5-8=-994/324

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=25ft; 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 10-10-3, Exterior(2) 10-10-3 to 15-3-0 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 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 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) 8=241, 2=113.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.

LOAD CASE(S) Standard

- Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
 Uniform Loads (plf)
 Vert: 1-5=-64, 5-6=-64, 2-10=-21, 8-10=-81, 7-8=-21



March 21, 2019

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818 Soundside Road
 Edenton, NC 27932

Job B0419-1974	Truss A09	Truss Type COMMON	Qty 8	Ply 1	Topsail A	E12828936
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Comtech, Inc., Fayetteville, NC 28309

8.130 s Mar 11 2018 MiTek Industries, Inc. Wed Mar 20 16:57:34 2019 Page 1
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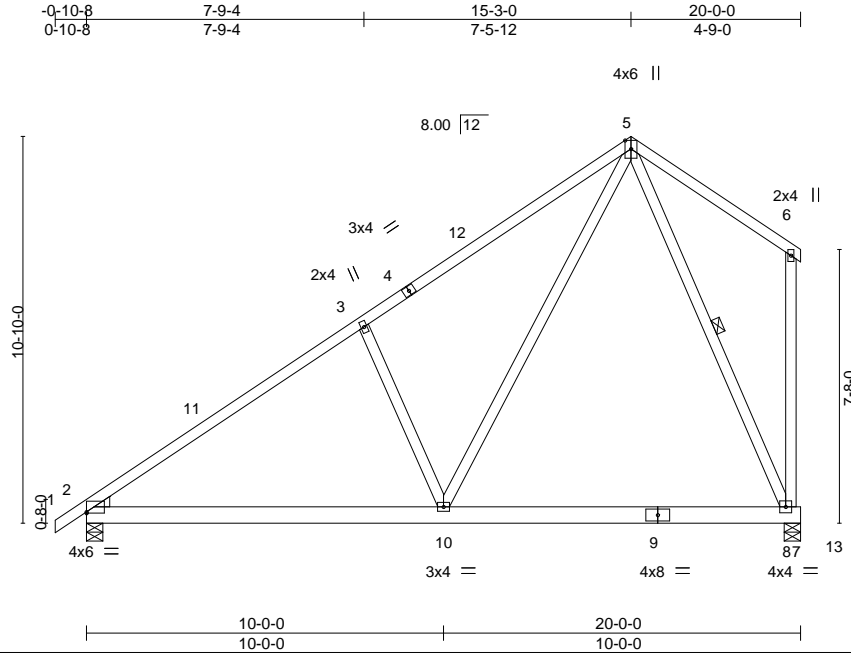


Plate Offsets (X,Y)--	[2:0-0-0,0-0-6]
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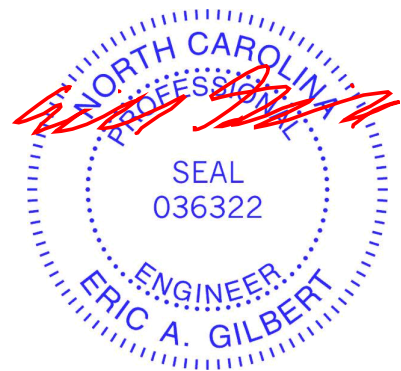
LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.15	TC 0.57	Vert(LL) -0.16	8-10	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.41	Vert(CT) -0.22	8-10	>999	240		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.60	Horz(CT) 0.01	8	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-S	Wind(LL) 0.05	2-10	>999	240		
							Weight: 137 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.1	TOP CHORD Structural wood sheathing directly applied or 5-7-3 oc purlins, except end verticals.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3 *Except* 5-10,5-8: 2x4 SP No.2	WEBS 1 Row at midpt 5-8
WEDGE Left: 2x4 SP No.3	

REACTIONS. (lb/size) 8=784/0-5-8, 2=848/0-5-8
 Max Horz 2=319(LC 10)
 Max Uplift 8=-153(LC 10), 2=-82(LC 10)
 Max Grav 8=980(LC 17), 2=883(LC 17)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 2-3=-1076/205, 3-5=-948/326
 BOT CHORD 2-10=-349/914, 8-10=-100/314
 WEBS 3-10=-541/351, 5-10=-250/947, 5-8=-766/249

- 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=5.0psf; h=25ft; 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 10-10-3, Exterior(2) 10-10-3 to 15-3-0 zone; 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) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members, with BCDL = 10.0psf.
 - 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2 except (jt=lb) 8=153.

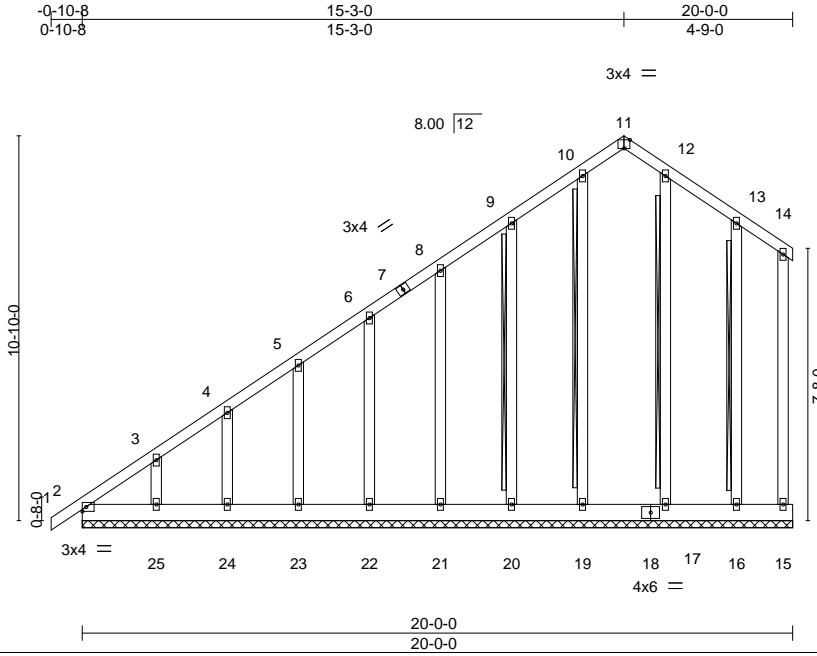


March 21, 2019

Job B0419-1974	Truss A10	Truss Type GABLE	Qty 1	Ply 1	Topsail A	E12828937
					Job Reference (optional)	

Comtech, Inc., Fayetteville, NC 28309

8.130 s Mar 11 2018 MiTek Industries, Inc. Wed Mar 20 16:57:35 2019 Page 1
ID:WeU20_wZYqtA5MeulVrNlzoaVc-DHpJsGd5y7sQ5?J8ABNTCoa_pp_B?LE3_3EAYvzZ_4k



Scale = 1:64.9

Plate Offsets (X,Y)-- [11'-0-2-0,Edge]									
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	1	n/r	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.02	Vert(CT)	-0.00	1	n/r		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.14	Horz(CT)	0.00	15	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S					Weight: 177 lb	FT = 20%

LUMBER-	BRACING-	
TOP CHORD 2x4 SP No.1	TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x6 SP No.1	BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3	WEBS	T-Brace: 2x4 SPF No.2 - 10-19, 9-20, 12-17, 13-16
OTHERS 2x4 SP No.3		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. All bearings 20-0-0.
 (lb) - Max Horz 2=470(LC 10)
 Max Uplift All uplift 100 lb or less at joint(s) 15, 19, 2 except 20=124(LC 10), 21=104(LC 10), 22=107(LC 10), 23=107(LC 10), 24=104(LC 10), 25=171(LC 10), 16=130(LC 11)
 Max Grav All reactions 250 lb or less at joint(s) 15, 20, 21, 22, 23, 24, 25, 17, 16 except 19=283(LC 17), 2=270(LC 10)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 2-3=-531/360, 3-4=-408/261, 4-5=-325/216

- 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=25ft; 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 10-10-3, Corner(3) 10-10-3 to 15-3-0 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 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 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) 15, 19, 2 except (jt=lb) 20=124, 21=104, 22=107, 23=107, 24=104, 25=171, 16=130.
 - Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.

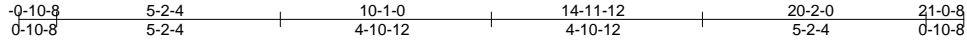


March 21, 2019

Job B0419-1974	Truss B01	Truss Type GABLE	Qty 1	Ply 1	Topsail A	E12828938
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Comtech, Inc., Fayetteville, NC 28309

8.130 s Mar 11 2018 MiTek Industries, Inc. Wed Mar 20 16:57:36 2019 Page 1
ID:WeU20_wZYqtTA5MeulVrNlzoaVc-hTNh3cejR?Gi8uKkvuik?64UCFFkk4CCj_j4MzZ_4j



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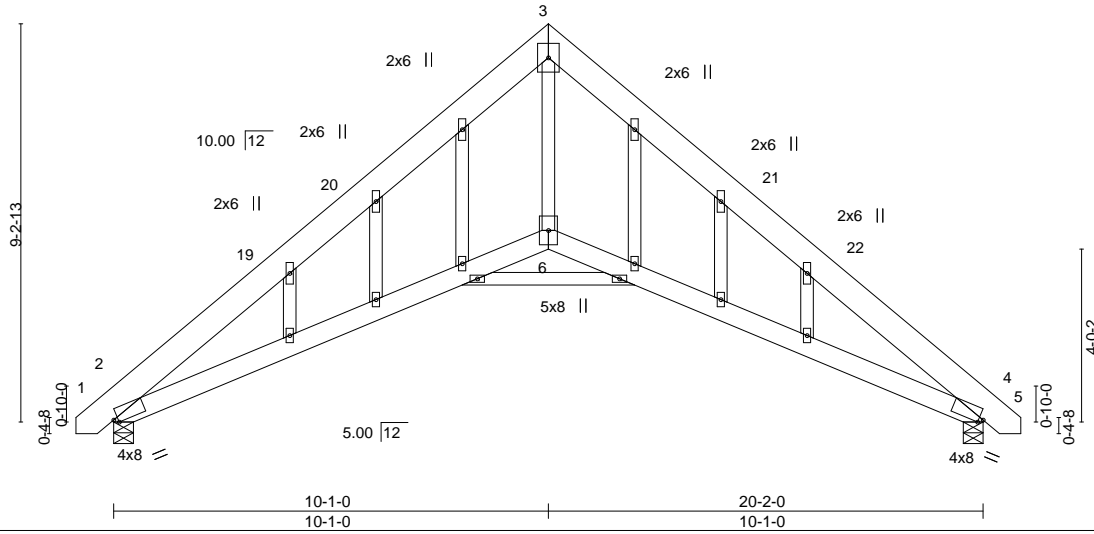


Plate Offsets (X,Y)--	[2:0-1-3,Edge], [4:0-1-3,Edge]				
LOADING (psf)	SPACING- 2-0-0	CSI.	DEFL. in (loc) l/defl L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.15	TC 0.34	Vert(LL) -0.08 4-6 >999 360	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.35	Vert(CT) -0.19 4-6 >999 240		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.42	Horz(CT) 0.08 4 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-S	Wind(LL) 0.08 2-6 >999 240		
				Weight: 175 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x8 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.
WEBS 2x4 SP No.3	
OTHERS 2x4 SP No.3	

REACTIONS. (lb/size) 2=840/0-5-8, 4=840/0-5-8
Max Horz 2=-298(LC 8)
Max Uplift 2=-227(LC 10), 4=-227(LC 11)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1403/235, 3-4=-1437/350
BOT CHORD 2-6=-148/1185, 4-6=-143/1177
WEBS 3-6=-25/1101

- 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=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-7-9 to 3-9-4, Interior(1) 3-9-4 to 5-8-3, Exterior(2) 5-8-3 to 10-1-0, Interior(1) 14-5-13 to 16-4-12 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 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 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
 - Bearing at joint(s) 2, 4 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=227, 4=227.



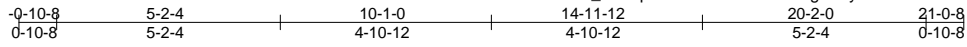
March 21, 2019

Job B0419-1974	Truss B02	Truss Type SCISSORS	Qty 1	Ply 1	Topsail A	E12828939
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Comtech, Inc., Fayetteville, NC 28309

8.130 s Mar 11 2018 MiTek Industries, Inc. Wed Mar 20 16:57:37 2019 Page 1

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6x8 ||

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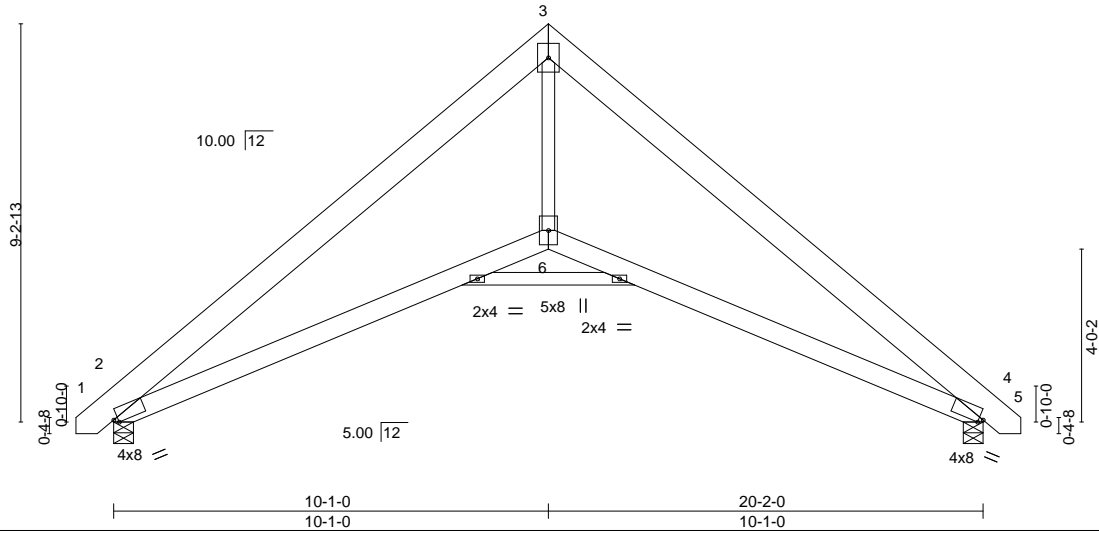


Plate Offsets (X,Y)-- [2:0-1-3,Edge], [4:0-1-3,Edge]

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.34	Vert(LL)	-0.08	4-6	>999	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.35	Vert(CT)	-0.19	4-6	>999		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.42	Horz(CT)	0.08	4	n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Wind(LL)	0.05	2-6	>999		
	Code IRC2015/TPI2014						Weight: 153 lb	FT = 20%

LUMBER-
 TOP CHORD 2x8 SP No.1
 BOT CHORD 2x6 SP No.1
 WEBS 2x4 SP No.3

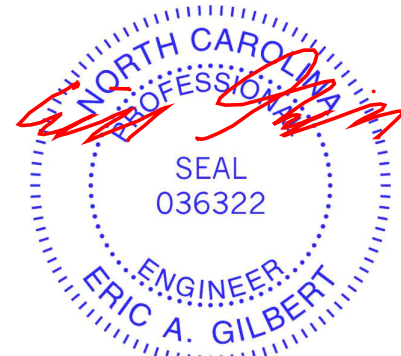
BRACING-
 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (lb/size) 2=840/0-5-8, 4=840/0-5-8
 Max Horz 2=-238(LC 8)
 Max Uplift 2=-97(LC 10), 4=-97(LC 11)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 2-3=-1403/254, 3-4=-1404/254
 BOT CHORD 2-6=-30/1142, 4-6=-21/1135
 WEBS 3-6=0/1069

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=25ft; 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 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
- Bearing at joint(s) 2, 4 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 4.



March 21, 2019

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 B0419-1974	Truss B03	Truss Type SCISSORS	Qty 6	Ply 1	Topsail A	E12828940
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Comtech, Inc., Fayetteville, NC 28309

8.130 s Mar 11 2018 MiTek Industries, Inc. Wed Mar 20 16:57:37 2019 Page 1
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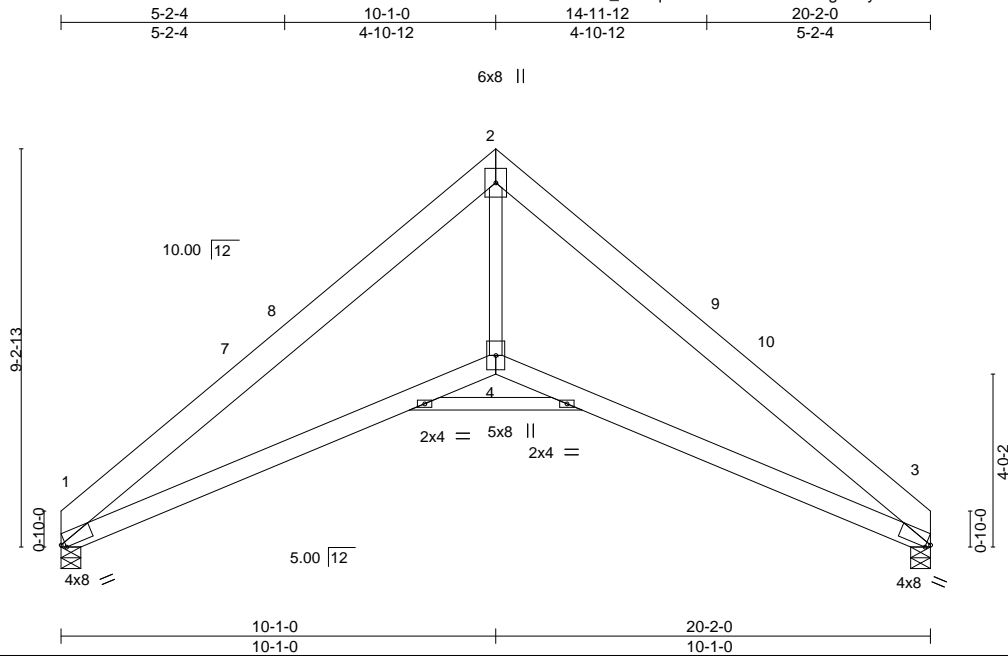


Plate Offsets (X,Y)--	[1:0-1-3,Edge], [3:0-1-3,Edge]				
LOADING (psf)	SPACING- 2-0-0	CSI.	DEFL. in (loc) l/defl L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.15	TC 0.35	Vert(LL) -0.09 3-4 >999 360	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.36	Vert(CT) -0.19 3-4 >999 240		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.42	Horz(CT) 0.08 3 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-S	Wind(LL) 0.05 1-4 >999 240		
				Weight: 147 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x8 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.
WEBS 2x4 SP No.3	

REACTIONS. (lb/size) 1=788/0-5-8, 3=788/0-5-8
Max Horz 1=-232(LC 8)
Max Uplift 1=-82(LC 10), 3=-82(LC 11)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-1409/267, 2-3=-1406/268
BOT CHORD 1-4=-37/1141, 3-4=-29/1134
WEBS 2-4=0/1068

- 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=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) and C-C Exterior(2) 0-2-12 to 4-7-9, Interior(1) 4-7-9 to 5-8-3, Exterior(2) 5-8-3 to 10-1-0, Interior(1) 14-5-13 to 15-6-7 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 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
 - Bearing at joint(s) 1, 3 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.

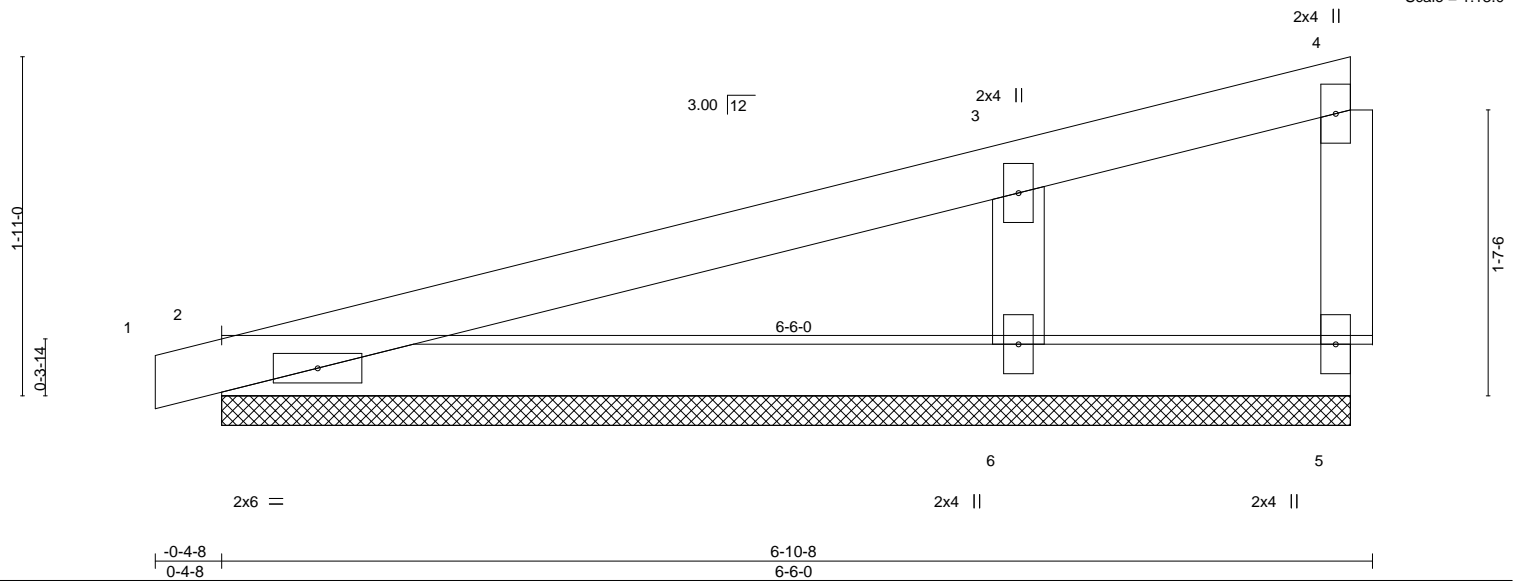
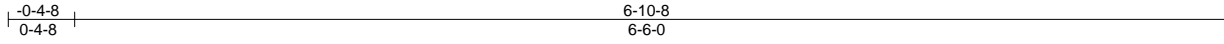


March 21, 2019

Job B0419-1974	Truss M01	Truss Type GABLE	Qty 1	Ply 1	Topsail A	E12828941
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Comtech, Inc., Fayetteville, NC 28309

8.130 s Mar 11 2018 MiTek Industries, Inc. Wed Mar 20 16:57:38 2019 Page 1
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LOADING (psf)	SPACING-	CSL	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.15	TC 0.22	Vert(LL) -0.00	1	n/r	120	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.41	Vert(CT) 0.00	1	n/r	120		
BCLL 0.0 *	Rep Stress Incr NO	WB 0.09	Horz(CT) -0.00	5	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-P					Weight: 23 lb	FT = 20%

LUMBER-

TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.1
WEBS 2x4 SP No.3
OTHERS 2x4 SP No.3

BRACING-

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

REACTIONS. (lb/size) 5=-18/6-4-8, 2=343/6-4-8, 6=809/6-4-8
Max Horz 2=89(LC 6)
Max Uplift 5=-18(LC 1), 2=-128(LC 6), 6=-320(LC 10)
Max Grav 5=7(LC 10), 2=343(LC 1), 6=809(LC 1)

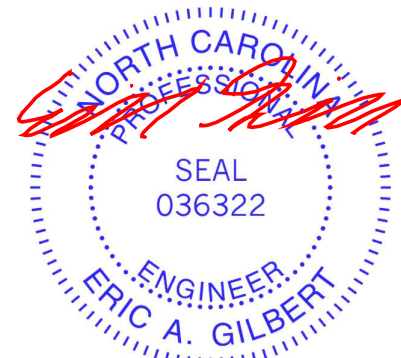
FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 3-6=-276/313

NOTES-

- 1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; porch left 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) Gable requires continuous bottom chord bearing.
- 4) Gable studs spaced at 2-0-0 oc.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 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) 5 except (jt=lb) 2=128, 6=320.
- 8) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.
- 9) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard

- 1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-4=-60, 2-5=-115(F=-95)



March 21, 2019

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.



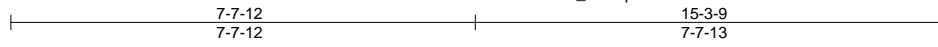
818 Soundside Road
Edenton, NC 27932

Job B0419-1974	Truss V01	Truss Type GABLE	Qty 1	Ply 1	Topsail A	E12828944
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Comtech, Inc., Fayetteville, NC 28309

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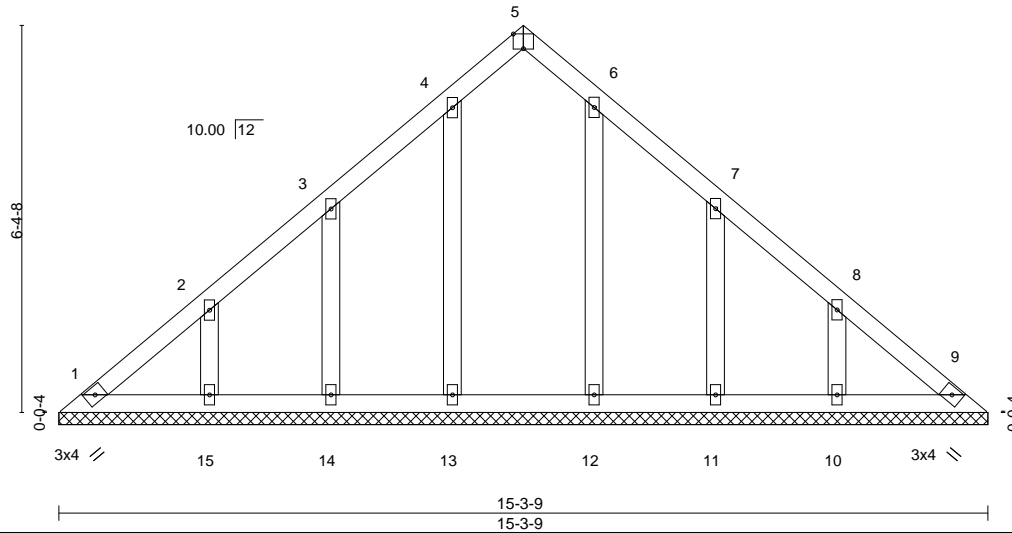


Plate Offsets (X,Y)-- [5:0-2-0,Edge]

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.15	TC 0.06	Vert(LL)	n/a	-	n/a	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.04	Vert(CT)	n/a	-	n/a		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.07	Horz(CT)	0.00	9	n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-S					Weight: 79 lb	FT = 20%

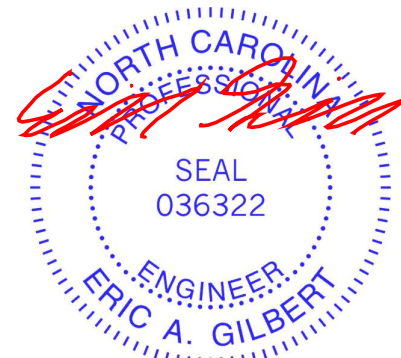
LUMBER-
 TOP CHORD 2x4 SP No.1
 BOT CHORD 2x4 SP No.1
 OTHERS 2x4 SP No.3

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 15-3-9.
 (lb) - Max Horz 1=-201(LC 6)
 Max Uplift All uplift 100 lb or less at joint(s) 1, 9, 13, 12 except 14=-144(LC 10), 15=-150(LC 10), 11=-147(LC 11), 10=-150(LC 11)
 Max Grav All reactions 250 lb or less at joint(s) 1, 9, 13, 14, 15, 12, 11, 10

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 1-2=-281/189, 8-9=-265/189

- 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=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone 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
 - All plates are 2x4 MT20 unless otherwise indicated.
 - Gable requires continuous bottom chord bearing.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 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) 1, 9, 13, 12 except (jt=lb) 14=144, 15=150, 11=147, 10=150.



March 21, 2019

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

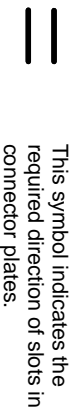
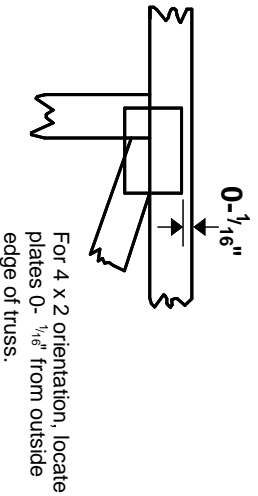
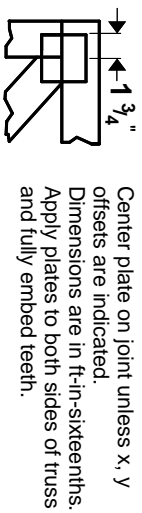
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall 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

Symbols

PLATE LOCATION AND ORIENTATION



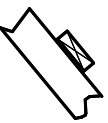
* Plate location details available in **MITrak 20/20 software or upon request.**

PLATE SIZE

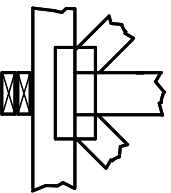
4 X 4

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

LATERAL BRACING LOCATION



BEARING

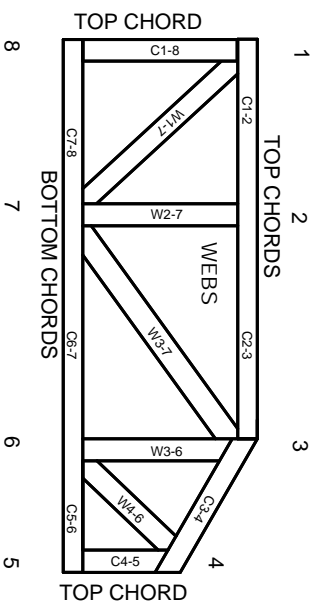


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

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.