

RE: J0320-1198

Lot 15 Blackberry Manor

Trenco 818 Soundside Rd Edenton, NC 27932

Site Information:

Customer: Project Name: J0320-1198

Lot/Block: Model:
Address: Subdivision:
City: State:

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

Design Code: IRC2015/TPI2014 Design Program: MiTek 20/20 8.1

Wind Code: N/A Wind Speed: N/A mph Roof Load: N/A psf Floor Load: 55.0 psf

This package includes 8 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date
1	E13772240	et1	4/7/2020
2	E13772241	f1	4/7/2020
3	E13772242	f2	4/7/2020
4	E13772243	f3	4/7/2020
5	E13772244	f3a	4/7/2020
6	E13772245	f4	4/7/2020
7	E13772246	f5	4/7/2020
8	E13772247	fg1	4/7/2020

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, 2020.

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.



April 07, 2020

Job	Truss	Truss Type	Qty	Ply	Lot 15 Blackberry Manor	٦
					E13772240	
J0320-1198	ET1	Floor Supported Gable	1	1		
					Inh Reference (ontional)	

Comtech, Inc.,

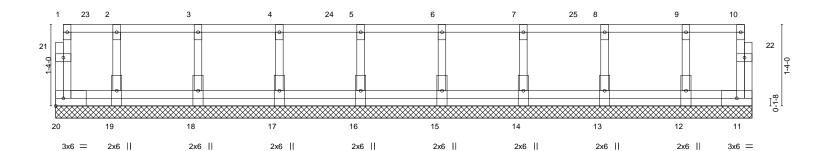
0-1-8

Fayetteville, NC 28309

8.130 s Mar 11 2018 MiTek Industries, Inc. Mon Nov 18 08:20:29 2019 Page 1  $ID: KhiM10Q\_9dy0362zxkFfqAyJzV8-nTKELBfjjdv6Nvqk5?LVPVbuE\_ILpGnv9JGMtlyl?jG$ 

0<u>-1-</u>8

Scale = 1:18.9



<u> </u>	11·5·0 11·5·0											
LOADIN	G (psf)	SPACING- 2-0-0	CSI.	DEFL.	in (loc)	I/defl	L/d	PLATES	GRIP			
TCLL	40.0	Plate Grip DOL 1.00	TC 0.09	Vert(LL)	n/a -	n/a	999	MT20	244/190			
TCDL	10.0	Lumber DOL 1.00	BC 0.01	Vert(CT)	n/a -	n/a	999					
BCLL	0.0	Rep Stress Incr YES	WB 0.05	Horz(CT)	0.00 11	n/a	n/a					
BCDL	5.0	Code IRC2015/TPI2014	Matrix-R					Weight: 67 lb	FT = 20%F, 11%E			

LUMBER-**BRACING-**

TOP CHORD 2x4 SP No.1(flat) BOT CHORD 2x4 SP No.1(flat)

2x4 SP No.3(flat) WEBS **OTHERS** 2x4 SP No.3(flat)

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

except end verticals.

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

REACTIONS. All bearings 11-5-0.

(lb) - Max Grav All reactions 250 lb or less at joint(s) 20, 11, 19, 18, 17, 16, 15, 14, 13, 12

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

- 1) All plates are 1.5x3 MT20 unless otherwise indicated.
- 2) Plates checked for a plus or minus 1 degree rotation about its center.
- 3) Gable requires continuous bottom chord bearing.
- 4) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 5) Gable studs spaced at 1-4-0 oc.
- 6) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

## LOAD CASE(S) Standard

1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00 Uniform Loads (plf)

Vert: 11-20=-10, 1-10=-100

Concentrated Loads (lb)

Vert: 3=-92 6=-92 9=-96 23=-98 24=-92 25=-92



November 18,2019



🗥 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.



Job Truss Type Lot 15 Blackberry Manor Truss Qty E13772241 J0320-1198 F1 Floor Job Reference (optional)

Comtech, Inc., Fayetteville, NC 28309 8.130 s Mar 11 2018 MiTek Industries, Inc. Mon Nov 18 08:20:31 2019 Page 1 ID:KhiM10Q\_9dy0362zxkFfqAyJzV8-jsS\_lthzFE9pcD\_7DQNzUwg6toK?H4mCcdlSxAyl?jE

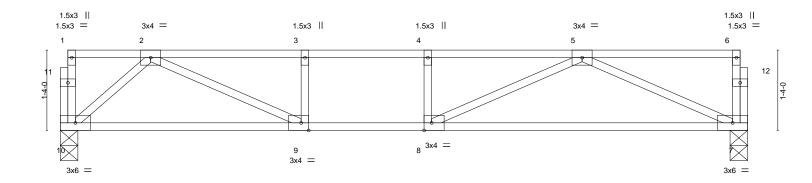
Structural wood sheathing directly applied or 6-0-0 oc purlins,

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

except end verticals.

0-1-8 Scale = 1:19.1





						11-5-0						
Plate Offs	sets (X,Y)	[8:0-1-8,Edge], [9:0-1-8,E	Edge]									
LOADING	(psf)	SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.Ó	Plate Grip DOL	1.00	TC	0.53	Vert(LL)	-0.16	7-8	>833	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.51	Vert(CT)	-0.25	7-8	>540	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.40	Horz(CT)	0.02	7	n/a	n/a		
BCDL	5.0	Code IRC2015/TF	PI2014	Matri	k-S						Weight: 57 lb	FT = 20%F, 11%E

**BRACING-**

TOP CHORD

**BOT CHORD** 

11-5-0

LUMBER-

TOP CHORD 2x4 SP No.1(flat) **BOT CHORD** 2x4 SP No.1(flat)

2x4 SP No.3(flat) **WEBS** 

**REACTIONS.** (lb/size) 10=608/0-3-8, 7=608/0-3-8

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

TOP CHORD 2-3=-1398/0, 3-4=-1398/0, 4-5=-1398/0 **BOT CHORD** 9-10=0/634, 8-9=0/1398, 7-8=0/1056

**WEBS** 2-10=-841/0, 2-9=0/844, 3-9=-301/0, 5-7=-1157/0, 5-8=0/495

## NOTES-

- 1) Unbalanced floor live loads have been considered for this design.
- 2) Plates checked for a plus or minus 1 degree rotation about its center.
- 3) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.



November 18,2019

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/TPI Quality Criteria, DSB-89 and BCSI Building Component Safety Information

available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



Job Truss Type Lot 15 Blackberry Manor Truss Qty E13772242 J0320-1198 F2 Floor Job Reference (optional)

Comtech. Inc.. Fayetteville, NC 28309 8.130 s Mar 11 2018 MiTek Industries, Inc. Mon Nov 18 08:20:31 2019 Page 1 ID:KhiM10Q\_9dy0362zxkFfqAyJzV8-jsS\_lthzFE9pcD\_7DQNzUwg5toIJH5MCcdlSxAyI?jE

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

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

except end verticals.



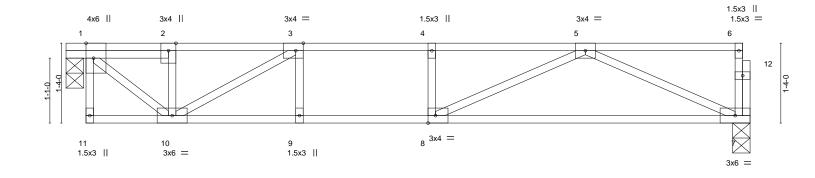


Plate Offsets (X,Y)	- [1:0-3-0.Edge], [3:0-1-8.Edge], [8:0-1-8.	11-1-0 :0-3-0,Edge], [3:0-1-8,Edge], [8:0-1-8,Edge]								
LOADING (psf)	<b>SPACING-</b> 2-0-0	CSI.	DEFL. in (loc) I/defl L	d PLATES GRIP						
TCLL 40.0	Plate Grip DOL 1.00	TC 0.60	Vert(LL) -0.17 7-8 >777 48	-						
TCDL 10.0	Lumber DOL 1.00	BC 0.61	Vert(CT) -0.27 7-8 >489 36	60						
BCLL 0.0	Rep Stress Incr YES	WB 0.36	Horz(CT) 0.03 7 n/a n/	/a						
BCDL 5.0	Code IRC2015/TPI2014	Matrix-S	, ,	Weight: 59 lb FT = 20%F, 11%E						

**BRACING-**

TOP CHORD

**BOT CHORD** 

11-5-0

LUMBER-

0-4-0

TOP CHORD 2x4 SP No.1(flat) **BOT CHORD** 2x4 SP No.1(flat)

2x4 SP No.3(flat) **WEBS** 

**REACTIONS.** (lb/size) 7=593/0-3-8, 1=599/0-3-8

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

TOP CHORD 1-2=-591/0, 2-3=-588/0, 3-4=-1313/0, 4-5=-1313/0 **BOT CHORD** 9-10=0/1313, 8-9=0/1313, 7-8=0/1022

**WEBS** 1-10=0/765, 3-10=-858/0, 5-7=-1119/0, 5-8=0/443

## NOTES-

- 1) Unbalanced floor live loads have been considered for this design.
- 2) Plates checked for a plus or minus 1 degree rotation about its center.
- 3) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
- 4) Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.
- 5) CAUTION, Do not erect truss backwards.



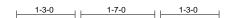
November 18,2019



Job	Truss	Truss Type	Qty	Ply	Lot 15 Blackberry Manor
					E13772243
J0320-1198	F3	Floor	3	1	
					Job Reference (optional)

Comtech. Inc.. Fayetteville, NC 28309 8.130 s Mar 11 2018 MiTek Industries, Inc. Mon Nov 18 08:20:32 2019 Page 1 ID:KhiM10Q\_9dy0362zxkFfqAyJzV8-B20NzDib0YHgEMZJm7vC17DL3CeK0WCLrHU0Tdyl?jD





0-1-8 Scale = 1:24.7

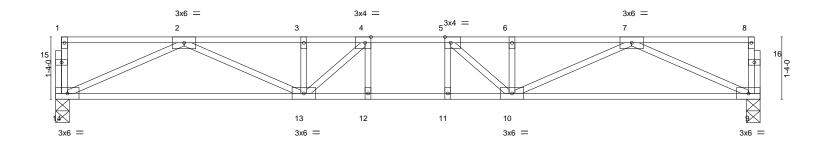


Plate Offsets (X,Y)	[4:0-1-8,Edge], [5:0-1-8,Edge]		15-1-0	
LOADING (psf) TCLL 40.0 TCDL 10.0 BCLL 0.0	SPACING-         2-0-0           Plate Grip DOL         1.00           Lumber DOL         1.00           Rep Stress Incr         YES	CSI. TC 0.31 BC 0.56 WB 0.45	DEFL.         in (loc)         l/defl         L/d           Vert(LL)         -0.13 11-12 >999 480         Vert(CT)         -0.18 11-12 >999 360           Horz(CT)         0.04 9 n/a n/a         9 n/a n/a	<b>PLATES GRIP</b> MT20 244/190
BCLL 0.0 BCDL 5.0	Rep Stress Incr YES Code IRC2015/TPI2014	WB 0.45 Matrix-S	Horz(CT) 0.04 9 n/a n/a	Weight: 78 lb FT = 20%F, 11%E

15-1-0

LUMBER-

TOP CHORD 2x4 SP No.1(flat) BOT CHORD 2x4 SP No.1(flat)

2x4 SP No.3(flat) **WEBS** 

**BRACING-**

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

except end verticals.

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

**REACTIONS.** (lb/size) 14=810/0-3-8, 9=810/0-3-8

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown. TOP CHORD 2-3=-2316/0, 3-4=-2316/0, 4-5=-2475/0, 5-6=-2316/0, 6-7=-2316/0 **BOT CHORD** 13-14=0/1496, 12-13=0/2475, 11-12=0/2475, 10-11=0/2475, 9-10=0/1496 WEBS 2-14=-1641/0, 2-13=0/907, 7-9=-1641/0, 7-10=0/907, 5-10=-457/90, 4-13=-457/90

## NOTES-

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All plates are 1.5x3 MT20 unless otherwise indicated.
- 3) Plates checked for a plus or minus 1 degree rotation about its center.
- 4) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.



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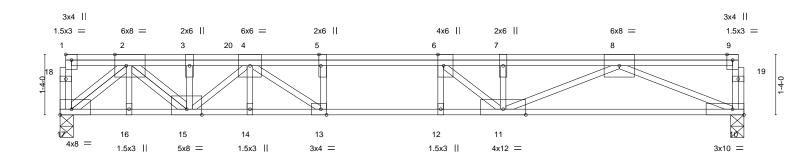
Job Lot 15 Blackberry Manor Truss Truss Type Qty E13772244 J0320-1198 F3A Floor Job Reference (optional)

Comtech. Inc..

Fayetteville, NC 28309

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Dieta Offe	ate Offsets (X,Y) [1:Edge,0-1-8], [2:0-3-0,Edge], [5:0-3-0,Edge], [6:0-3-0,Edge], [17:Edge,0-1-8]											
Plate Offs	sets (X,Y)	[1:Eage,0-1-8], [2:0-3-0,E	agej, [5:0-3-0	),Eagej, [6:0-3	-u,⊨agej, [¹	13:0-1-8,Eagej, [17	Eage,u-	1-8]			1	
LOADING	(psf)	SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.87	Vert(LL)	-0.21	13	>844	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.87	Vert(CT)	-0.29	13-14	>605	360		
BCLL	0.0	Rep Stress Incr	NO	WB	0.84	Horz(CT)	0.06	10	n/a	n/a		
BCDL	5.0	Code IRC2015/TP	I2014	Matrix	:-S						Weight: 105 lb	FT = 20%F, 11%E

15-1-0

LUMBER-

TOP CHORD 2x4 SP No.1(flat)

**BOT CHORD** 2x4 SP 2400F 2.0E(flat)

2x4 SP No.3(flat) **WEBS** 

**BRACING-**

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

except end verticals.

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

**REACTIONS.** (lb/size) 17=1903/0-3-8, 10=1171/0-3-8

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

TOP CHORD  $2\text{-}3\text{--}4189/0,\ 3\text{-}4\text{--}4216/0,\ 4\text{-}5\text{--}5032/0,\ 5\text{-}6\text{--}5032/0,\ 6\text{-}7\text{--}3997/0,\ 7\text{-}8\text{--}3997/0}$ **BOT CHORD** 

16-17=0/2203, 15-16=0/2203, 14-15=0/5615, 13-14=0/5615, 12-13=0/5032, 11-12=0/5032, 10-11=0/2388 **WEBS** 8-10=-2599/0, 8-11=0/1763, 7-11=0/410, 6-11=-1669/0, 2-17=-2844/0, 2-15=0/2663, 3-15=-598/0, 4-15=-1817/0,

4-13=-1109/0, 5-13=0/504

## NOTES-

- 1) Unbalanced floor live loads have been considered for this design.
- 2) Plates checked for a plus or minus 1 degree rotation about its center.
- 3) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
- 4) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1536 lb down at 3-9-12 on top chord. The design/selection of such connection device(s) is the responsibility of others.
- 5) 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 + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00

Uniform Loads (plf)

Vert: 10-17=-10, 1-9=-100 Concentrated Loads (lb)

Vert: 20=-1456(F)



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Job Truss Type Lot 15 Blackberry Manor Truss Qty E13772245 J0320-1198 F4 Floor Job Reference (optional)

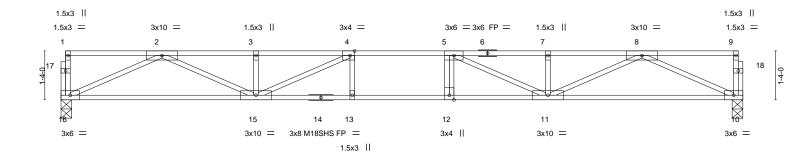
Comtech, Inc., Fayetteville, NC 28309 8.130 s Mar 11 2018 MiTek Industries, Inc. Mon Nov 18 08:20:34 2019 Page 1 ID:KhiM10Q\_9dy0362zxkFfqAyJzV8-7R77OvjrY9XOTgiiuYxg6Ylf1?KIUMWelbz7YVyI?jB

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

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

except end verticals.





18-7-0 Plate Offsets (X,Y) [4:0-1-8,Edge]											
LOADING (ps	sf)	SPACING-	2-0-0	CSI.		DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 40	).Ó	Plate Grip DOL	1.00	TC	0.41	Vert(LL)	-0.28 11-12	>788	480	MT20	244/190
TCDL 10	0.0	Lumber DOL	1.00	BC	0.57	Vert(CT)	-0.36 11-12	>614	360	M18SHS	244/190
BCLL 0	0.0	Rep Stress Incr	YES	WB	0.66	Horz(CT)	0.06 10	n/a	n/a		
BCDL 5	5.0	Code IRC2015/TF	PI2014	Matrix	:-S					Weight: 93 lb	FT = 20%F, 11%E

**BRACING-**

TOP CHORD

**BOT CHORD** 

18-7-0

LUMBER-

TOP CHORD 2x4 SP 2400F 2.0E(flat) **BOT CHORD** 2x4 SP 2400F 2.0E(flat)

2x4 SP No.3(flat) **WEBS** 

**REACTIONS.** (lb/size) 16=1002/0-3-8, 10=1002/0-3-8

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown. TOP CHORD  $2-3=-3152/0,\ 3-4=-3152/0,\ 4-5=-3780/0,\ 5-7=-3155/0,\ 7-8=-3155/0$ **BOT CHORD** 15-16=0/1907, 13-15=0/3780, 12-13=0/3780, 11-12=0/3780, 10-11=0/1907

**WEBS**  $2-16=-2094/0,\ 2-15=0/1376,\ 3-15=-304/24,\ 8-10=-2093/0,\ 8-11=0/1380,\ 7-11=-309/20,\ 5-11=-984/0,\ 4-15=-989/0,\ 1-10-109/2$ 

## NOTES-

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All plates are MT20 plates unless otherwise indicated.
- 3) Plates checked for a plus or minus 1 degree rotation about its center.
- 4) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.



November 18,2019



Job Lot 15 Blackberry Manor Truss Truss Type Qty E13772246 J0320-1198 F5 Floor Job Reference (optional)

Comtech. Inc., Fayetteville, NC 28309

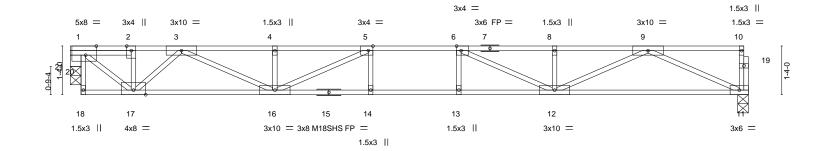
1-3-0

8.130 s Mar 11 2018 MiTek Industries, Inc. Mon Nov 18 08:20:35 2019 Page 1 ID:KhiM10Q\_9dy0362zxkFfqAyJzV8-bdhVbFkUJTfF5qHuSGSvfmrqoPgHDpSnXFjg4yyI?jA

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

Scale = 1:31.6

0-1\_8



						18-7-0					
Plate Offsets	(X,Y)	[1:0-3-8,Edge], [5:0-1-8,E	dge], [6:0-1-8	3,Edge]							
LOADING (p	osf)	SPACING-	2-0-0	CSI.		DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 4	0.0	Plate Grip DOL	1.00	TC	0.41	Vert(LL)	-0.25 14-16	>874	480	MT20	244/190
TCDL 1	0.0	Lumber DOL	1.00	BC	0.55	Vert(CT)	-0.33 14-16	>662	360	M18SHS	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.68	Horz(CT)	0.03 11	n/a	n/a		
BCDL	5.0	Code IRC2015/TF	PI2014	Matrix	-S					Weight: 96 lb	FT = 20%F, 11%E

TOP CHORD

18-7-0

LUMBER-**BRACING-**

TOP CHORD 2x4 SP 2400F 2.0E(flat) **BOT CHORD** 2x4 SP 2400F 2.0E(flat)

except end verticals. 2x4 SP No.3(flat) **BOT CHORD WEBS** Rigid ceiling directly applied or 10-0-0 oc bracing.

**OTHERS** 4x4 SP No.2(flat)

**REACTIONS.** (lb/size) 11=996/0-3-8, 21=989/0-3-8

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

TOP CHORD  $1-2=-1154/0,\ 2-3=-1152/0,\ 3-4=-3191/0,\ 4-5=-3191/0,\ 5-6=-3744/0,\ 6-8=-3127/0,$ 

**BOT CHORD** 

16-17=0/1997, 14-16=0/3744, 13-14=0/3744, 12-13=0/3744, 11-12=0/1895

WEBS 1-17=0/1423, 9-11=-2080/0, 9-12=0/1363, 8-12=-301/18, 6-12=-960/0, 3-17=-1148/0,

3-16=0/1320, 4-16=-324/12, 5-16=-926/0, 1-21=-1007/0

## NOTES-

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All plates are MT20 plates unless otherwise indicated.
- 3) Plates checked for a plus or minus 1 degree rotation about its center.
- 4) Bearing at joint(s) 21 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 5) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
- 6) CAUTION, Do not erect truss backwards.



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Job Truss Type Lot 15 Blackberry Manor Truss Qty E13772247 J0320-1198 FG1 Floor Girder Job Reference (optional)

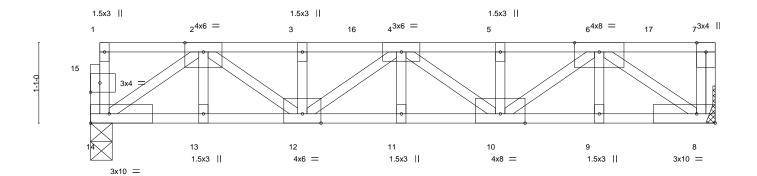
Comtech, Inc.,

Fayetteville, NC 28309

8.130 s Mar 11 2018 MiTek Industries, Inc. Mon Nov 18 08:20:35 2019 Page 1 ID:KhiM10Q\_9dy0362zxkFfqAyJzV8-bdhVbFkUJTfF5qHuSGSvfmrj2PeKDqxnXFjg4yyl?jA

0-1-8 1-2-8

1-3-0 Scale = 1:15.5



			6-5-0	
			8-5-0	
Plate Offsets (X,Y)	[15:0-1-8,0-1-8]			
LOADING (psf)	SPACING- 2-0-0	CSI.	DEFL. in (loc) I/defl L/d	PLATES GRIP
TCLL 40.0	Plate Grip DOL 1.00	TC 0.84	Vert(LL) -0.06 11 >999 480	MT20 244/190
TCDL 10.0	Lumber DOL 1.00	BC 0.67	Vert(CT) -0.09 11 >999 360	
BCLL 0.0	Rep Stress Incr NO	WB 0.58	Horz(CT) 0.03 8 n/a n/a	
BCDL 5.0	Code IRC2015/TPI2014	Matrix-P		Weight: 49 lb FT = 20%F, 11%E

LUMBER-

TOP CHORD 2x4 SP No.1(flat) **BOT CHORD** 2x4 SP No.1(flat)

2x4 SP No.3(flat) **WEBS** 

**BRACING-**

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

except end verticals.

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

**REACTIONS.** (lb/size) 14=1351/0-3-8, 8=1556/Mechanical

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown. TOP CHORD 7-8=-294/0, 2-3=-2786/0, 3-4=-2786/0, 4-5=-2868/0, 5-6=-2868/0

**BOT CHORD** 13-14=0/1855, 12-13=0/1855, 11-12=0/3195, 10-11=0/3195, 9-10=0/1874, 8-9=0/1874

**WEBS** 2-14=-2245/0, 2-12=0/1146, 3-12=-358/0, 4-12=-504/0, 4-10=-402/0, 5-10=-465/0, 6-10=0/1223, 6-8=-2253/0

## NOTES-

- 1) Plates checked for a plus or minus 1 degree rotation about its center.
- 2) Refer to girder(s) for truss to truss connections.
- 3) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
- 4) CAUTION, Do not erect truss backwards.

## LOAD CASE(S) Standard

1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00

Uniform Loads (plf)

Vert: 8-14=-10, 1-7=-100

Concentrated Loads (lb)

Vert: 2=-499 5=-499 16=-499 17=-517



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🗥 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.

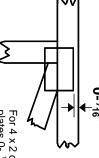


## Symbols

## PLATE LOCATION AND ORIENTATION



Center plate on joint unless x, y offsets are indicated.
Dimensions are in ft-in-sixteenths.
Apply plates to both sides of truss and fully embed teeth.



For 4 x 2 orientation, locate plates 0- <sup>1</sup>/16" from outside edge of truss.

This symbol indicates the required direction of slots in connector plates.

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

## PLATE SIZE

4 × 4

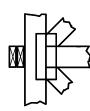
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## LATERAL BRACING LOCATION



Indicated by symbol shown and/or by text in the bracing section of the output. Use T or I bracing if indicated.

## 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.

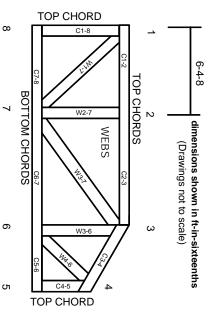
## Industry Standards:

National Design Specification for Metal

ANSI/TPI1: DSB-89:

Plate Connected Wood Truss Construction. Design Standard for Bracing.
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

- Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI
- 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.
- Never exceed the design loading shown and never stack materials on inadequately braced trusses.
- Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
- Cut members to bear tightly against each other.

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- 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.
- Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI 1.
- Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.

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- Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
- Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
- Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
- Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
- Top chords must be sheathed or purlins provided at spacing indicated on design.
- 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.
- Do not cut or alter truss member or plate without prior approval of an engineer.
- 17. Install and load vertically unless indicated otherwise
- Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
- Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
- Design assumes manufacture in accordance with ANSI/TPI 1 Quality Criteria.