ENGINEERING BY TRENCO
A MiTek Affiliate

RE: Penwell BFK Floor
Penwell BFK

Trenco
818 Soundside Rd
Edenton, NC 27932

Site Information:

Customer: D.R. HORTON - RAL - 055 Project Name: Penwell BFK Floor
Lot/Block: Model: Penwell BFK
Address: Subdivision:
City: FUQUAY-VARINA State: NC

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

Design Code: IRC2015/TPI2014 Design Program: MiTek 20/20 8.5
Wind Code: N/A Wind Speed: N/A mph
Roof Load: N/A psf Floor Load: 55.0 psf

This package includes 19 individual, dated Truss Design Drawings and 0 Additional Drawings.

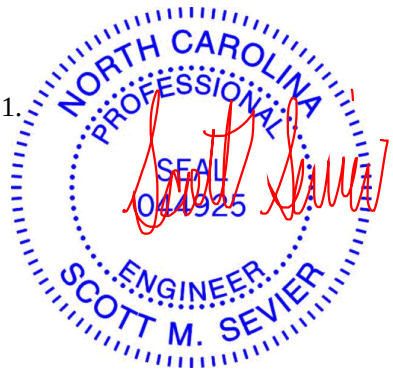
No.	Seal#	Truss Name	Date
1	I47711575	F1	9/1/2021
2	I47711576	F1A	9/1/2021
3	I47711577	F1E	9/1/2021
4	I47711578	F2	9/1/2021
5	I47711579	F2GR	9/1/2021
6	I47711580	F3	9/1/2021
7	I47711581	F3E	9/1/2021
8	I47711582	F4	9/1/2021
9	I47711583	F5	9/1/2021
10	I47711584	F6	9/1/2021
11	I47711585	F6E	9/1/2021
12	I47711586	F7	9/1/2021
13	I47711587	F7E	9/1/2021
14	I47711588	F8	9/1/2021
15	I47711589	F8E	9/1/2021
16	I47711590	F9	9/1/2021
17	I47711591	F10	9/1/2021
18	I47711592	F10E	9/1/2021
19	I47711593	F11	9/1/2021

The truss drawing(s) referenced above have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by 84 Components - #2383.

Truss Design Engineer's Name: Sevier, Scott

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

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.

September 01, 2021

Sevier, Scott

Job	Truss	Truss Type	Qty	Ply	Penwell BFK
Penwell BFK Floor	F1	Floor	5	1	I47711575
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Tue Aug 31 14:29:35 2021 Page 1
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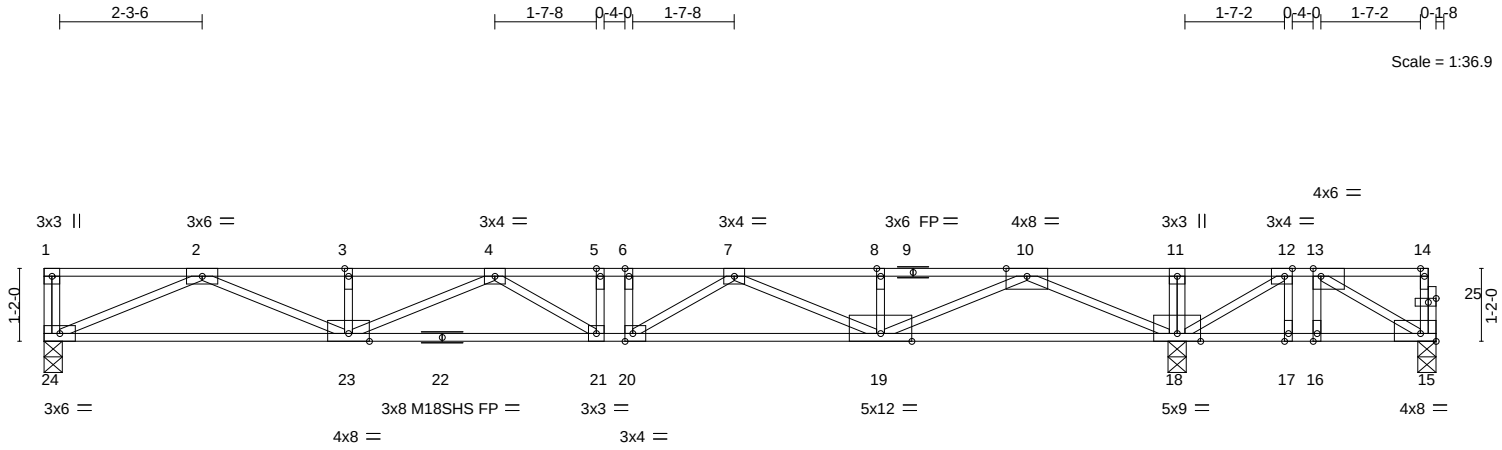

FASTEN TRUSS TO BEARING FOR THE UPLIFT REACTION SHOWN WHILE PERMITTING NO UPWARD MOVEMENT OF THE BEARING.

18-1-12
18-1-12
22-3-8
4-1-12

Plate Offsets (X,Y)-- [12:0-1-8,Edge], [13:0-1-8,Edge], [15:Edge,0-1-8], [20:0-1-8,Edge], [25:0-1-8,0-0-12]

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	0.90	Vert(LL)	-0.25	21-23	>877	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.92	Vert(CT)	-0.34	21-23	>633	360	M18SHS	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.90	Horz(CT)	0.05	18	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 115 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP No.1(flat)
BOT CHORD 2x4 SP No.2(flat)
WEBS 2x4 SP No.3(flat)

BRACING-
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.

REACTIONS. (size) 24=0-3-8, 18=0-3-8, 15=0-3-8
Max Uplift 15=-641(LC 3)
Max Grav 24=834(LC 10), 18=2077(LC 1), 15=18(LC 4)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2660/0, 3-4=-2660/0, 4-5=-2928/0, 5-6=-2928/0, 6-7=-2928/0, 7-8=-1375/0, 8-10=-1375/0, 10-11=0/2705, 11-12=0/2701, 12-13=0/1288
BOT CHORD 23-24=0/1652, 21-23=0/3036, 20-21=0/2928, 19-20=0/2457, 18-19=-472/0, 17-18=-1288/0, 16-17=-1288/0, 15-16=-1288/0
WEBS 2-24=-1801/0, 10-18=-2527/0, 2-23=0/1103, 10-19=0/1887, 4-23=-411/0, 7-19=-1193/0, 4-21=-371/239, 7-20=0/691, 12-18=-1792/0, 13-15=0/1497, 12-17=0/404, 13-16=-389/0

NOTES-
1) Unbalanced floor live loads have been considered for this design.
2) All plates are MT20 plates unless otherwise indicated.
3) All plates are 1.5x4 MT20 unless otherwise indicated.
4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 641 lb uplift at joint 15.
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.

September 1,2021

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Job	Truss	Truss Type	Qty	Ply	Penwell BFK
Penwell BFK Floor	F1A	Floor	3	1	I47711576
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Tue Aug 31 14:29:38 2021 Page 1
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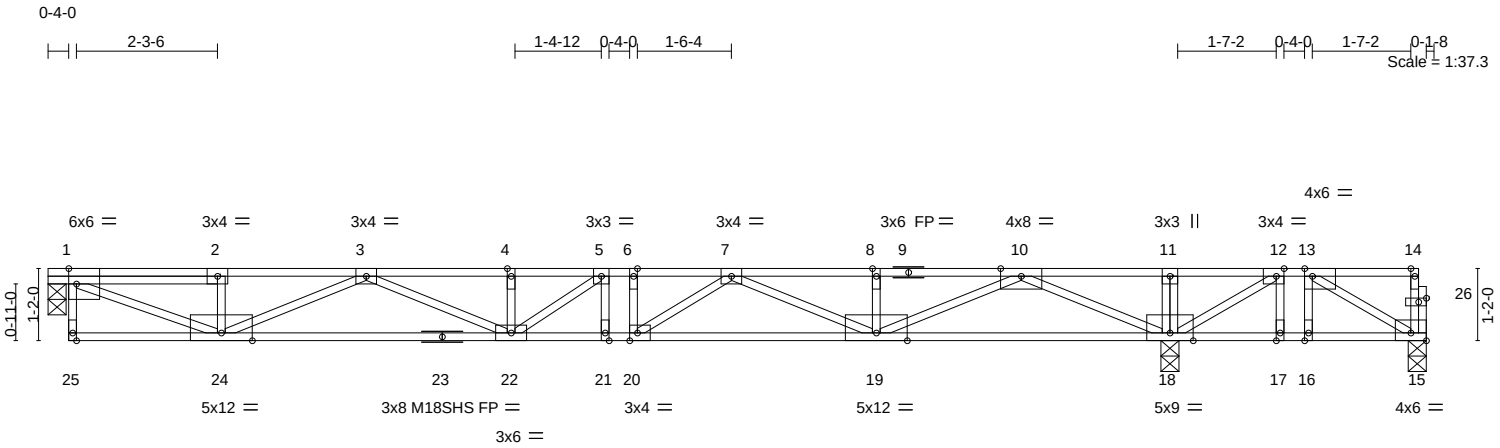

FASTEN TRUSS TO BEARING FOR THE UPLIFT REACTION SHOWN WHILE PERMITTING NO UPWARD MOVEMENT OF THE BEARING.

0-4-0	18-1-12	22-3-8
0-4-0	17-9-12	4-1-12

Plate Offsets (X,Y)-- [1:0-1-8,Edge], [12:0-1-8,Edge], [13:0-1-8,Edge], [15:Edge,0-1-8], [20:0-1-8,Edge], [26:0-1-8,0-0-12]

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)	-0.23	21-22	>936	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.89	Vert(CT)	-0.31	21-22	>687	360	M18SHS	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.88	Horz(CT)	-0.01	15	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 118 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP No.1(flat)
BOT CHORD 2x4 SP No.2(flat)
WEBS 2x4 SP No.3(flat)

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. (size) 1=0-3-8, 18=0-3-8, 15=0-3-8
Max Uplift 15=-614(LC 3)
Max Grav 1=823(LC 10), 18=2031(LC 1), 15=25(LC 4)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-1648/0, 2-3=-1645/0, 3-4=-2986/0, 4-5=-2986/0, 5-6=-2846/0, 6-7=-2846/0, 7-8=-1398/0, 8-10=-1398/0, 10-11=0/2598, 11-12=0/2595, 12-13=0/1235
BOT CHORD 22-24=0/2580, 21-22=0/2846, 20-21=0/2846, 19-20=0/2437, 18-19=-429/0, 17-18=-1235/0, 16-17=-1235/0, 15-16=-1235/0
WEBS 1-24=0/1776, 10-18=-2480/0, 3-24=-1023/0, 10-19=0/1841, 3-22=0/444, 7-19=-1147/0, 5-22=-199/408, 7-20=0/628, 12-18=-1730/0, 13-15=0/1435, 12-17=0/390, 13-16=-376/0

NOTES-
1) Unbalanced floor live loads have been considered for this design.
2) All plates are MT20 plates unless otherwise indicated.
3) All plates are 1.5x4 MT20 unless otherwise indicated.
4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 614 lb uplift at joint 15.
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) Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.
7) CAUTION, Do not erect truss backwards.

September 1,2021

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Job	Truss	Truss Type	Qty	Ply	Penwell BFK
Penwell BFK Floor	F1E	Floor Supported Gable	1	1	I47711577
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Tue Aug 31 14:29:39 2021 Page 1
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0-1-8

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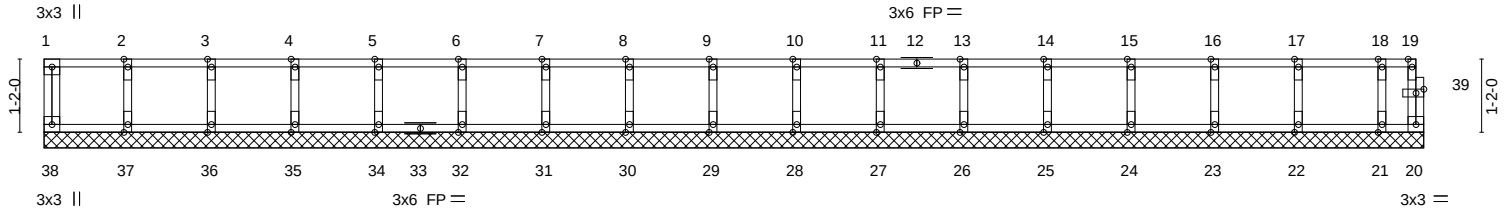

22-0-0
22-0-0

Plate Offsets (X,Y)-- [39:0-1-8,0-0-12]

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	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.02	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	20	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-R							Weight: 92 lb	FT = 20%F, 11%E

LUMBER-

TOP CHORD	2x4 SP No.2(flat)
BOT CHORD	2x4 SP No.2(flat)
WEBS	2x4 SP No.3(flat)
OTHERS	2x4 SP No.3(flat)

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. All bearings 22-0-0.
(lb) - Max Grav All reactions 250 lb or less at joint(s) 38, 20, 37, 36, 35, 34, 32, 31, 30, 29, 28, 27, 26, 25, 24, 23, 22, 21

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

NOTES-
1) All plates are 1.5x4 MT20 unless otherwise indicated.
2) Gable requires continuous bottom chord bearing.
3) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
4) Gable studs spaced at 1-4-0 oc.
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.

September 1,2021

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Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Penwell BFK
Penwell BFK Floor	F2	Floor	8	1	I47711578
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Tue Aug 31 14:29:41 2021 Page 1
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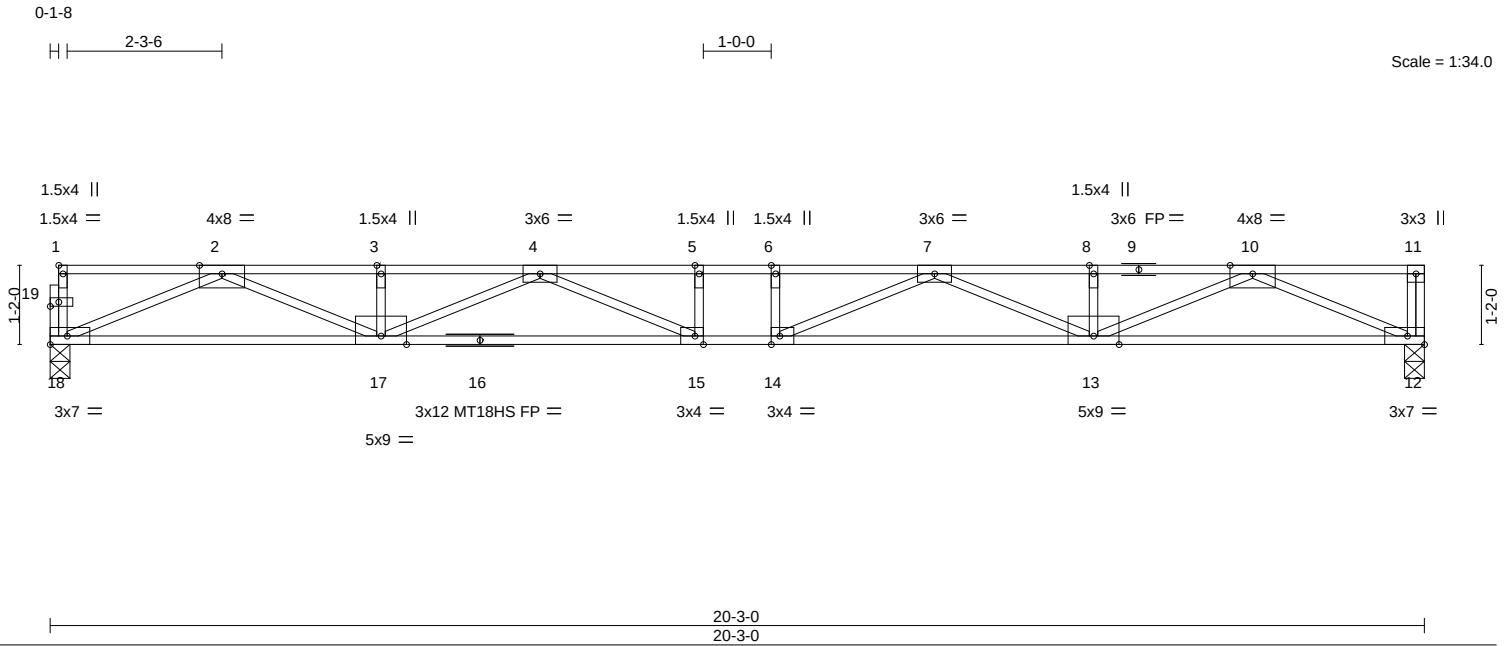

Plate Offsets (X,Y)-- [1:Edge,0-0-12], [14:0-1-8,Edge], [15:0-1-8,Edge], [19:0-1-8,0-0-12]

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	0.67	Vert(LL)	-0.46	14-15	>522	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.52	Vert(CT)	-0.63	15	>380	360	MT18HS	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.83	Horz(CT)	0.09	12	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 100 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP No.1(flat)
BOT CHORD 2x4 SP DSS(flat)
WEBS 2x4 SP No.3(flat)

BRACING-
TOP CHORD Structural wood sheathing directly applied or 4-9-2 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 18=0-3-8, 12=0-3-8
Max Grav 18=1094(LC 1), 12=1100(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-3863/0, 3-4=-3863/0, 4-5=-5272/0, 5-6=-5272/0, 6-7=-5272/0, 7-8=-3863/0, 8-10=-3863/0
BOT CHORD 17-18=0/2264, 15-17=0/4850, 14-15=0/5272, 13-14=0/4850, 12-13=0/2266
WEBS 2-18=-2460/0, 10-12=-2469/0, 2-17=0/1751, 10-13=0/1747, 4-17=-1080/0, 7-13=-1081/0, 4-15=-87/806, 7-14=-88/806

NOTES-
1) Unbalanced floor live loads have been considered for this design.
2) All plates are MT20 plates unless otherwise indicated.
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.

September 1,2021

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Job	Truss	Truss Type	Qty	Ply	Penwell BFK
Penwell BFK Floor	F2GR	FLOOR GIRDER	1	2	I47711579

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Tue Aug 31 14:29:42 2021 Page 1
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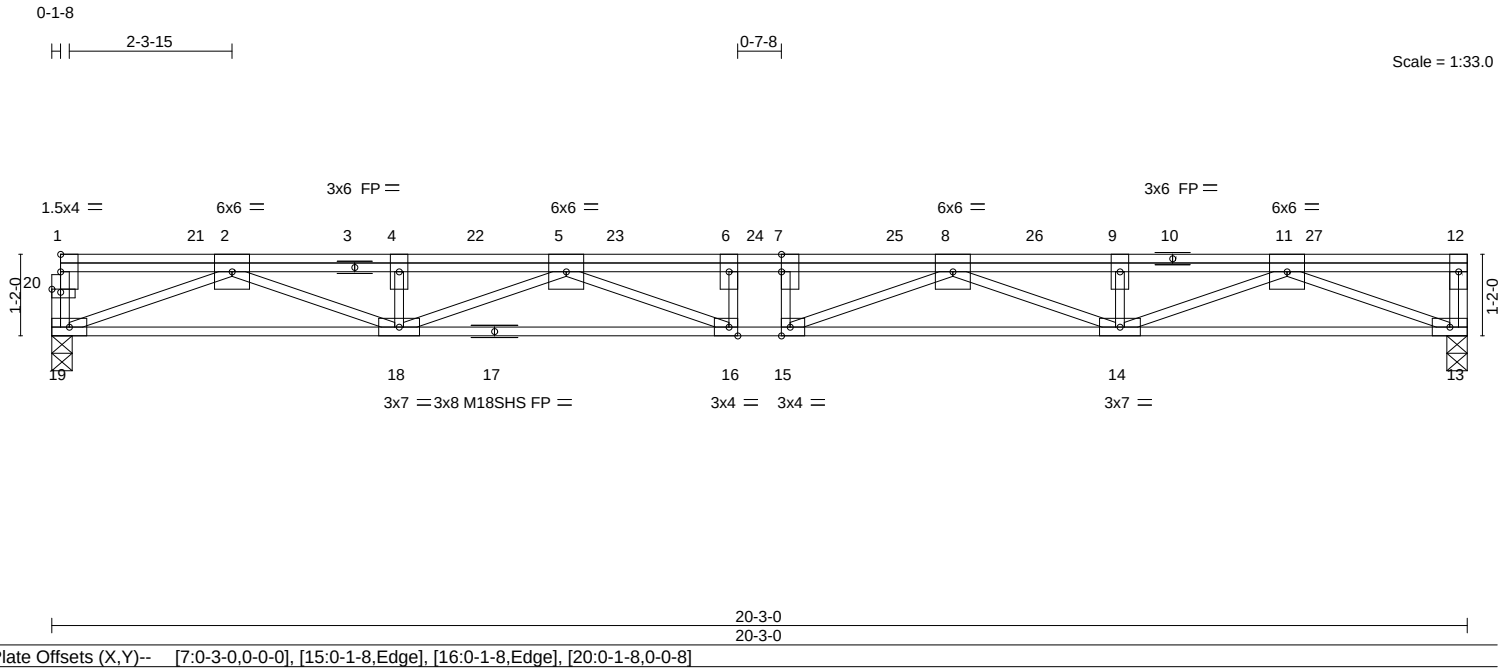

Plate Offsets (X,Y)-- [7:0-3-0,0-0-0], [15:0-1-8,Edge], [16:0-1-8,Edge], [20:0-1-8,0-0-8]

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	0.16	Vert(LL)	-0.25	16	>957	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.86	Vert(CT)	-0.35	16	>689	360	M18SHS	244/190
BCLL	0.0	Rep Stress Incr	NO	WB	0.48	Horz(CT)	0.07	13	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 257 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP No.2(flat)
BOT CHORD 2x4 SP No.2(flat)
WEBS 2x4 SP No.3(flat)

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. (size) 19=0-3-8, 13=0-3-8
Max Grav 19=1191(LC 1), 13=1198(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-4=-4480/0, 4-5=-4480/0, 5-6=-5916/0, 6-7=-5916/0, 7-8=-5916/0, 8-9=-4478/0, 9-11=-4478/0
BOT CHORD 18-19=0/2633, 16-18=0/5426, 15-16=0/5916, 14-15=0/5425, 13-14=0/2640
WEBS 2-19=-2827/0, 11-13=-2843/0, 2-18=0/1995, 4-18=-315/63, 11-14=0/1986, 9-14=-310/62, 5-18=-1023/76, 8-14=-1024/79, 5-16=-171/714, 8-15=-175/717

NOTES-
1) Fasten trusses together to act as a single unit as per standard industry detail, or loads are to be evenly applied to all plies.
2) Unbalanced floor live loads have been considered for this design.
3) All plates are MT20 plates unless otherwise indicated.
4) All plates are 3x6 MT20 unless otherwise indicated.
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.
7) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 129 lb down at 2-1-4, 129 lb down at 4-1-4, 31 lb down and 170 lb up at 4-10-12, 31 lb down and 170 lb up at 6-1-4, 31 lb down and 170 lb up at 8-1-4, 170 lb up at 10-1-4, 31 lb down and 170 lb up at 12-1-4, 31 lb down and 170 lb up at 14-1-4, 31 lb down and 170 lb up at 15-4-4, and 129 lb down at 16-1-4, and 129 lb down at 18-1-4 on top chord. The design/selection of such connection device(s) is the responsibility of others.
8) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (plf)
Vert: 13-19=-10, 1-12=-100
Concentrated Loads (lb)
Vert: 10=-49(F) 3=-49(F) 21=-49(F) 27=-49(F)

September 1,2021

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Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Penwell BFK
Penwell BFK Floor	F3	Floor	5	1	I47711580
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Tue Aug 31 14:29:43 2021 Page 1
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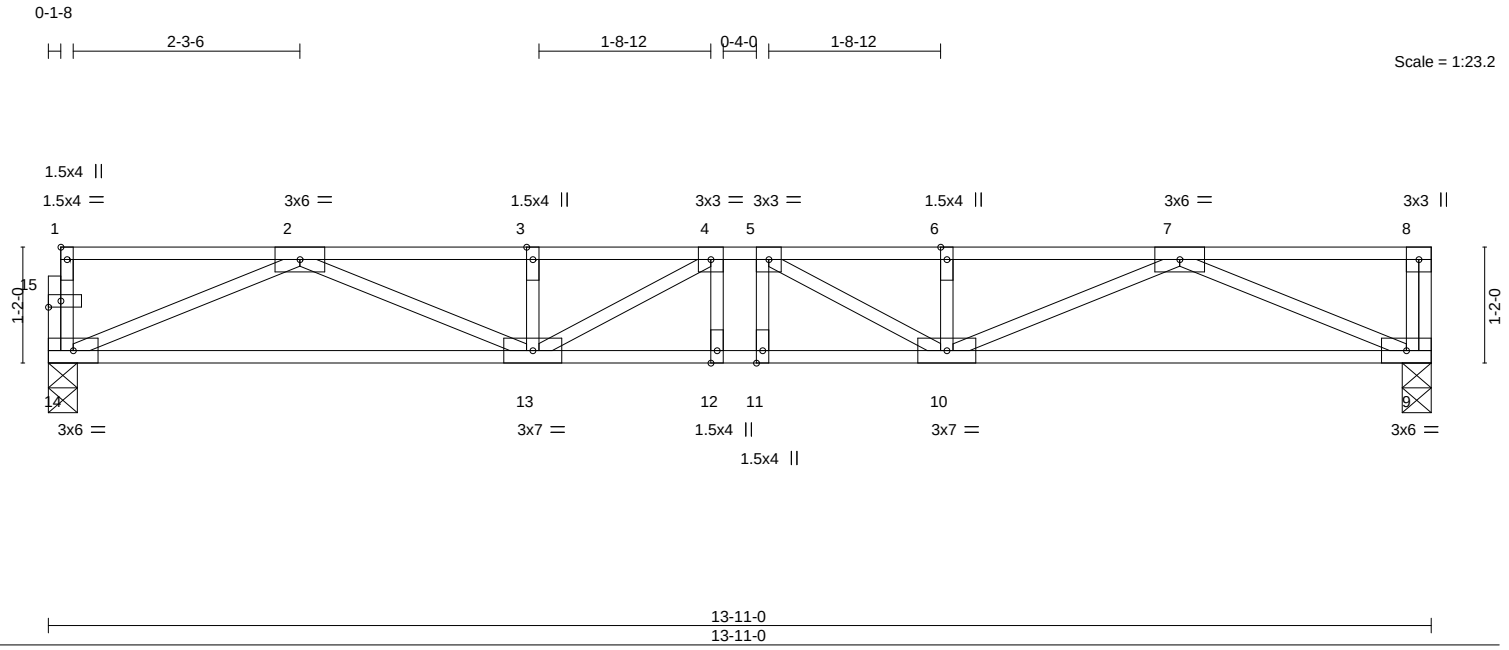

Plate Offsets (X,Y)-- [1:Edge,0-0-12], [15:0-1-8,0-0-12]

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	0.36	Vert(LL)	-0.14	12	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.72	Vert(CT)	-0.19	12	>878	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.42	Horz(CT)	0.04	9	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 72 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP No.2(flat)
BOT CHORD 2x4 SP No.2(flat)
WEBS 2x4 SP No.3(flat)

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. (size) 14=0-3-8, 9=0-3-8
Max Grav 14=745(LC 1), 9=752(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2277/0, 3-4=-2277/0, 4-5=-2464/0, 5-6=-2277/0, 6-7=-2277/0
BOT CHORD 13-14=0/1462, 12-13=0/2464, 11-12=0/2464, 10-11=0/2464, 9-10=0/1464
WEBS 2-14=-1587/0, 7-9=-1596/0, 2-13=0/892, 7-10=0/889, 4-13=-384/93, 5-10=-384/92

NOTES-
1) Unbalanced floor live loads have been considered for this design.
2) 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.
3) CAUTION, Do not erect truss backwards.

September 1,2021

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A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Penwell BFK
Penwell BFK Floor	F3E	Floor Supported Gable	1	1	I47711581
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Tue Aug 31 14:29:43 2021 Page 1
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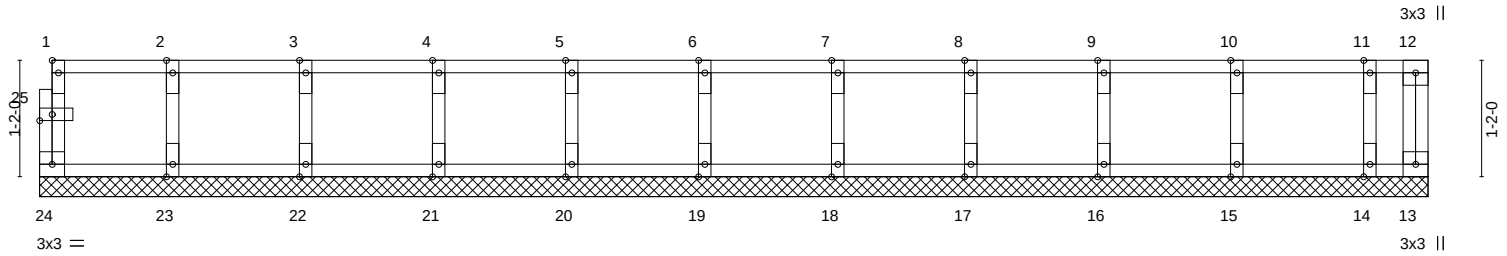

Plate Offsets (X,Y)-- [1:Edge,0-0-12], [25:0-1-8,0-0-12]

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	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.02	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	13	n/a	n/a		
BCDL	5.0	Code IRC2015/TPI2014		Matrix-R							Weight: 60 lb	FT = 20%F, 11%E

LUMBER-

TOP CHORD	2x4 SP No.2(flat)
BOT CHORD	2x4 SP No.2(flat)
WEBS	2x4 SP No.3(flat)
OTHERS	2x4 SP No.3(flat)

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. All bearings 13-11-0.
(lb) - Max Grav All reactions 250 lb or less at joint(s) 24, 13, 23, 22, 21, 20, 19, 18, 17, 16, 15, 14

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

NOTES-
1) All plates are 1.5x4 MT20 unless otherwise indicated.
2) Gable requires continuous bottom chord bearing.
3) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
4) Gable studs spaced at 1-4-0 oc.
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.

September 1,2021

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

Job	Truss	Truss Type	Qty	Ply	Penwell BFK
Penwell BFK Floor	F4	Floor	4	1	I47711582
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Tue Aug 31 14:29:44 2021 Page 1
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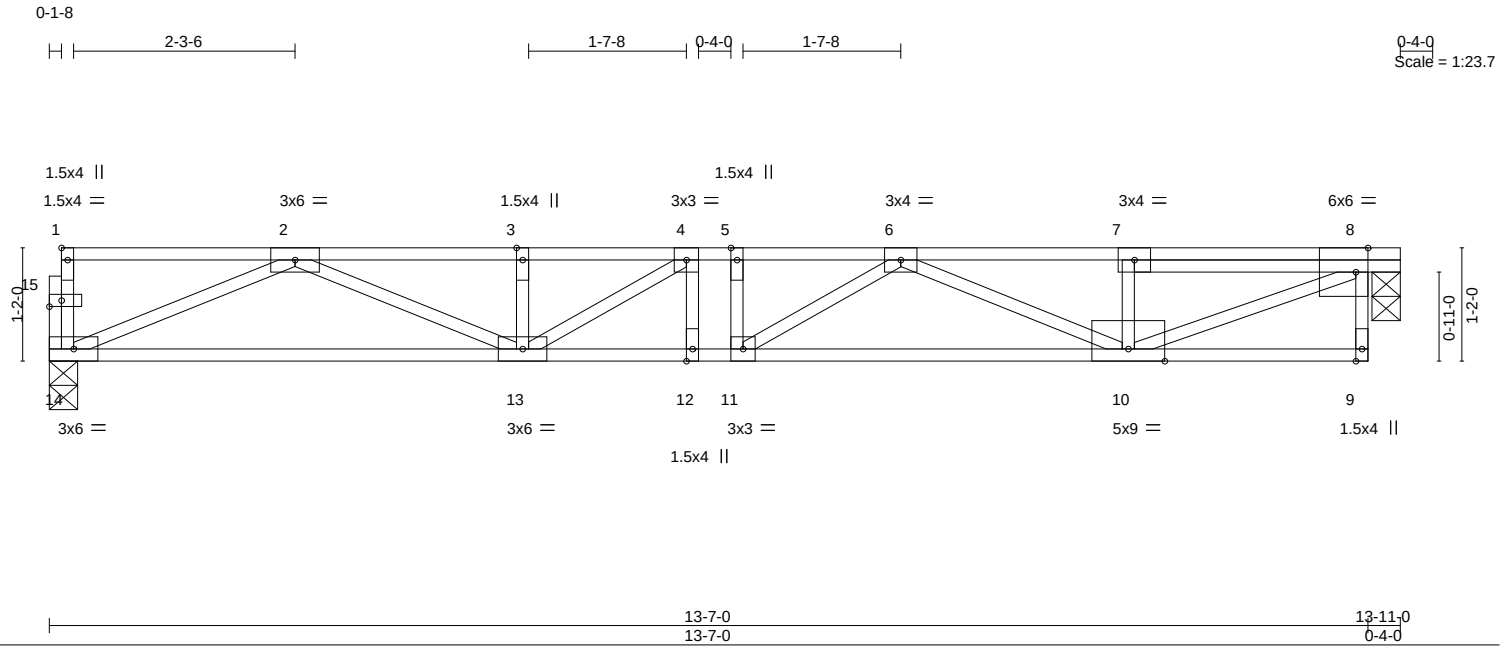

Plate Offsets (X,Y)-- [1:Edge,0-0-12], [8:0-1-8,Edge], [15:0-1-8,0-0-12]

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	0.35	Vert(LL)	-0.12	12	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.70	Vert(CT)	-0.17	10-11	>938	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.74	Horz(CT)	0.00	8	n/a	n/a		
BCDL	5.0	Code IRC2015/TPI2014		Matrix-S							Weight: 74 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP No.2(flat)
BOT CHORD 2x4 SP No.2(flat)
WEBS 2x4 SP No.3(flat)

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. (size) 14=0-3-8, 8=0-3-8
Max Grav 14=731(LC 1), 8=737(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2207/0, 3-4=-2207/0, 4-5=-2371/0, 5-6=-2371/0, 6-7=-1448/0, 7-8=-1450/0
BOT CHORD 13-14=0/1428, 12-13=0/2371, 11-12=0/2371, 10-11=0/2184
WEBS 2-14=-1550/0, 8-10=0/1563, 2-13=0/852, 6-10=-806/0, 4-13=-365/98, 6-11=-55/380

NOTES-
1) Unbalanced floor live loads have been considered for this design.
2) 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.
3) Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.
4) CAUTION, Do not erect truss backwards.

September 1,2021

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

Job	Truss	Truss Type	Qty	Ply	Penwell BFK
Penwell BFK Floor	F5	Floor	5	1	I47711583
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Tue Aug 31 14:29:45 2021 Page 1
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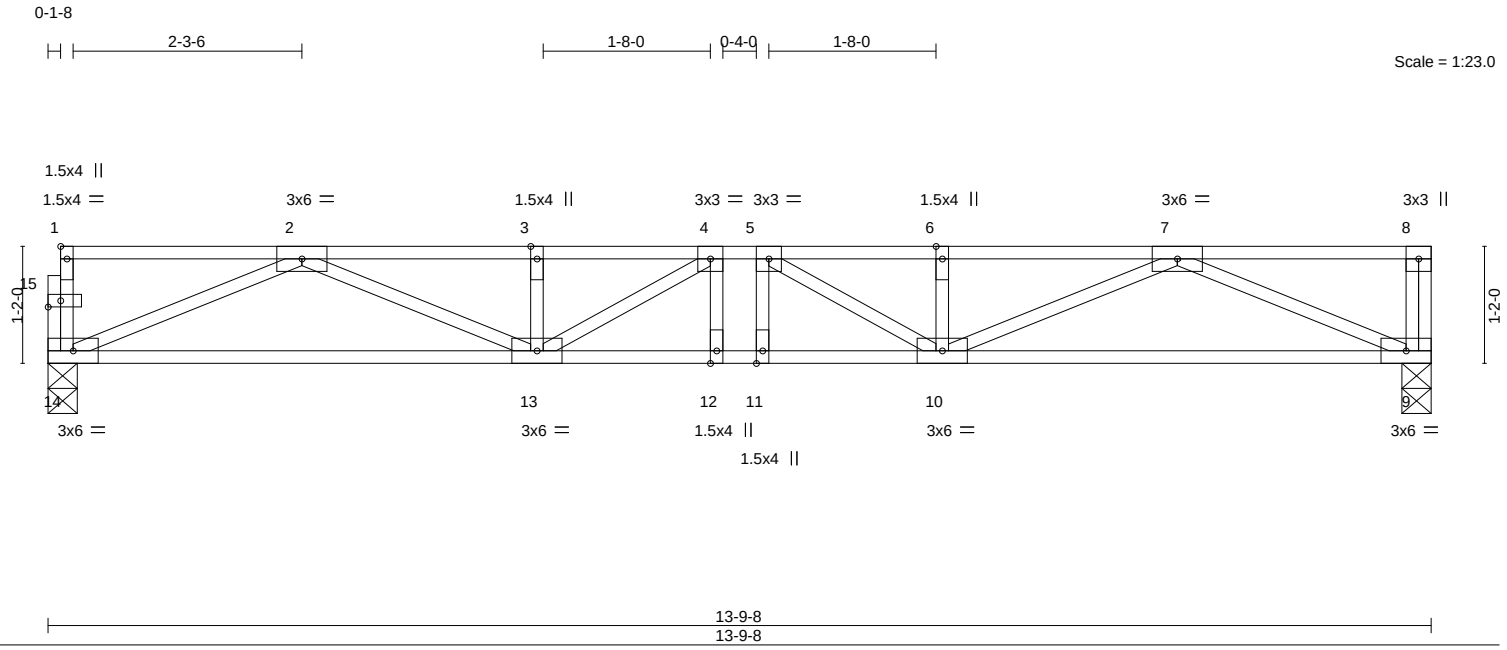

Plate Offsets (X,Y)-- [1:Edge,0-0-12], [15:0-1-8,0-0-12]

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	0.36	Vert(LL)	-0.13	12	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.71	Vert(CT)	-0.18	12	>900	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.42	Horz(CT)	0.04	9	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 72 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP No.2(flat)
BOT CHORD 2x4 SP No.2(flat)
WEBS 2x4 SP No.3(flat)

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. (size) 14=0-3-8, 9=0-3-8
Max Grav 14=739(LC 1), 9=745(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2245/0, 3-4=-2245/0, 4-5=-2417/0, 5-6=-2245/0, 6-7=-2245/0
BOT CHORD 13-14=0/1447, 12-13=0/2417, 11-12=0/2417, 10-11=0/2417, 9-10=0/1449
WEBS 2-14=-1570/0, 7-9=-1579/0, 2-13=0/874, 7-10=0/871, 4-13=-368/98, 5-10=-368/97

NOTES-
1) Unbalanced floor live loads have been considered for this design.
2) 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.
3) CAUTION, Do not erect truss backwards.

September 1,2021

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

Job	Truss	Truss Type	Qty	Ply	Penwell BFK
Penwell BFK Floor	F6	Floor	3	1	I47711584
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Tue Aug 31 14:29:45 2021 Page 1
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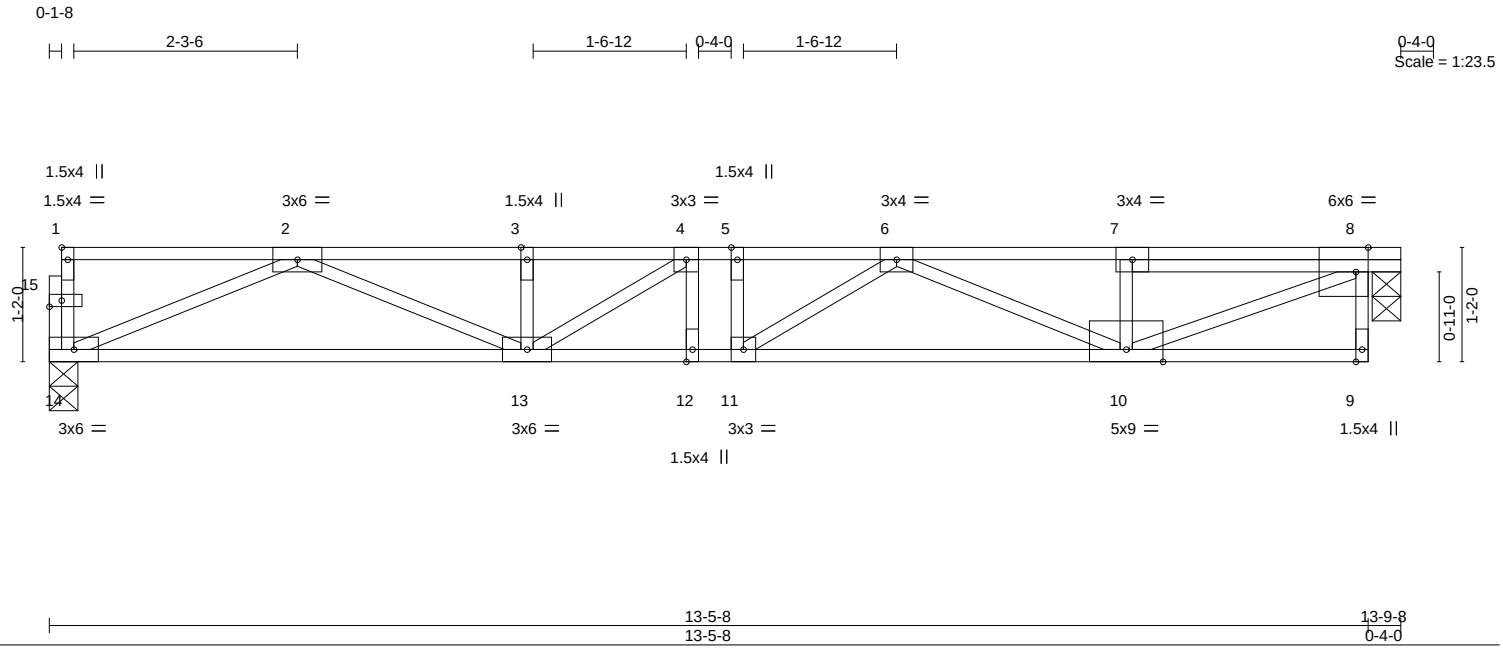

Plate Offsets (X,Y)-- [1:Edge,0-0-12], [8:0-1-8,Edge], [15:0-1-8,0-0-12]

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	0.35	Vert(LL)	-0.12	12	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.69	Vert(CT)	-0.17	10-11	>963	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.74	Horz(CT)	0.00	8	n/a	n/a		
BCDL	5.0	Code IRC2015/TPI2014		Matrix-S							Weight: 73 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP No.2(flat)
BOT CHORD 2x4 SP No.2(flat)
WEBS 2x4 SP No.3(flat)

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. (size) 14=0-3-8, 8=0-3-8
Max Grav 14=724(LC 1), 8=730(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2175/0, 3-4=-2175/0, 4-5=-2325/0, 5-6=-2325/0, 6-7=-1432/0, 7-8=-1434/0
BOT CHORD 13-14=0/1413, 12-13=0/2325, 11-12=0/2325, 10-11=0/2153
WEBS 2-14=-1533/0, 8-10=0/1546, 2-13=0/834, 6-10=-789/0, 4-13=-350/103, 6-11=-60/366

NOTES-
1) Unbalanced floor live loads have been considered for this design.
2) 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.
3) Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.
4) CAUTION, Do not erect truss backwards.

September 1,2021

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

Job	Truss	Truss Type	Qty	Ply	Penwell BFK
Penwell BFK Floor	F6E	Floor Supported Gable	1	1	I47711585
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Tue Aug 31 14:29:46 2021 Page 1
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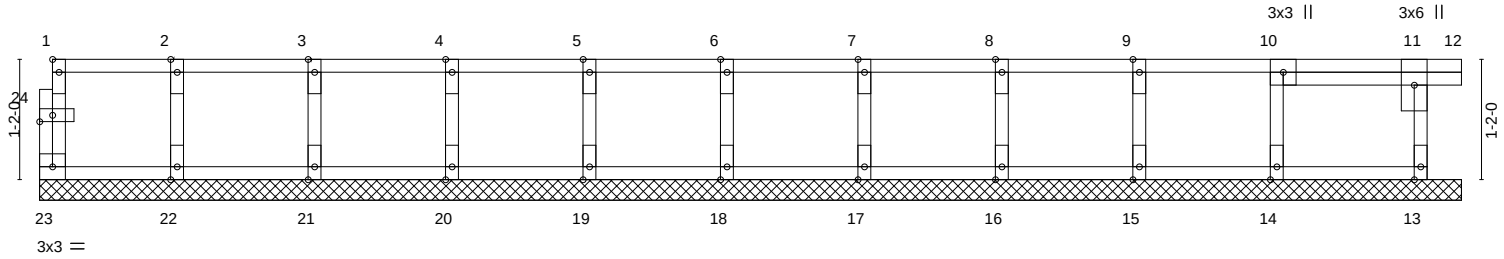

13-5-8 13-9-8
13-5-8 0-4-0

Plate Offsets (X,Y)-- [1:Edge,0-0-12], [24:0-1-8,0-0-12]

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	0.08	Vert(LL)	0.00	11	n/r	90	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.02	Vert(CT)	0.00	11	n/r	90		
BCLL	0.0	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	13	n/a	n/a		
BCDL	5.0	Code IRC2015/TPI2014		Matrix-R							Weight: 59 lb	FT = 20%F, 11%E

LUMBER-

TOP CHORD	2x4 SP No.2(flat)
BOT CHORD	2x4 SP No.2(flat)
WEBS	2x4 SP No.3(flat)
OTHERS	2x4 SP No.3(flat)

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. All bearings 13-9-8.
(lb) - Max Grav All reactions 250 lb or less at joint(s) 23, 13, 22, 21, 20, 19, 18, 17, 16, 15, 14

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

NOTES-
1) All plates are 1.5x4 MT20 unless otherwise indicated.
2) Gable requires continuous bottom chord bearing.
3) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
4) Gable studs spaced at 1-4-0 oc.
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.

September 1,2021

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

Job	Truss	Truss Type	Qty	Ply	Penwell BFK
Penwell BFK Floor	F7	Floor	3	1	I47711586
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Tue Aug 31 14:29:47 2021 Page 1
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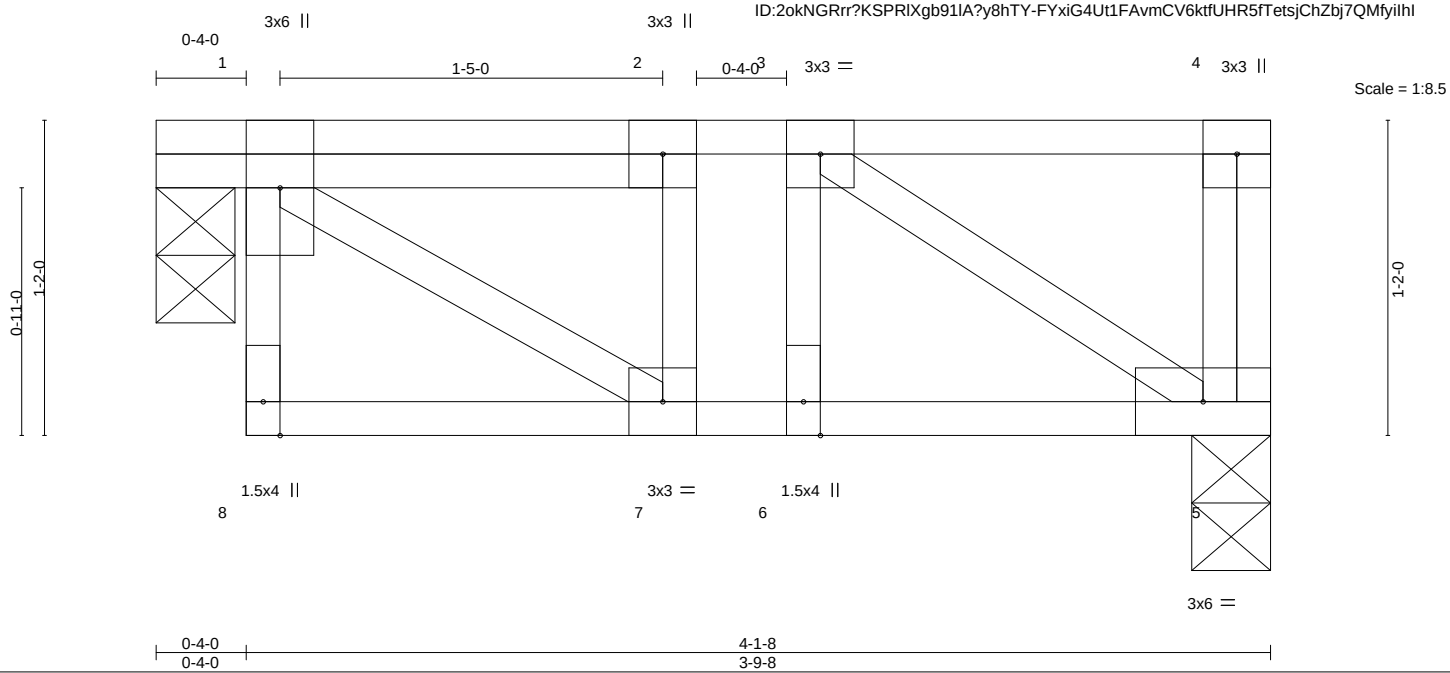

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.15	Vert(LL)	-0.00	6	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.08	Vert(CT)	-0.00	5-6	>999	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.10	Horz(CT)	0.00	5	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 26 lb	FT = 20%F, 11%E

LUMBER-

TOP CHORD	2x4 SP No.2(flat)
BOT CHORD	2x4 SP No.2(flat)
WEBS	2x4 SP No.3(flat)

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 4-1-8 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 5=0-3-8, 1=0-3-8
Max Grav 5=198(LC 1), 1=198(LC 1)

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

NOTES-

1) Unbalanced floor live loads have been considered for this design.
2) 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.
3) Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.
4) CAUTION, Do not erect truss backwards.

September 1,2021

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

Job	Truss	Truss Type	Qty	Ply	Penwell BFK
Penwell BFK Floor	F7E	Floor Supported Gable	1	1	I47711587
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Tue Aug 31 14:29:47 2021 Page 1
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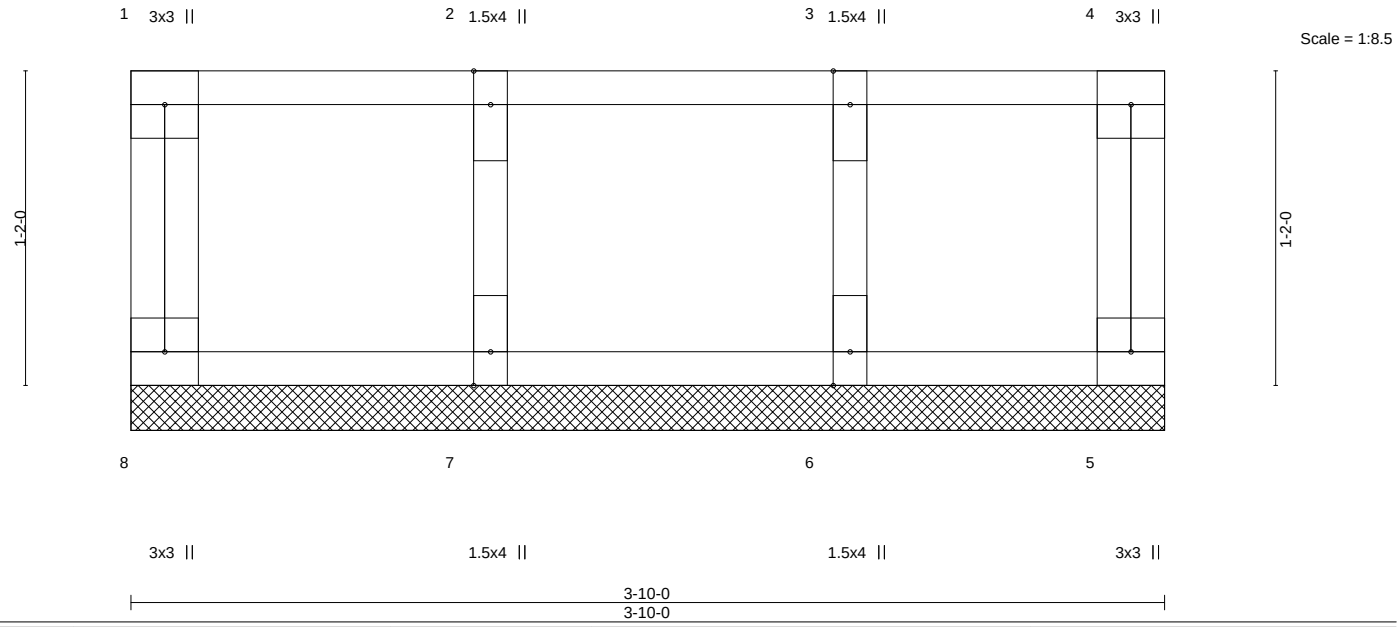

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.01	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	5	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-R							Weight: 20 lb	FT = 20%F, 11%E

LUMBER-

TOP CHORD	2x4 SP No.2(flat)
BOT CHORD	2x4 SP No.2(flat)
WEBS	2x4 SP No.3(flat)
OTHERS	2x4 SP No.3(flat)

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 3-10-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. All bearings 3-10-0.
(lb) - Max Grav All reactions 250 lb or less at joint(s) 8, 5, 7, 6

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

NOTES-
1) Gable requires continuous bottom chord bearing.
2) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
3) Gable studs spaced at 1-4-0 oc.
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.

September 1,2021

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

Job	Truss	Truss Type	Qty	Ply	Penwell BFK
Penwell BFK Floor	F8	Floor	1	1	I47711588
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Tue Aug 31 14:29:48 2021 Page 1
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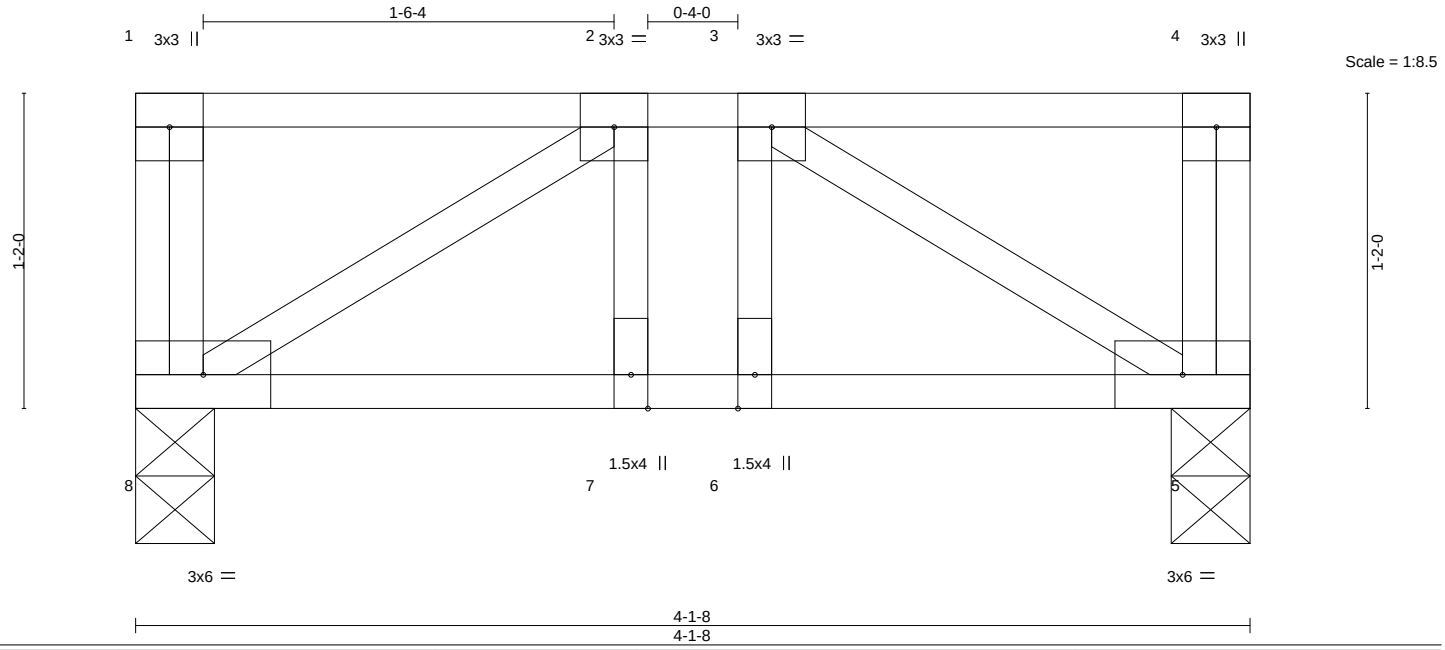

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.17	Vert(LL)	-0.00	7-8	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.10	Vert(CT)	-0.01	7-8	>999	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	5	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 26 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP No.2(flat)
BOT CHORD 2x4 SP No.2(flat)
WEBS 2x4 SP No.3(flat)

BRACING-
TOP CHORD Structural wood sheathing directly applied or 4-1-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 8=0-3-8, 5=0-3-8
Max Grav 8=213(LC 1), 5=213(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 2-8=-258/0, 3-5=-258/0

NOTES-
1) Unbalanced floor live loads have been considered for this design.
2) 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.

September 1,2021

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

Job	Truss	Truss Type	Qty	Ply	Penwell BFK
Penwell BFK Floor	F8E	Floor Supported Gable	1	1	I47711589
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Tue Aug 31 14:29:48 2021 Page 1
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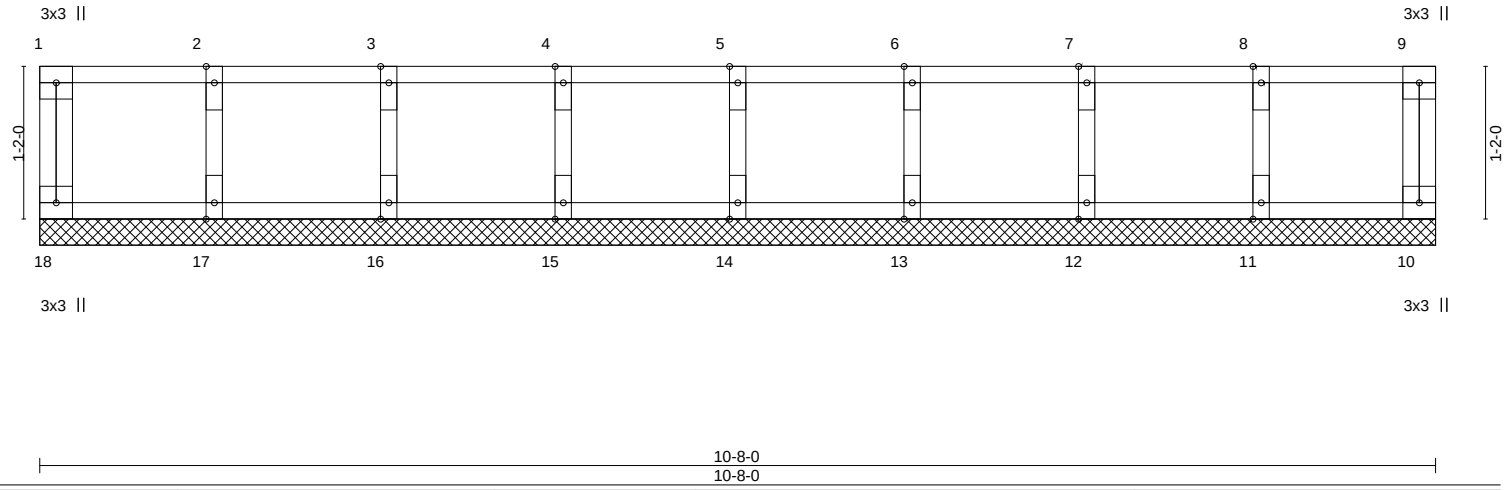

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.01	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	10	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-R							Weight: 47 lb	FT = 20%F, 11%E

LUMBER-

TOP CHORD	2x4 SP No.2(flat)
BOT CHORD	2x4 SP No.2(flat)
WEBS	2x4 SP No.3(flat)
OTHERS	2x4 SP No.3(flat)

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. All bearings 10-8-0.
(lb) - Max Grav All reactions 250 lb or less at joint(s) 18, 10, 17, 16, 15, 14, 13, 12, 11

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

NOTES-
1) All plates are 1.5x4 MT20 unless otherwise indicated.
2) Gable requires continuous bottom chord bearing.
3) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
4) Gable studs spaced at 1-4-0 oc.
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.

September 1,2021

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

Job	Truss	Truss Type	Qty	Ply	Penwell BFK
Penwell BFK Floor	F9	Floor	2	1	I47711590
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Tue Aug 31 14:29:49 2021 Page 1
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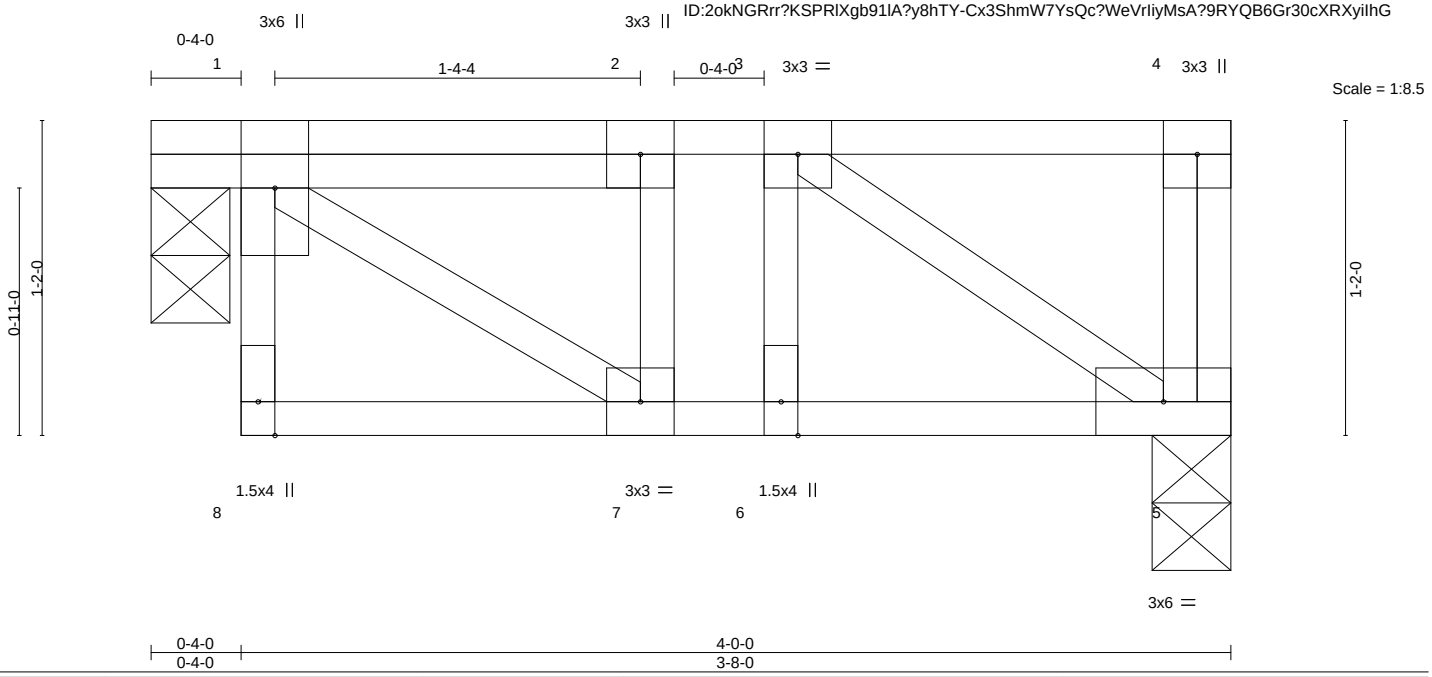

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.14	Vert(LL)	-0.00	6	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.08	Vert(CT)	-0.00	5-6	>999	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.10	Horz(CT)	0.00	5	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 25 lb	FT = 20%F, 11%E

LUMBER-

TOP CHORD	2x4 SP No.2(flat)
BOT CHORD	2x4 SP No.2(flat)
WEBS	2x4 SP No.3(flat)

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 4-0-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 5=0-3-8, 1=0-3-8
Max Grav 5=191(LC 1), 1=191(LC 1)

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

NOTES-

1) Unbalanced floor live loads have been considered for this design.
2) 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.
3) Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.
4) CAUTION, Do not erect truss backwards.

September 1,2021

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A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Penwell BFK
Penwell BFK Floor	F10	Floor	4	1	I47711591
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Tue Aug 31 14:29:36 2021 Page 1
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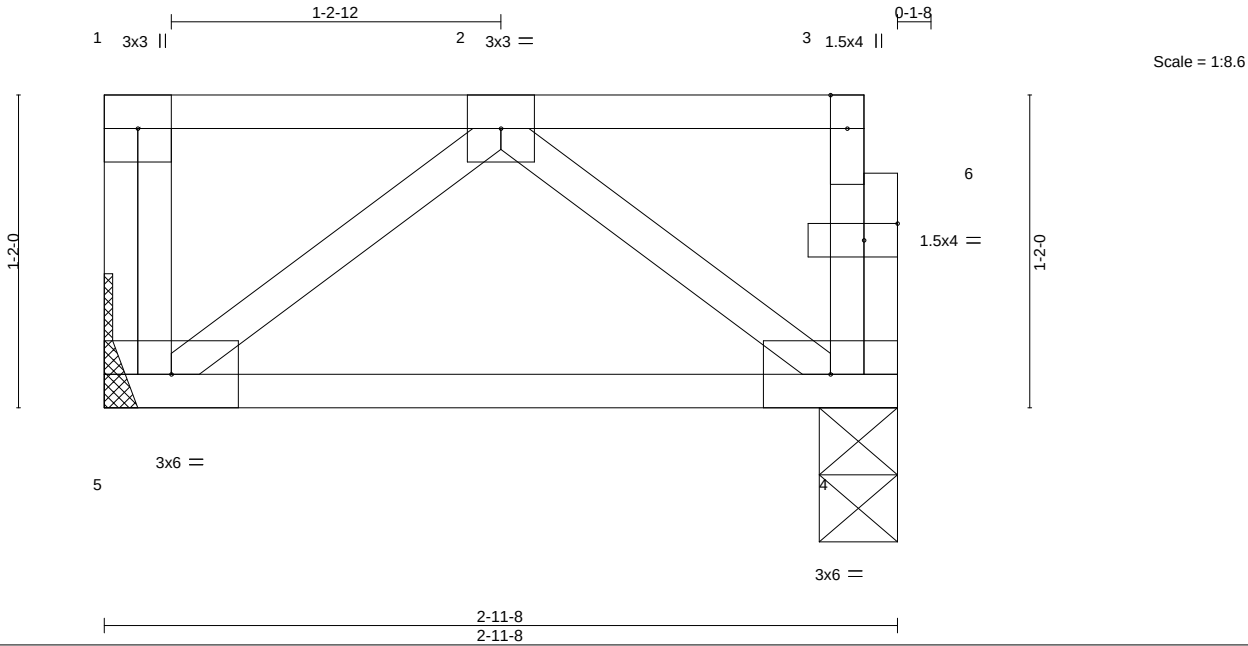

Plate Offsets (X,Y)-- [6:0-1-8,0-0-12]

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	0.10	Vert(LL)	0.00	5	****	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.09	Vert(CT)	-0.01	4-5	>999	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	4	n/a	n/a		
BCDL	5.0	Code IRC2015/TPI2014		Matrix-P							Weight: 18 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP No.2(flat)
BOT CHORD 2x4 SP No.2(flat)
WEBS 2x4 SP No.3(flat)

BRACING-
TOP CHORD Structural wood sheathing directly applied or 2-11-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 5=Mechanical, 4=0-3-8
Max Grav 5=149(LC 1), 4=143(LC 1)

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

NOTES-
1) Refer to girder(s) for truss to truss connections.
2) 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.
3) CAUTION, Do not erect truss backwards.

September 1,2021

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Job	Truss	Truss Type	Qty	Ply	Penwell BFK
Penwell BFK Floor	F10E	Floor Supported Gable	2	1	I47711592
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Tue Aug 31 14:29:36 2021 Page 1
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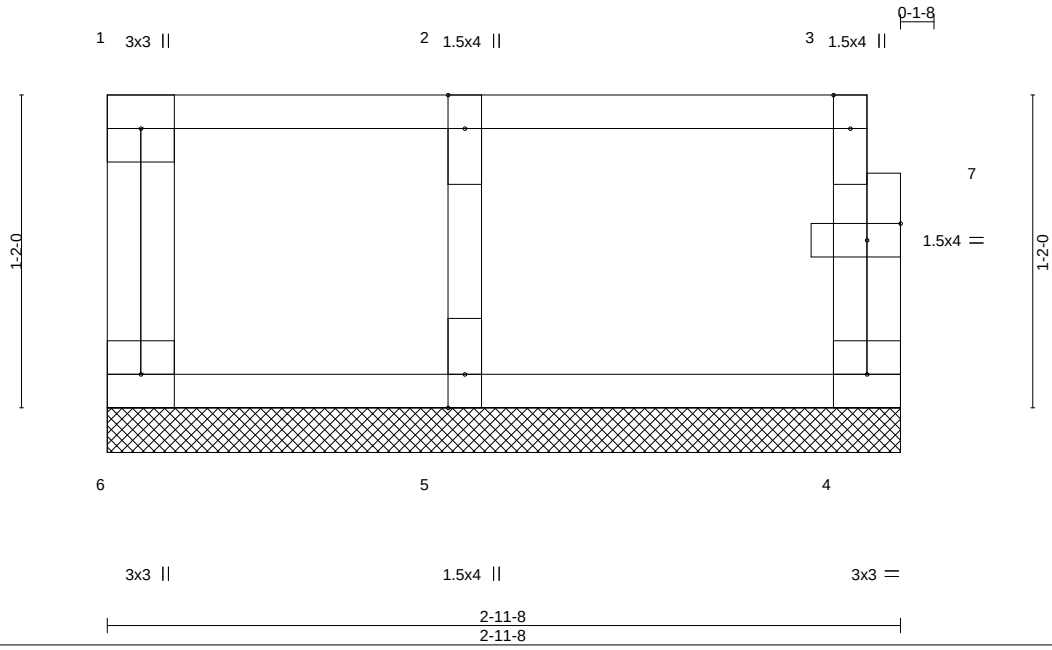

Plate Offsets (X,Y)-- [7:0-1-8,0-0-12]

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	0.10	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.03	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	4	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-R							Weight: 15 lb	FT = 20%F, 11%E

LUMBER-

TOP CHORD	2x4 SP No.2(flat)
BOT CHORD	2x4 SP No.2(flat)
WEBS	2x4 SP No.3(flat)
OTHERS	2x4 SP No.3(flat)

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 2-11-8 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 6=2-11-8, 4=2-11-8, 5=2-11-8
Max Grav 6=64(LC 1), 4=75(LC 1), 5=153(LC 1)

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

NOTES-

1) Gable requires continuous bottom chord bearing.
2) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
3) Gable studs spaced at 1-4-0 oc.
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.
5) CAUTION, Do not erect truss backwards.

September 1,2021

ENGINEERING BY TRENCO
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Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Penwell BFK
Penwell BFK Floor	F11	Floor	7	1	I47711593
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Tue Aug 31 14:29:37 2021 Page 1
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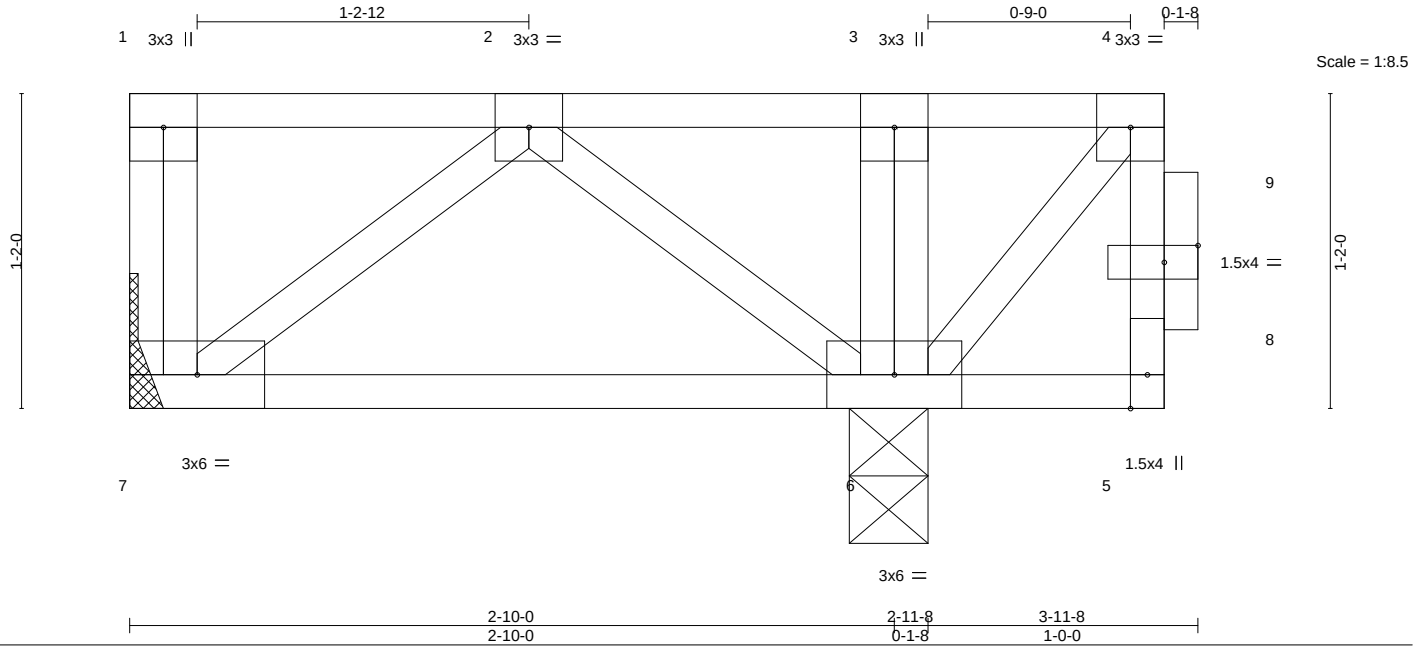

Plate Offsets (X,Y)-- [8:0-1-8,0-0-12]

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	0.19	Vert(LL)	0.00	6-7	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.06	Vert(CT)	-0.00	6-7	>999	360		
BCLL	0.0	Rep Stress Incr	NO	WB	0.10	Horz(CT)	-0.00	6	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-P							Weight: 25 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP No.2(flat)
BOT CHORD 2x4 SP No.2(flat)
WEBS 2x4 SP No.3(flat)

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-11-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS. (size) 7=Mechanical, 6=0-3-8
Max Uplift 7=-84(LC 4)
Max Grav 7=38(LC 3), 6=677(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=0/303, 3-4=0/302
WEBS 2-6=-311/0, 4-6=-448/0

NOTES-
1) Unbalanced floor live loads have been considered for this design.
2) Refer to girder(s) for truss to truss connections.
3) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 84 lb uplift at joint 7.
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.
5) 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: 5-7=-10, 1-4=-100
Concentrated Loads (lb)
Vert: 4=-300

September 1,2021

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TRENCO
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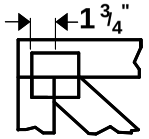
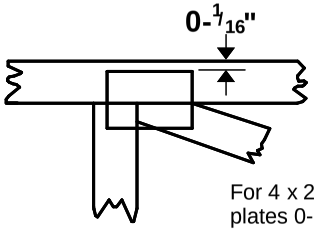
Edenton, NC 27932

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- 1/16" from outside edge of truss.

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

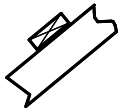
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

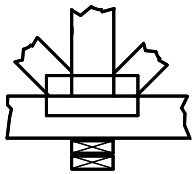
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

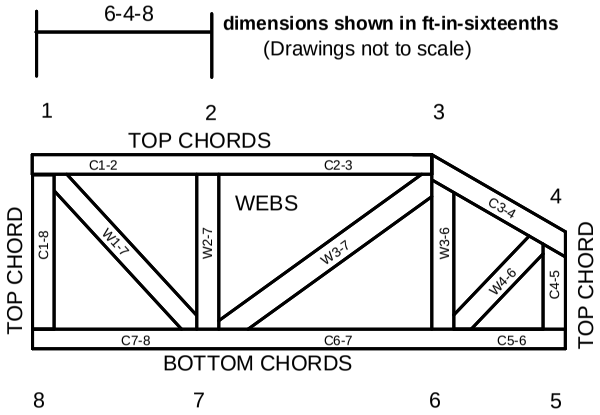


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI1: 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.

MiTek
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MiTek Engineering Reference Sheet: MII-7473 rev. 5/19/2020

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.
21. The design does not take into account any dynamic or other loads other than those expressly stated.