ENGINEERING BY TRENCO
A MiTek Affiliate

RE: J0923-5134
Precision/58 Liberty Meadows/Harnett

Trenco
818 Soundside Rd
Edenton, NC 27932

Site Information:

Customer: Project Name: J0923-5134
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 8.4
Wind Code: ASCE 7-10 Wind Speed: 130 mph
Roof Load: 40.0 psf Floor Load: N/A psf

This package includes 18 individual, dated Truss Design Drawings and 0 Additional Drawings.

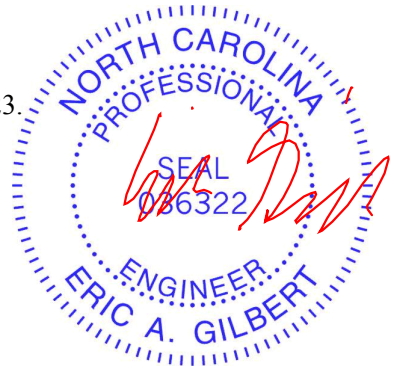
No.	Seal#	Truss Name	Date
1	I57763285	A1-GE	4/13/2023
2	I57763286	A2	4/13/2023
3	I57763287	A3	4/13/2023
4	I57763288	A4-GE	4/13/2023
5	I57763289	A5	4/13/2023
6	I57763290	A6-GE	4/13/2023
7	I57763291	B1-GE	4/13/2023
8	I57763292	B2	4/13/2023
9	I57763293	B3	4/13/2023
10	I57763294	C1-GE	4/13/2023
11	I57763295	C2	4/13/2023
12	I57763296	C3	4/13/2023
13	I57763297	D1-GE	4/13/2023
14	I57763298	D2	4/13/2023
15	I57763299	P1SG	4/13/2023
16	I57763300	P2	4/13/2023
17	I57763301	VB1	4/13/2023
18	I57763302	VB2	4/13/2023

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, 2023.

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 13, 2023

Gilbert, Eric

Job	Truss	Truss Type	Qty	Ply	Precision/58 Liberty Meadows/Harnett
J0923-5134	A1-GE	GABLE	1	1	I57763285
					Job Reference (optional)

Comtech, Inc., Fayetteville, NC 28309 — 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 13:10:40 2023 Page 1

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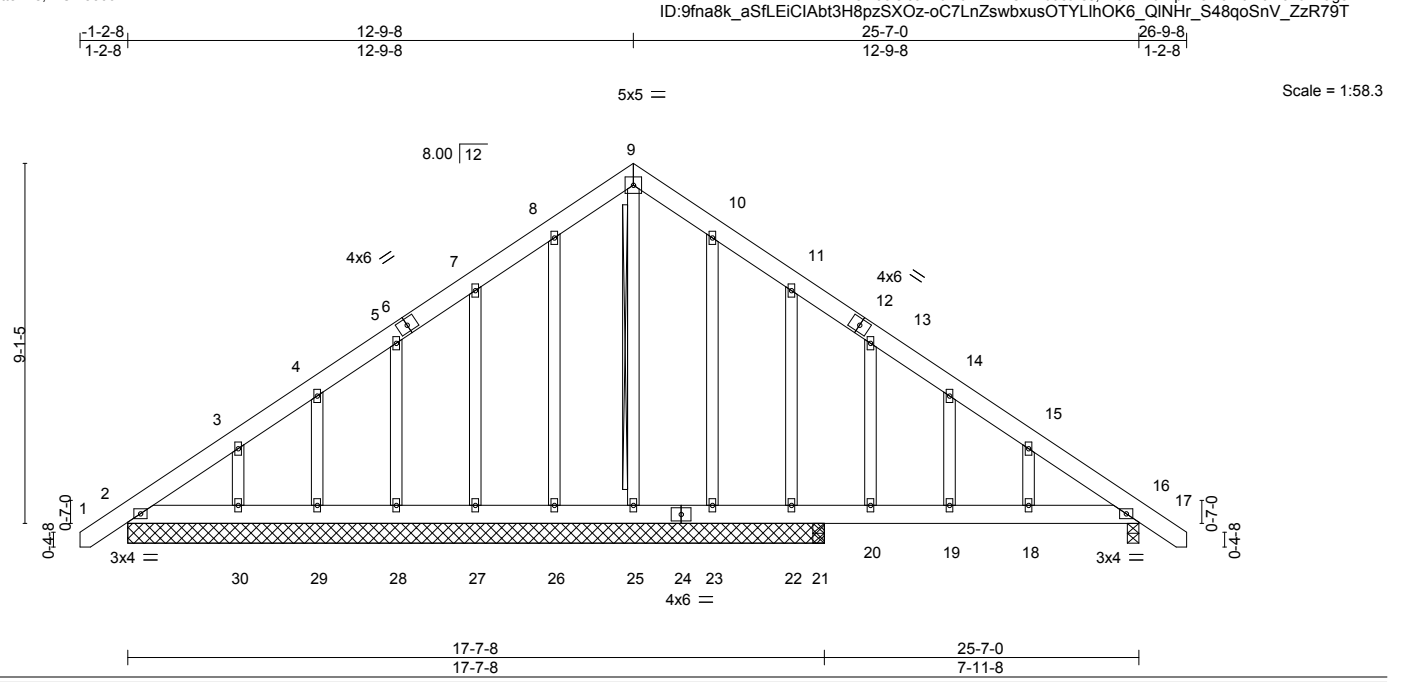

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.14	Vert(LL)	-0.03	18-19	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.32	Vert(CT)	-0.06	18-19	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.00	16	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-S		Wind(LL)	0.05	18-19	>999	240	Weight: 214 lb	FT = 20%

LUMBER-

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

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	T-Brace: 2x4 SPF No.2 - 9-25
	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 17-7-8 except (jt=length) 16=0-3-8, 21=0-3-8.
(lb) - Max Horz 2=-277(LC 10)
Max Uplift All uplift 100 lb or less at joint(s) 2, 16, 25, 26, 27, 28, 29, 23 except 30=-116(LC 12), 22=-615(LC 20), 21=-603(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 2, 25, 26, 27, 28, 29, 30, 23 except 16=378(LC 1), 22=299(LC 13), 21=1201(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-254/185, 8-9=-265/257, 9-10=-262/256, 10-11=-262/220
WEBS 13-20=-286/174

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; 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
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 16, 25, 26, 27, 28, 29, 23 except (jt=lb) 30=116, 22=615, 21=603.
9) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.

LOAD CASE(S) Standard

April 13,2023

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

Job	Truss	Truss Type	Qty	Ply	Precision/58 Liberty Meadows/Harnett
J0923-5134	A2	COMMON	5	1	I57763286
					Job Reference (optional)

Comtech, Inc., Fayetteville, NC 28309 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 13:10:41 2023 Page 1

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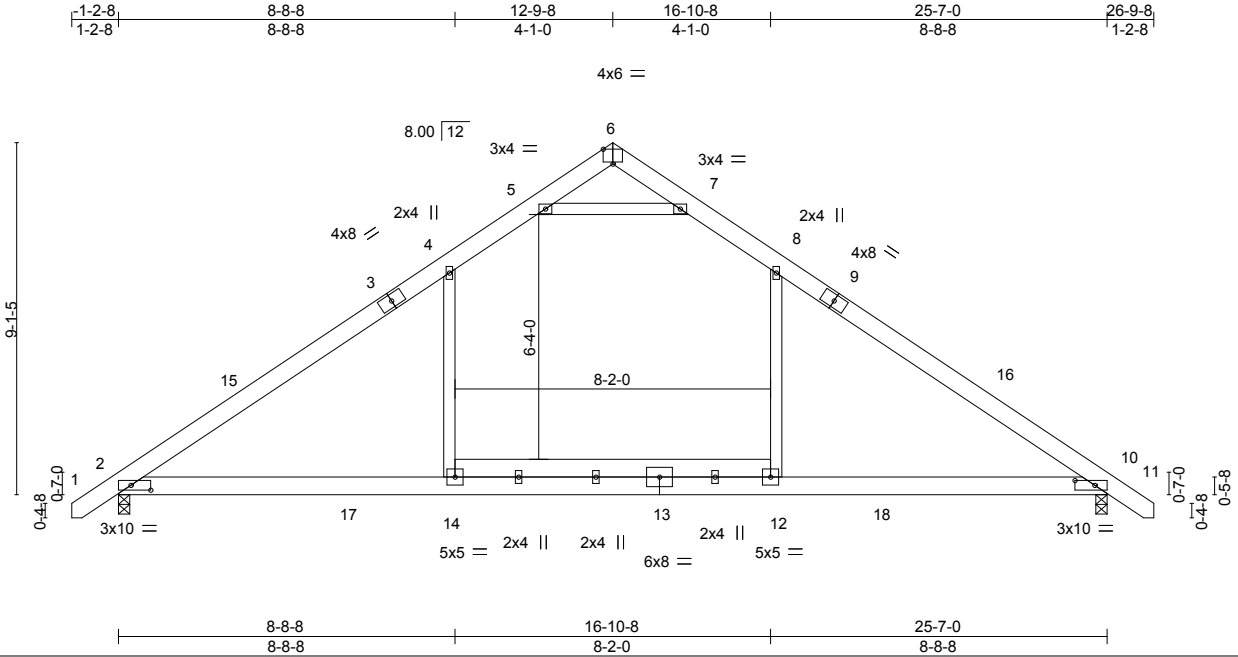

Plate Offsets (X,Y)-- [2:0-6-2,0-1-8], [6:0-3-0,Edge], [10:0-6-3,0-1-8]

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	0.84	Vert(LL)	-0.23	12-14	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.47	Vert(CT)	-0.33	12-14	>921	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.55	Horz(CT)	0.03	10	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-S		Wind(LL)	0.19	2-14	>999	240	Weight: 180 lb	FT = 20%

LUMBER-

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

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 4-10-5 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (lb/size) 2=1085/0-3-8 (min. 0-1-9), 10=1085/0-3-8 (min. 0-1-9)
Max Horz 2=222(LC 11)
Max Uplift 2=-71(LC 12), 10=-71(LC 13)
Max Grav 2=1320(LC 19), 10=1320(LC 20)

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

TOP CHORD	2-15=-1781/223, 3-15=-1622/232, 3-4=-1585/260, 4-5=-1224/322, 5-6=-171/751, 6-7=-171/752, 7-8=-1223/322, 8-9=-1585/260, 9-16=-1621/232, 10-16=-1781/224
BOT CHORD	2-17=-38/1368, 14-17=-38/1368, 13-14=-38/1368, 12-13=-38/1368, 12-18=-38/1368, 10-18=-38/1368
WEBS	8-12=0/616, 4-14=0/616, 5-7=-2174/573

NOTES-

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-0-15 to 3-3-14, Interior(1) 3-3-14 to 12-9-8, Exterior(2) 12-9-8 to 17-0-4, Interior(1) 17-0-4 to 26-7-15 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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 10.
6) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 13,2023

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

Job	Truss	Truss Type	Qty	Ply	Precision/58 Liberty Meadows/Harnett
J0923-5134	A3	COMMON	8	1	I57763287
					Job Reference (optional)

Comtech, Inc., Fayetteville, NC 28309 — 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 13:10:41 2023 Page 1

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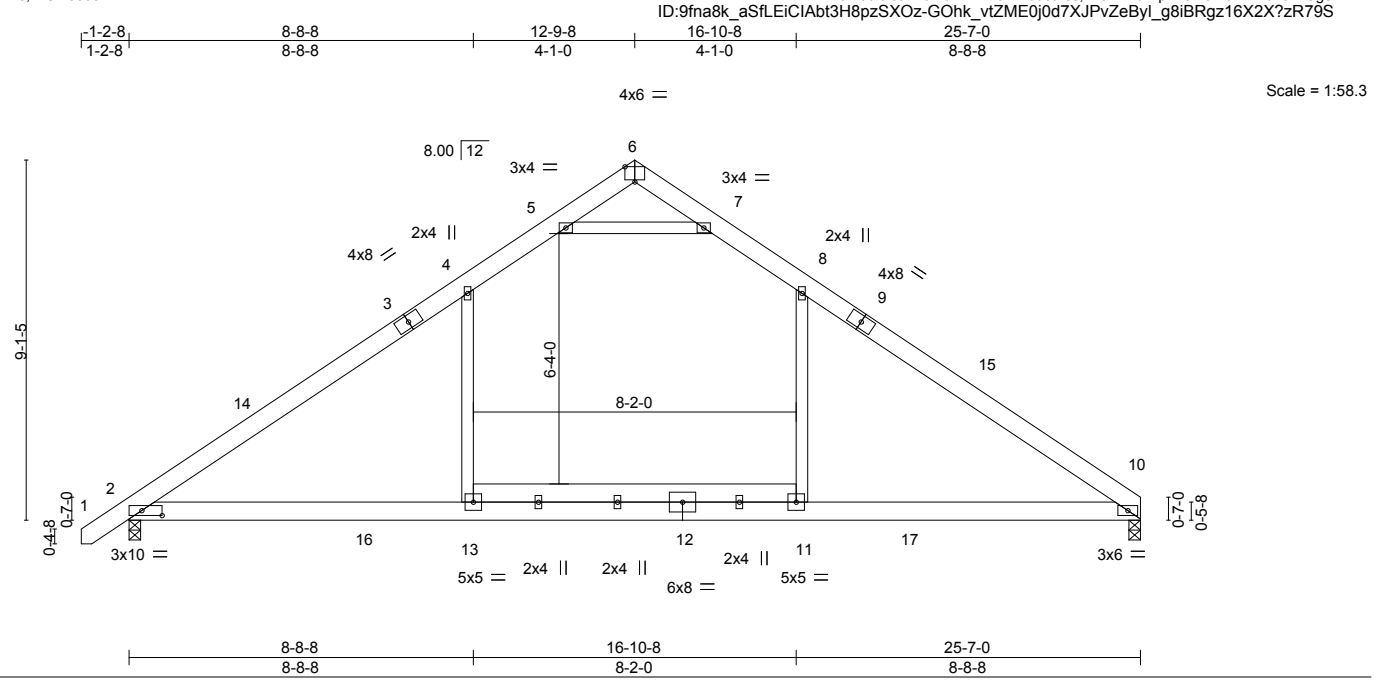

Plate Offsets (X,Y)-- [2:0-6-2,0-1-8], [6:0-3-0,Edge]

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	0.85	Vert(LL)	-0.24	11-13	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.48	Vert(CT)	-0.34	11-13	>902	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.56	Horz(CT)	0.03	10	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-S		Wind(LL)	0.19	2-13	>999	240	Weight: 177 lb	FT = 20%

LUMBER-

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

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 4-7-14 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (lb/size) 2=1087/0-3-8 (min. 0-1-9), 10=1010/0-3-8 (min. 0-1-8)
Max Horz 2=217(LC 9)
Max Uplift 2=-71(LC 12), 10=-53(LC 13)
Max Grav 2=1321(LC 19), 10=1250(LC 20)

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

TOP CHORD	2-14=-1786/226, 3-14=-1627/235, 3-4=-1590/263, 4-5=-1226/323, 5-6=-188/759, 6-7=-176/761, 7-8=-1226/331, 8-9=-1583/264, 9-15=-1626/235, 10-15=-1779/233
BOT CHORD	2-16=-65/1363, 13-16=-65/1363, 12-13=-65/1363, 11-12=-65/1363, 11-17=-65/1363, 10-17=-65/1363
WEBS	8-11=0/610, 4-13=0/618, 5-7=-2191/603

NOTES-

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-0-15 to 3-3-14, Interior(1) 3-3-14 to 12-9-8, Exterior(2) 12-9-8 to 17-0-4, Interior(1) 17-0-4 to 25-5-4 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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 10.
6) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 13,2023

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

Job	Truss	Truss Type	Qty	Ply	Precision/58 Liberty Meadows/Harnett	I57763288
J0923-5134	A4-GE	GABLE	1	1	Job Reference (optional)	

Comtech, Inc., Fayetteville, NC 28309 — 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 13:10:42 2023 Page 1

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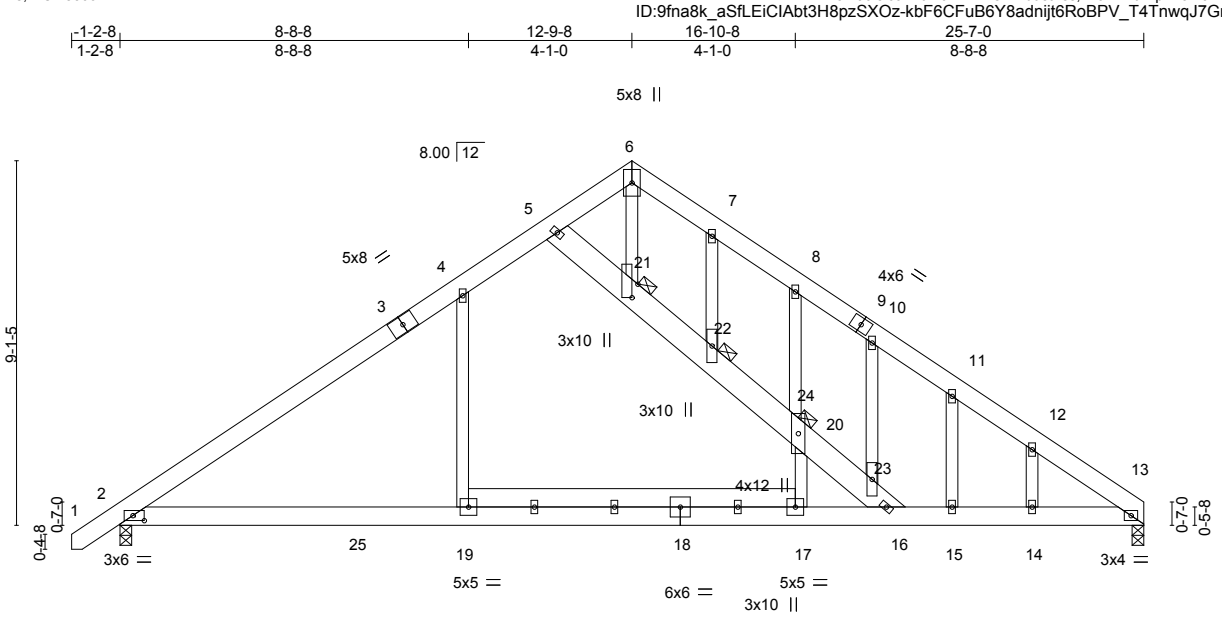

Plate Offsets (X,Y)-- [2:0-3-6,0-1-8], [21:0-4-1,0-1-12]

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	0.61	Vert(LL)	-0.21	17-19	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.55	Vert(CT)	-0.38	2-19	>800	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.79	Horz(CT)	0.02	13	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-S		Wind(LL)	0.24	2-19	>999	240	Weight: 225 lb	FT = 20%

LUMBER-

TOP CHORD	2x6 SP No.1
BOT CHORD	2x6 SP No.1
WEBS	2x4 SP No.2 *Except* 5-16: 2x8 SP No.1
OTHERS	2x4 SP No.2

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 4-8-4 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
JOINTS	1 Brace at Jt(s): 20, 21, 22

REACTIONS. (lb/size) 2=1087/0-3-8 (min. 0-1-8), 13=1010/0-3-8 (min. 0-1-8)
Max Horz 2=271(LC 9)
Max Uplift 2=-231(LC 12), 13=-195(LC 13)
Max Grav 2=1237(LC 19), 13=1082(LC 20)

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

TOP CHORD	2-3=-1509/276, 3-4=-1308/297, 4-5=-1049/393, 5-6=-1470/603, 6-7=-1329/557, 7-8=-1262/474, 8-9=-1331/435, 9-10=-1373/426, 10-11=-1279/342, 11-12=-1331/309, 12-13=-1384/246
BOT CHORD	2-25=-152/1228, 19-25=-152/1228, 18-19=-152/1228, 17-18=-152/1228, 16-17=-150/1210, 15-16=-129/1044, 14-15=-129/1044, 13-14=-129/1044
WEBS	17-20=-80/719, 4-19=0/509, 5-21=-718/259, 21-22=-323/538, 22-24=-254/433, 20-24=-212/456, 20-23=-334/255, 16-23=-454/194, 6-21=-563/1399, 10-23=-283/154

NOTES-

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; 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
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=231, 13=195.
9) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 13,2023

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Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Precision/58 Liberty Meadows/Harnett
J0923-5134	A5	ROOF SPECIAL	6	1	I57763289
					Job Reference (optional)

Comtech, Inc., Fayetteville, NC 28309 — 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 13:10:42 2023 Page 1

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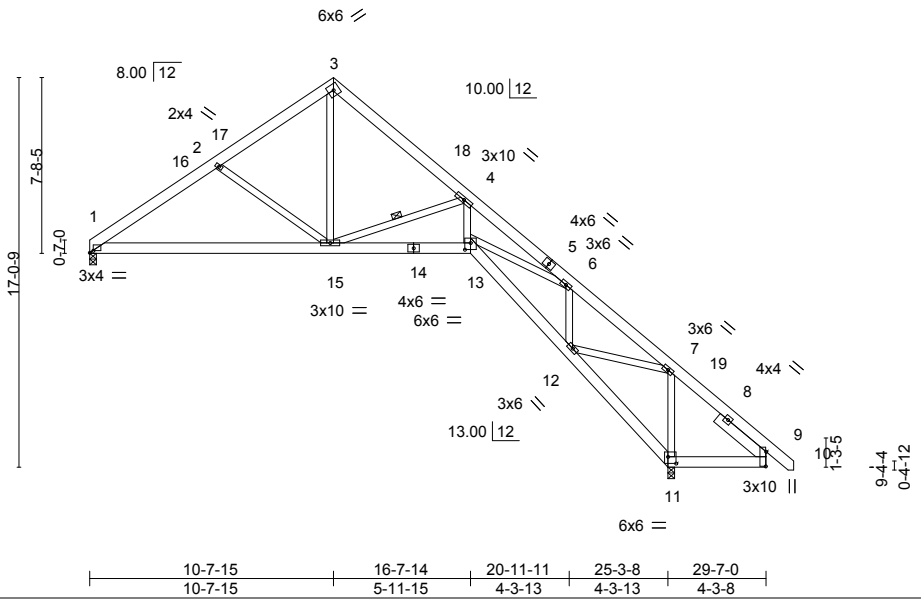
5-7-13	10-7-15	16-7-14	20-11-11	25-3-8	29-7-0	30-9-8
5-7-13	5-0-2	5-11-15	4-3-13	4-3-13	4-3-8	1-2-8

Scale = 1:100.8



10-7-15	16-7-14	20-11-11	25-3-8	29-7-0
10-7-15	5-11-15	4-3-13	4-3-13	4-3-8

Plate Offsets (X,Y)-- [1:0-1-14,0-1-1], [9:0-7-11,0-0-3], [11:0-4-4,0-3-8], [13:0-3-0,0-3-8]

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	0.17	Vert(LL)	-0.11	13	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.40	Vert(CT)	-0.22	13	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.37	Horz(CT)	0.27	11	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-S		Wind(LL)	-0.04	13	>999	240	Weight: 232 lb	FT = 20%

LUMBER-

TOP CHORD	2x6 SP No.1
BOT CHORD	2x6 SP No.1
WEBS	2x4 SP No.2
SLIDER	Right 2x6 SP No.1 2-8-15

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 4-5-1 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS	1 Row at midpt 4-15

REACTIONS. (lb/size) 1=964/0-3-8 (min. 0-1-8), 11=1456/0-3-8 (min. 0-1-11)
Max Horz 1=-395(LC 13)
Max Uplift 1=-9(LC 12), 11=-186(LC 13)

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

TOP CHORD	1-16=-1361/204, 2-16=-1215/224, 2-17=-1103/153, 3-17=-1013/185, 3-18=-1075/152, 4-18=-1156/112, 4-5=-3039/0, 5-6=-3127/0, 6-7=-1278/145, 7-19=-98/373, 8-19=-112/285, 8-9=-131/286
BOT CHORD	1-15=0/1165, 14-15=0/2237, 13-14=0/2237, 9-11=-251/186, 12-13=0/1320, 11-12=-460/312
WEBS	2-15=-361/228, 3-15=-35/911, 4-15=-1511/53, 4-13=0/1507, 6-13=0/1517, 6-12=-949/52, 7-12=0/1154, 7-11=-1100/236

NOTES-

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-1-12 to 4-6-9, Interior(1) 4-6-9 to 10-7-15, Exterior(2) 10-7-15 to 15-0-12, Interior(1) 15-0-12 to 30-8-1 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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1 except (jt=lb) 11=186.
6) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 13,2023

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

Job	Truss	Truss Type	Qty	Ply	Precision/58 Liberty Meadows/Harnett
J0923-5134	A6-GE	GABLE	1	1	I57763290
					Job Reference (optional)

Comtech, Inc., Fayetteville, NC 28309 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 13:10:43 2023 Page 1
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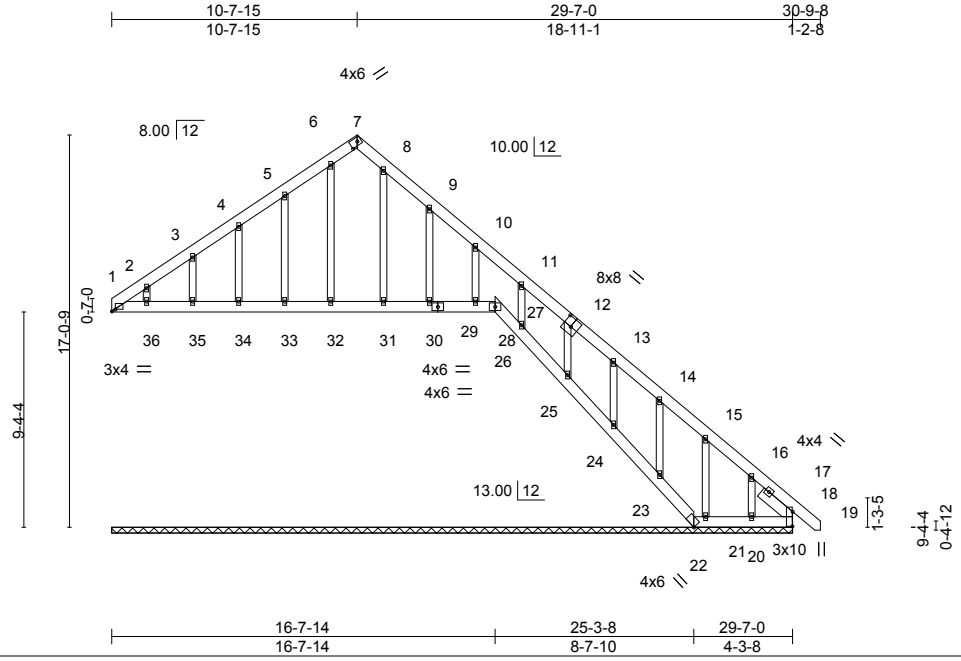

Plate Offsets (X,Y)-- [1:0-1-14,0-1-1], [7:0-3-15,0-2-0], [12:0-4-0,0-4-8], [18:0-7-11,0-0-3]

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	0.12	Vert(LL)	-0.00	18	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	-0.00	18	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.17	Horz(CT)	0.02	18	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 244 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
OTHERS 2x4 SP No.2
SLIDER Right 2x6 SP No.1 1-8-15

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 29-7-0.
(lb) - Max Horz 1=-590(LC 13)
Max Uplift All uplift 100 lb or less at joint(s) 18, 32, 34, 35, 36, 26, 24 except 1=-138(LC 8), 27=-141(LC 11), 22=-440(LC 13), 33=-123(LC 12), 30=-171(LC 13), 28=-106(LC 13), 25=-145(LC 13), 23=-102(LC 13), 21=-110(LC 13), 20=-290(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 1, 22, 33, 34, 35, 36, 31, 30, 28, 26, 25, 24, 23, 21, 20 except 27=404(LC 13), 18=391(LC 13), 32=285(LC 13)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-264/269, 2-3=-243/267, 3-4=-221/308, 4-5=-252/352, 5-6=-335/423, 6-7=-249/287, 7-8=-261/289, 8-9=-348/403, 9-10=-239/268, 15-16=-328/232, 16-17=-515/387, 17-18=-540/392
BOT CHORD 1-36=-311/420, 35-36=-311/420, 34-35=-311/420, 33-34=-311/420, 32-33=-311/420, 31-32=-311/420, 30-31=-311/420, 29-30=-311/420, 28-29=-311/420, 27-28=-310/420, 21-22=-287/400, 20-21=-287/400, 18-20=-287/400, 26-27=-444/588, 25-26=-471/626, 24-25=-441/601, 23-24=-440/601, 22-23=-442/614
WEBS 6-32=-259/114, 16-20=-282/283

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; 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
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 18, 32, 34, 35, 36, 26, 24 except (jt=lb) 1=138, 27=141, 22=440, 33=123, 30=171, 28=106, 25=145, 23=102, 21=110, 20=290.
10) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 27, 32, 33, 34, 35, 36, 31, 30, 28, 26, 25, 24, 23.
11) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

April 13,2023

Continued on page 2

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

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	Precision/58 Liberty Meadows/Harnett
J0923-5134	B1-GE	GABLE	1	1	I57763291
					Job Reference (optional)

Comtech, Inc., Fayetteville, NC 28309 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 13:10:44 2023 Page 1
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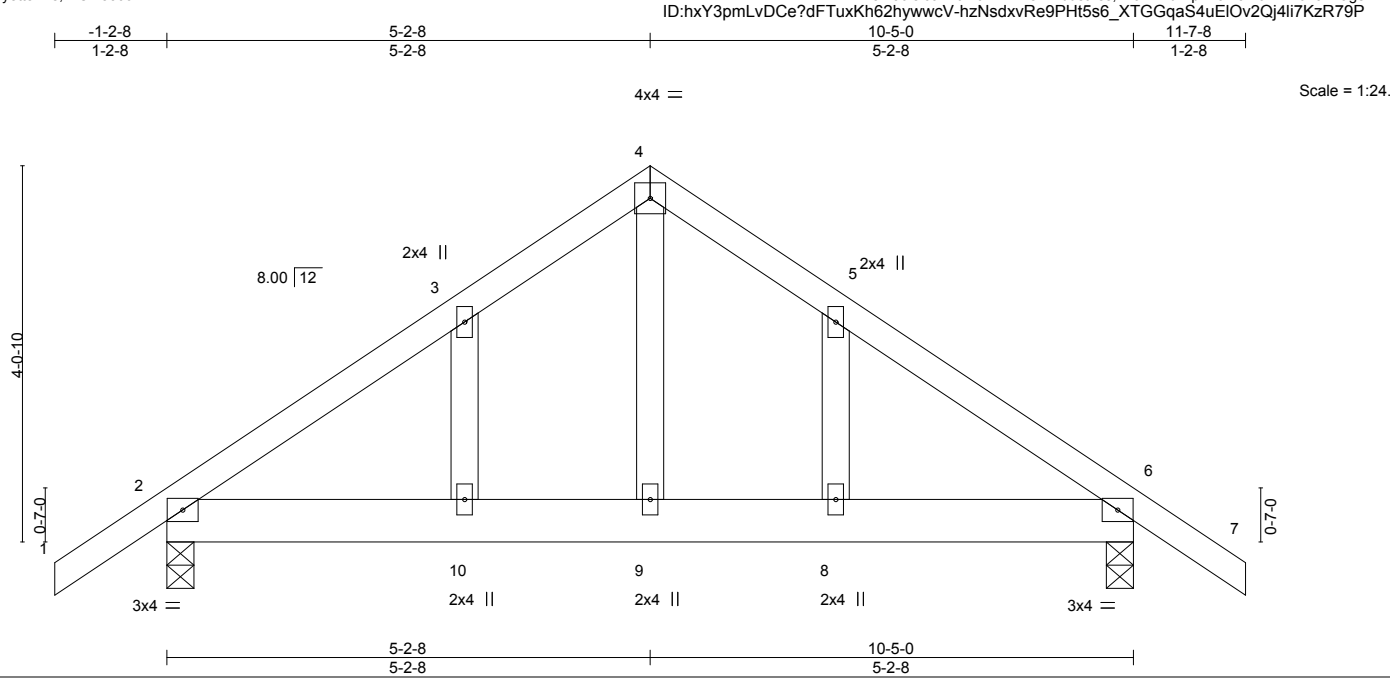

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.09	Vert(LL)	-0.01	8	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.14	Vert(CT)	-0.02	8	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.07	Horz(CT)	0.00	6	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-S		Wind(LL)	0.01	10	>999	240	Weight: 59 lb	FT = 20%

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

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

REACTIONS. (lb/size) 2=486/0-3-8 (min. 0-1-8), 6=486/0-3-8 (min. 0-1-8)
Max Horz 2=-128(LC 10)
Max Uplift 2=-117(LC 12), 6=-117(LC 13)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-455/102, 3-4=-465/192, 4-5=-465/192, 5-6=-455/102
BOT CHORD 2-10=-17/331, 9-10=-17/331, 8-9=-17/331, 6-8=-17/331
WEBS 4-9=-137/374

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; 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
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) 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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=117, 6=117.
8) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 13,2023

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

Job	Truss	Truss Type	Qty	Ply	Precision/58 Liberty Meadows/Harnett
J0923-5134	B2	COMMON	1	1	I57763292
					Job Reference (optional)

Comtech, Inc., Fayetteville, NC 28309 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 13:10:44 2023 Page 1
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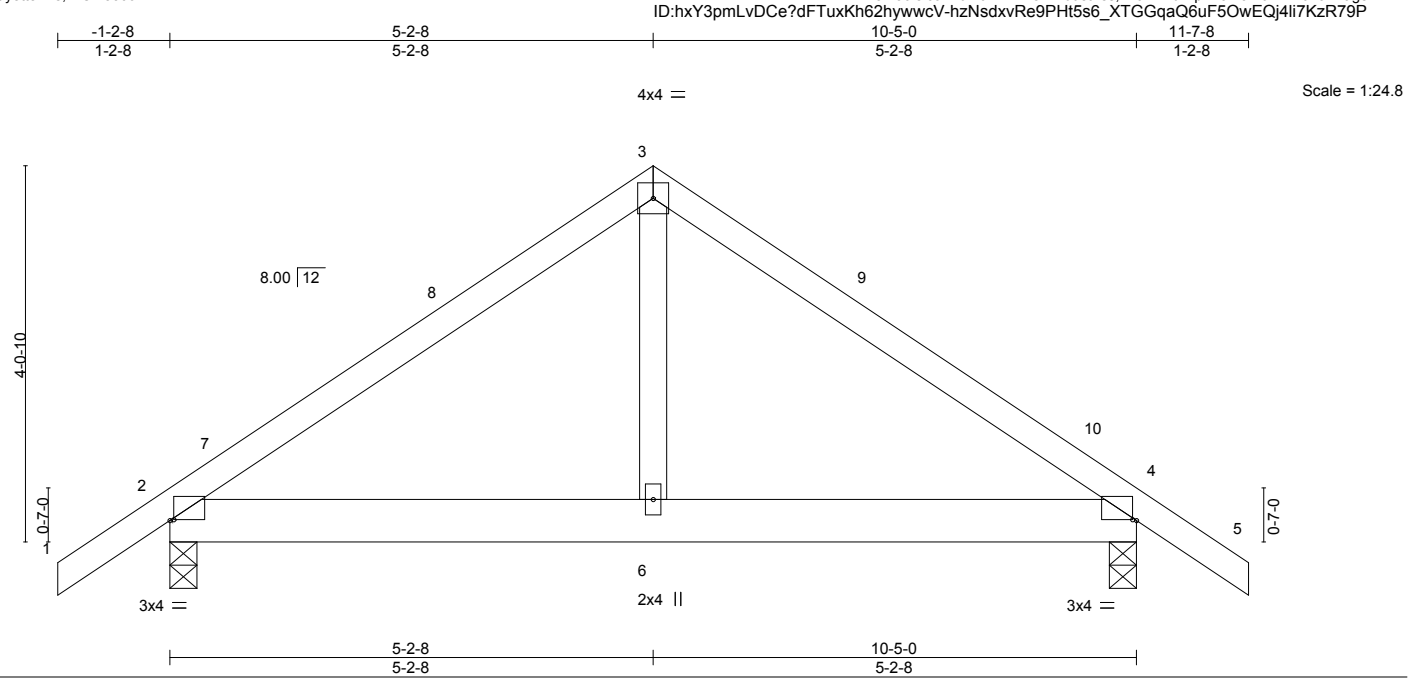

Plate Offsets (X,Y)-- [2:0-0-8,0-0-2], [4:0-0-8,0-0-2]

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	0.22	Vert(LL)	-0.01	4-6	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.12	Vert(CT)	-0.01	4-6	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-S		Wind(LL)	-0.01	4-6	>999	240	Weight: 53 lb	FT = 20%

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

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

REACTIONS. (lb/size) 2=486/0-3-8 (min. 0-1-8), 4=486/0-3-8 (min. 0-1-8)
Max Horz 2=-103(LC 10)
Max Uplift 2=-41(LC 12), 4=-41(LC 13)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-7=-474/97, 7-8=-408/112, 3-8=-404/129, 3-9=-404/129, 9-10=-409/112, 4-10=-474/97
BOT CHORD 2-6=0/317, 4-6=0/317
WEBS 3-6=0/253

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-2-8 to 3-2-5, Interior(1) 3-2-5 to 5-2-8, Exterior(2) 5-2-8 to 9-7-5, Interior(1) 9-7-5 to 11-7-8 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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 4.
6) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 13,2023

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

Job	Truss	Truss Type	Qty	Ply	Precision/58 Liberty Meadows/Harnett
J0923-5134	B3	COMMON GIRDER	1	2	I57763293
					Job Reference (optional)

Comtech, Inc., Fayetteville, NC 28309 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 13:10:45 2023 Page 1
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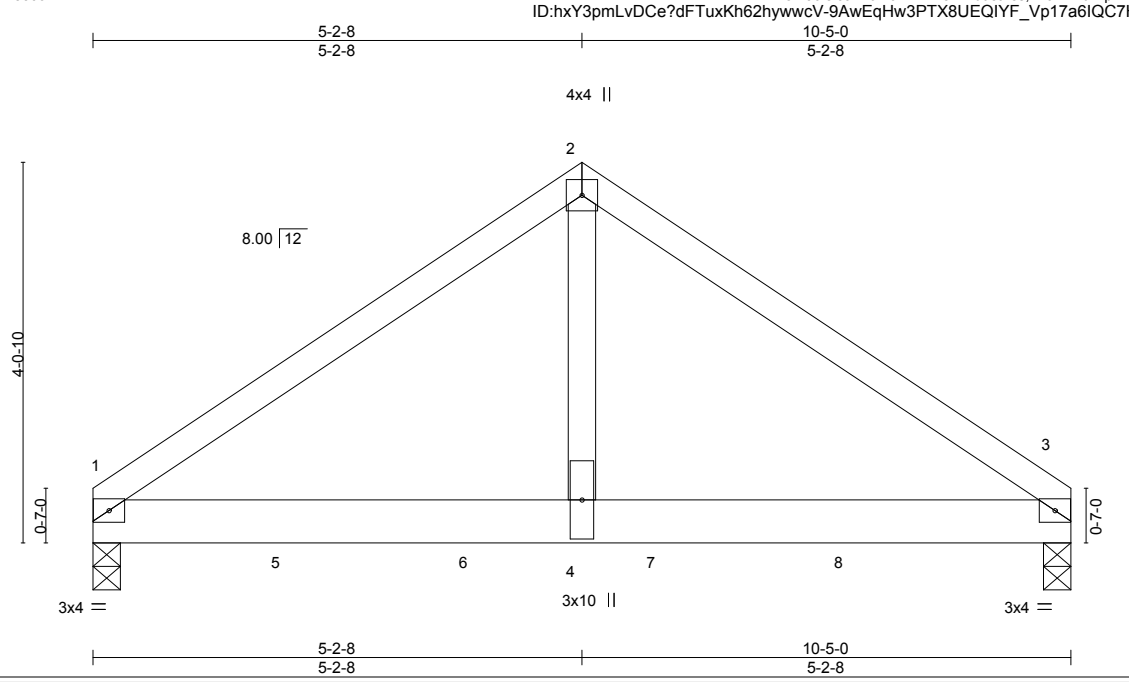

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.26	Vert(LL)	-0.05	1-4	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.83	Vert(CT)	-0.08	1-4	>999	240		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.44	Horz(CT)	0.01	3	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.03	1-4	>999	240	Weight: 97 lb	FT = 20%

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

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

REACTIONS. (lb/size) 1=2442/0-3-8 (min. 0-1-10), 3=3326/0-3-8 (min. 0-2-4)
Max Horz 1=-88(LC 23)
Max Uplift 1=-154(LC 8), 3=-207(LC 9)
Max Grav 1=2770(LC 2), 3=3818(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-3377/212, 2-3=-3378/212
BOT CHORD 1-5=-122/2704, 5-6=-122/2704, 4-6=-122/2704, 4-7=-122/2704, 7-8=-122/2704, 3-8=-122/2704
WEBS 2-4=-136/3593

NOTES-
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); Lumber DOL=1.60 plate grip DOL=1.60
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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 1=154, 3=207.
8) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1174 lb down and 73 lb up at 2-0-12, 1174 lb down and 73 lb up at 4-0-12, 1174 lb down and 73 lb up at 6-0-12, and 1174 lb down and 73 lb up at 8-0-12, and 1182 lb down and 65 lb up at 10-3-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-2=-60, 2-3=-60, 1-3=-20

April 13,2023

Continued on page 2

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

LOAD CASE(S) Standard
Concentrated Loads (lb)
Vert: 3=-998(B) 5=-990(B) 6=-990(B) 7=-990(B) 8=-990(B)

Job	Truss	Truss Type	Qty	Ply	Precision/58 Liberty Meadows/Harnett
J0923-5134	C1-GE	ATTIC	1	1	I57763294
					Job Reference (optional)

Comtech, Inc., Fayetteville, NC 28309 — 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 13:10:46 2023 Page 1

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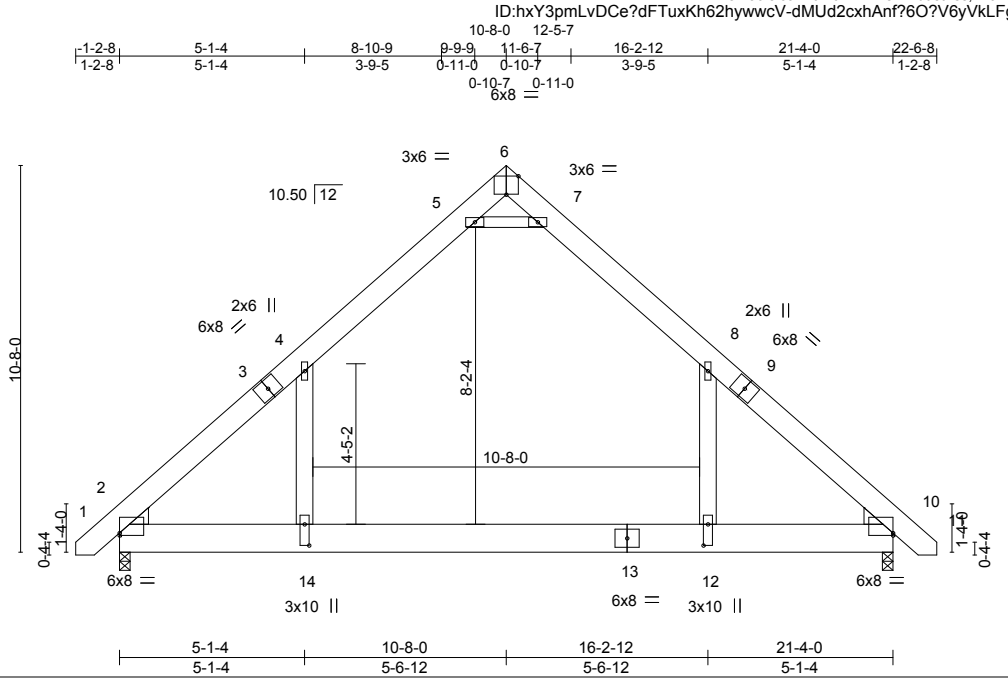

Plate Offsets (X,Y)-- [2:0-0-0,0-0-13], [6:0-4-0,Edge], [10:Edge,0-0-13], [12:0-7-0,0-1-8], [14:0-7-0,0-1-8]

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	0.78	Vert(LL)	-0.21	12-14	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.69	Vert(CT)	-0.37	12-14	>677	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.01	10	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-S		Wind(LL)	0.10	12-14	>999	240	Weight: 209 lb	FT = 20%

LUMBER-
TOP CHORD 2x8 SP No.1
BOT CHORD 2x10 SP No.1
WEBS 2x6 SP No.1 *Except*
5-7: 2x4 SP No.1
WEDGE
Left: 2x6 SP No.1 , Right: 2x6 SP No.1

BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-1-14 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (lb/size) 2=1180/0-3-8 (min. 0-1-11), 10=1180/0-3-8 (min. 0-1-11)
Max Horz 2=-305(LC 10)
Max Grav 2=1429(LC 20), 10=1429(LC 21)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1840/0, 3-4=-1660/0, 4-5=-1041/173, 5-6=-112/1126, 6-7=-112/1128, 7-8=-1041/173, 8-9=-1659/0, 9-10=-1840/0
BOT CHORD 2-14=0/1091, 13-14=0/1091, 12-13=0/1091, 10-12=0/1091
WEBS 8-12=0/904, 4-14=0/904, 5-7=-2435/392

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; 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
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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
5) Ceiling dead load (10.0 psf) on member(s). 4-5, 7-8, 5-7; Wall dead load (5.0psf) on member(s).8-12, 4-14
6) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 12-14
7) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.
9) Attic room checked for L/360 deflection.

LOAD CASE(S) Standard

April 13,2023

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

Job	Truss	Truss Type	Qty	Ply	Precision/58 Liberty Meadows/Harnett
J0923-5134	C2	ATTIC	4	1	I57763295
					Job Reference (optional)

Comtech, Inc., Fayetteville, NC 28309 — 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 13:10:47 2023 Page 1

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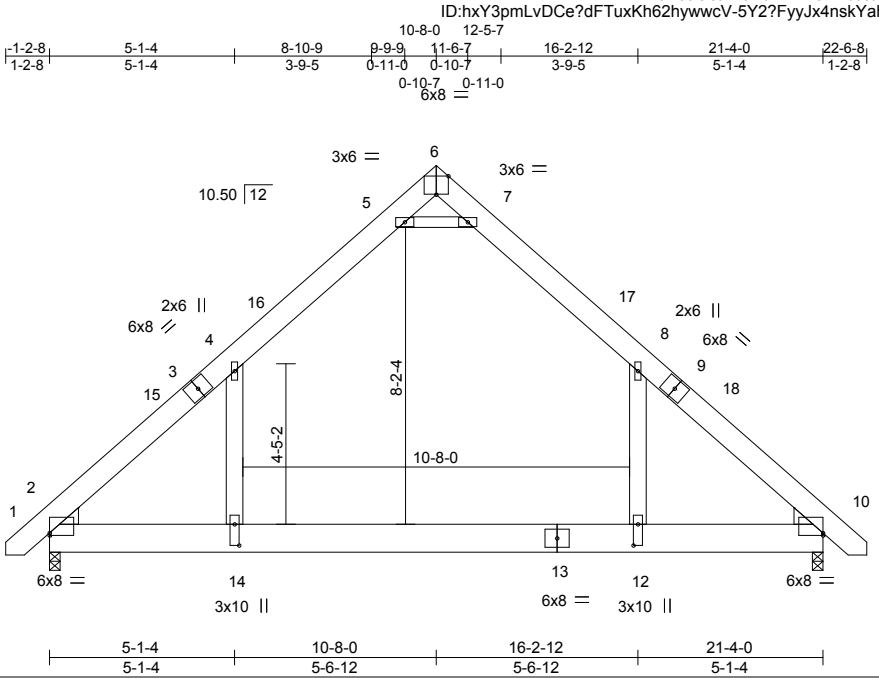

Plate Offsets (X,Y)-- [2:0-0-0,0-0-13], [6:0-4-0,Edge], [10:Edge,0-0-13], [12:0-7-0,0-1-8], [14:0-7-0,0-1-8]

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	0.78	Vert(LL)	-0.21	12-14	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.69	Vert(CT)	-0.37	12-14	>677	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.01	10	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.07	12-14	>999	240	Weight: 209 lb	FT = 20%

LUMBER-
TOP CHORD 2x8 SP No.1
BOT CHORD 2x10 SP No.1
WEBS 2x6 SP No.1 *Except*
5-7: 2x4 SP No.1
WEDGE
Left: 2x6 SP No.1 , Right: 2x6 SP No.1

BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-1-14 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (lb/size) 2=1180/0-3-8 (min. 0-1-11), 10=1180/0-3-8 (min. 0-1-11)
Max Horz 2=-244(LC 10)
Max Grav 2=1431(LC 20), 10=1431(LC 21)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-15=-1824/0, 3-15=-1682/0, 3-4=-1644/0, 4-16=-1039/77, 5-16=-859/139, 5-6=-67/1124, 6-7=-67/1125, 7-17=-859/139, 8-17=-1038/77, 8-9=-1643/0, 9-18=-1681/0, 10-18=-1824/0
BOT CHORD 2-14=0/1069, 13-14=0/1069, 12-13=0/1069, 10-12=0/1069
WEBS 8-12=0/904, 4-14=0/904, 5-7=-2449/256

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -0-11-7 to 3-5-6, Interior(1) 3-5-6 to 10-8-0, Exterior(2) 10-8-0 to 15-0-13, Interior(1) 15-0-13 to 22-3-7 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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
5) Ceiling dead load (10.0 psf) on member(s). 4-5, 7-8, 5-7; Wall dead load (5.0psf) on member(s).8-12, 4-14
6) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 12-14
7) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.
9) Attic room checked for L/360 deflection.

LOAD CASE(S) Standard

April 13,2023

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

Job	Truss	Truss Type	Qty	Ply	Precision/58 Liberty Meadows/Harnett
J0923-5134	C3	ATTIC	2	1	I57763296
					Job Reference (optional)

Comtech, Inc., Fayetteville, NC 28309 — 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 13:10:47 2023 Page 1

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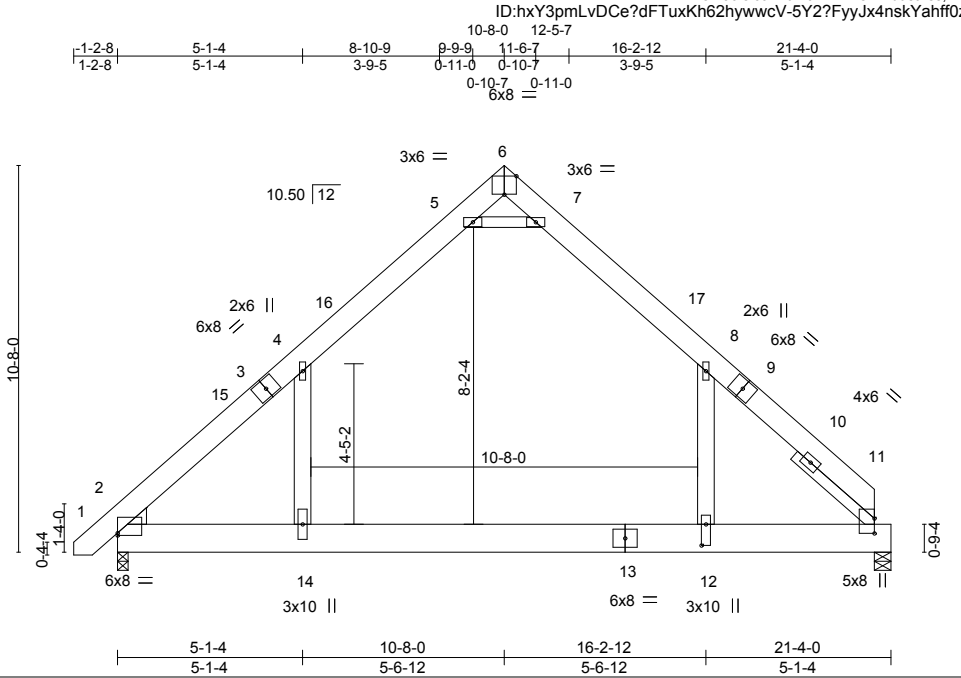

Plate Offsets (X,Y)-- [2:0-0-0,0-0-13], [6:0-4-0,Edge], [11:0-4-15,0-0-0], [12:0-7-0,0-1-8]

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	0.75	Vert(LL)	-0.20	12-14	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.68	Vert(CT)	-0.35	12-14	>713	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.01	11	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.07	12-14	>999	240	Weight: 206 lb	FT = 20%

LUMBER-
TOP CHORD 2x8 SP No.1
BOT CHORD 2x10 SP No.1
WEBS 2x6 SP No.1 *Except*
5-7: 2x4 SP No.1
WEDGE
Left: 2x6 SP No.1
SLIDER Right 2x4 SP No.2 2-11-0

BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-3-4 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (lb/size) 2=1165/0-3-8 (min. 0-1-11), 11=1104/0-5-8 (min. 0-1-10)
Max Horz 2=241(LC 9)
Max Grav 2=1412(LC 20), 11=1363(LC 21)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-15=-1777/0, 3-15=-1634/0, 3-4=-1597/0, 4-16=-1019/79, 5-16=-839/140, 5-6=-83/1062, 6-7=-71/1068, 7-17=-837/145, 8-17=-1016/84, 8-9=-1627/0, 9-10=-1643/0, 10-11=-1823/0
BOT CHORD 2-14=0/1038, 13-14=0/1038, 12-13=0/1038, 11-12=0/1038
WEBS 8-12=0/912, 4-14=0/867, 5-7=-2344/288

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -0-11-7 to 3-5-6, Interior(1) 3-5-6 to 10-8-0, Exterior(2) 10-8-0 to 15-0-13, Interior(1) 15-0-13 to 20-10-8 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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
5) Ceiling dead load (10.0 psf) on member(s). 4-5, 7-8, 5-7; Wall dead load (5.0psf) on member(s).8-12, 4-14
6) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 12-14
7) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.
9) Attic room checked for L/360 deflection.

LOAD CASE(S) Standard

April 13,2023

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

Job	Truss	Truss Type	Qty	Ply	Precision/58 Liberty Meadows/Harnett
J0923-5134	D1-GE	GABLE	1	1	I57763297
					Job Reference (optional)

Comtech, Inc., Fayetteville, NC 28309 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 13:10:47 2023 Page 1

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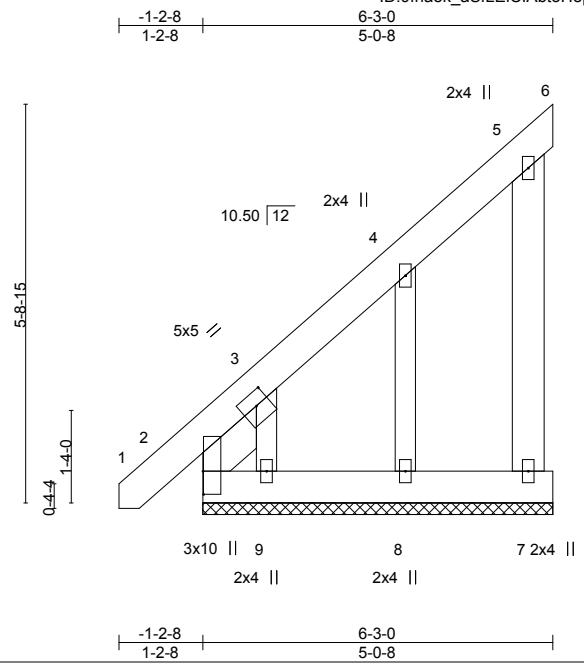

Plate Offsets (X,Y)-- [2:0-4-0,0-0-2], [3:0-2-5,0-2-4]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.03	Vert(LL)	-0.00	1	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.01	Vert(CT)	-0.00	1	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.05	Horz(CT)	-0.00	6	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-P							Weight: 51 lb	FT = 20%

LUMBER-

TOP CHORD	2x6 SP No.1
BOT CHORD	2x6 SP No.1
WEBS	2x6 SP No.1
OTHERS	2x4 SP No.2
SLIDER	Left 2x6 SP No.1 1-2-6

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 5-0-8 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. All bearings 5-0-8.
(lb) - Max Horz 2=249(LC 12)
Max Uplift All uplift 100 lb or less at joint(s) 6, 7, 2 except 8=-130(LC 12), 9=-256(LC 12)
Max Grav All reactions 250 lb or less at joint(s) 6, 7, 8, 9 except 2=304(LC 12)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-449/384
WEBS 3-9=-314/305

NOTES-

1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; 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
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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 6, 7, 2 except (jt=lb) 8=130, 9=256.
8) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

April 13,2023

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

Job	Truss	Truss Type	Qty	Ply	Precision/58 Liberty Meadows/Harnett
J0923-5134	D2	MONOPITCH	4	1	I57763298
					Job Reference (optional)

Comtech, Inc., Fayetteville, NC 28309 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 13:10:48 2023 Page 1

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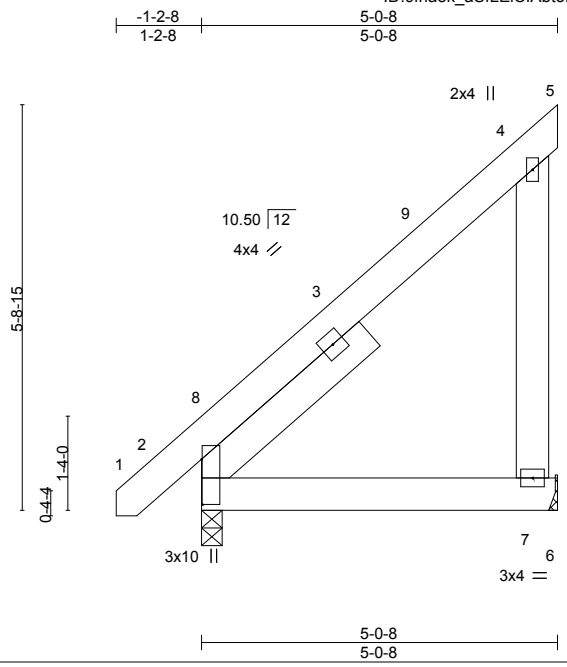

Plate Offsets (X,Y)-- [2:0-7-11,0-0-2]

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	0.21	Vert(LL)	-0.01	2-7	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.08	Vert(CT)	-0.01	2-7	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00		n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-P		Wind(LL)	0.00	2	****	240	Weight: 50 lb	FT = 20%

LUMBER-

TOP CHORD	2x6 SP No.1
BOT CHORD	2x6 SP No.1
WEBS	2x6 SP No.1
SLIDER	Left 2x6 SP No.1 3-1-10

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 5-0-8 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (lb/size) 7=210/Mechanical, 2=257/0-3-8 (min. 0-1-8)
Max Horz 2=171(LC 12)
Max Uplift 7=-111(LC 12)
Max Grav 7=241(LC 19), 2=257(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 4-7=-270/249

NOTES-

1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-0-12 to 3-4-1, Interior(1) 3-4-1 to 5-0-8 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 7=111.
6) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

April 13,2023

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

Job	Truss	Truss Type	Qty	Ply	Precision/58 Liberty Meadows/Harnett
J0923-5134	P1SG	GABLE	1	1	I57763299
					Job Reference (optional)

Comtech, Inc., Fayetteville, NC 28309 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 13:10:48 2023 Page 1

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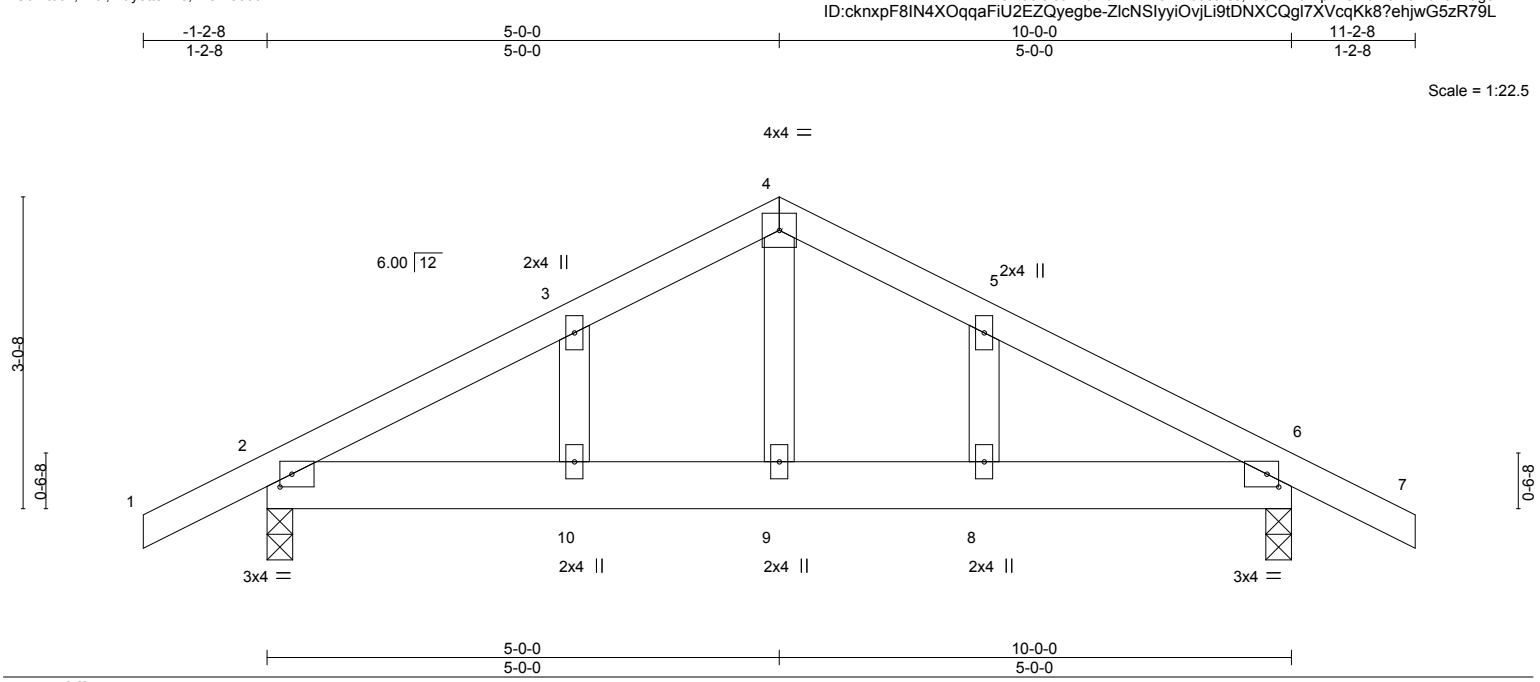

Plate Offsets (X,Y)-- [2:0-1-6,0-1-8], [6:0-1-6,0-1-8]

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	0.12	Vert(LL)	-0.01	8	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.13	Vert(CT)	-0.02	8	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	6	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-S		Wind(LL)	0.02	8	>999	240	Weight: 52 lb	FT = 20%

LUMBER-

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

BRACING-

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

REACTIONS. (lb/size) 2=470/0-3-0 (min. 0-1-8), 6=470/0-3-0 (min. 0-1-8)
Max Horz 2=63(LC 16)
Max Uplift 2=-121(LC 9), 6=-121(LC 8)

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

TOP CHORD	2-3=-503/565, 3-4=-463/621, 4-5=-463/621, 5-6=-503/565
BOT CHORD	2-10=-402/393, 9-10=-402/393, 8-9=-402/393, 6-8=-402/393
WEBS	4-9=-425/256

NOTES-

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) 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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=121, 6=121.
8) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 13,2023

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

Job	Truss	Truss Type	Qty	Ply	Precision/58 Liberty Meadows/Harnett
J0923-5134	P2	COMMON	4	1	I57763300
					Job Reference (optional)

Comtech, Inc., Fayetteville, NC 28309 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 13:10:48 2023 Page 1
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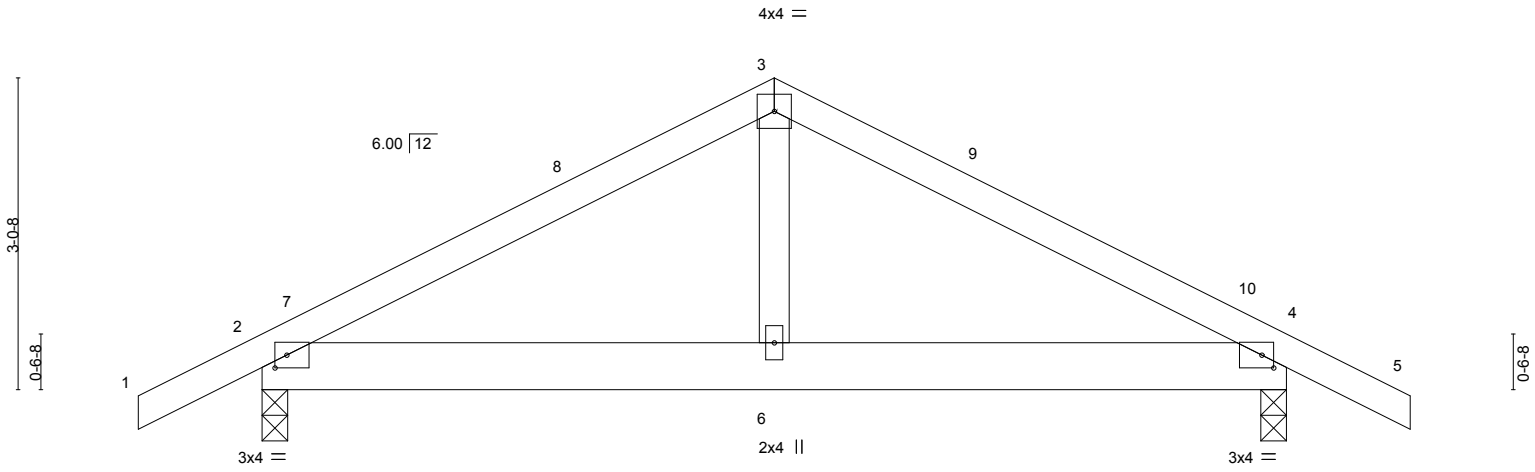

Plate Offsets (X,Y)-- [2:0-1-6,0-1-8], [4:0-1-6,0-1-8]

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	0.21	Vert(LL)	-0.01	6	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.10	Vert(CT)	-0.01	4-6	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-S		Wind(LL)	0.02	4-6	>999	240	Weight: 48 lb	FT = 20%

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

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

REACTIONS. (lb/size) 2=470/0-3-0 (min. 0-1-8), 4=470/0-3-0 (min. 0-1-8)
Max Horz 2=40(LC 11)
Max Uplift 2=-91(LC 9), 4=-91(LC 8)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-7=-515/540, 7-8=-501/553, 3-8=-427/568, 3-9=-427/568, 9-10=-501/553, 4-10=-515/540
BOT CHORD 2-6=-376/387, 4-6=-376/387
WEBS 3-6=-327/240

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-2-8 to 3-2-5, Interior(1) 3-2-5 to 5-0-0, Exterior(2) 5-0-0 to 9-4-13, Interior(1) 9-4-13 to 11-2-8 zone; porch left and right exposed;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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 4.
6) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 13,2023

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

Job	Truss	Truss Type	Qty	Ply	Precision/58 Liberty Meadows/Harnett
J0923-5134	VB1	VALLEY	1	1	I57763301
					Job Reference (optional)

Comtech, Inc., Fayetteville, NC 28309 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 13:10:49 2023 Page 1
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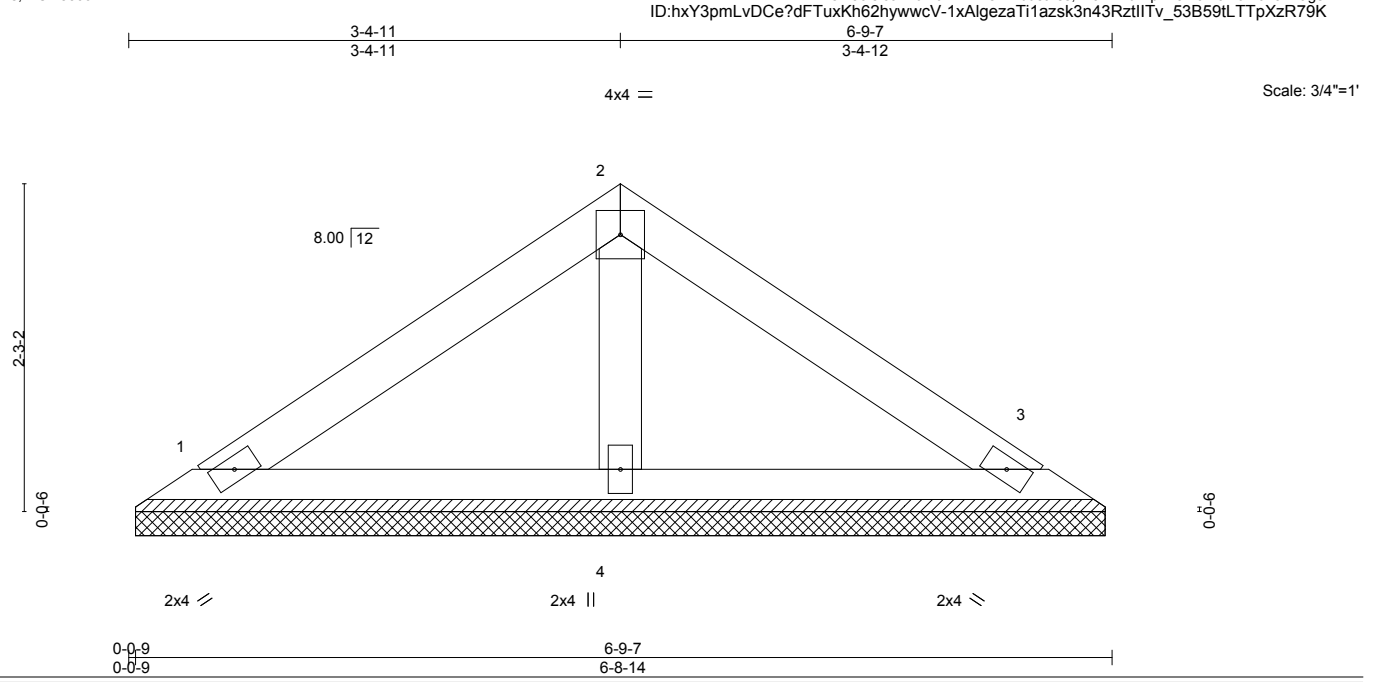


LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.11	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-P							Weight: 23 lb	FT = 20%

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

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

REACTIONS. (lb/size) 1=126/6-8-5 (min. 0-1-8), 3=126/6-8-5 (min. 0-1-8), 4=212/6-8-5 (min. 0-1-8)
Max Horz 1=47(LC 11)
Max Uplift 1=-20(LC 12), 3=-24(LC 13)

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

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
6) Non Standard bearing condition. Review required.
7) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 13,2023

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

Job	Truss	Truss Type	Qty	Ply	Precision/58 Liberty Meadows/Harnett
J0923-5134	VB2	VALLEY	1	1	I57763302
					Job Reference (optional)

Comtech, Inc., Fayetteville, NC 28309 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 13:10:49 2023 Page 1

ID:hxY3pmLvDCe?dFTuxKh62hywwcV-1xAlgezaTi1azsk3n43RztlJ3v_f3BM9tLTTpXzR79K

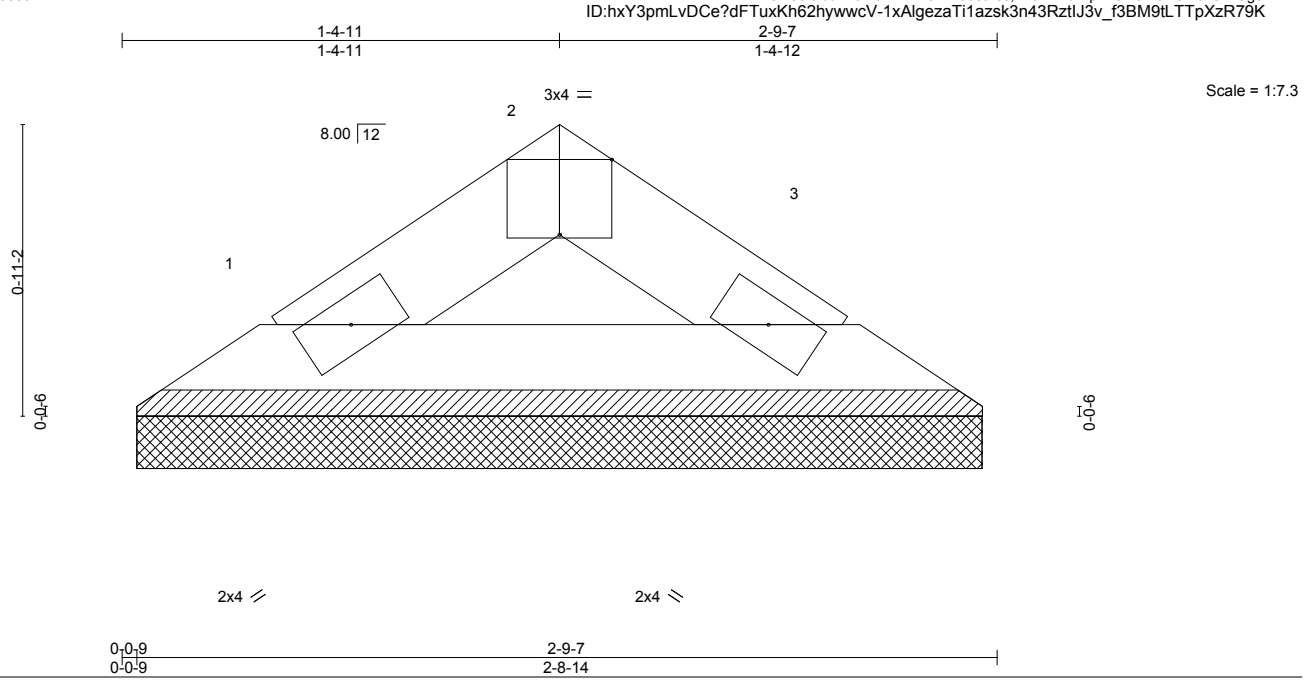


Plate Offsets (X,Y)-- [2:0-2-0,Edge]

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	0.01	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-P							Weight: 7 lb	FT = 20%

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

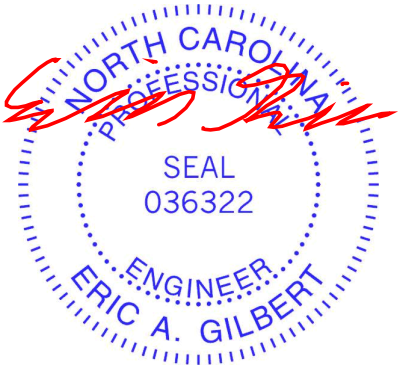
BRACING-
TOP CHORD Structural wood sheathing directly applied or 2-9-7 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (lb/size) 1=72/2-8-5 (min. 0-1-8), 3=72/2-8-5 (min. 0-1-8)
Max Horz 1=15(LC 9)
Max Uplift 1=-4(LC 12), 3=-4(LC 13)

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

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
6) Non Standard bearing condition. Review required.
7) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



April 13,2023

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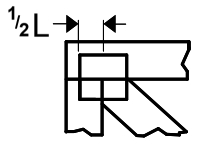
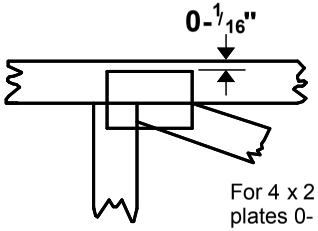
TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

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.

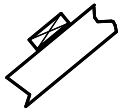
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

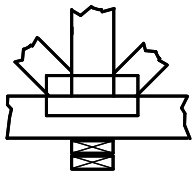
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

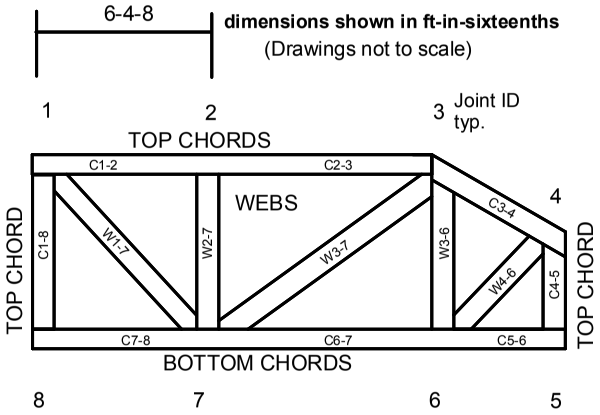


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-22: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing, Restraining & 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-1988, ESR-2362, ESR-2685, ESR-3282
ESR-4722, ESL-1388

Design General Notes

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. 1/2/2023

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.

ENGINEERING BY TRENCO
A MiTek Affiliate

RE: J0923-5135
Precision/58 Liberty Meadows/Harnett

Trenco
818 Soundside Rd
Edenton, NC 27932

Site Information:

Customer: Project Name: J0923-5135
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 8.4
Wind Code: N/A Wind Speed: N/A mph
Roof Load: N/A psf Floor Load: 55.0 psf

This package includes 12 individual, dated Truss Design Drawings and 0 Additional Drawings.

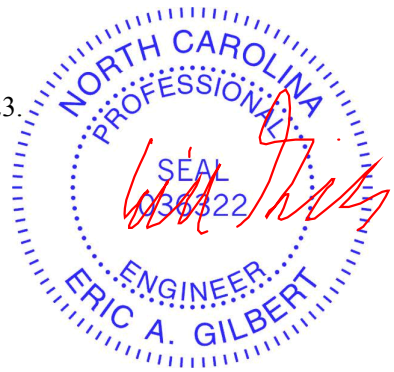
No.	Seal#	Truss Name	Date
1	I57763303	ET1	4/13/2023
2	I57763304	ET2	4/13/2023
3	I57763305	ET3	4/13/2023
4	I57763306	F1	4/13/2023
5	I57763307	F2	4/13/2023
6	I57763308	F3	4/13/2023
7	I57763309	F4	4/13/2023
8	I57763310	F5	4/13/2023
9	I57763311	F6	4/13/2023
10	I57763312	F7	4/13/2023
11	I57763313	F8	4/13/2023
12	I57763314	F9	4/13/2023

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, 2023.

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 13, 2023

Gilbert, Eric

Job	Truss	Truss Type	Qty	Ply	Precision/58 Liberty Meadows/Harnett
J0923-5135	ET1	GABLE	1	1	I57763303
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 12:06:19 2023 Page 1
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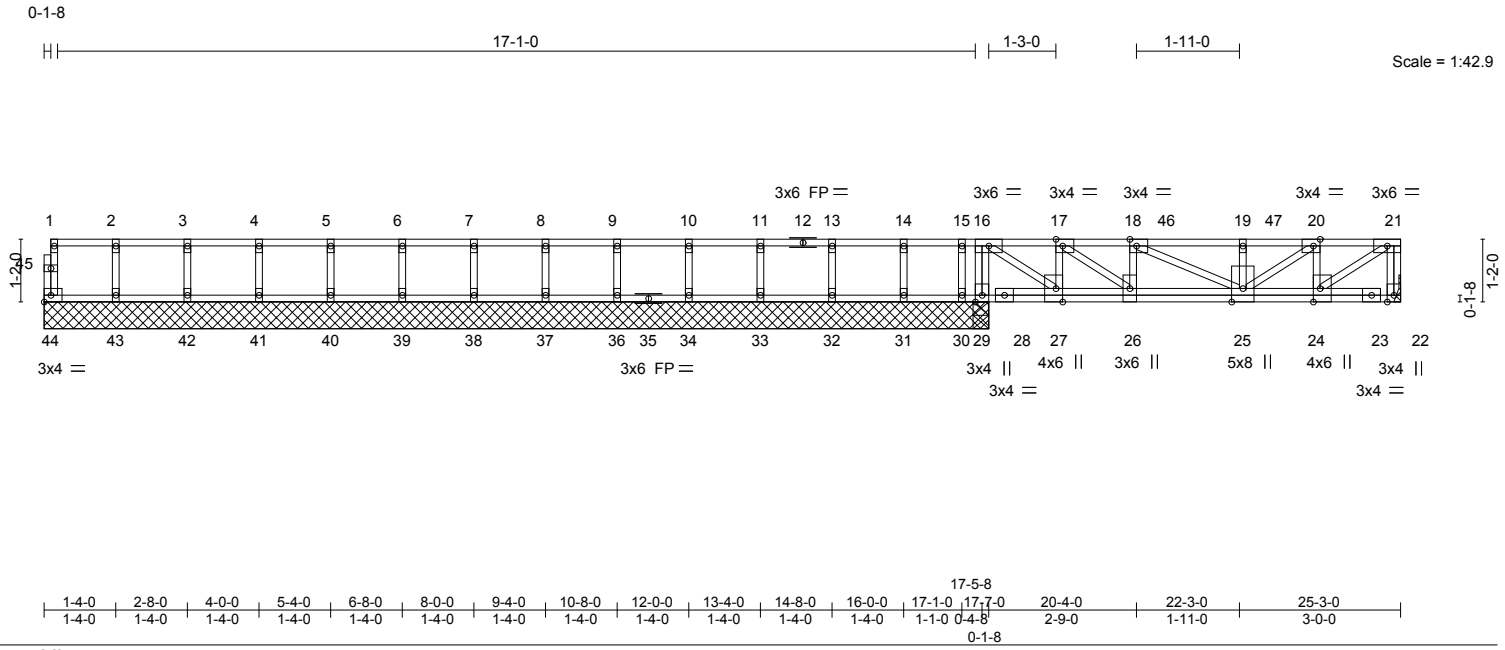

Plate Offsets (X,Y)-- [17:0-1-8,Edge], [18:0-1-8,Edge], [20:0-1-8,Edge], [24:0-3-0,Edge], [27:0-3-0,Edge]

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	0.20	Vert(LL)	-0.01	25	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.13	Vert(CT)	-0.03	25-26	>999	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.39	Horz(CT)	0.00	22	n/a	n/a		
BCDL	5.0	Code IRC2015/TPI2014		Matrix-S							Weight: 128 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP No.1(flat)
BOT CHORD 2x4 SP No.1(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, Except: 6-0-0 oc bracing: 27-29,22-24.

REACTIONS. All bearings 17-7-0 except (jt=length) 22=Mechanical.
(lb) - Max Uplift All uplift 100 lb or less at joint(s) except 30=-145(LC 4)
Max Grav All reactions 250 lb or less at joint(s) 44, 30, 43, 42, 41, 40, 39, 38, 37, 36, 34, 33, 32, 31 except 22=624(LC 1), 29=741(LC 1), 29=741(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 21-22=-611/0, 16-17=-651/0, 17-18=-1053/0, 18-19=-1048/0, 19-20=-1048/0, 20-21=-676/0
BOT CHORD 26-27=0/651, 25-26=0/1053, 24-25=0/676
WEBS 16-29=-620/0, 16-27=0/785, 17-27=-466/0, 17-26=0/494, 18-26=-257/0, 21-24=0/818, 20-24=-442/0, 20-25=0/457, 19-25=-262/0

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) Gable studs spaced at 1-4-0 oc.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 145 lb uplift at joint 30.
7) 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.
8) CAUTION, Do not erect truss backwards.
9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 86 lb down at 18-10-12, 86 lb down at 20-10-12, and 86 lb down at 22-10-12, and 94 lb down at 25-1-8 on top chord. The design/selection of such connection device(s) is the responsibility of others.
10) 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: 22-44=-10, 1-21=-100
Concentrated Loads (lb)
Vert: 17=-86(F) 21=-94(F) 46=-86(F) 47=-86(F)

April 13,2023

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

Job	Truss	Truss Type	Qty	Ply	Precision/58 Liberty Meadows/Harnett
J0923-5135	ET2	GABLE	1	1	I57763304
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 12:06:20 2023 Page 1
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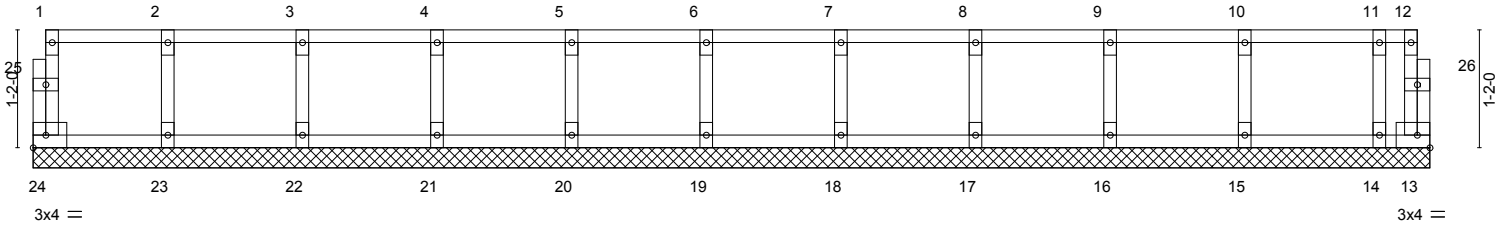
0-1-8 0-1-8

Scale = 1:22.8



1-4-0	2-8-0	4-0-0	5-4-0	6-8-0	8-0-0	9-4-0	10-8-0	12-0-0	13-4-0	13-10-0
1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	0-6-0

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	0.06	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: 59 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP No.1(flat)
BOT CHORD 2x4 SP No.1(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 13-10-0.
(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 1.5x3 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.

April 13,2023

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

Job	Truss	Truss Type	Qty	Ply	Precision/58 Liberty Meadows/Harnett
J0923-5135	ET3	GABLE	1	1	I57763305
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 12:06:21 2023 Page 1
ID:hxY3pmLvDCe?dFTuxKh62hywwcV-u?3wQPfRRBqole7aRBTXtC5IShr_npJpQZUo2kzR85m

0-1-8 0-1-8

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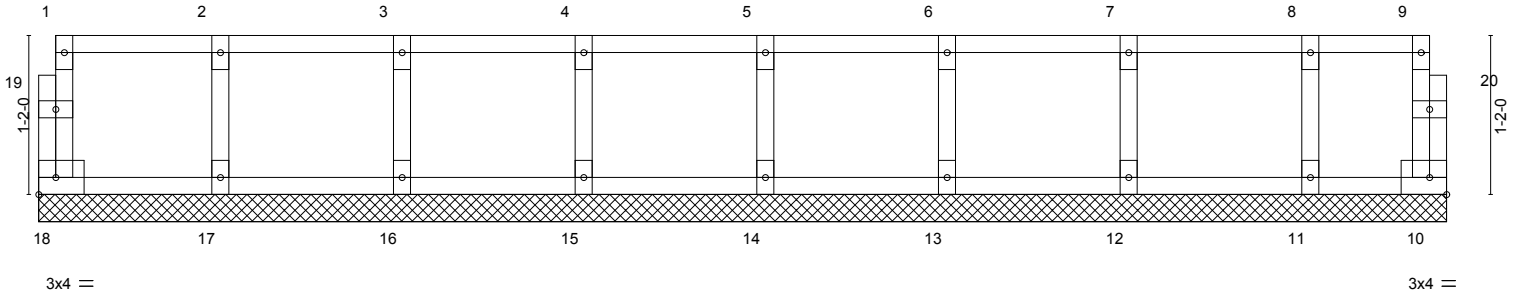

1-4-0	2-8-0	4-0-0	5-4-0	6-8-0	8-0-0	9-4-0	10-4-0
1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-0-0

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	0.06	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: 45 lb	FT = 20%F, 11%E

LUMBER-

TOP CHORD	2x4 SP No.1(flat)
BOT CHORD	2x4 SP No.1(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 10-4-0.
(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 1.5x3 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.

April 13,2023

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

Job	Truss	Truss Type	Qty	Ply	Precision/58 Liberty Meadows/Harnett
J0923-5135	F1	Floor	8	1	I57763306
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 12:06:23 2023 Page 1
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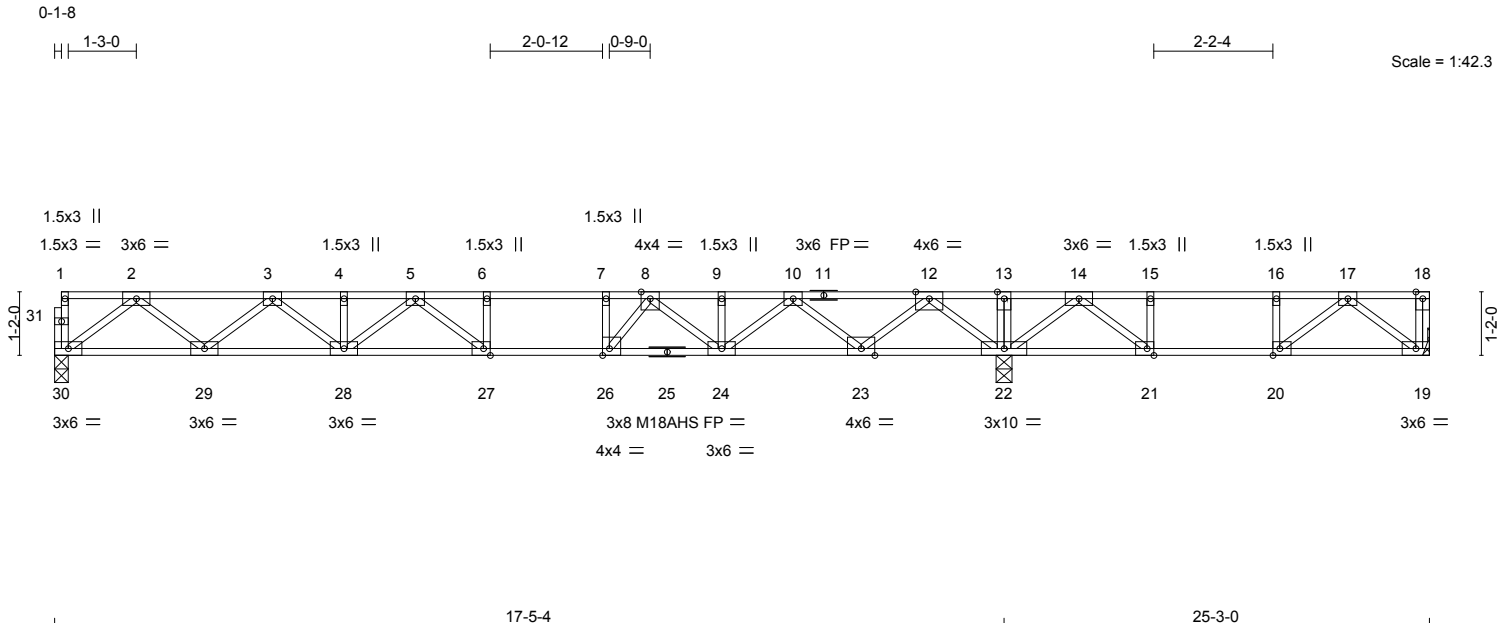

Plate Offsets (X,Y)-- [20:0-1-8,Edge], [21:0-1-8,Edge], [26:0-1-8,Edge], [27:0-1-8,Edge]

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	0.86	Vert(LL)	-0.26	27-28	>801	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.88	Vert(CT)	-0.36	27-28	>582	360	M18AHS	186/179
BCLL	0.0	Rep Stress Incr	YES	WB	0.57	Horz(CT)	0.05	22	n/a	n/a		
BCDL	5.0	Code IRC2015/TPI2014		Matrix-S							Weight: 127 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP No.1(flat)
BOT CHORD 2x4 SP No.1(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 6-0-0 oc bracing.

REACTIONS. (size) 30=0-3-0, 19=Mechanical, 22=0-3-8
Max Uplift 19=-44(LC 3)
Max Grav 30=880(LC 10), 19=367(LC 4), 22=1620(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1831/0, 3-4=-2998/0, 4-5=-2998/0, 5-6=-3353/0, 6-7=-3353/0, 7-8=-3353/0, 8-9=-2550/0, 9-10=-2550/0, 10-12=-1084/0, 12-13=0/1342, 13-14=0/1342, 14-15=-539/378, 15-16=-539/378, 16-17=-539/378
BOT CHORD 29-30=0/1100, 28-29=0/2536, 27-28=0/3294, 26-27=0/3353, 24-26=0/3031, 23-24=0/1932, 21-22=-838/124, 20-21=-378/539, 19-20=-96/387
WEBS 2-30=-1378/0, 2-29=0/952, 3-29=-917/0, 3-28=0/589, 12-22=-1594/0, 12-23=0/1193, 10-23=-1131/0, 17-19=-485/120, 17-20=-360/195, 14-22=-835/0, 10-24=0/817, 5-28=-379/0, 8-24=-644/0, 5-27=-219/410, 8-26=0/790, 7-26=-476/0, 14-21=0/875, 15-21=-421/0

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 3x4 MT20 unless otherwise indicated.
4) Plates checked for a plus or minus 1 degree rotation about its center.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 44 lb uplift at joint 19.
7) 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.
8) CAUTION, Do not erect truss backwards.

April 13,2023

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

Job	Truss	Truss Type	Qty	Ply	Precision/58 Liberty Meadows/Harnett
J0923-5135	F2	Floor	5	1	I57763307
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 12:06:24 2023 Page 1
ID:hxY3pmLvDCe?dFTuxKh62hywwcV-Iak32RiKk6CNc6s96J1FVqjhLuh__2rF6XjSe3zR85j

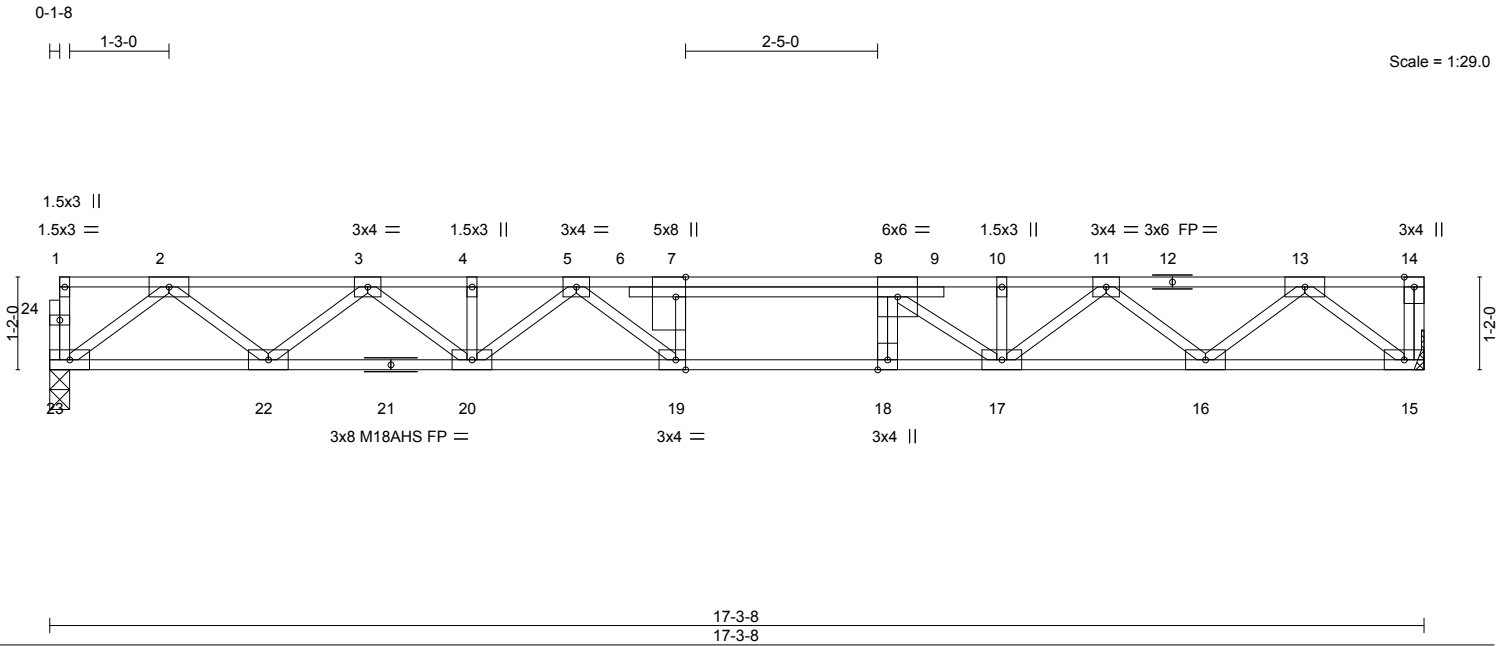

Plate Offsets (X,Y)-- [7:0-3-0,Edge], [19:0-1-8,Edge]

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	0.53	Vert(LL)	-0.25	19	>826	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.76	Vert(CT)	-0.34	19	>600	360	M18AHS	186/179
BCLL	0.0	Rep Stress Incr	YES	WB	0.49	Horz(CT)	0.06	15	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 94 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP No.1(flat)
BOT CHORD 2x4 SP No.1(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) 23=0-3-0, 15=Mechanical
Max Grav 23=931(LC 1), 15=937(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1960/0, 3-4=-3249/0, 4-5=-3249/0, 5-7=-3924/0, 7-8=-3924/0, 8-10=-3215/0, 10-11=-3205/0, 11-13=-1964/0
BOT CHORD 22-23=0/1168, 20-22=0/2719, 19-20=0/3589, 18-19=0/3924, 17-18=0/3924, 16-17=0/2724, 15-16=0/1167
WEBS 2-23=-1463/0, 2-22=0/1030, 3-22=-989/0, 3-20=0/676, 5-20=-435/0, 5-19=0/755, 7-19=-419/0, 13-15=-1464/0, 13-16=0/1037, 11-16=-990/0, 11-17=0/614, 10-17=-57/264, 8-17=-1077/0

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 3x6 MT20 unless otherwise indicated.
4) Plates checked for a plus or minus 1 degree rotation about its center.
5) Refer to girder(s) for truss to truss connections.
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.
7) CAUTION, Do not erect truss backwards.

April 13,2023

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

Job	Truss	Truss Type	Qty	Ply	Precision/58 Liberty Meadows/Harnett
J0923-5135	F3	Floor	1	1	I57763308
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 12:06:25 2023 Page 1
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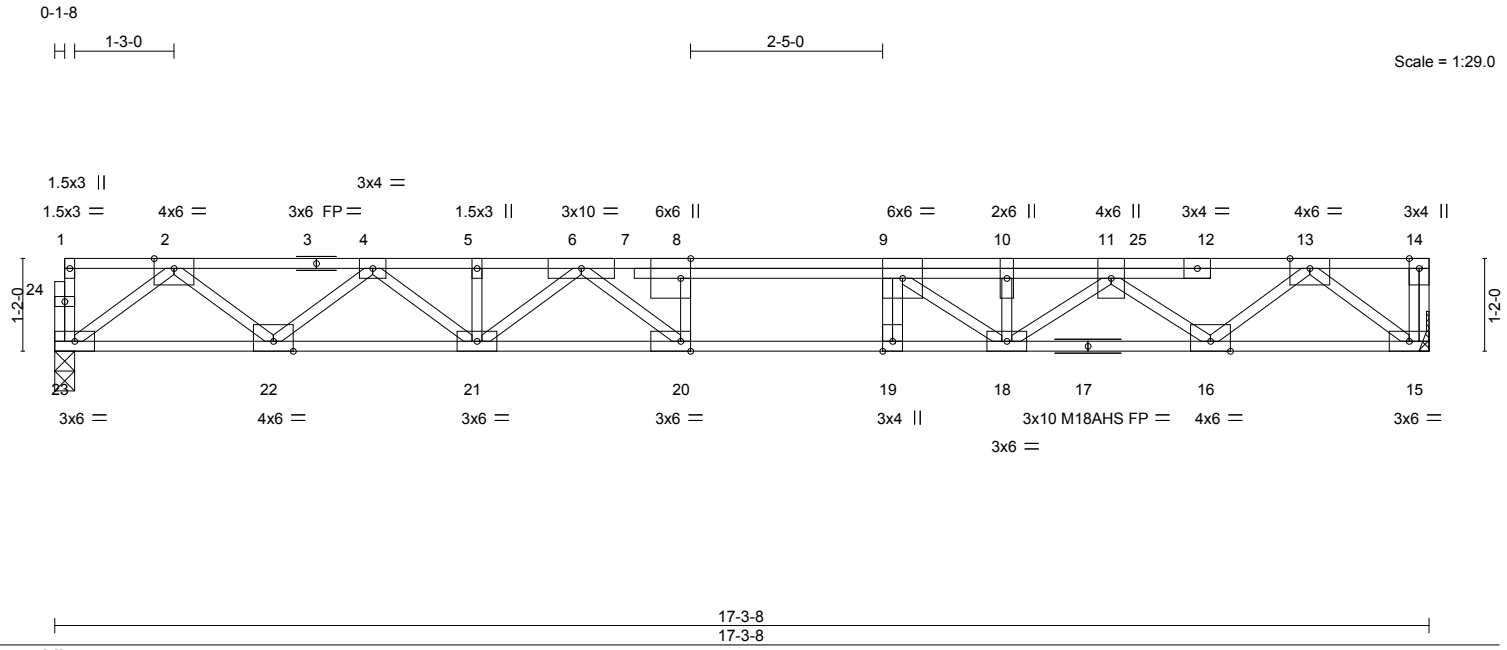

17-3-8
17-3-8

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

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	0.96	Vert(LL)	-0.27	19-20	>761	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.99	Vert(CT)	-0.37	19-20	>547	360	M18AHS	186/179
BCLL	0.0	Rep Stress Incr	NO	WB	0.72	Horz(CT)	0.08	15	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 98 lb	FT = 20%F, 11%E

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

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-8-11 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 23=0-3-0, 15=Mechanical
Max Grav 23=1009(LC 1), 15=1242(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-4=-2156/0, 4-5=-3636/0, 5-6=-3636/0, 6-8=-4658/0, 8-9=-4651/0, 9-10=-4375/0, 10-11=-4375/0, 11-13=-2753/0
BOT CHORD 22-23=0/1271, 21-22=0/3006, 20-21=0/4062, 19-20=0/4651, 18-19=0/4651, 16-18=0/3943, 15-16=0/1562
WEBS 2-23=-1593/0, 2-22=0/1152, 4-22=-1106/0, 4-21=0/804, 6-21=-545/0, 6-20=0/1067, 8-20=-590/0, 13-15=-1960/0, 13-16=0/1522, 11-16=-1538/0, 11-18=0/539, 9-18=-582/188

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) Refer to girder(s) for truss to truss connections.
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) 463 lb down at 13-8-4 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: 15-23=-10, 1-14=-100
Concentrated Loads (lb)
Vert: 25=-383(B)

April 13,2023

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

Job	Truss	Truss Type	Qty	Ply	Precision/58 Liberty Meadows/Harnett
J0923-5135	F4	Floor	1	1	I57763309
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 12:06:26 2023 Page 1
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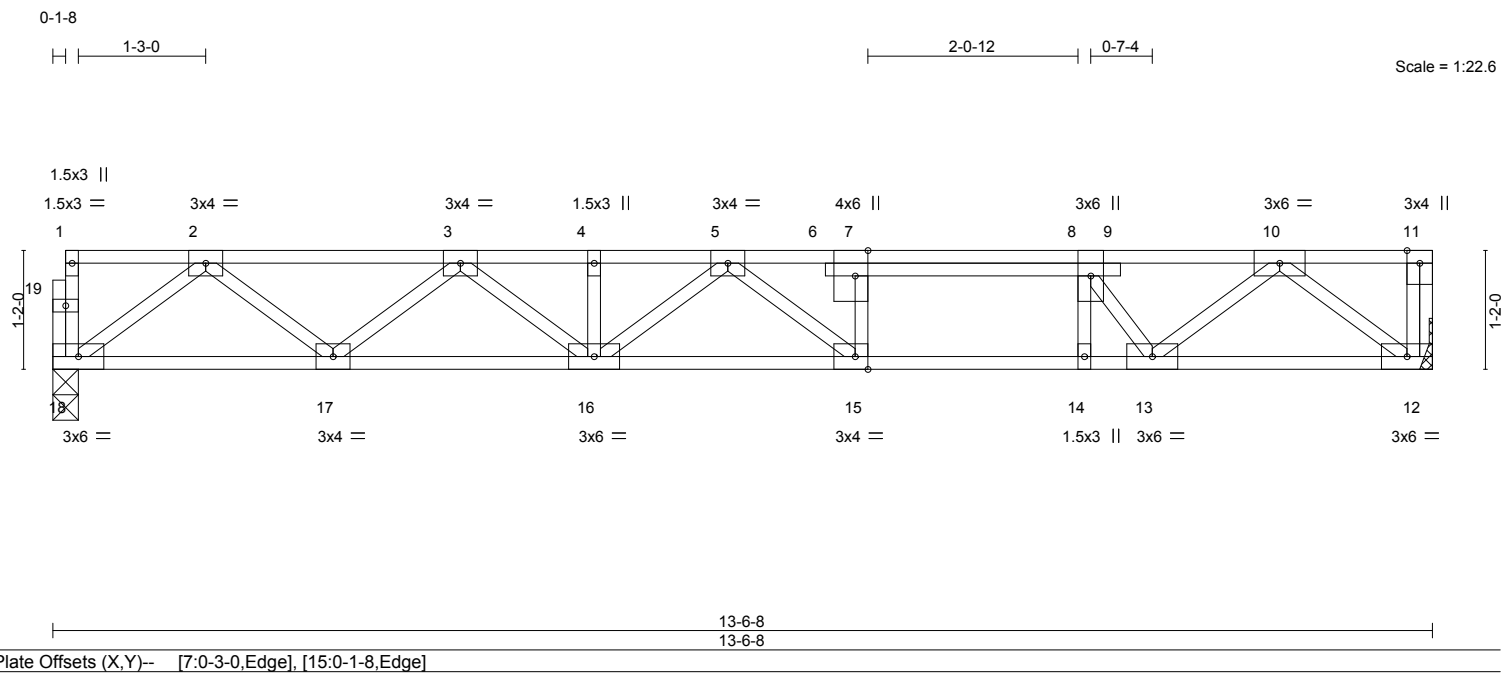

Plate Offsets (X,Y)-- [7:0-3-0,Edge], [15:0-1-8,Edge]

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	0.86	Vert(LL)	-0.17	15-16	>929	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.82	Vert(CT)	-0.24	15-16	>675	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.46	Horz(CT)	0.03	12	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.1(flat)
BOT CHORD 2x4 SP No.1(flat)
WEBS 2x4 SP No.3(flat)

BRACING-
TOP CHORD Structural wood sheathing directly applied or 4-6-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 18=0-3-0, 12=Mechanical
Max Grav 18=725(LC 1), 12=731(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1440/0, 3-4=-2227/0, 4-5=-2227/0, 5-7=-2080/0, 7-8=-2080/0, 8-10=-1581/0
BOT CHORD 17-18=0/895, 16-17=0/1963, 15-16=0/2338, 14-15=0/2080, 13-14=0/2080, 12-13=0/821
WEBS 2-18=-1120/0, 2-17=0/710, 3-17=-680/0, 3-16=0/338, 5-15=-457/131, 8-14=0/269, 10-12=-1030/0, 10-13=0/971, 8-13=-912/0

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

April 13,2023

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

Job	Truss	Truss Type	Qty	Ply	Precision/58 Liberty Meadows/Harnett
J0923-5135	F5	Floor	4	1	I57763310
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 12:06:27 2023 Page 1
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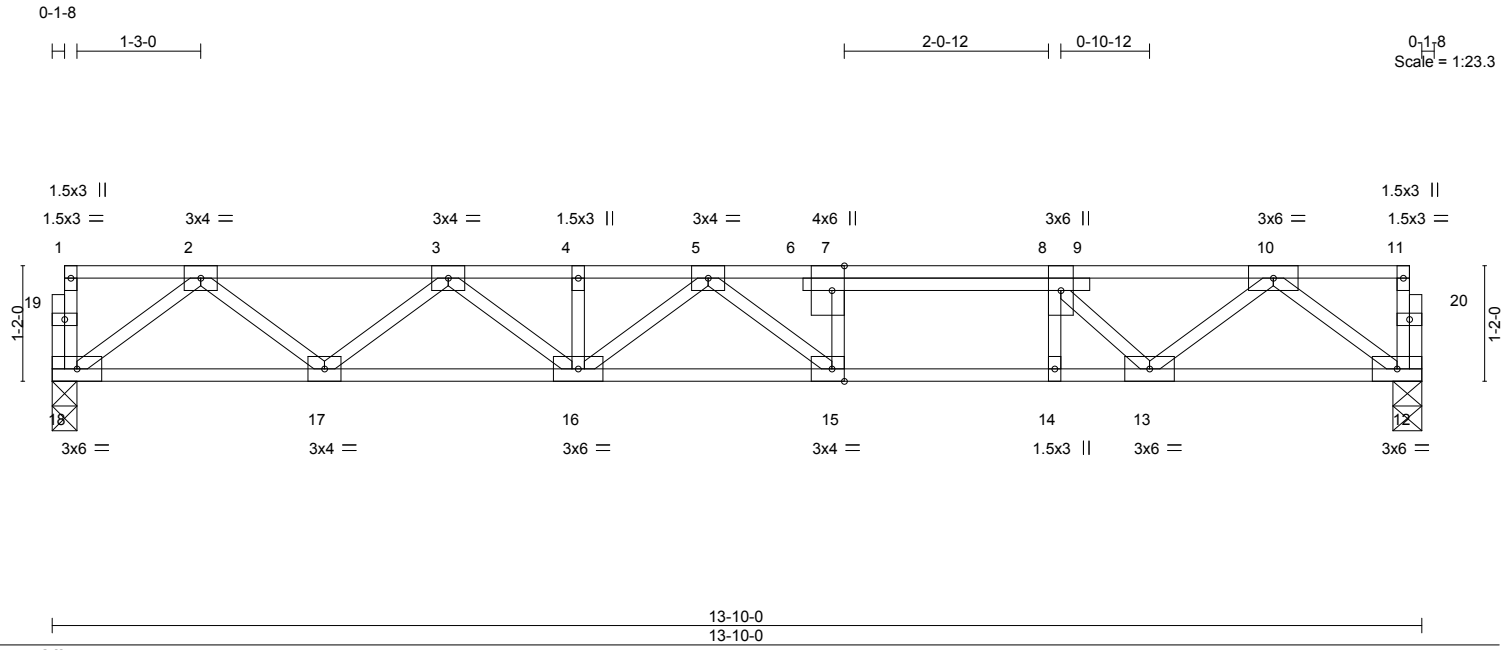

Plate Offsets (X,Y)-- [7:0-3-0,Edge], [15:0-1-8,Edge]

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	0.82	Vert(LL)	-0.18	15-16	>915	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.80	Vert(CT)	-0.24	15-16	>667	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.44	Horz(CT)	0.03	12	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.1(flat)
BOT CHORD 2x4 SP No.1(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) 18=0-3-0, 12=0-3-8
Max Grav 18=741(LC 1), 12=741(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1480/0, 3-4=-2306/0, 4-5=-2306/0, 5-7=-2216/0, 7-8=-2216/0, 8-10=-1571/0
BOT CHORD 17-18=0/916, 16-17=0/2021, 15-16=0/2436, 14-15=0/2216, 13-14=0/2216, 12-13=0/848
WEBS 2-18=-1147/0, 2-17=0/735, 3-17=-704/0, 3-16=0/364, 5-15=-438/177, 10-12=-1058/0, 10-13=0/926, 8-13=-938/0

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.

April 13,2023

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

Job	Truss	Truss Type	Qty	Ply	Precision/58 Liberty Meadows/Harnett
J0923-5135	F6	Floor	2	1	I57763311
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 12:06:28 2023 Page 1
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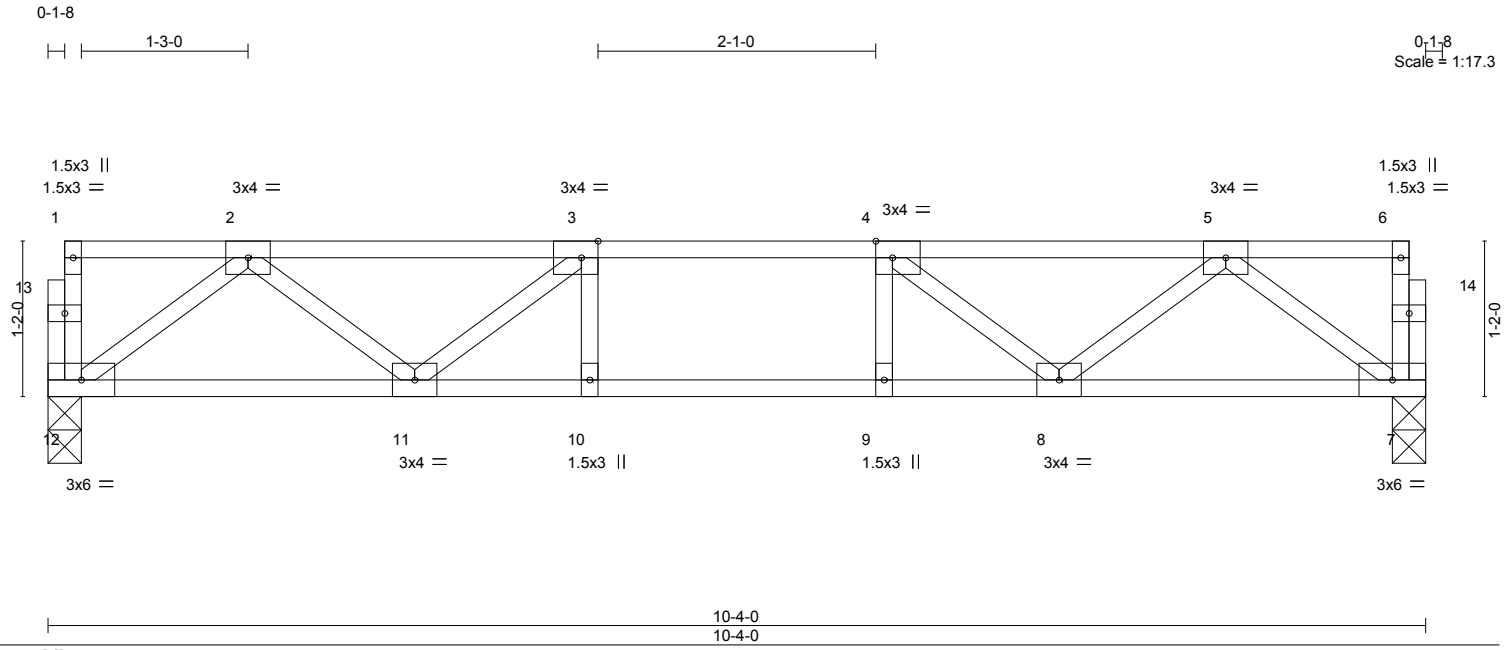

Plate Offsets (X,Y)-- [3:0-1-8,Edge], [4:0-1-8,Edge]

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	0.24	Vert(LL)	-0.06	10-11	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.42	Vert(CT)	-0.07	10	>999	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.21	Horz(CT)	0.01	7	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 52 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP No.1(flat)
BOT CHORD 2x4 SP No.1(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) 12=0-3-0, 7=0-3-0
Max Grav 12=548(LC 1), 7=548(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-999/0, 3-4=-1319/0, 4-5=-999/0
BOT CHORD 11-12=0/666, 10-11=0/1319, 9-10=0/1319, 8-9=0/1319, 7-8=0/666
WEBS 2-12=-833/0, 2-11=0/434, 3-11=-449/0, 5-7=-833/0, 5-8=0/434, 4-8=-449/0

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.

April 13,2023

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

Job	Truss	Truss Type	Qty	Ply	Precision/58 Liberty Meadows/Harnett
J0923-5135	F7	Floor	4	1	I57763312
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 12:06:29 2023 Page 1
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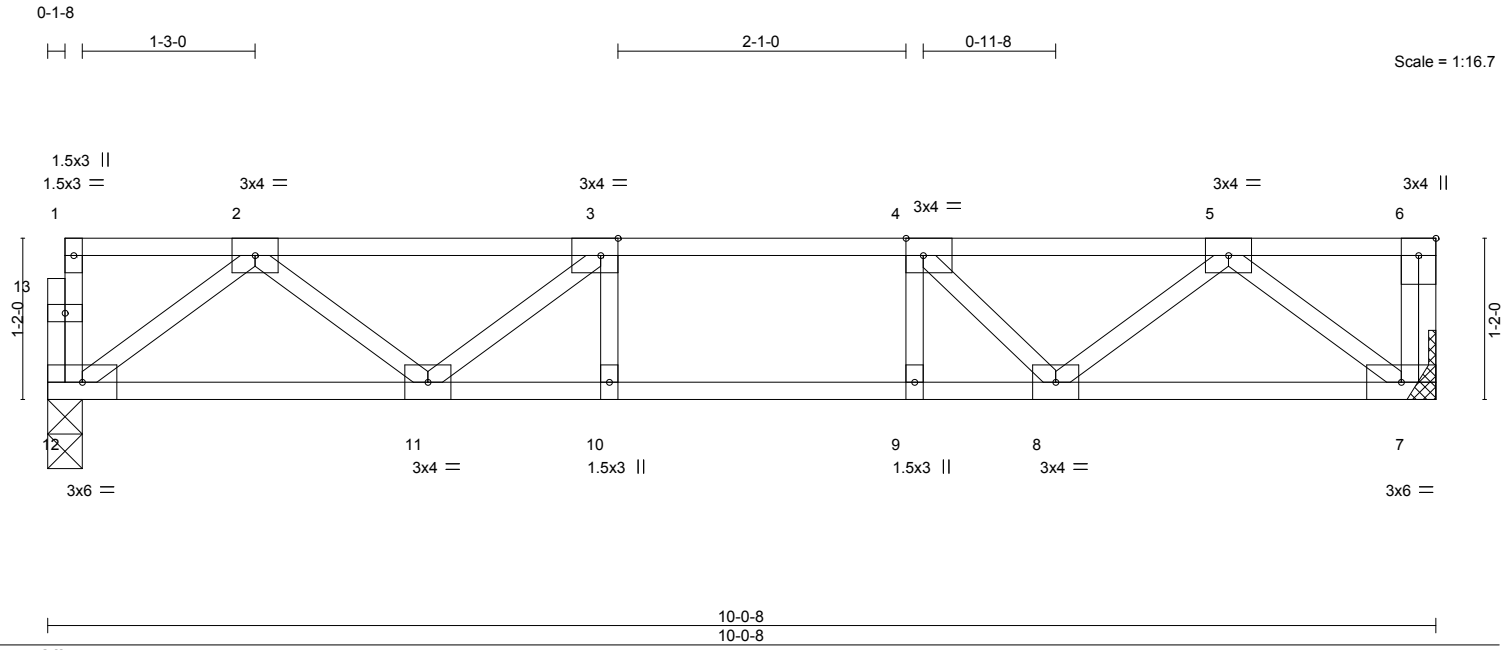

10-0-8
10-0-8

Plate Offsets (X,Y)-- [3:0-1-8,Edge], [4:0-1-8,Edge]

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	0.28	Vert(LL)	-0.06	10-11	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.44	Vert(CT)	-0.07	10	>999	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.21	Horz(CT)	0.01	7	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 51 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP No.1(flat)
BOT CHORD 2x4 SP No.1(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) 12=0-3-0, 7=Mechanical
Max Grav 12=532(LC 1), 7=539(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-959/0, 3-4=-1240/0, 4-5=-971/0
BOT CHORD 11-12=0/648, 10-11=0/1240, 9-10=0/1240, 8-9=0/1240, 7-8=0/633
WEBS 2-12=-811/0, 2-11=0/405, 3-11=-402/0, 5-7=-794/0, 5-8=0/440, 4-8=-432/0

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

April 13,2023

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

Job	Truss	Truss Type	Qty	Ply	Precision/58 Liberty Meadows/Harnett
J0923-5135	F8	FLOOR GIRDER	1	1	I57763313 Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 12:06:30 2023 Page 1
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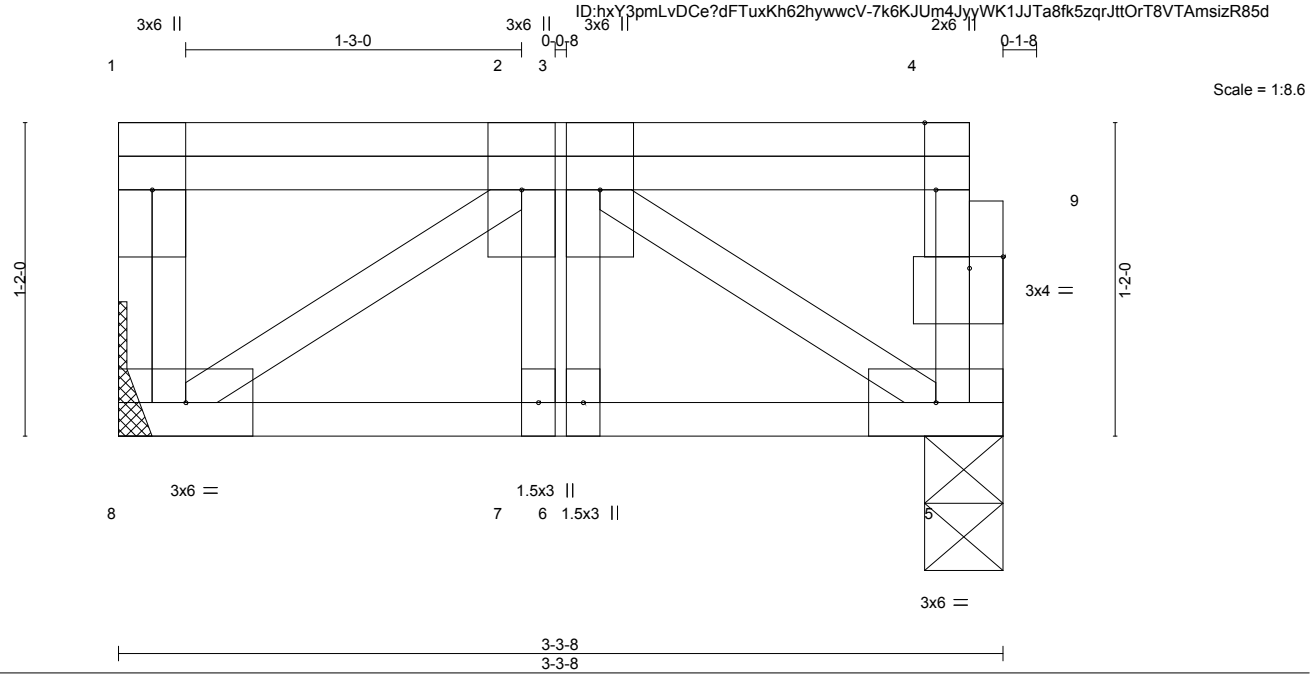

Plate Offsets (X,Y)-- [4:0-3-0,Edge], [9:0-1-8,0-0-8]

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	0.08	Vert(LL)	-0.00	7	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.15	Vert(CT)	-0.01	7	>999	360		
BCLL	0.0	Rep Stress Incr	NO	WB	0.16	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.1(flat)
BOT CHORD 2x4 SP No.1(flat)
WEBS 2x4 SP No.3(flat)

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-3-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 8=Mechanical, 5=0-3-8
Max Grav 8=500(LC 1), 5=459(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-578/0
BOT CHORD 7-8=0/578, 6-7=0/578, 5-6=0/578
WEBS 2-8=-700/0, 3-5=-695/0

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) Refer to girder(s) for truss to truss connections.
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.
6) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 676 lb down at 1-10-4 on top chord. The design/selection of such connection device(s) is the responsibility of others.
7) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (plf)
Vert: 5-8=-10, 1-4=-100
Concentrated Loads (lb)
Vert: 2=-631(B)

April 13,2023

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

Job	Truss	Truss Type	Qty	Ply	Precision/58 Liberty Meadows/Harnett
J0923-5135	F9	FLOOR GIRDER	1	1	I57763314
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 12:06:31 2023 Page 1
ID:hxY3pmLvDCe?dFTuxKh62hywwcV-bwgiWqnj4G5NyBuV1HfuHJVqtj0477bHj7vKO9zR85c

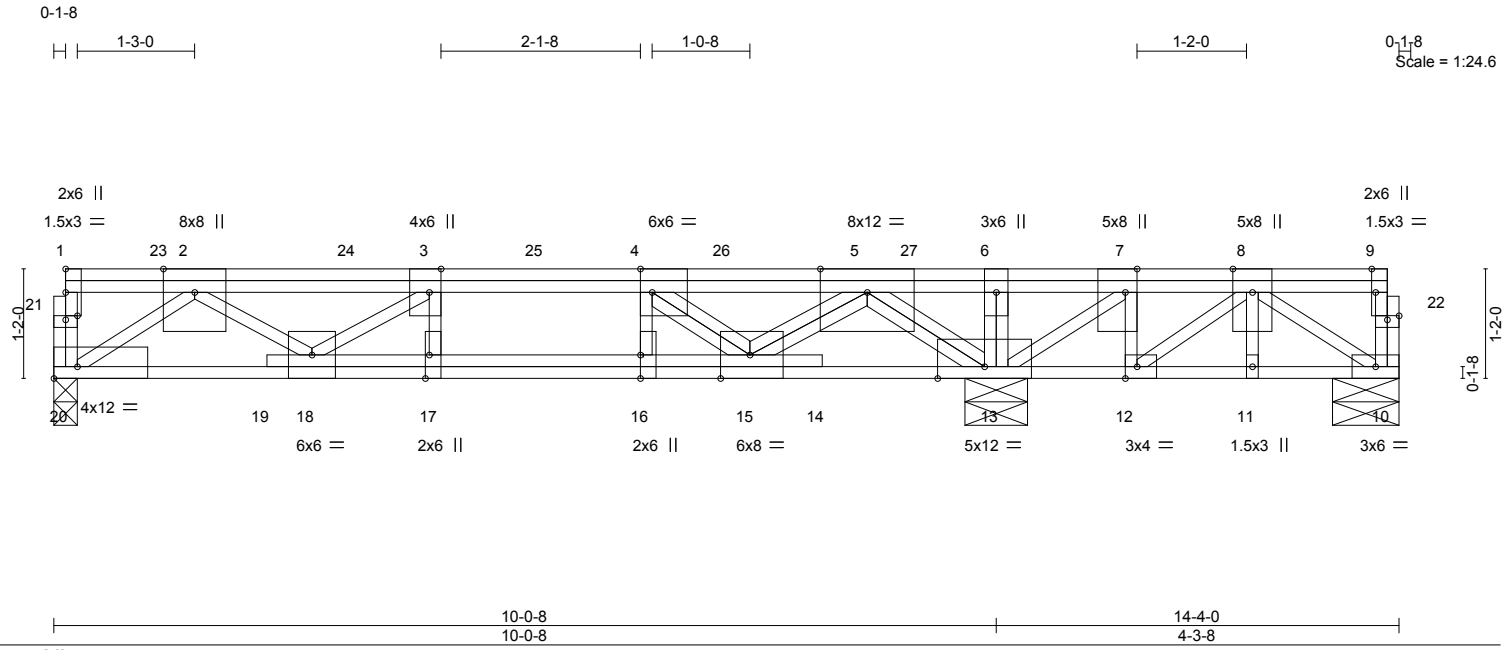

Plate Offsets (X,Y)-- [3:0-3-0,Edge], [4:0-1-8,Edge], [7:0-3-0,Edge], [9:0-3-0,Edge], [12:0-1-8,Edge], [15:0-3-12,Edge], [16:0-3-0,0-0-0], [17:0-3-0,Edge], [20:Edge,0-1-8], [21:0-1-8,0-0-8], [22:0-1-8,0-0-8]

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	0.83	Vert(LL)	-0.11	17	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.99	Vert(CT)	-0.16	17	>759	360		
BCLL	0.0	Rep Stress Incr	NO	WB	0.88	Horz(CT)	0.03	13	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 108 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP No.1(flat)
BOT CHORD 2x4 SP No.1(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) 20=0-3-0, 10=0-8-8, 13=0-8-0
Max Uplift 10=-284(LC 3)
Max Grav 20=2267(LC 3), 13=4757(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-4197/0, 3-4=-5207/0, 4-5=-2819/0, 5-6=0/3050, 6-7=0/3050, 7-8=0/982
BOT CHORD 18-20=0/3051, 17-18=0/5207, 16-17=0/5207, 15-16=0/5207, 13-15=0/567, 12-13=-982/0, 11-12=-416/0, 10-11=-416/0
WEBS 2-20=-3737/0, 2-18=0/1421, 3-18=-1232/0, 3-17=-324/0, 4-16=0/511, 5-13=-4392/0, 5-15=0/2826, 4-15=-3093/0, 8-10=0/503, 7-13=-2592/0, 7-12=0/431, 6-13=-707/0, 8-12=-763/0

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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 284 lb uplift at joint 10.
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.
6) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 917 lb down at 1-2-4, 917 lb down at 3-2-4, 917 lb down at 5-2-4, 917 lb down at 7-2-4, and 911 lb down at 9-2-4, and 1222 lb down at 11-2-4 on top chord. The design/selection of such connection device(s) is the responsibility of others.
7) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (plf)
Vert: 10-20=-10, 1-9=-100
Concentrated Loads (lb)
Vert: 7=-1142(B) 23=-837(B) 24=-837(B) 25=-837(B) 26=-837(B) 27=-837(B)

April 13,2023

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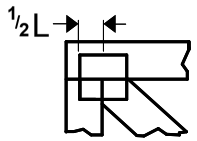
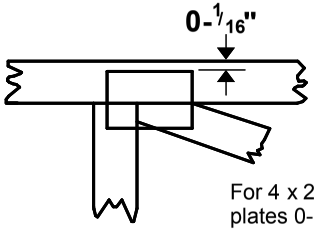
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

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.

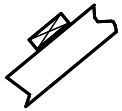
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

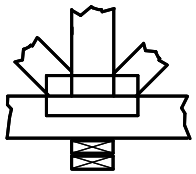
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

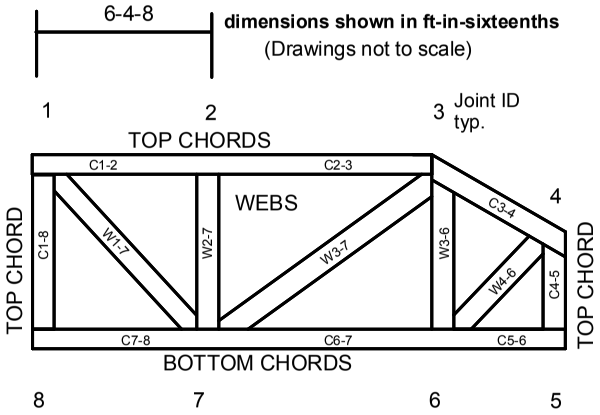


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-22: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing, Restraining & 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-1988, ESR-2362, ESR-2685, ESR-3282
ESR-4722, ESL-1388

Design General Notes

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®

ENGINEERING BY TRENCO
A MiTek Affiliate

MiTek Engineering Reference Sheet: MII-7473 rev. 1/2/2023

General Safety Notes

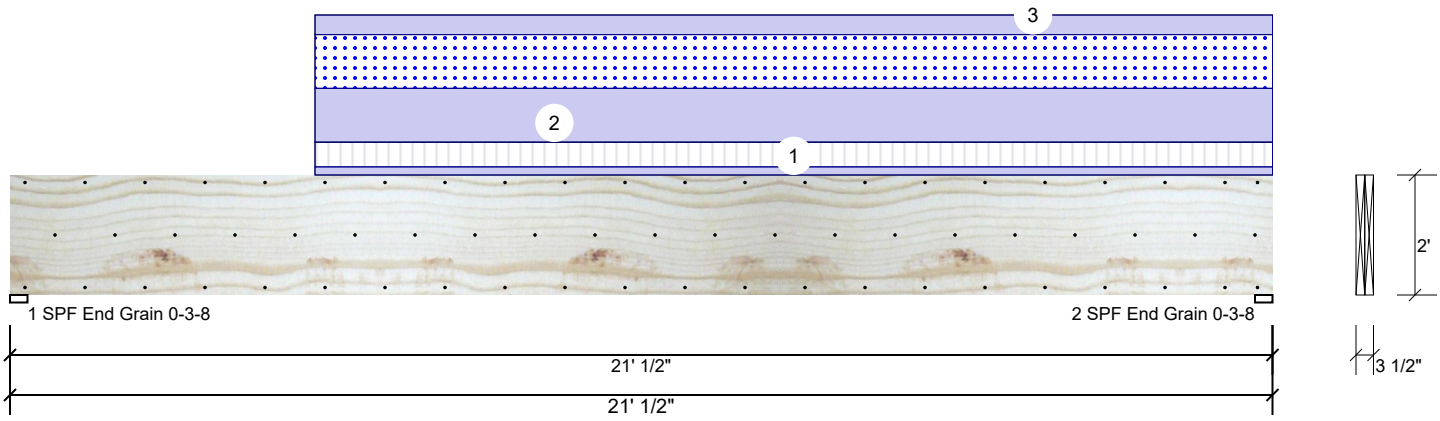
Failure to Follow Could Cause Property Damage or Personal Injury

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.

Client:		Date:	11/7/2023
Project:		Input by:	Neal Baggett
Address:		Job Name:	58 LIBERTY MEADOWS
		Project #:	

BM2 Kerto-S LVL 1.750" X 24.000" 2-Ply - PASSED

Level: Level



Member Information

Type:	Girder	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	480	Load Sharing:	No
Deflection TL:	360	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	914	3202	1984	0	0
2	Vertical	1512	5170	3282	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	Vert	52%	3202 / 2173	5376	L	D+0.75(L+S)
2 - SPF End Grain	3.500"	Vert	85%	5170 / 3596	8765	L	D+0.75(L+S)

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	41750 ft-lb	11'1"	84163 ft-lb	0.496 (50%)	D+0.75(L+S)	L
Unbraced	41750 ft-lb	11'1"	42041 ft-lb	0.993 (99%)	D+0.75(L+S)	L
Shear	6786 lb	18'9"	20608 lb	0.329 (33%)	D+0.75(L+S)	L
LL Defl inch	0.182 (L/1360)	10'9 1/8"	0.515 (L/480)	0.353 (35%)	0.75(L+S)	L
TL Defl inch	0.444 (L/557)	10'9"	0.687 (L/360)	0.647 (65%)	D+0.75(L+S)	L

Design Notes

1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
2 Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
3 Refer to last page of calculations for fasteners required for specified loads.
4 Girders are designed to be supported on the bottom edge only.
5 Top loads must be supported equally by all plies.
6 Top must be laterally braced at a maximum of 4'2 1/4" o.c.
7 Bottom must be laterally braced at end bearings.
8 Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Part. Uniform	5-1-0 to 21-0-8		Near Face	50 PLF	152 PLF	0 PLF	0 PLF	0 PLF	F1
2	Part. Uniform	5-1-0 to 21-0-8		Top	330 PLF	0 PLF	330 PLF	0 PLF	0 PLF	A TRUSSES
3	Part. Uniform	5-1-0 to 21-0-8		Top	120 PLF	0 PLF	0 PLF	0 PLF	0 PLF	WALL
	Self Weight				19 PLF					

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. For flat roofs provide proper drainage to prevent ponding

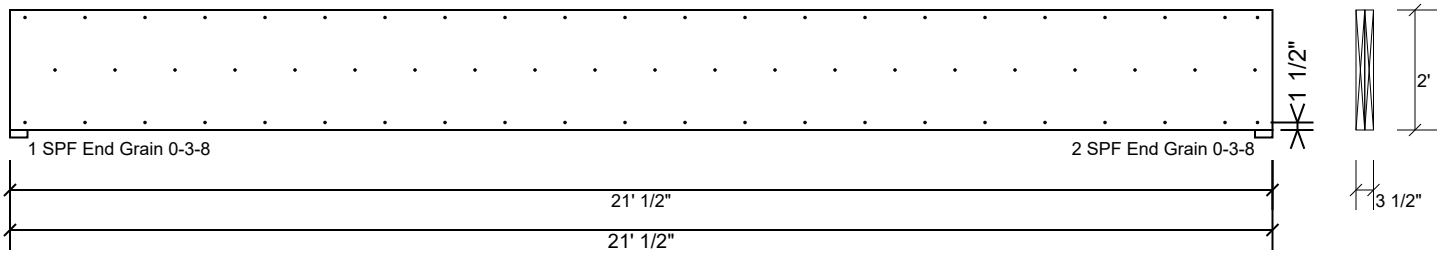
This design is valid until 6/28/2026

Manufacturer Info

Metsä Wood
301 Merritt 7 Building, 2nd Floor
Norwalk, CT 06851
(800) 622-5850
www.metsawood.com/us

BM2 Kerto-S LVL 1.750" X 24.000" 2-Ply - PASSED

Level: Level



Multi-Ply Analysis

Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6".

Capacity	41.1 %
Load	101.0 PLF
Yield Limit per Foot	245.6 PLF
Yield Limit per Fastener	81.9 lb.
C_M	1
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	D+L
Duration Factor	1.00

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 6/28/2026

Manufacturer Info

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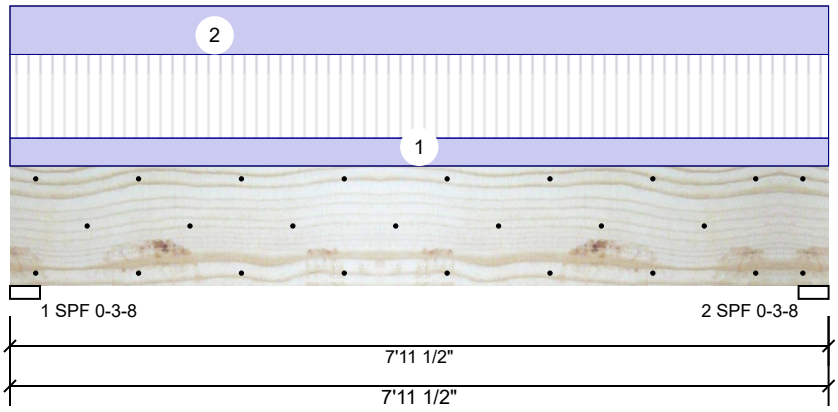
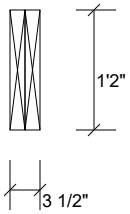
301 Merritt 7 Building, 2nd Floor
Norwalk, CT 06851
(800) 622-5850
www.metsawood.com/us

Client:		Date:	11/7/2023
Project:		Input by:	Neal Baggett
Address:		Job Name:	58 LIBERTY MEADOWS
		Project #:	

BM1 Kerto-S LVL 1.750" X 14.000" 2-Ply - PASSED

Level: Level





Member Information

Type:	Girder	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	480	Load Sharing:	No
Deflection TL:	360	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	824	795	0	0	0
2	Vertical	824	795	0	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	31%	795 / 824	1619	L	D+L
2 - SPF	3.500"	Vert	31%	795 / 824	1619	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2861 ft-lb	3'11 3/4"	26999 ft-lb	0.106 (11%)	D+L	L
Unbraced	2861 ft-lb	3'11 3/4"	13588 ft-lb	0.211 (21%)	D+L	L
Shear	1360 lb	6'6"	10453 lb	0.130 (13%)	D+L	L
LL Defl inch	0.013 (L/7127)	3'11 13/16"	0.188 (L/480)	0.067 (7%)	L	L
TL Defl inch	0.025 (L/3626)	3'11 13/16"	0.250 (L/360)	0.099 (10%)	D+L	L

Design Notes

1. Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
2. Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
3. Refer to last page of calculations for fasteners required for specified loads.
4. Girders are designed to be supported on the bottom edge only.
5. Top loads must be supported equally by all plies.
6. Top must be laterally braced at end bearings.
7. Bottom must be laterally braced at end bearings.
8. Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Near Face	69 PLF	207 PLF	0 PLF	0 PLF	0 PLF	F7
2	Uniform			Top	120 PLF	0 PLF	0 PLF	0 PLF	0 PLF	WALL
	Self Weight				11 PLF					

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. For flat roofs provide proper drainage to prevent ponding

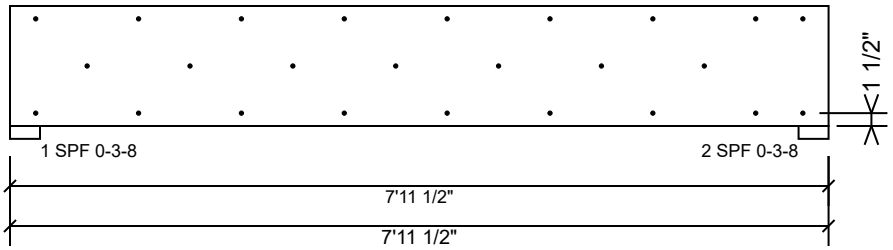
This design is valid until 6/28/2026

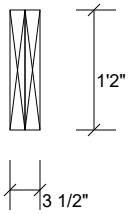
Manufacturer Info

Metsä Wood
301 Merritt 7 Building, 2nd Floor
Norwalk, CT 06851
(800) 622-5850
www.metsawood.com/us

BM1 Kerto-S LVL 1.750" X 14.000" 2-Ply - PASSED

Level: Level





Multi-Ply Analysis

Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6".

Capacity	56.2 %
Load	138.0 PLF
Yield Limit per Foot	245.6 PLF
Yield Limit per Fastener	81.9 lb.
C_M	1
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	D+L
Duration Factor	1.00

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 6/28/2026

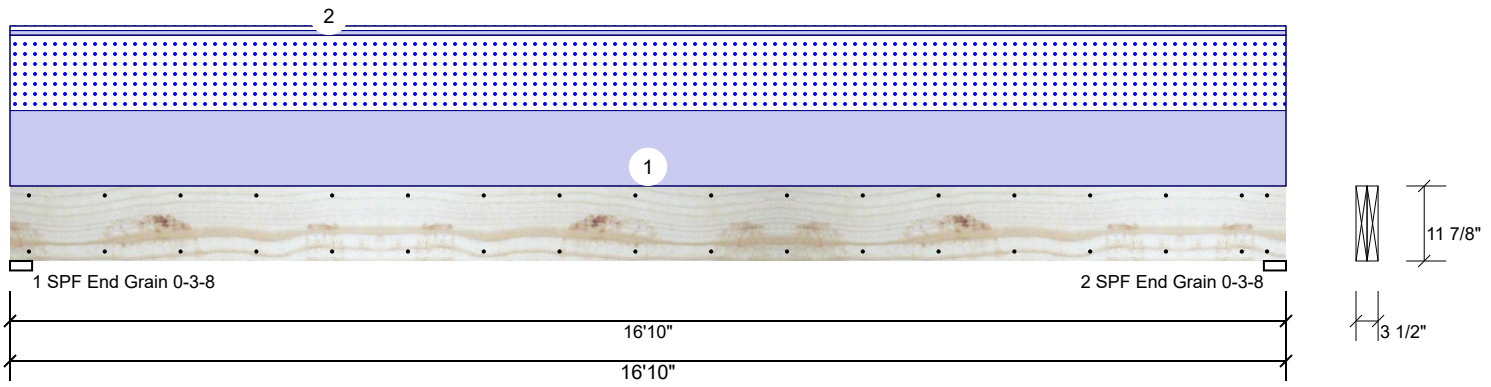
Manufacturer Info

Metsä Wood
301 Merritt 7 Building, 2nd Floor
Norwalk, CT 06851
(800) 622-5850
www.metsawood.com/us

Client:		Date:	11/7/2023
Project:		Input by:	Neal Baggett
Address:		Job Name:	58 LIBERTY MEADOWS
		Project #:	

GDH Kerto-S LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Level



Member Information

Type:	Header	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Header Supports Glass:	No
Importance:	Normal - II	Deck:	Not Checked
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	0	1551	1473	0	0
2	Vertical	0	1551	1473	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	Vert	29%	1551 / 1473	3024	L	D+S
2 - SPF End Grain	3.500"	Vert	29%	1551 / 1473	3024	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	12041 ft-lb	8'5"	22897 ft-lb	0.526 (53%)	D+S	L
Unbraced	12041 ft-lb	8'5"	22897 ft-lb	0.526 (53%)	D+S	L
Shear	2572 lb	1'3 3/8"	10197 lb	0.252 (25%)	D+S	L
LL Defl inch	0.306 (L/642)	8'5 1/16"	0.546 (L/360)	0.561 (56%)	S	L
TL Defl inch	0.628 (L/313)	8'5 1/16"	0.819 (L/240)	0.767 (77%)	D+S	L

Design Notes

1. Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
2. Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
3. Refer to last page of calculations for fasteners required for specified loads.
4. Girders are designed to be supported on the bottom edge only.
5. Top loads must be supported equally by all plies.
6. Top must be continuously laterally braced.
7. Bottom must be laterally braced at bearings.
8. Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Top	165 PLF	0 PLF	165 PLF	0 PLF	0 PLF	C1-GE
2	Tie-In	0-0-0 to 16-10-0	0-6-0	Top	20 PSF	0 PSF	20 PSF	0 PSF	0 PSF	RAKE OH
	Self Weight				9 PLF					

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 6/28/2026

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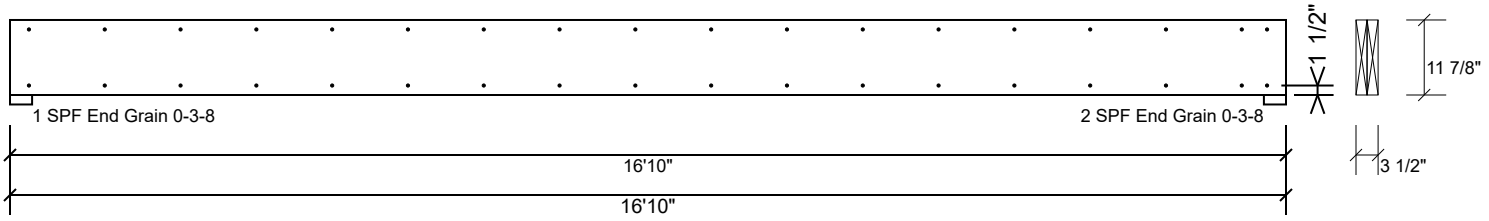

Multi-Ply Analysis

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6".

Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	163.7 PLF
Yield Limit per Fastener	81.9 lb.
C_M	1
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

Notes

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Lumber

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