ENGINEERING BY TRENCO
A MiTek Affiliate

RE: J0121-0109
Lot 48 Sierra Villas

Trenco
818 Soundside Rd
Edenton, NC 27932

Site Information:

Customer: Project Name: J0121-0109
Lot/Block: Model:
Address: Subdivision:
City: State:

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

Design Code: IRC2015/TPI2014 Design Program: MiTek 20/20 8.1
Wind Code: 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	E14133274	A1	1/7/2021
2	E14133275	A1GE	1/7/2021
3	E14133276	A2	1/7/2021
4	E14133277	A3	1/7/2021
5	E14133278	A3A	1/7/2021
6	E14133279	A3GE	1/7/2021
7	E14133280	B1	1/7/2021
8	E14133281	B1-GR	1/7/2021
9	E14133282	B1GE	1/7/2021
10	E14133283	C1	1/7/2021
11	E14133284	C1-GR	1/7/2021
12	E14133285	C1GE	1/7/2021
13	E14133286	M1	1/7/2021
14	E14133287	M1GE	1/7/2021
15	E14133288	V1	1/7/2021
16	E14133289	V2	1/7/2021
17	E14133290	V3	1/7/2021
18	E14133291	V4	1/7/2021

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, 2021.

North Carolina COA: C-0844

IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which were given to TRENCO. Any project specific information included is for TRENCO customers file reference purpose only, and was not taken into account in the preparation of these designs. TRENCO has not independently verified the applicability of the design parameters or the designs for any particular building. Before use, the building designer should verify applicability of design parameters and properly incorporate these designs into the overall building design per ANSI/TPI 1, Chapter 2.

January 07, 2021

Gilbert, Eric

Job	Truss	Truss Type	Qty	Ply	Lot 48 Sierra Villas
J0121-0109	A1	COMMON	5	1	E14133274
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Mar 3 06:21:02 2020 Page 1
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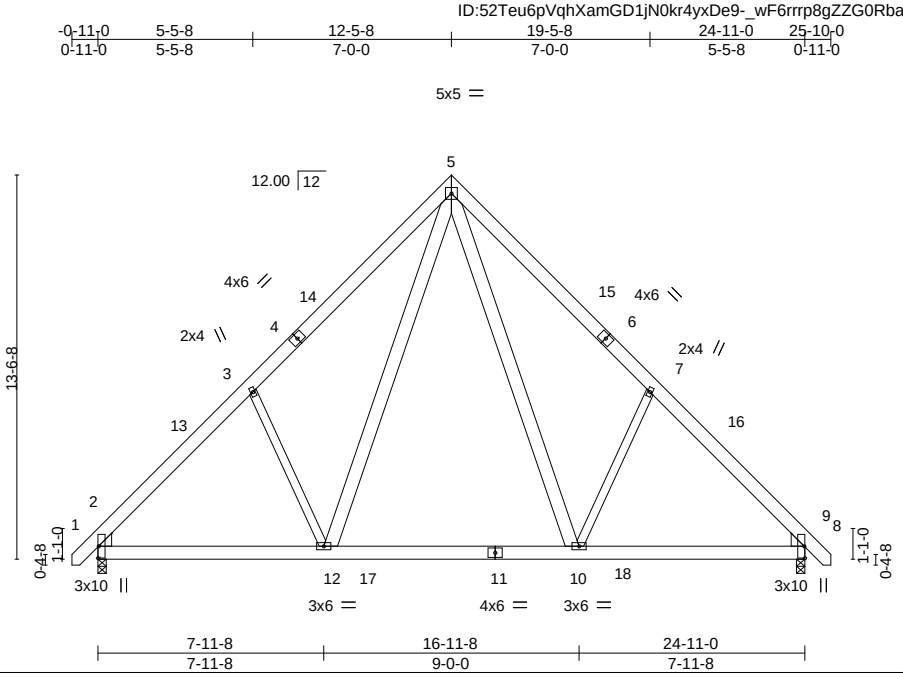

Plate Offsets (X,Y)-- [2:0-0-2,0-0-2], [2:0-0-4,0-3-15], [8:0-0-2,0-0-2], [8:0-0-4,0-3-15]

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	0.20	Vert(LL)	-0.08	10-12	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.26	Vert(CT)	-0.11	10-12	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.39	Horz(CT)	0.01	8	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.02	12	>999	240	Weight: 230 lb	FT = 20%

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

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

REACTIONS. (size) 2=0-3-8, 8=0-3-8
Max Horz 2=-317(LC 10)
Max Uplift 2=-41(LC 12), 8=-41(LC 13)
Max Grav 2=1052(LC 19), 8=1052(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1246/274, 3-5=-1148/453, 5-7=-1148/453, 7-8=-1246/274
BOT CHORD 2-12=-123/951, 10-12=-9/614, 8-10=-52/795
WEBS 5-10=-214/639, 7-10=-444/338, 5-12=-214/639, 3-12=-444/338

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -0-9-6 to 3-7-7, Interior(1) 3-7-7 to 12-5-8, Exterior(2) 12-5-8 to 16-10-5, Interior(1) 16-10-5 to 25-8-6 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members, with BCDL = 10.0psf.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 8.

March 3,2020

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Job	Truss	Truss Type	Qty	Ply	Lot 48 Sierra Villas
J0121-0109	A1GE	COMMON SUPPORTED GAB	1	1	E14133275
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Mar 3 06:21:04 2020 Page 1
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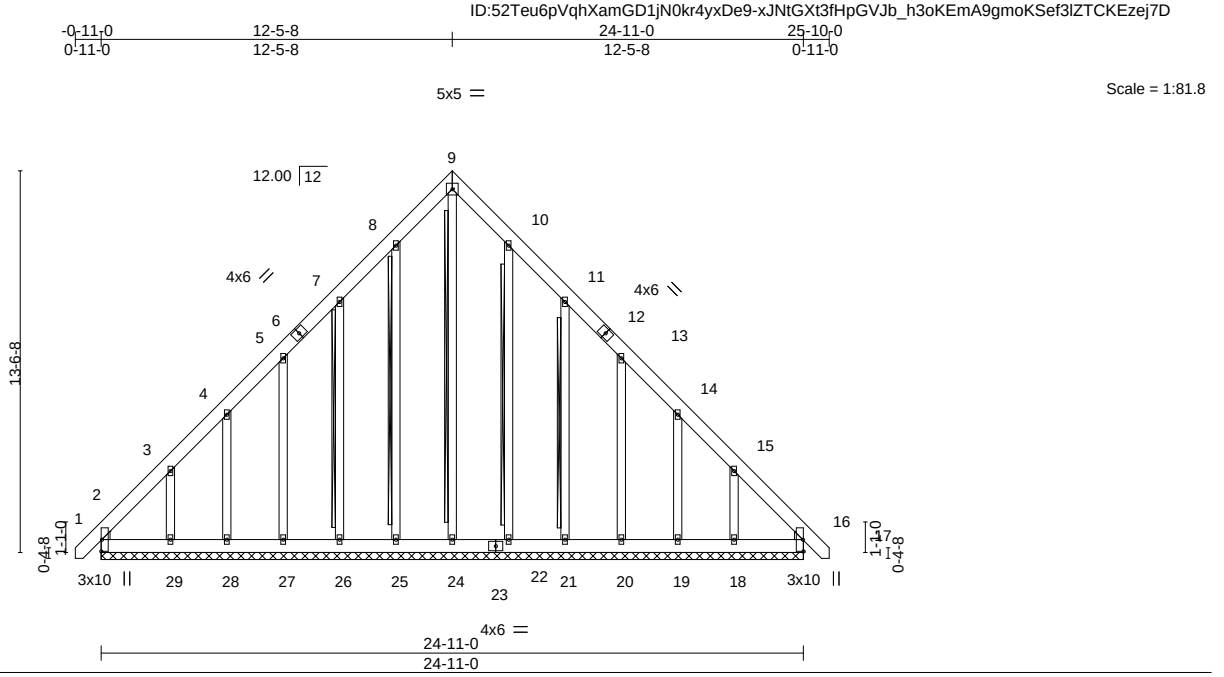

Plate Offsets (X,Y)-- [2:0-0-2,0-0-2], [2:0-0-4,0-2-10], [16:0-0-2,0-0-2], [16:0-0-4,0-2-10]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.06	Vert(LL)	0.00	16	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	0.00	16	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.24	Horz(CT)	0.01	16	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 265 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
OTHERS 2x4 SP No.2
WEDGE
Left: 2x4 SP No.2 , Right: 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 - 9-24, 8-25, 7-26, 10-22, 11-21
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 24-11-0.
(lb) - Max Horz 2=-317(LC 10)
Max Uplift All uplift 100 lb or less at joint(s) 25, 26, 27, 28, 22, 21, 20, 19, 16 except 2=-122(LC 10), 29=-164(LC 12), 18=-159(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 24, 25, 26, 27, 28, 29, 22, 21, 20, 19, 18, 16 except 2=279(LC 9)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-411/332, 8-9=-249/270, 9-10=-249/270, 15-16=-412/335
BOT CHORD 2-29=-258/337, 28-29=-259/338, 27-28=-260/339, 26-27=-260/339, 25-26=-261/340, 24-25=-261/340, 22-24=-261/340, 21-22=-261/340, 20-21=-260/339, 19-20=-260/339, 18-19=-259/338, 16-18=-258/337
WEBS 9-24=-261/185, 3-29=-273/239, 15-18=-273/239

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Corner(3) -0-9-6 to 3-7-7, Exterior(2) 3-7-7 to 12-5-8, Corner(3) 12-5-8 to 16-10-5, Exterior(2) 16-10-5 to 25-8-6 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 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members, with BCDL = 10.0psf.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 25, 26, 27, 28, 22, 21, 20, 19, 16 except (jt=lb) 2=122, 29=164, 18=159.
10) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.

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Job	Truss	Truss Type	Qty	Ply	Lot 48 Sierra Villas
J0121-0109	A2	COMMON	6	1	E14133276
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Mar 3 06:21:05 2020 Page 1
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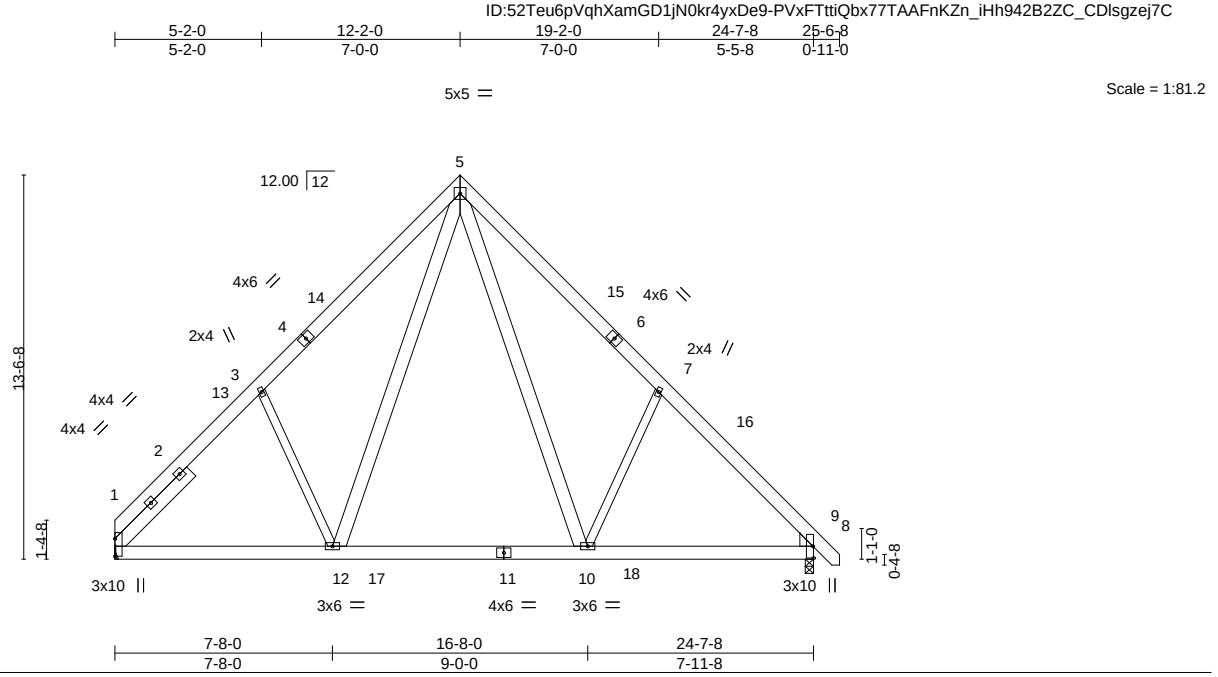

Plate Offsets (X,Y)-- [1:Edge,0-0-0], [8:0-0-2,0-0-2], [8:0-0-4,0-3-15]

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	0.23	Vert(LL)	-0.08	10-12	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.27	Vert(CT)	-0.12	10-12	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.39	Horz(CT)	0.01	8	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.01	12	>999	240	Weight: 233 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x6 SP No.1 *Except*
3-12,7-10: 2x4 SP No.2
WEDGE
Right: 2x6 SP No.1
SLIDER Left 2x6 SP No.1 -H 3-9-3

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

REACTIONS. (size) 1=Mechanical, 8=0-3-8
Max Horz 1=-315(LC 8)
Max Uplift 1=-37(LC 13), 8=-41(LC 13)
Max Grav 1=1009(LC 20), 8=1047(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-3=-1219/283, 3-5=-1112/456, 5-7=-1142/452, 7-8=-1240/273
BOT CHORD 1-12=-129/923, 10-12=-10/610, 8-10=-54/790
WEBS 3-12=-417/334, 5-12=-208/599, 5-10=-214/641, 7-10=-442/338

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-0-0 to 4-4-13, Interior(1) 4-4-13 to 12-2-0, Exterior(2) 12-2-0 to 16-6-13, Interior(1) 16-6-13 to 25-4-14 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members, with BCDL = 10.0psf.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 8.

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Job	Truss	Truss Type	Qty	Ply	Lot 48 Sierra Villas
J0121-0109	A3	COMMON	5	1	E14133277
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Mar 3 06:21:06 2020 Page 1
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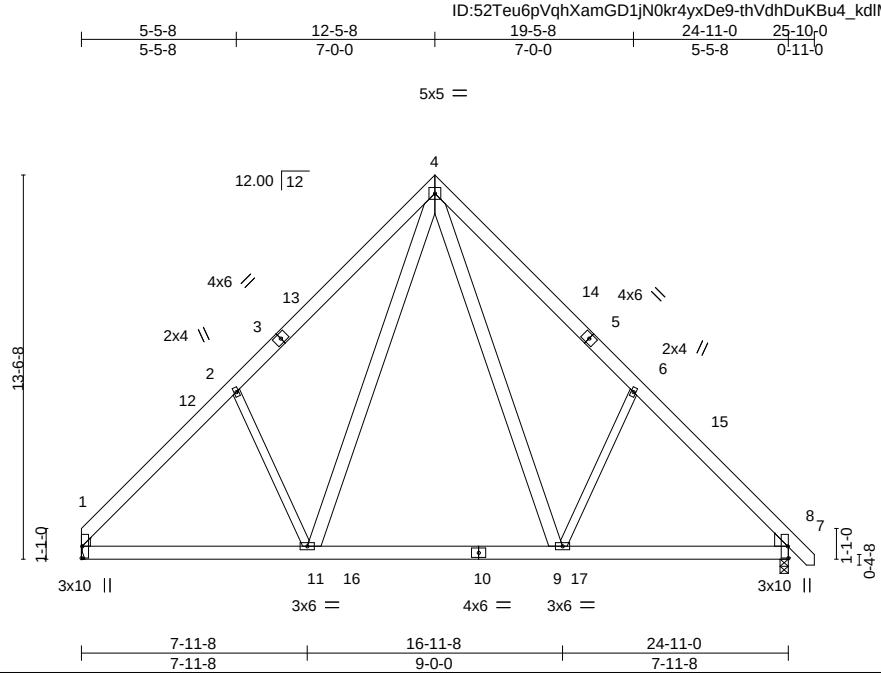

Plate Offsets (X,Y)-- [1:0-0-2,0-0-2], [1:0-0-4,0-2-10], [7:0-0-2,0-0-2], [7:0-0-4,0-3-15]

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)	-0.08	9-11	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.26	Vert(CT)	-0.11	9-11	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.40	Horz(CT)	0.01	7	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.02	11	>999	240	Weight: 227 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x6 SP No.1 *Except*
6-9,2-11: 2x4 SP No.2
WEDGE
Left: 2x4 SP No.2 , Right: 2x6 SP No.1

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

REACTIONS. (size) 1=Mechanical, 7=0-3-8
Max Horz 1=-315(LC 8)
Max Uplift 1=-35(LC 13), 7=-41(LC 13)
Max Grav 1=1014(LC 20), 7=1056(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-1236/281, 2-4=-1158/467, 4-6=-1153/455, 6-7=-1252/275
BOT CHORD 1-11=-123/967, 9-11=-9/618, 7-9=-56/798
WEBS 4-9=-215/639, 6-9=-444/338, 4-11=-220/655, 2-11=-454/344

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-0-12 to 4-5-9, Interior(1) 4-5-9 to 12-5-8, Exterior(2) 12-5-8 to 16-10-5, Interior(1) 16-10-5 to 25-8-6 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members, with BCDL = 10.0psf.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 7.

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Job	Truss	Truss Type	Qty	Ply	Lot 48 Sierra Villas
J0121-0109	A3A	COMMON	5	1	E14133278
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Mar 3 06:21:06 2020 Page 1
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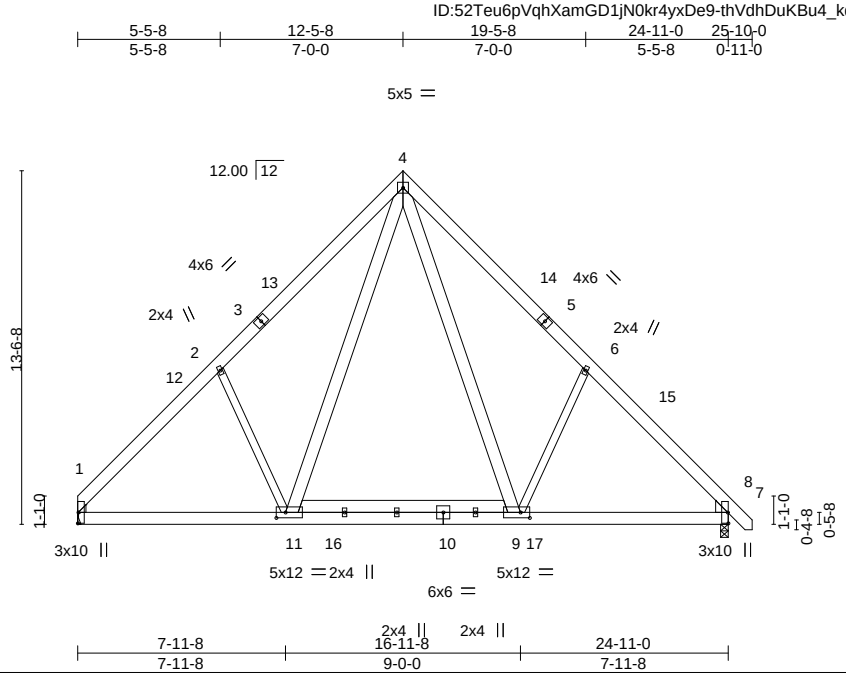

Plate Offsets (X,Y)-- [1:0-0-2,0-0-2], [1:0-0-4,0-2-10], [7:0-0-4,0-3-15], [7:0-0-2,0-0-2], [9:0-4-4,0-2-8], [11:0-4-4,0-2-8]

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)	-0.08	9-11	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.26	Vert(CT)	-0.11	9-11	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.40	Horz(CT)	0.01	7	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.02	11	>999	240	Weight: 245 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x6 SP No.1 *Except*
6-9,2-11: 2x4 SP No.2
WEDGE
Left: 2x4 SP No.2 , Right: 2x6 SP No.1

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

REACTIONS. (size) 1=Mechanical, 7=0-3-8
Max Horz 1=-315(LC 8)
Max Uplift 1=-35(LC 13), 7=-41(LC 13)
Max Grav 1=1009(LC 20), 7=1052(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-1229/281, 2-4=-1158/467, 4-6=-1153/455, 6-7=-1245/275
BOT CHORD 1-11=-123/962, 9-11=-9/615, 7-9=-56/794
WEBS 4-9=-215/634, 6-9=-444/338, 4-11=-220/650, 2-11=-454/344

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-0-12 to 4-5-9, Interior(1) 4-5-9 to 12-5-8, Exterior(2) 12-5-8 to 16-10-5, Interior(1) 16-10-5 to 25-8-6 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members, with BCDL = 10.0psf.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 7.

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Job	Truss	Truss Type	Qty	Ply	Lot 48 Sierra Villas
J0121-0109	A3GE	COMMON SUPPORTED GAB	1	1	E14133279
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Mar 3 06:21:07 2020 Page 1
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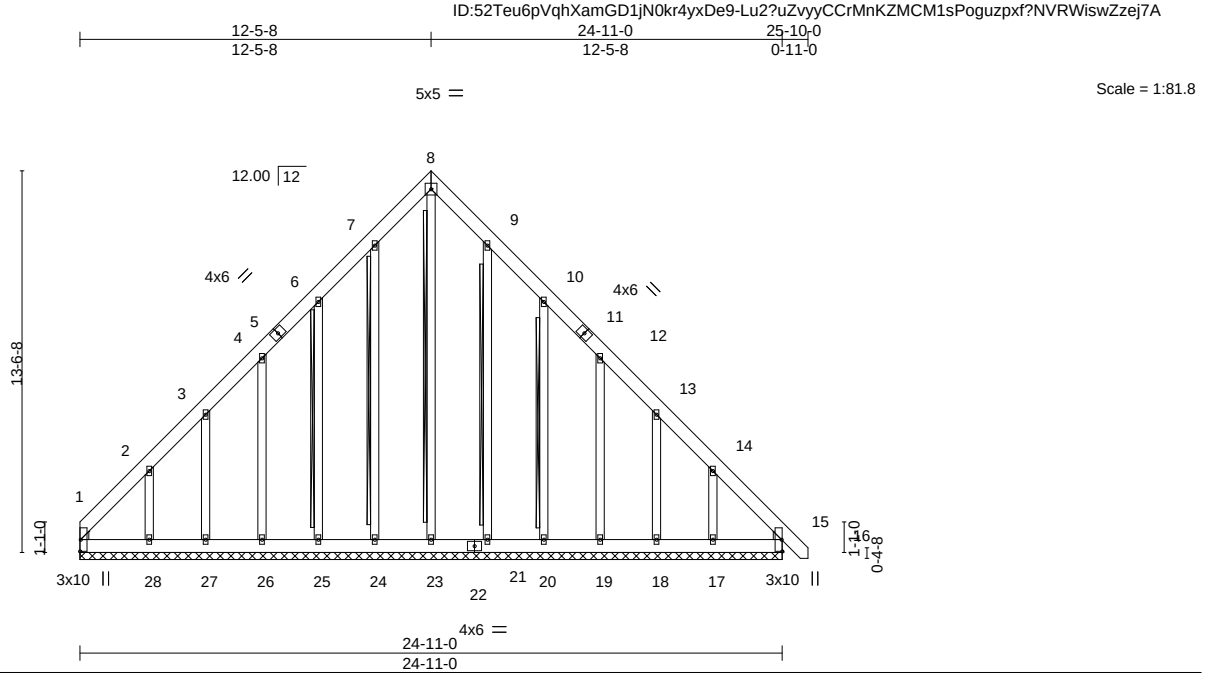


Plate Offsets (X,Y)-- [1:0-0-2,0-0-2], [1:0-0-4,0-2-10], [15:0-0-2,0-0-2], [15:0-0-4,0-2-10]

LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.06	Vert(LL)	0.00	15	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	0.00	15	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.24	Horz(CT)	0.01	15	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 262 lb	FT = 20%

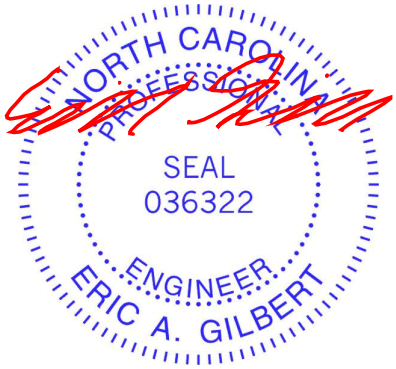
LUMBER-
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
OTHERS 2x4 SP No.2
WEDGE
Left: 2x4 SP No.2 , Right: 2x4 SP No.2

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 - 8-23, 7-24, 6-25, 9-21, 10-20
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 24-11-0.
(lb) - Max Horz 1=-394(LC 8)
Max Uplift All uplift 100 lb or less at joint(s) 24, 21, 15 except 1=-190(LC 10), 25=-157(LC 12), 26=-140(LC 12), 27=-127(LC 12), 28=-268(LC 12), 20=-160(LC 13), 19=-141(LC 13), 18=-128(LC 13), 17=-255(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 27, 21, 18 except 1=412(LC 12), 23=272(LC 13), 24=253(LC 19), 25=252(LC 19), 26=256(LC 19), 28=273(LC 19), 20=255(LC 20), 19=256(LC 20), 17=253(LC 20), 15=340(LC 13)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-563/338, 2-3=-333/235, 7-8=-249/270, 8-9=-249/270, 13-14=-280/161, 14-15=-497/335
BOT CHORD 1-28=-258/391, 27-28=-259/392, 26-27=-260/392, 25-26=-260/392, 24-25=-261/392, 23-24=-261/392, 21-23=-261/392, 20-21=-261/392, 19-20=-260/392, 18-19=-260/391, 17-18=-259/391, 15-17=-258/389
WEBS 8-23=-262/185, 2-28=-278/280, 14-17=-273/262

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=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 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members, with BCDL = 10.0psf.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 24, 21, 15 except (jt=lb) 1=190, 25=157, 26=140, 27=127, 28=268, 20=160, 19=141, 18=128, 17=255.
10) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.



March 3,2020

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

Job	Truss	Truss Type	Qty	Ply	Lot 48 Sierra Villas
J0121-0109	B1	ATTIC	6	1	E14133280
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Mar 3 06:21:08 2020 Page 1
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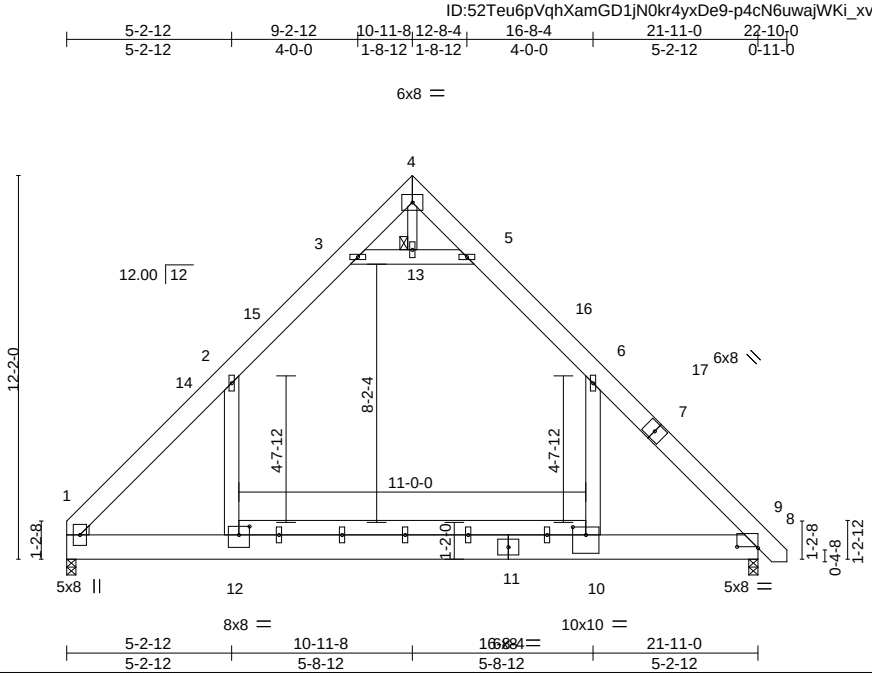

Plate Offsets (X,Y)-- [1:0-0-0,0-2-8], [1:0-0-0,0-7-5], [8:0-8-0,0-0-8], [10:0-5-0,0-3-0], [12:0-4-0,0-3-4]

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	0.75	Vert(LL)	-0.21	10-12	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.70	Vert(CT)	-0.37	10-12	>702	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.01	8	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.08	10-12	>999	240	Weight: 248 lb	FT = 20%

LUMBER-
TOP CHORD 2x8 SP No.1
BOT CHORD 2x10 SP No.1 *Except*
10-12: 2x6 SP No.1
WEBS 2x6 SP No.1 *Except*
4-13: 2x4 SP No.2
WEDGE
Left: 2x4 SP No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
JOINTS 1 Brace at Jt(s): 13

REACTIONS. (size) 1=0-3-8, 8=0-3-8
Max Horz 1=-277(LC 10)
Max Grav 1=1411(LC 21), 8=1457(LC 21)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-1864/0, 2-3=-1036/152, 3-4=-39/465, 4-5=-44/476, 5-6=-1026/148, 6-8=-1920/0
BOT CHORD 1-12=0/1084, 10-12=0/1084, 8-10=0/1084
WEBS 6-10=0/966, 2-12=0/889, 3-13=-1662/249, 5-13=-1662/249

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-0-6 to 4-5-3, Interior(1) 4-5-3 to 10-11-8, Exterior(2) 10-11-8 to 15-4-5, Interior(1) 15-4-5 to 22-7-2 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) All plates are 2x6 MT20 unless otherwise indicated.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
6) Ceiling dead load (10.0 psf) on member(s). 2-3, 5-6, 3-13, 5-13; Wall dead load (5.0psf) on member(s).6-10, 2-12
7) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 10-12
8) Attic room checked for L/360 deflection.

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Job	Truss	Truss Type	Qty	Ply	Lot 48 Sierra Villas	E14133281
J0121-0109	B1-GR	ATTIC	1	3	Job Reference (optional)	

Comtech, Inc., Fayetteville, NC 28309 — 8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Mar 3 08:59:44 2020 Page 1

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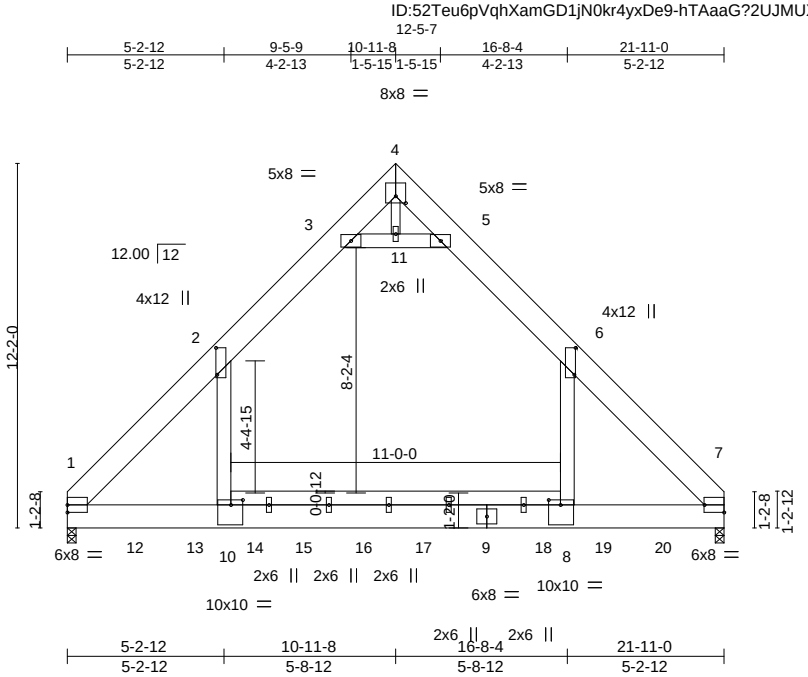


Plate Offsets (X,Y)-- [2:0-10-12,0-0-8], [4:0-4-0,0-2-12], [6:0-10-12,0-0-8], [7:Edge,0-3-0], [8:0-4-12,0-2-0], [10:0-4-12,0-2-0]

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	0.67	Vert(LL)	-0.30	8-10	>877	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.32	Vert(CT)	-0.40	8-10	>648	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.39	Horz(CT)	0.02	7	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.01	8-10	>999	240	Weight: 805 lb	FT = 20%

LUMBER-

TOP CHORD 2x10 SP 2400F 2.0E
BOT CHORD 2x10 SP 2400F 2.0E *Except*
8-10: 2x6 SP No.1
WEBS 2x6 SP No.1 *Except*
4-11: 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.

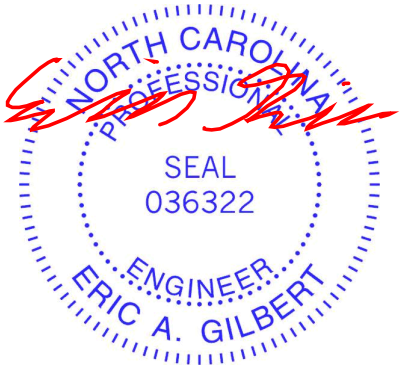
REACTIONS. (lb/size) 1=3308/0-3-8 (min. 0-2-12), 7=3306/0-3-8 (min. 0-2-12)
Max Horz 1=-269(LC 4)
Max Grav 1=10019(LC 14), 7=10002(LC 14)

FORCES. (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-10536/0, 2-3=-4389/33, 3-4=-15/4021, 4-5=-15/4015, 5-6=-4395/33, 6-7=-10529/0
BOT CHORD 1-12=0/5913, 12-13=0/5913, 10-13=0/5913, 10-14=0/5980, 14-15=0/5980, 15-16=0/5980, 16-17=0/5980, 9-17=0/5980, 9-18=0/5980, 8-18=0/5980, 8-19=0/5913, 19-20=0/5913, 7-20=0/5913
WEBS 6-8=0/8529, 2-10=0/8548, 3-11=-12139/0, 5-11=-12139/0, 4-11=0/938

NOTES-

1) 3-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x10 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x10 - 5 rows staggered at 0-4-0 oc.
Webs connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 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 (3-second gust) 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) Concentrated loads from layout are not present in Load Case(s): #3 Dead + Uninhabitable Attic Without Storage; #4 Dead + 0.6 MWFRS Wind (Pos. Internal) Left; #5 Dead + 0.6 MWFRS Wind (Pos. Internal) Right; #6 Dead + 0.6 MWFRS Wind (Neg. Internal) Left; #7 Dead + 0.6 MWFRS Wind (Neg. Internal) Right; #8 Dead + 0.6 MWFRS Wind (Pos. Internal) 1st Parallel; #9 Dead + 0.6 MWFRS Wind (Pos. Internal) 2nd Parallel; #10 Dead + 0.6 MWFRS Wind (Pos. Internal) 3rd Parallel; #11 Dead + 0.6 MWFRS Wind (Pos. Internal) 4th Parallel; #12 Dead + 0.6 MWFRS Wind (Neg. Internal) 1st Parallel; #13 Dead + 0.6 MWFRS Wind (Neg. Internal) 2nd Parallel; #20 Dead + 0.75 Roof Live (bal.) + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) Left); #21 Dead + 0.75 Roof Live (bal.) + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) Right); #22 Dead + 0.75 Roof Live (bal.) + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel); #23 Dead + 0.75 Roof Live (bal.) + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) 2nd Parallel).
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

Continued on page 2



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NOTES-

7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
8) Ceiling dead load (10.0 psf) on member(s). 2-3, 5-6, 3-11, 5-11; Wall dead load (5.0psf) on member(s).6-8, 2-10
9) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 8-10
10) 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.
11) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1853 lb down at 2-1-12, 1853 lb down at 4-1-12, 4072 lb down at 5-3-12, 353 lb down and 67 lb up at 6-1-12, 353 lb down and 67 lb up at 7-9-4, 353 lb down and 67 lb up at 9-9-4, 353 lb down and 67 lb up at 11-9-4, 353 lb down and 67 lb up at 13-9-4, 353 lb down and 67 lb up at 15-9-4, 4072 lb down at 16-7-4, and 1853 lb down at 17-9-4, and 1853 lb down at 19-9-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
12) Attic room checked for L/360 deflection.

LOAD CASE(S)

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (plf)
   Vert: 1-2=-60, 2-3=-80, 3-4=-60, 4-5=-60, 5-6=-80, 6-7=-60, 1-10=-20, 8-10=-40, 7-8=-20, 3-5=-20
   Drag: 6-8=-10, 2-10=-10
   Concentrated Loads (lb)
   Vert: 9=-49(B) 8=-1096(B) 10=-1096(B) 12=-458(B) 13=-458(B) 14=-49(B) 15=-49(B) 16=-49(B) 17=-49(B) 18=-49(B) 19=-458(B) 20=-458(B)
2) Dead + 0.75 Roof Live (balanced) + 0.75 Attic Floor: Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (plf)
   Vert: 1-2=-50, 2-3=-70, 3-4=-50, 4-5=-50, 5-6=-70, 6-7=-50, 1-10=-20, 8-10=-100, 7-8=-20, 3-5=-20
   Drag: 6-8=-10, 2-10=-10
   Concentrated Loads (lb)
   Vert: 9=-277(B) 8=-3328(B) 10=-3328(B) 12=-1504(B) 13=-1504(B) 14=-277(B) 15=-277(B) 16=-277(B) 17=-277(B) 18=-277(B) 19=-1504(B) 20=-1504(B)
3) Dead + Uninhabitable Attic Without Storage: Lumber Increase=1.25, Plate Increase=1.25
   Uniform Loads (plf)
   Vert: 1-2=-20, 2-3=-40, 3-4=-20, 4-5=-20, 5-6=-40, 6-7=-20, 1-7=-40, 3-5=-20
   Drag: 6-8=-10, 2-10=-10
4) Dead + 0.6 MWFRS Wind (Pos. Internal) Left: Lumber Increase=1.60, Plate Increase=1.60
   Uniform Loads (plf)
   Vert: 1-2=-13, 2-3=-25, 3-4=-13, 4-5=11, 5-6=-1, 6-7=11, 1-10=-12, 8-10=-24, 7-8=-12, 3-5=-12
   Horz: 1-4=1, 4-7=23
   Drag: 6-8=-10, 2-10=-10
5) Dead + 0.6 MWFRS Wind (Pos. Internal) Right: Lumber Increase=1.60, Plate Increase=1.60
   Uniform Loads (plf)
   Vert: 1-2=11, 2-3=-1, 3-4=11, 4-5=-13, 5-6=-25, 6-7=-13, 1-10=-12, 8-10=-24, 7-8=-12, 3-5=-12
   Horz: 1-4=-23, 4-7=-1
   Drag: 6-8=-10, 2-10=-10
6) Dead + 0.6 MWFRS Wind (Neg. Internal) Left: Lumber Increase=1.60, Plate Increase=1.60
   Uniform Loads (plf)
   Vert: 1-2=-35, 2-3=-55, 3-4=-35, 4-5=-11, 5-6=-31, 6-7=-11, 1-10=-20, 8-10=-40, 7-8=-20, 3-5=-20
   Horz: 1-4=15, 4-7=9
   Drag: 6-8=-10, 2-10=-10
7) Dead + 0.6 MWFRS Wind (Neg. Internal) Right: Lumber Increase=1.60, Plate Increase=1.60
   Uniform Loads (plf)
   Vert: 1-2=-11, 2-3=-31, 3-4=-11, 4-5=-35, 5-6=-55, 6-7=-35, 1-10=-20, 8-10=-40, 7-8=-20, 3-5=-20
   Horz: 1-4=-9, 4-7=-15
   Drag: 6-8=-10, 2-10=-10
8) Dead + 0.6 MWFRS Wind (Pos. Internal) 1st Parallel: Lumber Increase=1.60, Plate Increase=1.60
   Uniform Loads (plf)
   Vert: 1-2=21, 2-3=9, 3-4=21, 4-5=9, 5-6=-3, 6-7=9, 1-10=-12, 8-10=-24, 7-8=-12, 3-5=-12
   Horz: 1-4=-33, 4-7=21
   Drag: 6-8=-10, 2-10=-10
9) Dead + 0.6 MWFRS Wind (Pos. Internal) 2nd Parallel: Lumber Increase=1.60, Plate Increase=1.60
   Uniform Loads (plf)
   Vert: 1-2=9, 2-3=-3, 3-4=9, 4-5=21, 5-6=9, 6-7=21, 1-10=-12, 8-10=-24, 7-8=-12, 3-5=-12
   Horz: 1-4=-21, 4-7=33
   Drag: 6-8=-10, 2-10=-10
10) Dead + 0.6 MWFRS Wind (Pos. Internal) 3rd Parallel: Lumber Increase=1.60, Plate Increase=1.60
   Uniform Loads (plf)
   Vert: 1-2=21, 2-3=9, 3-4=21, 4-5=9, 5-6=-3, 6-7=9, 1-10=-12, 8-10=-24, 7-8=-12, 3-5=-12
   Horz: 1-4=-33, 4-7=21
   Drag: 6-8=-10, 2-10=-10
11) Dead + 0.6 MWFRS Wind (Pos. Internal) 4th Parallel: Lumber Increase=1.60, Plate Increase=1.60
   Uniform Loads (plf)
   Vert: 1-2=9, 2-3=-3, 3-4=9, 4-5=21, 5-6=9, 6-7=21, 1-10=-12, 8-10=-24, 7-8=-12, 3-5=-12
   Horz: 1-4=-21, 4-7=33
   Drag: 6-8=-10, 2-10=-10
12) Dead + 0.6 MWFRS Wind (Neg. Internal) 1st Parallel: Lumber Increase=1.60, Plate Increase=1.60
   Uniform Loads (plf)
   Vert: 1-2=-1, 2-3=-21, 3-4=-1, 4-5=-13, 5-6=-33, 6-7=-13, 1-10=-20, 8-10=-40, 7-8=-20, 3-5=-20
   Horz: 1-4=-19, 4-7=7
   Drag: 6-8=-10, 2-10=-10
13) Dead + 0.6 MWFRS Wind (Neg. Internal) 2nd Parallel: Lumber Increase=1.60, Plate Increase=1.60

Continued on page 3

LOAD CASE(S)

Uniform Loads (plf)
Vert: 1-2=-13, 2-3=-33, 3-4=-13, 4-5=-1, 5-6=-21, 6-7=-1, 1-10=-20, 8-10=-40, 7-8=-20, 3-5=-20
Horz: 1-4=-7, 4-7=19
Drag: 6-8=-10, 2-10=-10

14) Dead + Attic Floor: Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (plf)
Vert: 1-2=-20, 2-3=-40, 3-4=-20, 4-5=-20, 5-6=-40, 6-7=-20, 1-10=-20, 8-10=-120, 7-8=-20, 3-5=-20
Drag: 6-8=-10, 2-10=-10
Concentrated Loads (lb)
Vert: 9=-353(B) 8=-4072(B) 10=-4072(B) 12=-1853(B) 13=-1853(B) 14=-353(B) 15=-353(B) 16=-353(B) 17=-353(B) 18=-353(B) 19=-1853(B) 20=-1853(B)

15) Dead: Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (plf)
Vert: 1-2=-20, 2-3=-40, 3-4=-20, 4-5=-20, 5-6=-40, 6-7=-20, 1-10=-20, 8-10=-120, 7-8=-20, 3-5=-20
Drag: 6-8=-10, 2-10=-10
Concentrated Loads (lb)
Vert: 9=-353(B) 8=-4072(B) 10=-4072(B) 12=-1853(B) 13=-1853(B) 14=-353(B) 15=-353(B) 16=-353(B) 17=-353(B) 18=-353(B) 19=-1853(B) 20=-1853(B)

16) Dead + 0.75 Roof Live (bal.) + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) Left): Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-61, 2-3=-81, 3-4=-61, 4-5=-43, 5-6=-63, 6-7=-43, 1-10=-20, 8-10=-100, 7-8=-20, 3-5=-20
Horz: 1-4=11, 4-7=7
Drag: 6-8=-10, 2-10=-10

17) Dead + 0.75 Roof Live (bal.) + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) Right): Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-43, 2-3=-63, 3-4=-43, 4-5=-61, 5-6=-81, 6-7=-61, 1-10=-20, 8-10=-100, 7-8=-20, 3-5=-20
Horz: 1-4=-7, 4-7=-11
Drag: 6-8=-10, 2-10=-10

18) Dead + 0.75 Roof Live (bal.) + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel): Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-36, 2-3=-56, 3-4=-36, 4-5=-45, 5-6=-65, 6-7=-45, 1-10=-20, 8-10=-100, 7-8=-20, 3-5=-20
Horz: 1-4=-14, 4-7=5
Drag: 6-8=-10, 2-10=-10

19) Dead + 0.75 Roof Live (bal.) + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) 2nd Parallel): Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-45, 2-3=-65, 3-4=-45, 4-5=-36, 5-6=-56, 6-7=-36, 1-10=-20, 8-10=-100, 7-8=-20, 3-5=-20
Horz: 1-4=-5, 4-7=14
Drag: 6-8=-10, 2-10=-10

20) 1st Dead + Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-2=-60, 2-3=-80, 3-4=-60, 4-5=-20, 5-6=-40, 6-7=-20, 1-10=-20, 8-10=-40, 7-8=-20, 3-5=-20
Drag: 6-8=-10, 2-10=-10
Concentrated Loads (lb)
Vert: 9=-49(B) 8=-1096(B) 10=-1096(B) 12=-458(B) 13=-458(B) 14=-49(B) 15=-49(B) 16=-49(B) 17=-49(B) 18=-49(B) 19=-458(B) 20=-458(B)

21) 2nd Dead + Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-2=-20, 2-3=-40, 3-4=-20, 4-5=-60, 5-6=-80, 6-7=-60, 1-10=-20, 8-10=-40, 7-8=-20, 3-5=-20
Drag: 6-8=-10, 2-10=-10
Concentrated Loads (lb)
Vert: 9=-49(B) 8=-1096(B) 10=-1096(B) 12=-458(B) 13=-458(B) 14=-49(B) 15=-49(B) 16=-49(B) 17=-49(B) 18=-49(B) 19=-458(B) 20=-458(B)

22) 3rd Dead + 0.75 Roof Live (unbalanced) + 0.75 Attic Floor: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-2=-50, 2-3=-70, 3-4=-50, 4-5=-20, 5-6=-40, 6-7=-20, 1-10=-20, 8-10=-100, 7-8=-20, 3-5=-20
Drag: 6-8=-10, 2-10=-10
Concentrated Loads (lb)
Vert: 9=-277(B) 8=-3328(B) 10=-3328(B) 12=-1504(B) 13=-1504(B) 14=-277(B) 15=-277(B) 16=-277(B) 17=-277(B)
18=-277(B) 19=-1504(B) 20=-1504(B)

23) 4th Dead + 0.75 Roof Live (unbalanced) + 0.75 Attic Floor: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-2=-20, 2-3=-40, 3-4=-20, 4-5=-50, 5-6=-70, 6-7=-50, 1-10=-20, 8-10=-100, 7-8=-20, 3-5=-20
Drag: 6-8=-10, 2-10=-10
Concentrated Loads (lb)
Vert: 9=-277(B) 8=-3328(B) 10=-3328(B) 12=-1504(B) 13=-1504(B) 14=-277(B) 15=-277(B) 16=-277(B) 17=-277(B)
18=-277(B) 19=-1504(B) 20=-1504(B)

24) Reversal: Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-2=-60, 2-3=-80, 3-4=-60, 4-5=-60, 5-6=-80, 6-7=-60, 1-10=-20, 8-10=-40, 7-8=-20, 3-5=-20
Drag: 6-8=-10, 2-10=-10
Concentrated Loads (lb)
Vert: 9=-49(B) 8=-1096(B) 10=-1096(B) 12=-458(B) 13=-458(B) 14=-49(B) 15=-49(B) 16=-49(B) 17=-49(B) 18=-49(B)
19=-458(B) 20=-458(B)

25) Reversal: Dead + 0.75 Roof Live (balanced) + 0.75 Attic Floor: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-2=-50, 2-3=-70, 3-4=-50, 4-5=-50, 5-6=-70, 6-7=-50, 1-10=-20, 8-10=-100, 7-8=-20, 3-5=-20
Drag: 6-8=-10, 2-10=-10
Concentrated Loads (lb)
Vert: 9=38(B) 8=-1096(B) 10=-1096(B) 12=-458(B) 13=-458(B) 14=38(B) 15=38(B) 16=38(B) 17=38(B) 18=38(B) 19=-458(B)
20=-458(B)

Continued on page 4

LOAD CASE(S)

26) Reversal: Dead + Attic Floor: Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (plf)
Vert: 1-2=-20, 2-3=-40, 3-4=-20, 4-5=-20, 5-6=-40, 6-7=-20, 1-10=-20, 8-10=-120, 7-8=-20, 3-5=-20
Drag: 6-8=-10, 2-10=-10
Concentrated Loads (lb)
Vert: 9=67(B) 8=-1096(B) 10=-1096(B) 12=-458(B) 13=-458(B) 14=67(B) 15=67(B) 16=67(B) 17=67(B) 18=67(B) 19=-458(B) 20=-458(B)

27) Reversal: Dead: Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (plf)
Vert: 1-2=-20, 2-3=-40, 3-4=-20, 4-5=-20, 5-6=-40, 6-7=-20, 1-10=-20, 8-10=-120, 7-8=-20, 3-5=-20
Drag: 6-8=-10, 2-10=-10
Concentrated Loads (lb)
Vert: 9=67(B) 8=-1096(B) 10=-1096(B) 12=-458(B) 13=-458(B) 14=67(B) 15=67(B) 16=67(B) 17=67(B) 18=67(B) 19=-458(B) 20=-458(B)

28) Reversal: 1st Dead + Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-2=-60, 2-3=-80, 3-4=-60, 4-5=-20, 5-6=-40, 6-7=-20, 1-10=-20, 8-10=-40, 7-8=-20, 3-5=-20
Drag: 6-8=-10, 2-10=-10
Concentrated Loads (lb)
Vert: 9=-49(B) 8=-1096(B) 10=-1096(B) 12=-458(B) 13=-458(B) 14=-49(B) 15=-49(B) 16=-49(B) 17=-49(B) 18=-49(B) 19=-458(B) 20=-458(B)

29) Reversal: 2nd Dead + Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-2=-20, 2-3=-40, 3-4=-20, 4-5=-60, 5-6=-80, 6-7=-60, 1-10=-20, 8-10=-40, 7-8=-20, 3-5=-20
Drag: 6-8=-10, 2-10=-10
Concentrated Loads (lb)
Vert: 9=-49(B) 8=-1096(B) 10=-1096(B) 12=-458(B) 13=-458(B) 14=-49(B) 15=-49(B) 16=-49(B) 17=-49(B) 18=-49(B) 19=-458(B) 20=-458(B)

30) Reversal: 3rd Dead + 0.75 Roof Live (unbalanced) + 0.75 Attic Floor: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-2=-50, 2-3=-70, 3-4=-50, 4-5=-20, 5-6=-40, 6-7=-20, 1-10=-20, 8-10=-100, 7-8=-20, 3-5=-20
Drag: 6-8=-10, 2-10=-10
Concentrated Loads (lb)
Vert: 9=38(B) 8=-1096(B) 10=-1096(B) 12=-458(B) 13=-458(B) 14=38(B) 15=38(B) 16=38(B) 17=38(B) 18=38(B) 19=-458(B) 20=-458(B)

31) Reversal: 4th Dead + 0.75 Roof Live (unbalanced) + 0.75 Attic Floor: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-2=-20, 2-3=-40, 3-4=-20, 4-5=-50, 5-6=-70, 6-7=-50, 1-10=-20, 8-10=-100, 7-8=-20, 3-5=-20
Drag: 6-8=-10, 2-10=-10
Concentrated Loads (lb)
Vert: 9=38(B) 8=-1096(B) 10=-1096(B) 12=-458(B) 13=-458(B) 14=38(B) 15=38(B) 16=38(B) 17=38(B) 18=38(B) 19=-458(B) 20=-458(B)

Job	Truss	Truss Type	Qty	Ply	Lot 48 Sierra Villas
J0121-0109	B1GE	GABLE	1	1	E14133282
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Mar 3 06:21:09 2020 Page 1
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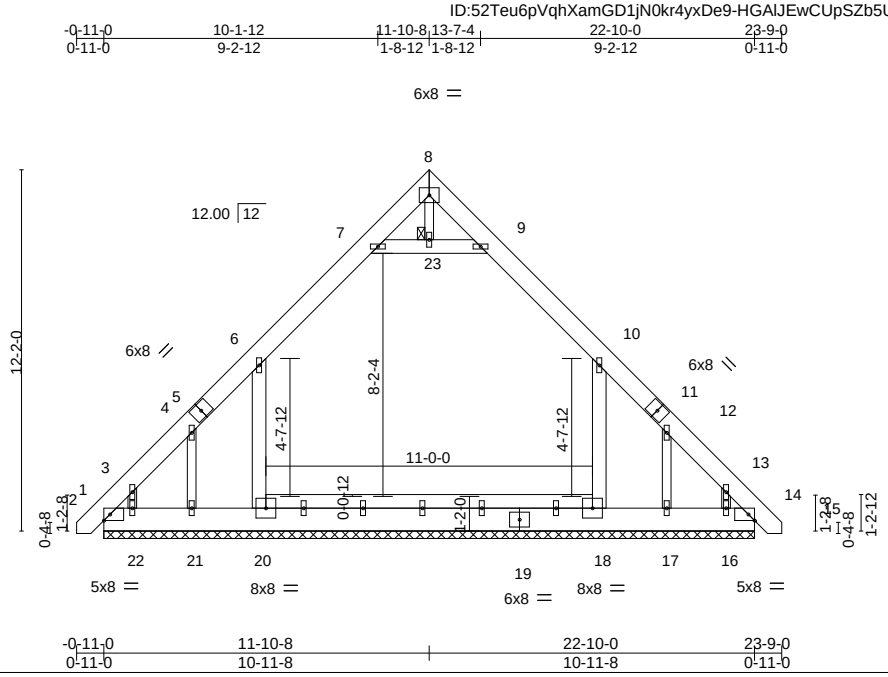

Plate Offsets (X,Y)-- [14:0-2-8,Edge]

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	0.06	Vert(LL)	0.00	14	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.19	Vert(CT)	0.00	14	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.00	14	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 262 lb	FT = 20%

LUMBER-
TOP CHORD 2x8 SP No.1
BOT CHORD 2x10 SP No.1 *Except*
18-20: 2x6 SP No.1
WEBS 2x6 SP No.1 *Except*
8-23: 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.
JOINTS 1 Brace at Jt(s): 23

REACTIONS. All bearings 21-11-0.
(lb) - Max Horz 2=-349(LC 10)
Max Uplift All uplift 100 lb or less at joint(s) 2, 18, 20, 14 except 21=-379(LC 18), 22=-189(LC 12), 17=-379(LC 18), 16=-186(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 22, 16 except 2=524(LC 21), 18=1008(LC 21), 20=1017(LC 20), 14=518(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-634/67, 3-4=-557/57, 4-6=-520/85, 6-7=-534/151, 9-10=-534/151, 10-12=-510/71, 12-13=-550/48, 13-14=-629/58
BOT CHORD 2-22=-43/411, 21-22=-36/411, 20-21=-35/411, 18-20=-35/411, 17-18=-35/411, 16-17=-35/410, 14-16=-33/406
WEBS 10-18=-424/210, 6-20=-433/218, 7-23=-350/228, 9-23=-350/228

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=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 2x6 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 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members, with BCDL = 10.0psf.
9) Ceiling dead load (10.0 psf) on member(s). 6-7, 9-10, 7-23, 9-23; Wall dead load (5.0psf) on member(s).10-18, 6-20
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 18, 20, 14 except (jt=lb) 21=379, 22=189, 17=379, 16=186.
11) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.
12) Attic room checked for L/360 deflection.

March 3,2020

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Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 48 Sierra Villas
J0121-0109	C1	COMMON	2	1	E14133283
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Mar 3 06:21:11 2020 Page 1
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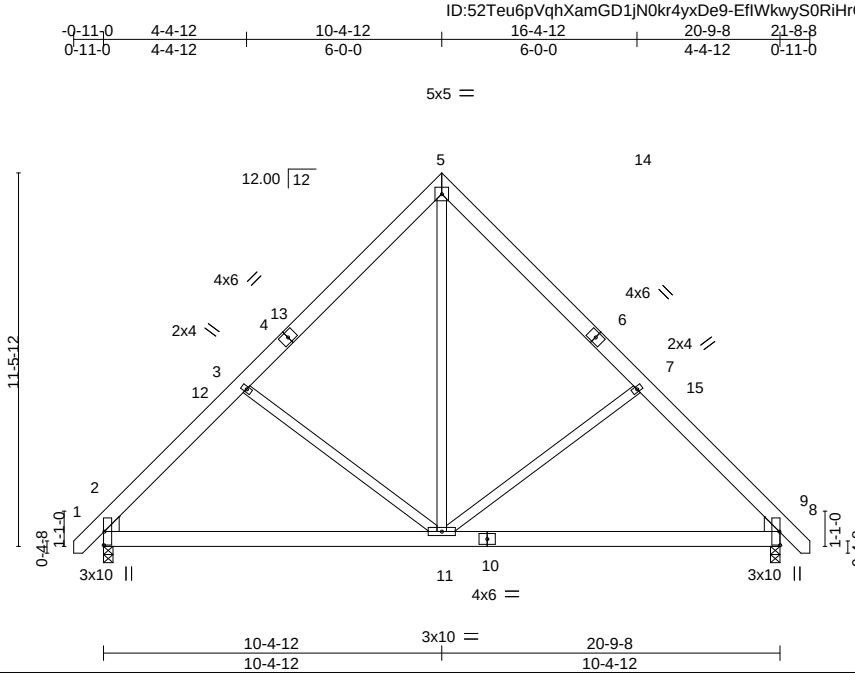

Plate Offsets (X,Y)-- [2:0-0-4,0-3-15], [2:0-0-2,0-0-2], [8:0-0-2,0-0-2], [8:0-0-4,0-3-15]

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	0.15	Vert(LL)	-0.05	2-11	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.33	Vert(CT)	-0.11	2-11	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.36	Horz(CT)	0.01	8	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.01	11	>999	240	Weight: 164 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x4 SP No.2
WEDGE
Left: 2x6 SP No.1 , Right: 2x6 SP No.1

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

REACTIONS. (size) 8=0-3-8, 2=0-3-8
Max Horz 2=-268(LC 10)
Max Uplift 8=-36(LC 13), 2=-36(LC 12)
Max Grav 8=876(LC 1), 2=876(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-908/254, 3-5=-752/282, 5-7=-752/282, 7-8=-908/254
BOT CHORD 2-11=-122/675, 8-11=-60/568
WEBS 5-11=-179/668, 7-11=-354/267, 3-11=-354/267

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -0-9-6 to 3-7-7, Interior(1) 3-7-7 to 10-4-12, Exterior(2) 10-4-12 to 14-9-9, Interior(1) 14-9-9 to 21-6-14 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 8, 2.

March 3,2020

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Job	Truss	Truss Type	Qty	Ply	Lot 48 Sierra Villas
J0121-0109	C1-GR	Common Girder	1	2	E14133284
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Mar 3 06:21:14 2020 Page 1
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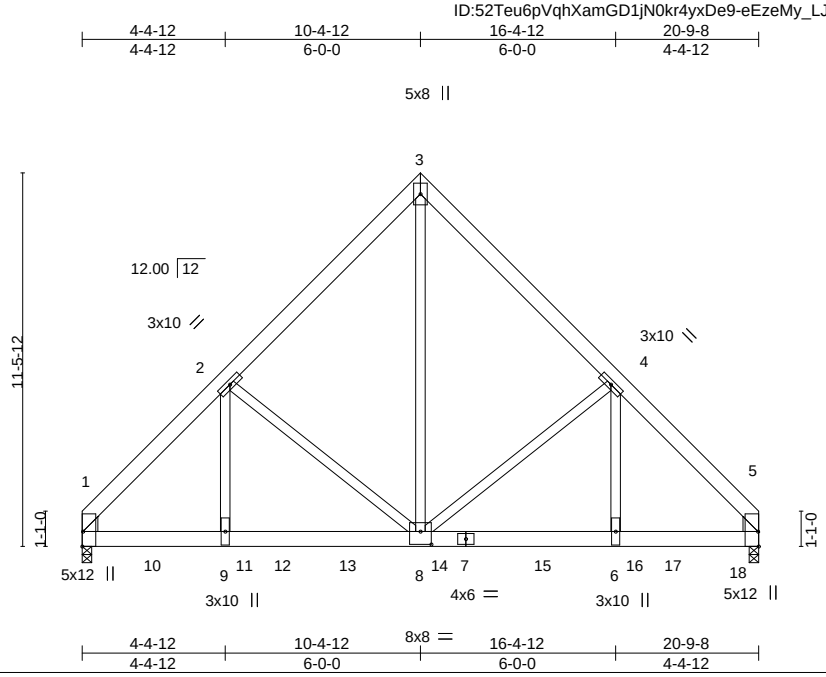

Plate Offsets (X,Y)-- [1:0-0-2,0-0-2], [1:0-0-4,0-3-15], [1:Edge,0-0-4], [5:Edge,0-0-4], [5:0-0-4,0-3-15], [5:0-0-2,0-0-2], [8:0-4-0,0-4-12]

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	0.66	Vert(LL)	-0.07	8-9	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.51	Vert(CT)	-0.14	8-9	>999	240		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.66	Horz(CT)	0.03	5	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.05	8-9	>999	240	Weight: 344 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP 2400F 2.0E
WEBS 2x4 SP No.2
WEDGE
Left: 2x6 SP No.1 , Right: 2x6 SP No.1

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

REACTIONS. (size) 1=0-3-8, 5=0-3-8
Max Horz 1=-262(LC 25)
Max Uplift 1=-253(LC 9), 5=-280(LC 8)
Max Grav 1=5355(LC 1), 5=5963(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-6430/344, 2-3=-4163/337, 3-4=-4190/337, 4-5=-6409/342
BOT CHORD 1-9=-278/4164, 8-9=-278/4173, 6-8=-168/4165, 5-6=-168/4157
WEBS 3-8=-332/5361, 4-8=-1673/259, 4-6=-65/2655, 2-8=-1683/259, 2-9=-66/2684

NOTES-
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered 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 (3-second gust) 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 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 1=253, 5=280.
8) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 967 lb down and 55 lb up at 2-0-12, 967 lb down and 55 lb up at 4-0-12, 967 lb down and 55 lb up at 6-0-12, 967 lb down and 55 lb up at 8-0-12, 967 lb down and 55 lb up at 10-0-12, 967 lb down and 55 lb up at 12-0-12, 967 lb down and 55 lb up at 14-0-12, 967 lb down and 55 lb up at 16-0-12, and 967 lb down and 55 lb up at 18-0-12, and 971 lb down and 51 lb up at 20-0-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

March 3,2020

Continued on page 2

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Edenton, NC 27932

LOAD CASE(S) Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (plf)
   Vert: 1-3=-60, 3-5=-60, 1-5=-20
   Concentrated Loads (lb)
   Vert: 7=-967(B) 10=-967(B) 11=-967(B) 12=-967(B) 13=-967(B) 14=-967(B) 15=-967(B) 16=-967(B) 17=-967(B) 18=-971(B)

Job	Truss	Truss Type	Qty	Ply	Lot 48 Sierra Villas
J0121-0109	C1GE	COMMON SUPPORTED GAB	1	1	E14133285
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Mar 3 06:21:12 2020 Page 1
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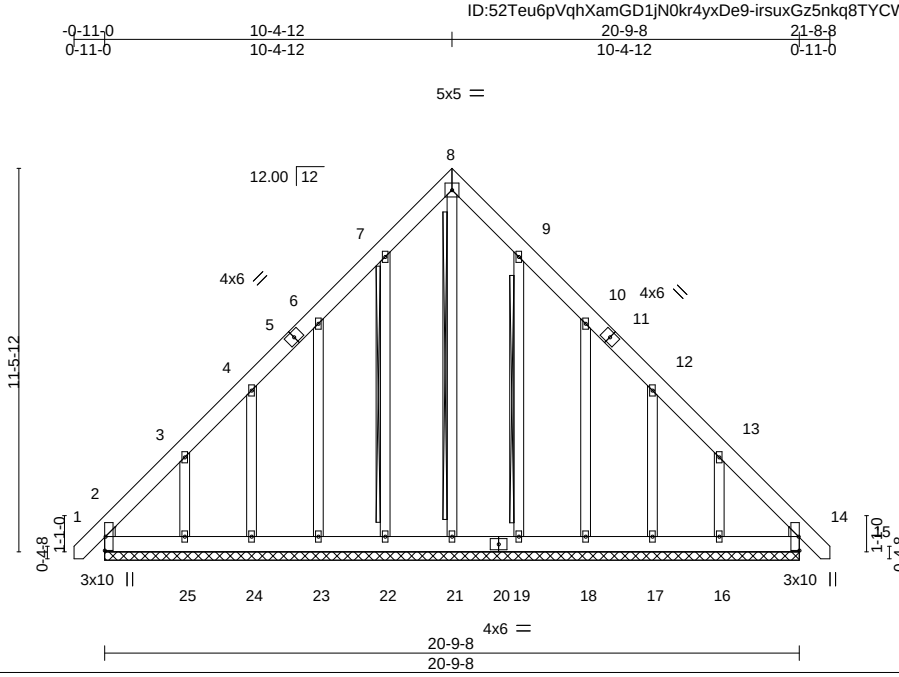


Plate Offsets (X,Y)-- [2:0-0-2,0-0-2], [2:0-0-4,0-2-10], [14:0-0-2,0-0-2], [14:0-0-4,0-2-10]

LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.05	Vert(LL)	0.00	14	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	0.00	14	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.16	Horz(CT)	0.01	14	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 207 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
OTHERS 2x4 SP No.2
WEDGE
Left: 2x4 SP No.2 , Right: 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 - 8-21, 7-22, 9-19
Fasten (2X) T and I braces to narrow edge of web with 10d (0.131"x3") nails, 6in o.c.,with 3in minimum end distance.
Brace must cover 90% of web length.

REACTIONS. All bearings 20-9-8.
(lb) - Max Horz 2=-335(LC 10)
Max Uplift All uplift 100 lb or less at joint(s) 19, 14 except 2=-118(LC 10), 22=-103(LC 12), 23=-155(LC 12), 24=-129(LC 12), 25=-246(LC 12), 18=-158(LC 13), 17=-128(LC 13), 16=-239(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 21, 24, 19, 17, 16 except 2=304(LC 12), 22=251(LC 19), 23=259(LC 19), 25=252(LC 19), 18=262(LC 20), 14=268(LC 22)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-450/274, 13-14=-400/265
BOT CHORD 2-25=-211/327, 24-25=-213/328, 23-24=-213/328, 22-23=-214/328, 21-22=-214/328, 19-21=-214/328, 18-19=-214/328, 17-18=-213/327, 16-17=-213/327, 14-16=-211/326
WEBS 3-25=-261/253, 13-16=-261/247

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=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 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members, with BCDL = 10.0psf.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 19, 14 except (jt=lb) 2=118, 22=103, 23=155, 24=129, 25=246, 18=158, 17=128, 16=239.
10) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.

March 3,2020

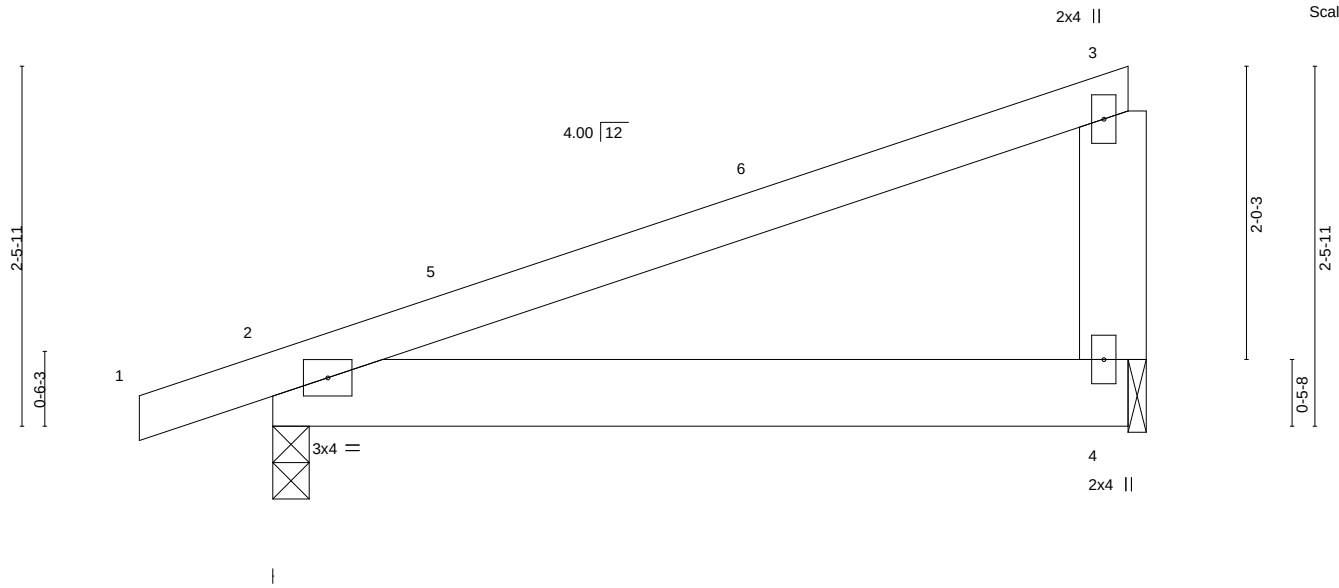
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 48 Sierra Villas
J0121-0109	M1	MONOPITCH	10	1	E14133286
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Mar 3 06:21:14 2020 Page 1
ID:52Teu6pVqhXamGD1jN0kr4yxDe9-eEzeMy_LJM4sisMvGA_getanBoBOoCqX26ukgfzej73

-0-11-0 6-0-0
0-11-0 6-0-0

Scale = 1:15.8



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	0.44	Vert(LL)	-0.01	2-4	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.12	Vert(CT)	-0.03	2-4	>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)	0.03	2-4	>999	240	Weight: 29 lb	FT = 20%

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

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) 2=0-3-0, 4=0-1-8
Max Horz 2=75(LC 8)
Max Uplift 2=-116(LC 8), 4=-96(LC 8)
Max Grav 2=294(LC 1), 4=220(LC 1)

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

NOTES-
1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -0-11-0 to 3-5-13, Interior(1) 3-5-13 to 5-9-4 zone; porch left exposed;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 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
4) Bearing at joint(s) 4 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
5) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 4.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4 except (jt=lb) 2=116.

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Job	Truss	Truss Type	Qty	Ply	Lot 48 Sierra Villas
J0121-0109	M1GE	GABLE	1	1	E14133287
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Mar 3 06:21:15 2020 Page 1
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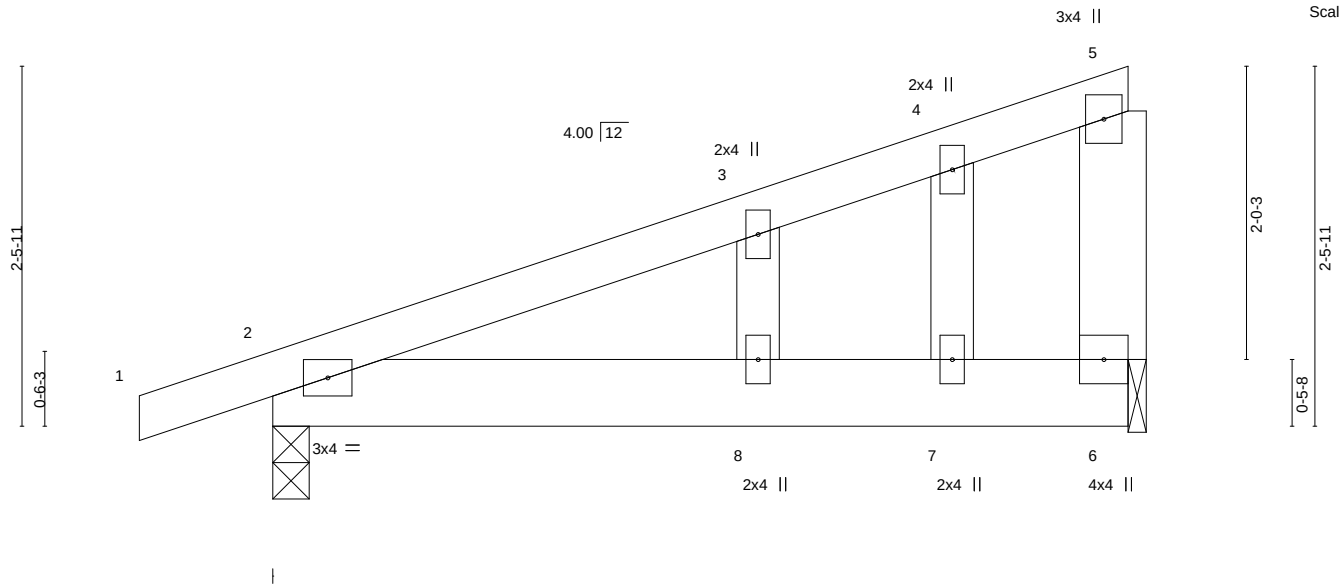
-0-11-0 6-0-0
0-11-0 6-0-0

Scale = 1:15.8



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	0.13	Vert(LL)	0.03	2-8	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.14	Vert(CT)	-0.02	2-8	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.02	Horz(CT)	-0.00	6	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 32 lb	FT = 20%

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

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) 2=0-3-0, 6=0-1-8
Max Horz 2=107(LC 8)
Max Uplift 2=-167(LC 8), 6=-140(LC 8)
Max Grav 2=294(LC 1), 6=220(LC 1)

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

NOTES-
1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; 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 exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable studs spaced at 1-4-0 oc.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
6) Bearing at joint(s) 6 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
7) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 6.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=167, 6=140.

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Job	Truss	Truss Type	Qty	Ply	Lot 48 Sierra Villas
J0121-0109	V1	VALLEY	1	1	E14133288
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Mar 3 06:21:15 2020 Page 1
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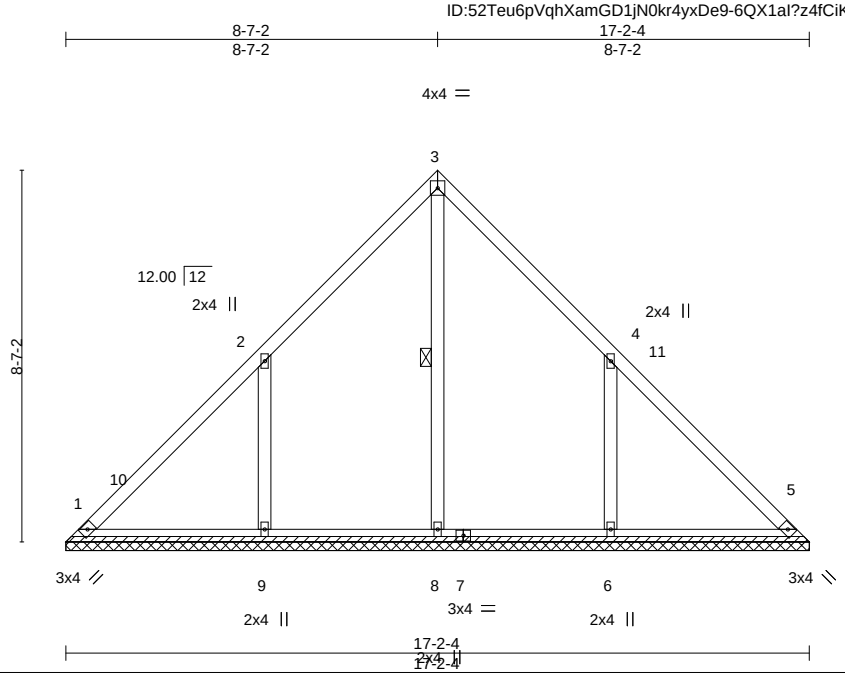

Plate Offsets (X,Y)-- [4:0-0-0,0-0-0]

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	0.20	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.13	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.00	5	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 84 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.
WEBS 1 Row at midpt 3-8

REACTIONS. All bearings 17-2-4.
(lb) - Max Horz 1=198(LC 11)
Max Uplift All uplift 100 lb or less at joint(s) 1 except 9=-207(LC 12), 6=-207(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 8=347(LC 22), 9=510(LC 19), 6=509(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 2-9=-445/331, 4-6=-445/331

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-4-4 to 4-7-2, Interior(1) 4-7-2 to 8-7-2, Exterior(2) 8-7-2 to 12-11-15, Interior(1) 12-11-15 to 16-10-0 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Gable requires continuous bottom chord bearing.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members, with BCDL = 10.0psf.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1 except (jt=lb) 9=207, 6=207.

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Job	Truss	Truss Type	Qty	Ply	Lot 48 Sierra Villas
J0121-0109	V2	VALLEY	1	1	E14133289
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Mar 3 06:21:16 2020 Page 1
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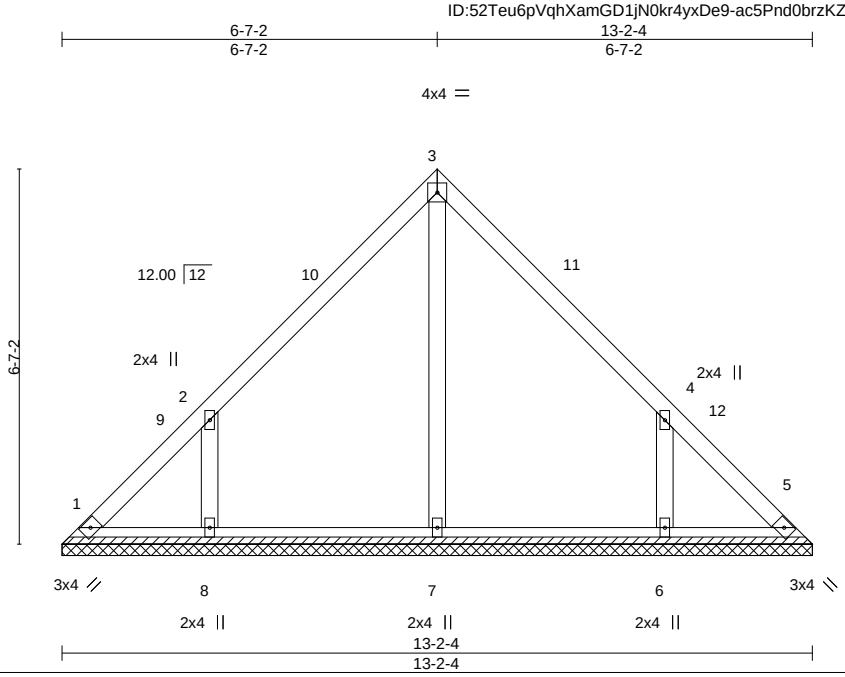

Plate Offsets (X,Y)-- [4:0-0-0,0-0-0]

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)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.09	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.09	Horz(CT)	0.00	5	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 61 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. All bearings 13-2-4.
(lb) - Max Horz 1=-150(LC 8)
Max Uplift All uplift 100 lb or less at joint(s) 1, 5 except 8=-164(LC 12), 6=-163(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 1, 5, 7 except 8=349(LC 19), 6=348(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 2-8=-359/290, 4-6=-359/290

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-4-4 to 4-9-0, Interior(1) 4-9-0 to 6-7-2, Exterior(2) 6-7-2 to 10-11-15, Interior(1) 10-11-15 to 12-10-0 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Gable requires continuous bottom chord bearing.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 5 except (jt=lb) 8=164, 6=163.

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Job	Truss	Truss Type	Qty	Ply	Lot 48 Sierra Villas
J0121-0109	V3	VALLEY	1	1	E14133290
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Mar 3 06:21:17 2020 Page 1
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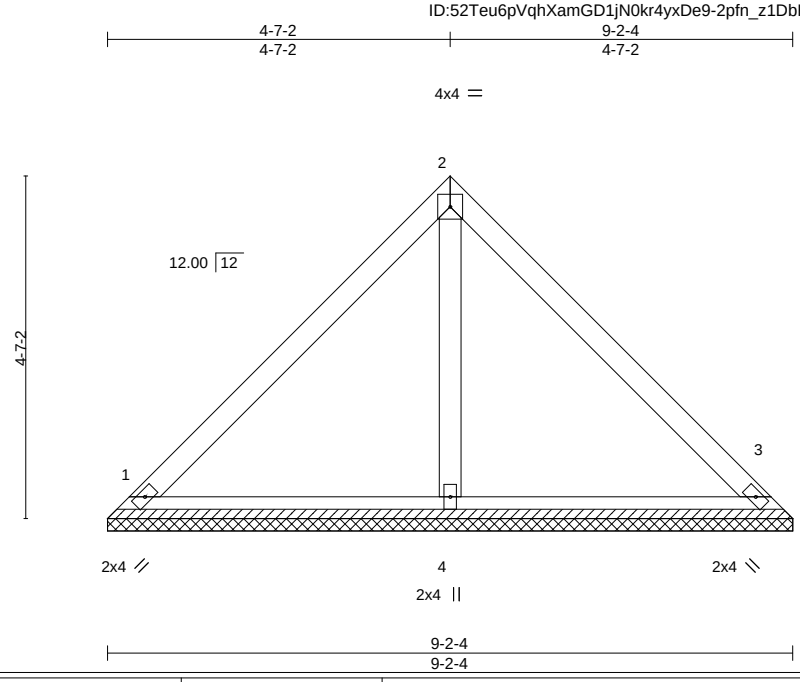

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.20	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.13	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 38 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. (size) 1=9-2-4, 3=9-2-4, 4=9-2-4
Max Horz 1=-102(LC 8)
Max Uplift 1=-25(LC 13), 3=-25(LC 13)
Max Grav 1=192(LC 1), 3=192(LC 1), 4=294(LC 1)

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 (3-second gust) 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) Gable requires continuous bottom chord bearing.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.

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Job	Truss	Truss Type	Qty	Ply	Lot 48 Sierra Villas
J0121-0109	V4	VALLEY	1	1	E14133291
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Mar 3 06:21:17 2020 Page 1
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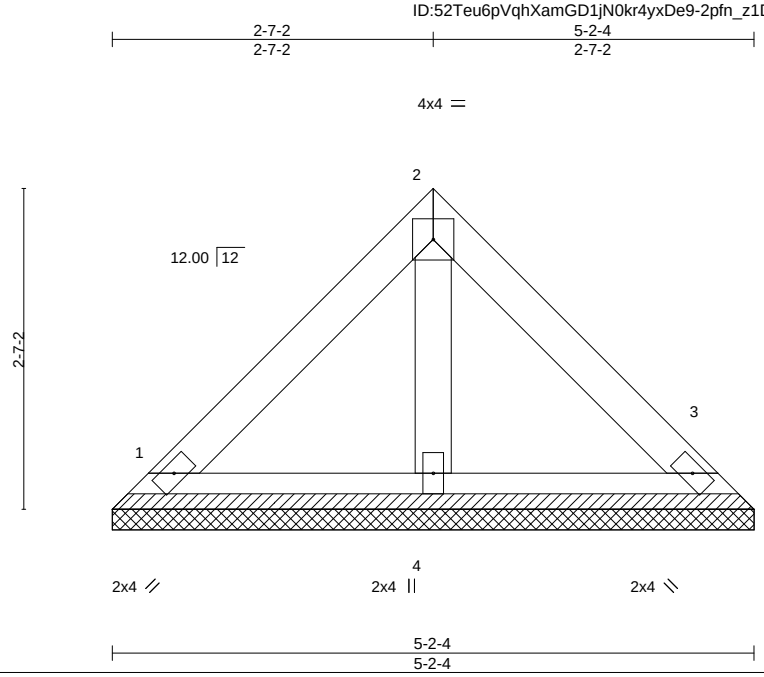

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.01	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-P							Weight: 20 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 5-2-4 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 1=5-2-4, 3=5-2-4, 4=5-2-4
Max Horz 1=54(LC 9)
Max Uplift 1=-19(LC 13), 3=-19(LC 13)
Max Grav 1=109(LC 1), 3=109(LC 1), 4=140(LC 1)

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 (3-second gust) 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) Gable requires continuous bottom chord bearing.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.

March 3,2020

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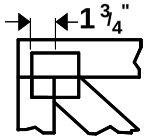
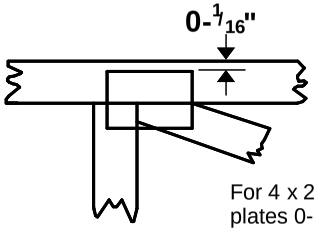
Symbols

PLATE LOCATION AND ORIENTATION



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



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

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

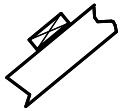
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

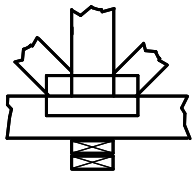
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



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

BEARING

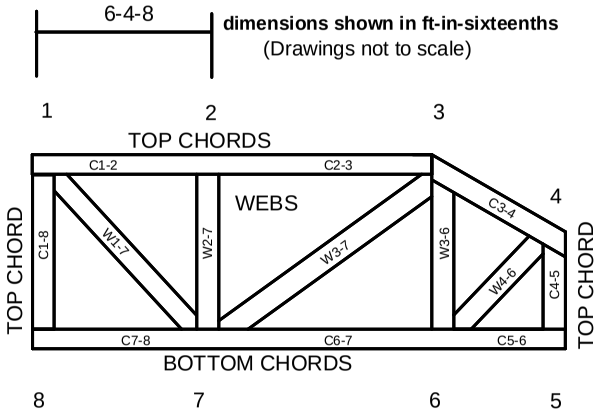


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



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

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

PRODUCT CODE APPROVALS

ICC-ES Reports:

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

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

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

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

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

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