ENGINEERING BY
TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: 24010087
BCTH-55

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by The Building Center.

Pages or sheets covered by this seal: I62935658 thru I62935663

My license renewal date for the state of North Carolina is December 31, 2024.

North Carolina COA: C-0844

January 9,2024

Gilbert, Eric

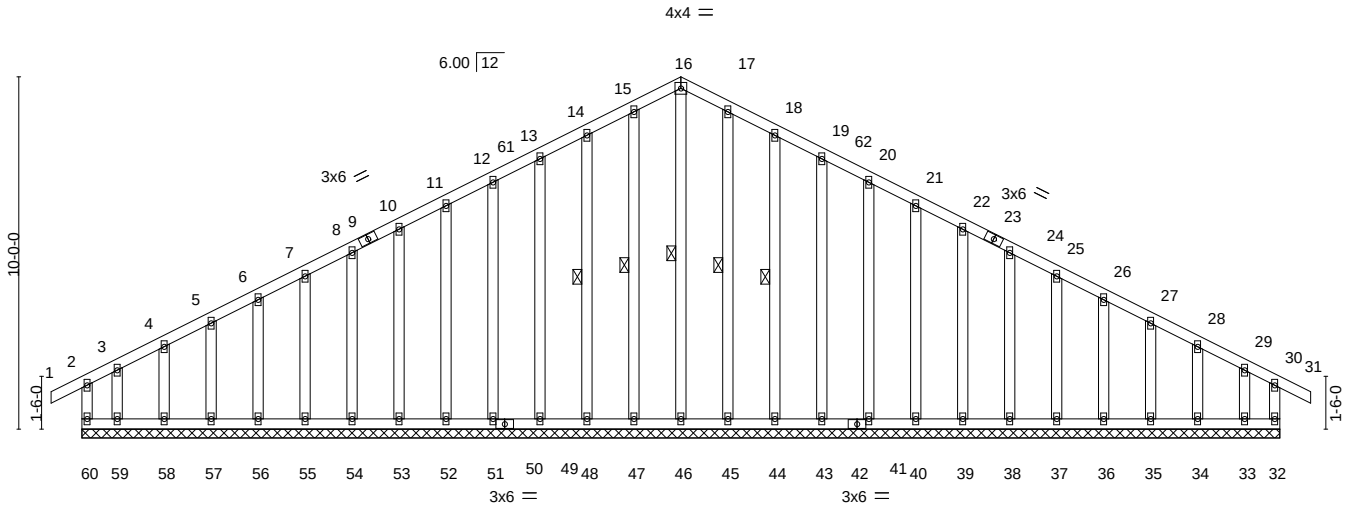
IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which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

Job	Truss	Truss Type	Qty	Ply	BCTH-55
24010087	A1GE	GABLE	2	1	I62935658
					Job Reference (optional)

The Building Center, Gastonia, NC - 28052, 8.730 s Dec 14 2023 MiTek Industries, Inc. Tue Jan 9 10:14:54 2024 Page 1
ID:WIYe?dzY3YhuLGtsyuOyDRy7aYq-zBbKGpoCabbttH183qgQVvMc7vDiQ8c?agMX82zx6y?

-0-10-8 0-10-8 | 15-8-0 15-8-0 | 17-0-0 1-4-0 | 18-4-0 1-4-0 | 34-0-0 15-8-0 | 34-10-8 0-10-8

Scale = 1:65.4



LOADING (psf)			SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0		Plate Grip DOL	1.15	TC	0.17	Vert(LL)	-0.00	31	n/r	120	MT20	244/190
Snow (Pf/Pg)	15.4/20.0		Lumber DOL	1.15	BC	0.09	Vert(CT)	-0.00	31	n/r	120		
TCDL	10.0		Rep Stress Incr	YES	WB	0.12	Horz(CT)	-0.00	32	n/a	n/a		
BCLL	0.0	*	Code	IRC2018/TPI2014	Matrix-R							Weight: 310 lb	FT = 20%
BCDL	10.0												

LUMBER-

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

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS	1 Row at midpt 16-46, 15-47, 14-48, 17-45, 18-44

REACTIONS. All bearings 34-0-0.
(lb) - Max Horz 60=-175(LC 14)
Max Uplift All uplift 100 lb or less at joint(s) 32, 48, 49, 51, 52, 53, 54, 55, 56, 57, 58, 44, 43, 41, 40, 39, 38, 37, 36, 35, 34, 33 except 60=-135(LC 14), 59=-136(LC 15)
Max Grav All reactions 250 lb or less at joint(s) 60, 32, 46, 47, 48, 49, 51, 52, 53, 54, 55, 56, 57, 58, 59, 45, 44, 43, 41, 40, 39, 38, 37, 36, 35, 34, 33

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 13-14=-110/264, 14-15=-124/294, 15-16=-130/305, 16-17=-130/305, 17-18=-124/294, 18-19=-110/264

NOTES-

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=34ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner(3E) -0-10-8 to 2-4-0, Exterior(2N) 2-4-0 to 17-0-0, Corner(3R) 17-0-0 to 20-4-13, Exterior(2N) 20-4-13 to 34-10-8 zone; cantilever left and right exposed ; end vertical 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) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
7) All plates are 2x4 MT20 unless otherwise indicated.
8) Gable requires continuous bottom chord bearing.
9) Gable studs spaced at 1-4-0 oc.
10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
11) * 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.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 32, 48, 49, 51, 52, 53, 54, 55, 56, 57, 58, 44, 43, 41, 40, 39, 38, 37, 36, 35, 34, 33 except (jt=lb) 60=135, 59=136.
13) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

January 9,2024

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818 Soundside Road
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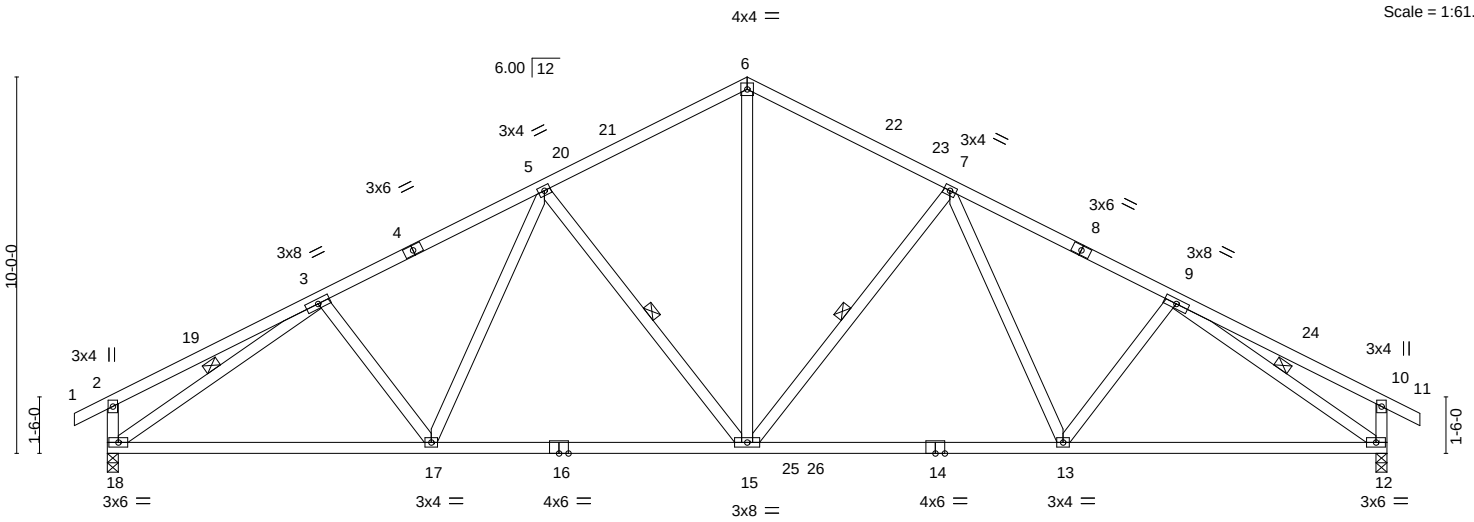
Job	Truss	Truss Type	Qty	Ply	BCTH-55
24010087	A1	COMMON	2	1	I62935659
					Job Reference (optional)

The Building Center, Gastonia, NC - 28052, 8.730 s Dec 14 2023 MiTek Industries, Inc. Tue Jan 9 10:14:51 2024 Page 1
ID:WlYe?dzY3YhuLGtsyuOyDRy7aYq-ZcwCenmKIgDI0pIZOh7jtHk0Xh0?DglZti8tXjzx6y2

-0-10-8	5-8-12	11-7-6	17-0-0	22-4-10	28-3-4	34-0-0	34-10-8
0-10-8	5-8-12	5-10-9	5-4-10	5-4-10	5-10-9	5-8-12	0-10-8

Scale = 1:61.2



8-7-5	17-0-0	25-4-12	34-0-0
8-7-5	8-4-11	8-4-12	8-7-5

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.45	Vert(LL)	-0.23	13-15	>999	240	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.80	Vert(CT)	-0.36	13-15	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.57	Horz(CT)	0.09	12	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-S							Weight: 208 lb	FT = 20%
BCDL	10.0											

LUMBER-

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2 *Except* 14-16: 2x4 SP No.1
WEBS	2x4 SP No.3

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 3-10-3 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 7-15, 5-15, 3-18, 9-12

REACTIONS. (size) 18=0-3-8, 12=0-3-8
Max Horz 18=-175(LC 14)
Max Uplift 18=-35(LC 16), 12=-35(LC 16)
Max Grav 18=1502(LC 28), 12=1502(LC 29)

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

TOP CHORD	3-5=-2041/114, 5-6=-1616/155, 6-7=-1616/155, 7-9=-2041/114, 2-18=-304/99, 10-12=-304/99
BOT CHORD	17-18=-46/1831, 15-17=-3/1742, 13-15=0/1666, 12-13=-35/1722
WEBS	6-15=-39/1144, 7-15=-505/95, 7-13=0/291, 5-15=-505/94, 5-17=0/291, 3-18=-1958/43, 9-12=-1958/43

NOTES-

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=34ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2E) -0-10-8 to 2-6-5, Interior(1) 2-6-5 to 17-0-0, Exterior(2R) 17-0-0 to 20-4-13, Interior(1) 20-4-13 to 34-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
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 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.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 18, 12.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	BCTH-55
24010087	A2	COMMON	8	1	I62935660
					Job Reference (optional)

The Building Center, Gastonia, NC - 28052, 8.730 s Dec 14 2023 MiTek Industries, Inc. Tue Jan 9 10:14:56 2024 Page 1
ID:WIYe?dzY3YhuLGtsyuOyDRy7aYq-vaj5hVqS6Crb6aBXAFiuaKSlfijHuuYI1_reBwzx6xz

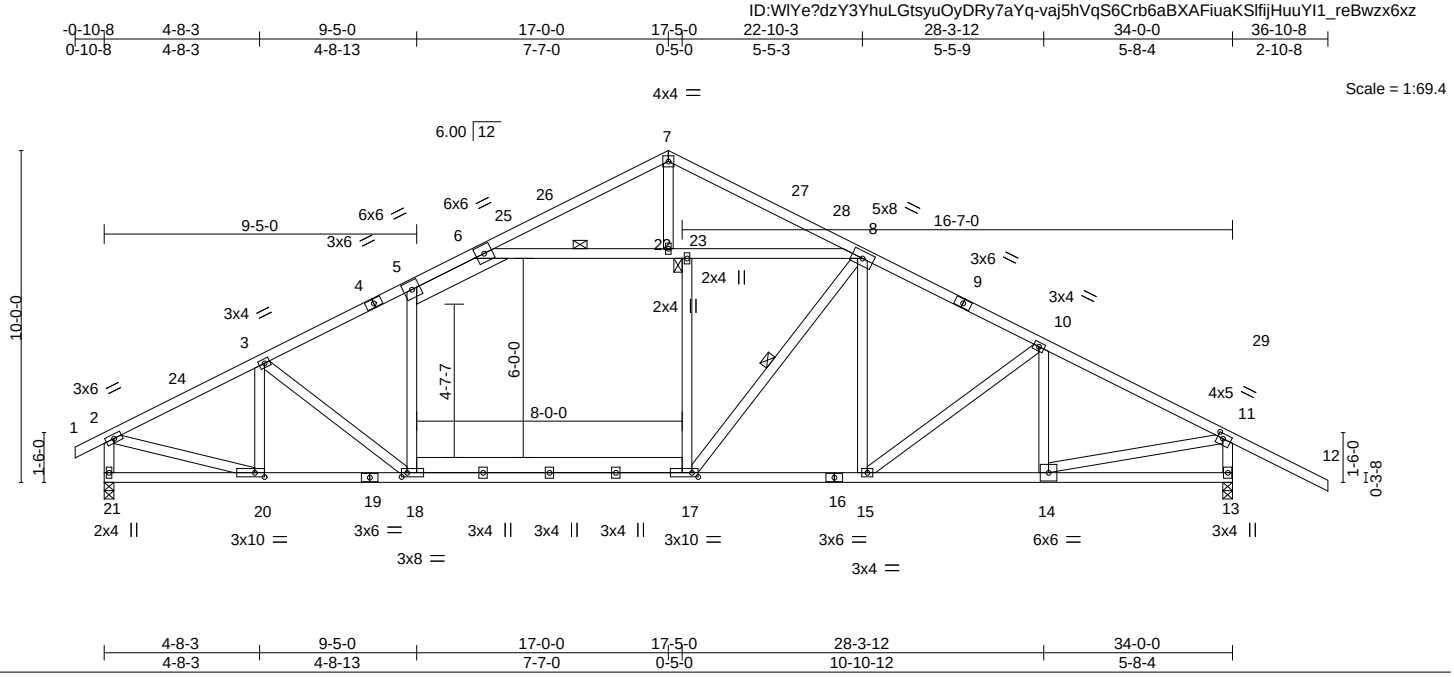

Plate Offsets (X,Y)-- [11:0-2-0,0-1-12], [17:0-2-4,0-1-8], [18:0-2-0,0-1-8], [20:0-3-8,0-1-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	1.00	Vert(LL)	-0.12	18-20	>999	240	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.85	Vert(CT)	-0.28	18-20	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.73	Horz(CT)	0.05	13	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-S							Weight: 246 lb	FT = 20%
BCDL	10.0											

LUMBER-

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2 *Except* 17-18: 2x6 SP No.1
WEBS	2x4 SP No.3 *Except* 5-18,17-22,6-8: 2x4 SP No.2, 5-6: 2x6 SP No.1

BRACING-

TOP CHORD	Structural wood sheathing directly applied, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 13-14.
WEBS	1 Row at midpt 6-22, 8-17
JOINTS	1 Brace at Jt(s): 22

REACTIONS. (size) 21=0-3-8, 13=0-3-8
Max Horz 21=-187(LC 14)
Max Grav 21=1574(LC 2), 13=1665(LC 2)

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

TOP CHORD	2-3=-2016/0, 3-5=-2061/0, 5-6=-1858/0, 6-7=-903/0, 7-8=-917/0, 8-10=-1954/0, 10-11=-1989/0, 2-21=-1528/0, 11-13=-1611/53
BOT CHORD	18-20=0/1790, 17-18=0/1788, 15-17=0/1687, 14-15=0/1704
WEBS	5-18=0/321, 17-22=-86/513, 6-23=-1330/7, 22-23=-1330/7, 8-22=-1331/7, 7-23=-63/512, 8-17=-233/447, 10-14=-275/40, 11-14=0/1756, 3-20=-369/13, 2-20=0/1752

NOTES-

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=34ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2E) -0-10-8 to 2-6-5, Interior(1) 2-6-5 to 17-0-0, Exterior(2R) 17-0-0 to 20-4-13, Interior(1) 20-4-13 to 36-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
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 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.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Load case(s) 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 34, 35, 36, 37 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15

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Continued on page 2

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LOAD CASE(S) Standard

Uniform Loads (plf)
Vert: 1-2=-51, 2-5=-51, 5-7=-61, 7-8=-61, 8-11=-51, 11-12=-51, 18-21=-20, 17-18=-40, 13-17=-20

2) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-2=-60, 2-5=-60, 5-7=-70, 7-8=-70, 8-11=-60, 11-12=-60, 18-21=-20, 17-18=-40, 13-17=-20

3) Dead + 0.75 Roof Live (balanced) + 0.75 Uninhab. Attic Storage: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-2=-50, 2-5=-50, 5-7=-60, 7-8=-60, 8-11=-50, 11-12=-50, 18-21=-20, 17-18=-40, 15-17=-50, 13-15=-20

4) Dead + 0.75 Snow (balanced) + 0.75 Uninhab. Attic Storage: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-2=-43, 2-5=-43, 5-7=-53, 7-8=-53, 8-11=-43, 11-12=-43, 18-21=-20, 17-18=-40, 15-17=-50, 13-15=-20

5) Dead + 0.75 Snow (Unbal. Left) + 0.75 Uninhab. Attic Storage: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-2=-43, 2-5=-43, 5-25=-53, 7-25=-75, 7-8=-37, 8-11=-27, 11-12=-27, 18-21=-20, 17-18=-40, 15-17=-50, 13-15=-20

6) Dead + 0.75 Snow (Unbal. Right) + 0.75 Uninhab. Attic Storage: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-2=-27, 2-5=-27, 5-7=-37, 7-28=-75, 8-28=-53, 8-11=-43, 11-12=-43, 18-21=-20, 17-18=-40, 15-17=-50, 13-15=-20

7) Dead + Uninhabitable Attic Without Storage: Lumber Increase=1.25, Plate Increase=1.25
Uniform Loads (plf)
Vert: 1-2=-20, 2-5=-20, 5-7=-30, 7-8=-30, 8-11=-20, 11-12=-20, 18-21=-40, 17-18=-60, 13-17=-40

8) Dead + 0.6 C-C Wind (Pos. Internal) Case 1: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=38, 2-24=18, 5-24=13, 5-7=3, 7-27=13, 8-27=3, 8-11=13, 11-12=8, 18-21=-12, 17-18=-32, 13-17=-12
Horz: 1-2=-50, 2-24=-30, 7-24=-25, 7-27=35, 11-27=25, 11-12=20, 2-21=21, 11-13=32

9) Dead + 0.6 C-C Wind (Pos. Internal) Case 2: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=8, 2-5=13, 5-26=3, 7-26=13, 7-8=3, 8-29=13, 11-29=18, 11-12=38, 18-21=-12, 17-18=-32, 13-17=-12
Horz: 1-2=-20, 2-26=-25, 7-26=-35, 7-29=25, 11-29=30, 11-12=50, 2-21=-32, 11-13=-21

10) Dead + 0.6 C-C Wind (Neg. Internal) Case 1: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-12, 2-5=-32, 5-7=-42, 7-8=-42, 8-11=-32, 11-12=-28, 18-21=-20, 17-18=-40, 13-17=-20
Horz: 1-2=-8, 2-7=12, 7-11=-12, 11-12=-8, 2-21=30, 11-13=23

11) Dead + 0.6 C-C Wind (Neg. Internal) Case 2: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-28, 2-5=-32, 5-7=-42, 7-8=-42, 8-11=-32, 11-12=-12, 18-21=-20, 17-18=-40, 13-17=-20
Horz: 1-2=8, 2-7=12, 7-11=-12, 11-12=8, 2-21=-23, 11-13=-30

12) Dead + 0.6 MWFRS Wind (Pos. Internal) Left: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=12, 2-5=-0, 5-7=-10, 7-8=-5, 8-11=5, 11-12=1, 18-21=-12, 17-18=-32, 13-17=-12
Horz: 1-2=-24, 2-7=-12, 7-11=17, 11-12=13, 2-21=13, 11-13=15

13) Dead + 0.6 MWFRS Wind (Pos. Internal) Right: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=1, 2-5=5, 5-7=-5, 7-8=-10, 8-11=-0, 11-12=12, 18-21=-12, 17-18=-32, 13-17=-12
Horz: 1-2=-13, 2-7=-17, 7-11=12, 11-12=24, 2-21=-15, 11-13=-13

14) Dead + 0.6 MWFRS Wind (Neg. Internal) Left: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-23, 2-5=-27, 5-7=-37, 7-8=-22, 8-11=-12, 11-12=-7, 18-21=-20, 17-18=-40, 13-17=-20
Horz: 1-2=3, 2-7=7, 7-11=8, 11-12=13, 2-21=22, 11-13=6

15) Dead + 0.6 MWFRS Wind (Neg. Internal) Right: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-7, 2-5=-12, 5-7=-22, 7-8=-37, 8-11=-27, 11-12=-23, 18-21=-20, 17-18=-40, 13-17=-20
Horz: 1-2=-13, 2-7=-8, 7-11=-7, 11-12=-3, 2-21=-6, 11-13=-22

16) Dead + 0.6 MWFRS Wind (Pos. Internal) 1st Parallel: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=25, 2-5=13, 5-7=3, 7-8=3, 8-11=13, 11-12=25, 18-21=-12, 17-18=-32, 13-17=-12
Horz: 1-2=-37, 2-7=-25, 7-11=25, 11-12=37, 2-21=-19, 11-13=19

17) Dead + 0.6 MWFRS Wind (Pos. Internal) 2nd Parallel: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=16, 2-5=4, 5-7=-6, 7-8=-6, 8-11=4, 11-12=16, 18-21=-12, 17-18=-32, 13-17=-12
Horz: 1-2=-28, 2-7=-16, 7-11=16, 11-12=28, 2-21=-19, 11-13=19

18) Dead + 0.6 MWFRS Wind (Neg. Internal) 1st Parallel: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-16, 2-5=-21, 5-7=-31, 7-8=-31, 8-11=-21, 11-12=-16, 18-21=-20, 17-18=-40, 13-17=-20
Horz: 1-2=-4, 2-7=1, 7-11=-1, 11-12=4, 2-21=-10, 11-13=10

19) Dead + 0.6 MWFRS Wind (Neg. Internal) 2nd Parallel: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-16, 2-5=-21, 5-7=-31, 7-8=-31, 8-11=-21, 11-12=-16, 18-21=-20, 17-18=-40, 13-17=-20
Horz: 1-2=-4, 2-7=1, 7-11=-1, 11-12=4, 2-21=-10, 11-13=10

20) Dead + Snow on Overhangs: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-2=-51, 2-5=-20, 5-7=-30, 7-8=-30, 8-11=-20, 11-12=-51, 18-21=-20, 17-18=-40, 13-17=-20

21) Dead + Snow (Unbal. Left): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-2=-51, 2-5=-51, 5-25=-61, 7-25=-90, 7-8=-39, 8-11=-29, 11-12=-29, 18-21=-20, 17-18=-40, 13-17=-20

22) Dead + Snow (Unbal. Right): Lumber Increase=1.15, Plate Increase=1.15

Continued on page 3

LOAD CASE(S) Standard

Uniform Loads (plf)
Vert: 1-2=-29, 2-5=-29, 5-7=-39, 7-28=-90, 8-28=-61, 8-11=-51, 11-12=-51, 18-21=-20, 17-18=-40, 13-17=-20

23) Dead + Uninhabitable Attic Storage: Lumber Increase=1.25, Plate Increase=1.25
Uniform Loads (plf)
Vert: 1-2=-20, 2-5=-20, 5-7=-30, 7-8=-30, 8-11=-20, 11-12=-20, 18-21=-20, 17-18=-40, 15-17=-60, 13-15=-20

24) Dead + 0.75 Snow (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) Left): Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-45, 2-5=-49, 5-7=-59, 7-8=-47, 8-11=-37, 11-12=-34, 18-21=-20, 17-18=-40, 15-17=-50, 13-15=-20
Horz: 1-2=2, 2-7=6, 7-11=6, 11-12=10, 2-21=16, 11-13=5

25) Dead + 0.75 Snow (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) Right): Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-34, 2-5=-37, 5-7=-47, 7-8=-59, 8-11=-49, 11-12=-45, 18-21=-20, 17-18=-40, 15-17=-50, 13-15=-20
Horz: 1-2=-10, 2-7=-6, 7-11=-6, 11-12=-2, 2-21=-5, 11-13=-16

26) Dead + 0.75 Snow (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel): Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-40, 2-5=-44, 5-7=-54, 7-8=-54, 8-11=-44, 11-12=-40, 18-21=-20, 17-18=-40, 15-17=-50, 13-15=-20
Horz: 1-2=-3, 2-7=1, 7-11=-1, 11-12=3, 2-21=-8, 11-13=8

27) Dead + 0.75 Snow (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) 2nd Parallel): Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-40, 2-5=-44, 5-7=-54, 7-8=-54, 8-11=-44, 11-12=-40, 18-21=-20, 17-18=-40, 15-17=-50, 13-15=-20
Horz: 1-2=-3, 2-7=1, 7-11=-1, 11-12=3, 2-21=-8, 11-13=8

28) Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) Left): Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-52, 2-5=-56, 5-7=-66, 7-8=-54, 8-11=-44, 11-12=-40, 18-21=-20, 17-18=-40, 15-17=-50, 13-15=-20
Horz: 1-2=2, 2-7=6, 7-11=6, 11-12=10, 2-21=16, 11-13=5

29) Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) Right): Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-40, 2-5=-44, 5-7=-54, 7-8=-66, 8-11=-56, 11-12=-52, 18-21=-20, 17-18=-40, 15-17=-50, 13-15=-20
Horz: 1-2=-10, 2-7=-6, 7-11=-6, 11-12=-2, 2-21=-5, 11-13=-16

30) Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel): Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-47, 2-5=-51, 5-7=-61, 7-8=-61, 8-11=-51, 11-12=-47, 18-21=-20, 17-18=-40, 15-17=-50, 13-15=-20
Horz: 1-2=-3, 2-7=1, 7-11=-1, 11-12=3, 2-21=-8, 11-13=8

31) Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) 2nd Parallel): Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-47, 2-5=-51, 5-7=-61, 7-8=-61, 8-11=-51, 11-12=-47, 18-21=-20, 17-18=-40, 15-17=-50, 13-15=-20
Horz: 1-2=-3, 2-7=1, 7-11=-1, 11-12=3, 2-21=-8, 11-13=8

34) 1st Dead + Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-2=-60, 2-5=-60, 5-7=-70, 7-8=-30, 8-11=-20, 11-12=-20, 18-21=-20, 17-18=-40, 13-17=-20

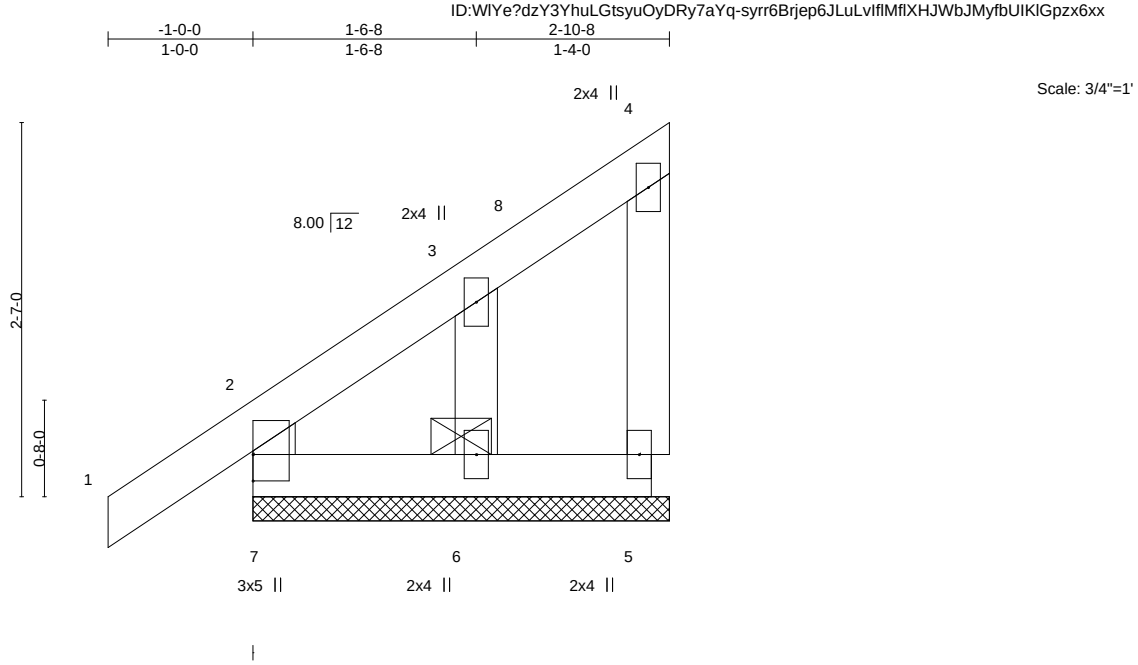
35) 2nd Dead + Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-2=-20, 2-5=-20, 5-7=-30, 7-8=-70, 8-11=-60, 11-12=-60, 18-21=-20, 17-18=-40, 13-17=-20

36) 3rd Dead + 0.75 Roof Live (unbalanced) + 0.75 Uninhab. Attic Storage: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-2=-50, 2-5=-50, 5-7=-60, 7-8=-30, 8-11=-20, 11-12=-20, 18-21=-20, 17-18=-40, 15-17=-50, 13-15=-20

37) 4th Dead + 0.75 Roof Live (unbalanced) + 0.75 Uninhab. Attic Storage: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-2=-20, 2-5=-20, 5-7=-30, 7-8=-60, 8-11=-50, 11-12=-50, 18-21=-20, 17-18=-40, 15-17=-50, 13-15=-20

Job	Truss	Truss Type	Qty	Ply	BCTH-55
24010087	E1GE	GABLE	2	1	I62935661
					Job Reference (optional)

The Building Center, Gastonia, NC - 28052, 8.730 s Dec 14 2023 MiTek Industries, Inc. Tue Jan 9 10:14:58 2024 Page 1
ID:WIYe?dzY3YhuLGtsyuOyDRy7aYq-syrr6Brjep6JLuLvIflMflXHJWbJMyfbUIKlGpzx6xx



LOADING (psf)			SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0		Plate Grip DOL	1.15	TC	0.16	Vert(LL)	0.00	1	n/r	120	MT20	244/190
Snow (Pf/Pg)	15.4/20.0		Lumber DOL	1.15	BC	0.05	Vert(CT)	-0.00	1	n/r	120		
TCDL	10.0		Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	5	n/a	n/a		
BCLL	0.0	*	Code	IRC2018/TPI2014	Matrix-R							Weight: 16 lb	FT = 20%
BCDL	10.0												

LUMBER-

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

BRACING-

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

REACTIONS. (size) 7=2-10-8, 5=2-10-8, 6=2-10-8
Max Horz 7=73(LC 11)
Max Uplift 7=-25(LC 14), 5=-7(LC 11), 6=-21(LC 11)
Max Grav 7=149(LC 2), 5=44(LC 24), 6=96(LC 24)

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

NOTES-

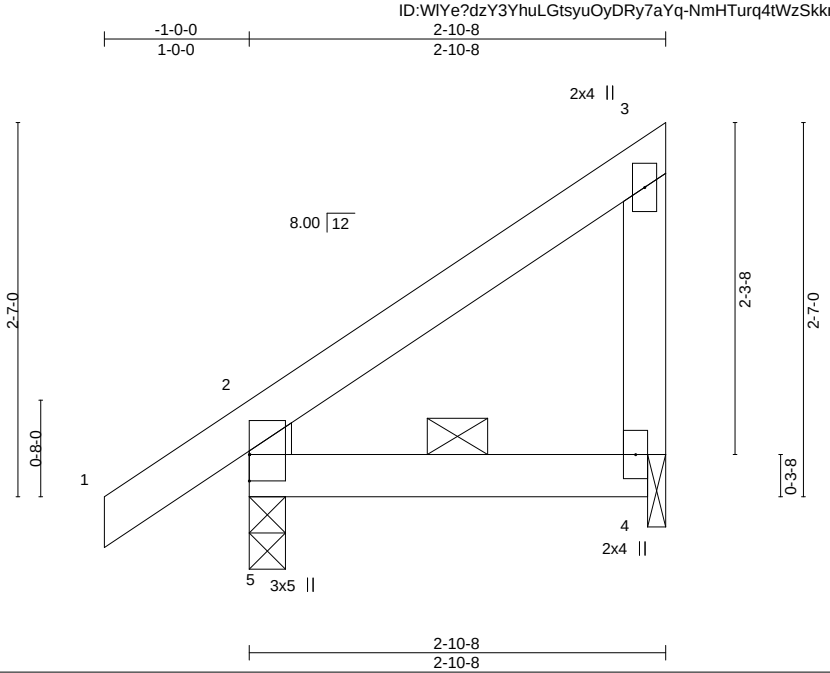
1) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner(3E) -1-0-0 to 2-0-0, Exterior(2N) 2-0-0 to 2-8-12 zone; cantilever left and right exposed ; end vertical left and right 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) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 1-4-0 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.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 7, 5, 6.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

January 9,2024

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

Job	Truss	Truss Type	Qty	Ply	BCTH-55
24010087	E1	MONOPITCH	2	1	I62935662
					Job Reference (optional)

The Building Center, Gastonia, NC - 28052, 8.730 s Dec 14 2023 MiTek Industries, Inc. Tue Jan 9 10:14:57 2024 Page 1
ID:WlYe?dzY3YhuLGtsyuOyDRy7aYq-NmHTurq4tWzSkkmjkyE76Y_7U6GzdW8SGebCkNzx6xy



LOADING (psf)

TCLL (roof)	20.0	
Snow (Pf/Pg)	15.4/20.0	
TCDL	10.0	
BCLL	0.0	*
BCDL	10.0	

SPACING-	2-0-0	**CSI.**		**DEFL.**	in (loc)	l/defl L/d
Plate Grip DOL	1.15	TC	0.10	Vert(LL)	-0.00 4-5	>999 240
Lumber DOL	1.15	BC	0.06	Vert(CT)	-0.00 4-5	>999 180
Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00 4	n/a n/a
Code	IRC2018/TPI2014	Matrix-R				

PLATES	**GRIP**
MT20	244/190
Weight: 15 lb	FT = 20%

LUMBER-

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

BRACING-

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

REACTIONS. (size) 5=0-3-0, 4=0-1-8
Max Horz 5=73(LC 11)
Max Uplift 5=-31(LC 14), 4=-18(LC 11)
Max Grav 5=187(LC 2), 4=96(LC 24)

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

NOTES-

1) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior(1) 2-0-0 to 2-8-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
3) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
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) 4 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) 4.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 4.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

January 9,2024

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

Job	Truss	Truss Type	Qty	Ply	BCTH-55
24010087	V1GE	VALLEY	1	1	I62935663
					Job Reference (optional)

The Building Center, Gastonia, NC - 28052, 8.730 s Dec 14 2023 MiTek Industries, Inc. Tue Jan 9 10:14:59 2024 Page 1
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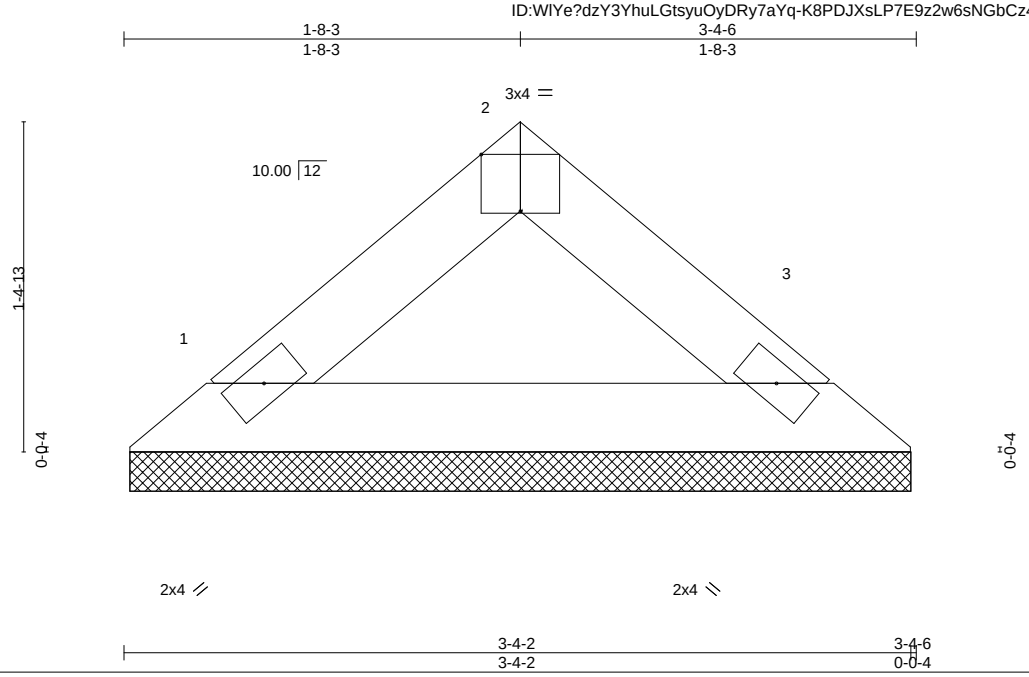

Plate Offsets (X,Y)-- [2:0-2-0,Edge]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.03	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.08	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-P							Weight: 10 lb	FT = 20%
BCDL	10.0											

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

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-4-6 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 1=3-3-13, 3=3-3-13
Max Horz 1=-19(LC 12)
Max Uplift 1=-1(LC 14), 3=-1(LC 14)
Max Grav 1=102(LC 2), 3=102(LC 2)

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 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Gable requires continuous bottom chord bearing.
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) 1, 3.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

January 9,2024

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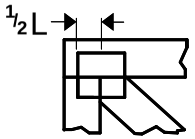
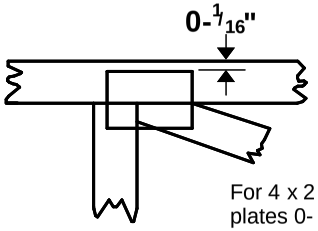
818 Soundside Road
Edenton, NC 27932

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.

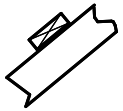
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

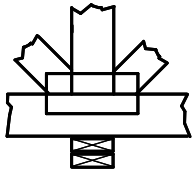
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

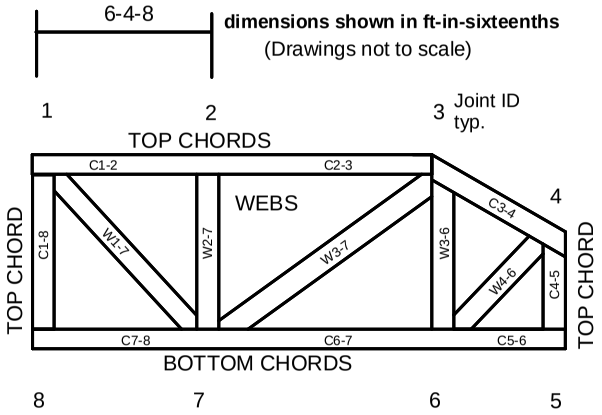


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

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
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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.