ENGINEERING BY TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: 20041397e
NOF-14

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: I41498089 thru I41498106

My license renewal date for the state of North Carolina is December 31, 2020.

North Carolina COA: C-0844

NORTH CAROLINA
PROFESSIONAL
SEAL
044925
SCOTT M. SEVIER
ENGINEER

Sevier, Scott

June 2,2020

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	NOF-14	
20041397E	A	COMMON TRUSS	9	1		I41498089
					Job Reference (optional)	

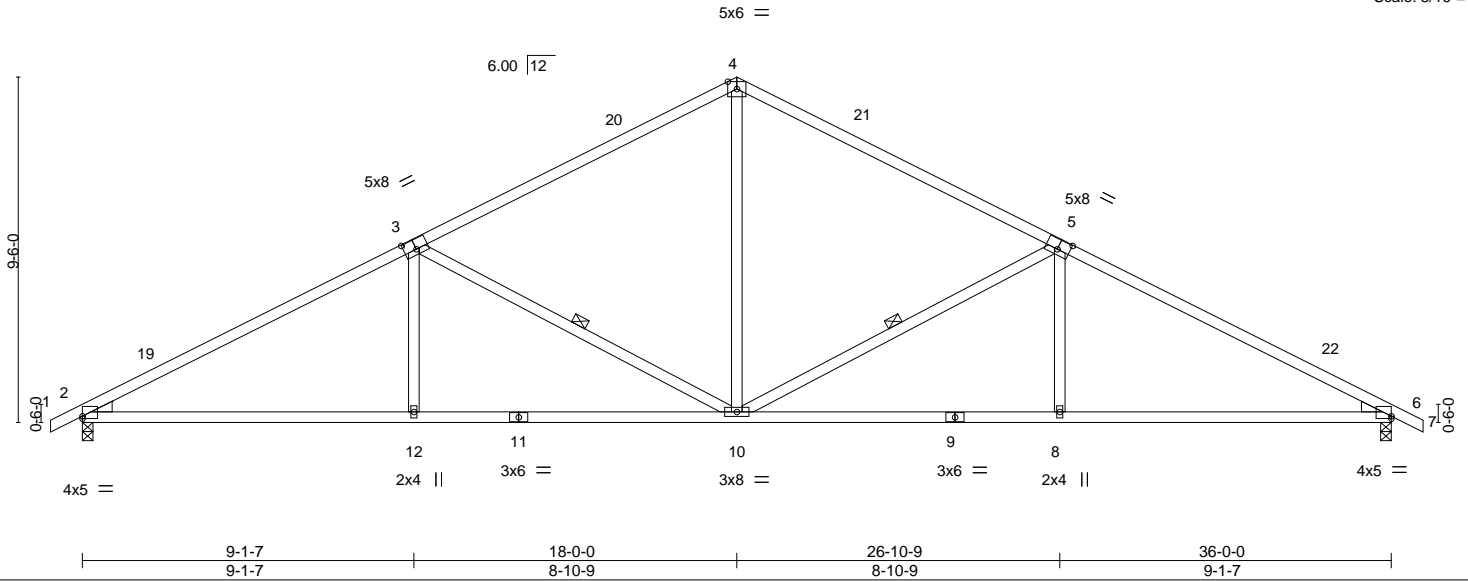The Building Center, Gastonia, NC - 28052,

8.410 s May 20 2020 MiTek Industries, Inc. Tue Jun 2 10:30:24 2020 Page 1
ID:P8HCMU73SEDR6eVBE6m2ePzZmjO-TMz?KctqpTb5dnzqh81Vibvj7dnGMnfykNSCEHzALjj

Scale: 3/16"=1'

Plate Offsets (X,Y)-- [2:0-0-0,0-0-13], [3:0-4-0,0-3-4], [5:0-4-0,0-3-4], [6:Edge,0-0-13]

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	0.79	Vert(LL)	-0.14	10-12	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.85	Vert(CT)	-0.34	10-12	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.45	Horz(CT)	0.11	6	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-AS							Weight: 174 lb	FT = 20%

LUMBER-
TOP CHORD   2x4 SP No.2
BOT CHORD   2x4 SP No.2
WEBS   2x4 SP No.3
WEDGE
Left: 2x4 SP No.3 , Right: 2x4 SP No.3

BRACING-
TOP CHORD   Structural wood sheathing directly applied.
BOT CHORD   Rigid ceiling directly applied.
WEBS   1 Row at midpt   5-10, 3-10

REACTIONS.   (size)   2=0-3-8, 6=0-3-8
            Max Horz 2=-129(LC 11)
            Max Uplift 2=-146(LC 10), 6=-146(LC 11)
            Max Grav 2=1493(LC 1), 6=1493(LC 1)

FORCES.   (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD   2-3=-2546/251, 3-4=-1749/252, 4-5=-1749/252, 5-6=-2546/251
BOT CHORD   2-12=-236/2177, 10-12=-236/2177, 8-10=-117/2177, 6-8=-117/2177
WEBS   4-10=-36/956, 5-10=-854/231, 5-8=0/362, 3-10=-854/231, 3-12=0/362

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=35ft; Cat. II; Exp B; Enclosed;
   MWFRS (envelope) gable end zone and C-C Exterior(2) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 15-0-0, Exterior(2) 15-0-0 to 21-0-0,
   Interior(1) 21-0-0 to 33-10-8, Exterior(2) 33-10-8 to 36-10-8 zone; cantilever left and right exposed ;C-C for members and forces &
   MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
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) except (jt=lb)
   2=146, 6=146.
6) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum
   sheetrock applied directly to the bottom chord.

June 2,2020

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TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

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8.410 s May 20 2020 MiTek Industries, Inc. Tue Jun 2 10:30:25 2020 Page 1
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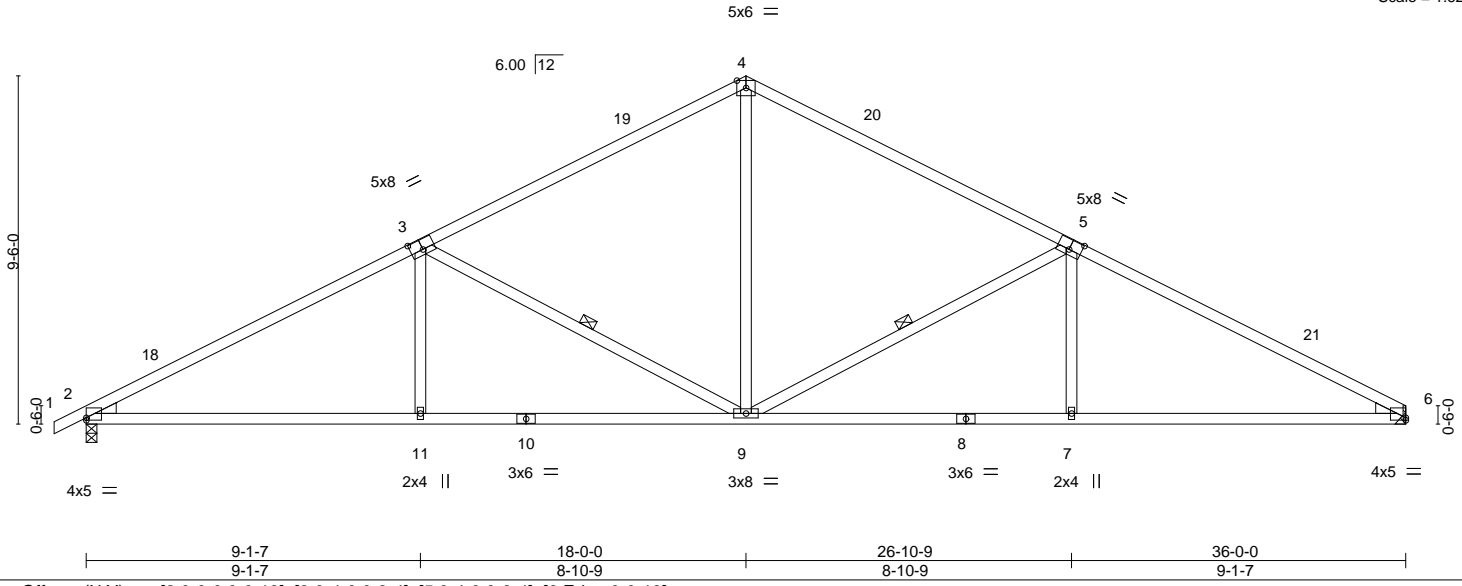
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Plate Offsets (X,Y)--   [2:0-0-0,0-0-13], [3:0-4-0,0-3-4], [5:0-4-0,0-3-4], [6:Edge,0-0-13]

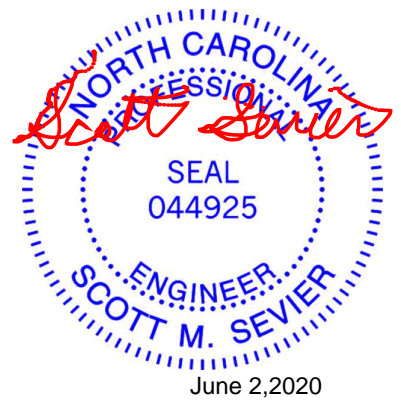| LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.80	Vert(LL)	-0.14	7-9	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.85	Vert(CT)	-0.34	9-11	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.46	Horz(CT)	0.11	6	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-AS							Weight: 172 lb	FT = 20%

LUMBER-
TOP CHORD   2x4 SP No.2
BOT CHORD   2x4 SP No.2
WEBS   2x4 SP No.3
WEDGE
Left: 2x4 SP No.3 , Right: 2x4 SP No.3

BRACING-
TOP CHORD   Structural wood sheathing directly applied.
BOT CHORD   Rigid ceiling directly applied.
WEBS   1 Row at midpt   5-9, 3-9

REACTIONS.   (size)   2=0-3-8, 6=Mechanical
               Max Horz 2=135(LC 14)
               Max Uplift 2=-147(LC 10), 6=-131(LC 11)
               Max Grav 2=1493(LC 1), 6=1439(LC 1)

FORCES.   (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD   2-3=-2547/254, 3-4=-1750/254, 4-5=-1750/255, 5-6=-2551/260
BOT CHORD   2-11=-242/2178, 9-11=-242/2178, 7-9=-147/2182, 6-7=-147/2182
WEBS   4-9=-40/958, 5-9=-858/233, 5-7=0/363, 3-9=-854/231, 3-11=0/362

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=35ft; Cat. II; Exp B; Enclosed;
   MWFRS (envelope) gable end zone and C-C Exterior(2) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 15-0-0, Exterior(2) 15-0-0 to 21-0-0,
   Interior(1) 21-0-0 to 33-0-0, Exterior(2) 33-0-0 to 36-0-0 zone; cantilever left and right exposed ;C-C for members and forces &
   MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
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) 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) except (jt=lb)
   2=147, 6=131.
7) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum
   sheetrock be applied directly to the bottom chord.

June 2,2020

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Edenton, NC 27932

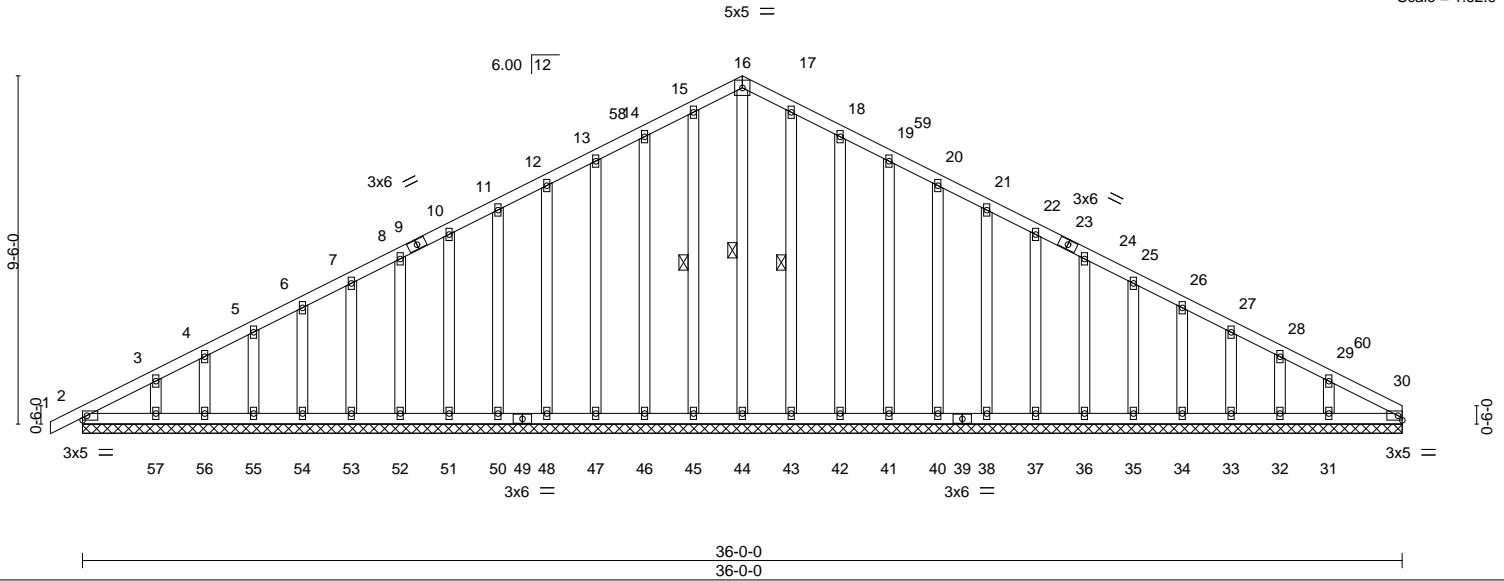| Job	Truss	Truss Type	Qty	Ply	NOF-14	
20041397E	A1GE	GABLE	1	1		I41498091
					Job Reference (optional)	

The Building Center,   Gastonia, NC - 28052,

8.410 s May 20 2020 MiTek Industries, Inc. Tue Jun 2 10:30:28 2020 Page 1
ID:P8HCMU73SEDR6eVBE6m2ePzZmjO-M7DWAzwKti5X5PHcw_6RtR4Z5ELuIgDYe?QQO2zALjf

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.09	Vert(LL)	-0.00	1	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	0.00	1	n/r	90		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.10	Horz(CT)	0.01	30	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 293 lb	FT = 20%

LUMBER-
TOP CHORD   2x4 SP No.2
BOT CHORD   2x4 SP No.2
OTHERS   2x4 SP No.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.
WEBS   1 Row at midpt   16-44, 15-45, 17-43

REACTIONS.   All bearings 36-0-0.
   (lb) - Max Horz 2=132(LC 14)
        Max Uplift   All uplift 100 lb or less at joint(s) 2, 45, 46, 47, 48, 50, 51, 52, 53, 54, 55, 56, 57, 43, 42, 41, 40, 38, 37, 36, 35, 34, 33, 32, 31
        Max Grav   All reactions 250 lb or less at joint(s) 2, 30, 44, 45, 46, 47, 48, 50, 51, 52, 53, 54, 55, 56, 57, 43, 42, 41, 40, 38, 37, 36, 35, 34, 33, 32, 31

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD   15-16=-85/259, 16-17=-85/259

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=35ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) -0-10-8 to 2-0-0, Exterior(2) 2-0-0 to 15-0-0, Corner(3) 15-0-0 to 21-0-0, Exterior(2) 21-0-0 to 33-0-0, Corner(3) 33-0-0 to 36-0-0 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
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 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, with BCDL = 10.0psf.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 45, 46, 47, 48, 50, 51, 52, 53, 54, 55, 56, 57, 43, 42, 41, 40, 38, 37, 36, 35, 34, 33, 32, 31.

June 2,2020

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	NOF-14	
20041397E	AGE	GABLE	1	1		I41498092
					Job Reference (optional)	

The Building Center, Gastonia, NC - 28052,
8.410 s May 20 2020 MiTek Industries, Inc. Tue Jun 2 10:30:30 2020 Page 1
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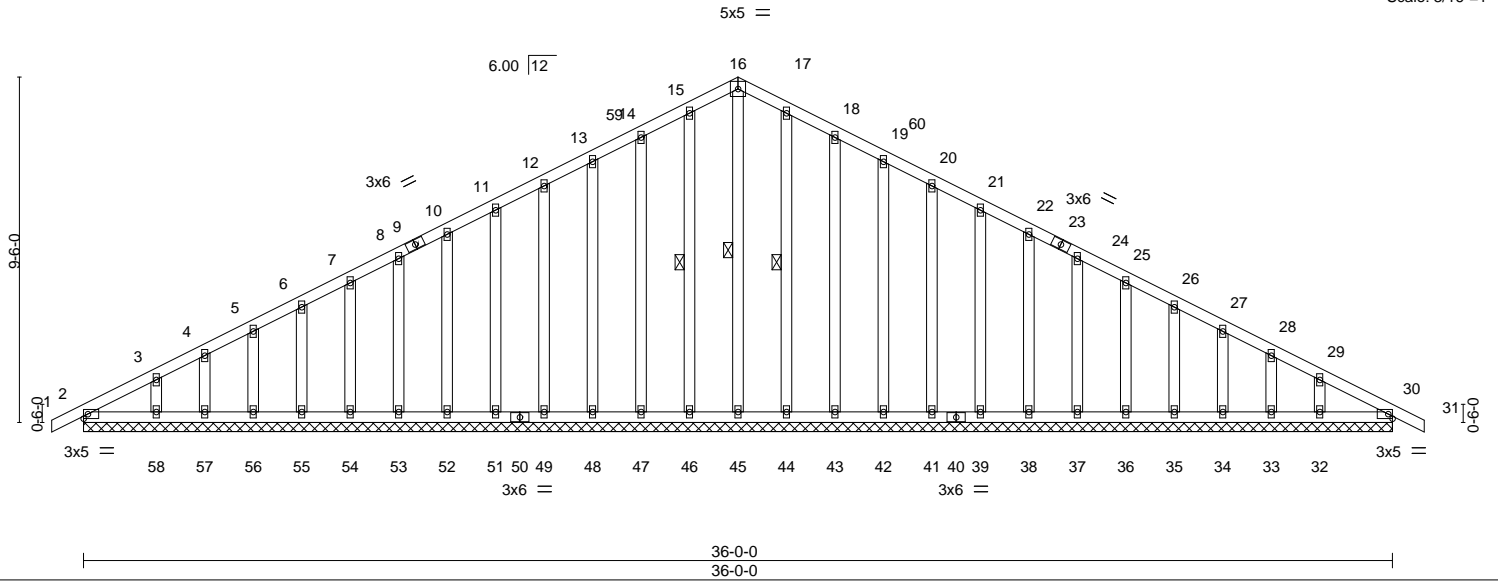
LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.09	Vert(LL)	-0.00	30	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	-0.00	30	n/r	90		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.10	Horz(CT)	0.01	30	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 295 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.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.
WEBS 1 Row at midpt 16-45, 15-46, 17-44

REACTIONS. All bearings 36-0-0.
(lb) - Max Horz 2=-129(LC 11)
Max Uplift All uplift 100 lb or less at joint(s) 2, 46, 47, 48, 49, 51, 52, 53, 54, 55, 56, 57, 58, 44, 43, 42, 41, 39, 38, 37, 36, 35, 34, 33, 32
Max Grav All reactions 250 lb or less at joint(s) 2, 30, 45, 46, 47, 48, 49, 51, 52, 53, 54, 55, 56, 57, 58, 44, 43, 42, 41, 39, 38, 37, 36, 35, 34, 33, 32

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 15-16=-84/261, 16-17=-84/261

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=35ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) -0-10-8 to 2-0-0, Exterior(2) 2-0-0 to 15-0-0, Corner(3) 15-0-0 to 21-0-0, Exterior(2) 21-0-0 to 33-10-8, Corner(3) 33-10-8 to 36-10-8 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
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 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, with BCDL = 10.0psf.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 46, 47, 48, 49, 51, 52, 53, 54, 55, 56, 57, 58, 44, 43, 42, 41, 39, 38, 37, 36, 35, 34, 33, 32.

June 2,2020

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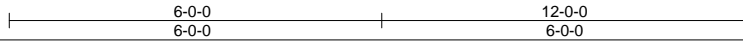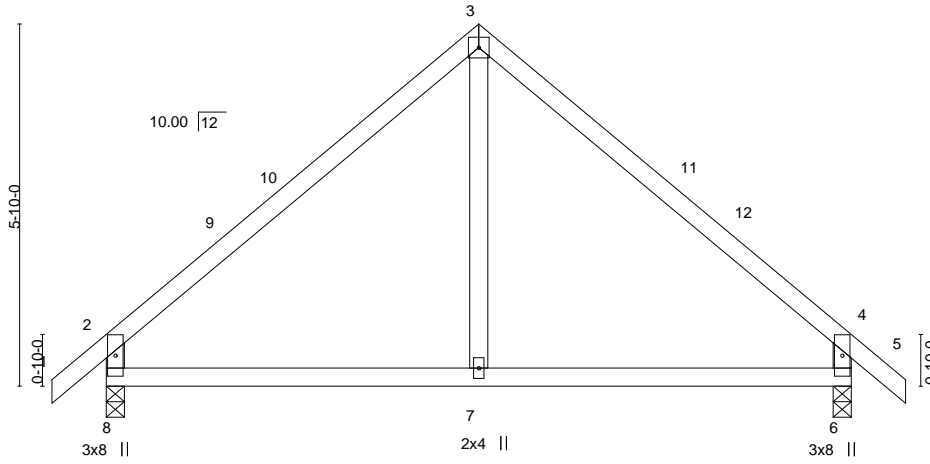| Job	Truss	Truss Type	Qty	Ply	NOF-14	
20041397E	D	COMMON TRUSS	1	1		I41498093
					Job Reference (optional)	

The Building Center, Gastonia, NC - 28052,

8.410 s May 20 2020 MiTek Industries, Inc. Tue Jun 2 10:30:32 2020 Page 1
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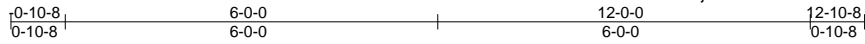
Scale = 1:37.1

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	0.32	Vert(LL)	-0.02	7-8	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.30	Vert(CT)	-0.04	7-8	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.10	Horz(CT)	0.01	6	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-AS							Weight: 54 lb	FT = 20%

LUMBER-
TOP CHORD   2x4 SP No.2
BOT CHORD   2x4 SP No.2
WEBS   2x4 SP No.2 *Except*
             3-7: 2x4 SP No.3

BRACING-
TOP CHORD   Structural wood sheathing directly applied, except end verticals.
BOT CHORD   Rigid ceiling directly applied.

REACTIONS.   (size)   8=0-3-8, 6=0-3-8
            Max Horz 8=116(LC 9)
            Max Uplift 8=-48(LC 10), 6=-48(LC 11)
            Max Grav 8=530(LC 1), 6=530(LC 1)

FORCES.   (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD   2-3=-479/90, 3-4=-479/90, 2-8=-476/139, 4-6=-476/139
BOT CHORD   7-8=0/291, 6-7=0/291
WEBS   3-7=0/251

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=35ft; Cat. II; Exp B; Enclosed;
   MWFRS (envelope) gable end zone and C-C Exterior(2) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 3-0-0, Exterior(2) 3-0-0 to 9-0-0,
   Interior(1) 9-0-0 to 9-10-8, Exterior(2) 9-10-8 to 12-10-8 zone; cantilever left and right exposed ;C-C for members and forces &
   MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
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, 6.
6) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum
   sheetrock be applied directly to the bottom chord.

NORTH CAROLINA
PROFESSIONAL
SEAL
044925
SCOTT M. SEVIER
ENGINEER

June 2,2020

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TRENCO
A MiTek Affiliate

818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	NOF-14	
20041397E	DGE	GABLE	1	1		I41498094
					Job Reference (optional)	

The Building Center, Gastonia, NC - 28052,
8.410 s May 20 2020 MiTek Industries, Inc. Tue Jun 2 10:30:33 2020 Page 1
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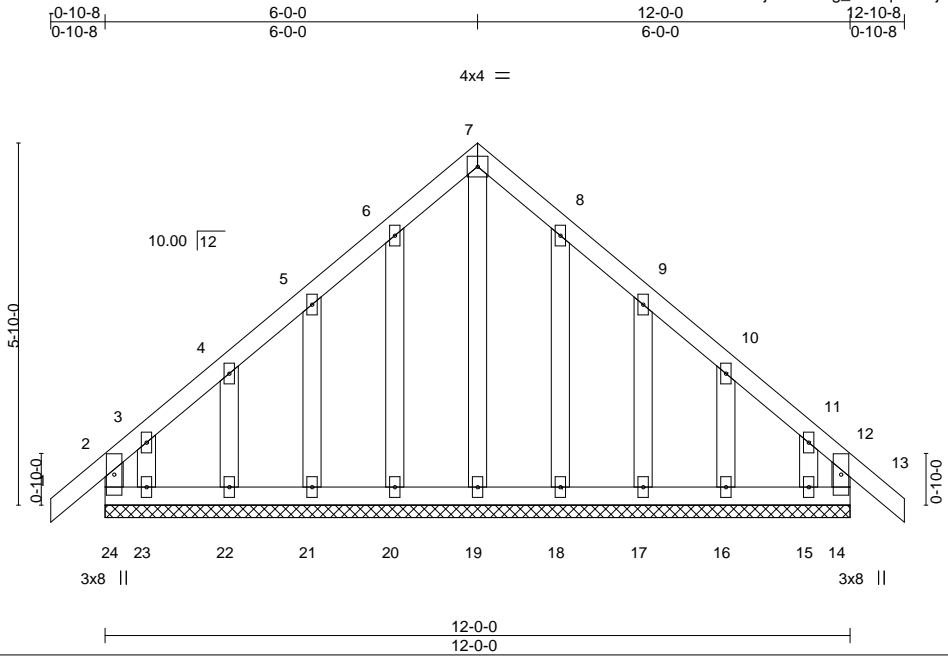
4x4 =

Scale = 1:37.1

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	0.07	Vert(LL)	-0.00	13	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	-0.00	13	n/r	90		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.07	Horz(CT)	0.00	14	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-R							Weight: 84 lb	FT = 20%

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

REACTIONS.   All bearings 12-0-0.
(lb) - Max Horz 24=-116(LC 8)
Max Uplift   All uplift 100 lb or less at joint(s) 24, 14, 20, 21, 22, 18, 17, 16 except 23=-121(LC 10), 15=-107(LC 11)
Max Grav   All reactions 250 lb or less at joint(s) 24, 14, 19, 20, 21, 22, 23, 18, 17, 16, 15

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=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=35ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) -0-10-8 to 2-0-0, Exterior(2) 2-0-0 to 3-0-0, Corner(3) 3-0-0 to 9-0-0, Exterior(2) 9-0-0 to 9-10-8, Corner(3) 9-10-8 to 12-10-8 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
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) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
7) Gable studs spaced at 1-4-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * 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.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 24, 14, 20, 21, 22, 18, 17, 16 except (jt=lb) 23=121, 15=107.

June 2,2020

ENGINEERING BY
TRENCO
A MiTek Affiliate

818 Soundside Road
Edenton, NC 27932

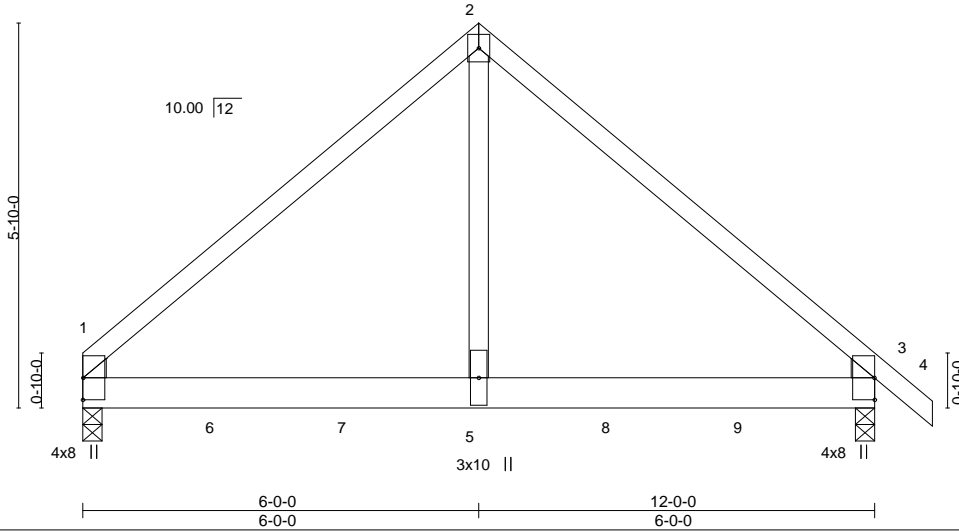| Job	Truss	Truss Type	Qty	Ply	NOF-14	
20041397E	DGR	COMMON GIRDER	1	**2**		I41498095
					Job Reference (optional)	

The Building Center, Gastonia, NC - 28052,

8.410 s May 20 2020 MiTek Industries, Inc. Tue Jun 2 10:30:34 2020 Page 1
ID:P8HCMU73SEDR6eVBE6m2ePzZmjO-BHanR0?5TYshpKklGEDr6iJQBeEmiGMR1wtkbizALjZ

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	0.82	Vert(LL)	-0.07	1-5	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.65	Vert(CT)	-0.14	1-5	>994	240		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.63	Horz(CT)	0.01	3	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-SH							Weight: 124 lb	FT = 20%

LUMBER-
TOP CHORD   2x4 SP No.2
BOT CHORD   2x6 SP DSS
WEBS   2x4 SP No.2
WEDGE
Left: 2x4 SP No.3 , Right: 2x4 SP No.3

BRACING-
TOP CHORD   Structural wood sheathing directly applied or 4-9-13 oc purlins.
BOT CHORD   Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS.   (size)   3=0-3-8, 1=0-3-8
    Max Horz 1=-114(LC 23)
    Max Uplift 3=-406(LC 9), 1=-381(LC 8)
    Max Grav 3=4111(LC 1), 1=3984(LC 1)

FORCES.   (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD   1-2=-4165/447, 2-3=-4165/449
BOT CHORD   1-5=-263/3005, 3-5=-263/3005
WEBS   2-5=-475/5137

NOTES-
1) 2-ply truss to be connected together with 10d (0.148"x3") nails as follows:
    Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
    Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
    Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to
    ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=35ft; Cat. II; Exp B; Enclosed;
    MWFRS (envelope) gable end zone; cantilever left and right exposed ; Lumber DOL=1.33 plate grip DOL=1.33
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)
    3=406, 1=381.
8) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1419 lb down and 151 lb up at
    2-0-12, 1419 lb down and 151 lb up at 4-0-12, 1419 lb down and 151 lb up at 6-0-12, and 1419 lb down and 151 lb up at 8-0-12,
    and 1419 lb down and 151 lb up at 10-0-12 on bottom chord. The design/selection of such connection device(s) is the responsibility
    of others.

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
    Uniform Loads (plf)
        Vert: 1-2=-60, 2-4=-60, 1-3=-20

June 2,2020

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Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	NOF-14	
						I41498095
20041397E	DGR	COMMON GIRDER	1	**2**	Job Reference (optional)	

LOAD CASE(S) Standard
    Concentrated Loads (lb)
        Vert: 5=-1419(B) 6=-1419(B) 7=-1419(B) 8=-1419(B) 9=-1419(B)

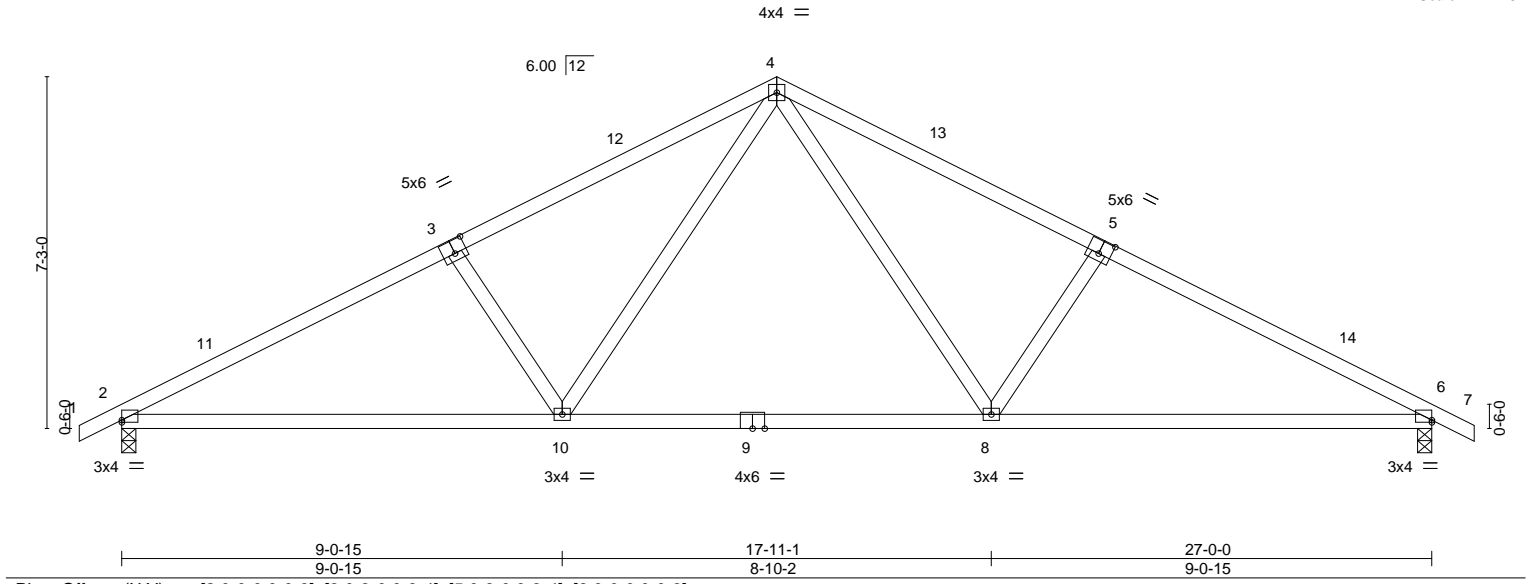| Job	Truss	Truss Type	Qty	Ply	NOF-14	
20041397E	F	COMMON	5	1		I41498096
					Job Reference (optional)	

The Building Center, Gastonia, NC - 28052,

8.410 s May 20 2020 MiTek Industries, Inc. Tue Jun 2 10:30:35 2020 Page 1
ID:P8HCMU73SEDR6eVBE6m2ePzZmjO-fU89eM0jEr_YRUJyqyk4fwsdg2WNRovaGacI78zALjY
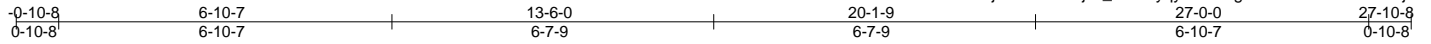
Scale = 1:47.5

Plate Offsets (X,Y)-- [2:0-0-0,0-0-9], [3:0-3-0,0-3-4], [5:0-3-0,0-3-4], [6:0-0-0,0-0-9]

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	0.64	Vert(LL)	-0.41	8-10	>782	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.95	Vert(CT)	-0.52	8-10	>618	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.29	Horz(CT)	0.06	6	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 124 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 3-5-4 oc purlins.
BOT CHORD   Rigid ceiling directly applied or 2-2-0 oc bracing.

REACTIONS.   (size)   2=0-3-8, 6=0-3-8
Max Horz 2=98(LC 14)
Max Uplift 2=-115(LC 10), 6=-115(LC 11)
Max Grav 2=1130(LC 1), 6=1130(LC 1)

FORCES.   (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD   2-3=-1900/213, 3-4=-1718/231, 4-5=-1718/231, 5-6=-1900/213
BOT CHORD   2-10=-183/1614, 8-10=-28/1091, 6-8=-108/1614
WEBS   4-8=-91/705, 5-8=-378/197, 4-10=-91/705, 3-10=-378/197

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=35ft; Cat. II; Exp B; Enclosed;
   MWFRS (envelope) gable end zone and C-C Exterior(2) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 10-6-0, Exterior(2) 10-6-0 to 16-6-0,
   Interior(1) 16-6-0 to 24-10-8, Exterior(2) 24-10-8 to 27-10-8 zone; cantilever left and right exposed ;C-C for members and forces &
   MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
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) except (jt=lb)
   2=115, 6=115.

June 2,2020

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TRENCO
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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	NOF-14	I41498097
20041397E	FGE	COMMON SUPPORTED GAB	1	1	Job Reference (optional)	

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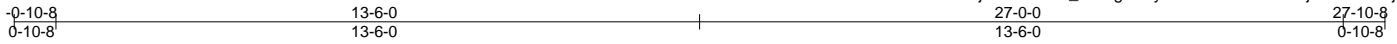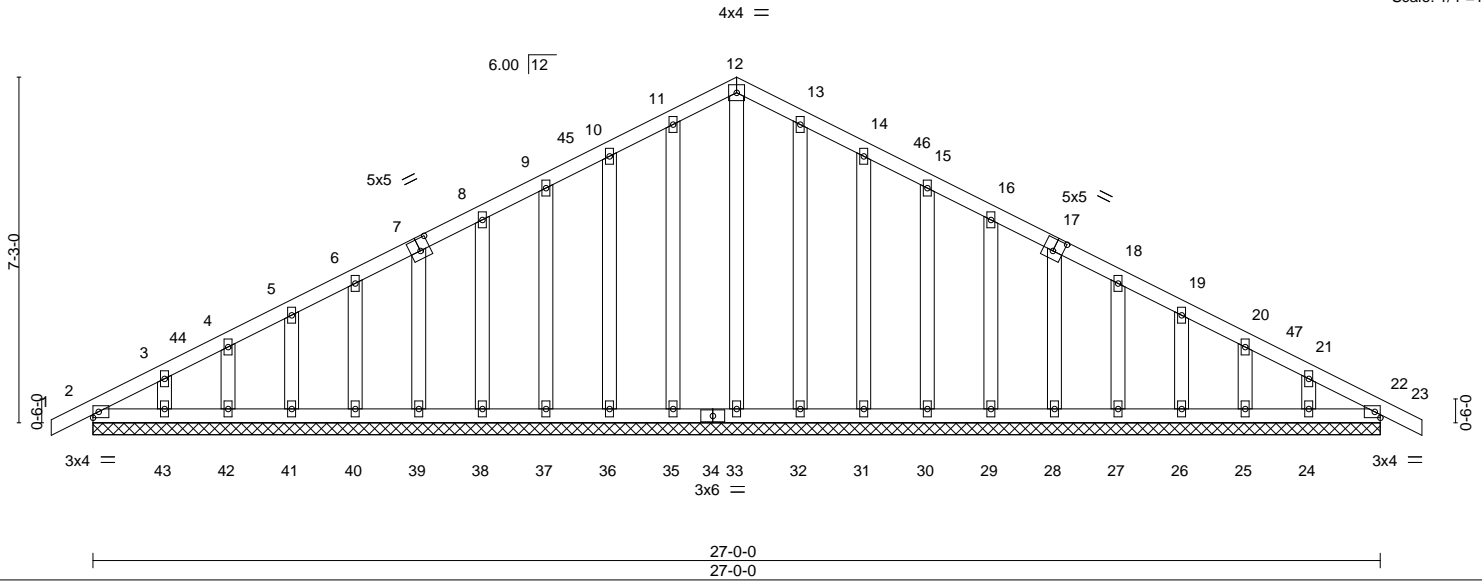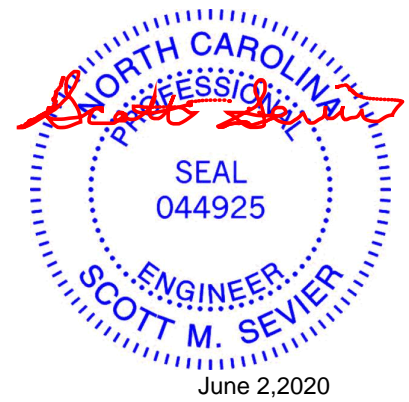
Scale: 1/4"=1'

Plate Offsets (X,Y)-- [7:0-2-8,0-3-0], [17:0-2-8,0-3-0]

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	0.07	Vert(LL)	-0.00	22	n/r	120	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	-0.00	23	n/r	90		
BCLL 0.0 *	Rep Stress Incr	YES	WB	0.10	Horz(CT)	0.00	22	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 188 lb	FT = 20%

LUMBER-
TOP CHORD   2x4 SP No.2
BOT CHORD   2x4 SP No.2
OTHERS   2x4 SP No.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.   All bearings 27-0-0.
    (lb) - Max Horz 2=98(LC 14)
        Max Uplift   All uplift 100 lb or less at joint(s) 2, 35, 36, 37, 38, 39, 40, 41, 42, 43, 32, 31, 30, 29, 28, 27, 26, 25, 24, 22
        Max Grav   All reactions 250 lb or less at joint(s) 2, 33, 35, 36, 37, 38, 39, 40, 41, 42, 43, 32, 31, 30, 29, 28, 27, 26, 25, 24, 22

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=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=35ft; Cat. II; Exp B; Enclosed;
   MWFRS (envelope) gable end zone and C-C Corner(3) -0-10-8 to 2-1-8, Exterior(2) 2-1-8 to 10-6-0, Corner(3) 10-6-0 to 16-6-0,
   Exterior(2) 16-6-0 to 24-10-8, Corner(3) 24-10-8 to 27-10-8 zone; cantilever left and right exposed ;C-C for members and forces &
   MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
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 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, with BCDL = 10.0psf.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 35, 36, 37, 38,
   39, 40, 41, 42, 43, 32, 31, 30, 29, 28, 27, 26, 25, 24, 22.
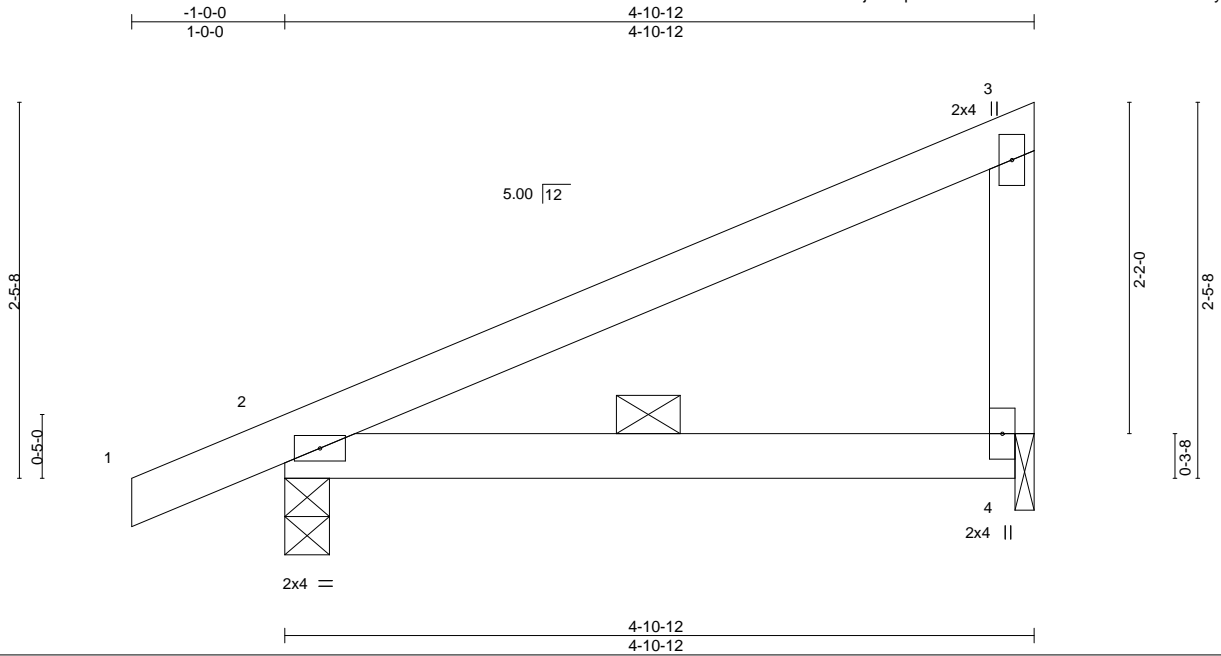10) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 2.

June 2,2020

ENGINEERING BY
TRENCO
A MiTek Affiliate

818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	NOF-14	
20041397E	H	MONOPITCH	9	1		I41498098
					Job Reference (optional)	

The Building Center,   Gastonia, NC - 28052,
8.410 s May 20 2020 MiTek Industries, Inc. Tue Jun 2 10:30:38 2020 Page 1
ID:P8HCMU73SEDR6eVBE6m2ePzZmjO-33pIHO2cWmM6Ix2XV4HnHYUEEGixeDB0yYrykTzALjV

-1-0-0 / 1-0-0
4-10-12 / 4-10-12

Scale = 1:15.1

5.00 [12]

2-5-8
0-5-0
2-2-0
2-5-8
0-3-8

2x4 || (joint 3)
2x4 || (joint 4)
2x4 = (2x4)

4-10-12 / 4-10-12

LOADING (psf)		SPACING-		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.30	Vert(LL)	-0.02	4-7	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.25	Vert(CT)	-0.05	4-7	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-AS							Weight: 20 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, except end verticals.
BOT CHORD   3-0-0 oc bracing.

REACTIONS.   (size) 2=0-3-8, 4=0-1-8
          Max Horz 2=74(LC 10)
          Max Uplift 2=-32(LC 10), 4=-40(LC 10)
          Max Grav 2=256(LC 1), 4=184(LC 1)

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

NOTES-
1) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=35ft; Cat. II; Exp B; Enclosed;
   MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces &
   MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
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) 2, 4.
7) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord.

NORTH CAROLINA PROFESSIONAL ENGINEER
Scott Sevier
SEAL
044925
SCOTT M. SEVIER

June 2,2020

TRENCO
ENGINEERING BY
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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	NOF-14	
20041397E	HGE	GABLE	1	1		I41498099
					Job Reference (optional)	

The Building Center,   Gastonia, NC - 28052,

8.410 s May 20 2020 MiTek Industries, Inc. Tue Jun 2 10:30:39 2020 Page 1
ID:P8HCMU73SEDR6eVBE6m2ePzZmjO-XFNgUk3EH4Uzw5dj3oo0pm1Pzf2ANgRAACaVGwzALjU

Scale = 1:15.1

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	0.30	Vert(LL)	-0.02	4-11	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.25	Vert(CT)	-0.05	4-11	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-AS							Weight: 23 lb	FT = 20%

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, except end verticals.
BOT CHORD   3-0-0 oc bracing.

REACTIONS.   (size)   2=0-3-8, 4=0-1-8
                Max Horz 2=74(LC 10)
                Max Uplift 2=-32(LC 10), 4=-40(LC 10)
                Max Grav 2=256(LC 1), 4=184(LC 1)

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

NOTES-
1) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=35ft; Cat. II; Exp B; Enclosed;
   MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces &
   MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
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) 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) 2, 4.
9) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord.

June 2,2020

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TRENCO
A MiTek Affiliate

818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	NOF-14	
						I41498100
20041397E	R1	MONOPITCH TRUSS	3	1		
					Job Reference (optional)	

The Building Center, Gastonia, NC - 28052,
8.410 s May 20 2020 MiTek Industries, Inc. Tue Jun 2 10:30:39 2020 Page 1
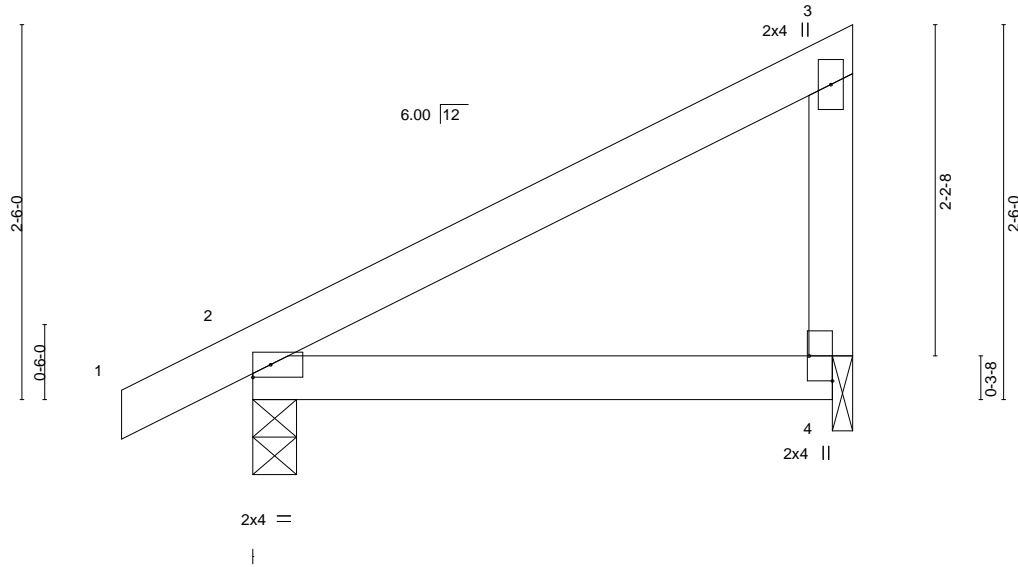ID:P8HCMU73SEDR6eVBE6m2ePzZmjO-XFNgUk3EH4Uzw5dj3oo0pm1Qbf3oNgRAACaVGwzALjU

-0-10-8 | 4-0-0
0-10-8 | 4-0-0
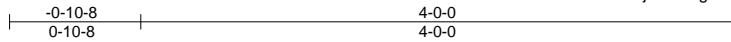
Scale = 1:15.4

Plate Offsets (X,Y)-- [4:Edge,0-1-14]

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)	-0.01	4-7	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC	0.15	Vert(CT)	-0.02	4-7	>999	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-AS							Weight: 17 lb	FT = 20%

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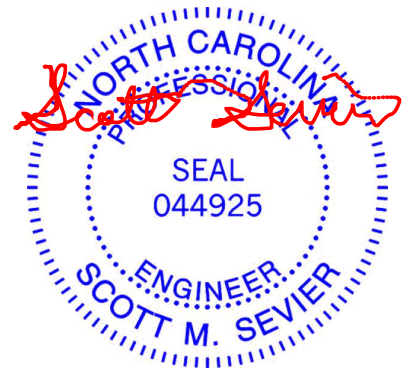WEBS   2x4 SP No.3

BRACING-
TOP CHORD   Structural wood sheathing directly applied, except end verticals.
BOT CHORD   Rigid ceiling directly applied.

REACTIONS.   (size)   2=0-3-8, 4=0-1-10
                 Max Horz 2=73(LC 10)
                 Max Uplift 2=-21(LC 10), 4=-39(LC 10)
                 Max Grav 2=213(LC 1), 4=148(LC 1)

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

NOTES-
1) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=35ft; Cat. II; Exp B; Enclosed;
   MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces &
   MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
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) 2, 4.
7) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum
   sheetrock be applied directly to the bottom chord.

NORTH CAROLINA
PROFESSIONAL
SEAL
044925
SCOTT M. SEVIER
ENGINEER

June 2,2020

ENGINEERING BY
TRENCO
A MiTek Affiliate

818 Soundside Road
Edenton, NC 27932

The Building Center, Gastonia, NC - 28052,

Scale = 1:10.2

Plate Offsets (X,Y)-- [3:0-2-0,0-2-8], [5:Edge,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	0.25	Vert(LL)	-0.00	5-8	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.15	Vert(CT)	-0.01	5-8	>999	240		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MR							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 4-0-0 oc purlins,
             except end verticals, and 2-0-0 oc purlins: 3-4.
BOT CHORD   Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS.   (size)   2=0-3-8, 5=0-1-8
                  Max Horz 2=44(LC 8)
                  Max Uplift 2=-31(LC 8), 5=-22(LC 5)
                  Max Grav 2=225(LC 1), 5=162(LC 1)

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

NOTES-
1) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=35ft; Cat. II; Exp B; Enclosed;
   MWFRS (envelope) gable end zone; cantilever left and right exposed ; Lumber DOL=1.33 plate grip DOL=1.33
2) Provide adequate drainage to prevent water ponding.
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) Bearing at joint(s) 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify
   capacity of bearing surface.
6) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 5.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 5.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 27 lb down and 30 lb up at
   2-0-0 on top chord, and 19 lb down at 2-0-12 on bottom chord. The design/selection of such connection device(s) is the
   responsibility of others.
10) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (plf)
          Vert: 1-3=-60, 3-4=-60, 5-6=-20
   Concentrated Loads (lb)
          Vert: 3=-7(B) 9=-19(B)

June 2,2020

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	NOF-14	
						I41498102
20041397E	R2	JACK-OPEN TRUSS	2	1		
					Job Reference (optional)	

The Building Center,   Gastonia, NC - 28052,   8.410 s May 20 2020 MiTek Industries, Inc. Tue Jun 2 10:30:41 2020 Page 1

ID:P8HCMU73SEDR6eVBE6m2ePzZmjO-TeVRvQ4Uphkh9Pn5BDrUvB6nwTnoraxTeW3cLlozALjS

Scale = 1:10.4

2x4 =
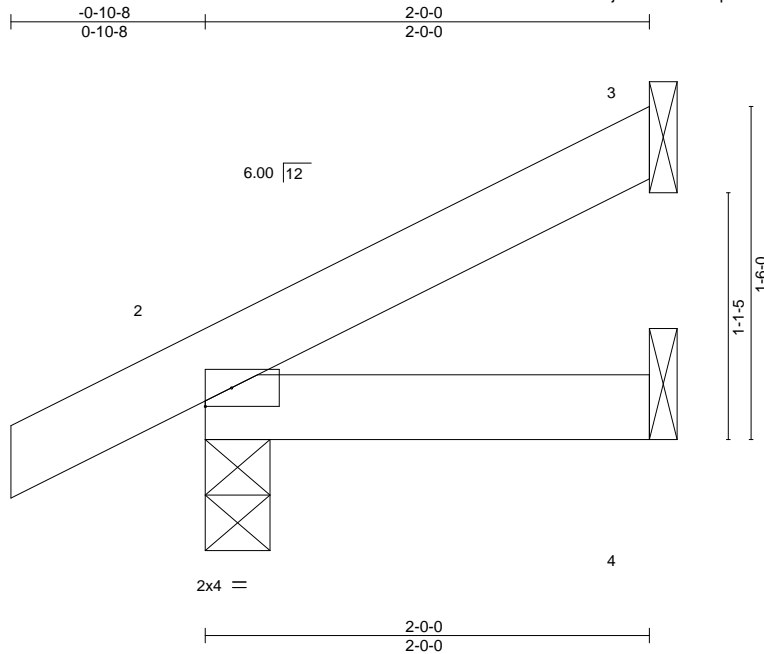
LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	-0.00	7	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	-0.00	4-7	>999	240		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MP							Weight: 8 lb	FT = 20%

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

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

REACTIONS.   (size)   3=Mechanical, 2=0-3-8, 4=Mechanical
                Max Horz   2=43(LC 10)
                Max Uplift   3=-25(LC 10), 2=-28(LC 10)
                Max Grav   3=65(LC 1), 2=205(LC 1), 4=49(LC 3)

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

NOTES-
1) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=35ft; Cat. II; Exp B; Enclosed;
    MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces &
    MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
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) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 2.
6) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S)   Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
    Uniform Loads (plf)
        Vert: 1-3=-80(F=-20), 4-5=-40(F=-20)

June 2,2020

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8.410 s May 20 2020 MiTek Industries, Inc. Tue Jun 2 10:30:42 2020 Page 1
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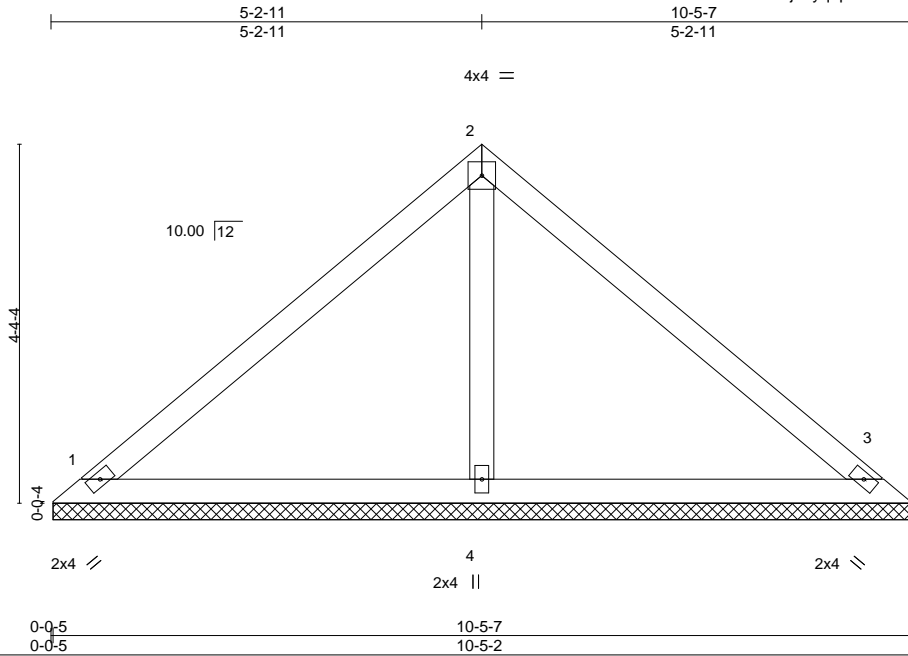
5-2-11 | 10-5-7
5-2-11 | 5-2-11

4x4 =

Scale = 1:27.9

10.00 ⌐12

4-4-4

0-0-4

2x4 ∥

1 — 2x4 ∥ — 3

0-0-4

2x4 ∥

4

2x4 ∥

0-0-5 | 10-5-7
0-0-5 | 10-5-2

LOADING (psf)		SPACING-		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.33	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.23	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 40 lb	FT = 20%

LUMBER-
TOP CHORD   2x4 SP No.2
BOT CHORD   2x4 SP No.2
OTHERS   2x4 SP No.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=10-4-13, 3=10-4-13, 4=10-4-13
Max Horz 1=-81(LC 6)
Max Uplift 1=-26(LC 11), 3=-36(LC 11), 4=-4(LC 10)
Max Grav 1=204(LC 1), 3=204(LC 1), 4=363(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=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=35ft; Cat. II; Exp B; Enclosed;
   MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces &
   MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
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, 4.

(Engineer's seal: NORTH CAROLINA PROFESSIONAL ENGINEER, SEAL 044925, SCOTT M. SEVIER)

June 2,2020

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Edenton, NC 27932

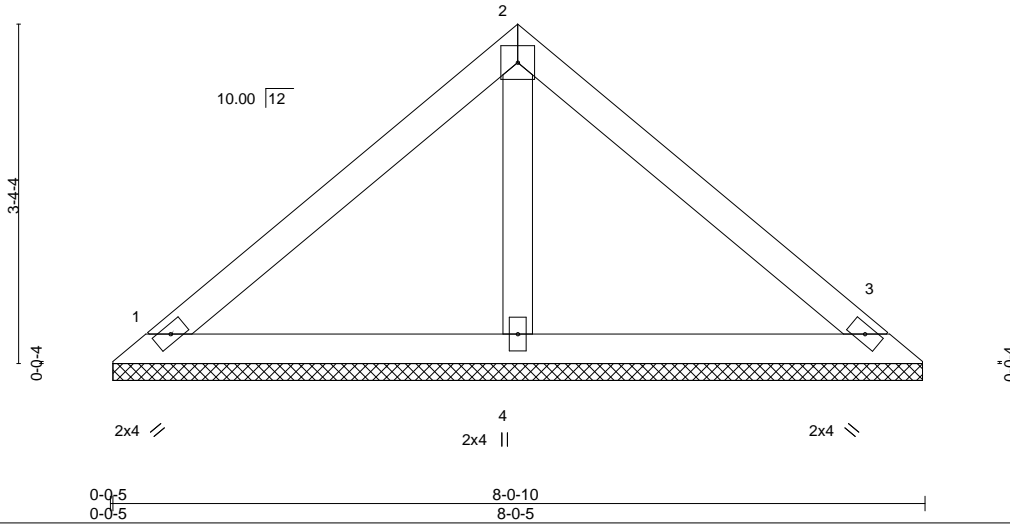| Job	Truss	Truss Type	Qty	Ply	NOF-14	
20041397E	V2	Valley Truss	1	1		I41498104
					Job Reference (optional)	

The Building Center,   Gastonia, NC - 28052,
8.410 s May 20 2020 MiTek Industries, Inc. Tue Jun 2 10:30:42 2020 Page 1
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4x4 ▭

Scale = 1:22.8

10.00 ⌐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	0.25	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	0.04	Horz(CT)	0.00	3	n/a	n/a			
BCDL	10.0	Code IRC2015/TPI2014		Matrix-P								Weight: 30 lb	FT = 20%

LUMBER-
TOP CHORD   2x4 SP No.2
BOT CHORD   2x4 SP No.2
OTHERS   2x4 SP No.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=8-0-0, 3=8-0-0, 4=8-0-0
               Max Horz 1=-61(LC 6)
               Max Uplift 1=-28(LC 11), 3=-35(LC 11)
               Max Grav 1=166(LC 1), 3=166(LC 1), 4=247(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=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=35ft; Cat. II; Exp B; Enclosed;
   MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces &
   MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
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.

June 2,2020

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Job	Truss	Truss Type	Qty	Ply	NOF-14	
20041397E	V3	GABLE	1	1		I41498105
					Job Reference (optional)	

The Building Center, Gastonia, NC - 28052,

8.410 s May 20 2020 MiTek Industries, Inc. Tue Jun 2 10:30:43 2020 Page 1
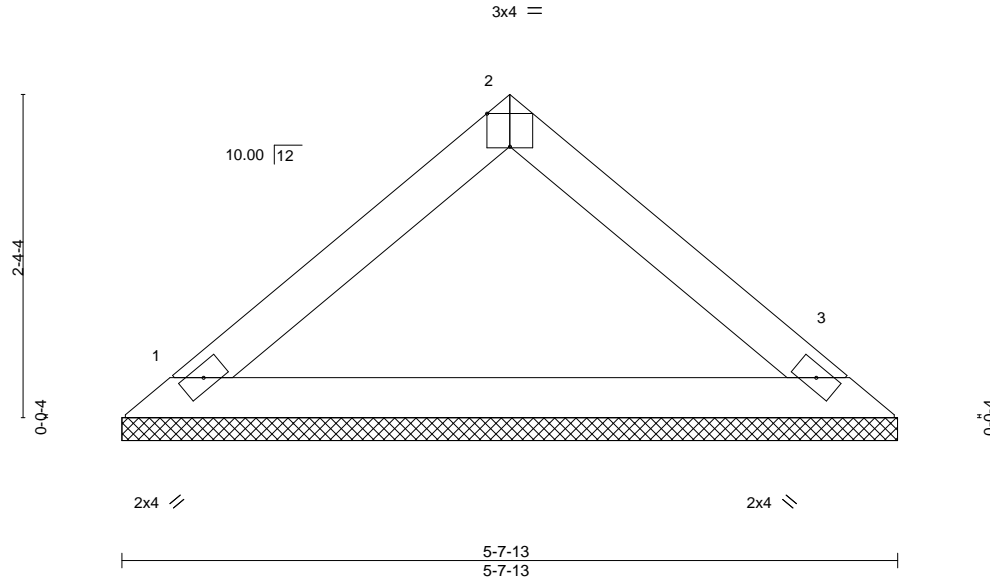ID:P8HCMU73SEDR6eVBE6m2ePzZmjO-Q0dBK56lLJ_POiwUIdty_cB71HPOJTRI5qYjPhzALjQ

	2-9-15		5-7-13	
	2-9-15		2-9-15	

Scale = 1:16.8

3x4 =

10.00 ⟍12

2-4-4

0-0-4

2x4 ⫽

2x4 ⟍

0-0-4

5-7-13
5-7-13

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

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.11	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.30	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-P							Weight: 18 lb	FT = 20%

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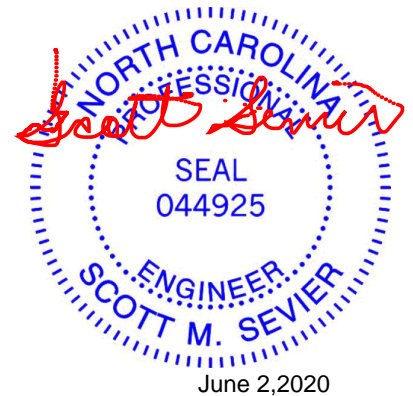BOT CHORD   2x4 SP No.2

BRACING-
TOP CHORD   Structural wood sheathing directly applied or 5-7-13 oc purlins.
BOT CHORD   Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS.   (size)   1=5-7-13, 3=5-7-13
               Max Horz 1=-41(LC 6)
               Max Uplift 1=-14(LC 10), 3=-14(LC 11)
               Max Grav 1=194(LC 1), 3=194(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=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=35ft; Cat. II; Exp B; Enclosed;
   MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces &
   MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
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	NOF-14	
20041397E	V4	Valley Truss	1	1		I41498106
					Job Reference (optional)	

The Building Center,   Gastonia, NC - 28052,

8.410 s May 20 2020 MiTek Industries, Inc. Tue Jun 2 10:30:44 2020 Page 1
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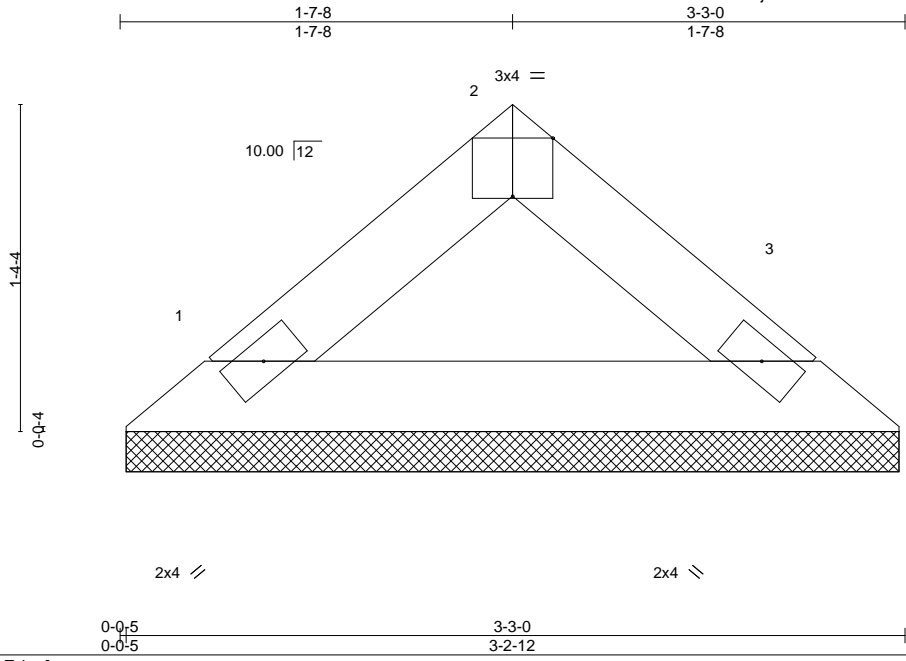
1-7-8
3-3-0
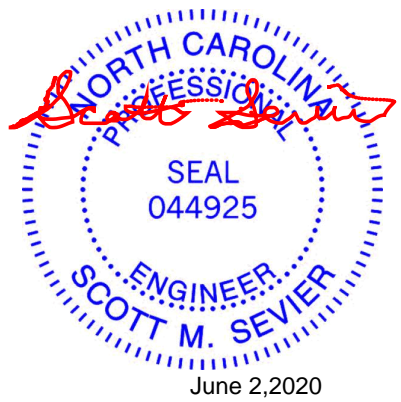1-7-8
1-7-8

Scale = 1:9.5

3x4 ═

2

10.00 ⌐12

3

1

1-4-4

0-0-4

0-0-4

2x4 ╱╱

2x4 ╲╲

0-0-5
3-3-0
0-0-5
3-2-12

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

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.02	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-P							Weight: 10 lb	FT = 20%

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

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

REACTIONS.   (size)   1=3-2-7, 3=3-2-7
               Max Horz 1=21(LC 9)
               Max Uplift 1=-7(LC 10), 3=-7(LC 11)
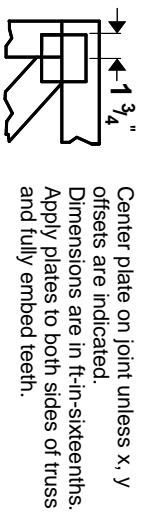   Max Grav 1=98(LC 1), 3=98(LC 1)

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=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=35ft; Cat. II; Exp B; Enclosed;
   MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces &
   MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
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.
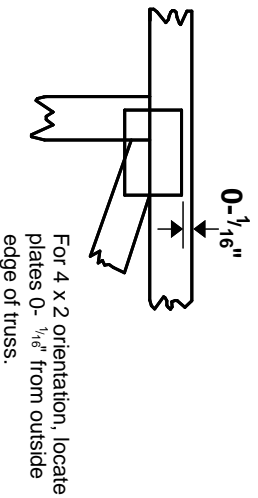
NORTH CAROLINA
PROFESSIONAL
SEAL
044925
ENGINEER
SCOTT M. SEVIER

June 2,2020

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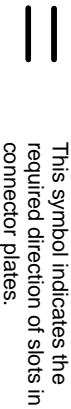
818 Soundside Road
Edenton, NC 27932

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.

1 ¾"

0- ¹⁄₁₆"

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.
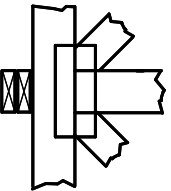
PLATE SIZE

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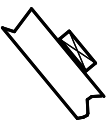
Indicated by symbol shown and/or by text in the bracing section of the output. Use T or I bracing if indicated.
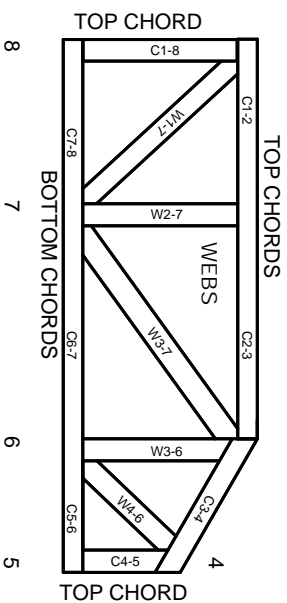
BEARING

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

6-4-8 | dimensions shown in ft-in-sixteenths
(Drawings not to scale)

TOP CHORD

1 — 2 — 3 TOP CHORDS

C1-8 C1-2 C2-3 C3-4

W1-7 W2-7 W3-7 W4-6

WEBS

BOTTOM CHORDS

8 — 7 — 6 — 5

C7-8 C6-7 C5-6 C4-5

TOP CHORD

4

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

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

PRODUCT CODE APPROVALS

ICC-ES Reports:

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

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

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

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⚠ 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 T or 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.