

Trenco  
818 Soundside Rd  
Edenton, NC 27932

Re: 20073751  
NOF-12

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: I41958163 thru I41958183

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

North Carolina COA: C-0844



July 9, 2020

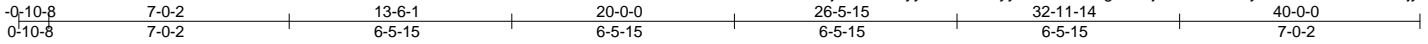
Sevier, Scott

**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 20073751	Truss A	Truss Type COMMON TRUSS	Qty 13	Ply 1	NOF-12	I41958163
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The Building Center Inc., Gastonia, NC 28052

ID:PVc7jxLhoWfMyvzbNFxcRyyo1P-cC8nGgkctcl5jWkCt75EaMyIwTPGHmFUoC9a7jyzrjN  
8.400 s Apr 21 2020 Mitek Industries, Inc. Thu Jul 9 08:44:06 2020 Page 1



Scale = 1:67.2

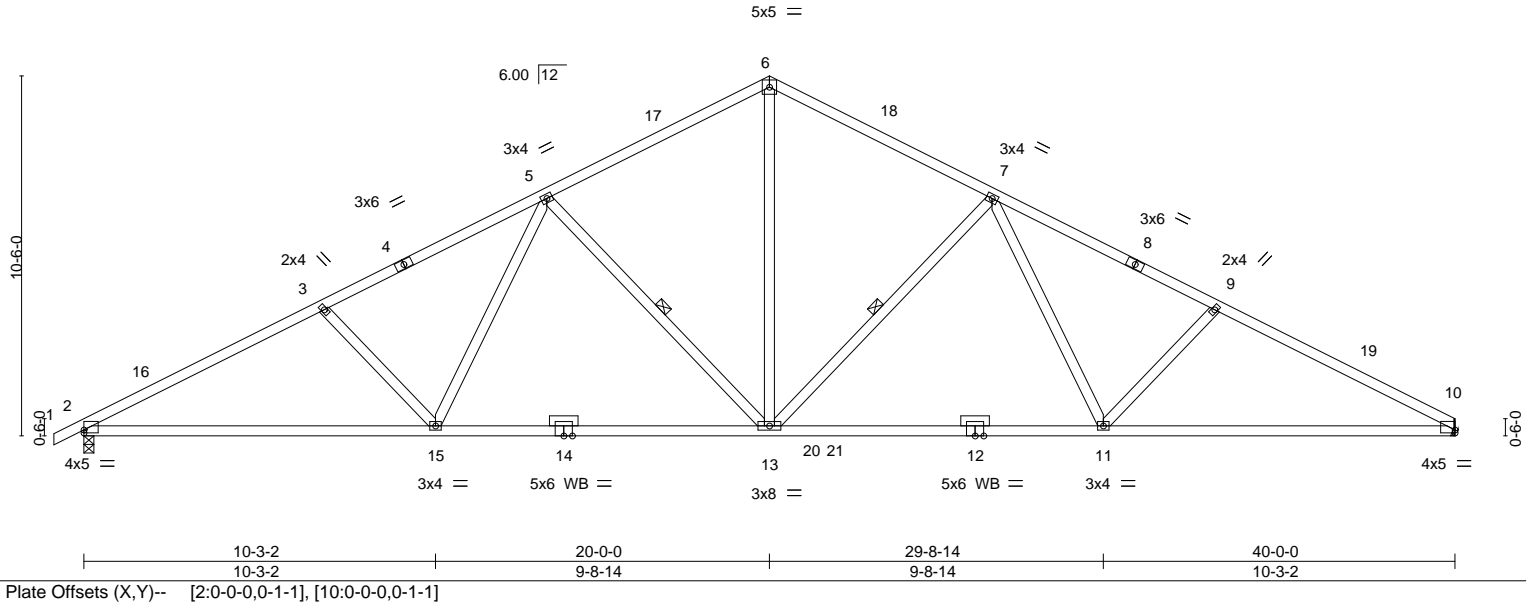


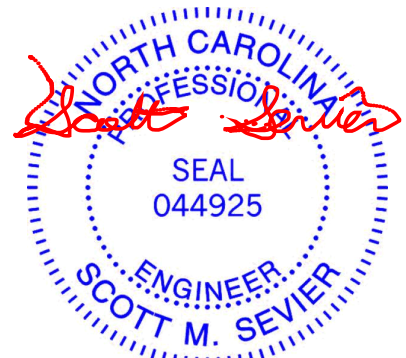
Plate Offsets (X,Y)--	[2:0-0-0,0-1-1], [10:0-0-0,0-1-1]				
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL 1.15	TC 0.73	Vert(LL) -0.39 11-13 >999 360	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.90	Vert(CT) -0.60 10-11 >790 240		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.63	Horz(CT) 0.14 10 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-S			Weight: 208 lb FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.2 *Except* 1-4: 2x4 SP No.1, 8-10: 2x4 SP DSS	TOP CHORD Structural wood sheathing directly applied or 2-4-4 oc purlins.
BOT CHORD 2x4 SP No.1 *Except* 12-14: 2x4 SP DSS	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3	WEBS 1 Row at midpt 7-13, 5-13
OTHERS 2x4 SP No.3	

**REACTIONS.** (lb/size) 2=1654/0-3-8, 10=1591/Mechanical  
Max Horz 2=146(LC 10)  
Max Uplift 2=163(LC 10), 10=145(LC 11)  
Max Grav 2=1727(LC 2), 10=1673(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-16=-3129/261, 3-16=-3076/284, 3-4=-2922/254, 4-5=-2789/280, 5-17=-2116/269,  
6-17=-2038/282, 6-18=-2037/282, 7-18=-2116/268, 7-8=-2808/290, 8-9=-2941/263,  
9-19=-3101/297, 10-19=-3155/278  
BOT CHORD 2-15=-316/2708, 14-15=-178/2297, 14-20=-178/2297, 13-20=-178/2297, 13-21=-99/2305,  
12-21=-99/2305, 11-12=-99/2305, 10-11=-193/2741  
WEBS 6-13=-104/1521, 7-13=-727/214, 7-11=-38/615, 9-11=-353/190, 5-13=-718/213,  
5-15=-34/596, 3-15=-331/183

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - 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 17-0-0, Exterior(2) 17-0-0 to 23-0-0, Interior(1) 23-0-0 to 36-11-4, Exterior(2) 36-11-4 to 39-11-4 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
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* 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.
  - Refer to girder(s) for truss to truss connections.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 163 lb uplift at joint 2 and 145 lb uplift at joint 10.
  - This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



July 9, 2020

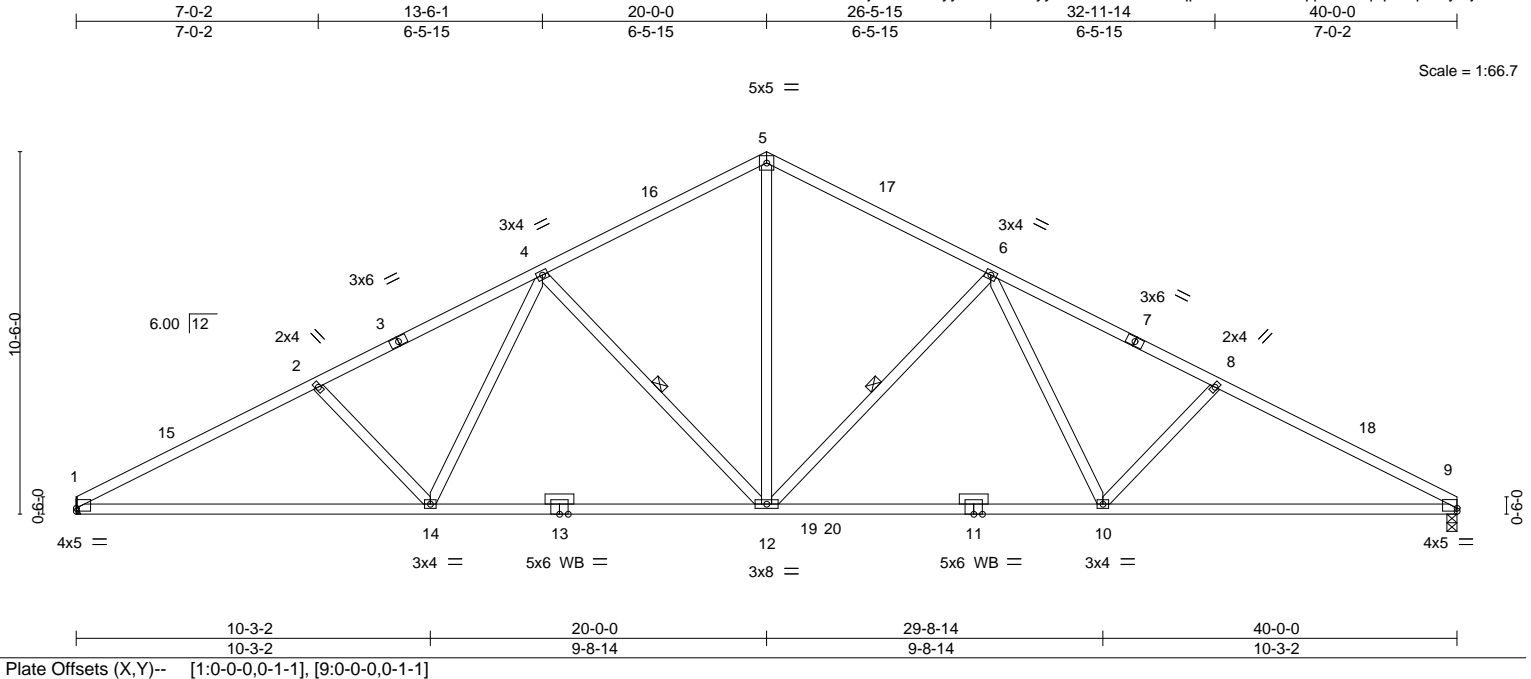
**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**  
Design valid for use only with Mitek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



Job 20073751	Truss A1	Truss Type COMMON TRUSS	Qty 2	Ply 1	NOF-12	I41958164
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The Building Center Inc., Gastonia, NC 28052

8.400 s Apr 21 2020 MiTek Industries, Inc. Thu Jul 9 08:44:15 2020 Page 1  
 ID:PVc7jxLhoWfMyvzbNFxcRyyo1P-rxBB9lrVWV3qpluwuwWILRGqtp6TnuqTps5qYxhyzjE



Scale = 1:66.7

<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL 1.15	TC 0.59	Vert(LL) -0.38 12-14 >999 360	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.90	Vert(CT) -0.60 1-14 >792 240		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.63	Horz(CT) 0.14 9 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-S		Weight: 207 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP DSS *Except* 3-5,5-7: 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 3-1-13 oc purlins.
BOT CHORD 2x4 SP No.1 *Except* 11-13: 2x4 SP DSS	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3	WEBS 1 Row at midpt 6-12, 4-12
OTHERS 2x4 SP No.3	

**REACTIONS.** (lb/size) 1=1592/Mechanical, 9=1592/0-3-8  
 Max Horz 1=139(LC 14)  
 Max Uplift 1=-145(LC 10), 9=-145(LC 11)  
 Max Grav 1=1674(LC 2), 9=1675(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-15=-3157/281, 2-15=-3102/300, 2-3=-2943/266, 3-4=-2810/293, 4-16=-2117/272,  
 5-16=-2039/285, 5-17=-2039/285, 6-17=-2117/272, 6-7=-2795/292, 7-8=-2927/265,  
 8-18=-3080/298, 9-18=-3135/280  
 BOT CHORD 1-14=-324/2742, 13-14=-179/2306, 13-19=-179/2306, 12-19=-179/2306, 12-20=-101/2299,  
 11-20=-101/2299, 10-11=-101/2299, 9-10=-193/2716  
 WEBS 5-12=-106/1522, 6-12=-719/213, 6-10=-37/600, 8-10=-337/188, 4-12=-728/214,  
 4-14=-38/615, 2-14=-353/190

- 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) 0-0-12 to 3-0-12, Interior(1) 3-0-12 to 17-0-0, Exterior(2) 17-0-0 to 23-0-0, Interior(1) 23-0-0 to 36-10-4, Exterior(2) 36-10-4 to 39-10-4 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) Refer to girder(s) for truss to truss connections.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 145 lb uplift at joint 1 and 145 lb uplift at joint 9.
  - 7) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



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**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



818 Soundside Road  
 Edenton, NC 27932

Job 20073751	Truss AGE	Truss Type GABLE	Qty 2	Ply 1	NOF-12	141958165
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The Building Center, Gastonia, NC - 28052,

8.410 s May 22 2020 MiTek Industries, Inc. Wed Jul 8 16:50:29 2020 Page 1

ID:Lukt8dNxK7v4CG3MioHPsyoy1N-3UYXrGZ0JDvL3C9ZDNogCiUGyYJlQ3emsWPPbz\_3hO

40-0-0  
20-0-0  
40-10-8  
0-10-8

Scale = 1:68.3

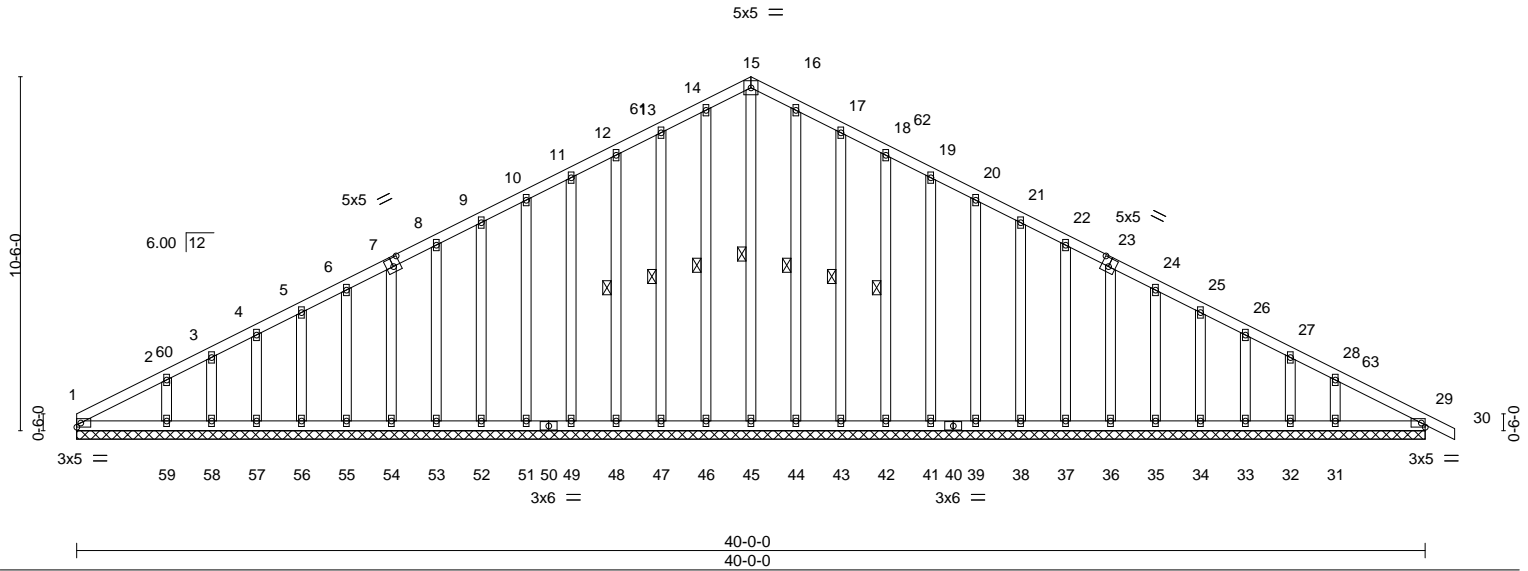


Plate Offsets (X,Y)-- [7:0-2-8,0-3-0], [23:0-2-8,0-3-0]

<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL	1.15	TC 0.10	Vert(LL)	0.00	29	n/r	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.05	Vert(CT)	0.00	30	n/r		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.09	Horz(CT)	0.01	29	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S						
								Weight: 347 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS 2x4 SP No.3	WEBS 1 Row at midpt 15-45, 14-46, 13-47, 12-48, 16-44, 17-43, 18-42

**REACTIONS.** All bearings 40-0-0.  
 (lb) - Max Horz 1=-146(LC 15)  
 Max Uplift All uplift 100 lb or less at joint(s) 1, 46, 47, 48, 49, 51, 52, 53, 54, 55, 56, 57, 58, 59, 44, 43, 42, 41, 39, 38, 37, 36, 35, 34, 33, 32, 31  
 Max Grav All reactions 250 lb or less at joint(s) 1, 45, 46, 47, 48, 49, 51, 52, 53, 54, 55, 56, 57, 58, 59, 44, 43, 42, 41, 39, 38, 37, 36, 35, 34, 33, 32, 31, 29

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 13-14=-88/258, 14-15=-93/286, 15-16=-93/286, 16-17=-88/258

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCCL=5.0psf; BCDL=5.0psf; h=35ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) 0-0-0 to 3-0-0, Exterior(2) 3-0-0 to 17-0-0, Corner(3) 17-0-0 to 23-0-0, Exterior(2) 23-0-0 to 37-10-8, Corner(3) 37-10-8 to 40-10-8 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
  - 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.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - Gable requires continuous bottom chord bearing.
  - Gable studs spaced at 1-4-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* 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.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 46, 47, 48, 49, 51, 52, 53, 54, 55, 56, 57, 58, 59, 44, 43, 42, 41, 39, 38, 37, 36, 35, 34, 33, 32, 31.



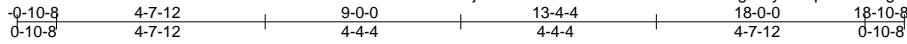
July 9,2020

Job 20073751	Truss B	Truss Type COMMON TRUSS	Qty 1	Ply 1	NOF-12	I41958166
					Job Reference (optional)	

The Building Center, Gastonia, NC - 28052,

8.410 s May 22 2020 MiTek Industries, Inc. Wed Jul 8 16:50:31 2020 Page 1

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4x4 =

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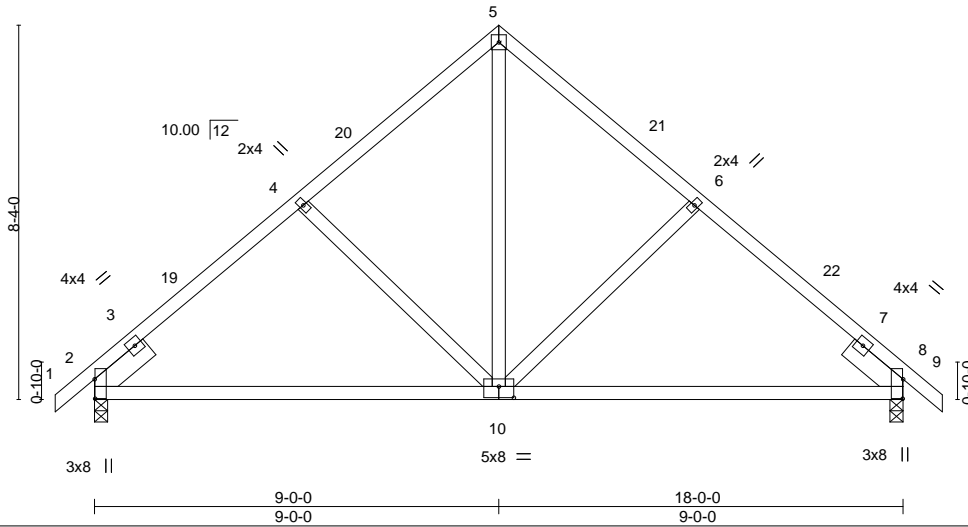


Plate Offsets (X,Y)--	[2:0-5-3,0-0-2], [8:0-5-3,0-0-2], [10:0-4-0,0-3-0]
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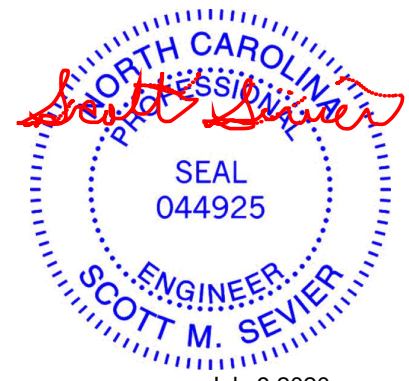
<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	2-0-0	TC 0.19	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.62	Vert(LL) -0.08 10-17 >999 360		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.19	Vert(CT) -0.17 10-17 >999 240		
BCDL 10.0	Rep Stress Incr YES	Matrix-AS	Horz(CT) 0.01 2 n/a n/a		
	Code IRC2015/TPI2014			Weight: 102 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied.
WEBS 2x4 SP No.3	
SLIDER Left 2x6 SP No.1 - 1-6-0, Right 2x6 SP No.1 -x 1-6-0	

**REACTIONS.** (size) 2=0-3-8, 8=0-3-8  
 Max Horz 2=-166(LC 8)  
 Max Uplift 2=-65(LC 10), 8=-65(LC 11)  
 Max Grav 2=773(LC 1), 8=773(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-4=-806/121, 4-5=-643/137, 5-6=-643/137, 6-8=-806/121  
 BOT CHORD 2-10=-88/608, 8-10=-16/571  
 WEBS 5-10=-72/495

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TC DL=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 6-0-0, Exterior(2) 6-0-0 to 12-0-0, Interior(1) 12-0-0 to 15-10-8, Exterior(2) 15-10-8 to 18-10-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* 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.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 8.
  - 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.



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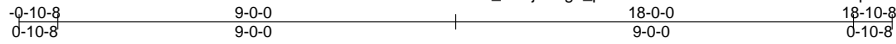
<p><b>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.</b></p> <p>Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see <b>ANSI/TP1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information</b> available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601</p>	<p>ENGINEERING BY</p> <p><b>TRENCO</b></p> <p>A MiTek Affiliate</p> <p>818 Soundside Road Edenton, NC 27932</p>
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Job 20073751	Truss BGE	Truss Type GABLE	Qty 1	Ply 1	NOF-12	I41958167
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The Building Center, Gastonia, NC - 28052,

8.410 s May 22 2020 MiTek Industries, Inc. Wed Jul 8 16:50:33 2020 Page 1

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4x4 =

Scale = 1:52.1

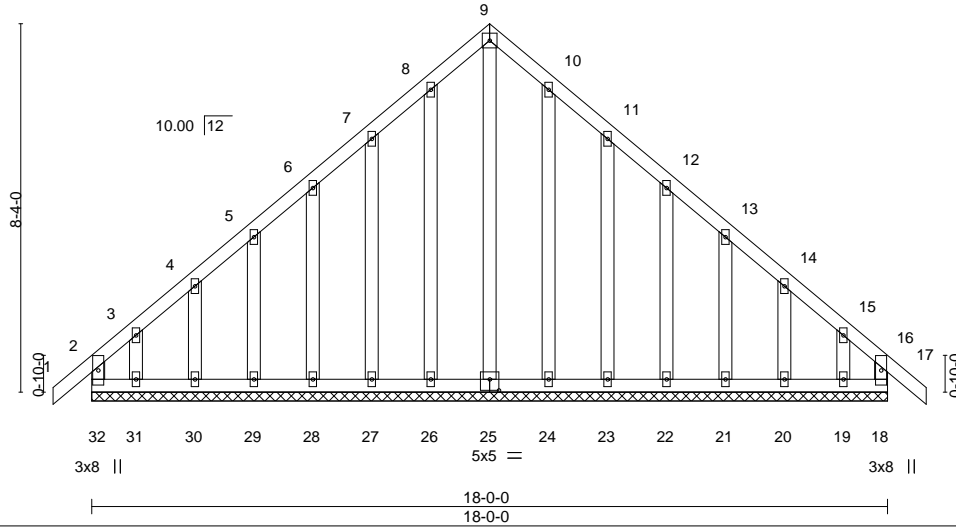


Plate Offsets (X,Y)--	[25:0-2-8,0-3-0]				
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL 1.15	TC 0.08	Vert(LL) -0.00 17 n/r 120	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.08	Vert(CT) -0.00 17 n/r 90		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.23	Horz(CT) 0.00 18 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-R		Weight: 148 lb	FT = 20%

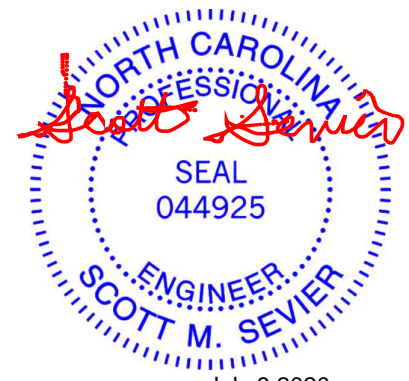
<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 2x4 SP No.2	
OTHERS 2x4 SP No.3	

**REACTIONS.** All bearings 18-0-0.  
 (lb) - Max Horz 32=-185(LC 8)  
 Max Uplift All uplift 100 lb or less at joint(s) 18, 26, 27, 28, 29, 30, 24, 23, 22, 21, 20 except 32=-112(LC 6), 31=-136(LC 10), 19=-123(LC 11)  
 Max Grav All reactions 250 lb or less at joint(s) 32, 18, 25, 26, 27, 28, 29, 30, 31, 24, 23, 22, 21, 20, 19

**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; TC DL=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 2-4-0, Exterior(2) 2-4-0 to 6-0-0, Corner(3) 6-0-0 to 12-0-0, Exterior(2) 12-0-0 to 15-8-0, Corner(3) 15-8-0 to 18-10-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 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, with BCDL = 10.0psf.
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 18, 26, 27, 28, 29, 30, 24, 23, 22, 21, 20 except (jt=lb) 32=112, 31=136, 19=123.



Job 20073751	Truss BGR	Truss Type COMMON GIRDER	Qty 1	Ply 3	NOF-12 Job Reference (optional)	I41958168
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The Building Center, Gastonia, NC - 28052,

8.410 s May 22 2020 MiTek Industries, Inc. Wed Jul 8 16:50:35 2020 Page 1

ID:G4DIX3tYDbebuPVeySUXPwz3kvX-tewo5Jenv3fp3\_fJvUUCvTyPwNML9yIX8ozjFz\_3hl



5x8 ||

Scale = 1:51.3

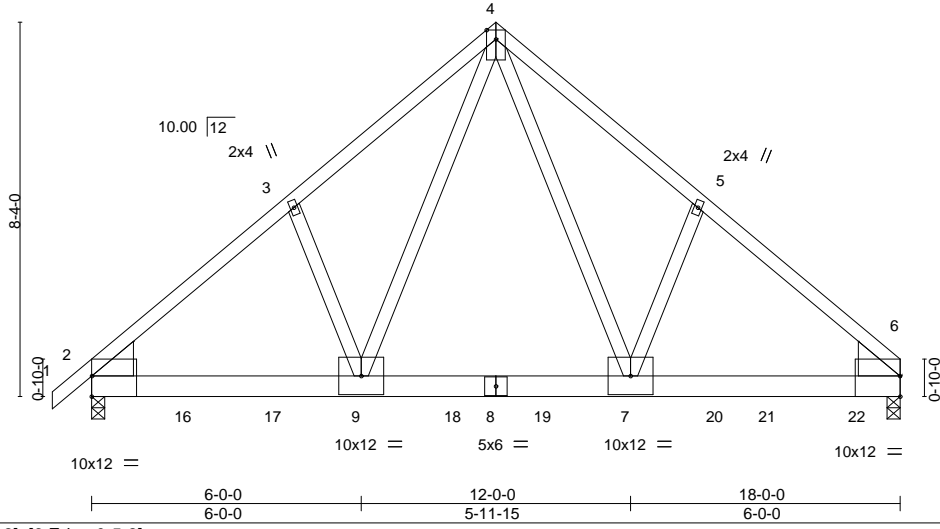


Plate Offsets (X,Y)--	[2:Edge,0-5-8], [6:Edge,0-5-8]
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<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL 1.15	TC 0.47	Vert(LL) -0.10 7-9 >999 360	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.97	Vert(CT) -0.19 7-9 >999 240		
BCLL 0.0 *	Rep Stress Incr NO	WB 0.87	Horz(CT) 0.02 6 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-MSH		Weight: 368 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3	
WEDGE	
Left: 2x10 SP No.2 , Right: 2x10 SP No.2	

**REACTIONS.** (size) 2=0-3-8, 6=0-3-8  
 Max Horz 2=161(LC 24)  
 Max Uplift 2=-701(LC 8), 6=-811(LC 9)  
 Max Grav 2=7493(LC 2), 6=8787(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-8678/826, 3-4=-8564/900, 4-5=-9005/942, 5-6=-9102/865  
 BOT CHORD 2-9=-660/6586, 7-9=-393/4652, 6-7=-619/6937  
 WEBS 4-7=-677/6314, 4-9=-588/5373

**NOTES-**

- 3-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 0-5-0 oc.  
 Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
- 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.
- Unbalanced roof live loads have been considered for this design.
- 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
- The Fabrication Tolerance at joint 2 = 16%, joint 6 = 16%
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=701, 6=811.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1653 lb down and 165 lb up at 2-0-12, 1653 lb down and 165 lb up at 4-0-12, 1640 lb down and 165 lb up at 6-0-12, 1623 lb down and 165 lb up at 8-0-12, 1623 lb down and 165 lb up at 10-0-12, 1639 lb down and 165 lb up at 11-10-12, 1653 lb down and 165 lb up at 13-10-12, and 1655 lb down and 165 lb up at 15-0-12, and 1656 lb down and 164 lb up at 17-0-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

**LOAD CASE(S)** Standard



Continued on page 2

<p><b>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.</b></p> <p>Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see <b>ANSI/TP1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information</b> available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601</p>	<p><b>ENGINEERING BY</b>  <b>TRENCO</b>  <small>A MiTek Affiliate</small></p> <p>818 Soundside Road        Edenton, NC 27932</p>
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Job 20073751	Truss BGR	Truss Type COMMON GIRDER	Qty 1	Ply <b>3</b>	NOF-12 Job Reference (optional)	I41958168
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The Building Center, Gastonia, NC - 28052,

8.410 s May 22 2020 MiTek Industries, Inc. Wed Jul 8 16:50:35 2020 Page 2  
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**LOAD CASE(S)** Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (plf)

Vert: 1-4=-60, 4-6=-60, 10-13=-20

Concentrated Loads (lb)

Vert: 7=-1571(F) 9=-1571(F) 16=-1571(F) 17=-1571(F) 18=-1571(F) 19=-1571(F) 20=-1571(F) 21=-1572(F) 22=-1572(F)

**WARNING** - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

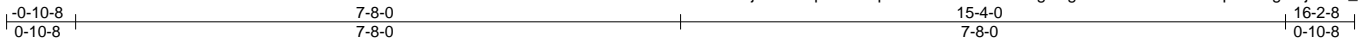
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



818 Soundside Road  
Edenton, NC 27932



Job 20073751	Truss C	Truss Type COMMON	Qty 2	Ply 1	NOF-12	I41958169
The Building Center, Gastonia, NC - 28052,					8.410 s May 22 2020 MiTek Industries, Inc. Wed Jul 8 16:50:36 2020 Page 1	
					Job Reference (optional) ID:fZojtr5nXcSpaQ18fJplGDz3kwY-LrTAJffPgNngh8EVTB?RShUY4npwua8gNSjG8hz_3hH	



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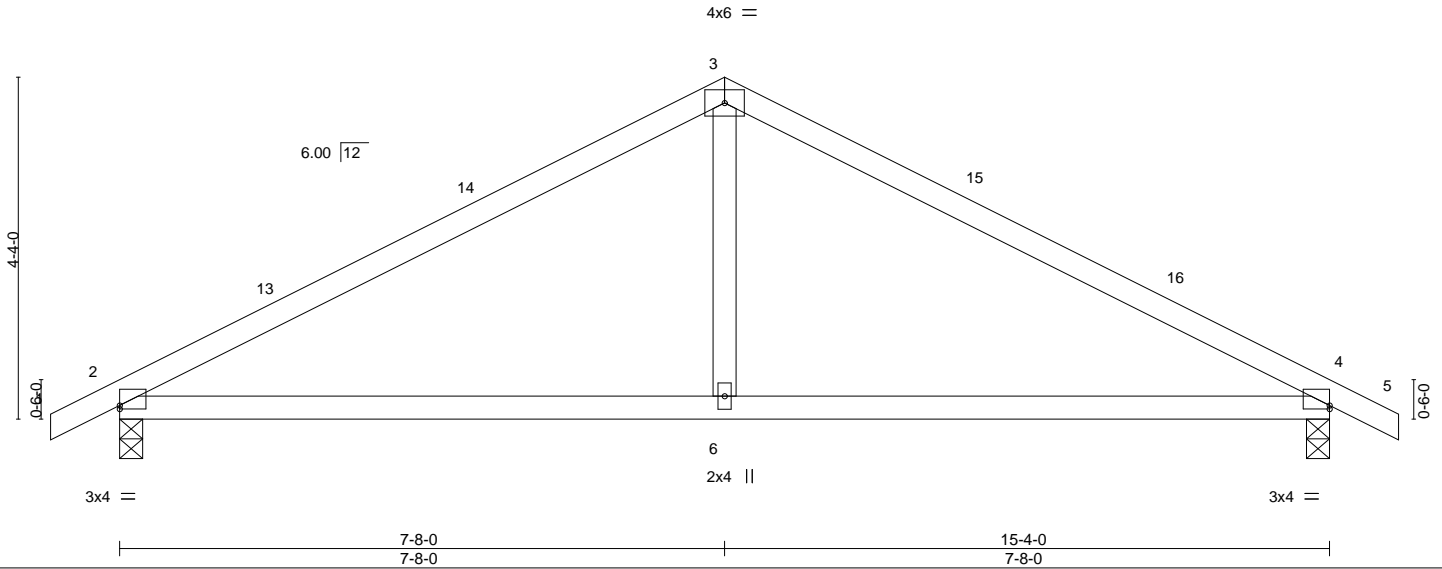


Plate Offsets (X,Y)--	[2:0-0-0,0-0-9], [4:0-0-0,0-0-9]
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LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.64	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.57	Vert(LL) -0.08 6-9 >999 360		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.13	Vert(CT) -0.15 6-9 >999 240		
BCDL 10.0	Rep Stress Incr YES	Matrix-AS	Horz(CT) 0.02 2 n/a n/a		
	Code IRC2015/TPI2014			Weight: 57 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied.
WEBS 2x4 SP No.3	

**REACTIONS.** (size) 2=0-3-8, 4=0-3-8  
 Max Horz 2=-58(LC 11)  
 Max Uplift 2=-71(LC 10), 4=-71(LC 11)  
 Max Grav 2=666(LC 1), 4=666(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-853/145, 3-4=-853/145  
 BOT CHORD 2-6=-27/678, 4-6=-27/678  
 WEBS 3-6=0/341

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TC DL=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 4-8-0, Exterior(2) 4-8-0 to 10-8-0, Interior(1) 10-8-0 to 13-2-8, Exterior(2) 13-2-8 to 16-2-8 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
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* 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.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 4.
  - 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.



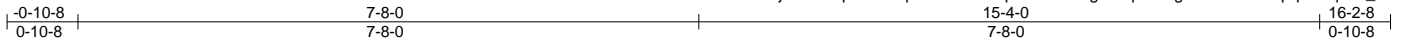
July 9,2020

<p><b>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.</b></p> <p>Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see <b>ANSI/TP1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information</b> available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601</p>	<p>818 Soundside Road Edenton, NC 27932</p>
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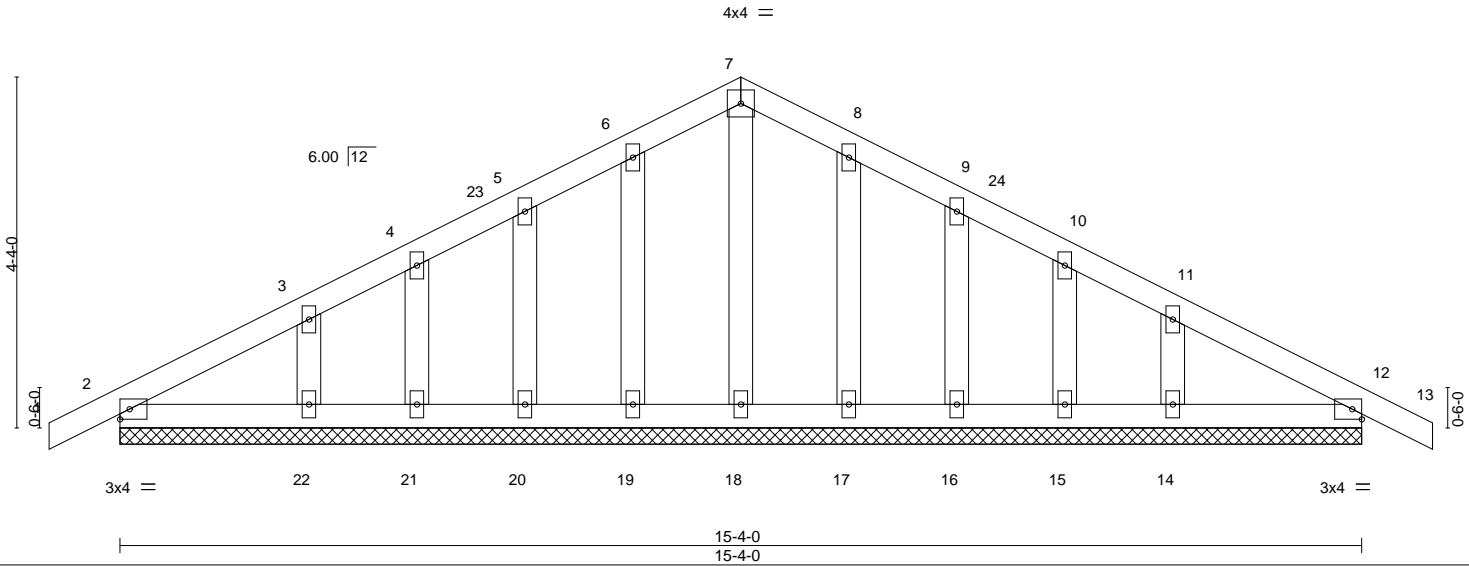
Job 20073751	Truss CGE	Truss Type COMMON SUPPORTED GAB	Qty 1	Ply 1	NOF-12	I41958170
					Job Reference (optional)	

The Building Center, Gastonia, NC - 28052,

8.410 s May 22 2020 MiTek Industries, Inc. Wed Jul 8 16:50:37 2020 Page 1  
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Scale = 1:28.5



<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>	
TCLL 20.0	Plate Grip DOL	1.15	TC 0.05	Vert(LL)	-0.00	12	n/r	120	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.04	Vert(CT)	0.00	12	n/r	90		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.04	Horz(CT)	0.00	12	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S						Weight: 82 lb	FT = 20%

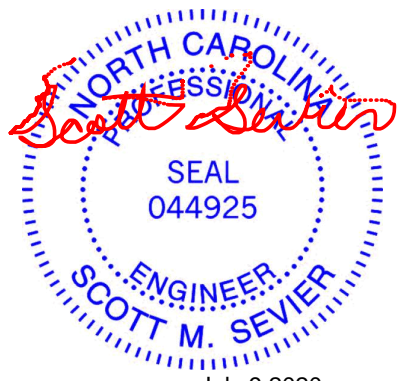
<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS 2x4 SP No.3	

**REACTIONS.** All bearings 15-4-0.  
 (lb) - Max Horz 2=-58(LC 11)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 12, 19, 20, 21, 22, 17, 16, 15, 14  
 Max Grav All reactions 250 lb or less at joint(s) 2, 12, 18, 19, 20, 21, 22, 17, 16, 15, 14

**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; TC DL=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 2-4-0, Exterior(2) 2-4-0 to 4-8-0, Corner(3) 4-8-0 to 10-8-0, Exterior(2) 10-8-0 to 13-0-0, Corner(3) 13-0-0 to 16-2-8 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.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 12, 19, 20, 21, 22, 17, 16, 15, 14.
- 10) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 12.



Job 20073751	Truss CGR	Truss Type COMMON GIRDER	Qty 1	Ply 3	NOF-12	141958171
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The Building Center, Gastonia, NC - 28052,

8.410 s May 22 2020 MiTek Industries, Inc. Wed Jul 8 16:50:39 2020 Page 1  
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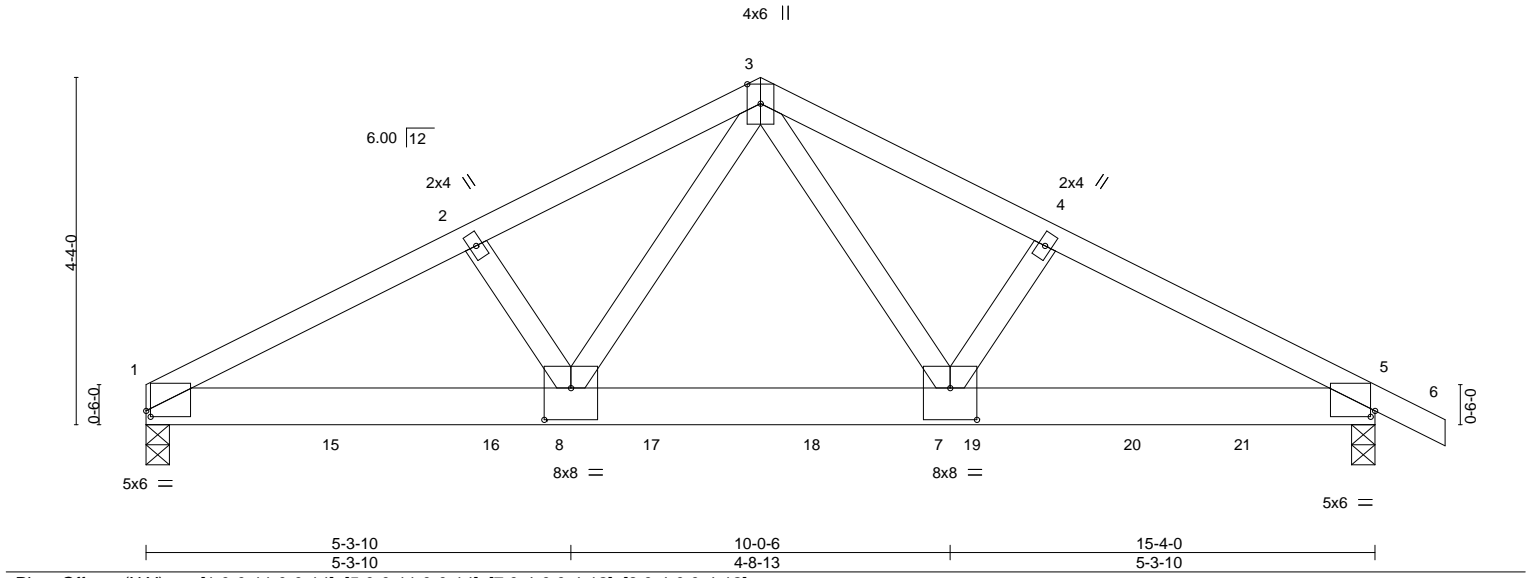


Plate Offsets (X,Y)-- [1:0-0-11,0-0-14], [5:0-0-11,0-0-14], [7:0-4-0,0-4-12], [8:0-4-0,0-4-12]

<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL	1.15	TC 0.53	Vert(LL)	-0.09	7-8	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.60	Vert(CT)	-0.16	7-8	>999		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.79	Horz(CT)	0.03	5	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MSH						
								Weight: 247 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x6 SP DSS	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3	

**REACTIONS.** (size) 1=0-3-8, 5=0-3-8  
 Max Horz 1=-64(LC 28)  
 Max Uplift 1=-742(LC 8), 5=-728(LC 9)  
 Max Grav 1=7565(LC 2), 5=7107(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-2=-10859/1097, 2-3=-10767/1105, 3-4=-11003/1135, 4-5=-11105/1127  
 BOT CHORD 1-8=-988/9711, 7-8=-650/6862, 5-7=-958/9933  
 WEBS 3-7=-604/5751, 4-7=-264/110, 3-8=-550/5344

- NOTES-**
- 3-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 0-4-0 oc.  
 Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
  - 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.
  - Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TC DL=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
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* 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.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 1=742, 5=728.
  - Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1660 lb down and 159 lb up at 0-4-12, 1654 lb down and 165 lb up at 2-4-12, 1707 lb down and 183 lb up at 4-4-12, 1707 lb down and 183 lb up at 6-4-12, 1707 lb down and 183 lb up at 8-4-12, 1707 lb down and 183 lb up at 10-4-12, and 1707 lb down and 183 lb up at 12-4-12, and 1707 lb down and 183 lb up at 13-9-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

**LOAD CASE(S)** Standard  
 1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15  
 Uniform Loads (plf)  
 Vert: 1-3=-60, 3-6=-60, 9-12=-20



Continued on page 2

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**  
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

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

Job 20073751	Truss CGR	Truss Type COMMON GIRDER	Qty 1	Ply <b>3</b>	NOF-12 Job Reference (optional)	I41958171
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The Building Center, Gastonia, NC - 28052,

8.410 s May 22 2020 MiTek Industries, Inc. Wed Jul 8 16:50:39 2020 Page 2  
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**LOAD CASE(S)** Standard

Concentrated Loads (lb)

Vert: 11=-1578(B) 15=-1572(B) 16=-1634(B) 17=-1634(B) 18=-1634(B) 19=-1634(B) 20=-1634(B) 21=-1634(B)

**WARNING** - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TP1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

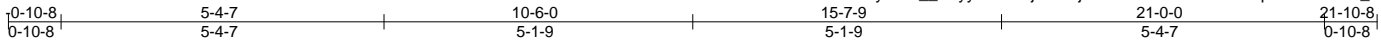


818 Soundside Road  
Edenton, NC 27932

Job 20073751	Truss F	Truss Type COMMON	Qty 5	Ply 1	NOF-12	141958172
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The Building Center, Gastonia, NC - 28052,

8.410 s May 22 2020 MiTek Industries, Inc. Wed Jul 8 16:50:40 2020 Page 1  
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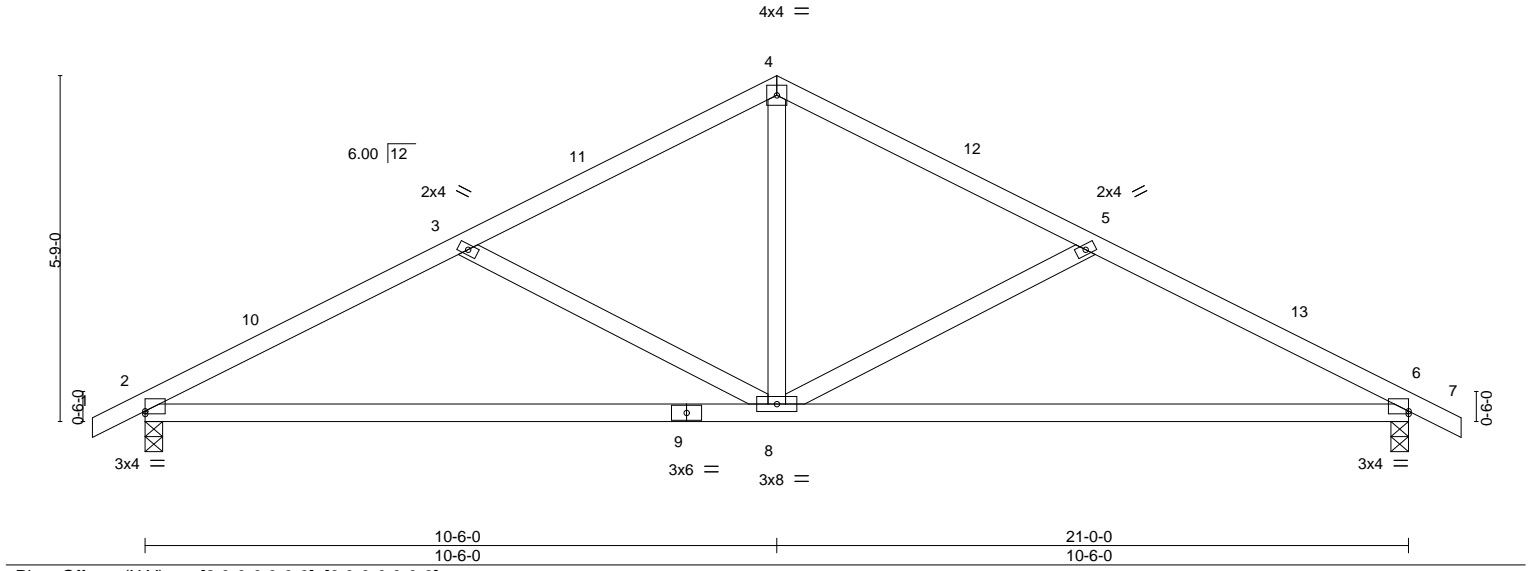


Plate Offsets (X,Y)--	[2:0-0-0,0-0-9], [6:0-0-0,0-0-9]
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LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.38	Vert(LL)	-0.24	2-8	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.84	Vert(CT)	-0.49	2-8	>503		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.24	Horz(CT)	0.04	6	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S					Weight: 94 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 4-7-5 oc purlins.
BOT CHORD 2x4 SP No.2 *Except* 6-9: 2x4 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3	

**REACTIONS.** (size) 2=0-3-8, 6=0-3-8  
 Max Horz 2=78(LC 14)  
 Max Uplift 2=93(LC 10), 6=93(LC 11)  
 Max Grav 2=890(LC 1), 6=890(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1341/198, 3-4=-1018/147, 4-5=-1018/147, 5-6=-1340/199  
 BOT CHORD 2-8=-154/1138, 6-8=-106/1137  
 WEBS 4-8=-5/598, 5-8=-355/179, 3-8=-357/179

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - 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 7-6-0, Exterior(2) 7-6-0 to 13-6-0, Interior(1) 13-6-0 to 18-10-8, Exterior(2) 18-10-8 to 21-10-8 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
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* 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.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 6.



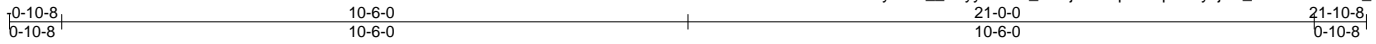
July 9, 2020

<p><b>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.</b></p> <p>Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see <b>ANSI/TP1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information</b> available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601</p>	<p>ENGINEERING BY</p> <p><b>TRENCO</b></p> <p>A MiTek Affiliate</p> <p>818 Soundside Road Edenton, NC 27932</p>
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Job 20073751	Truss FGE	Truss Type COMMON SUPPORTED GAB	Qty 1	Ply 1	NOF-12	141958173
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The Building Center, Gastonia, NC - 28052,

8.410 s May 22 2020 MiTek Industries, Inc. Wed Jul 8 16:50:42 2020 Page 1  
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Scale = 1:38.6

Plate Offsets (X,Y)--	[26:0-3-0,0-1-4]				
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL 1.15	TC 0.06	Vert(LL) 0.00 16 n/r 120	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.04	Vert(CT) 0.00 16 n/r 90		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.05	Horz(CT) 0.00 16 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-S		Weight: 128 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 21-0-0.  
(lb) - Max Horz 2=78(LC 10)  
Max Uplift All uplift 100 lb or less at joint(s) 2, 25, 27, 28, 29, 30, 31, 23, 22, 21, 20, 19, 18, 16  
Max Grav All reactions 250 lb or less at joint(s) 2, 24, 25, 27, 28, 29, 30, 31, 23, 22, 21, 20, 19, 18, 16

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

**NOTES-**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCCL=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 7-6-0, Corner(3) 7-6-0 to 13-6-0, Exterior(2) 13-6-0 to 18-10-8, Corner(3) 18-10-8 to 21-10-8 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
- 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.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 1-4-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 25, 27, 28, 29, 30, 31, 23, 22, 21, 20, 19, 18, 16.
- Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 16.



July 9, 2020

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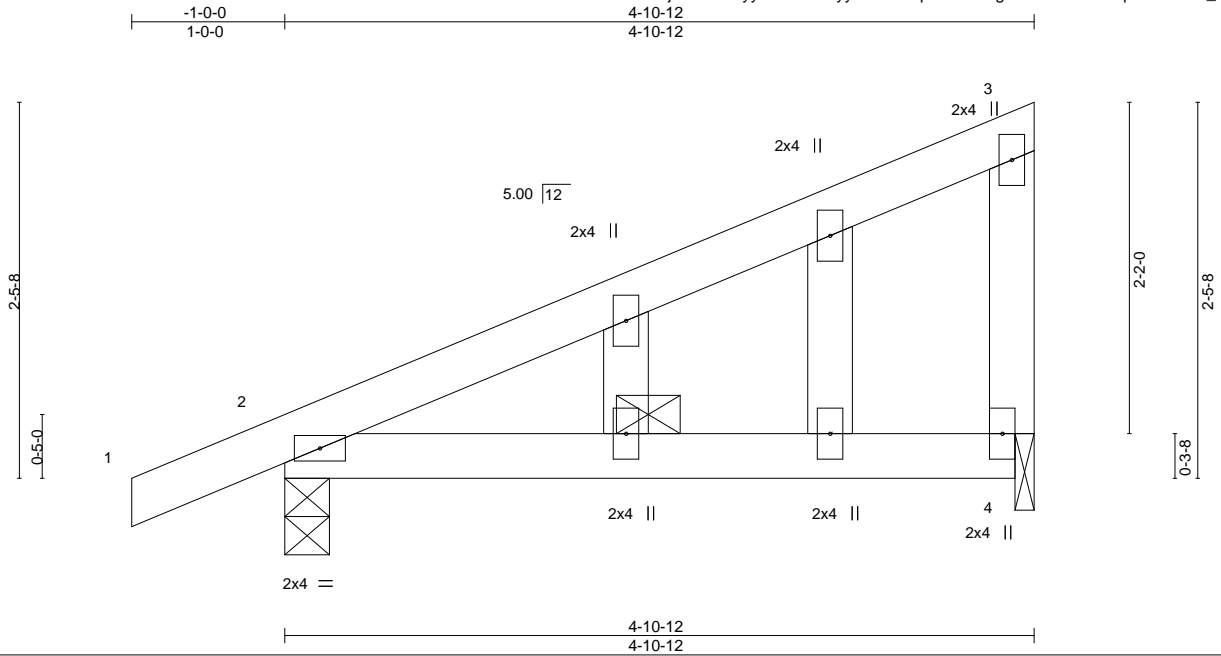


Job 20073751	Truss HGE	Truss Type GABLE	Qty 2	Ply 1	NOF-12	I41958175
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The Building Center, Gastonia, NC - 28052,

8.410 s May 22 2020 MiTek Industries, Inc. Wed Jul 8 16:50:43 2020 Page 1

ID:PVc7jxLhoWfMyvzbNFxcRyyo1P-eBPpn2ko0Wfg1DGrN9d4E9HqYbHW1nui\_1v8unz\_3hA



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

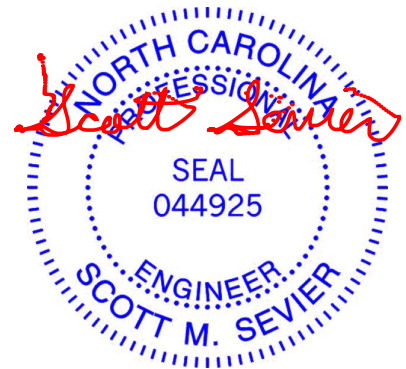
**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied, except end verticals.  
 BOT CHORD 3-0-0 oc bracing.

**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.



July 9,2020

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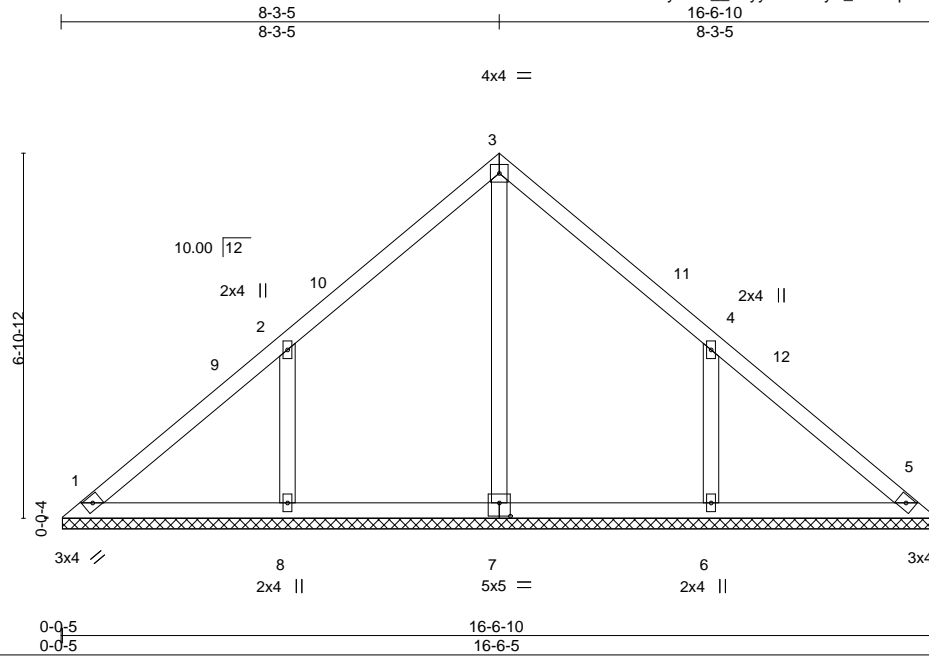


Job 20073751	Truss V1	Truss Type Valley Truss	Qty 1	Ply 1	NOF-12	I41958176
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The Building Center, Gastonia, NC - 28052,

8.410 s May 22 2020 MiTek Industries, Inc. Wed Jul 8 16:50:44 2020 Page 1

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Scale = 1:43.5

Plate Offsets (X,Y)--	[7:0-2-8,0-3-0]				
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL 1.15	TC 0.23	Vert(LL) n/a - n/a 999	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.18	Vert(CT) n/a - n/a 999		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.12	Horz(CT) 0.00 5 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-S		Weight: 73 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 16-6-0.  
(lb) - Max Horz 1=-133(LC 6)  
Max Uplift All uplift 100 lb or less at joint(s) 1 except 8=-161(LC 10), 6=-161(LC 11)  
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 7=358(LC 20), 8=450(LC 17), 6=450(LC 18)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
**WEBS** 2-8=-297/198, 4-6=-296/198

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - 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) 0-4-13 to 3-4-13, Interior(1) 3-4-13 to 5-3-5, Exterior(2) 5-3-5 to 11-3-5, Interior(1) 11-3-5 to 13-1-12, Exterior(2) 13-1-12 to 16-1-12 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
  - Gable requires continuous bottom chord bearing.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* 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.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1 except (it=lb) 8=161, 6=161.



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**  
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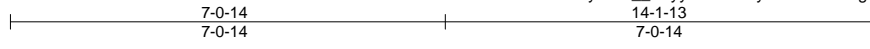
ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate  
818 Soundside Road  
Edenton, NC 27932

Job 20073751	Truss V2	Truss Type Valley Truss	Qty 1	Ply 1	NOF-12	141958177
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The Building Center, Gastonia, NC - 28052,

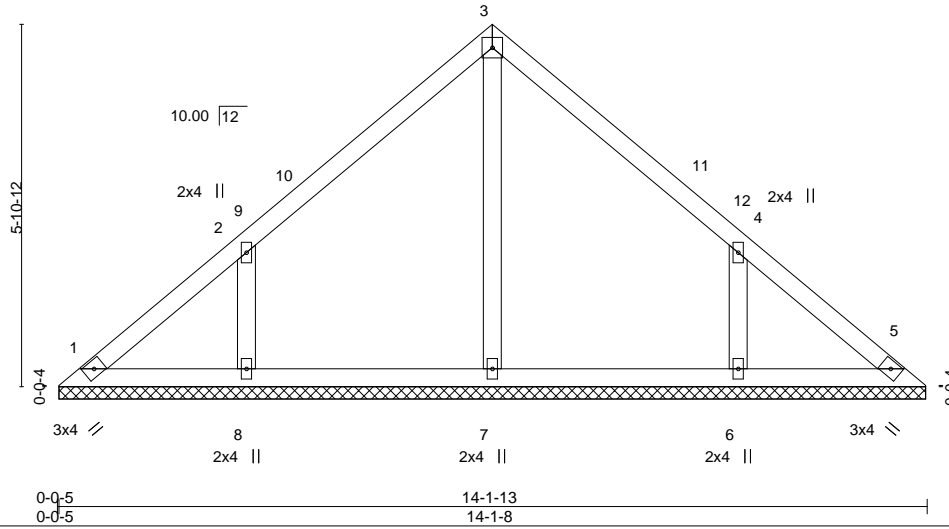
8.410 s May 22 2020 MiTek Industries, Inc. Wed Jul 8 16:50:46 2020 Page 1

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4x4 =

Scale = 1:37.5



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 0.18	Vert(LL)	n/a	-	n/a	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.12	Vert(CT)	n/a	-	n/a		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.10	Horz(CT)	0.00	5	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S					Weight: 61 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 14-1-3.  
 (lb) - Max Horz 1=-112(LC 6)  
 Max Uplift All uplift 100 lb or less at joint(s) 1 except 8=-139(LC 10), 6=-139(LC 11)  
 Max Grav All reactions 250 lb or less at joint(s) 1, 5, 7 except 8=334(LC 17), 6=334(LC 18)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
**WEBS** 2-8=-258/174, 4-6=-258/174

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TC DL=5.0psf; BCDL=5.0psf; h=35ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-4-13 to 3-4-13, Interior(1) 3-4-13 to 4-0-14, Exterior(2) 4-0-14 to 10-0-14, Interior(1) 10-0-14 to 10-8-15, Exterior(2) 10-8-15 to 13-8-15 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
  - Gable requires continuous bottom chord bearing.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* 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.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1 except (jt=lb) 8=139, 6=139.



July 9, 2020

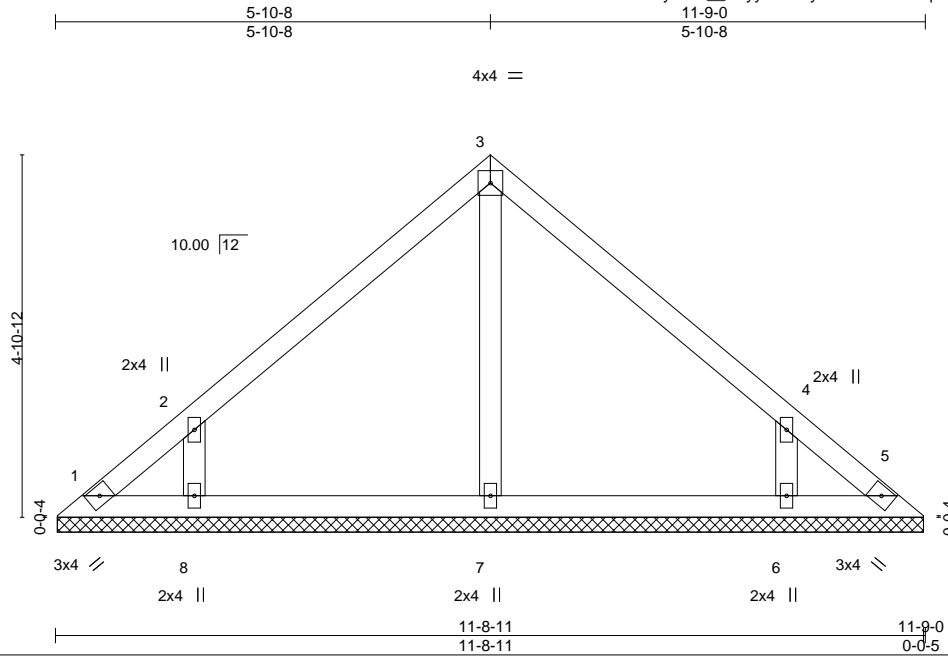
**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**  
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Job 20073751	Truss V3	Truss Type Valley Truss	Qty 1	Ply 1	NOF-12	I41958178
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8.410 s May 22 2020 MiTek Industries, Inc. Wed Jul 8 16:50:47 2020 Page 1  
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Scale = 1:31.1

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 0.19	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.12	Vert(CT)	n/a	-	n/a	999		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.07	Horz(CT)	0.00	5	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S						Weight: 48 lb	FT = 20%

**LUMBER-**  
 TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x4 SP No.2  
 OTHERS 2x4 SP No.3

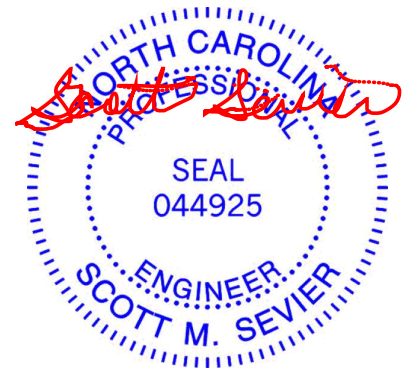
**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** All bearings 11-8-6.  
 (lb) - Max Horz 1=92(LC 6)  
 Max Uplift All uplift 100 lb or less at joint(s) 1, 5 except 8=133(LC 10), 6=132(LC 11)  
 Max Grav All reactions 250 lb or less at joint(s) 1, 5, 7 except 8=309(LC 17), 6=309(LC 18)

**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, 5 except (jt=lb) 8=133, 6=132.



July 9, 2020

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



818 Soundside Road  
 Edenton, NC 27932

Job 20073751	Truss V4	Truss Type Valley Truss	Qty 1	Ply 1	NOF-12	I41958179
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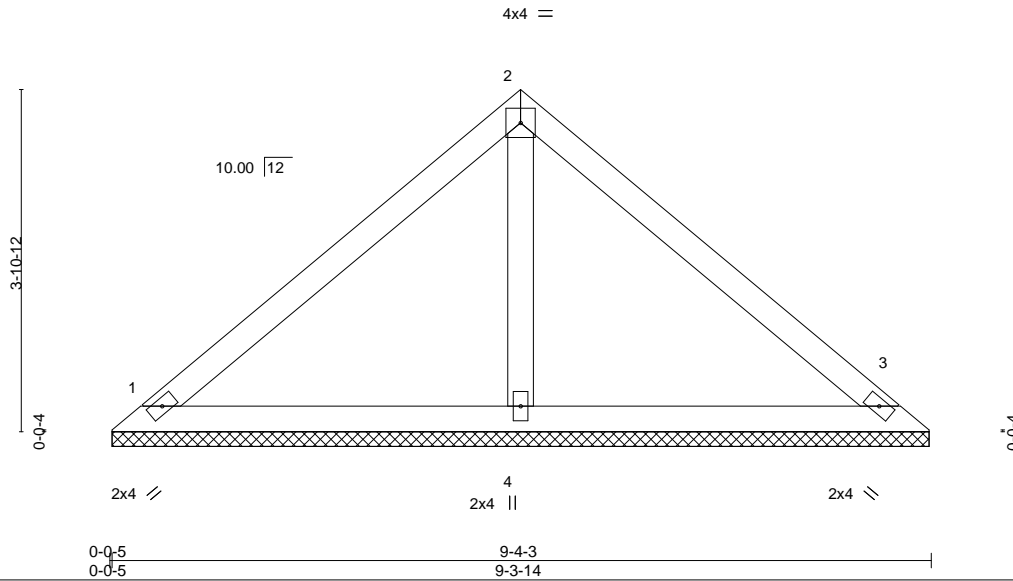
The Building Center, Gastonia, NC - 28052,

8.410 s May 22 2020 MiTek Industries, Inc. Wed Jul 8 16:50:47 2020 Page 1

ID:X0u1ROVrkWHW0yPTrc\_eByyo1C-XyeKdQnJ4IA6Vqadc?i0P?SWDCfVza?IvftM1Yz\_3h6



Scale = 1:26.2



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.26	Vert(LL)	n/a	-	n/a	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.18	Vert(CT)	n/a	-	n/a		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.06	Horz(CT)	0.00	3	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S					Weight: 35 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=9-3-10, 3=9-3-10, 4=9-3-10  
 Max Horz 1=72(LC 7)  
 Max Uplift 1=-23(LC 11), 3=-32(LC 11), 4=-3(LC 10)  
 Max Grav 1=181(LC 1), 3=181(LC 1), 4=322(LC 1)

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

**NOTES-**

- Unbalanced roof live loads have been considered for this design.
- 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
- Gable requires continuous bottom chord bearing.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3, 4.



July 9, 2020

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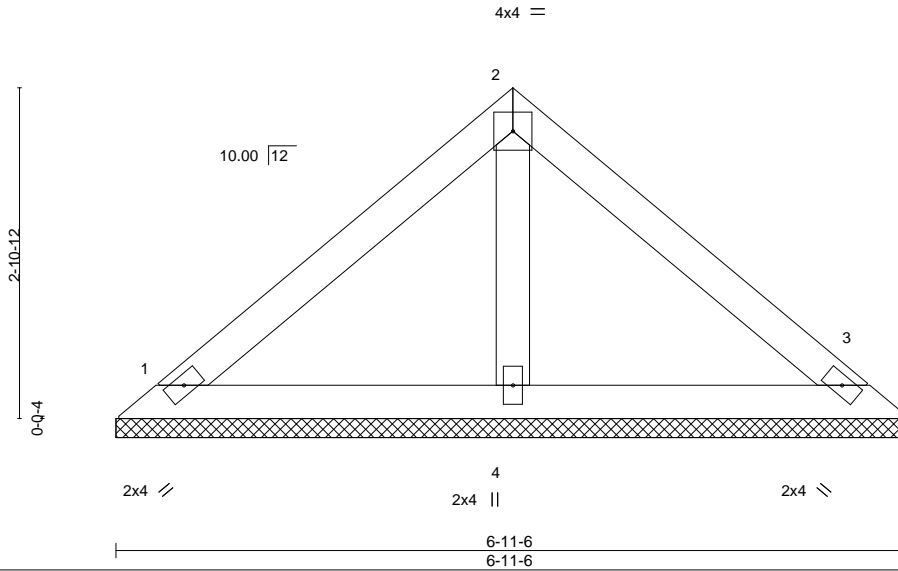
Job 20073751	Truss V5	Truss Type GABLE	Qty 1	Ply 1	NOF-12	I41958180
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The Building Center, Gastonia, NC - 28052,

8.410 s May 22 2020 MiTek Industries, Inc. Wed Jul 8 16:50:48 2020 Page 1  
ID:X0u1ROVrkWHW0yPTrc\_eByyo1C-?8Ciqmoxr3lz7\_9pAIDFxD\_jEc06i1gr7Jdva?z\_3h5



Scale = 1:20.2



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.18	Vert(LL)	n/a	-	n/a	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.10	Vert(CT)	n/a	-	n/a		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.03	Horz(CT)	0.00	3	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-P					Weight: 26 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=6-11-6, 3=6-11-6, 4=6-11-6  
Max Horz 1=52(LC 7)  
Max Uplift 1=24(LC 11), 3=30(LC 11)  
Max Grav 1=141(LC 1), 3=141(LC 1), 4=210(LC 1)

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

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TC DL=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
  - Gable requires continuous bottom chord bearing.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* 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.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.



July 9, 2020

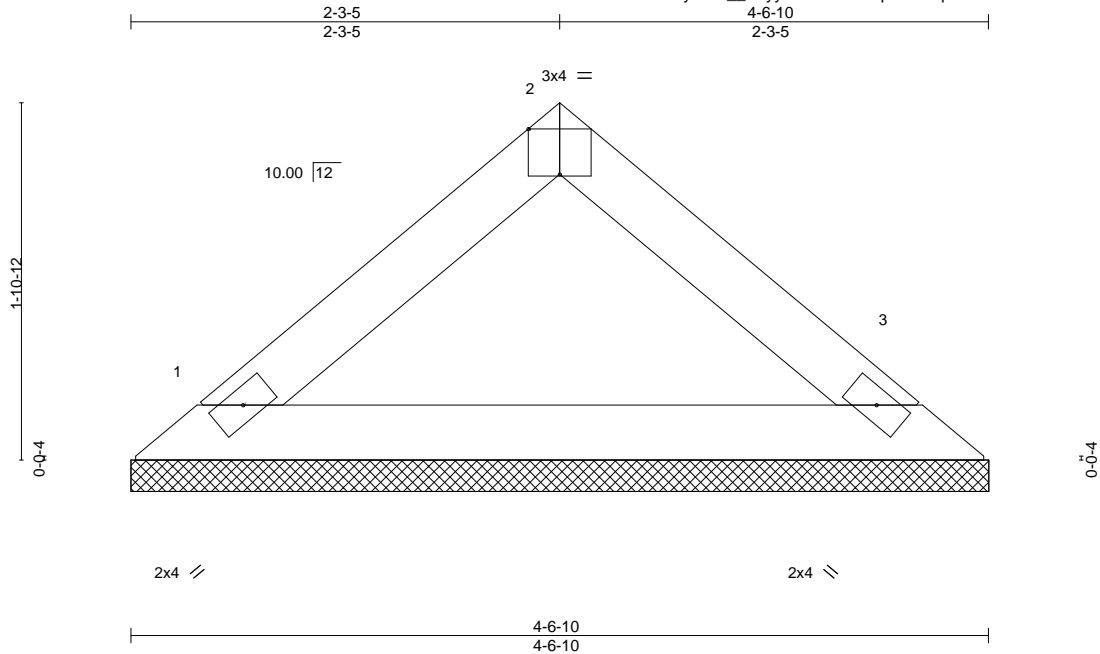
Job 20073751	Truss V6	Truss Type GABLE	Qty 1	Ply 1	NOF-12	I41958181
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8.410 s May 22 2020 MiTek Industries, Inc. Wed Jul 8 16:50:49 2020 Page 1

ID:X0u1ROVrkWHW0yPTrc\_eByyo1C-TLm426pZcMQqI8k?kQkUUQXwo0LARUNbMzMT6Rz\_3h4

Job Reference (optional)



Scale = 1:12.2

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.06	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.17	Vert(LL) n/a - n/a		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.00	Vert(CT) n/a - n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-P	Horz(CT) 0.00 3 n/a n/a		
	Code IRC2015/TPI2014			Weight: 14 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 4-6-10 oc purlins.  
 BOT CHORD Rigid ceiling applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 1=4-6-10, 3=4-6-10  
 Max Horz 1=32(LC 9)  
 Max Uplift 1=-11(LC 10), 3=-11(LC 11)  
 Max Grav 1=150(LC 1), 3=150(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.



July 9,2020

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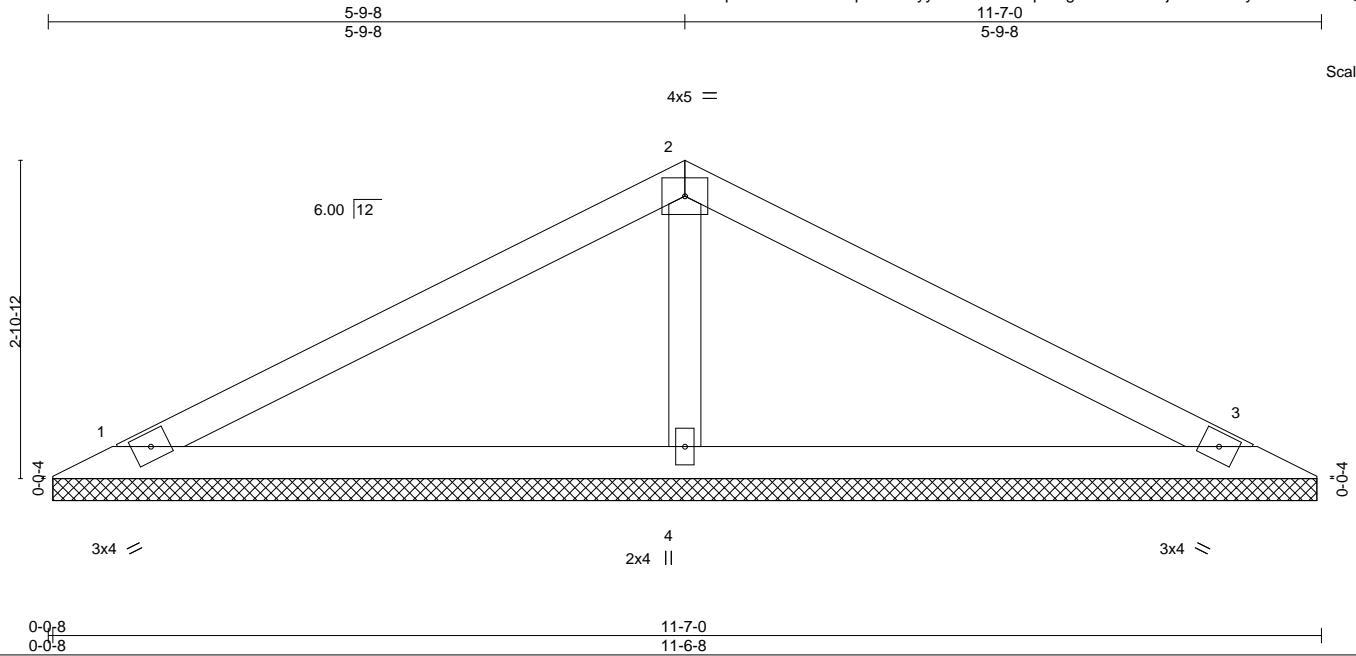


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Job 20073751	Truss V7	Truss Type Valley	Qty 1	Ply 1	NOF-12	I41958182
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8.410 s May 22 2020 MiTek Industries, Inc. Wed Jul 8 16:50:50 2020 Page 1  
ID:3pLfe2VCzC9fOoqHluSl5zyyo1D-xXKTFRpBNgYhNIJBH7Gj0e30WQeyAwakbd60etz\_3h3



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 0.38	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.26	Vert(CT)	n/a	-	n/a	999		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.07	Horz(CT)	0.00	3	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S						Weight: 38 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS 2x4 SP No.3	

**REACTIONS.** (size) 1=11-6-0, 3=11-6-0, 4=11-6-0  
 Max Horz 1=35(LC 10)  
 Max Uplift 1=-30(LC 10), 3=-37(LC 11), 4=-15(LC 10)  
 Max Grav 1=190(LC 21), 3=190(LC 22), 4=449(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
**WEBS** 2-4=-298/126

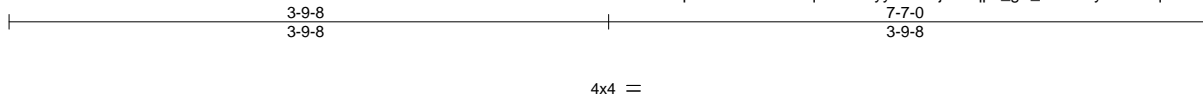
- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=35ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
  - Gable requires continuous bottom chord bearing.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* 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.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3, 4.



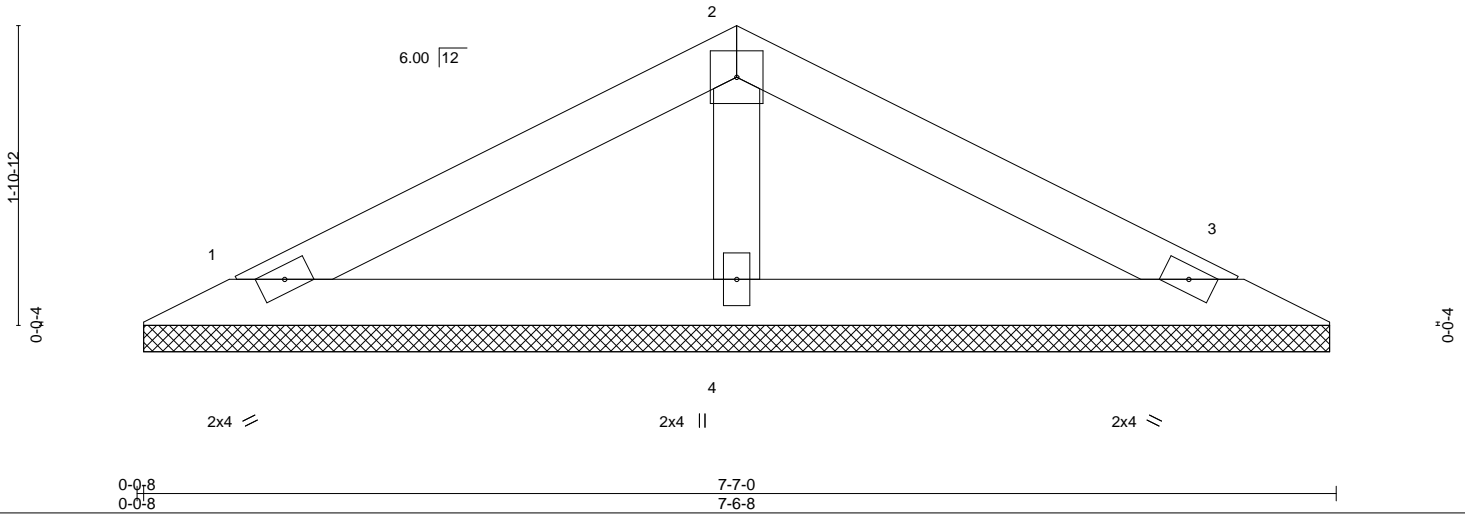
Job 20073751	Truss V8	Truss Type Valley	Qty 1	Ply 1	NOF-12	I41958183
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The Building Center, Gastonia, NC - 28052,

8.410 s May 22 2020 MiTek Industries, Inc. Wed Jul 8 16:50:51 2020 Page 1  
ID:3pLFE2VCzC9fOoqHluSl5zyyo1D-PjtrSnqp8\_gX\_SuOrnyZrcDMq1lvOLupHrZAJz\_3h2



Scale = 1:14.6



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 0.18	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.10	Vert(CT)	n/a	-	n/a	999		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.03	Horz(CT)	0.00	3	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-P						Weight: 24 lb	FT = 20%

**LUMBER-**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
OTHERS 2x4 SP No.3

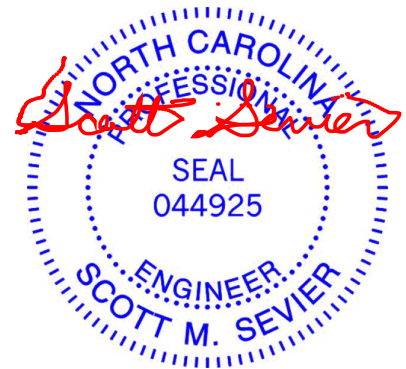
**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 1=7-6-0, 3=7-6-0, 4=7-6-0  
Max Horz 1=-22(LC 15)  
Max Uplift 1=-24(LC 10), 3=-28(LC 11)  
Max Grav 1=128(LC 1), 3=128(LC 1), 4=249(LC 1)

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

**NOTES-**

- Unbalanced roof live loads have been considered for this design.
- 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
- Gable requires continuous bottom chord bearing.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.



July 9,2020

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



# Symbols

## PLATE LOCATION AND ORIENTATION



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



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



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

\* Plate location details available in **MITek 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



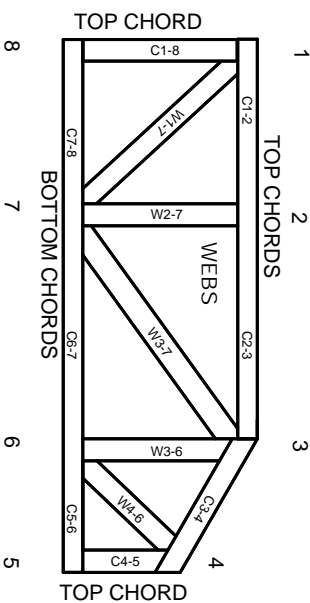
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

## Industry Standards:

ANSI/TP1: National Design Specification for Metal Plate Connected Wood Truss Construction.  
DSB-89: Design Standard for Bracing, 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)



**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/TP1 section 6.3 These truss designs rely on lumber values established by others.

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MITek Engineering Reference Sheet: Mill-7473 rev. 5/19/2020



# General Safety Notes

## Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative 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/TP1 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TP1 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/TP1 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.