

Trenco  
818 Soundside Rd  
Edenton, NC 27932

Re: 23574A  
240.2596.B.12x12

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by 84 Components - #2383.

Pages or sheets covered by this seal: I41752138 thru I41752158

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

North Carolina COA: C-0844



June 23, 2020

Sevier, Scott

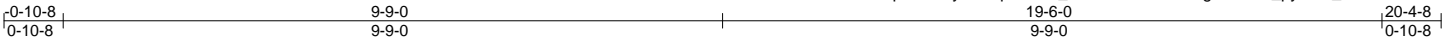
**IMPORTANT NOTE:** The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), 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 23574A	Truss AE	Truss Type COMMON SUPPORTED GAB	Qty 1	Ply 1	240.2596.B.12x12	I41752138
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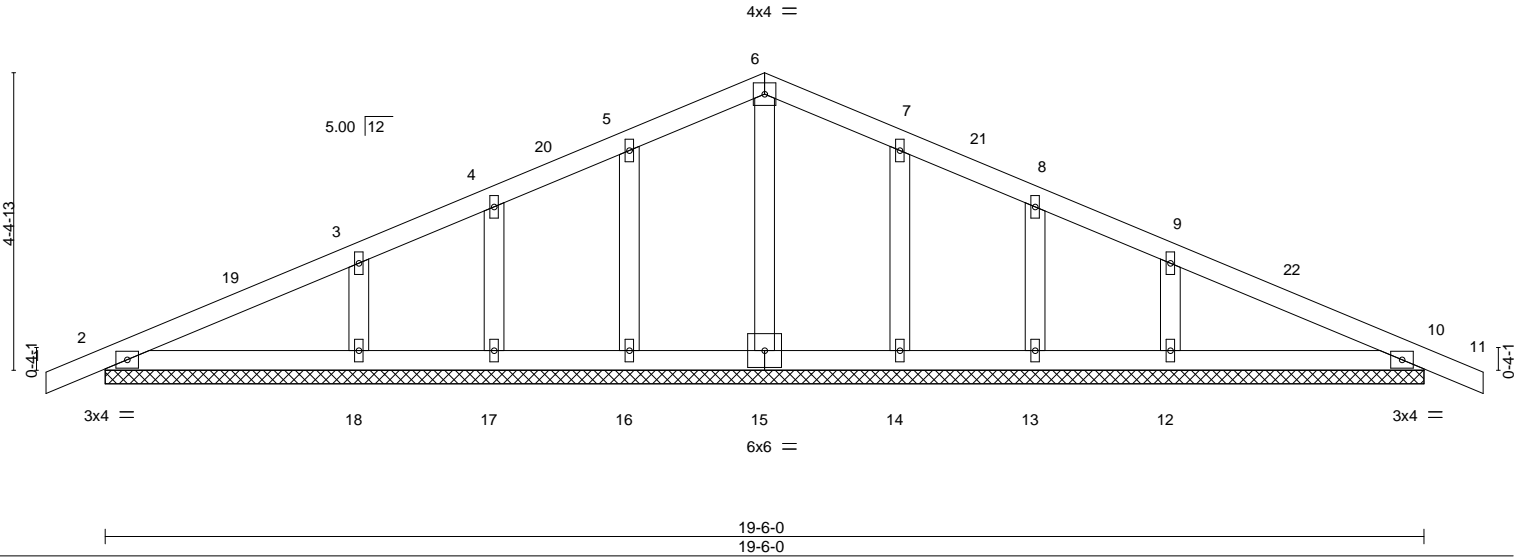
84 Components (Dunn), Dunn, NC - 28334,

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 22 15:48:14 2020 Page 1

ID:IRUvu6CsEmxbTOsip7BE4uyZSNq-aaw24\_OWNQNe1KenEagllLFix9S\_pyONs\_7UNSZ3hBI



Scale = 1:34.1



<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 0.15	Vert(LL)	0.00 11	n/r	120	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.10	Vert(TL)	0.01 11	n/r	120		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.04	Horz(TL)	0.00 10	n/a	n/a		
BCDL 10.0	Code	IRC2012/TPI2007	Matrix-S					Weight: 89 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 19-6-0.  
(lb) - Max Horz 2=74(LC 12)  
Max Uplift All uplift 100 lb or less at joint(s) 2, 16, 17, 18, 14, 13, 12, 10  
Max Grav All reactions 250 lb or less at joint(s) 2, 15, 16, 17, 14, 13, 10 except 18=293(LC 23), 12=293(LC 24)

**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=130mph (3-second gust) V(IRC2012)=103mph; TC DL=6.0psf; BCDL=6.0psf; h=30ft; 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 9-9-0, Corner(3) 9-9-0 to 12-9-0, Exterior(2) 12-9-0 to 20-4-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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 1.5x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 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 where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 16, 17, 18, 14, 13, 12, and 10. This connection is for uplift only and does not consider lateral forces.



June 23, 2020

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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, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



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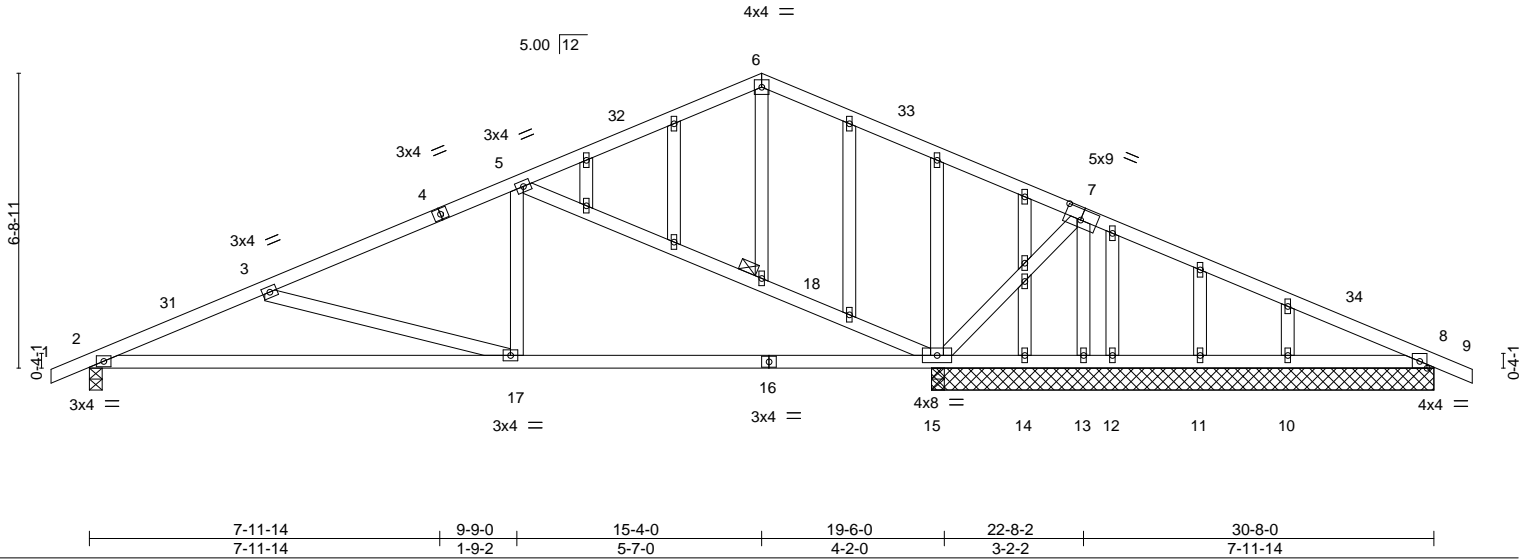
Job 23574A	Truss BE	Truss Type COMMON STRUCTURAL GA	Qty 1	Ply 1	240.2596.B.12x12	141752139
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84 Components (Dunn), Dunn, NC - 28334, 8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 22 15:48:16 2020 Page 1

ID:IRUvu6CsEmxbTOSip7BE4uyZSNq-Wz2oVgPnv2eMGeo9L?IDnmLsDyz3HiCgJcbRLz3hBj

-0-10-8	4-0-0	7-11-14	9-9-0	15-4-0	22-8-2	30-8-0	31-6-8
0-10-8	4-0-0	3-11-14	1-9-2	5-7-0	7-4-2	7-11-14	0-10-8

Scale = 1:52.6



7-11-14	9-9-0	15-4-0	19-6-0	22-8-2	30-8-0
7-11-14	1-9-2	5-7-0	4-2-0	3-2-2	7-11-14

Plate Offsets (X,Y)-- [7:0-4-8,0-3-0]

<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 0.93	Vert(LL)	-0.18	2-17	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.77	Vert(TL)	-0.47	2-17	>484		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.66	Horz(TL)	0.05	8	n/a		
BCDL 10.0	Code IRC2012/TPI2007		Matrix-S						

Weight: 179 lb FT = 20%

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

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 4-2-13 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
JOINTS 1 Brace at Jt(s): 18

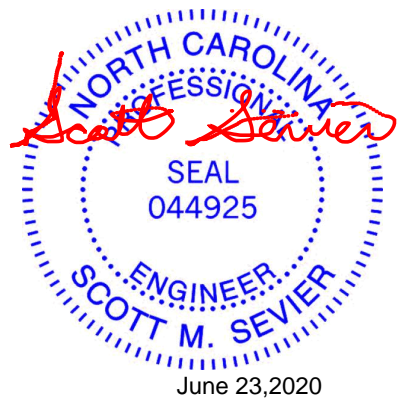
**REACTIONS.** All bearings 11-5-8 except (jt=length) 2=0-3-8.  
(lb) - Max Horz 2=-113(LC 13)  
Max Uplift All uplift 100 lb or less at joint(s) 12, 11, 10, 8 except 2=-157(LC 12), 13=-152(LC 13), 14=-136(LC 3)  
Max Grav All reactions 250 lb or less at joint(s) 12, 11, 10 except 2=930(LC 1), 15=641(LC 3), 15=439(LC 1), 13=777(LC 1), 8=330(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-1771/345, 3-5=-1380/207, 5-6=-481/195, 6-7=-509/183, 7-8=-341/96  
BOT CHORD 2-17=-377/1599, 15-17=-173/1217  
WEBS 7-13=-718/195, 5-18=-926/192, 15-18=-936/194, 5-17=0/466, 3-17=-401/212

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) V(IRC2012)=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; 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 15-4-0, Exterior(2) 15-4-0 to 18-4-0, Interior(1) 18-4-0 to 31-6-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - 4) All plates are 1.5x4 MT20 unless otherwise indicated.
  - 5) Gable studs spaced at 2-0-0 oc.
  - 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 8) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 13, 14, 12, 11, 10, and 8. This connection is for uplift only and does not consider lateral forces.
  - 9) 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: 1-6=-60, 6-9=-60, 2-8=-20, 5-15=-3(F)



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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, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

**ENGINEERING BY**  
**TRENCO**  
A MiTek Affiliate

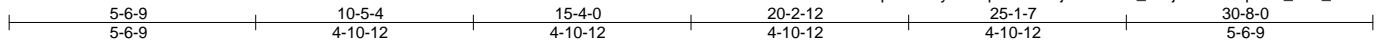
818 Soundside Road  
Edenton, NC 27932

Job 23574A	Truss BG	Truss Type COMMON GIRDER	Qty 1	Ply 3	240.2596.B.12x12	141752140
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84 Components, Dunn, NC 28334

Job Reference (optional)

8.330 s Apr 21 2020 MiTek Industries, Inc. Mon Jun 22 15:57:41 2020 Page 1  
ID:IRUvu6CsEmxbTOSip7BE4uyZSNq-ESvKQvjEok7WV4?\_rP2jmh9ESXipZ99\_rEiz\_msZ3h2u



Scale = 1:51.8

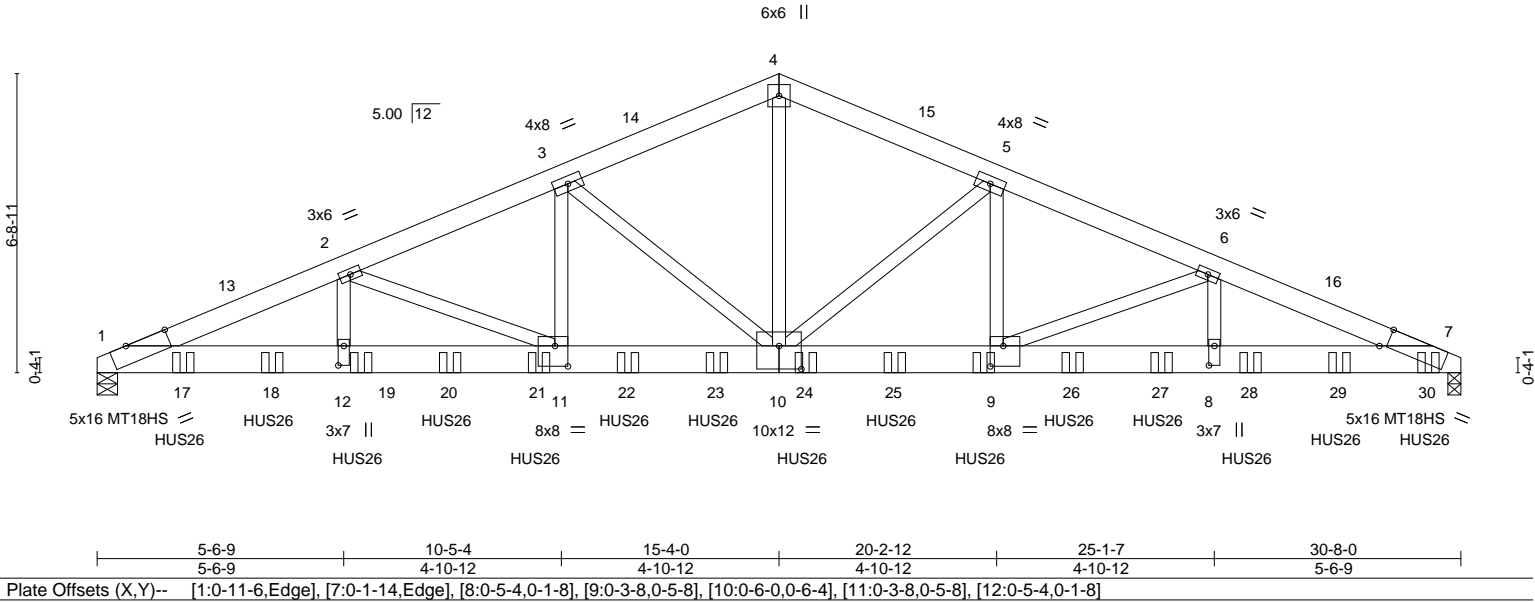


Plate Offsets (X,Y)--	[1:0-11-6,Edge], [7:0-1-14,Edge], [8:0-5-4,0-1-8], [9:0-3-8,0-5-8], [10:0-6-0,0-6-4], [11:0-3-8,0-5-8], [12:0-5-4,0-1-8]				
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL 1.15	TC 0.81	Vert(LL) -0.28 9-10 >999 240	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.75	Vert(TL) -0.70 10-11 >522 180	MT18HS	244/190
BCLL 0.0 *	Rep Stress Incr NO	WB 0.99	Horz(TL) 0.17 7 n/a n/a		
BCDL 10.0	Code IRC2012/TP12007	Matrix-S			
				Weight: 674 lb	FT = 20%

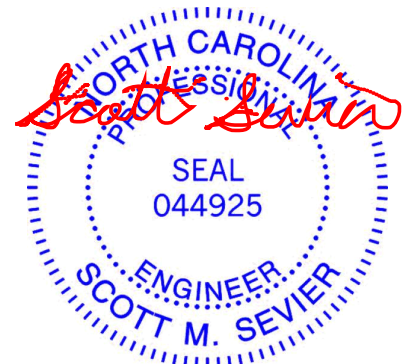
**LUMBER-**  
TOP CHORD 2x6 SP No.2  
BOT CHORD 2x8 SP DSS  
WEBS 2x4 SP No.3 \*Except\*  
4-10: 2x4 SP No.2

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 3-11-15 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 1=0-5-8, 7=0-3-8 (req. 0-4-2)  
Max Horz 1=103(LC 39)  
Max Uplift 1=-1365(LC 12), 7=-1552(LC 13)  
Max Grav 1=11605(LC 1), 7=12285(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-2=-26612/3128, 2-3=-21592/2612, 3-4=-16308/2069, 4-5=-16308/2069, 5-6=-21573/2706,  
6-7=-26745/3346  
BOT CHORD 1-12=-2963/24690, 11-12=-2963/24690, 10-11=-2366/19924, 9-10=-2389/19906,  
8-9=-3069/24866, 7-8=-3069/24866  
WEBS 4-10=-1453/12097, 5-10=-6381/931, 5-9=-722/5822, 6-9=-5398/781, 6-8=-391/3364,  
3-10=-6582/816, 3-11=-613/6062, 2-11=-5383/650, 2-12=-313/3567

- NOTES-**
- 3-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
Top chords connected as follows: 2x6 - 2 rows staggered at 0-7-0 oc.  
Bottom chords connected as follows: 2x8 - 3 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=130mph (3-second gust) V(IRC2012)=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-2-12 to 3-2-12, Interior(1) 3-2-12 to 15-4-0, Exterior(2) 15-4-0 to 18-4-0, Interior(1) 18-4-0 to 30-5-15 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - All plates are MT20 plates unless otherwise indicated.
  - 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 where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - WARNING: Required bearing size at joint(s) 7 greater than input bearing size.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1365 lb uplift at joint 1 and 1552 lb uplift at joint 7.
  - This truss is designed in accordance with the 2012 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - Use USP HUS26 (With 14-16d nails into Girder & 6-16d nails into Truss) or equivalent spaced at 2-0-0 oc max. starting at 1-11-4 from the left end to 29-11-4 to connect truss(es) to front face of bottom chord.
  - Fill all nail holes where hanger is in contact with lumber.



June 23,2020

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**ENGINEERING BY**  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932

Job 23574A	Truss BG	Truss Type COMMON GIRDER	Qty 1	Ply <b>3</b>	240.2596.B.12x12 Job Reference (optional)	I41752140
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84 Components, Dunn, NC 28334

8.330 s Apr 21 2020 MiTek Industries, Inc. Mon Jun 22 15:57:41 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, 4-7=-60, 1-7=-20

Concentrated Loads (lb)

Vert: 9=-1414(F) 17=-1456(F) 18=-1456(F) 19=-1456(F) 20=-1456(F) 21=-1456(F) 22=-1456(F) 23=-1414(F) 24=-1414(F) 25=-1414(F) 26=-1414(F) 27=-1414(F)  
28=-1414(F) 29=-1414(F) 30=-1419(F)

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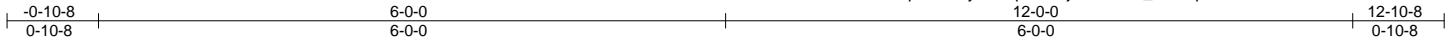
818 Soundside Road  
Edenton, NC 27932

Job 23574A	Truss C1	Truss Type COMMON	Qty 6	Ply 1	240.2596.B.12x12	I41752141
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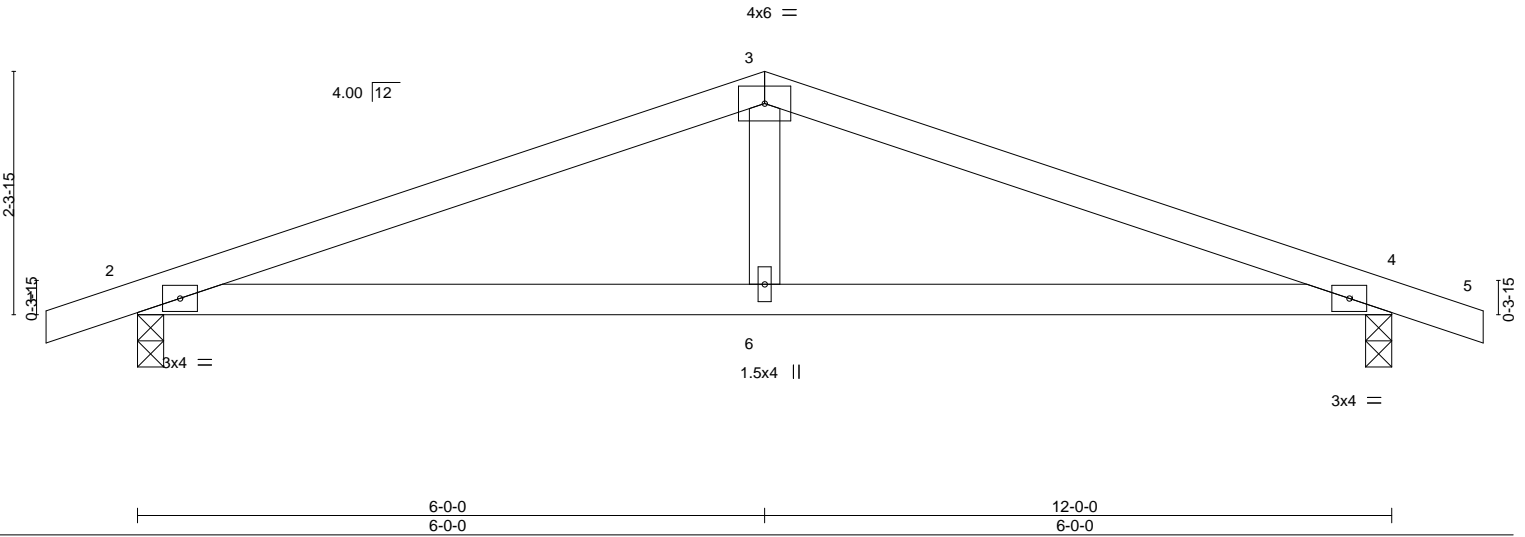
84 Components (Dunn), Dunn, NC - 28334,

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 22 15:48:22 2020 Page 1

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Scale = 1:22.0



<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 0.44	Vert(LL)	0.09 6-12	>999	240	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.51	Vert(CT)	-0.10 6-12	>999	180		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.11	Horz(CT)	0.01 4	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MS					Weight: 42 lb	FT = 20%

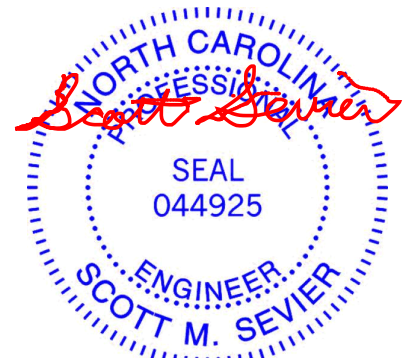
**LUMBER-**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 5-4-8 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 6-7-13 oc bracing.

**REACTIONS.** (size) 2=0-3-0, 4=0-3-0  
Max Horz 2=38(LC 12)  
Max Uplift 2=-213(LC 8), 4=-213(LC 9)  
Max Grav 2=533(LC 1), 4=533(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-893/826, 3-4=-893/826  
BOT CHORD 2-6=-714/815, 4-6=-714/815  
WEBS 3-6=-293/277

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 4) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 5) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 4. This connection is for uplift only and does not consider lateral forces.



June 23, 2020

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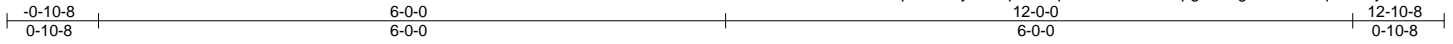
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall 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, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



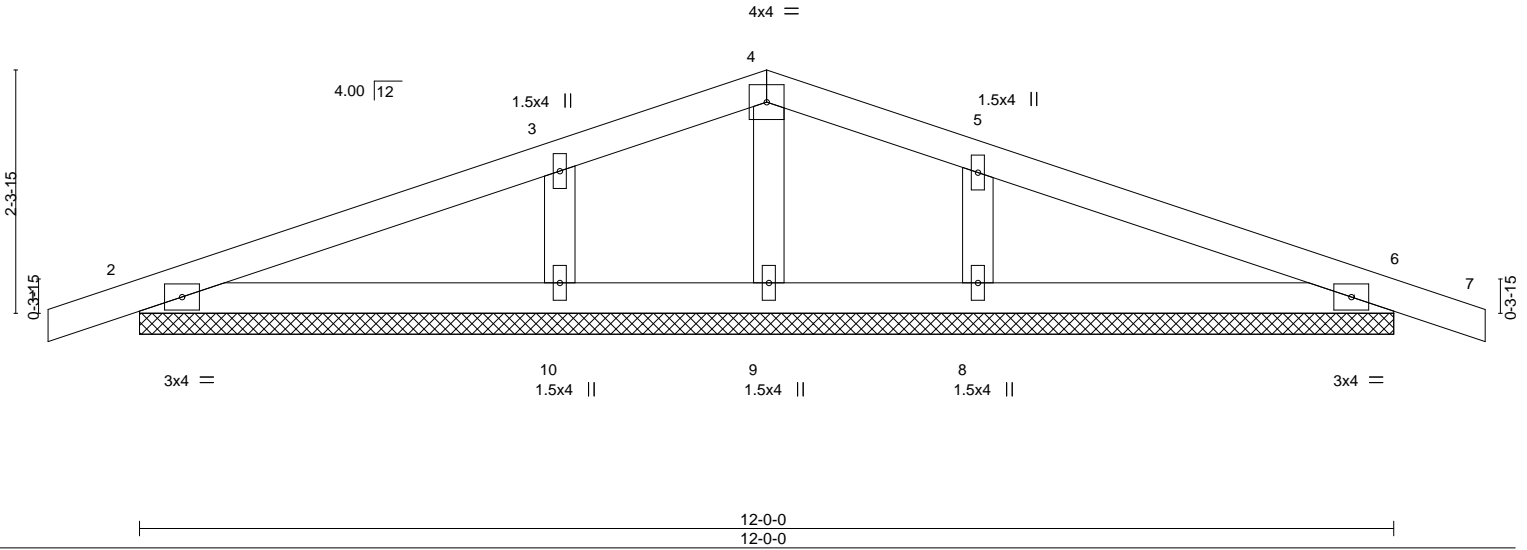
818 Soundside Road  
Edenton, NC 27932

Job 23574A	Truss CE	Truss Type COMMON SUPPORTED GAB	Qty 1	Ply 1	240.2596.B.12x12	141752142
84 Components (Dunn), Dunn, NC - 28334,					Job Reference (optional)	

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 22 15:48:24 2020 Page 1  
 ID:IRUvu6CsEmxbTOSip7BE4uyZSNq-HVXqAPVo0VeDDsPipgs66SgQ0As49Uqr9YY0jtz3hBb



Scale = 1:22.0



<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 0.18	Vert(LL)	0.00	7	n/r	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.12	Vert(CT)	0.01	7	n/r		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.05	Horz(CT)	0.00	6	n/a		
BCDL 10.0	Code	IRC2015/TPI2014	Matrix-S						
								Weight: 46 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 12-0-0.  
 (lb) - Max Horz 2=38(LC 12)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 6, 10, 8  
 Max Grav All reactions 250 lb or less at joint(s) 2, 6, 9 except 10=327(LC 1), 8=324(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=130mph (3-second gust) Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 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.
  - Gable requires continuous bottom chord bearing.
  - Gable studs spaced at 2-0-0 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 where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - One MTS12 Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 6. This connection is for uplift only and does not consider lateral forces.
  - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 10 and 8. This connection is for uplift only and does not consider lateral forces.



June 23, 2020

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 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, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



818 Soundside Road  
 Edenton, NC 27932

Job 23574A	Truss D1	Truss Type HALF HIP	Qty 9	Ply 1	240.2596.B.12x12	I41752143
84 Components (Dunn), Dunn, NC - 28334,					Job Reference (optional)	

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 22 15:48:25 2020 Page 1  
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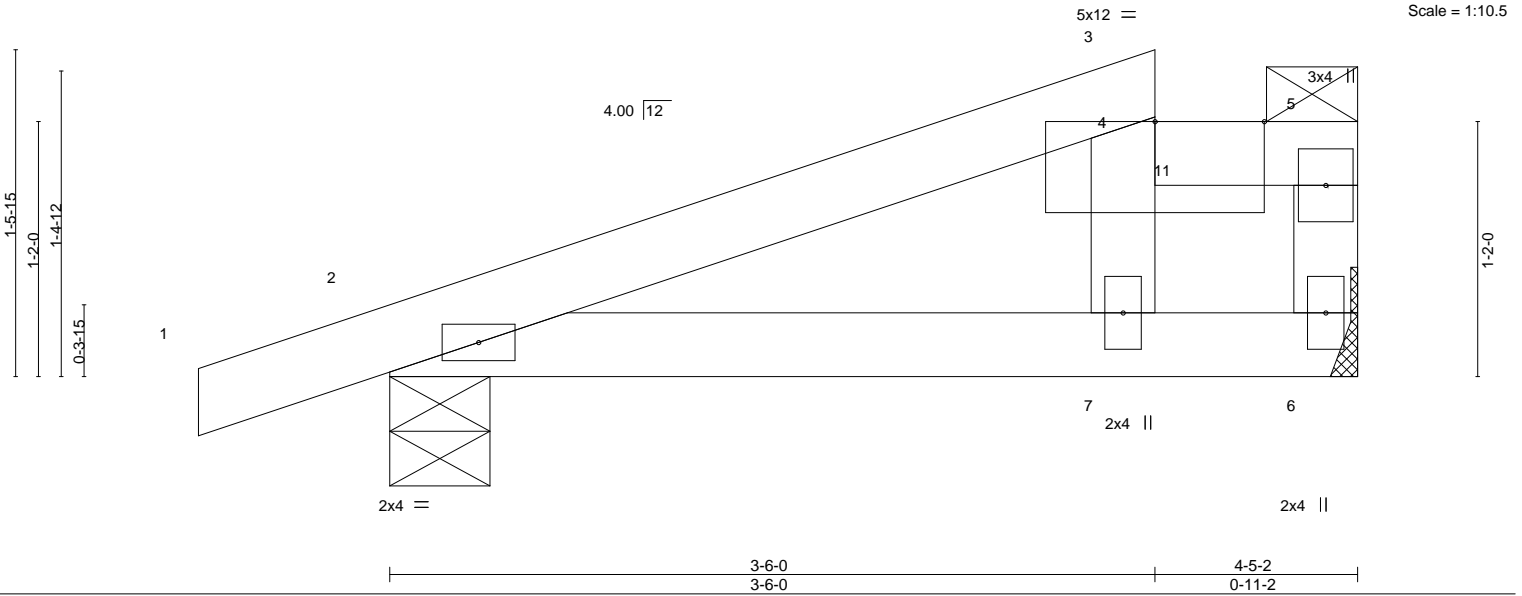
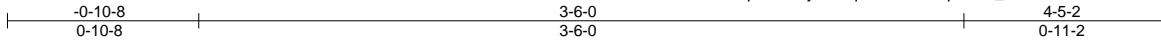


Plate Offsets (X,Y)--	[3:0-1-12,0-0-9], [4:0-0-0,0-1-12]				
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL 1.15	TC 0.34	Vert(LL) 0.01 7-10 >999 240	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.20	Vert(CT) -0.01 7-10 >999 180		
BCLL 0.0 *	Rep Stress Incr NO	WB 0.00	Horz(CT) 0.00 6 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-MR		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 or 4-5-2 oc purlins, except end verticals, and 2-0-0 oc purlins: 4-7, 4-5.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

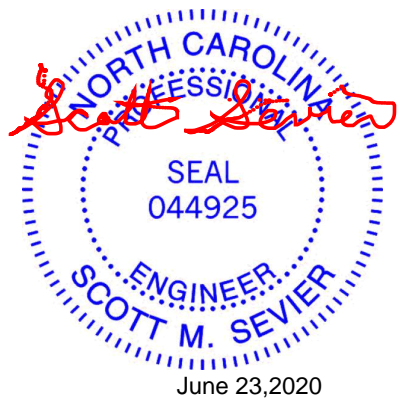
**REACTIONS.** (size) 6=Mechanical, 2=0-5-8  
 Max Horz 2=56(LC 9)  
 Max Uplift 6=-59(LC 12), 2=-71(LC 8)  
 Max Grav 6=418(LC 1), 2=270(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-306/125, 5-6=-284/125  
 BOT CHORD 2-7=-149/280

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-10-8 to 4-3-6 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Provide adequate drainage to prevent water ponding.
  - 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 where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 6) Refer to girder(s) for truss to truss connections.
  - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 6.
  - 8) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
  - 9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - 10) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s). The design/selection of such connection device(s) is the responsibility of others.
  - 11) 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, 4-5=-75(F=-15), 6-8=-20  
 Concentrated Loads (lb)  
 Vert: 11=-280(F)



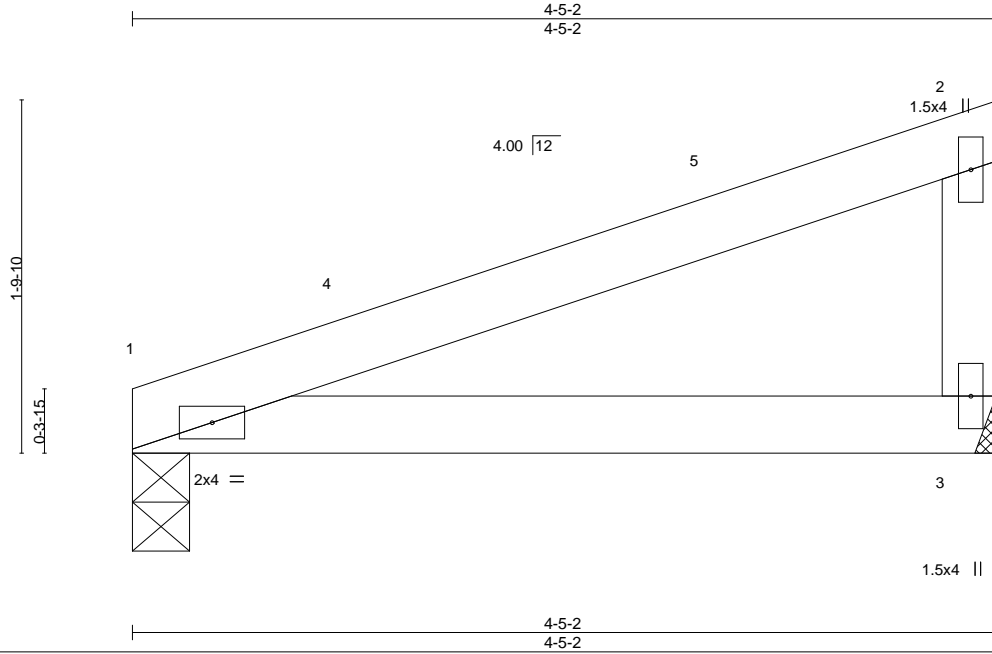


Job 23574A	Truss D2	Truss Type MONOPITCH	Qty 1	Ply 1	240.2596.B.12x12	Job Reference (optional) I41752144
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84 Components (Dunn), Dunn, NC - 28334,

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 22 15:48:26 2020 Page 1

ID:IRUvu6CsEmxbTOsip7BE4uyZSNq-Dueab5X2Y6uxTAY4x5uaBtlIB\_W9dO28cs17omz3hBZ



Scale = 1:11.8

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.32	Vert(LL)	-0.02	1-3	>999	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.21	Vert(TL)	-0.04	1-3	>999		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.00	Horz(TL)	0.00	3	n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-P						
	Code IRC2012/TPI2007						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 4-5-2 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 1=0-3-8, 3=Mechanical  
 Max Horz 1=61(LC 9)  
 Max Uplift 1=-26(LC 8), 3=-35(LC 12)  
 Max Grav 1=165(LC 1), 3=165(LC 1)

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

- NOTES-**
- 1) Wind: ASCE 7-10; Vult=130mph (3-second gust) V(IRC2012)=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-1-12 to 3-1-12, Interior(1) 3-1-12 to 4-3-6 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) 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 where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 4) Refer to girder(s) for truss to truss connections.
  - 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3.
  - 6) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1. This connection is for uplift only and does not consider lateral forces.



June 23, 2020

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 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, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



818 Soundside Road  
 Edenton, NC 27932

Job 23574A	Truss DE	Truss Type HALF HIP SUPPORTED	Qty 1	Ply 1	240.2596.B.12x12	I41752145
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84 Components (Dunn), Dunn, NC - 28334,

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 22 15:48:27 2020 Page 1

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Job Reference (optional)

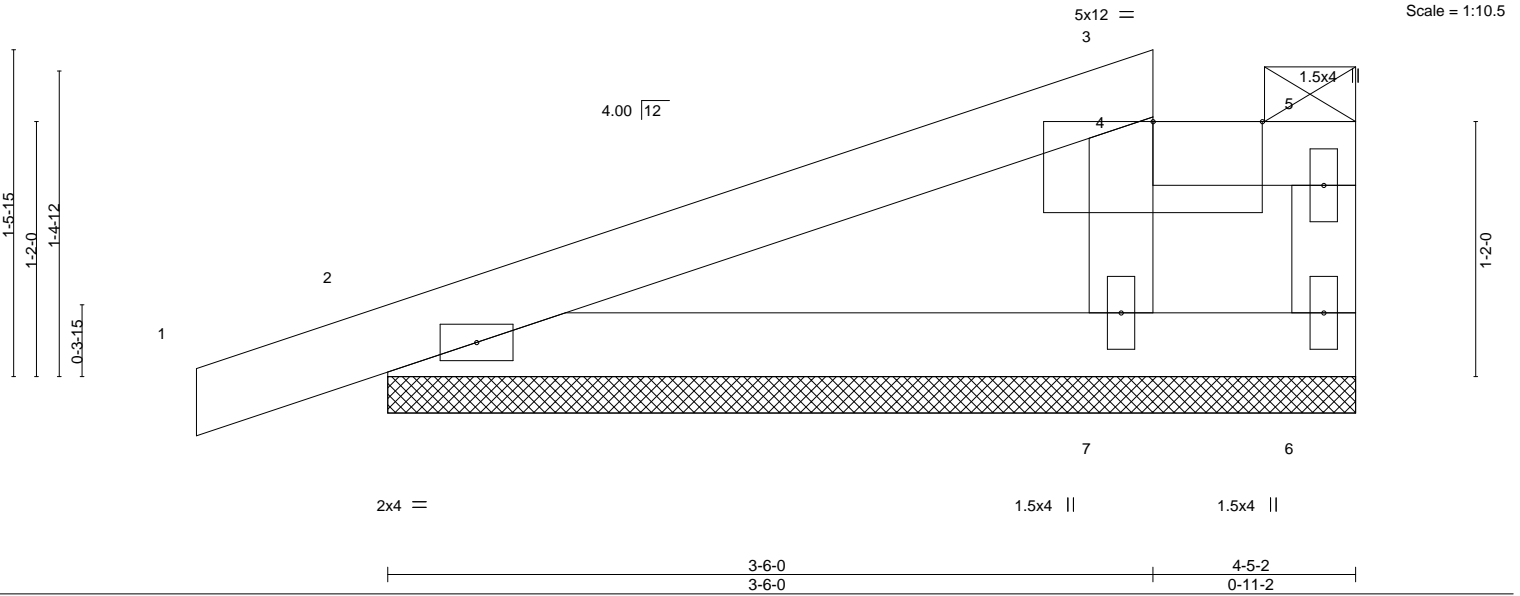
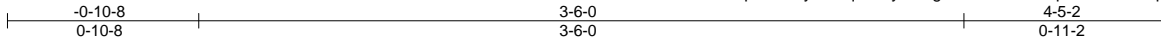


Plate Offsets (X,Y)--	[3:0-1-12,0-0-9], [4:0-0-0,0-1-12]				
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL 1.15	TC 0.14	Vert(LL) -0.00 1 n/r 120	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.10	Vert(CT) 0.00 1 n/r 90		
BCLL 0.0 *	Rep Stress Incr NO	WB 0.00	Horz(CT) -0.00 6 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-R		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 or 4-5-2 oc purlins, except end verticals, and 2-0-0 oc purlins: 4-7, 4-5.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 7=4-5-2, 6=4-5-2, 2=4-5-2  
Max Horz 2=57(LC 9)  
Max Uplift 7=-36(LC 12), 6=-37(LC 13), 2=-63(LC 8)  
Max Grav 7=340(LC 1), 6=165(LC 19), 2=185(LC 23)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 4-7=-264/167

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-10-8 to 4-3-6 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 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.
  - Provide adequate drainage to prevent water ponding.
  - Gable requires continuous bottom chord bearing.
  - Gable studs spaced at 2-0-0 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 where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 7 and 6. This connection is for uplift only and does not consider lateral forces.
  - One MTS12 Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
  - Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 2.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).



June 23,2020

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**

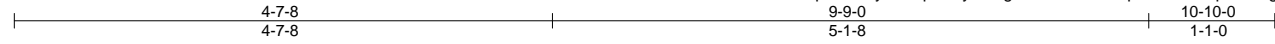
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall 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, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

**ENGINEERING BY**  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932

Job 23574A	Truss P1	Truss Type COMMON	Qty 3	Ply 1	240.2596.B.12x12	141752146
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84 Components (Dunn), Dunn, NC - 28334, 8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 22 15:48:27 2020 Page 1  
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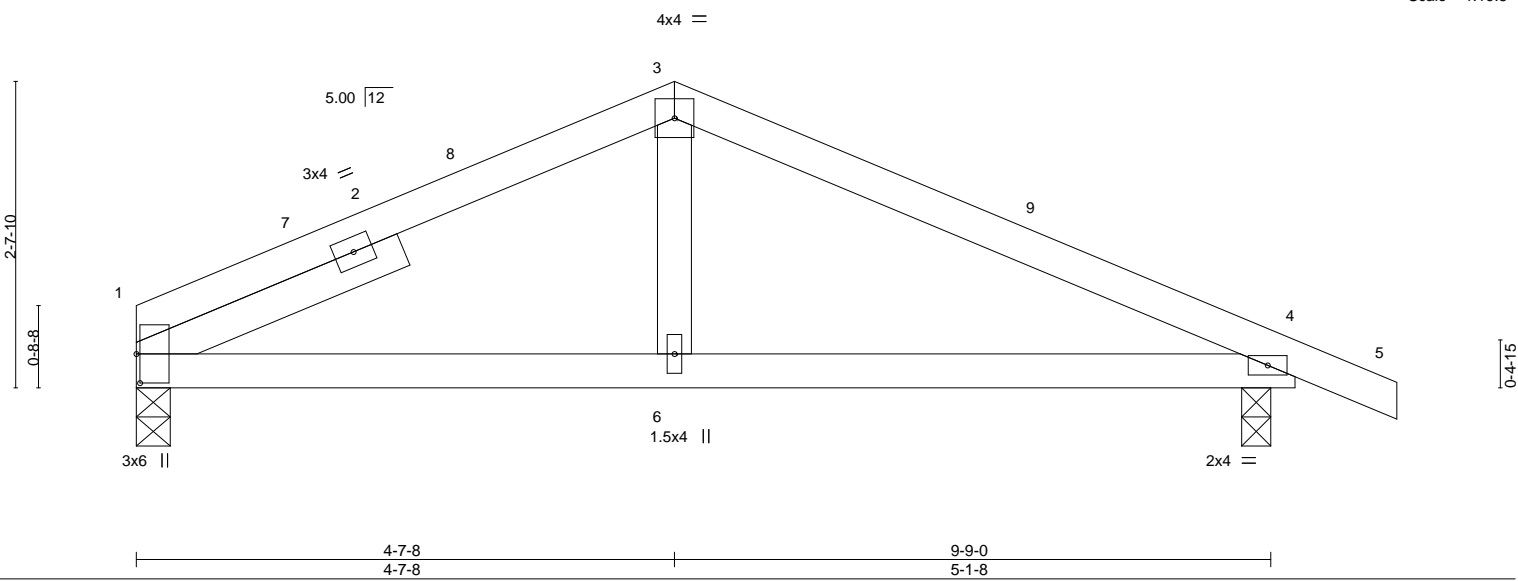


Plate Offsets (X,Y)--	[1:0-3-0,0-0-6]								
<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL 1.15	TC 0.41	Vert(LL) 0.05	4-6	>999	240	MT20	244/190	
TCDL 10.0	Lumber DOL 1.15	BC 0.62	Vert(TL) -0.07	4-6	>999	180			
BCLL 0.0 *	Rep Stress Incr YES	WB 0.09	Horz(TL) 0.01	4	n/a	n/a			
BCDL 10.0	Code IRC2012/TPI2007	Matrix-S					Weight: 39 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 9-2-5 oc bracing.
WEBS 2x4 SP No.3	
SLIDER Left 2x4 SP No.3 -x 2-5-9	

**REACTIONS.** (size) 1=0-3-8, 4=0-3-0  
 Max Horz 1=-47(LC 13)  
 Max Uplift 1=-105(LC 8), 4=-137(LC 9)  
 Max Grav 1=390(LC 1), 4=456(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-3=-568/499, 3-4=-572/479  
 BOT CHORD 1-6=-376/464, 4-6=-376/464

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph (3-second gust) V(IRC2012)=103mph; TCCL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-0-0 to 3-0-0, Interior(1) 3-0-0 to 4-7-8, Exterior(2) 4-7-8 to 7-7-8, Interior(1) 7-7-8 to 10-10-0 zone; cantilever left and right exposed; end vertical left and right exposed; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 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 where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1 and 4. This connection is for uplift only and does not consider lateral forces.



June 23, 2020

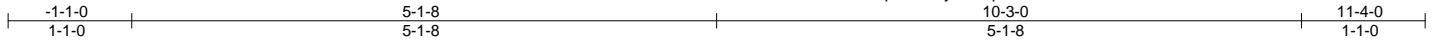
Job 23574A	Truss PE	Truss Type COMMON SUPPORTED GAB	Qty 1	Ply 1	240.2596.B.12x12	I41752147
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84 Components (Dunn),

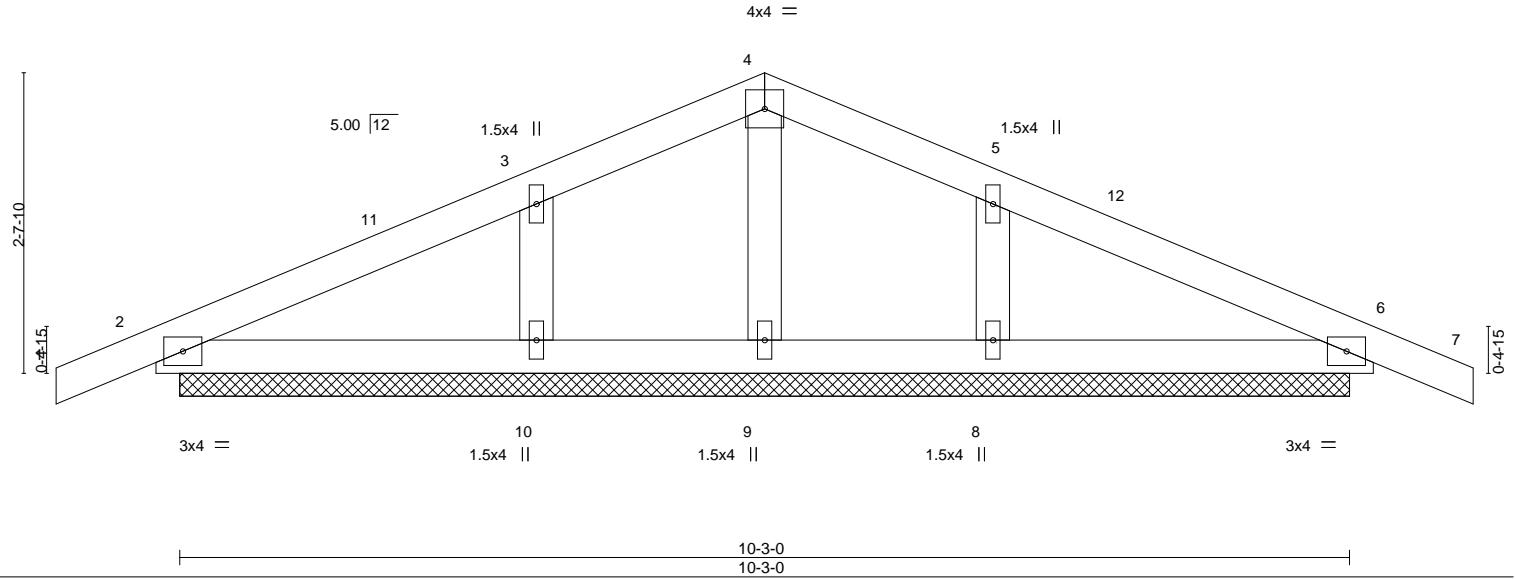
Dunn, NC - 28334,

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 22 15:48:28 2020 Page 1

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Scale = 1:20.2



<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 0.12	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.08	Vert(LL) 0.00 7 n/r 120		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.06	Vert(TL) 0.01 7 n/r 120		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(TL) 0.00 6 n/a n/a		
	Code IRC2012/TPI2007			Weight: 43 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 10-3-0.  
 (lb) - Max Horz 2=43(LC 12)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 6, 10, 8  
 Max Grav All reactions 250 lb or less at joint(s) 2, 6, 9 except 10=267(LC 23), 8=267(LC 24)

**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=130mph (3-second gust) V(IRC2012)=103mph; TC DL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) -1-1-0 to 1-11-0, Exterior(2) 1-11-0 to 5-1-8, Corner(3) 5-1-8 to 8-1-8, Exterior(2) 8-1-8 to 11-4-0 zone; cantilever left and right exposed; end vertical left and right exposed; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 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.
  - Gable requires continuous bottom chord bearing.
  - Gable studs spaced at 2-0-0 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 where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 6, 10, and 8. This connection is for uplift only and does not consider lateral forces.
  - Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 2, 6.



June 23, 2020

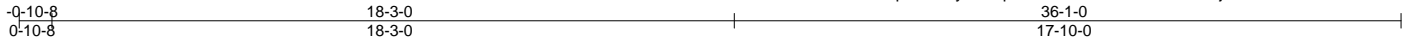
**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**  
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before 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, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



Job 23574A	Truss T1E	Truss Type COMMON SUPPORTED GAB	Qty 1	Ply 1	240.2596.B.12x12	141752148
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84 Components (Dunn), Dunn, NC - 28334,

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 22 15:48:30 2020 Page 1  
ID:IRUvu6CsEmxbTOSip7BE4uyZSNq-6fu5RSaZcLONxnsrAxzWMjwSDbwkZ9mkXU?KxXz3hBV



Scale = 1:61.6

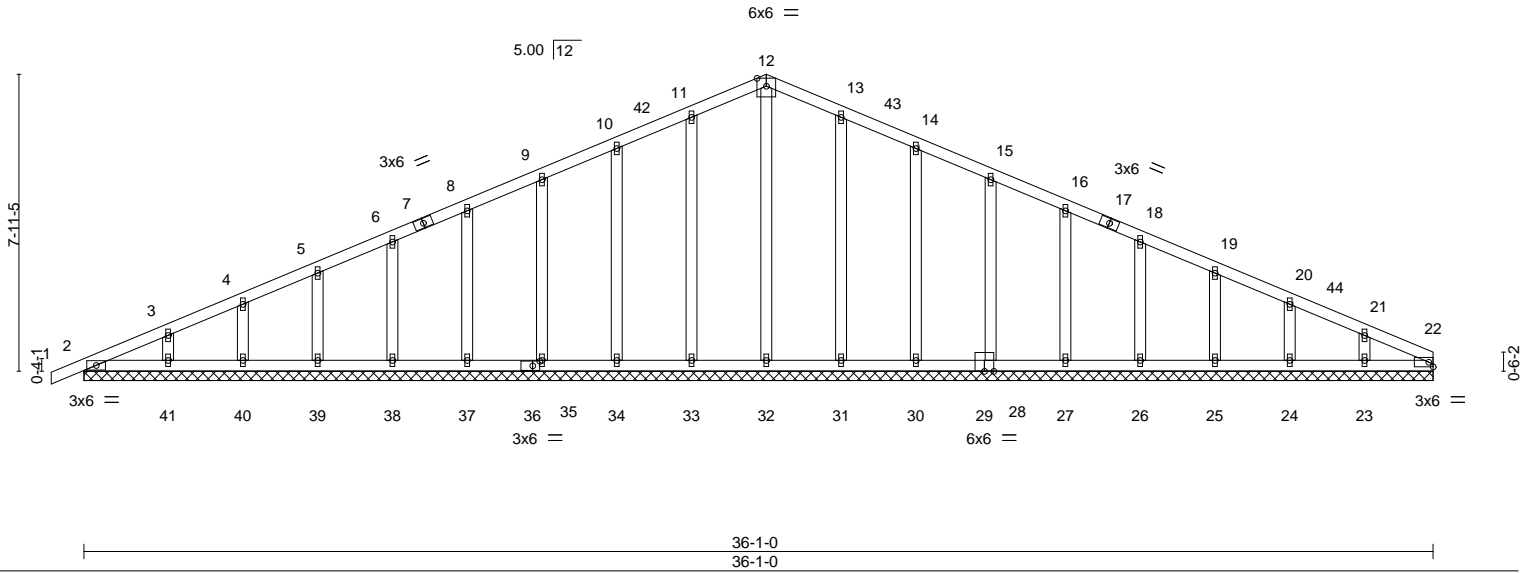


Plate Offsets (X,Y)--	[28:0-1-12,0-0-0], [29:0-0-0,0-1-12], [36:0-2-4,0-1-8]				
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL 1.15	TC 0.07	Vert(LL) -0.00 1 n/r 120	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.04	Vert(TL) 0.00 1 n/r 120		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.15	Horz(TL) 0.01 22 n/a n/a		
BCDL 10.0	Code IRC2012/TPI2007	Matrix-S		Weight: 211 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 36-1-0.  
 (lb) - Max Horz 2=138(LC 12)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 33, 34, 35, 37, 38, 39, 40, 41, 31, 30, 28, 27, 26, 25, 24, 23  
 Max Grav All reactions 250 lb or less at joint(s) 2, 32, 33, 34, 35, 37, 38, 39, 40, 41, 31, 30, 28, 27, 26, 25, 24, 23, 22

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 11-12=90/252, 12-13=90/255

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph (3-second gust) V(IRC2012)=103mph; TCCL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) -0-10-8 to 2-3-0, Exterior(2) 2-3-0 to 18-3-0, Corner(3) 18-3-0 to 21-3-0, Exterior(2) 21-3-0 to 36-1-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 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 1.5x4 MT20 unless otherwise indicated.
  - Gable requires continuous bottom chord bearing.
  - Gable studs spaced at 2-0-0 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 where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 33, 34, 35, 37, 38, 39, 40, 41, 31, 30, 28, 27, 26, 25, 24, and 23. This connection is for uplift only and does not consider lateral forces.



June 23,2020

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 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, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

**TRENCO** ENGINEERING BY  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932

Job 23574A	Truss T2	Truss Type ROOF TRUSS	Qty 6	Ply 1	240.2596.B.12x12	141752149
84 Components (Dunn), Dunn, NC - 28334,					Job Reference (optional)	

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 22 15:48:32 2020 Page 1  
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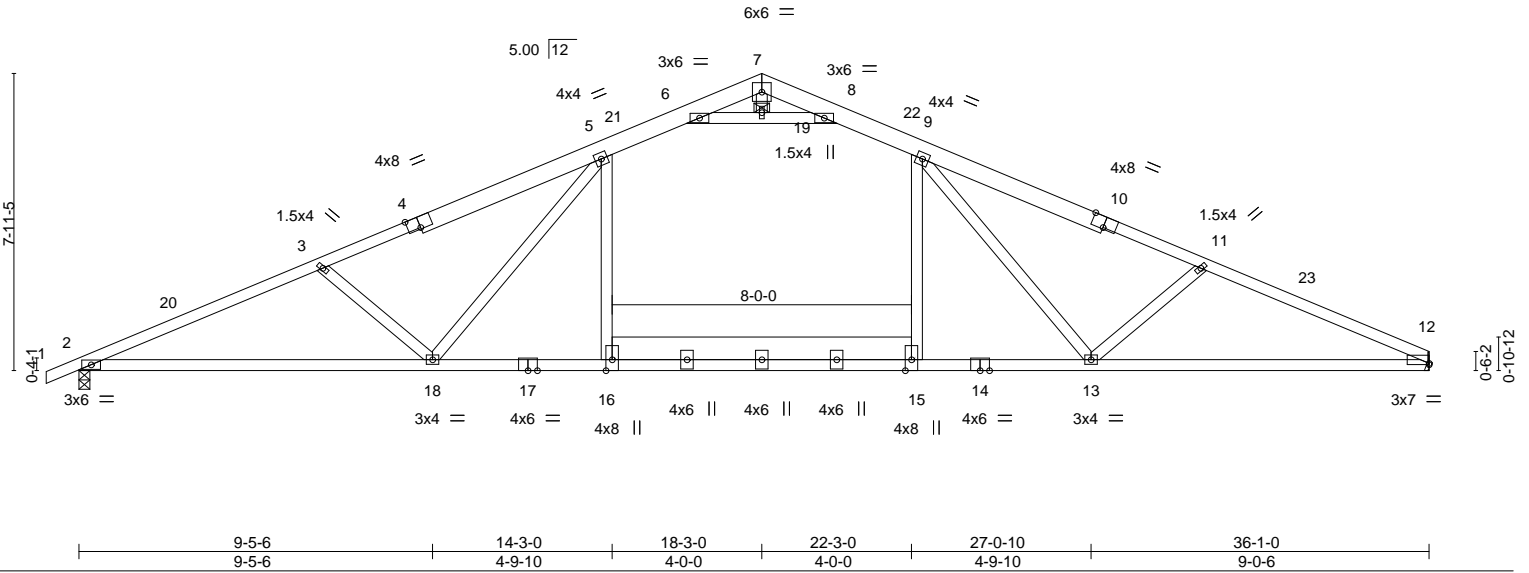


Plate Offsets (X,Y)--	[4:0-4-0,Edge], [10:0-4-0,Edge], [12:0-0-0,0-0-7]				
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL 1.15	TC 0.61	Vert(LL) -0.39 16-18 >999 240	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.80	Vert(TL) -0.70 16-18 >614 180		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.54	Horz(TL) 0.15 12 n/a n/a		
BCDL 10.0	Code IRC2012/TPI2007	Matrix-S	Attic -0.25 15-16 392 360		
				Weight: 211 lb	FT = 20%

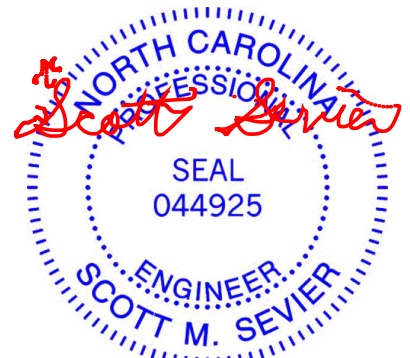
<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x6 SP DSS *Except* 1-4,10-12: 2x4 SP DSS	TOP CHORD Structural wood sheathing directly applied or 3-1-2 oc purlins.
BOT CHORD 2x4 SP No.1 *Except* 15-16: 2x8 SP No.2	BOT CHORD Rigid ceiling directly applied or 9-7-6 oc bracing.
WEBS 2x4 SP No.3 *Except* 6-8: 2x4 SP No.2	WEBS 1 Row at midpt 6-8

**REACTIONS.** (size) 2=0-3-8, 12=Mechanical  
 Max Horz 2=137(LC 16)  
 Max Uplift 2=173(LC 12), 12=148(LC 13)  
 Max Grav 2=1595(LC 2), 12=1548(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-3436/360, 3-5=-3136/266, 5-6=-2334/281, 6-7=-103/774, 7-8=-102/767,  
 8-9=-2340/286, 9-11=-3067/277, 11-12=-3325/349  
 BOT CHORD 2-18=-396/3126, 16-18=-85/2428, 15-16=-85/2428, 13-15=-85/2428, 12-13=-260/2999  
 WEBS 7-19=-16/312, 9-13=-151/720, 11-13=-483/279, 5-18=-155/796, 3-18=-556/286,  
 5-16=-33/441, 9-15=-17/460, 6-19=-3331/376, 8-19=-3331/376

**NOTES-**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) V(IRC2012)=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-10-8 to 2-8-13, Interior(1) 2-8-13 to 18-3-0, Exterior(2) 18-3-0 to 21-10-5, Interior(1) 21-10-5 to 36-0-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) 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 where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 5) Ceiling dead load (5.0 psf) on member(s). 5-6, 8-9, 6-19, 8-19
- 6) Bottom chord live load (40.0 psf) and additional bottom chord dead load (0.0 psf) applied only to room. 15-16
- 7) Refer to girder(s) for truss to truss connections.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 12=148.
- 9) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
- 10) ATTIC SPACE SHOWN IS DESIGNED AS UNINHABITABLE.



June 23,2020

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 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, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

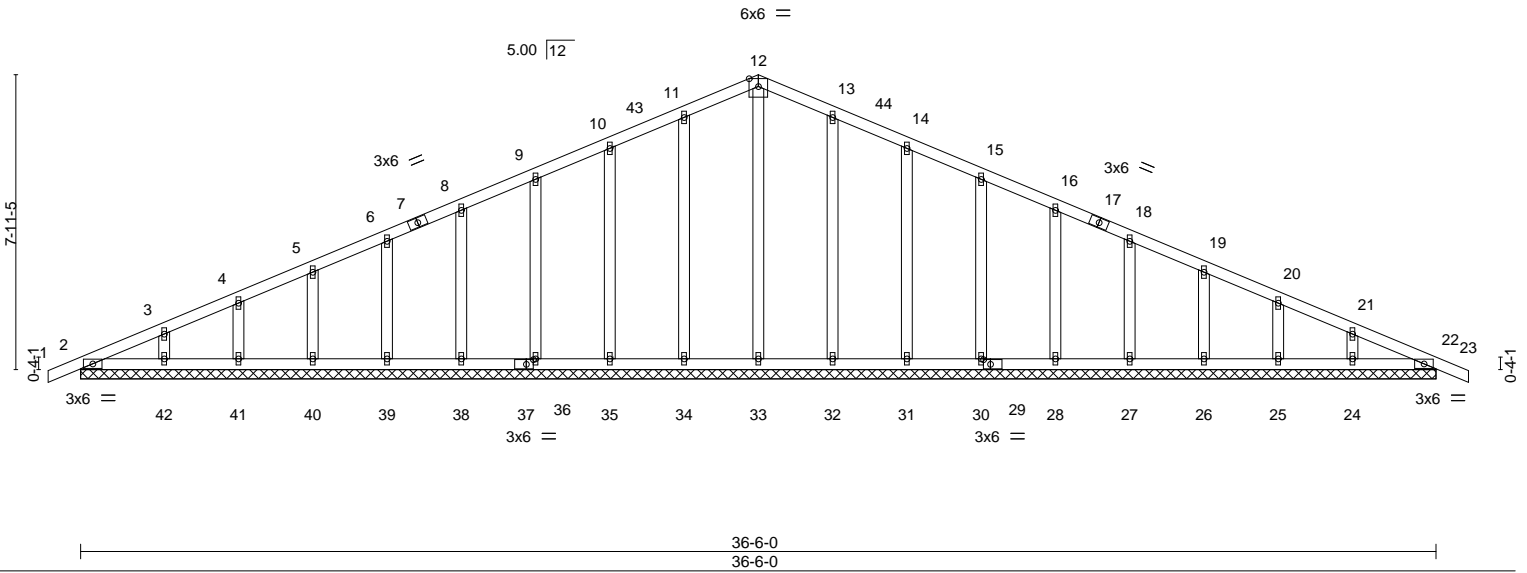


818 Soundside Road  
 Edenton, NC 27932

Job 23574A	Truss T2E	Truss Type COMMON SUPPORTED GAB	Qty 1	Ply 1	240.2596.B.12x12	141752150
84 Components (Dunn), Dunn, NC - 28334,					8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 22 15:48:34 2020 Page 1	
-0-10-8 0-10-8					18-3-0 18-3-0	
					36-6-0 18-3-0	
					37-4-8 0-10-8	

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Scale = 1:62.0



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.07	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.04	Vert(LL) -0.00 22 n/r 120		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.15	Vert(TL) 0.00 22 n/r 120		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(TL) 0.01 22 n/a n/a		
	Code IRC2012/TPI2007			Weight: 214 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.** All bearings 36-6-0.  
 (lb) - Max Horz 2=133(LC 12)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 34, 35, 36, 38, 39, 40, 41, 42, 32, 31, 30, 28, 27, 26, 25, 24, 22  
 Max Grav All reactions 250 lb or less at joint(s) 2, 33, 34, 35, 36, 38, 39, 40, 41, 42, 32, 31, 30, 28, 27, 26, 25, 24, 22

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 11-12=92/258, 12-13=92/261

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph (3-second gust) V(IRC2012)=103mph; TCCL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) -0-10-8 to 2-3-0, Exterior(2) 2-3-0 to 18-3-0, Corner(3) 18-3-0 to 21-3-0, Exterior(2) 21-3-0 to 37-4-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 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 1.5x4 MT20 unless otherwise indicated.
  - Gable requires continuous bottom chord bearing.
  - Gable studs spaced at 2-0-0 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 where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 34, 35, 36, 38, 39, 40, 41, 42, 32, 31, 30, 28, 27, 26, 25, 24, and 22. This connection is for uplift only and does not consider lateral forces.



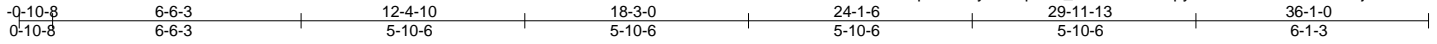
June 23,2020

Job 23574A	Truss T3	Truss Type COMMON	Qty 9	Ply 1	240.2596.B.12x12	I41752151
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84 Components (Dunn), Dunn, NC - 28334,

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 22 15:48:35 2020 Page 1

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Scale = 1:60.4

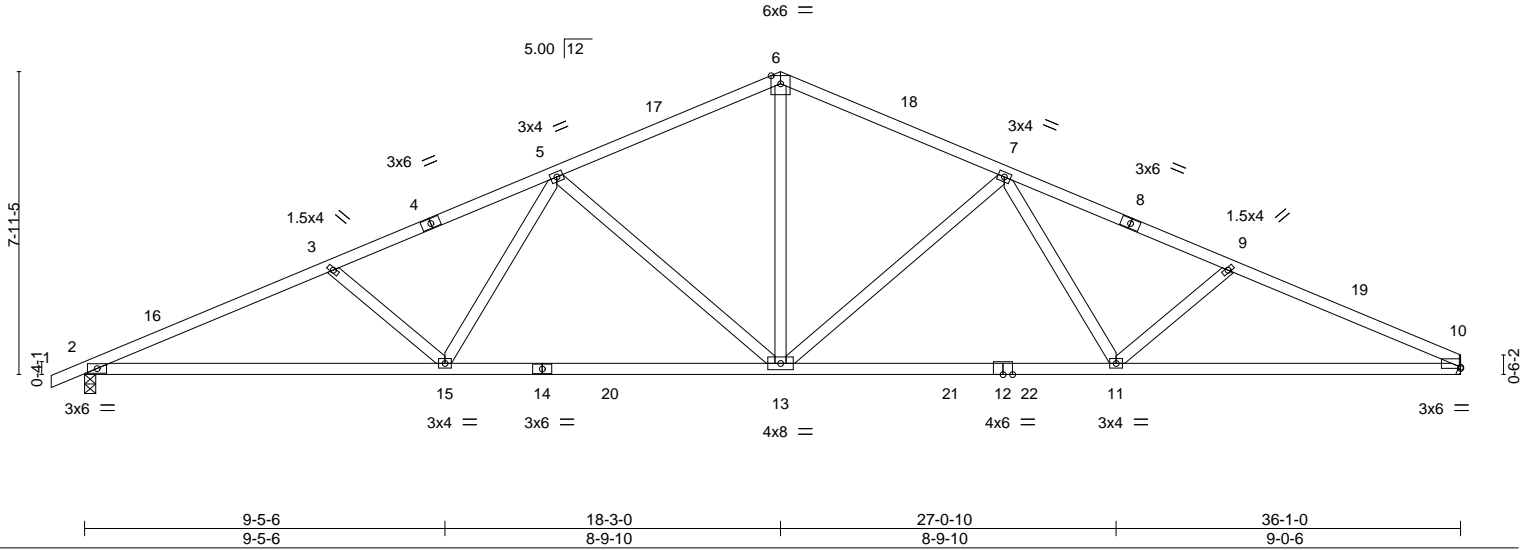


Plate Offsets (X,Y)--	[10:0-0-0,0-0-7]	9-5-6 9-5-6	18-3-0 8-9-10	27-0-10 8-9-10	36-1-0 9-0-6	
<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL 1.15	TC 0.88	Vert(LL) -0.22 11-13 >999 240	MT20	244/190	
TCDL 10.0	Lumber DOL 1.15	BC 0.87	Vert(TL) -0.61 2-15 >706 180			
BCLL 0.0 *	Rep Stress Incr YES	WB 0.87	Horz(TL) 0.17 10 n/a n/a			
BCDL 10.0	Code IRC2012/TPI2007	Matrix-S				
					Weight: 175 lb	FT = 20%

**LUMBER-**  
 TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x4 SP No.1 \*Except\*  
 12-14: 2x4 SP No.2  
 WEBS 2x4 SP No.3

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied.  
 BOT CHORD Rigid ceiling directly applied or 9-6-4 oc bracing.

**REACTIONS.** (size) 2=0-3-8, 10=Mechanical  
 Max Horz 2=138(LC 12)  
 Max Uplift 2=-198(LC 12), 10=-173(LC 13)  
 Max Grav 2=1497(LC 1), 10=1434(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-3073/392, 3-5=-2782/329, 5-6=-1926/291, 6-7=-1926/296, 7-9=-2719/321, 9-10=-2975/379  
 BOT CHORD 2-15=-423/2776, 13-15=-253/2252, 11-13=-154/2223, 10-11=-283/2664  
 WEBS 6-13=-87/1100, 7-13=-702/231, 7-11=-22/502, 9-11=-308/202, 5-13=-735/235, 5-15=-27/550, 3-15=-370/209

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph (3-second gust) V(IRC2012)=103mph; TC DL=6.0psf; BCDL=6.0psf; h=30ft; 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 18-3-0, Exterior(2) 18-3-0 to 21-3-0, Interior(1) 21-3-0 to 36-0-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 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 where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - Refer to girder(s) for truss to truss connections.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 10=173.
  - One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.



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818 Soundside Road  
 Edenton, NC 27932





Job 23574A	Truss V1	Truss Type VALLEY	Qty 1	Ply 1	240.2596.B.12x12	I41752153
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84 Components (Dunn),

Dunn, NC - 28334,

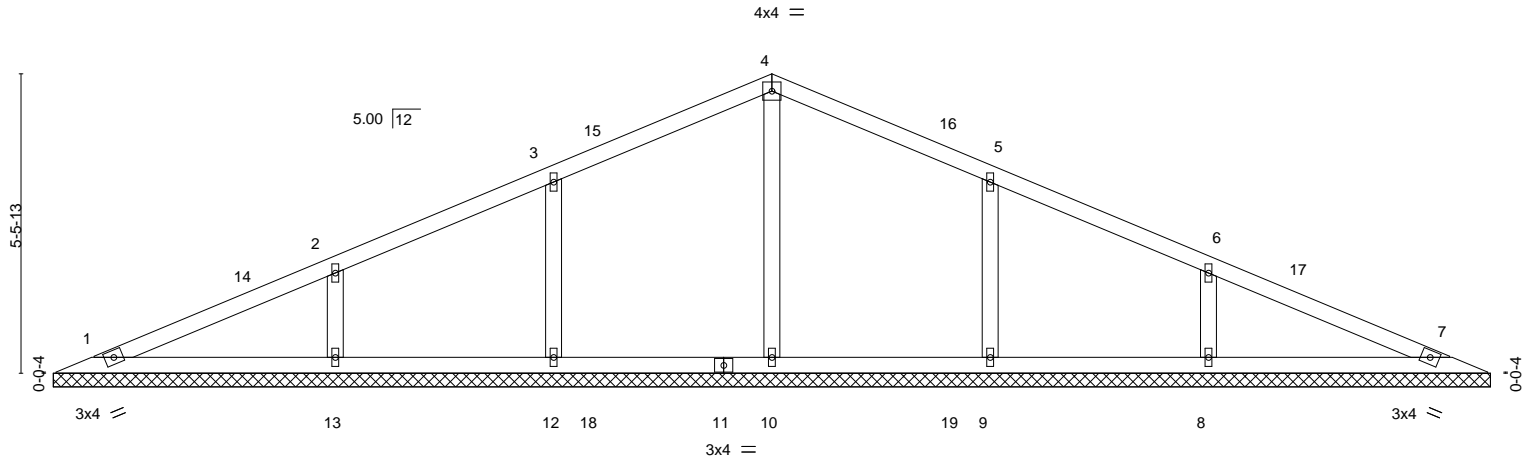
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Job Reference (optional)

13-2-0  
13-2-026-4-0  
13-2-0

Scale = 1:42.2

26-4-0  
26-4-0

<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 0.24	Vert(LL)	n/a	-	n/a	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.19	Vert(TL)	n/a	-	n/a		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.11	Horz(TL)	0.00	7	n/a		
BCDL 10.0	Code	IRC2012/TPI2007	Matrix-S						
								Weight: 101 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 26-4-0.  
(lb) - Max Horz 1=-87(LC 13)  
Max Uplift All uplift 100 lb or less at joint(s) 1, 7, 12, 9 except 13=-101(LC 12), 8=-101(LC 13)  
Max Grav All reactions 250 lb or less at joint(s) 1, 7 except 10=389(LC 2), 12=320(LC 23), 13=384(LC 1),  
9=320(LC 24), 8=384(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
WEBS 2-13=-279/151, 6-8=-279/151

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph (3-second gust) V(IRC2012)=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-9-1 to 3-9-1, Interior(1) 3-9-1 to 13-2-0, Exterior(2) 13-2-0 to 16-2-0, Interior(1) 16-2-0 to 25-6-15 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - All plates are 1.5x4 MT20 unless otherwise indicated.
  - 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 where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 7.
  - One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 12, 13, 9, and 8. This connection is for uplift only and does not consider lateral forces.



June 23, 2020

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 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, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932

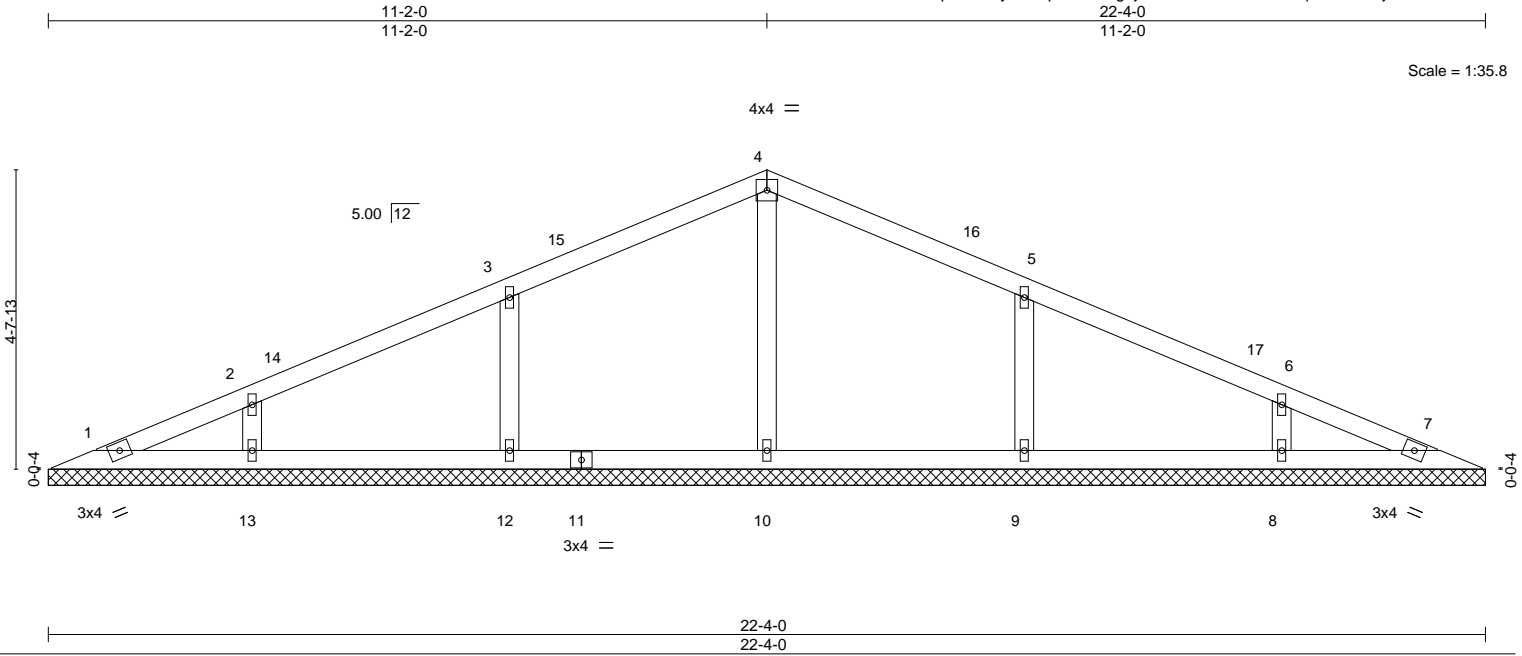
Job 23574A	Truss V2	Truss Type VALLEY	Qty 1	Ply 1	240.2596.B.12x12	I41752154
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84 Components (Dunn),

Dunn, NC - 28334,

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 22 15:48:38 2020 Page 1

ID:IRUvu6CsEmxbTOSip7BE4uyZSNq-tCN66BgajoPEv0TOec6OhPFo3qeQRooovNjxD3z3hBN



Scale = 1:35.8

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.20	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.11	Vert(LL) n/a - n/a 999		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.08	Vert(TL) n/a - n/a 999		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(TL) 0.00 7 n/a n/a		
	Code IRC2012/TPI2007			Weight: 82 lb	FT = 20%

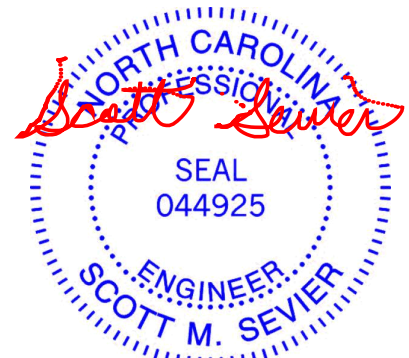
**LUMBER-**  
 TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x4 SP No.2  
 OTHERS 2x4 SP No.3

**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 22-4-0.  
 (lb) - Max Horz 1=73(LC 12)  
 Max Uplift All uplift 100 lb or less at joint(s) 1, 12, 13, 9, 8  
 Max Grav All reactions 250 lb or less at joint(s) 1, 7 except 10=279(LC 1), 12=349(LC 23), 13=282(LC 1), 9=349(LC 24), 8=282(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 WEBS 3-12=-267/148, 5-9=-267/148

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph (3-second gust) V(IRC2012)=103mph; TCCL=6.0psf; BCCL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-9-1 to 3-9-1, Interior(1) 3-9-1 to 11-2-0, Exterior(2) 11-2-0 to 14-2-0, Interior(1) 14-2-0 to 21-6-15 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - All plates are 1.5x4 MT20 unless otherwise indicated.
  - 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 where a rectangle 3-6-0 tall by 2-0-0 wide will fit 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.
  - One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 12, 13, 9, and 8. This connection is for uplift only and does not consider lateral forces.



June 23, 2020

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ENGINEERING BY  
**TRENCO**  
 A MiTek Affiliate

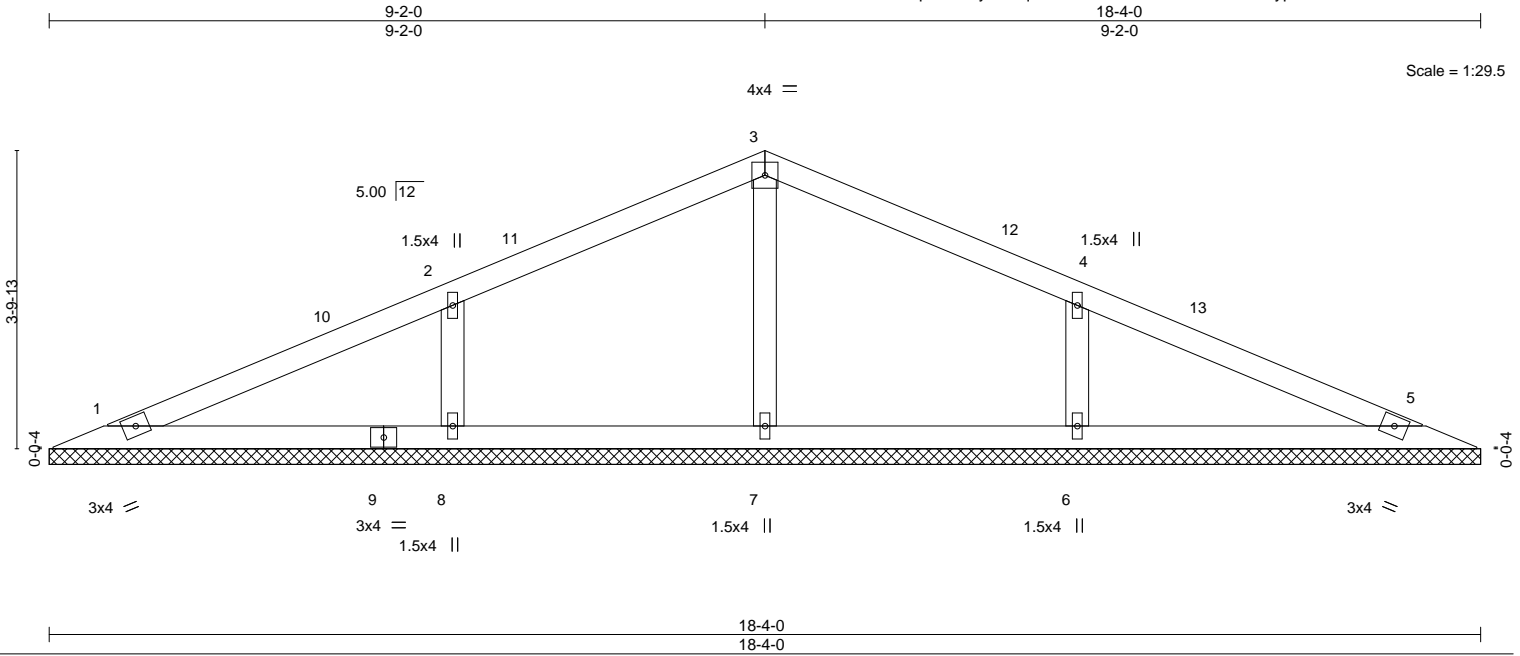
818 Soundside Road  
 Edenton, NC 27932

Job 23574A	Truss V3	Truss Type VALLEY	Qty 1	Ply 1	240.2596.B.12x12	I41752155
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84 Components (Dunn),

Dunn, NC - 28334,

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 22 15:48:39 2020 Page 1  
ID:IRUvu6CsEmxbTOSip7BE4uyZSNq-LOxVKXhCU6X5XA2aBKddDcoypDz0AGI3cNhJIWz3hBM



Scale = 1:29.5

<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 0.27	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.15	Vert(LL) n/a - n/a 999		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.06	Vert(TL) n/a - n/a 999		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(TL) 0.00 5 n/a n/a		
	Code IRC2012/TPI2007			Weight: 64 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 18-4-0.  
 (lb) - Max Horz 1=59(LC 16)  
 Max Uplift All uplift 100 lb or less at joint(s) 1, 5 except 8=113(LC 12), 6=112(LC 13)  
 Max Grav All reactions 250 lb or less at joint(s) 1, 5, 7 except 8=406(LC 23), 6=406(LC 24)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 WEBS 2-8=301/163, 4-6=301/163

**NOTES-**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) V(IRC2012)=103mph; TC DL=6.0psf; BC DL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-9-1 to 3-9-1, Interior(1) 3-9-1 to 9-2-0, Exterior(2) 9-2-0 to 12-2-0, Interior(1) 12-2-0 to 17-6-15 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) 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 where a rectangle 3'-6-0 tall by 2'-0 wide will fit 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.
- 7) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 8 and 6. This connection is for uplift only and does not consider lateral forces.



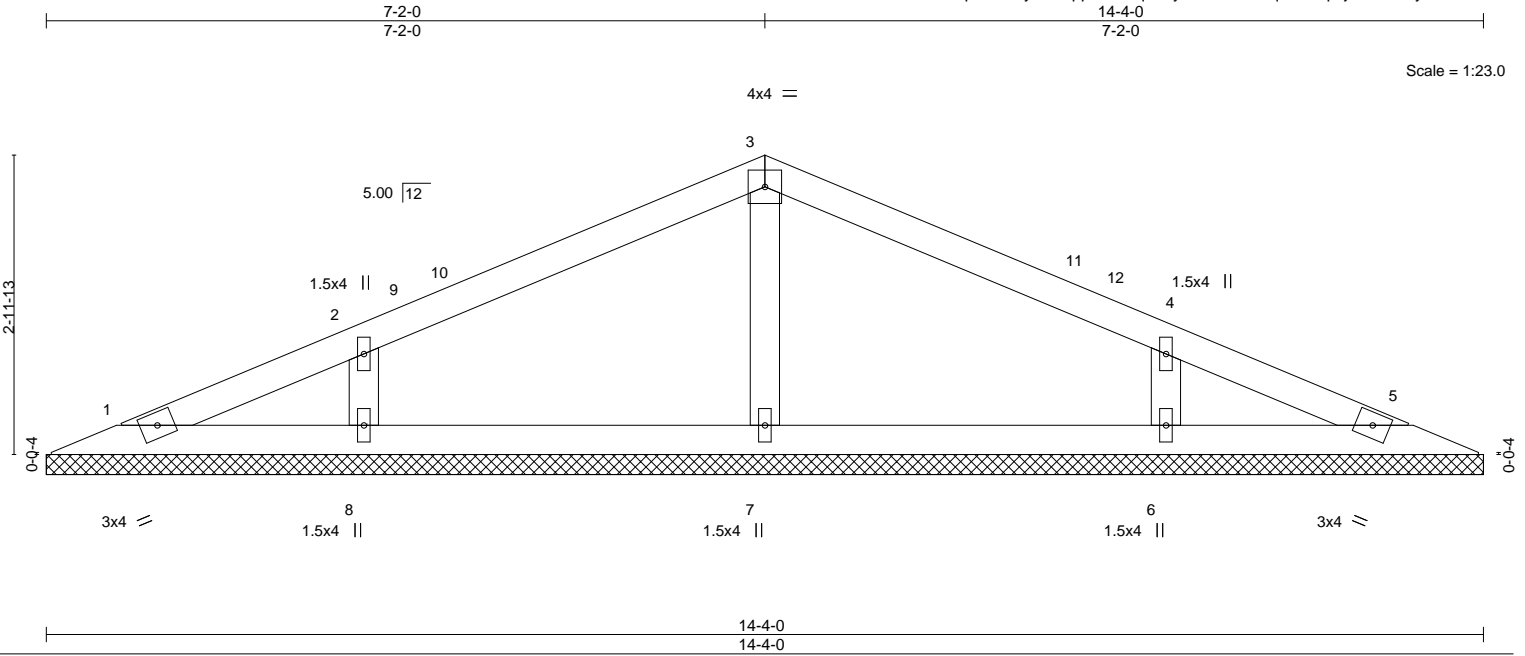
June 23, 2020

<p><b>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 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/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information</b> available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.</p>	<p>ENGINEERING BY  <b>TRENCO</b>  <small>A MiTek Affiliate</small></p> <p>818 Soundside Road        Edenton, NC 27932</p>
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Job 23574A	Truss V4	Truss Type VALLEY	Qty 1	Ply 1	240.2596.B.12x12	I41752156
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84 Components (Dunn), Dunn, NC - 28334,

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 22 15:48:40 2020 Page 1  
ID:IRUvu6CsEmxbTOSip7BE4uyZSNq-paUtXtiqFQly8Kdml18smqK92dJpvjmCr1Qslyz3hBL



Scale = 1:23.0

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.17	Vert(LL)	n/a	-	n/a	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.12	Vert(TL)	n/a	-	n/a		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.05	Horz(TL)	0.00	5	n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-S						
	Code IRC2012/TPI2007						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 14-4-0.  
 (lb) - Max Horz 1=45(LC 12)  
 Max Uplift All uplift 100 lb or less at joint(s) 1, 8, 6  
 Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 7=293(LC 1), 8=310(LC 23), 6=310(LC 24)

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

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) V(IRC2012)=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-9-1 to 3-9-1, Interior(1) 3-9-1 to 7-2-0, Exterior(2) 7-2-0 to 10-2-0, Interior(1) 10-2-0 to 13-6-15 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) 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 where a rectangle 3-6-0 tall by 2-0-0 wide will fit 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.
  - 7) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 8 and 6. This connection is for uplift only and does not consider lateral forces.



June 23, 2020

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**  
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 818 Soundside Road  
 Edenton, NC 27932

Job 23574A	Truss V5	Truss Type VALLEY	Qty 1	Ply 1	240.2596.B.12x12	I41752157
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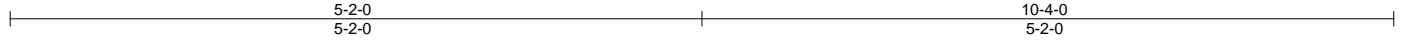
84 Components (Dunn),

Dunn, NC - 28334,

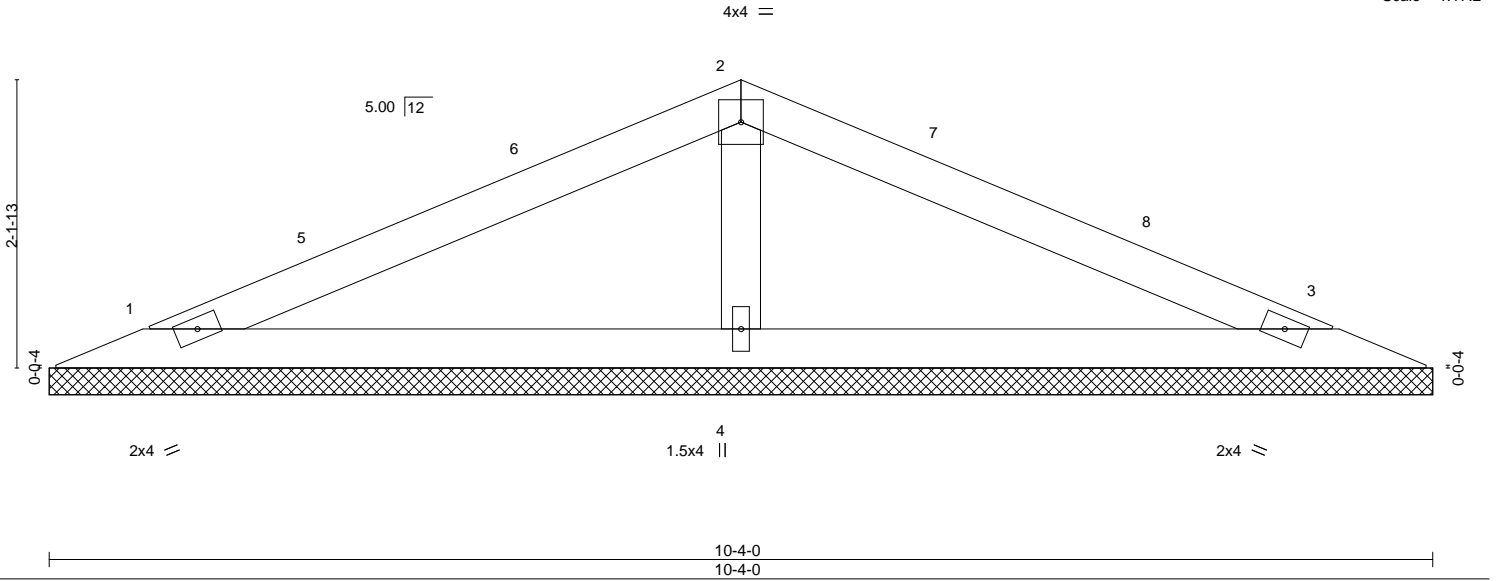
8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 22 15:48:41 2020 Page 1

ID:IRUvu6CsEmxbTOSip7BE4uyZSNq-Hn2FkDjS0jnpmUCzJlf511tIE1dueAvM3hAPqOz3hBK

Job Reference (optional)



Scale = 1:17.2



LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.15	TC 0.27	Vert(LL) n/a	-	n/a	999	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.19	Vert(TL) n/a	-	n/a	999		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.05	Horz(TL) 0.00	3	n/a	n/a		
BCDL 10.0	Code IRC2012/TPI2007	Matrix-S					Weight: 32 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=10-4-0, 3=10-4-0, 4=10-4-0  
 Max Horz 1=31(LC 16)  
 Max Uplift 1=-32(LC 12), 3=-38(LC 13), 4=-21(LC 12)  
 Max Grav 1=159(LC 23), 3=159(LC 24), 4=395(LC 1)

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

WEBS 2-4=266/126

**NOTES-**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph (3-second gust) V(IRC2012)=103mph; TC DL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-9-1 to 3-9-1, Interior(1) 3-9-1 to 5-2-0, Exterior(2) 5-2-0 to 8-2-0, Interior(1) 8-2-0 to 9-6-15 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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 where a rectangle 3-6-0 tall by 2-0-0 wide will fit 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.
- One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 4. This connection is for uplift only and does not consider lateral forces.



June 23, 2020

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**

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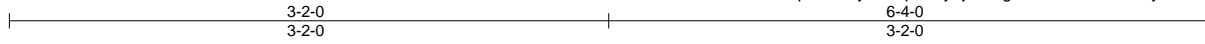
Job 23574A	Truss V6	Truss Type VALLEY	Qty 1	Ply 1	240.2596.B.12x12	I41752158
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84 Components (Dunn),

Dunn, NC - 28334,

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 22 15:48:42 2020 Page 1

ID:IRUvu6CsEmxbTOSip7BE4uyZSNq-lzcdyZj4n1vgOdn9tSAKrFQVcRyRNd?VILvzMqz3hBJ



Scale = 1:12.2

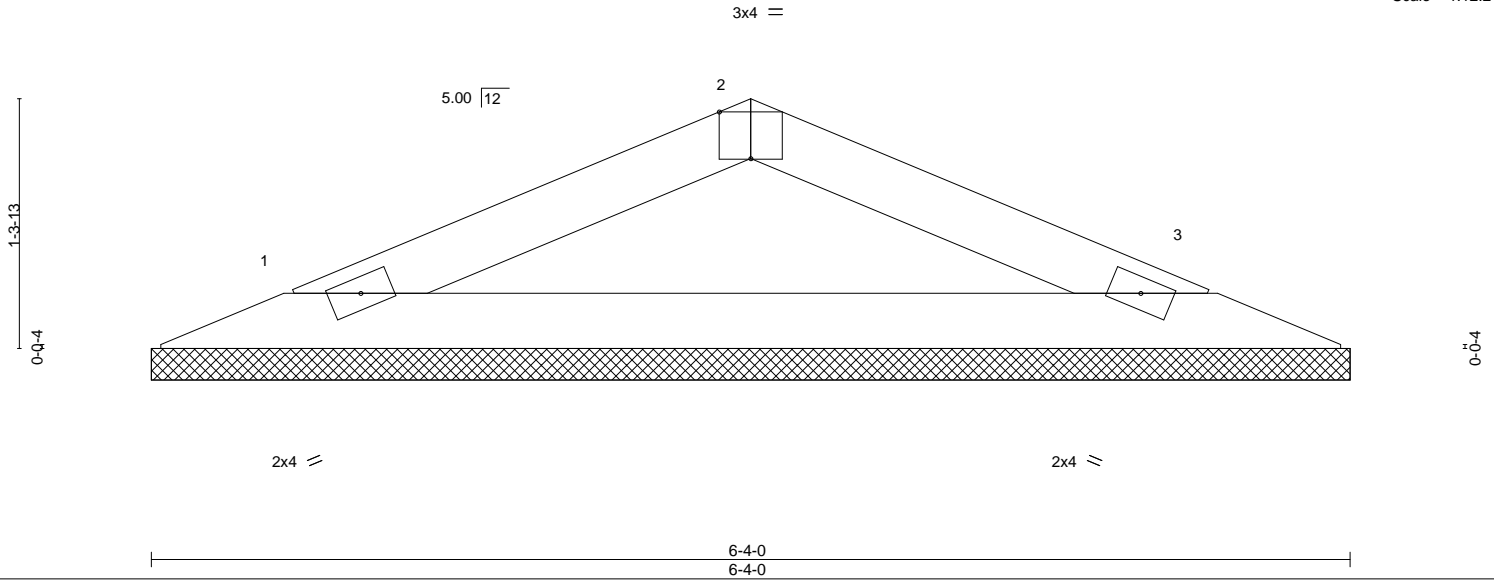


Plate Offsets (X,Y)-- [2:0-2-0,Edge]		6-4-0		6-4-0		PLATES		GRIP	
<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>MT20</b>	<b>244/190</b>
TCLL 20.0	Plate Grip DOL 1.15	TC 0.10	Vert(LL) n/a - n/a	999					
TCDL 10.0	Lumber DOL 1.15	BC 0.30	Vert(TL) n/a - n/a	999					
BCLL 0.0 *	Rep Stress Incr YES	WB 0.00	Horz(TL) 0.00 3 n/a	n/a					
BCDL 10.0	Code IRC2012/TPI2007	Matrix-P							
								Weight: 17 lb	FT = 20%

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

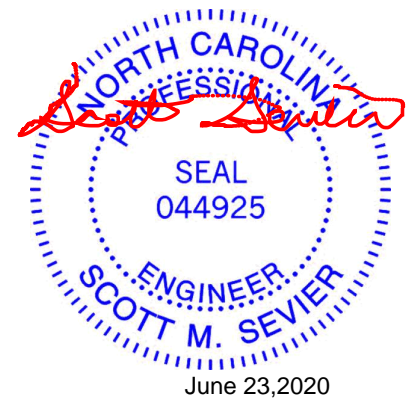
**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 1=6-4-0, 3=6-4-0  
 Max Horz 1=-17(LC 13)  
 Max Uplift 1=-23(LC 12), 3=-23(LC 13)  
 Max Grav 1=193(LC 1), 3=193(LC 1)

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

**NOTES-**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) V(IRC2012)=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) 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 where a rectangle 3-6-0 tall by 2-0-0 wide will fit 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.



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**

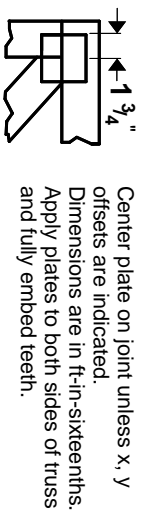
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall 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, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



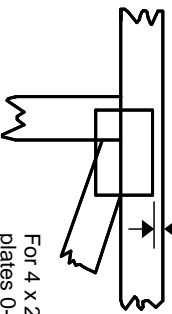
818 Soundside Road  
 Edenton, NC 27932

# 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-  $\frac{1}{16}$ " from outside edge of truss.

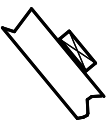
\* Plate location details available in **MITrak 20/20 software or upon request.**

## PLATE SIZE

4 X 4

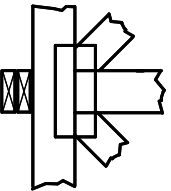
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## 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

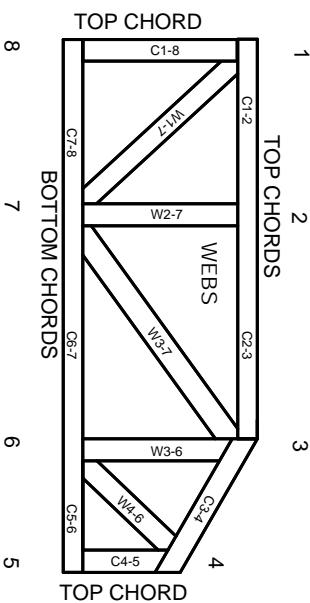


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

## Industry Standards:

ANSI/TPI 1: National Design Specification for Metal Plate Connected Wood Truss Construction.  
DSB-89: Design Standard for Bracing.  
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

# Numbering System



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

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

## PRODUCT CODE APPROVALS

ICC-ES Reports:

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

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

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

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