

RE: 20090081
 A&G RESIDENTIAL - 20 Mitchell Manor

Trenco
 818 Soundside Rd
 Edenton, NC 27932

Site Information:

Customer: A&G Residential Project Name: 20090081
 Lot/Block: 20 Model: Dorchester C
 Address: Subdivision: Mitchell Manor
 City: State:

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

Design Code: IRC2018/TPI2014 Design Program: MiTek 20/20 8.4
 Wind Code: N/A Wind Speed: 130 mph
 Roof Load: 40.0 psf Floor Load: N/A psf

This package includes 21 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	E14785986	A01	9/23/2020	21	E14786006	V25	9/23/2020
2	E14785987	A02	9/23/2020				
3	E14785988	A03	9/23/2020				
4	E14785989	A04	9/23/2020				
5	E14785990	A05	9/23/2020				
6	E14785991	A06	9/23/2020				
7	E14785992	A07	9/23/2020				
8	E14785993	A08	9/23/2020				
9	E14785994	A09	9/23/2020				
10	E14785995	B01	9/23/2020				
11	E14785996	B02	9/23/2020				
12	E14785997	C01	9/23/2020				
13	E14785998	CJ01	9/23/2020				
14	E14785999	D01	9/23/2020				
15	E14786000	D02	9/23/2020				
16	E14786001	J01	9/23/2020				
17	E14786002	J02	9/23/2020				
18	E14786003	J03	9/23/2020				
19	E14786004	J04	9/23/2020				
20	E14786005	J05	9/23/2020				

The truss drawing(s) referenced above have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Carter Components (Sanford, NC)).
 Truss Design Engineer's Name: Gilbert, Eric
 My license renewal date for the state of North Carolina is December 31, 2020.
 North Carolina COA: C-0844



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

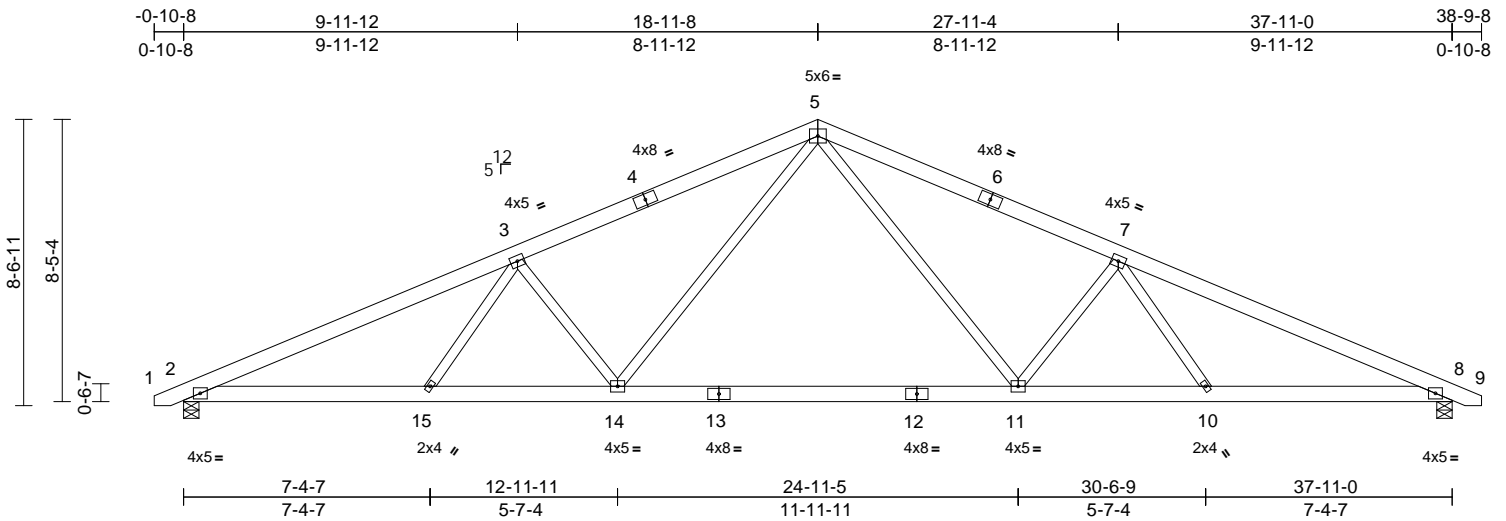
September 23, 2020

Job 20090081	Truss A01	Truss Type Common	Qty 15	Ply 1	A&G RESIDENTIAL - 20 Mitchell Manor Job Reference (optional)	E14785986
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.41 S May 22 2020 Print: 8.410 S May 22 2020 MiTek Industries, Inc. Tue Aug 25 17:20:42
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Page: 1



Scale = 1:68.9

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.49	Vert(LL)	-0.32	11-14	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.89	Vert(CT)	-0.58	11-14	>788	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.36	Horz(CT)	0.10	8	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 246 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP No.2
 BOT CHORD 2x6 SP No.2
 WEBS 2x4 SP No.3 *Except* 14-5,11-5:2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-5-10 oc purlins.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(size) 2=0-5-8, 8=0-5-8
 Max Horiz 2=-77 (LC 16)
 Max Grav 2=1687 (LC 3), 8=1687 (LC 3)

FORCES

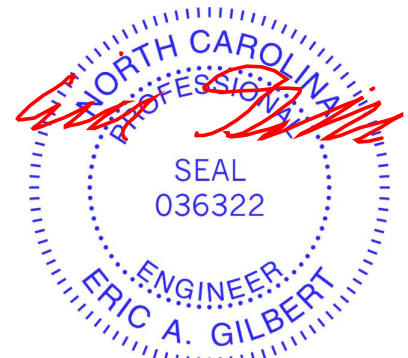
(lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=0/18, 2-3=-3450/0, 3-4=-2990/0, 4-5=-2895/0, 5-6=-2895/0, 6-7=-2990/0, 7-8=-3450/0, 8-9=0/18
 BOT CHORD 2-15=0/3134, 14-15=0/3020, 13-14=0/1986, 12-13=0/1986, 11-12=0/1986, 10-11=0/3020, 8-10=0/3134
 WEBS 3-14=-690/150, 5-14=0/1151, 5-11=0/1151, 7-11=-690/151, 3-15=0/215, 7-10=0/215

NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) 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=1.33
- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.

- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- 6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



August 26, 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

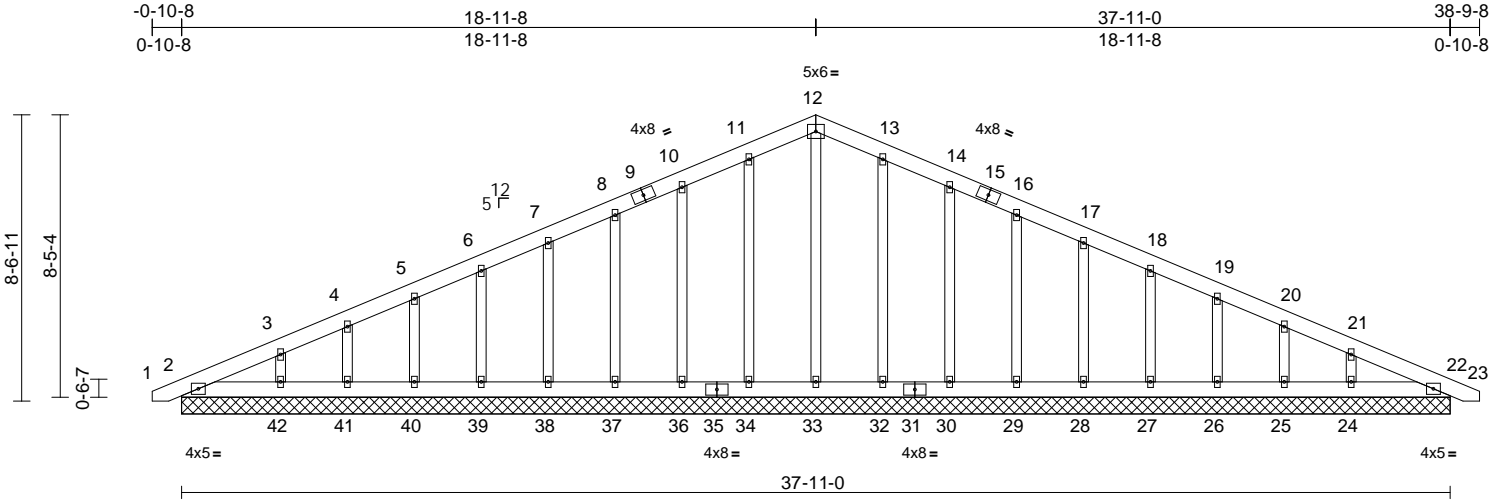
Job 20090081	Truss A02	Truss Type Common Supported Gable	Qty 1	Ply 1	A&G RESIDENTIAL - 20 Mitchell Manor Job Reference (optional)	E14785987
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1

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Scale = 1:68.9

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.03	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.00	22	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 291 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2
OTHERS 2x4 SP No.3 *Except*
33-12,34-11,36-10,37-8,32-13,30-14,29-16:2
x4 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)
2=37-11-0, 22=37-11-0,
24=37-11-0, 25=37-11-0,
26=37-11-0, 27=37-11-0,
28=37-11-0, 29=37-11-0,
30=37-11-0, 32=37-11-0,
33=37-11-0, 34=37-11-0,
36=37-11-0, 37=37-11-0,
38=37-11-0, 39=37-11-0,
40=37-11-0, 41=37-11-0,
42=37-11-0, 43=37-11-0,
46=37-11-0
Max Horiz 2=-77 (LC 16), 43=-77 (LC 16)
Max Uplift 24=-19 (LC 16), 25=-10 (LC 16),
26=-12 (LC 16), 27=-12 (LC 16),
28=-12 (LC 16), 29=-12 (LC 16),
30=-16 (LC 16), 32=-1 (LC 16),
34=-4 (LC 15), 36=-15 (LC 15),
37=-12 (LC 15), 38=-12 (LC 15),
39=-12 (LC 15), 40=-12 (LC 15),
41=-9 (LC 15), 42=-20 (LC 15)

Max Grav 2=146 (LC 2), 22=146 (LC 2),
24=233 (LC 36), 25=136 (LC 2),
26=165 (LC 36), 27=159 (LC 36),
28=160 (LC 2), 29=160 (LC 2),
30=185 (LC 23), 32=195 (LC 23),
33=146 (LC 32), 34=195 (LC 22),
36=185 (LC 22), 37=160 (LC 2),
38=160 (LC 2), 39=159 (LC 35),
40=165 (LC 35), 41=136 (LC 2),
42=233 (LC 35), 43=146 (LC 2),
46=146 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/18, 2-3=-96/43, 3-4=-75/43,
4-5=-62/50, 5-6=-53/63, 6-7=-43/77,
7-8=-54/92, 8-9=-68/98, 9-10=-60/106,
10-11=-84/122, 11-12=-97/133,
12-13=-97/129, 13-14=-84/109,
14-15=-60/85, 15-16=-68/77, 16-17=-54/62,
17-18=-39/44, 18-19=-37/29, 19-20=-37/18,
20-21=-50/14, 21-22=-63/36, 22-23=0/18
BOT CHORD 2-42=-40/79, 41-42=-40/79, 40-41=-40/79,
39-40=-40/79, 38-39=-40/79, 37-38=-40/79,
36-37=-40/79, 35-36=-40/79, 34-35=-40/79,
33-34=-40/79, 32-33=-40/79, 31-32=-40/79,
30-31=-40/79, 29-30=-40/79, 28-29=-40/79,
27-28=-40/79, 26-27=-40/79, 25-26=-40/79,
24-25=-40/79, 22-24=-40/79
WEBS 12-33=-106/8, 11-34=-155/28,
10-36=-145/39, 8-37=-121/36, 7-38=-119/36,
6-39=-120/36, 5-40=-122/36, 4-41=-110/35,
3-42=-153/40, 13-32=-155/25,
14-30=-145/40, 16-29=-121/36,
17-28=-119/36, 18-27=-120/36,
19-26=-122/36, 20-25=-110/35,
21-24=-153/39

NOTES
1) Unbalanced roof live loads have been considered for this design.

- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) zone; cantilever left and right exposed; and vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 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), or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0, qq



August 26, 2020

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



818 Soundside Road
Edenton, NC 27932

Job 20090081	Truss A02	Truss Type Common Supported Gable	Qty 1	Ply 1	A&G RESIDENTIAL - 20 Mitchell Manor Job Reference (optional)	E14785987
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 2

- 10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 11) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 34, 36, 37, 38, 39, 40, 41, 42, 32, 30, 29, 28, 27, 26, 25, and 24. This connection is for uplift only and does not consider lateral forces.
- 12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 13) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

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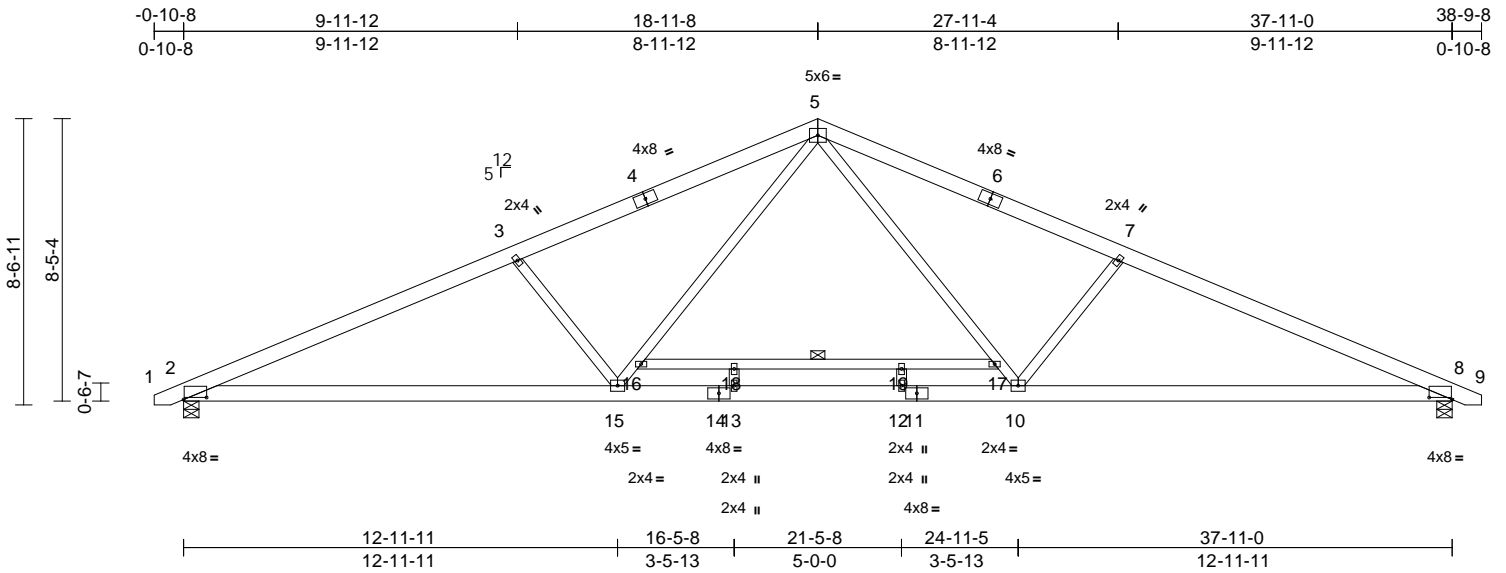
818 Soundside Road
Edenton, NC 27932

Job 20090081	Truss A03	Truss Type Common	Qty 4	Ply 1	A&G RESIDENTIAL - 20 Mitchell Manor Job Reference (optional)	E14785988
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



Scale = 1:68.9

Plate Offsets (X, Y): [2:0-8-4,0-0-12], [8:0-8-4,0-0-12]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.53	Vert(LL)	-0.15	10-25	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.89	Vert(CT)	-0.45	12-13	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.41	Horz(CT)	0.10	8	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 250 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP No.2
 BOT CHORD 2x6 SP No.2
 WEBS 2x4 SP No.3 *Except* 15-5,10-5,16-17:2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-4-12 oc purlins.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
 WEBS 1 Row at midpt 16-17

REACTIONS

(size) 2=0-5-8, 8=0-5-8
 Max Horiz 2=-77 (LC 16)
 Max Grav 2=1654 (LC 2), 8=1654 (LC 2)

FORCES

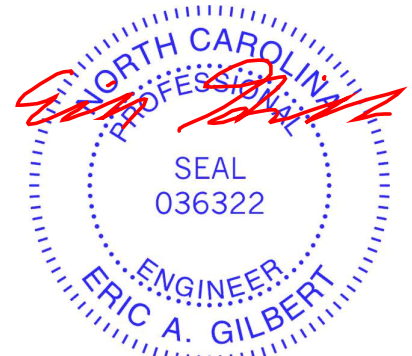
(lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=0/18, 2-3=-3319/0, 3-4=-2986/0,
 4-5=-2869/0, 5-6=-2869/0, 6-7=-2986/0,
 7-8=-3319/0, 8-9=0/18
 BOT CHORD 2-15=0/3009, 14-15=0/2123, 13-14=0/2123,
 12-13=0/2123, 11-12=0/2123, 10-11=0/2123,
 8-10=0/3009
 WEBS 3-15=-614/177, 15-16=0/1028, 5-16=0/1106,
 5-17=0/1106, 10-17=0/1028, 7-10=-614/177,
 16-18=-137/0, 18-19=-137/0, 17-19=-137/0,
 13-18=0/23, 12-19=0/23

NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust)
 Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;
 Cat. II; Exp B; Enclosed; MWFRS (envelope) 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=1.33

- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15
 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum
 DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully
 Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- 6) 200.0lb AC unit load placed on the bottom chord, 18-11-8 from left end, supported at two points, 5-0-0 apart.
- 7) All plates are 2x4 MT20 unless otherwise indicated.
- 8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



August 26, 2020

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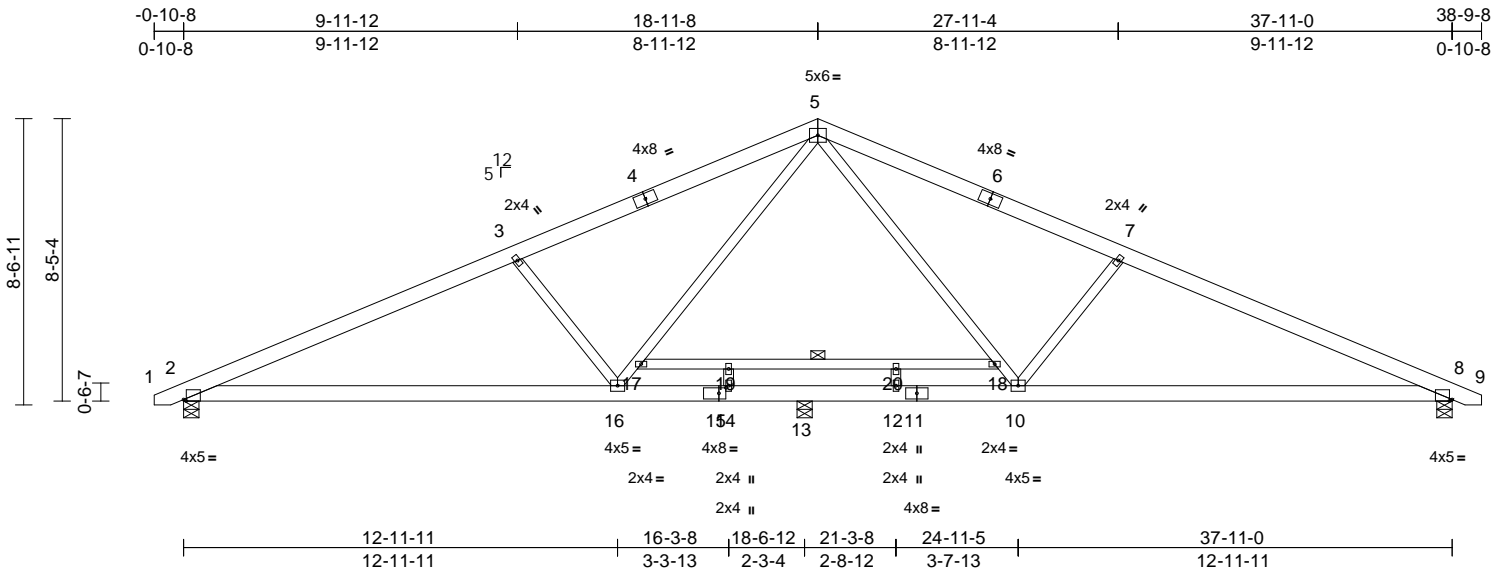
818 Soundside Road
 Edenton, NC 27932

Job 20090081	Truss A04	Truss Type Common	Qty 1	Ply 1	A&G RESIDENTIAL - 20 Mitchell Manor Job Reference (optional)	E14785989
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.41 S May 22 2020 Print: 8.410 S May 22 2020 MiTek Industries, Inc. Tue Aug 25 17:20:46
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Page: 1



Scale = 1:68.9

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.57	Vert(LL)	-0.18	16-23	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.83	Vert(CT)	-0.46	16-23	>484	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.35	Horz(CT)	0.08	8	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 250 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP No.2
 BOT CHORD 2x6 SP No.2
 WEBS 2x4 SP No.3 *Except* 16-5,10-5,17-18:2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-7-7 oc purlins.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
 WEBS 1 Row at midpt 17-18

REACTIONS

(size) 2=0-5-8, 8=0-5-8, 13=0-5-8
 Max Horiz 2=-77 (LC 16)
 Max Grav 2=1449 (LC 2), 8=1455 (LC 2), 13=405 (LC 2)

FORCES

(lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=0/18, 2-3=-2742/0, 3-4=-2403/0, 4-5=-2283/0, 5-6=-2303/0, 6-7=-2423/0, 7-8=-2762/0, 8-9=0/18
 BOT CHORD 2-16=0/2484, 15-16=0/1700, 14-15=0/1700, 13-14=0/1700, 12-13=0/1700, 11-12=0/1700, 10-11=0/1700, 8-10=0/2502
 WEBS 16-17=0/840, 5-17=0/858, 3-16=-636/165, 5-18=0/885, 10-18=0/860, 7-10=-635/165, 17-19=-80/0, 19-20=-80/0, 18-20=-80/0, 14-19=-33/0, 12-20=-17/5

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) 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=1.33

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- 200.0lb AC unit load placed on the bottom chord, 18-11-8 from left end, supported at two points, 5-0-0 apart.
- All plates are 2x4 MT20 unless otherwise indicated.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



August 26, 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



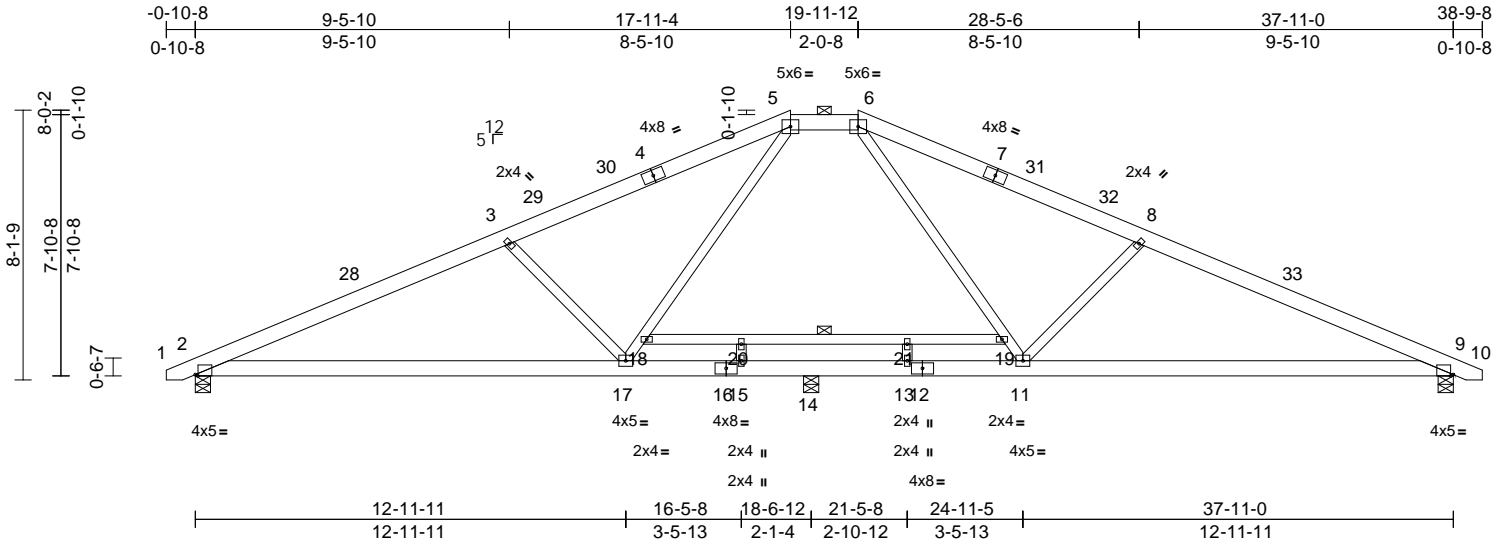
818 Soundside Road
 Edenton, NC 27932

Job 20090081	Truss A05	Truss Type Hip	Qty 1	Ply 1	A&G RESIDENTIAL - 20 Mitchell Manor Job Reference (optional)	E14785990
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.41 S May 22 2020 Print: 8.410 S May 22 2020 MiTek Industries, Inc. Tue Aug 25 17:20:46
ID: CyQ04YxiTotmZl?hQb1qWuykFJb-3QXrrKLbDe2iFVQUY74Mwvs5vtlwxelXSiDnykEI?

Page: 1



Scale = 1:69.4

Plate Offsets (X, Y): [2:0-1-0,Edge], [9:0-1-0,Edge]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.58	Vert(LL)	-0.20	17-24	>999	240
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.93	Vert(CT)	-0.47	17-24	>476	180
TCDL	10.0	Rep Stress Incr	YES	WB	0.37	Horz(CT)	0.10	9	n/a	n/a
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH						
BCDL	10.0									
										Weight: 247 lb FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.2 *Except* 20-15,21-13:2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-5-13 oc purlins, except 2-0-0 oc purlins (4-11-9 max.): 5-6.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing. Except: 2-2-0 oc bracing: 13-14.
WEBS 1 Row at midpt 18-19

REACTIONS (size) 2=0-5-8, 9=0-5-8, 14=0-5-8
Max Horiz 2=-72 (LC 16)
Max Grav 2=1594 (LC 40), 9=1604 (LC 40), 14=453 (LC 40)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/18, 2-28=-3237/0, 3-28=-3178/0, 3-29=-2782/0, 29-30=-2673/0, 4-30=-2641/0, 4-5=-2622/0, 5-6=-1993/0, 6-7=-2648/0, 7-31=-2668/0, 31-32=-2700/0, 8-32=-2809/0, 8-33=-3207/0, 9-33=-3266/0, 9-10=0/18
BOT CHORD 2-17=0/2950, 16-17=0/2061, 15-16=0/2061, 14-15=0/2061, 13-14=0/2061, 12-13=0/2061, 11-12=0/2061, 9-11=0/2976
WEBS 17-18=0/774, 5-18=0/784, 3-17=-756/171, 6-19=0/828, 11-19=0/811, 8-11=-758/169, 18-20=-68/0, 20-21=-68/0, 19-21=-68/0, 15-20=-36/0, 13-21=-16/4

NOTES
1) Unbalanced roof live loads have been considered for this design.

- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) 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=1.33
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10, Lu=50-0-0
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- 200.0lb AC unit load placed on the bottom chord, 18-11-8 from left end, supported at two points, 5-0-0 apart.
- Provide adequate drainage to prevent water ponding.
- All plates are 2x4 MT20 unless otherwise indicated.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



August 26, 2020

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818 Soundside Road
Edenton, NC 27932

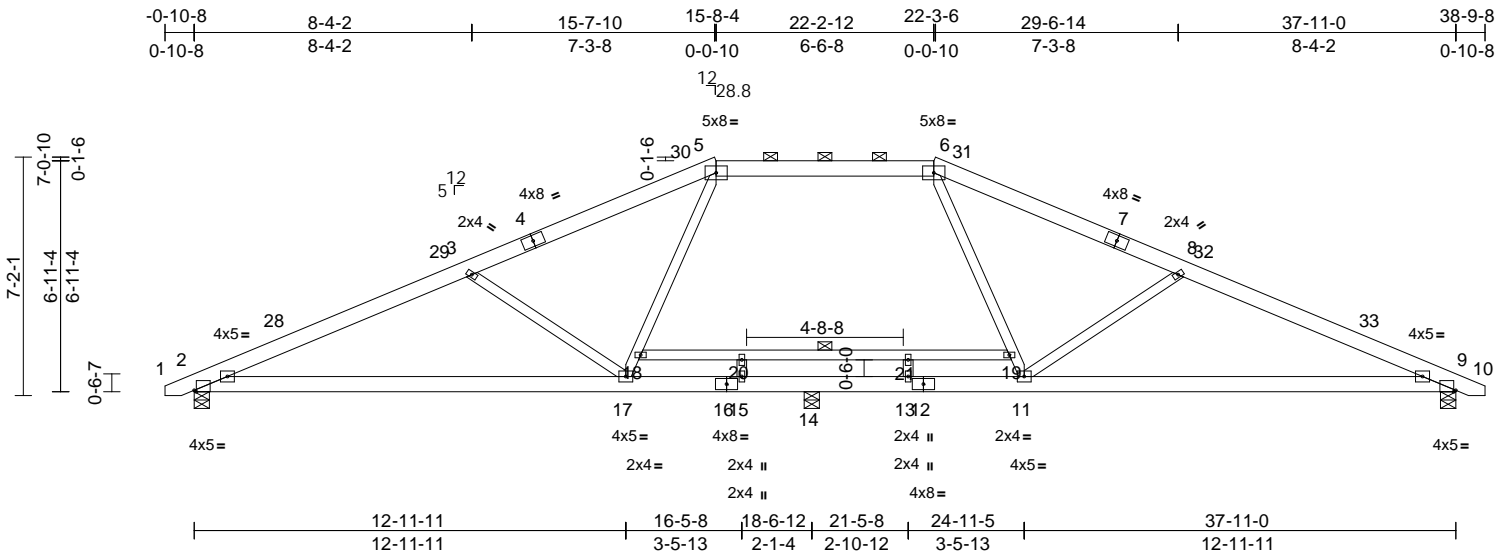
Job 20090081	Truss A06	Truss Type Hip	Qty 1	Ply 1	A&G RESIDENTIAL - 20 Mitchell Manor Job Reference (optional)	E14785991
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.41 S May 22 2020 Print: 8.410 S May 22 2020 MiTek Industries, Inc. Tue Aug 25 17:20:47

Page: 1

ID: AEEtmTwOc_7caulx0ViCvPykFHi-Xd5D3gLD_yAZtf?hxFeJvKt38JEAfIjo_BCCIDykEL



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.50	Vert(LL)	-0.43	11-27	>542	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.89	Vert(CT)	-0.67	11-27	>347	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.46	Horz(CT)	0.09	9	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 243 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.2 *Except* 15-20,21-13:2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-6-13 oc purlins, except 2-0-0 oc purlins (4-11-8 max.): 5-6.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 18-19

REACTIONS (size) 2=0-5-8, 9=0-5-8, 14=0-5-8
Max Horiz 2=-63 (LC 16)
Max Grav 2=1561 (LC 40), 9=1570 (LC 40), 14=432 (LC 40)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/18, 2-28=-3157/0, 28-29=-3113/0, 3-29=-2971/0, 3-4=-2567/0, 4-30=-2429/0, 5-30=-2333/0, 5-6=-2019/0, 6-31=-2350/0, 7-31=-2443/0, 7-8=-2584/0, 8-32=-2995/0, 32-33=-3139/0, 9-33=-3181/0, 9-10=0/18
BOT CHORD 2-17=0/2874, 16-17=0/2037, 15-16=0/2037, 14-15=0/2037, 13-14=0/2037, 12-13=0/2037, 11-12=0/2037, 9-11=0/2897
WEBS 17-18=0/616, 5-18=0/599, 3-17=-762/178, 6-19=0/633, 11-19=0/641, 8-11=-775/171, 18-20=-18/0, 20-21=-18/0, 19-21=-18/0, 15-20=-39/0, 13-21=-24/11

NOTES
1) Unbalanced roof live loads have been considered for this design.

- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) 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=1.33
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10, Lu=50-0-0
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- 200.0lb AC unit load placed on the bottom chord, 18-11-8 from left end, supported at two points, 5-0-0 apart.
- Provide adequate drainage to prevent water ponding.
- All plates are 2x4 MT20 unless otherwise indicated.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



August 26, 2020

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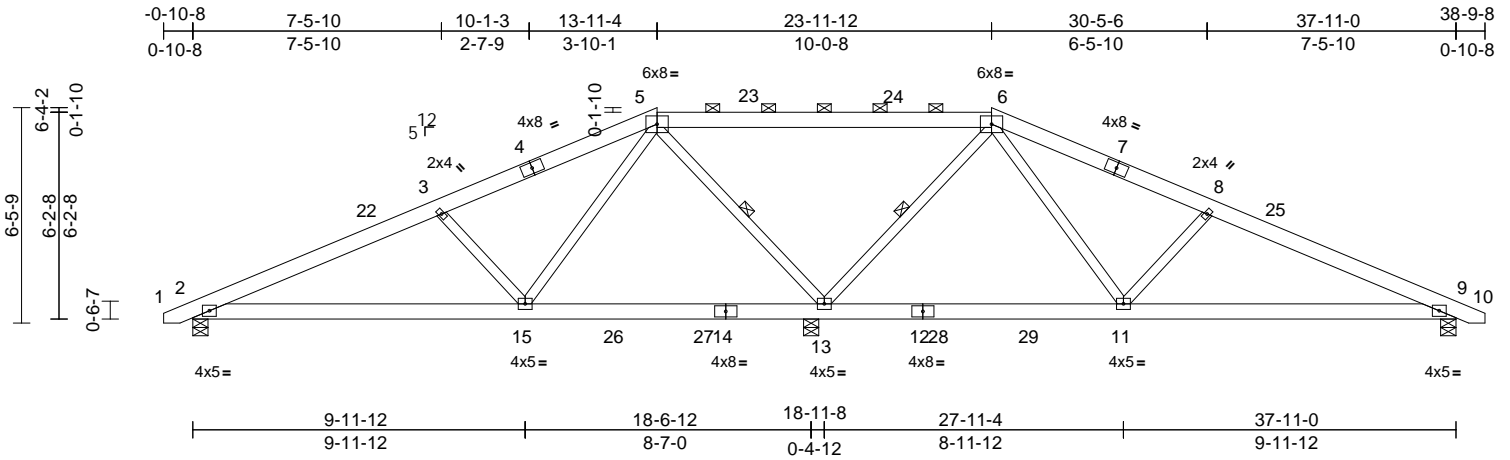
818 Soundside Road
Edenton, NC 27932

Job 20090081	Truss A07	Truss Type Hip	Qty 1	Ply 1	A&G RESIDENTIAL - 20 Mitchell Manor Job Reference (optional)	E14785992
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.41 S May 22 2020 Print: 8.410 S May 22 2020 MiTek Industries, Inc. Tue Aug 25 17:20:48
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Page: 1



Scale = 1:69.2

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.98	Vert(LL)	-0.07	11-21	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.45	Vert(CT)	-0.14	11-21	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.34	Horz(CT)	0.01	9	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 240 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.2 *Except* 15-3,11-8:2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (2-2-0 max.): 5-6.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 5-13, 6-13

REACTIONS (size) 2=0-5-8, 9=0-5-8, 13=0-5-8
Max Horiz 2=-56 (LC 16)
Max Uplift 2=-17 (LC 15), 9=-26 (LC 16)
Max Grav 2=669 (LC 46), 9=669 (LC 46), 13=2171 (LC 46)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/18, 2-22=-906/41, 3-22=-758/67, 3-4=-630/44, 4-5=-522/60, 5-23=0/877, 23-24=0/877, 6-24=0/877, 6-7=-522/83, 7-8=-630/67, 8-25=-758/90, 9-25=-906/64, 9-10=0/18
BOT CHORD 2-15=-56/798, 15-26=-115/131, 26-27=-115/131, 14-27=-115/131, 13-14=-115/131, 12-13=-115/131, 12-28=-115/131, 28-29=-115/131, 11-29=-115/131, 9-11=-21/791
WEBS 5-15=0/937, 3-15=-617/119, 5-13=-1209/31, 6-13=-1209/23, 6-11=0/937, 8-11=-617/119

NOTES
1) Unbalanced roof live loads have been considered for this design.

- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) 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=1.33
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10, Lu=50-0-0
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 9. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



August 26, 2020

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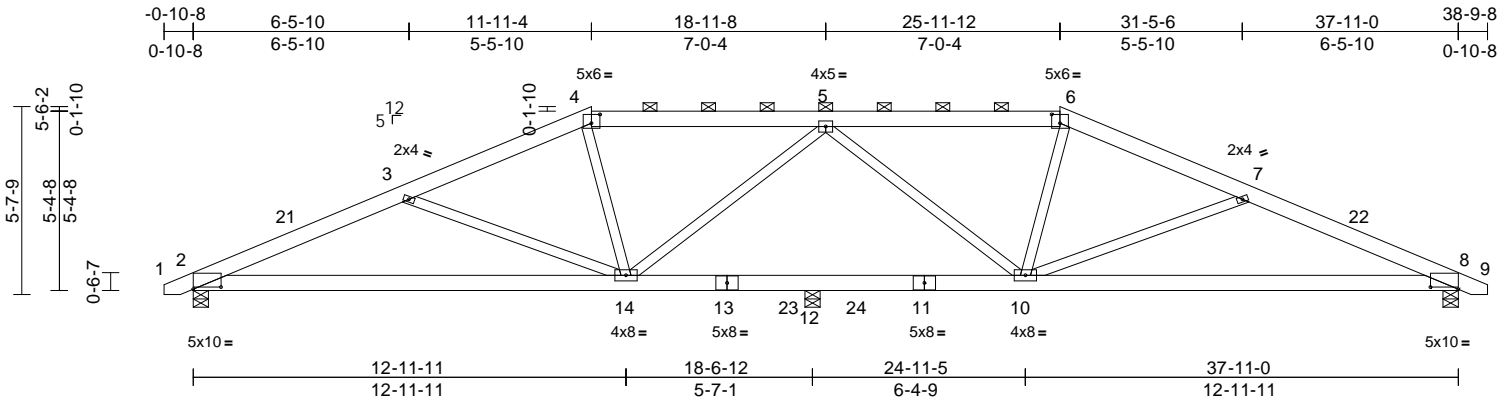
818 Soundside Road
Edenton, NC 27932

Job 20090081	Truss A08	Truss Type Hip	Qty 1	Ply 1	A&G RESIDENTIAL - 20 Mitchell Manor Job Reference (optional)	E14785993
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.41 S May 22 2020 Print: 8.410 S May 22 2020 MiTek Industries, Inc. Tue Aug 25 17:20:48
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Page: 1



Scale = 1:69.1

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in (loc)	l/defl	L/d	PLATES	GRIP		
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.52	Vert(LL)	-0.26	14-17	>869	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.99	Vert(CT)	-0.52	14-17	>429	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.65	Horz(CT)	0.10	8	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 243 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP No.2
 BOT CHORD 2x6 SP No.2
 WEBS 2x4 SP No.2 *Except* 14-4,10-6:2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-6-1 oc purlins, except 2-0-0 oc purlins (4-6-0 max.): 4-6.
 BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.

REACTIONS

(size) 2=0-5-8, 8=0-5-8, 12=0-5-8
 Max Horiz 2=-49 (LC 16)
 Max Grav 2=1523 (LC 46), 8=1530 (LC 46), 12=346 (LC 3)

FORCES

(lb) - Maximum Compression/Maximum Tension

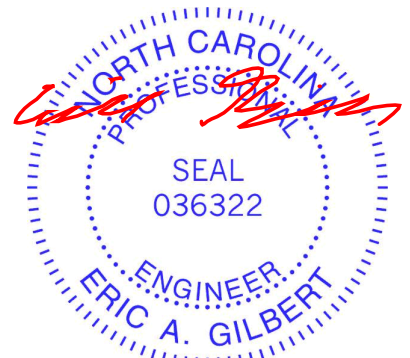
TOP CHORD 1-2=0/20, 2-21=-2931/0, 3-21=-2895/6, 3-4=-2464/8, 4-5=-2369/4, 5-6=-2393/2, 6-7=-2487/6, 7-22=-2915/4, 8-22=-2950/0, 8-9=0/20
 BOT CHORD 2-14=0/2706, 13-14=0/2671, 13-23=0/2671, 12-23=0/2671, 12-24=0/2671, 11-24=0/2671, 10-11=0/2671, 8-10=0/2723
 WEBS 4-14=0/655, 5-14=-548/84, 3-14=-742/109, 5-10=-524/86, 6-10=0/664, 7-10=-739/110

NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) 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=1.33

- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10, Lu=50-0-0
- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- 6) Provide adequate drainage to prevent water ponding.
- 7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



August 26, 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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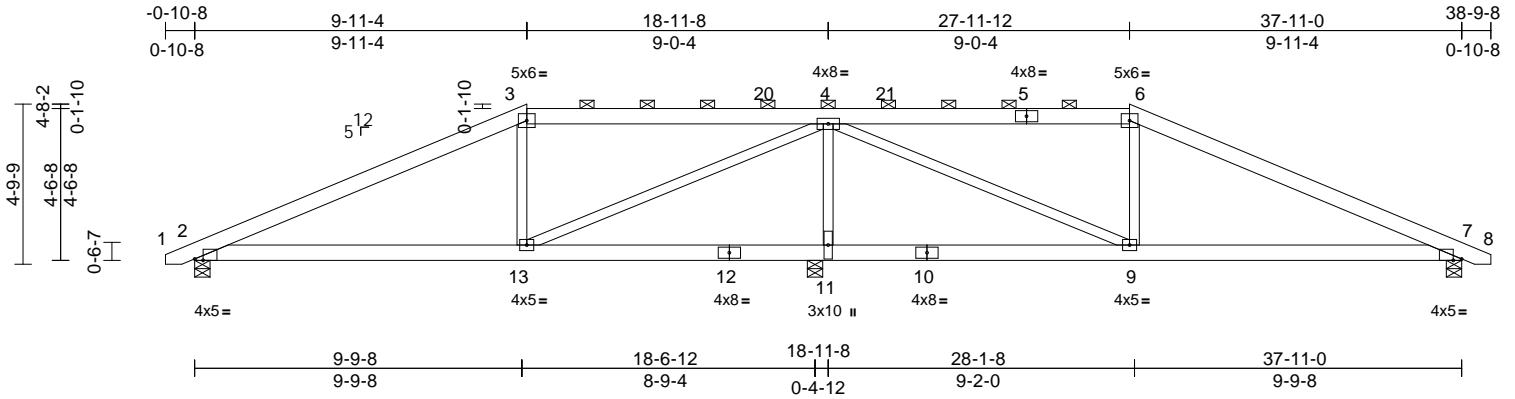
818 Soundside Road
 Edenton, NC 27932

Job 20090081	Truss A09	Truss Type Hip	Qty 1	Ply 1	A&G RESIDENTIAL - 20 Mitchell Manor Job Reference (optional)	E14785994
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.41 S May 22 2020 Print: 8.410 S May 22 2020 MiTek Industries, Inc. Tue Aug 25 17:20:49
ID:6714Lgc0wvtgFu2k7SwkloykF9g-T?D_ULNTWZQH6y832ggn_9YKB7x57B45RVhJp5ykEky

Page: 1



Scale = 1:69

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.78	Vert(LL)	-0.13	13-16	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.73	Vert(CT)	-0.23	13-16	>988	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.54	Horz(CT)	0.01	7	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 231 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP No.2
 BOT CHORD 2x6 SP No.2
 WEBS 2x4 SP No.3 *Except* 13-4,9-4;2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-7-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 3-6.
 BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS

(size) 2=0-5-8, 7=0-5-8, 11=0-5-8
 Max Horiz 2=-41 (LC 16)
 Max Uplift 2=-8 (LC 15), 7=-13 (LC 16)
 Max Grav 2=871 (LC 40), 7=871 (LC 40), 11=1769 (LC 39)

FORCES

(lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=0/20, 2-3=-1106/10, 3-20=-906/38, 4-20=-907/37, 4-21=-908/51, 5-21=-908/51, 5-6=-906/51, 6-7=-1107/25, 7-8=0/20
 BOT CHORD 2-13=0/901, 12-13=-73/9, 11-12=-73/9, 10-11=-73/9, 9-10=-73/9, 7-9=0/903
 WEBS 3-13=-166/85, 4-13=0/1050, 4-11=-1590/92, 4-9=0/1052, 6-9=-167/85

NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) 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=1.33

- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10, Lu=50-0-0
- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- 6) Provide adequate drainage to prevent water ponding.
- 7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 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 and 7. This connection is for uplift only and does not consider lateral forces.
- 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



August 26, 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



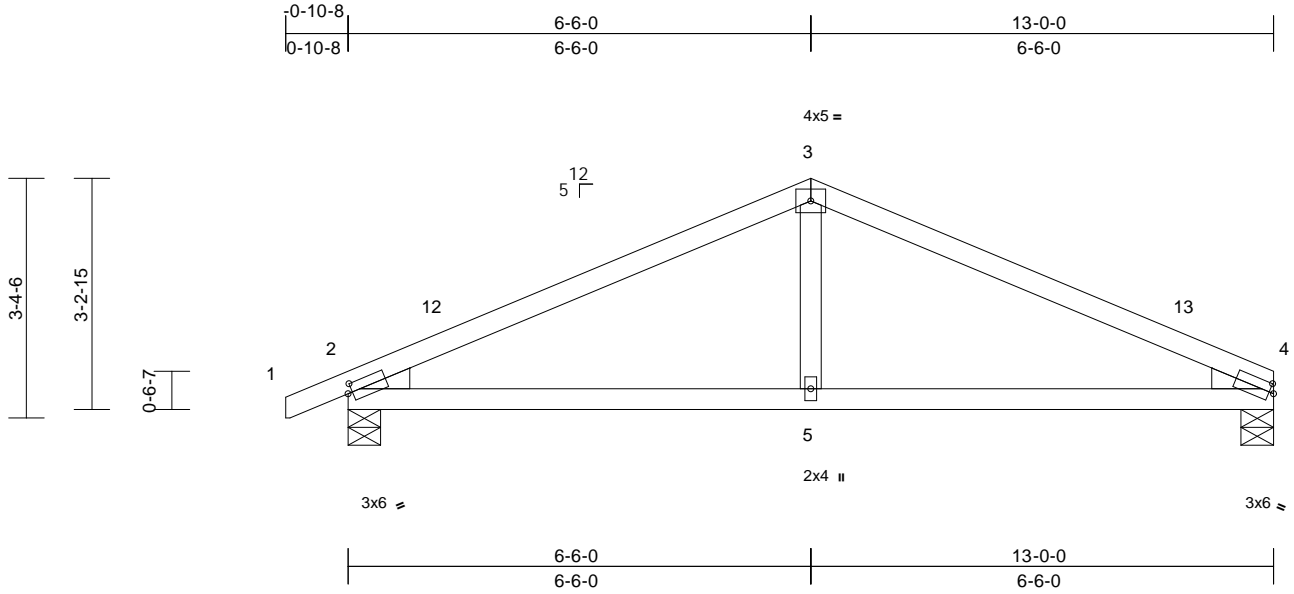
818 Soundside Road
 Edenton, NC 27932

Job 20090081	Truss B01	Truss Type Common	Qty 4	Ply 1	A&G RESIDENTIAL - 20 Mitchell Manor Job Reference (optional)	E14785995
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.41 S May 22 2020 Print: 8.410 S May 22 2020 MiTek Industries, Inc. Tue Aug 25 17:20:49
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Page: 1



Scale = 1:32.4

Plate Offsets (X, Y): [2:0-0-13,0-1-8], [4:0-0-13,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.67	Vert(LL)	-0.06	5-8	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.44	Vert(CT)	-0.10	5-8	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.01	2	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 48 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS (size) 2=0-5-8, 4=0-5-8

Max Horiz 2=33 (LC 19)
 Max Grav 2=572 (LC 2), 4=518 (LC 2)

FORCES

(lb) - Maximum Compression/Maximum Tension

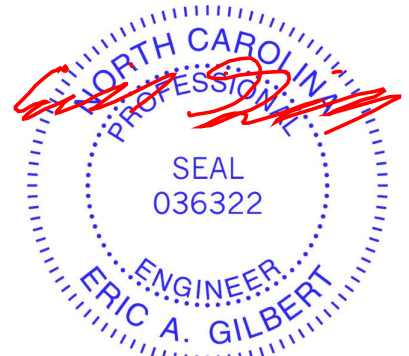
TOP CHORD 1-2=0/25, 2-12=-782/10, 3-12=-707/0,
 3-13=-707/0, 4-13=-782/0
 BOT CHORD 2-5=-93/653, 4-5=0/653
 WEBS 3-5=0/175

NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust)
 Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;
 Cat. II; Exp B; Enclosed; MWFRS (envelope) 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=1.33
- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.

- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- 6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



August 26, 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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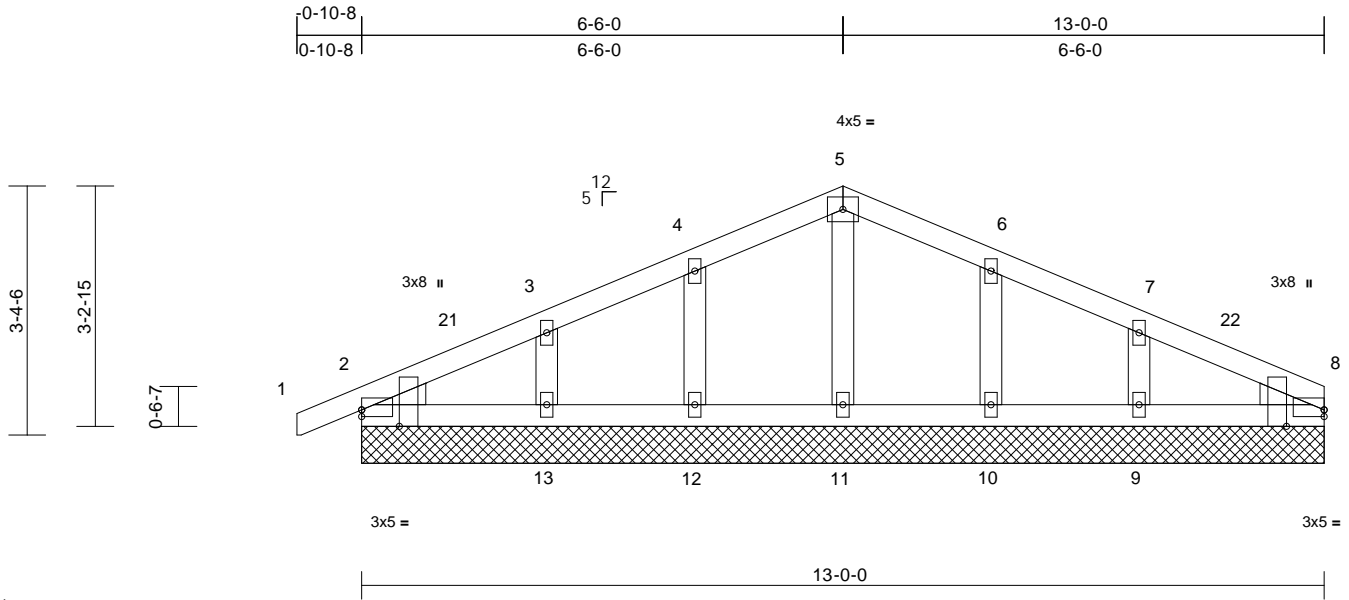
818 Soundside Road
 Edenton, NC 27932

Job 20090081	Truss B02	Truss Type Common	Qty 1	Ply 1	A&G RESIDENTIAL - 20 Mitchell Manor Job Reference (optional)	E14785996
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.41 S May 22 2020 Print: 8.410 S May 22 2020 MiTek Industries, Inc. Tue Aug 25 17:20:50
ID:BMLtLsqNdUUUEFhy_SjBotyKF86-T?D_ULNTWZQH6y832ggg_n9YWU76e7Jz5RVhJp5ykEky

Page: 1



Scale = 1:31.1

Plate Offsets (X, Y): [2:Edge,0-1-1], [2:0-2-11,Edge], [8:Edge,0-1-1], [8:0-2-11,Edge]

Loading	(psf)	Spacing	1-11-4	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.06	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	8	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
										Weight: 57 lb	FT = 20%	

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3
WEDGE Left: 2x4 SP No.2
Right: 2x4 SP No.2

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

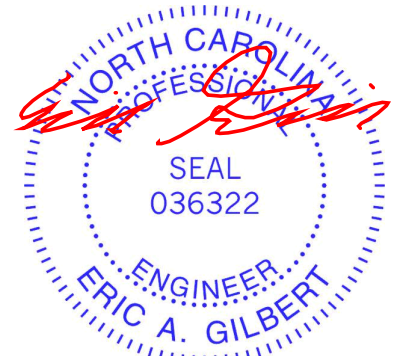
REACTIONS (size)
2=13-0-0, 8=13-0-0, 9=13-0-0,
10=13-0-0, 11=13-0-0, 12=13-0-0,
13=13-0-0, 14=13-0-0, 18=13-0-0
Max Horiz 2=32 (LC 19), 14=32 (LC 19)
Max Uplift 2=8 (LC 11), 9=18 (LC 16),
10=12 (LC 16), 12=12 (LC 15),
13=18 (LC 15), 14=8 (LC 11)
Max Grav 2=152 (LC 2), 8=93 (LC 2), 9=218
(LC 23), 10=182 (LC 23), 11=129
(LC 2), 12=185 (LC 22), 13=207
(LC 22), 14=152 (LC 2), 18=93 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/24, 2-21=-40/15, 3-21=-33/17,
3-4=-50/30, 4-5=-54/44, 5-6=-54/41,
6-7=-51/19, 7-22=-24/9, 8-22=-33/0
BOT CHORD 2-13=-13/31, 12-13=0/31, 11-12=0/31,
10-11=0/31, 9-10=0/31, 8-9=0/31
WEBS 5-11=-86/0, 4-12=-152/37, 3-13=-149/36,
6-10=-151/36, 7-9=-154/36

NOTES
1) Unbalanced roof live loads have been considered for this design.

- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) 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=1.33
- 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.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- All plates are 2x4 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 live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 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, 12, 13, 10, and 9. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard



August 26, 2020

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ENGINEERING BY
TRENCO
A MiTek Affiliate

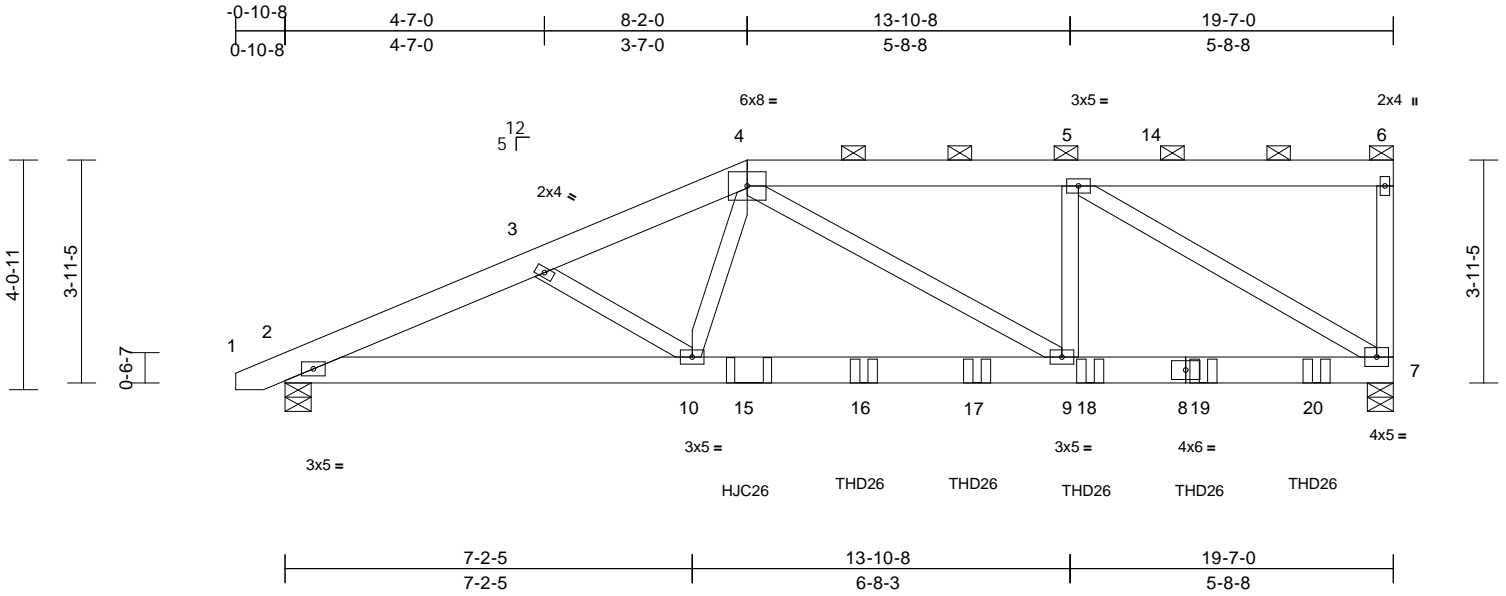
818 Soundside Road
Edenton, NC 27932

Job 20090081	Truss C01	Truss Type Half Hip Girder	Qty 1	Ply 2	A&G RESIDENTIAL - 20 Mitchell Manor Job Reference (optional)	E14785997
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.41 S May 22 2020 Print: 8.410 S May 22 2020 MiTek Industries, Inc. Tue Aug 25 17:20:50
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Page: 1



Scale = 1:40.7

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.22	Vert(LL)	-0.10	9-10	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.82	Vert(CT)	-0.18	9-10	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.61	Horz(CT)	0.03	7	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 265 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP No.2
 BOT CHORD 2x6 SP No.2
 WEBS 2x4 SP No.3 *Except* 7-5,9-4:2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-6.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(size) 2=0-5-8, 7=0-5-8
 Max Horiz 2=108 (LC 10)
 Max Uplift 7=41 (LC 8)
 Max Grav 2=1959 (LC 33), 7=2607 (LC 32)

FORCES

(lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=0/20, 2-3=4328/0, 3-4=-4169/0, 4-5=-3307/24, 5-14=-66/31, 6-14=-66/31, 6-7=-207/32
 BOT CHORD 2-10=0/3906, 10-15=0/3471, 15-16=0/3471, 16-17=0/3471, 9-17=0/3471, 9-18=-30/3307, 8-18=-30/3307, 8-19=-30/3307, 19-20=-30/3307, 7-20=-30/3307
 WEBS 5-7=-3845/9, 4-10=0/1586, 3-10=-154/165, 4-9=-454/0, 5-9=0/1691

NOTES

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
 Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
 Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
 Web 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 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope); cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.33
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10, Lu=50-0-0
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 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) 7. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- Use USP HJC26 (With 16-16d nails into Girder & 10d nails into Truss) or equivalent at 8-2-6 from the left end to connect truss(es) to back face of bottom chord.
- Use USP THD26 (With 18-16d nails into Girder & 12-10d x 1-1/2 nails into Truss) or equivalent spaced at 2-0-0 oc max. starting at 10-2-12 from the left end to 18-2-12 to connect truss(es) to back face of bottom chord.

- Fill all nail holes where hanger is in contact with lumber.
- LOAD CASE(S)** Standard
- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
 Uniform Loads (lb/ft)
 Vert: 1-4=-48, 4-6=-58, 7-11=-20
 Concentrated Loads (lb)
 Vert: 15=-1100 (B), 16=-342 (B), 17=-342 (B), 18=-342 (B), 19=-342 (B), 20=-342 (B)



August 26, 2020

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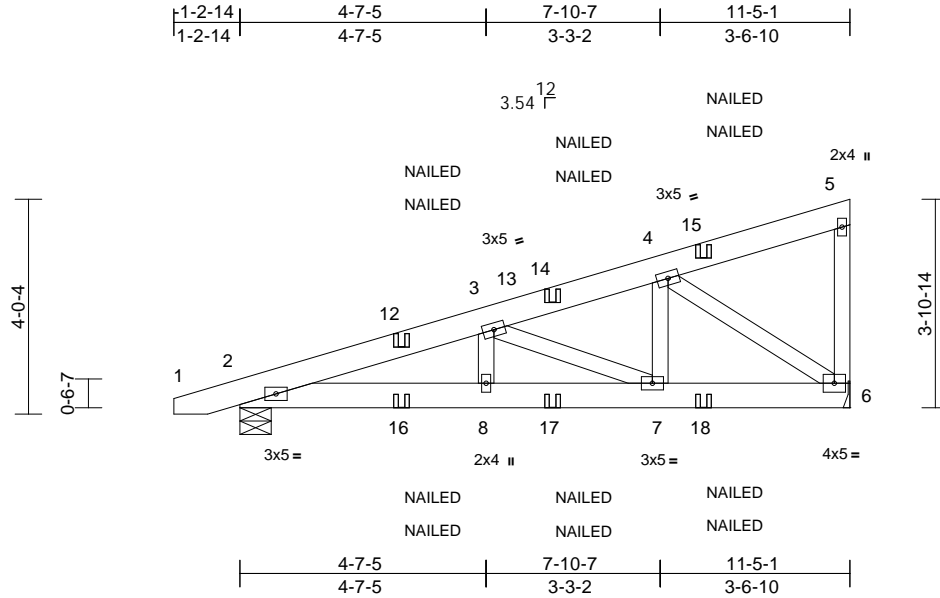
818 Soundside Road
 Edenton, NC 27932

Job 20090081	Truss CJ01	Truss Type Diagonal Hip Girder	Qty 1	Ply 1	A&G RESIDENTIAL - 20 Mitchell Manor Job Reference (optional)	E14785998
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.41 S May 22 2020 Print: 8.410 S May 22 2020 MiTek Industries, Inc. Tue Aug 25 17:20:51
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Page: 1



Scale = 1:43.2

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.16	Vert(LL)	-0.02	8	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.32	Vert(CT)	-0.04	8	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.36	Horz(CT)	0.01	6	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 77 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(size) 2=0-7-1, 6= Mechanical
Max Horiz 2=104 (LC 10)
Max Uplift 2=-14 (LC 7)
Max Grav 2=613 (LC 2), 6=786 (LC 18)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/20, 2-12=-1319/0, 3-12=-1301/0, 3-13=-933/0, 13-14=-918/0, 4-14=-894/0, 4-15=-75/13, 5-15=-41/21, 5-6=-99/17
BOT CHORD 2-16=-2/1253, 8-16=0/1253, 8-17=0/1253, 7-17=0/1253, 7-18=0/863, 6-18=0/863
WEBS 3-8=0/71, 3-7=-447/41, 4-7=0/548, 4-6=-1041/0

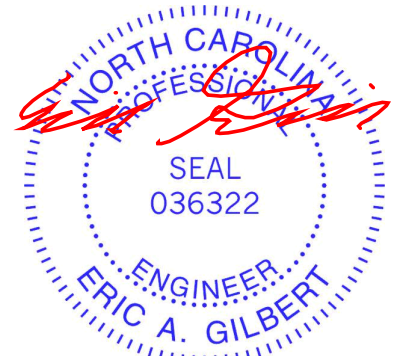
NOTES

- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope); cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.33
- 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 6) Refer to girder(s) for truss to truss connections.
- 7) 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.
- 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 9) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidelines.
- 10) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard

- 1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-5=-48, 6-9=-20
Concentrated Loads (lb)
Vert: 14=-123 (F=-61, B=-61), 15=-70 (F=-35, B=-35), 16=-6 (F=-3, B=-3), 17=-48 (F=-24, B=-24), 18=-305 (F=-153, B=-153)



August 26, 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



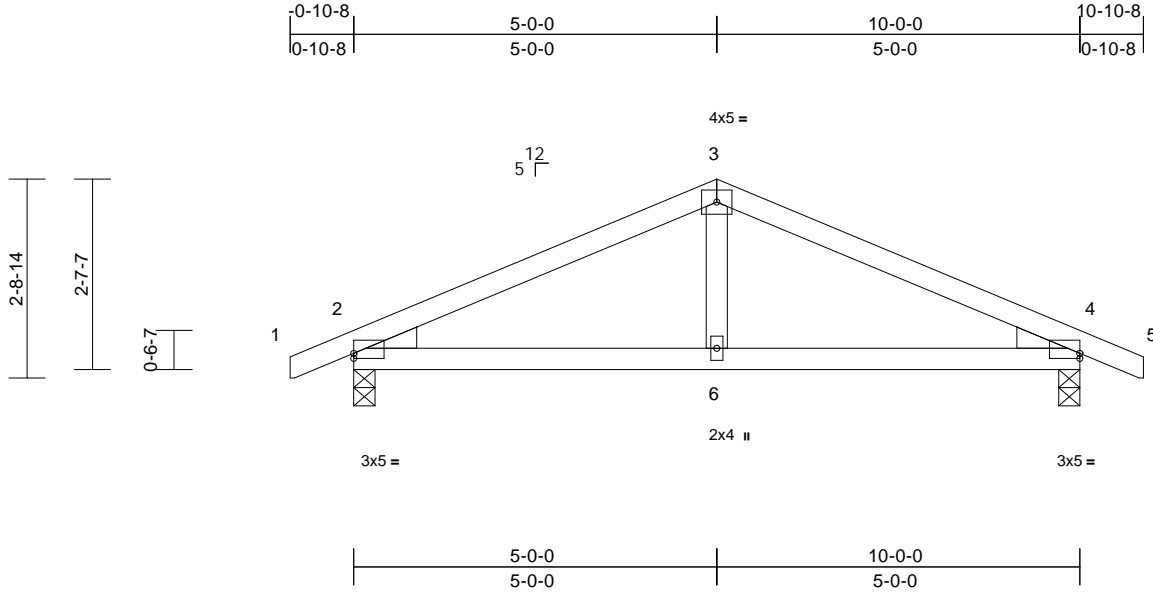
818 Soundside Road
Edenton, NC 27932

Job 20090081	Truss D01	Truss Type Common	Qty 3	Ply 1	A&G RESIDENTIAL - 20 Mitchell Manor Job Reference (optional)	E14785999
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.41 S May 22 2020 Print: 8.410 S May 22 2020 MiTek Industries, Inc. Tue Aug 25 17:20:51
ID:f5y6hqFi8OuWxsegXlrOjGykF7Z-POLku1Ok2Bg?MGISASiF3ZenOwl1bD3NvpAQL_ykEkW

Page: 1



Scale = 1:31.7

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.35	Vert(LL)	-0.02	6-12	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.26	Vert(CT)	-0.04	6-12	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.01	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 39 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS

- (size) 2=0-3-8, 4=0-3-8
- Max Horiz 2=-23 (LC 16)
- Max Uplift 2=-78 (LC 11), 4=-78 (LC 12)
- Max Grav 2=454 (LC 22), 4=454 (LC 23)

FORCES

- (lb) - Maximum Compression/Maximum Tension

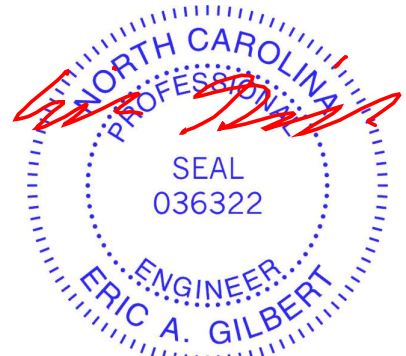
- TOP CHORD 1-2=0/25, 2-3=-574/98, 3-4=-574/98, 4-5=0/25
- BOT CHORD 2-6=-55/475, 4-6=-55/475
- WEBS 3-6=-34/121

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) 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=1.33
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10

- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with 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 3-06-00 tall by 2-00-00 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 and 4. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



August 26, 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



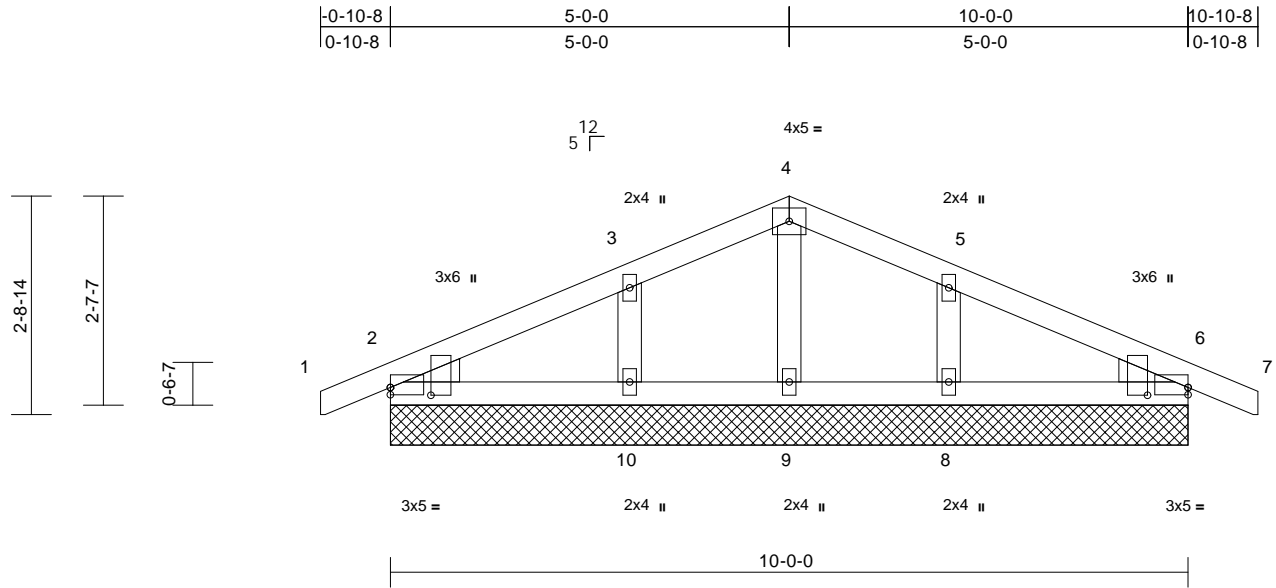
818 Soundside Road
Edenton, NC 27932

Job 20090081	Truss D02	Truss Type Common Supported Gable	Qty 1	Ply 1	A&G RESIDENTIAL - 20 Mitchell Manor Job Reference (optional)	E14786000
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.41 S May 22 2020 Print: 8.410 S May 22 2020 MiTek Industries, Inc. Tue Aug 25 17:20:51
ID: rC7G?bNcYmHymKCog6X_faykF7O-POLku1Ok2Bg?MGISA5iF3ZerRwnbbDKNvpAQ_t_ykEkW

Page: 1



Scale = 1:28.9

Plate Offsets (X, Y): [2:Edge,0-1-1], [2:0-1-3,0-6-2], [6:Edge,0-1-1], [6:0-1-3,0-6-2]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.09	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.09	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
										Weight: 43 lb	FT = 20%	

LUMBER

TOP CHORD 2x4 SP No.2
 BOT CHORD 2x4 SP No.2
 OTHERS 2x4 SP No.3
 WEDGE Left: 2x4 SP No.2
 Right: 2x4 SP No.2

BRACING

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

REACTIONS

(size) 2=10-0-0, 6=10-0-0, 8=10-0-0,
 9=10-0-0, 10=10-0-0, 11=10-0-0,
 15=10-0-0
 Max Horiz 2=-23 (LC 16), 11=-23 (LC 16)
 Max Uplift 2=-10 (LC 11), 6=-11 (LC 12),
 8=-20 (LC 16), 10=-22 (LC 15),
 11=-10 (LC 11), 15=-11 (LC 12)
 Max Grav 2=186 (LC 22), 6=186 (LC 23),
 8=282 (LC 23), 9=69 (LC 2),
 10=282 (LC 22), 11=186 (LC 22),
 15=186 (LC 23)

FORCES

(lb) - Maximum Compression/Maximum Tension

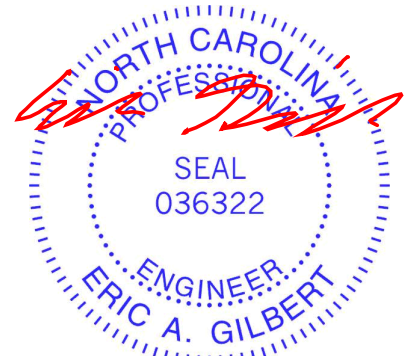
TOP CHORD 1-2=0/25, 2-3=-64/24, 3-4=-85/37,
 4-5=-85/34, 5-6=-64/14, 6-7=0/25
 BOT CHORD 2-10=-7/50, 9-10=0/50, 8-9=0/50, 6-8=0/50
 WEBS 4-9=-51/0, 3-10=-200/43, 5-8=-200/43

NOTES

1) Unbalanced roof live loads have been considered for this design.

- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) 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=1.33
- 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.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 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.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard



August 26, 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/TPI Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



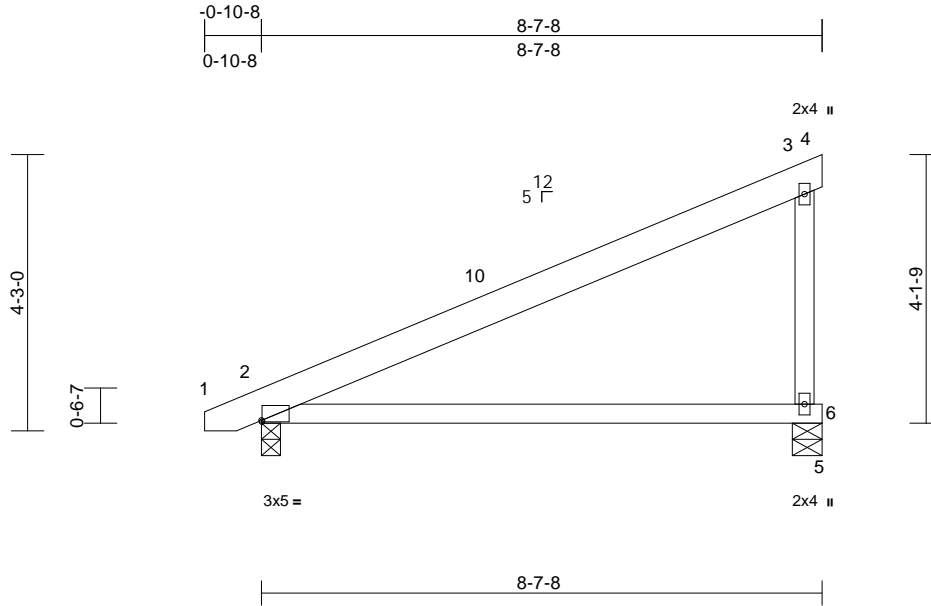
818 Soundside Road
 Edenton, NC 27932

Job 20090081	Truss J01	Truss Type Monopitch	Qty 3	Ply 1	A&G RESIDENTIAL - 20 Mitchell Manor Job Reference (optional)	E14786001
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.41 S May 22 2020 Print: 8.410 S May 22 2020 MiTek Industries, Inc. Tue Aug 25 17:20:52
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Page: 1



Scale = 1:35.4

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.67	Vert(LL)	0.17	6-9	>596	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.48	Vert(CT)	-0.27	6-9	>372	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.01	2	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0											
											Weight: 42 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-8, 6=0-5-8

Max Horiz 2=113 (LC 14)
Max Uplift 2=-60 (LC 11), 6=-73 (LC 12)
Max Grav 2=373 (LC 2), 6=398 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/18, 2-10=-162/83, 3-10=-62/114,
3-4=-8/0, 3-6=-312/56
BOT CHORD 2-6=-59/123, 5-6=0/0

NOTES

- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust)
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;
Cat. II; Exp B; Enclosed; MWFRS (envelope) 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=1.33
- 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15
Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum
DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully
Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 3) Unbalanced snow loads have been considered for this
design.
- 4) This truss has been designed for greater of min roof live
load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on
overhangs non-concurrent with 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
3-06-00 tall by 2-00-00 wide will fit between the bottom
chord and any other members.
- 6) One RT7A USP connectors recommended to connect
truss to bearing walls due to UPLIFT at jt(s) 6 and 2.
This connection is for uplift only and does not consider
lateral forces.
- 7) This truss is designed in accordance with the 2018
International Residential Code sections R502.11.1 and
R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



August 26, 2020

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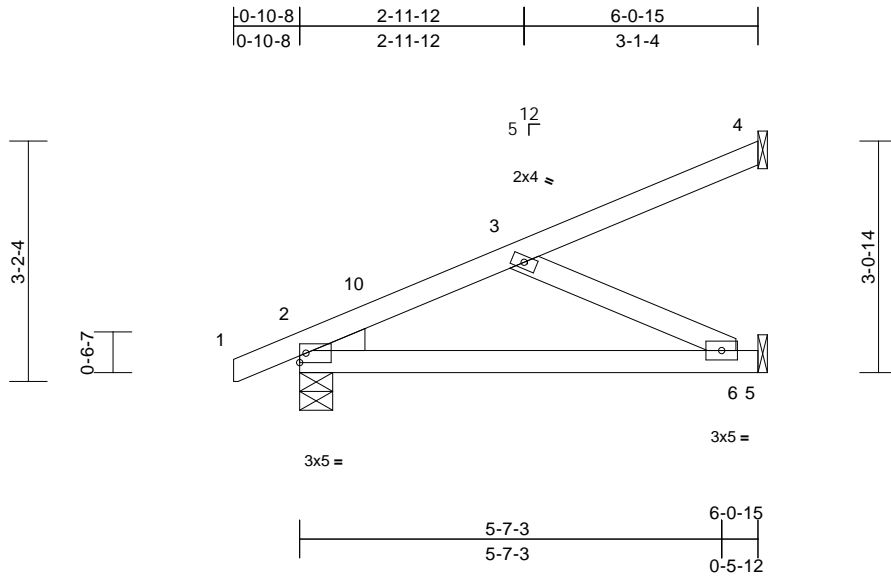
818 Soundside Road
Edenton, NC 27932

Job 20090081	Truss J03	Truss Type Jack-Partial	Qty 2	Ply 1	A&G RESIDENTIAL - 20 Mitchell Manor Job Reference (optional)	E14786003
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.41 S May 22 2020 Print: 8.410 S May 22 2020 MiTek Industries, Inc. Tue Aug 25 17:20:52
ID:1PO7acL9x1EIkTzoCSVMEykF69-tau66NPMpUosqQtejoEUcnA?DK47KfmX8TzvQyqEkv

Page: 1



Scale = 1:30.6

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.16	Vert(LL)	-0.01	6-9	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.26	Vert(CT)	-0.05	6-9	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.09	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0											
											Weight: 26 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
 BOT CHORD 2x4 SP No.2
 WEBS 2x4 SP No.3
 WEDGE Left: 2x4 SP No.3

BRACING

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

REACTIONS (size) 2=0-5-4, 4= Mechanical, 5= Mechanical

Max Horiz 2=71 (LC 15)
 Max Uplift 4=-26 (LC 15)
 Max Grav 2=304 (LC 22), 4=97 (LC 22), 5=181 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension

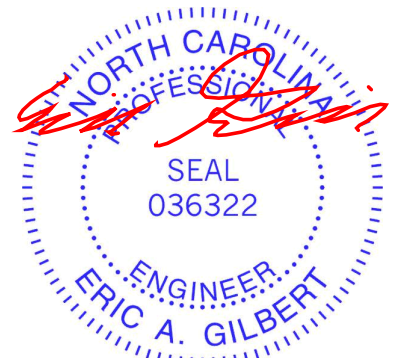
TOP CHORD 1-2=0/25, 2-10=-342/3, 3-10=-288/14, 3-4=-55/28
 BOT CHORD 2-6=-99/303, 5-6=0/0
 WEBS 3-6=-334/57

NOTES

- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) 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=1.33
- 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.

- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with 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 3-06-00 tall by 2-00-00 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 26 lb uplift at joint 4.
- 8) One RT16A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 5. This connection is for uplift only and does not consider lateral forces.
- 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



August 26, 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, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



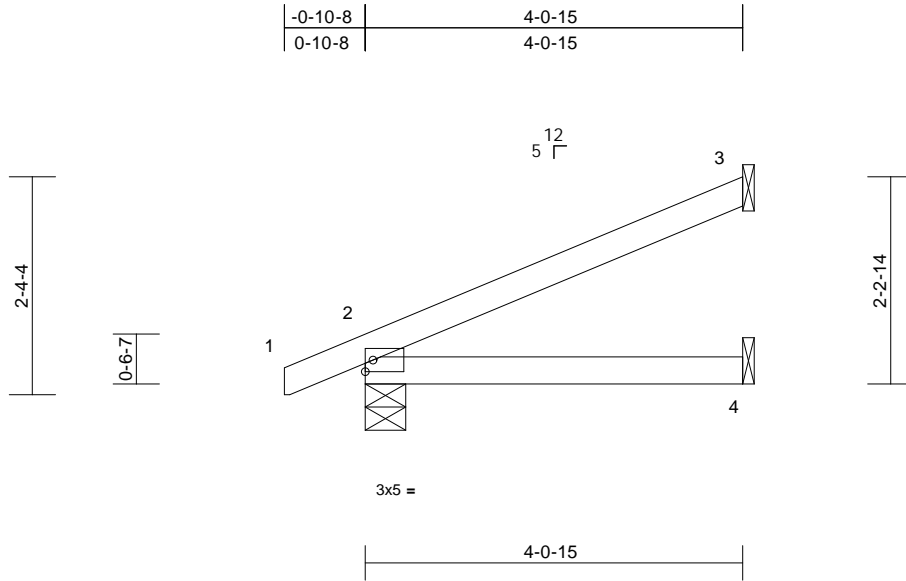
818 Soundside Road
 Edenton, NC 27932

Job 20090081	Truss J04	Truss Type Jack-Open	Qty 2	Ply 1	A&G RESIDENTIAL - 20 Mitchell Manor Job Reference (optional)	E14786004
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.41 S May 22 2020 Print: 8.410 S May 22 2020 MiTek Industries, Inc. Tue Aug 25 17:20:52
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Page: 1



Scale = 1:24.9

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.28	Vert(LL)	-0.01	4-7	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.18	Vert(CT)	-0.03	4-7	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.01	2	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0											
										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 4-0-15 oc purlins.

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-4, 3= Mechanical, 4= Mechanical

Max Horiz 2=50 (LC 15)

Max Uplift 3=-29 (LC 15)

Max Grav 2=257 (LC 22), 3=129 (LC 22), 4=52 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/25, 2-3=-59/93

BOT CHORD 2-4=-66/77

NOTES

- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) 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=1.33
- 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.

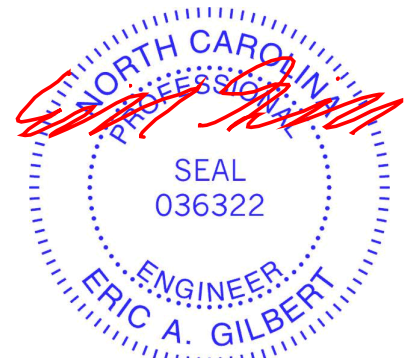
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.

6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 29 lb uplift at joint 3.

8) One RT16A 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.

9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



August 26, 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

ENGINEERING BY
TRENCO
A MiTek Affiliate

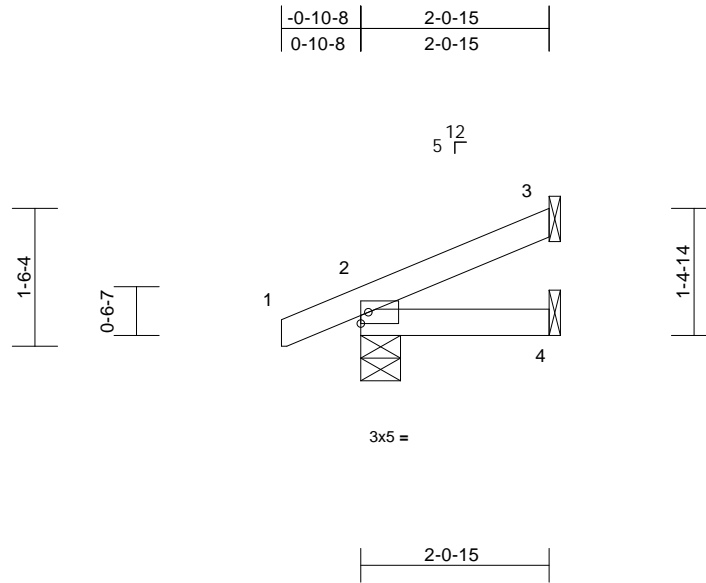
818 Soundside Road
Edenton, NC 27932

Job 20090081	Truss J05	Truss Type Jack-Open	Qty 2	Ply 1	A&G RESIDENTIAL - 20 Mitchell Manor Job Reference (optional)	E14786005
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.41 S May 22 2020 Print: 8.410 S May 22 2020 MiTek Industries, Inc. Tue Aug 25 17:20:53
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Page: 1



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.06	Vert(LL)	0.00	4-7	>999	240	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	0.00	4-7	>999	180	
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP							
BCDL	10.0									Weight: 8 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-0-15 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-4, 3= Mechanical, 4= Mechanical
Max Horiz 2=29 (LC 15)
Max Uplift 2=-8 (LC 11), 3=-14 (LC 15)
Max Grav 2=157 (LC 22), 3=55 (LC 22), 4=22 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/25, 2-3=-27/49
BOT CHORD 2-4=-26/27

- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 14 lb uplift at joint 3.
- One RT16A 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.
- 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.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

- NOTES**
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) 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=1.33
 - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
 - Unbalanced snow loads have been considered for this design.
 - This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.



August 26, 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

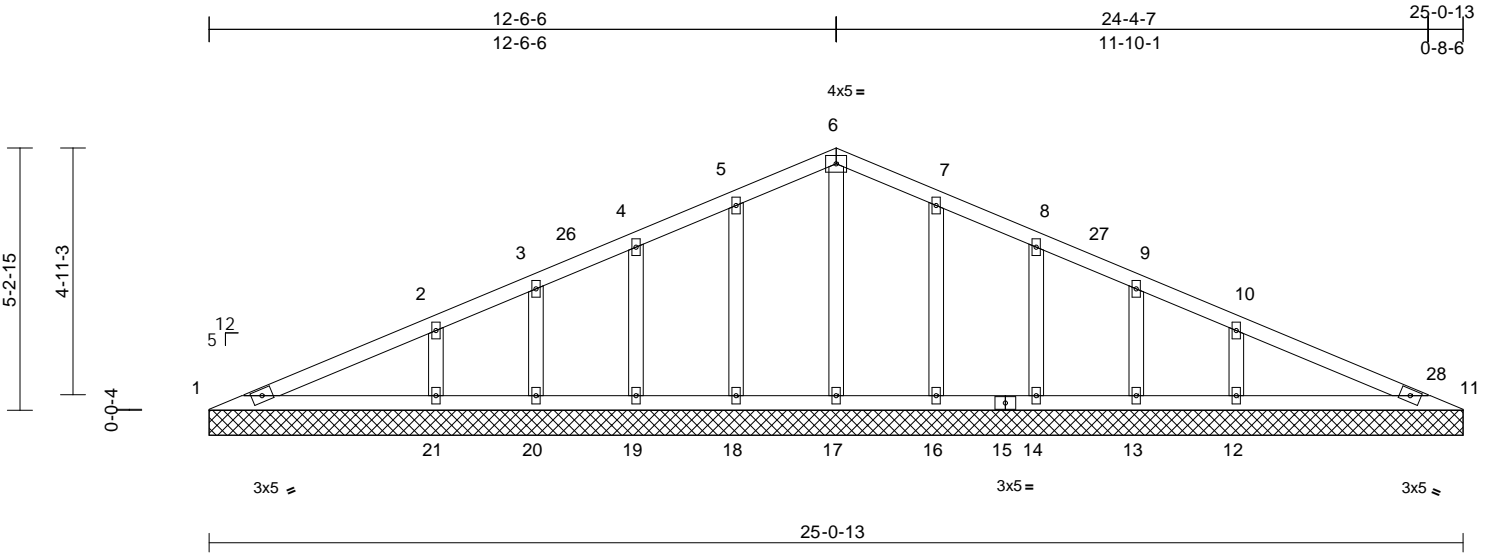
ENGINEERING BY
TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job 20090081	Truss V25	Truss Type Valley	Qty 1	Ply 1	A&G RESIDENTIAL - 20 Mitchell Manor Job Reference (optional)	E14786006
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.41 S May 22 2020 Print: 8.410 S May 22 2020 MiTek Industries, Inc. Tue Aug 25 17:20:53
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Page: 1



Scale = 1:46.1

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.20	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.20	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.09	Horiz(TL)	0.00	21	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 113 lb	FT = 20%

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

WEBS
6-17=-187/0, 5-18=-160/37, 4-19=-151/37,
3-20=-74/30, 2-21=-230/51, 7-16=-160/36,
8-14=-151/38, 9-13=-76/31, 10-12=-227/50

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

NOTES

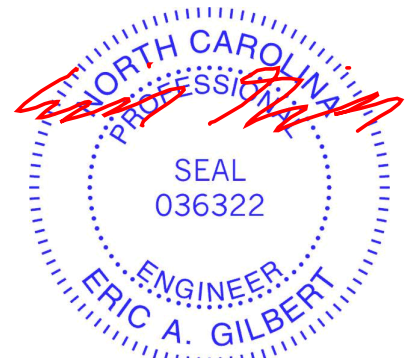
- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
- 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.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- All plates are 2x4 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 live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 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) 18, 19, 20, 21, 16, 14, 13, and 12. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

REACTIONS (size)
1=25-0-13, 11=25-0-13,
12=25-0-13, 13=25-0-13,
14=25-0-13, 16=25-0-13,
17=25-0-13, 18=25-0-13,
19=25-0-13, 20=25-0-13,
21=25-0-13

Max Horiz 1=51 (LC 15)
Max Uplift 12=-20 (LC 16), 13=-9 (LC 16),
14=-13 (LC 16), 16=-12 (LC 16),
18=-13 (LC 15), 19=-13 (LC 15),
20=-8 (LC 15), 21=-22 (LC 15)
Max Grav 1=124 (LC 34), 11=87 (LC 35),
12=355 (LC 35), 13=74 (LC 2),
14=201 (LC 22), 16=197 (LC 22),
17=228 (LC 2), 18=197 (LC 21),
19=202 (LC 21), 20=71 (LC 2),
21=361 (LC 34)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-199/155, 2-3=-14/113, 3-26=0/108,
4-26=0/131, 4-5=0/132, 5-6=-4/133,
6-7=-4/130, 7-8=0/128, 8-27=0/131,
9-27=0/104, 9-10=0/114, 10-11=-26/154,
11-28=-165/0, 11-28=-170/0
BOT CHORD 1-21=-96/178, 20-21=-96/40, 19-20=-96/40,
18-19=-96/40, 17-18=-96/40, 16-17=-96/40,
15-16=-96/40, 14-15=-96/40, 13-14=-96/40,
12-13=-96/40, 11-12=-96/40

LOAD CASE(S) Standard



August 26, 2020

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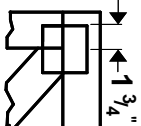
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall 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, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



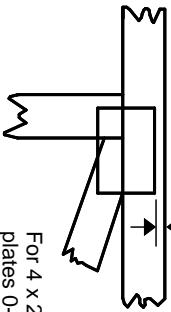
818 Soundside Road
Edenton, NC 27932

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

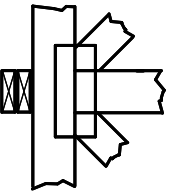
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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



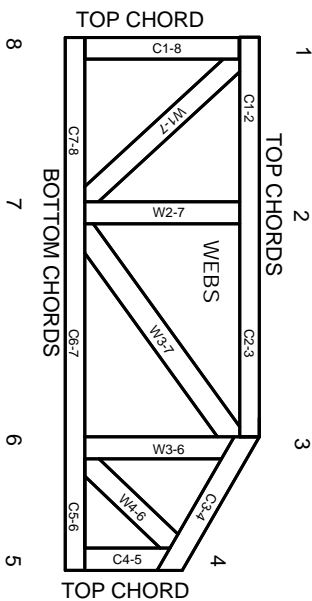
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI 1: 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/TPI 1 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/TPI 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TPI 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.