

**Estimate**

Carter Components - Sanford

298 Harvey Faulk Road  
Sanford NC 27332  
Phone: FAX:



Quote In:	9/29/2021	Job Number:	21090142
Quote Sent:		Customer Acct #:	TT04061
Order Date:	9/29/2021	Job Category:	Roof
Designer:		Sales Rep:	Tommy Hughes
Truss Rep:	Mark Dunham	Sch. Delivery	4/7/2022
Customer P.O. #			

SOLD TO	K&D Builders Inc of Stedman	Job Name:	Antioch Church Riddle 2-Roof	Lot:	Subdiv:
	Riddle 2	Model:	Riddle 2	Delivery Area:	Richmond
SHIP TO	Job Notes:				

**Rectangular EWP**

**Roof Trusses**

2.0 RigidLam DF LVL 1-3/4 x 11-7/8

LABEL	SIZE	QTY	LENGTH	NOTE
BM1	2.0 RigidLam DF LVL 1-3/4 x 11-7/8	2	12-00-00	
<b>Total: 2.0 RigidLam DF LVL 1-3/4 x 11-7/8</b>			<b>(2)</b>	<b>24-00-00 - L/F</b>
<b>Total: Roof Trusses</b>			<b>(2)</b>	<b>24-00-00 - L/F</b>

**Hangers**

QTY	TYPE	SIZE	LENGTH	NOTE
182	Hanger	One RT7A		
<b>Total: Roof Trusses</b>				

**Roof Trusses**

DIAGRAM	QTY	PLY	PITCH	LABEL	Height		OVERHANG		CANTILEVER		STUB		
					Shipping (Alternate)	Base Span	SPAN	LUMBER	LEFT	RIGHT	LEFT	RIGHT	LEFT
	1		8 / 12	A01	10-03-08	28-00-00	2 x 4	1-00-00	1-00-00	-	-	-	-
	6		8 / 12	A02	10-03-08	28-00-00	2 x 4	1-00-00	1-00-00	-	-	-	-
	1		8 / 12	A03	9-10-06 (9-08-11)	35-06-00	2 x 4	1-00-00		-	-	-	-
	2		8 / 12	A04	9-10-06 (9-08-11)	36-00-00	2 x 4	1-00-00		-	-	-	-
	4		8 / 12	A05	9-10-06 (9-08-11)	36-00-00	2 x 4	1-00-00		-	-	-	-
	3		8 / 12 4 / 12	A06	9-10-06	35-06-00	2 x 4	1-00-00	1-00-00	-	-	-	-
	1		8 / 12 4 / 12	A07	9-10-06	35-06-00	2 x 4	1-00-00	1-00-00	-	-	-	-
	5		8 / 12 4 / 12	A08	9-10-06	35-06-00	2 x 4	1-00-00	1-00-00	-	-	-	-
	1		8 / 12	A09	9-10-06	35-06-00	2 x 4	1-00-00	1-00-00	-	-	-	-

DIAGRAM	QTY		LABEL	Height	Base Span		OVERHANG		CANTILEVER		STUB	
	PLY	PITCH		Shipping (Alternate)	SPAN	LUMBER	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT
	1	8 /12	A10	9-10-06	35-06-00	2 x 4	1-00-00	1-00-00	-	-	-	-
	5	8 /12	A11	9-10-06	31-00-00	2 x 4	1-00-00	1-00-00	-	-	-	-
	1	8 /12	A12	9-10-06	31-00-00	2 x 4	1-00-00	1-00-00	-	-	-	-
	1	8 /12	PB01	2-11-02	8-09-05	2 x 4			-	-	-	-
	16	8 /12	PB02	2-11-02	8-09-05	2 x 4			-	-	-	-
	1	8 /12	PB03	2-11-02	8-09-05	2 x 4			-	-	-	-
	5	8 /12	PB04	1-05-02	4-03-05	2 x 4			-	-	-	-
	1	8 /12	PB05	1-05-02	4-03-05	2 x 4			-	-	-	-
	1	8 /12	VL01	5-05-10	10-01-08	2 x 4			-	-	-	-
	1	8 /12	VL02	5-05-10	11-11-10	2 x 4			-	-	-	-
	1	8 /12	VL03	5-04-00	15-11-04	2 x 4			-	-	-	-
	1	8 /12	VL04	4-00-00	11-11-04	2 x 4			-	-	-	-
	1	8 /12	VL05	2-08-00	7-11-04	2 x 4			-	-	-	-
	1	8 /12	VL06	1-04-00	3-11-04	2 x 4			-	-	-	-
	1	8 /12	VL07	5-05-05 (4-06-06)	8-02-00	2 x 4			-	-	-	-
<b>62</b>					<b>1277.67</b>							

Temporary and permanent bracing by others.

Quote valid for 15 days  
Price valid for 30 days from purchase.

	Delivery	Included
	Tax	Not Included
<b>Pretax Sub-Total</b>		<b>\$8,785.94</b>

NOTES:

**Accepted by Seller**

BY: \_\_\_\_\_  
TITLE: \_\_\_\_\_  
DATE OF ACCEPTANCE: \_\_\_\_\_

**Accepted by Buyer**

PURCHASER: \_\_\_\_\_  
BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
PHONE: \_\_\_\_\_ DATE: \_\_\_\_\_



Customer  
Job Name  
City  
Customer P..

Job Name 21090142  
Level 1st floor  
Label BM1 - i32  
Type Beam

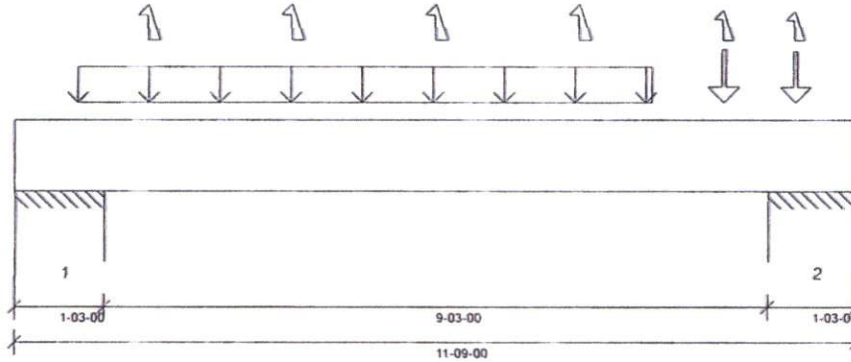
2 Ply Member  
2.0 RigidLam DF LVL 1-3/4  
x 11-7/8

Status:  
Design  
Passed

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version  
8.5 0.207.Update6 26

Report Version: 2020 10 28 10/22/2021 11:31



### DESIGN INFORMATION

Building Code: IRC2015  
Design Methodology: ASD  
Risk Category: II (General Construction)  
Residential  
Service Condition: Dry  
LL Deflection Limit: L/360, 0.75" (absolute)  
TL Deflection Limit: L/240, 1.00" (absolute)

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 1'- 10 1/2" Bottom: 11'- 9"

#### Bearing Stress of Support Material:

- 875 psi Wall @ 1'- 2"
- 875 psi Wall @ 10'- 7"

### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	5'- 10 1/2"	D + Lr	1.15	6768 lb ft	24296 lb ft	Passed - 28%
Max Neg. Moment:	5'- 10 1/2"	0.6D + 0.6W	1.60	1084 lb ft	27735 lb ft	Passed - 4%
Max Shear:	2'- 2 7/8"	D + Lr	1.15	2515 lb	9241 lb	Passed - 27%
Live Load (LL) Pos. Defl.:	5'- 10 5/16"	0.75(L + Lr + 0.6W)		0.057"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	5'- 10 1/4"	D + 0.75(L + Lr + 0.6W)		0.112"	L/240	Passed - L/994

### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Downward Reaction	Uplift Reaction	Resistance of Member	Resistance of Support	Result
1	1-03-00	D + Lr	1.15	2970 lb		39375 lb	45938 lb	Passed - 8%
1	1-03-00	0.6D + 0.6W	1.60		-466 lb	-	-	
2	1-03-00	D + Lr	1.15	3738 lb		39375 lb	45938 lb	Passed - 9%
2	1-03-00	0.6D + 0.6W	1.60		-494 lb	-	-	

### LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	11'- 9"	Self Weight	Top	11 lb/ft	-	-	-	-
Uniform	0'- 10 1/2"	8'- 10 1/2"	Smoothed Load	Top	288 lb/ft	-	126 lb/ft	300 lb/ft	102 lb/ft
Point	1'- 10 1/2"	1'- 10 1/2"	A02(Cond02)	Top	-	-	-	-	-744 lb
Point	3'- 10 1/2"	3'- 10 1/2"	A02(Cond01)	Top	-	-	-	-	-756 lb
Point	5'- 10 1/2"	5'- 10 1/2"	A02(Cond03)	Top	-	-	-	-	-756 lb
Point	7'- 10 1/2"	7'- 10 1/2"	A02(Cond06)	Top	-	-	-	-	-756 lb
Point	9'- 10 1/2"	9'- 10 1/2"	A02(Cond04)	Top	503 lb	-	189 lb	452 lb	153/-567 lb
Point	10'- 10 1/2"	10'- 10 1/2"	A02(Cond05)	Top	486 lb	-	176 lb	419 lb	153/-528 lb

### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	1'- 3"	W3(i31)	1499 lb	-	621 lb	1485 lb	923 lb/-2291 lb
==>	0'- 1 1/2"	0'- 1 1/2"	W3(i31)	-	-	-	-	-
==>	1'- 1 1/2"	1'- 1 1/2"	W3(i31)	1499 lb	-	621 lb	1485 lb	-
2	10'- 6"	11'- 9"	W2(i5)	1926 lb	-	748 lb	1785 lb	923 lb/-2291 lb
==>	10'- 7 1/2"	10'- 7 1/2"	W2(i5)	1926 lb	-	748 lb	1785 lb	-
==>	11'- 7 1/2"	11'- 7 1/2"	W2(i5)	-	-	-	-	-

### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.

### PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

**Trenco**  
818 Soundside Rd  
Edenton, NC 27932

Re: 21090142-A  
Antioch Church-Riddle 2-Roof

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Carter Components (Sanford, NC)).

Pages or sheets covered by this seal: I48455876 thru I48455899

My license renewal date for the state of North Carolina is December 31, 2021.

North Carolina COA: C-0844



October 21, 2021

Sevier, Scott

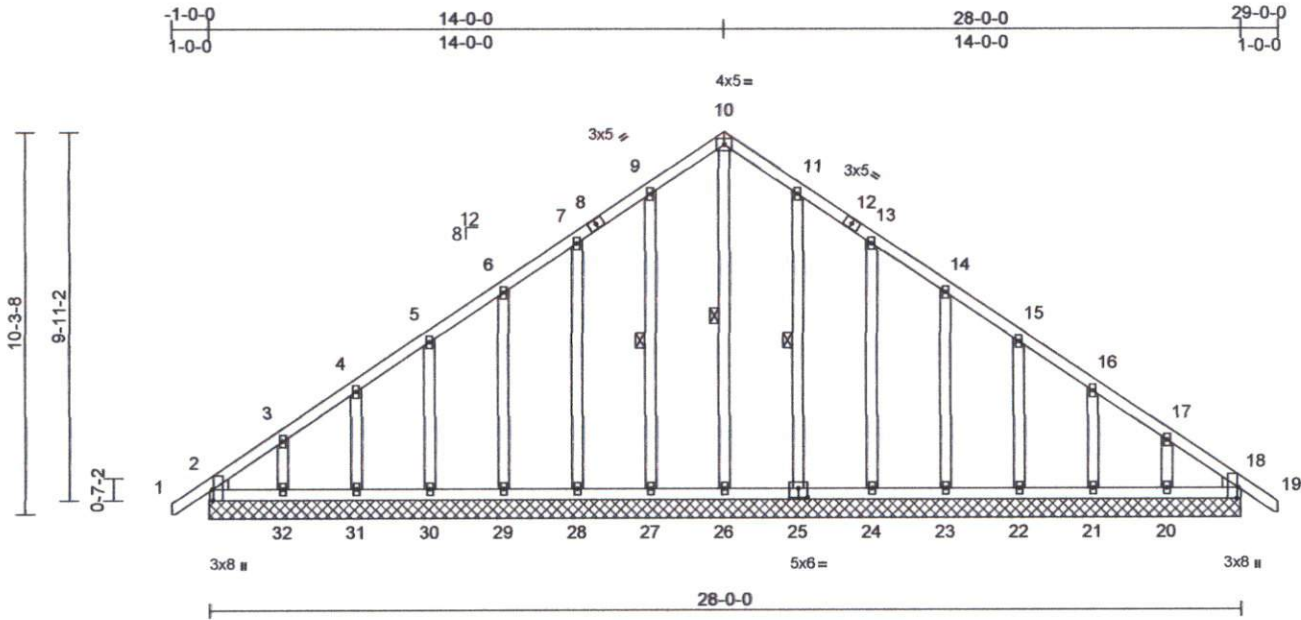
**IMPORTANT NOTE:** The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes),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

Job 21090142-A	Truss A01	Truss Type Common Supported Gable	Qty 1	Ply 1	Antioch Church-Riddle 2-Roof Job Reference (optional)	I48455876
-------------------	--------------	--------------------------------------	----------	----------	--	-----------

Carter Components (Sanford), Sanford, NC - 27332,

Run: 8:52 S Oct 11 2021 Print: 8:52 S Oct 11 2021 MiTek Industries, Inc. Wed Oct 20 14:29:26  
ID:4eFhn7usWaQoPnWrq0EjQZyTiQy-RfC?PsB70Hq3NSgPqnLw3uITxBGKwRcDoi7J4zJC7f

Page: 1



Scale = 1:62.5

Plate Offsets (X, Y): [2:0-3-8,Edge], [18:0-3-8,Edge], [25:0-3-0,0-3-0]

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	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.01	18	n/a	n/a		
3CLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
3CDL	10.0											
											Weight: 195 lb	FT = 20%

**UMBER**  
 TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x4 SP No.2  
 OTHERS 2x4 SP No.2 \*Except\*  
 30-5,31-4,32-3,22-15,21-16,20-17:2x4 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.  
 WEBS 1 Row at midpt 10-26, 9-27, 11-25  
**REACTIONS** (lb/size)  
 2=124/28-0-0, 18=124/28-0-0,  
 20=134/28-0-0, 21=136/28-0-0,  
 22=135/28-0-0, 23=136/28-0-0,  
 24=135/28-0-0, 25=140/28-0-0,  
 26=110/28-0-0, 27=140/28-0-0,  
 28=135/28-0-0, 29=136/28-0-0,  
 30=135/28-0-0, 31=136/28-0-0,  
 32=134/28-0-0, 33=124/28-0-0,  
 37=124/28-0-0  
 Max Horiz 2=197 (LC 11), 33=197 (LC 11)  
 Max Uplift 2=51 (LC 9), 18=6 (LC 10),  
 20=52 (LC 14), 21=24 (LC 14),  
 22=31 (LC 14), 23=29 (LC 14),  
 24=33 (LC 14), 25=25 (LC 14),  
 27=26 (LC 13), 28=32 (LC 13),  
 29=29 (LC 13), 30=31 (LC 13),  
 31=23 (LC 13), 32=58 (LC 13),  
 33=51 (LC 9), 37=6 (LC 10)

Max Grav 2=180 (LC 26), 18=152 (LC 2),  
 20=176 (LC 26), 21=164 (LC 26),  
 22=167 (LC 26), 23=166 (LC 26),  
 24=166 (LC 26), 25=171 (LC 26),  
 26=166 (LC 28), 27=174 (LC 25),  
 28=165 (LC 25), 29=166 (LC 25),  
 30=167 (LC 25), 31=161 (LC 25),  
 32=185 (LC 25), 33=180 (LC 26),  
 37=152 (LC 2)  
**FORCES** (lb) - Maximum Compression/Maximum Tension  
**TOP CHORD**  
 1-2=0/40, 2-3=177/154, 3-4=144/129,  
 4-5=124/111, 5-6=114/104, 6-7=113/119,  
 7-9=164/180, 9-10=210/233,  
 10-11=210/233, 11-13=164/180,  
 13-14=113/119, 14-15=65/61,  
 15-16=72/42, 16-17=80/64,  
 17-18=132/120, 18-19=0/40  
**BOT CHORD**  
 2-32=112/161, 31-32=112/161,  
 30-31=112/161, 29-30=112/161,  
 28-29=112/161, 27-28=112/161,  
 26-27=112/161, 24-26=112/161,  
 23-24=112/161, 22-23=112/161,  
 21-22=112/161, 20-21=112/161,  
 18-20=112/161  
**WEBS**  
 10-26=196/117, 9-27=134/73,  
 7-28=131/86, 6-29=127/81, 5-30=128/82,  
 4-31=126/81, 3-32=141/87, 11-25=131/73,  
 13-24=131/86, 14-23=127/81,  
 15-22=128/82, 16-21=126/81,  
 17-20=142/87

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

- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Corner (3)-0-11-8 to 2-0-0, Exterior (2) 2-0-0 to 14-0-0, Corner (3) 14-0-0 to 17-0-0, Exterior (2) 17-0-0 to 28-11-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
- 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 7-10; Pr=20.0 psf (roof live load; Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow; Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- 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.



October 21, 2021

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 ANSITPI1 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 21090142-A	Truss A01	Truss Type Common Supported Gable	Qty 1	Ply 1	Antioch Church-Riddle 2-Roof Job Reference (optional) I48455876
-------------------	--------------	--------------------------------------	----------	----------	---

Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.52 S Oct 11 2021 Print: 8.520 S Oct 11 2021 MiTek Industries, Inc. Wed Oct 20 14:29:26  
ID:4eFhn?usWaQoPnWrq0EjQZyTIQy-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKwCDoi7J4zJC?i

Page: 2

- 7) Gable requires continuous bottom chord bearing.
- 3) Gable studs spaced at 2-0-0 oc.
- 3) \* 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.
- 10) One RT7A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 18, 26, 27, 28, 29, 30, 31, 32, 24, 23, 22, 21, and 20. This connection is for uplift only and does not consider lateral forces.
- 11) One RT16A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 25. This connection is for uplift only and does not consider lateral forces.
- 12) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard

 **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

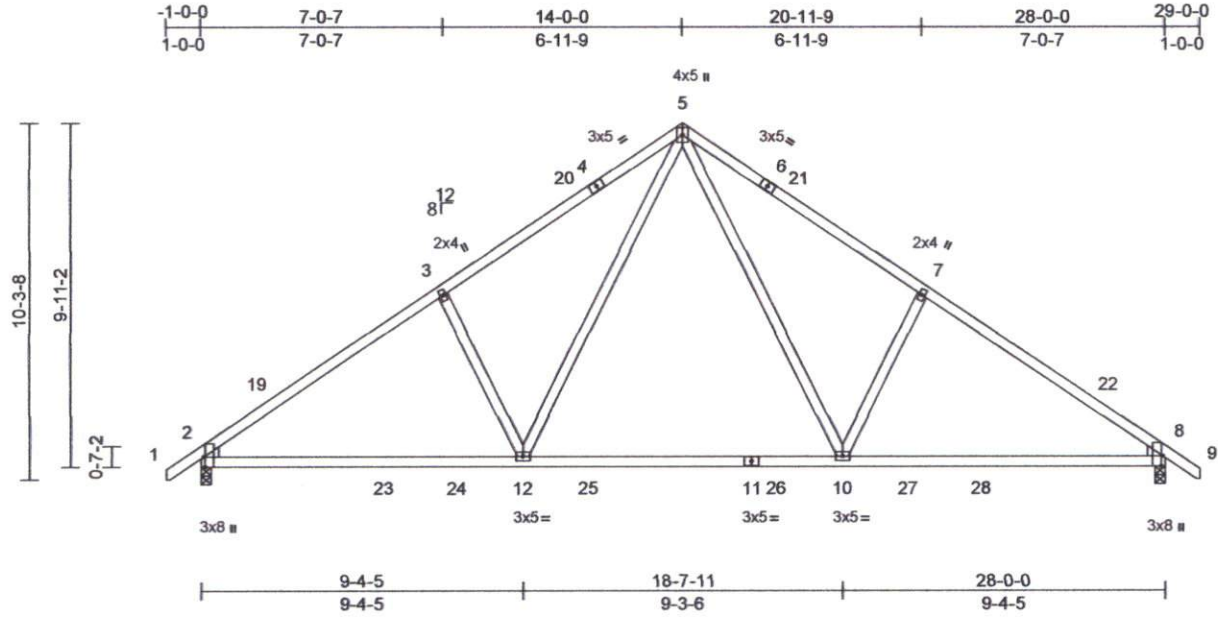
818 Soundside Road  
Edenton, NC 27932

Job 21090142-A	Truss A02	Truss Type Common	Qty 6	Ply 1	Antioch Church-Riddle 2-Roof Job Reference (optional)	I48455877
-------------------	--------------	----------------------	----------	----------	--	-----------

Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.52 S Oct 11 2021 Print: 8.520 S Oct 11 2021 MiTek Industries, Inc. Wed Oct 20 14:29:28  
ID:Yqp3\_LvUHYf0x51OklyznyTIQx-RFC?PsB70Hq3NSgPqntL8w3uITXbGKWrCD0i7J4zJC7f

Page: 1



Scale = 1:66.9

Plate Offsets (X, Y): [2:0-3-8,Edge], [8:0-3-8,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	0.64	Vert(LL)	-0.30	10-12	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.89	Vert(CT)	-0.43	10-12	>786	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.21	Horz(CT)	0.04	8	n/a	n/a		
3CLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
3CDL	10.0											
											Weight: 143 lb	FT = 20%

**UMBER**

TOP CHORD 2x4 SP No.2  
3OT CHORD 2x4 SP No.2  
MEBS 2x4 SP No.2  
MEDGE Left 2x4 SP No.3  
Right 2x4 SP No.3

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 3-6-14 oc purlins.  
3OT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS**

(lb/size) 2=994/0-3-8, 8=994/0-3-8  
Max Horiz 2=197 (LC 11)  
Max Grav 2=1228 (LC 25), 8=1228 (LC 26)

**FORCES**

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/40, 2-3=-1663/197, 3-5=-1538/270,  
5-7=-1538/270, 7-8=-1663/197, 8-9=0/40  
3OT CHORD 2-12=-73/1442, 10-12=0/938, 8-10=-52/1308  
MEBS 5-10=-81/761, 7-10=-407/202, 5-12=-81/761,  
3-12=-407/202

**NOTES**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph (3-second gust)  
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;  
Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C  
Exterior (2) -0-11-8 to 2-0-8, Interior (1) 2-0-8 to 14-0-0,  
Exterior (2) 14-0-0 to 17-0-0, Interior (1) 17-0-0 to  
28-11-8 zone; cantilever left and right exposed; end  
vertical left and right exposed; C-C for members and  
forces & MWFRS for reactions shown; Lumber  
DOL=1.60 plate grip DOL=1.33

- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- 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, with BCDL = 10.0psf.
- One RT7A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 8. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



October 21, 2021

**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



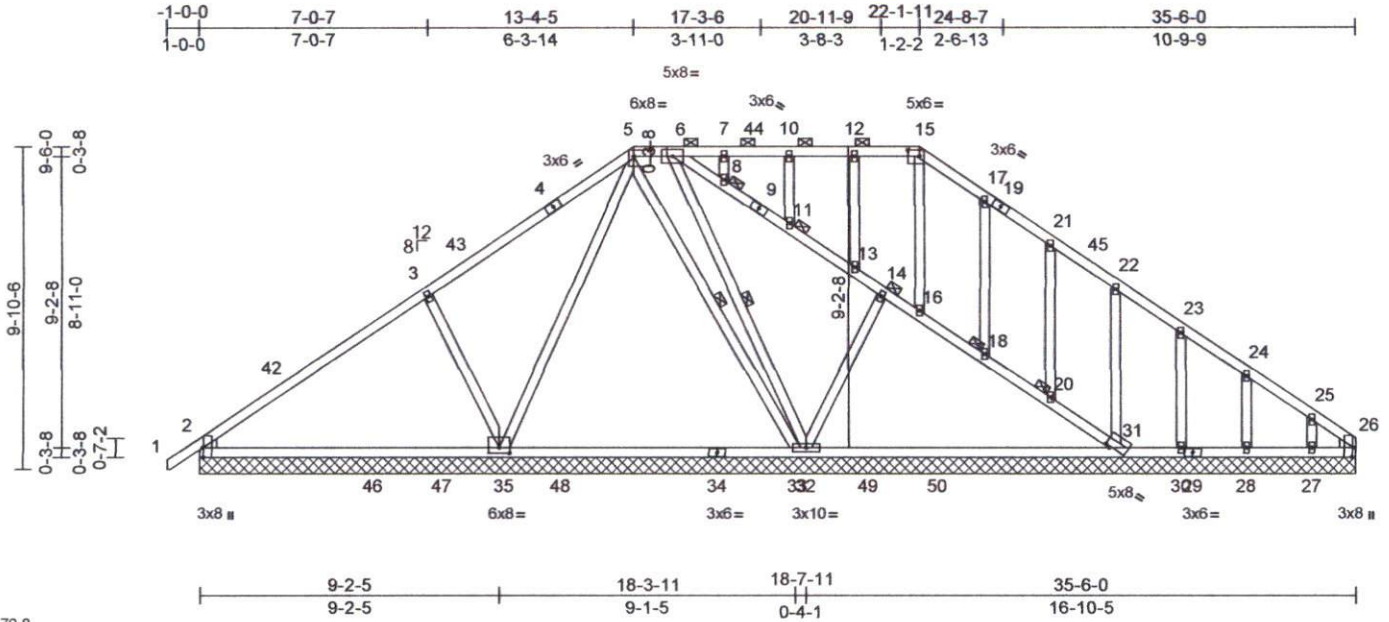
818 Soundside Road  
Edenton, NC 27932

Job 21090142-A	Truss A03	Truss Type Piggyback Base Supported Gable	Qty 1	Ply 1	Antioch Church-Riddle 2-Roof Job Reference (optional)	148455878
-------------------	--------------	--	----------	----------	--	-----------

Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.52 S Oct 11 2021 Print: 8.520 S Oct 11 2021 MiTek Industries, Inc. Wed Oct 20 14:29:28  
ID: KzGDGJSz6PjDvuNYqblSyTG8K-RFC?Psb70Hq3NSgPqnlBw3ulTxBGKWCDoi7J4zJC7f

Page: 1



Scale = 1:70.8

Plate Offsets (X, Y): [2:0-3-8,Edge], [5:0-6-4,0-2-4], [15:0-4-4,0-2-4], [26:0-3-8,Edge], [31:0-1-13,0-0-11], [35:0-4-0,0-2-0]

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	0.62	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.73	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.33	Horz(CT)	0.02	2	n/a	n/a		
3CCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
3CDL	10.0											
											Weight: 250 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.2  
OTHERS 2x4 SP No.3  
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, except 2-0-0 oc purlins (6-0-0 max.): 5-15, 6-31.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 31-32.  
WEBS 1 Row at midpt 5-33, 6-32  
JOINTS 1 Brace at Jt(s): 14, 11, 8, 18, 20

**TOP CHORD** 1-2=0/40, 2-3=480/112, 3-5=426/181, 5-6=197/202, 6-7=483/226, 7-10=483/226, 10-12=483/226, 12-15=483/226, 15-17=531/229, 17-21=503/189, 21-22=512/146, 22-23=462/78, 23-24=414/27, 24-25=427/0, 25-26=401/0, 6-8=127/664, 8-11=116/649, 11-13=107/637, 13-14=75/577, 14-16=84/593, 16-18=107/638, 18-20=82/592, 20-31=50/576

**BOT CHORD** 2-35=116/433, 33-35=33/189, 32-33=79/112, 31-32=230/133, 30-31=0/319, 28-30=0/319, 27-28=0/319, 26-27=0/319

**WEBS** 3-35=417/209, 5-35=3/218, 14-32=236/79, 5-33=237/24, 6-32=696/177, 15-16=46/134, 12-13=184/71, 10-11=35/17, 7-8=40/19, 17-18=87/45, 20-21=34/53, 22-31=187/99, 23-30=191/69, 24-28=79/64, 25-27=104/83

- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0
- 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.
- 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, with BCDL = 10.0psf.
- One RT7A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 26, 30, 28, and 27. This connection is for uplift only and does not consider lateral forces.

**REACTIONS (lb/size)** 2=464/35-6-0, 26=256/35-6-0, 27=89/35-6-0, 28=42/35-6-0, 30=243/35-6-0, 32=1181/35-6-0, 33=118/35-6-0, 35=380/35-6-0, 36=464/35-6-0, 39=256/35-6-0  
Max Horiz 2=185 (LC 10), 36=185 (LC 10)  
Max Uplift 2=3 (LC 13), 27=53 (LC 14), 28=9 (LC 14), 30=64 (LC 14), 33=190 (LC 30), 35=42 (LC 13), 36=3 (LC 13)  
Max Grav 2=547 (LC 2), 26=316 (LC 2), 27=107 (LC 26), 28=61 (LC 26), 30=280 (LC 2), 32=1281 (LC 30), 33=373 (LC 20), 35=567 (LC 25), 36=547 (LC 2), 39=316 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension

- NOTES**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) -0-11-8 to 2-7-9, Interior (1) 2-7-9 to 13-4-5, Exterior (2) 13-4-5 to 18-1-11, Interior (1) 18-1-11 to 22-1-11, Exterior (2) 22-1-11 to 27-2-8, Interior (1) 27-2-8 to 35-6-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
  - 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.



October 21, 2021

Continued on page 2

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

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate  
818 Soundside Road  
Edenton, NC 27832



Job	Truss	Truss Type	Qty	Ply	Antioch Church-Riddle 2-Roof	I48455878
21090142-A	A03	Piggyback Base Supported Gable	1	1	Job Reference (optional)	

Carter Components (Sanford), Sanford, NC - 27332.

Run: 8.52 S Oct 11 2021 Print: 8.520 S Oct 11 2021 MiTek Industries, Inc. Wed Oct 20 14:29:28  
 ID:KzGDGjS6ZpjJDvuNYqblISyTG8K-RfC?PsB70Hq3NSgPqnL8w3uITxbGKWrcDoi7J4zJC?f

Page: 2

- 12) One RT16A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 35, 32, and 33. This connection is for uplift only and does not consider lateral forces.
- 13) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 14) 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

**WARNING** - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MIL-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



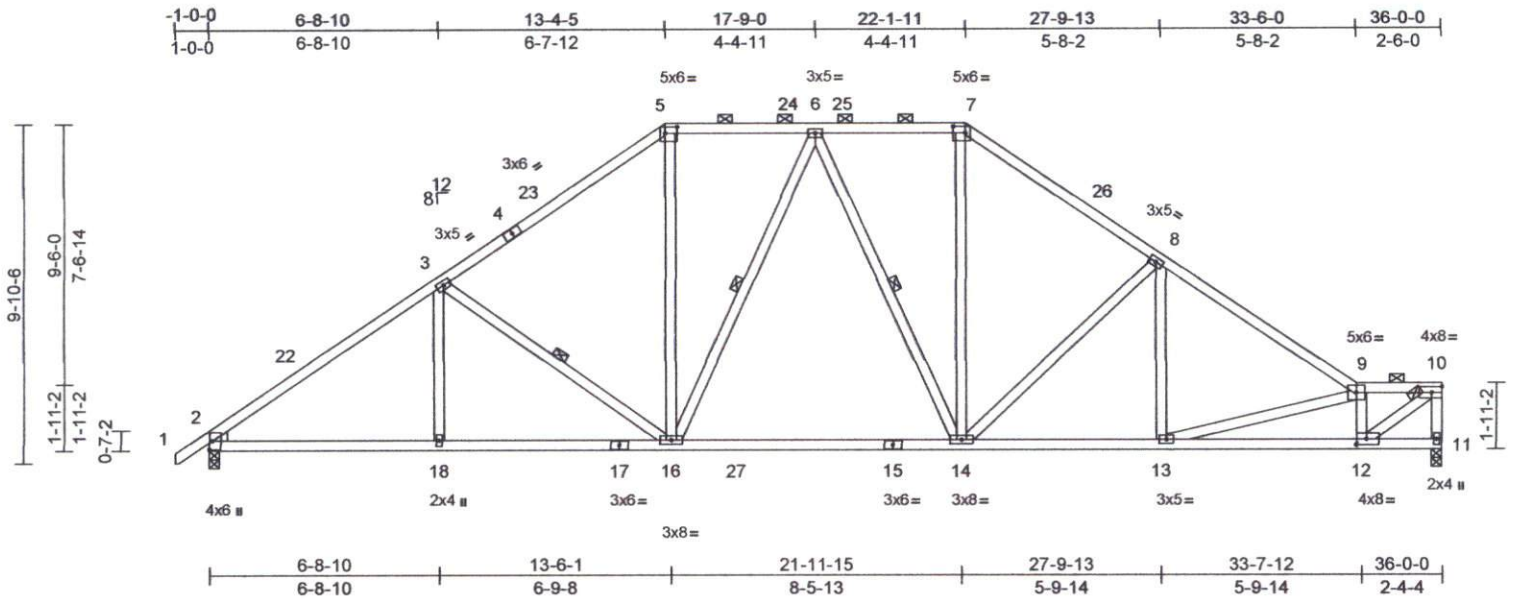
818 Soundside Road  
 Edenton, NC 27932

Job 21090142-A	Truss A04	Truss Type Piggyback Base	Qty 2	Ply 1	Antioch Church-Riddle 2-Roof Job Reference (optional)	148455879
-------------------	--------------	------------------------------	----------	----------	--	-----------

Carter Components (Sanford), Sanford, NC - 27332.

Run: 8.52 S Oct 11 2021 Print: 8.520 S Oct 11 2021 MiTek Industries, Inc. Wed Oct 20 14:29:29  
ID: uNg5jBxmkl?SmAvjQJlrQByTG3q-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKwRCDoi7J4zJC7f

Page: 1



Scale = 1:67.4

Plate Offsets (X, Y): [5:0-4-4,0-2-4], [7:0-4-4,0-2-4], [12:0-3-8,0-2-0]

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	0.71	Vert(LL)	-0.24	14-16	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.87	Vert(CT)	-0.43	14-16	>996	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.93	Horz(CT)	0.09	11	n/a	n/a		
3CCL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
3CDL	10.0											
											Weight: 227 lb	FT = 20%

**LUMBER**

TOP CHORD	2x4 SP No.2
3OT CHORD	2x4 SP No.2
WEBS	2x4 SP No.2 *Except
	10-11,3-18,12-9,12-10:2x4 SP No.3
WEDGE	Left: 2x4 SP No.3

**BRACING**

TOP CHORD	Structural wood sheathing directly applied or 3-1-4 oc purlins, except end verticals, and 2-0-0 oc purlins (4-3-13 max.); 5-7, 9-10.
3OT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

WEBS	1 Row at midpt 3-16, 6-16, 6-14
------	---------------------------------

REACTIONS	(lb/size) 2=1305/0-3-8, 11=1280/0-3-8
	Max Horiz 2=206 (LC 12)
	Max Grav 2=1492 (LC 2), 11=1433 (LC 2)

FORCES	(lb) - Maximum Compression/Maximum Tension
--------	--

TOP CHORD	1-2=0/40, 2-3=-2140/273, 3-5=-1713/303, 5-6=-1331/299, 6-7=-1339/302, 7-8=-1709/308, 8-9=-2121/280, 9-10=-1836/213, 10-11=-1400/167
-----------	---

3OT CHORD	2-18=-219/1696, 16-18=-219/1696, 14-16=-115/1396, 13-14=-189/1704, 12-13=-236/1950, 11-12=-19/37
-----------	--

WEBS	3-18=0/123, 3-16=-513/151, 5-16=-41/586, 7-14=-57/627, 8-14=-532/152, 8-13=0/190, 9-13=-266/65, 9-12=-1280/215, 10-12=-246/2245, 6-16=-280/128, 6-14=-261/126
------	---

**NOTES**

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

- 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) 0-11-8 to 2-7-12, Interior (1) 2-7-12 to 13-4-5, Exterior (2) 13-4-5 to 16-11-9, Interior (1) 16-11-9 to 22-1-11, Exterior (2) 22-1-11 to 25-8-14, Interior (1) 25-8-14 to 35-10-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
- 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0
- 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) Provide adequate drainage to prevent water ponding.
- 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) One RT7A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 11 and 2. This connection is for uplift only and does not consider lateral forces.
- 8) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 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



October 21, 2021

**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



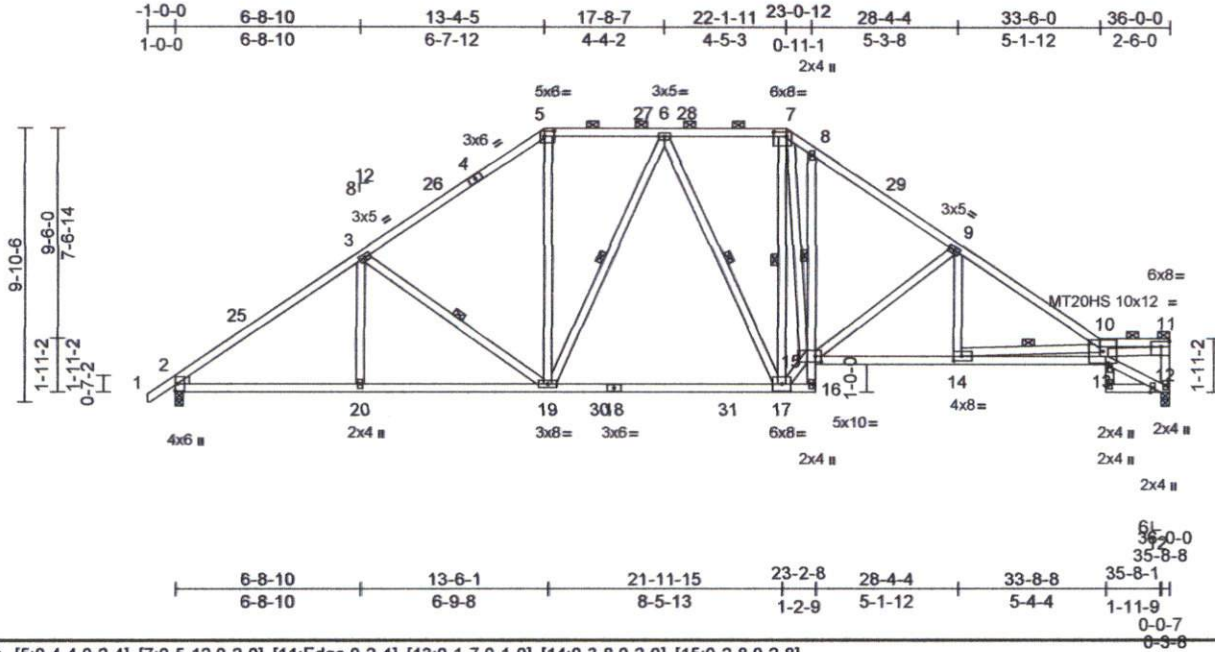
818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Antioch Church-Riddle 2-Roof	I48455880
21090142-A	A05	Piggyback Base	4	1	Job Reference (optional)	

Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.52 S Oct 11 2021 Print: 8.520 S Oct 11 2021 MiTek Industries, Inc. Wed Oct 20 14:29:29  
 ID:YmVLWVvxtv45MS1566Bbg3yTG2a-RIC7PsB70Hq3NSgPqnL8w3uiTXbGKWvCdoi7J4zJC7f

Page: 1



Scale = 1:83.4

Plate Offsets (X, Y): [5:0-4-4,0-2-4], [7:0-5-12,0-2-0], [11:Edge,0-2-4], [13:0-1-7,0-1-0], [14:0-3-8,0-2-0], [15:0-2-8,0-2-8]

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	0.75	Vert(LL)	-0.26	17-19	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.97	Vert(CT)	-0.50	17-19	>862	180	MT20HS	187/143
TCDL	10.0	Rep Stress Incr	YES	WB	0.72	Horz(CT)	0.31	12	n/a	n/a		
3CLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
3CDL	10.0											
											Weight: 251 lb	FT = 20%

**UMBER**  
 GOP CHORD 2x4 SP No.2  
 3OT CHORD 2x4 SP No.2 \*Except\* 15-13:2x4 SP No.1, 21-12:2x4 SP No.3  
 WEBS 2x4 SP No.2 \*Except\* 11-12,3-20,17-15,9-14,13-10,21-13:2x4 SP No.3, 13-11:2x4 SP No.1  
 WEDGE Left: 2x4 SP No.3

**BRACING**  
 GOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins (2-6-12 max.): 5-7, 10-11.  
 3OT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing. Except:  
 1 Row at midpt 8-15  
 WEBS 1 Row at midpt 3-19, 7-17, 10-14, 6-17, 6-19

**REACTIONS** (lb/size) 2=1305/0-3-8, 12=1280/0-3-8  
 Max Horiz 2=208 (LC 12)  
 Max Grav 2=1492 (LC 2), 12=1433 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
 GOP CHORD 1-2=0/40, 2-3=-2142/273, 3-5=-1711/303, 5-6=-1330/299, 6-7=-1345/299, 7-8=-1849/398, 8-9=-1979/327, 9-10=-2651/328, 10-11=-4213/494, 11-12=-1352/178  
 3OT CHORD 2-20=-220/1697, 19-20=-220/1697, 17-19=-1171/1399, 16-17=-47/139, 15-16=-312/0, 8-15=-166/143, 14-15=-242/2180, 13-14=-588/4631, 12-13=-24/39

**WEBS** 3-20=0/125, 3-19=-516/151, 5-19=-43/587, 7-17=-797/110, 15-17=-61/1668, 7-15=-266/1642, 9-15=-779/147, 9-14=0/478, 10-14=-2470/348, 10-13=-1328/211, 11-13=-523/4342, 6-17=-247/124, 6-19=-292/127

**NOTES**  
 1) Unbalanced roof live loads have been considered for this design.  
 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) -0-11-8 to 2-7-12, Interior (1) 2-7-12 to 13-4-5, Exterior (2) 13-4-5 to 16-11-9, Interior (1) 16-11-9 to 22-1-11, Exterior (2) 22-1-11 to 25-8-14, Interior (1) 25-8-14 to 35-10-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33  
 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load); Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow); Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0  
 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) Provide adequate drainage to prevent water ponding.  
 6) All plates are MT20 plates unless otherwise indicated.  
 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) Bearing at joint(s) 12 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.

9) One RT7A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 12 and 2. This connection is for uplift only and does not consider lateral forces.  
 10) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.  
 11) 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

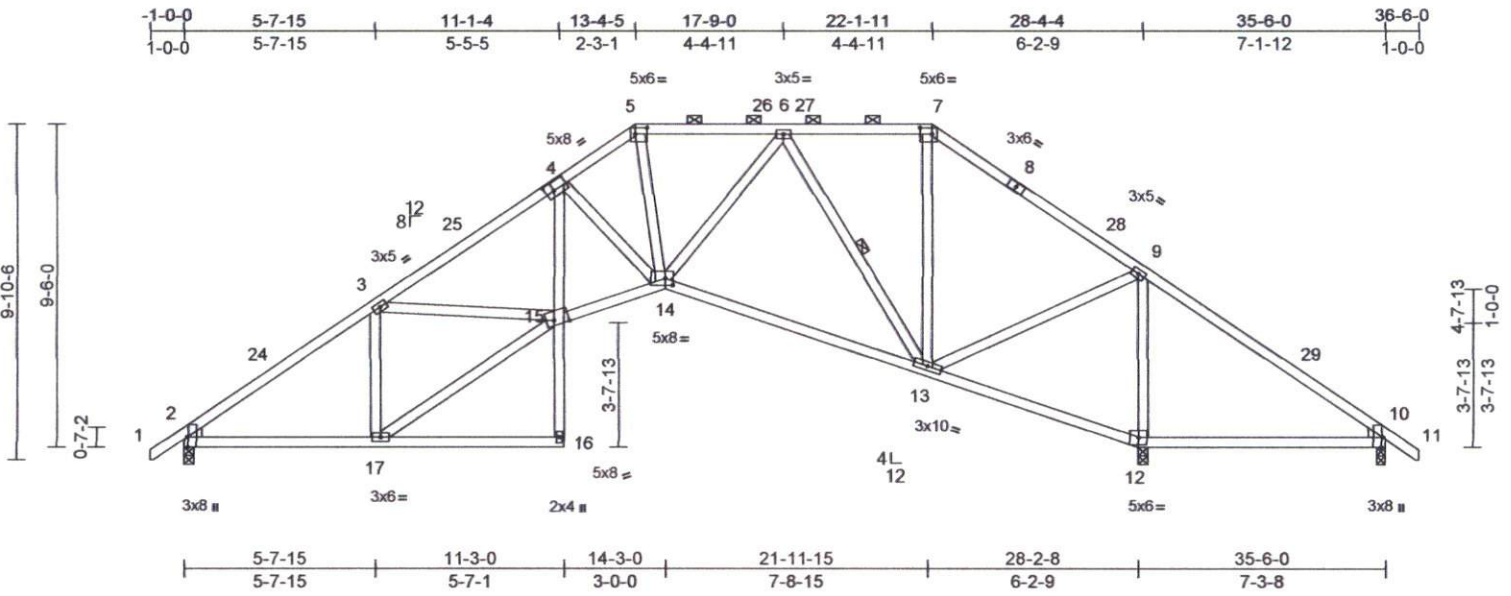


Job 21090142-A	Truss A06	Truss Type Piggyback Base	Qty 3	Ply 1	Antioch Church-Riddle 2-Roof Job Reference (optional)	148455881
-------------------	--------------	------------------------------	----------	----------	--	-----------

Carter Components (Sanford), Sanford, NC - 27332.

Run: 8.52 S Oct 11 2021 Print: 8.520 S Oct 11 2021 MiTek Industries, Inc. Wed Oct 20 14:29:30  
ID:q?HPhK4XaA3AoAu6aThgUVyTFI\_-RfC?Psb70Hq3NSgPqnl.8w3ulTXbGKWCDa7J4zJC?I

Page: 1



Scale = 1:68.1

Plate Offsets (X, Y): [2:0-3-8,Edge], [4:0-3-0,0-3-0], [5:0-4-4,0-2-4], [7:0-4-4,0-2-4], [10:0-3-8,Edge], [14:0-2-12,0-2-8], [15:0-5-4,0-1-12]

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	0.83	0.07	12-23	>999	240	MT20	244/190	
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.56	Vert(CT)	-0.25	13-14	>999			
TCDL	10.0	Rep Stress Incr	YES	WB	0.78	Horz(CT)	0.15	12	n/a			
3CLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
3CDL	10.0											
											Weight: 214 lb	FT = 20%

**LUMBER**  
 TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x4 SP No.2  
 WEBS 2x4 SP No.2 "Except"  
 3-17,14-4,14-5,12-9:2x4 SP No.3  
 WEDGE Left: 2x4 SP No.3  
 Right: 2x4 SP No.3

**BRACING**  
 TOP CHORD Structural wood sheathing directly applied or 3-8-12 oc purlins, except 2-0-0 oc purlins (4-7-10 max.): 5-7.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 12-13,10-12.  
 WEBS 1 Row at midpt 6-13

**REACTIONS** (lb/size) 2=953/0-3-8, 10=18/0-3-0, 12=1649/0-3-8  
 Max Horiz 2=189 (LC 11)  
 Max Uplift 2=-1 (LC 13), 10=226 (LC 29)  
 Max Grav 2=1098 (LC 2), 10=179 (LC 12), 12=1848 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-2=0/40, 2-3=1496/221, 3-5=2118/268, 5-6=1467/215, 6-7=559/208, 7-9=741/202, 9-10=125/674, 10-11=0/40  
 BOT CHORD 2-17=91/1171, 16-17=0/17, 15-16=0/54, 4-15=21/320, 14-15=12/1793, 13-14=0/1104, 12-13=598/117, 10-12=515/100  
 WEBS 3-17=688/126, 15-17=107/1397, 3-15=0/517, 4-14=520/160, 5-14=64/738, 7-13=0/145, 9-13=20/1056, 9-12=1535/204, 6-13=1015/90, 6-14=0/742

- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCCL=6.0psf; BCCL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) 0-11-8 to 2-7-2, Interior (1) 2-7-2 to 13-4-5, Exterior (2) 13-4-5 to 18-4-9, Interior (1) 18-4-9 to 22-1-11, Exterior (2) 22-1-11 to 27-1-15, Interior (1) 27-1-15 to 36-5-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0
- 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 MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 10. This connection is for uplift only and does not consider lateral forces.
- One RT16A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 12. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 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

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



October 21, 2021

**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 ANS/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



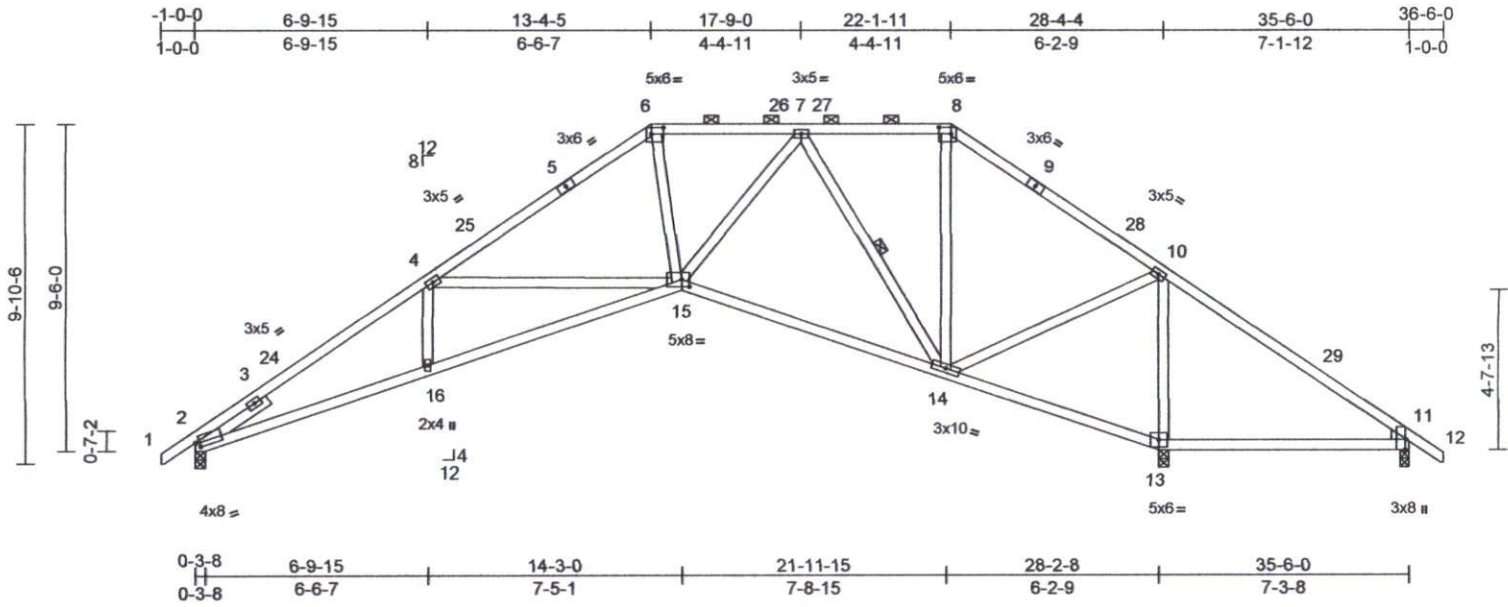
818 Soundside Road  
 Edenton, NC 27932

Job 21090142-A	Truss A07	Truss Type Piggyback Base	Qty 1	Ply 1	Antioch Church-Riddle 2-Roof Job Reference (optional)	I48455882
-------------------	--------------	------------------------------	----------	----------	--	-----------

Carter Components (Sanford), Sanford, NC - 27332,

Run: 8:52 S Oct 11 2021 Print: 8:52 S Oct 11 2021 MiTek Industries, Inc. Wed Oct 20 14:29:30  
ID: XxtBolCpEEKI?#19at0ucyTFkq-RfC?PsB70Hq3NSgPqnlL9w3ulTXbGKWrCDof7J4zJC?#

Page: 1



Scale = 1:67.4

Plate Offsets (X, Y): [2:0-1-7,0-1-15], [6:0-4-4,0-2-4], [8:0-4-4,0-2-4], [11:0-3-8,Edge], [15:0-2-12,0-2-8]

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	0.92	Vert(LL)	-0.14	15-16	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.73	Vert(CT)	-0.35	15-16	>969	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.84	Horz(CT)	0.20	13	n/a	n/a		
3CLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
3CDL	10.0											
											Weight: 192 lb	FT = 20%

- UMBER**
- TOP CHORD 2x4 SP No.2
  - 3OT CHORD 2x4 SP No.2
  - NEBS 2x4 SP No.2 \*Except\* 4-16,15-6,13-10:2x4 SP No.3
  - WEDGE Right: 2x4 SP No.3
  - SLIDER Left 2x4 SP No.3 - 2-6-0
- BRACING**
- TOP CHORD Structural wood sheathing directly applied, except 2-0-0 oc purlins (4-10-14 max.): 6-8.
  - 3OT CHORD Rigid ceiling directly applied or 5-4-12 oc bracing.
  - NEBS 1 Row at midpt 7-14
- REACTIONS** (lb/size)
- 2=916/0-3-8, 11=162/0-3-0, 13=1830/0-3-8
  - Max Horiz 2=189 (LC 11)
  - Max Uplift 2=3 (LC 13), 11=379 (LC 29)
  - Max Grav 2=1056 (LC 2), 11=134 (LC 10), 13=2051 (LC 2)
- FORCES** (lb) - Maximum Compression/Maximum Tension
- TOP CHORD 1-2=0/40, 2-4=2416/300, 4-6=1622/199, 6-7=1353/216, 7-8=461/210, 8-10=619/196, 10-11=110/934, 11-12=0/40
  - 3OT CHORD 2-16=154/2062, 15-16=159/2073, 14-15=0/966, 13-14=827/103, 11-13=728/88
  - NEBS 4-16=0/134, 4-15=796/233, 6-15=0/526, 8-14=15/76, 10-14=15/1168, 10-13=1654/203, 7-14=1012/88, 7-15=0/773

- Wind: ASCE 7-10; 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) -0-11-8 to 2-7-2, Interior (1) 2-7-2 to 13-4-5, Exterior (2) 13-4-5 to 18-4-9, Interior (1) 18-4-9 to 22-1-11, Exterior (2) 22-1-11 to 27-1-15, Interior (1) 27-1-15 to 36-5-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load; Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow; Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0
- 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.
- Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- One RT7A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 11. This connection is for uplift only and does not consider lateral forces.
- One RT16A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 13. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

11) 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



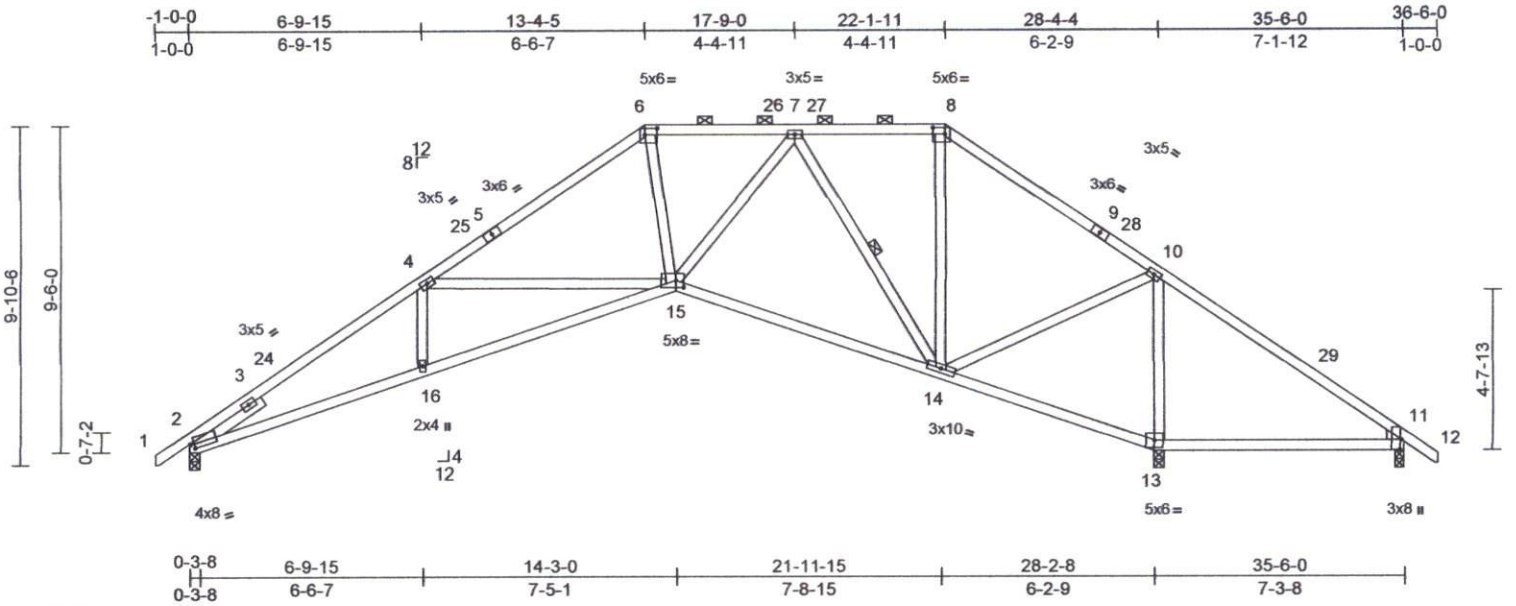
October 21, 2021

Job 21090142-A	Truss A08	Truss Type Piggyback Base	Qty 5	Ply 1	Antioch Church-Riddle 2-Roof Job Reference (optional)	148455883
-------------------	--------------	------------------------------	----------	----------	--	-----------

Carter Components (Sanford), Sanford, NC - 27332.

Run: 8.52 S Oct 11 2021 Print: 8.520 S Oct 11 2021 MiTek Industries, Inc. Wed Oct 20 14:29:31  
ID:ZeOLhnWTGY\_PenUqbxAvXyTIQ8-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKwRcDol7J4zJC7f

Page: 1



Scale = 1:67.4  
Plate Offsets (X, Y): [2:0-1-7,0-1-15], [6:0-4-4,0-2-4], [8:0-4-4,0-2-4], [11:0-3-8,Edge], [15:0-2-12,0-2-8]

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	0.91	Vert(LL)	-0.14	15-16	>999	240
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.74	Vert(CT)	-0.35	15-16	>972	180
TCDL	10.0	Rep Stress Incr	YES	WB	0.83	Horz(CT)	0.20	13	n/a	n/a
3CLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH						
3CDL	10.0									
										Weight: 192 lb FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.2 \*Except\* 4-16,15-6,13-10:2x4 SP No.3  
WEDGE Right: 2x4 SP No.3  
SLIDER Left 2x4 SP No.3 - 2-6-0

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except 2-0-0 oc purlins (4-10-14 max.): 6-8.  
BOT CHORD Rigid ceiling directly applied or 5-5-11 oc bracing.  
WEBS 1 Row at midpt 7-14

**REACTIONS** (lb/size) 2=917/0-3-8, 11=156/0-3-0, 13=1821/0-3-8  
Max Horiz 2=189 (LC 11)  
Max Uplift 2=4 (LC 13), 11=373 (LC 29)  
Max Grav 2=1058 (LC 2), 11=134 (LC 10), 13=2041 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/40, 2-4=-2421/303, 4-6=-1628/203, 6-7=-1359/219, 7-8=-468/213, 8-10=-624/201, 10-11=-110/924, 11-12=0/40  
BOT CHORD 2-16=-157/2066, 15-16=-162/2078, 14-15=0/973, 13-14=-819/103, 11-13=-720/88  
WEBS 4-16=0/134, 4-15=-795/233, 6-15=0/531, 8-14=-10/81, 10-14=-15/1162, 10-13=-1648/200, 7-14=-1012/88, 7-15=0/772

- Wind: ASCE 7-10; 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) -0-11-8 to 2-7-2, Interior (1) 2-7-2 to 13-4-5, Exterior (2) 13-4-5 to 18-4-9, Interior (1) 18-4-9 to 22-1-11, Exterior (2) 22-1-11 to 27-1-15, Interior (1) 27-1-15 to 36-5-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load); Lumber DOL=1.15 Plate DOL=1.15; Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow); Lumber DOL=1.15 Plate DOL=1.15; Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0
- 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.
- Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- One RT7A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 11. This connection is for uplift only and does not consider lateral forces.
- One RT16A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 13. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

11) 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

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



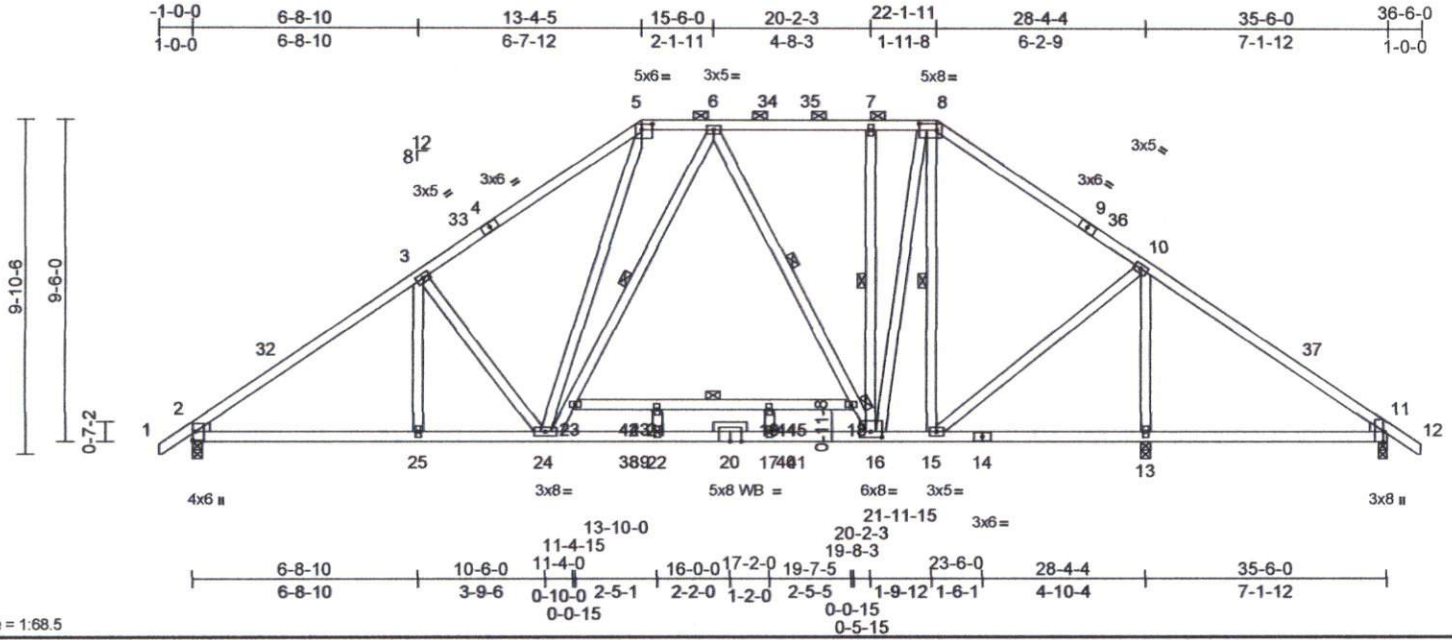
October 21, 2021

Job	Truss	Truss Type	Qty	Ply	Antioch Church-Riddle 2-Roof	148455884
21090142-A	A09	Piggyback Base	1	1	Job Reference (optional)	

Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.52 S Oct 11 2021 Print: 8.520 S Oct 11 2021 MiTek Industries, Inc. Wed Oct 20 14:29:32  
 ID:ZeOLhWGTG\_PenUqAvXxyTIQ8-RFC?PsB70Hq3NSgPqL8w3ulTXbGKwKCoDr7J4zJC7f

Page: 1



Scale = 1:68.5

Plate Offsets (X, Y): [5:0-3-12,0-2-0], [8:0-6-4,0-2-4], [11:0-3-8,Edge], [16:0-4-0,0-2-0]

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	0.64	Vert(LL)	-0.31	19-21	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.97	Vert(CT)	-0.68	19-21	>500	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.69	Horz(CT)	0.04	13	n/a	n/a		
3CLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
3CDL	10.0											
											Weight: 253 lb	FT = 20%

**UMBER**  
 GOP CHORD 2x4 SP No.2  
 3OT CHORD 2x4 SP No.1 \*Except\* 14-11:2x4 SP No.2  
 WEBS 2x4 SP No.2 \*Except\*  
 3-25,10-13,21-22,19-17:2x4 SP No.3  
 OTHERS 2x4 SP No.3  
 WEDGE Left: 2x4 SP No.3  
 Right: 2x4 SP No.3

**BRACING**  
 GOP CHORD Structural wood sheathing directly applied or  
 3-5-2 oc purlins, except  
 2-0-0 oc purlins (5-3-6 max.): 5-8.  
 3OT CHORD Rigid ceiling directly applied or 2-2-0 oc  
 bracing. Except:  
 6-0-0 oc bracing: 18-23  
 WEBS 1 Row at midpt 6-24, 6-18, 8-15, 7-16

**REACTIONS** (lb/size)  
 2=1217/0-3-8, 11=328/0-3-0,  
 13=1409/0-3-8  
 Max Horiz 2=189 (LC 11)  
 Max Uplift 11=75 (LC 14)  
 Max Grav 2=1374 (LC 2), 11=415 (LC 30),  
 13=1550 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum  
 Tension  
 GOP CHORD 1-2=0/40, 2-3=-1924/33, 3-5=-1740/54,  
 5-6=-1166/128, 6-7=-1001/114, 7-8=-998/112,  
 8-10=-1066/137, 10-11=-310/162, 11-12=0/40  
 3OT CHORD 2-25=42/1639, 24-25=0/1639,  
 22-24=0/1210, 17-22=0/1210, 16-17=0/1210,  
 15-16=0/786, 13-15=-18/182, 11-13=-28/182,  
 21-23=-98/0, 19-21=-98/0, 18-19=-98/0  
 WEBS 3-25=-70/24, 3-24=-404/220, 5-24=0/725,  
 8-16=0/1186, 23-24=-241/105,  
 6-23=-120/199, 6-18=-322/68, 16-18=-431/0,  
 8-15=-778/0, 7-16=-227/92, 10-15=0/883,  
 10-13=-1362/20, 21-22=0/36, 17-19=-55/4

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) -0-11-8 to 2-7-2, Interior (1) 2-7-2 to 13-4-5, Exterior (2) 13-4-5 to 18-4-9, Interior (1) 18-4-9 to 22-1-11, Exterior (2) 22-1-11 to 27-1-15, Interior (1) 27-1-15 to 36-5-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0
- 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, 15-6-0 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, with BCDL = 10.0psf.
- One RT7A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 11, and 13. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 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



October 21, 2021

**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 ANS/TPI 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

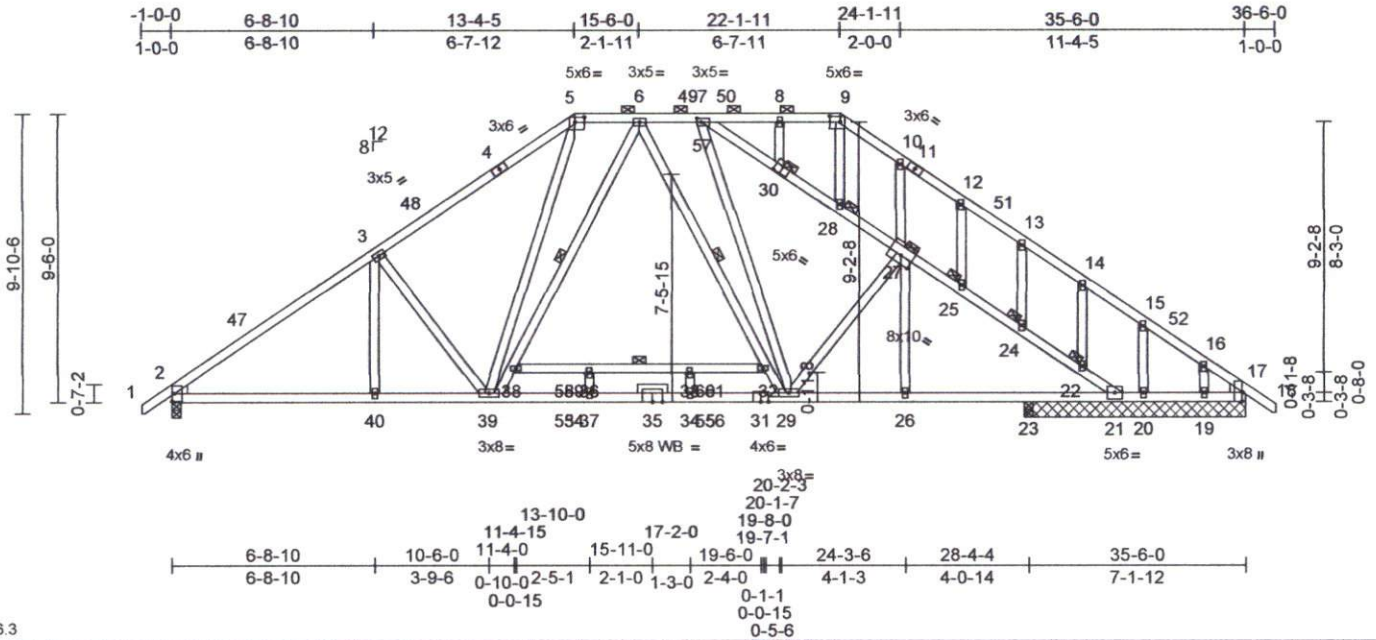
Job 21090142-A	Truss A10	Truss Type Piggyback Base Structural Gable	Qty 1	Ply 1	Antioch Church-Riddle 2-Roof Job Reference (optional)	148455885
-------------------	--------------	---	----------	----------	--	-----------

Carter Components (Sanford), Sanford, NC - 27332.

Run: 8.52 S Oct 11 2021 Print: 8.520 S Oct 11 2021 MiTek Industries, Inc. Wed Oct 20 14:29:32

Page: 1

ID: zD4TKoYMZTM\_VEDPY3jc99yTIQ5-RfC?Psb70Hq3NSgPqnl8w3ulTXbGKwRCD0i7J4zJC7f



Scale = 1:76.3  
 Plate Offsets (X, Y): [5:0-3-12,0-2-0], [7:0-1-12,0-1-8], [9:0-4-4,0-2-4], [17:0-3-8,Edge], [27:0-5-0,0-3-0], [30:0-3-0,0-3-0]

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	0.80	Vert(LL)	-0.30	33-36	>999	240	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.95	Vert(CT)	-0.68	33-36	>501	180	
TCDL	10.0	Rep Stress Incr	YES	WB	0.24	Horz(CT)	0.06	17	n/a	n/a	
3CLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH							
3CDL	10.0										Weight: 276 lb FT = 20%

**LUMBER**

TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x4 SP 2400F 2.0E \*Except\* 7-30,30-21:2x4 SP No.2, 38-32,35-31:2x4 SP No.1  
 WEBS 2x4 SP No.2 \*Except\*  
 3-40,27-26,10-27,36-37,33-34:2x4 SP No.3  
 OTHERS 2x4 SP No.3 \*Except\* 35-35:2x4 SP No.2  
 WEDGE Left: 2x4 SP No.3  
 Right: 2x4 SP No.3

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except 2-0-0 oc purlins (4-8-4 max.): 5-9.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:  
 2-2-0 oc bracing: 34-37.  
 3-5-0 oc bracing: 21-24  
 4-1-0 oc bracing: 24-25  
 4-5-0 oc bracing: 27-28, 25-27  
 4-6-0 oc bracing: 28-30  
 4-8-0 oc bracing: 7-30  
 6-0-0 oc bracing: 32-38

**WEBS**  
 1 Row at midpt 6-39, 6-29  
 JOINTS 1 Brace at Jt(s): 27, 28, 30, 25, 24

**REACTIONS** (lb/size)  
 2=1402/0-3-8, 17=435/7-3-8, 19=437/7-3-8, 20=307/7-3-8, 21=1241/7-3-8, 23=224/0-3-8, 44=435/7-3-8  
 Max Horiz 2=190 (LC 11)  
 Max Uplift 19=91 (LC 14), 20=46 (LC 12)  
 Max Grav 2=1567 (LC 2), 17=478 (LC 28), 19=36 (LC 12), 20=28 (LC 14), 21=1429 (LC 26), 23=256 (LC 26), 44=478 (LC 28)

**FORCES** (lb) - Maximum Compression/Maximum Tension

**TOP CHORD** 1-2=0/40, 2-3=-2246/0, 3-5=-2086/0, 5-6=-1411/53, 6-7=-1480/0, 7-8=-390/50, 8-9=-389/48, 9-10=-506/47, 10-12=-453/0, 12-13=-467/0, 13-14=-538/0, 14-15=-527/0, 15-16=-507/0, 16-17=-567/0, 17-18=0/40

**BOT CHORD** 2-40=-17/1905, 39-40=0/1905, 37-39=0/1529, 34-37=0/1529, 29-34=0/1529, 26-29=0/1740, 23-26=0/1740, 21-23=0/1740, 20-21=0/453, 19-20=0/453, 17-19=0/453, 7-28=-1597/0, 27-28=-1561/0, 25-27=-1606/3, 24-25=-1665/24, 22-24=-1686/29, 21-22=-1812/59, 36-38=-97/0, 33-36=-97/0, 32-33=-97/0

**WEBS** 3-40=-106/3, 3-39=-381/234, 5-39=0/859, 38-39=-352/25, 6-38=-246/96, 6-32=-21/222, 29-32=-107/105, 7-29=0/671, 27-29=-243/158, 26-27=-175/0, 9-28=0/124, 8-30=-49/47, 12-25=-73/60, 13-24=0/35, 14-22=-200/77, 15-20=-234/91, 16-19=0/68, 10-27=-234/130, 36-37=-34/16, 33-34=-22/19

- NOTES**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) 0-11-8 to 2-7-2, Interior (1) 2-7-2 to 13-4-5, Exterior (2) 13-4-5 to 18-4-9, Interior (1) 18-4-9 to 22-1-11, Exterior (2) 22-1-11 to 27-1-15, Interior (1) 27-1-15 to 36-5-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
  - 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- 4) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0
- 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, 15-6-0 from left end, supported at two points, 5-0-0 apart.
- 7) Provide adequate drainage to prevent water ponding.
- 8) All plates are 2x4 MT20 unless otherwise indicated.
- 9) Gable studs spaced at 2-0-0 oc.
- 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, with BCDL = 10.0psf.
- 11) One RT7A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 17, 20, and 19. This connection is for uplift only and does not consider lateral forces.



October 21, 2021

Continued on page 2

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITTEK 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	Truss	Truss Type	Qty	Ply	Antioch Church-Riddle 2-Roof	148455885
21090142-A	A10	Piggyback Base Structural Gable	1	1	Job Reference (optional)	

Carter Components (Sanford), Sanford, NC - 27332.

Run: 8.52 S Oct 11 2021 Print: 8.520 S Oct 11 2021 MiTek Industries, Inc. Wed Oct 20 14:29:32  
 ID:zD4TKoYMZTM\_VEDPY3jc99yTIQ5-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?r

Page: 2

- 12) One RT16A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 21 and 23. This connection is for uplift only and does not consider lateral forces.
- 13) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 14) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

.OAD CASE(S) Standard

**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



816 Soundside Road  
 Edenton, NC 27932

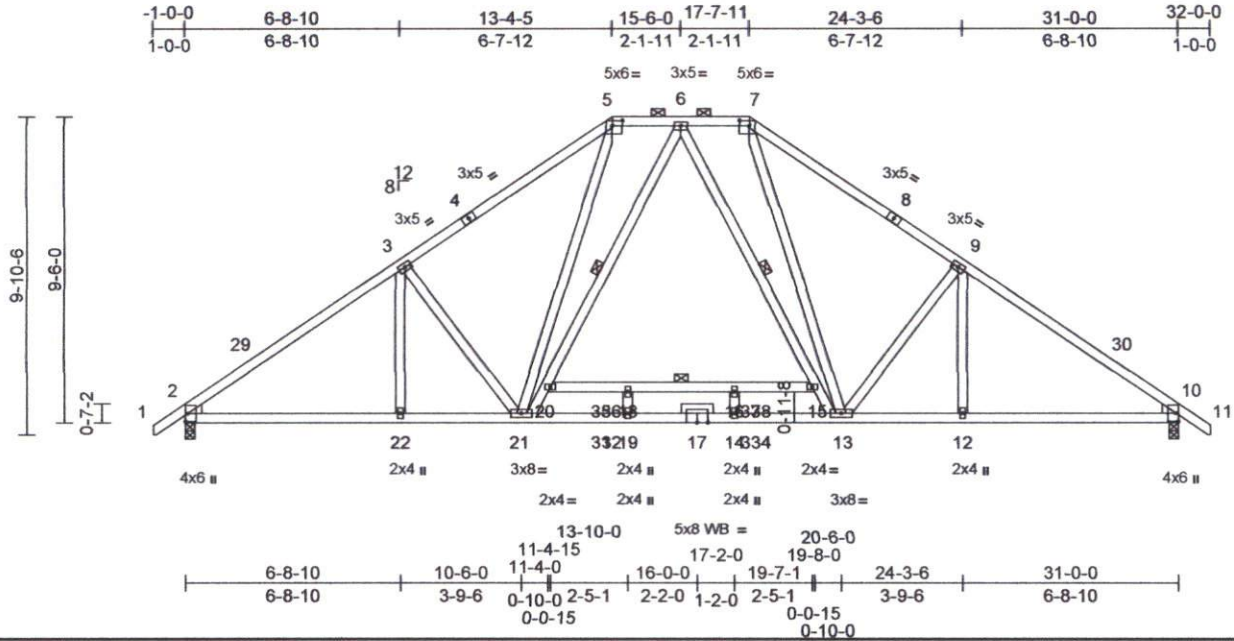
Job	Truss	Truss Type	Qty	Ply	Antioch Church-Riddle 2-Roof	148455886
21090142-A	A11	Piggyback Base	5	1	Job Reference (optional)	

Carter Components (Sanford), Sanford, NC - 27332.

Run: 8.52 S Oct 11 2021 Print: 8.520 S Oct 11 2021 MiTek Industries, Inc. Wed Oct 20 14:29:33

Page: 1

ID: RPerX8Z\_KnUr7Oob6nErhNyTIQ4-RfC?PsB70Hq3NSgPqnL9w3ulTXbGKwCdoi7J4zJC?f



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	0.69	Vert(LL)	-0.30	16-18	>999	240	MT20	244/190
Snow (Pfl/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.88	Vert(CT)	-0.69	16-18	>541	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.24	Horz(CT)	0.05	10	n/a	n/a		
3CLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
3CDL	10.0											
											Weight: 210 lb	FT = 20%

**LUMBER**

TOP CHORD 2x4 SP No.2

3OT CHORD 2x4 SP 2400F 2.0E \*Except\* 20-15:2x4 SP No.1

WEBS 2x4 SP No.2 \*Except\* 3-22,9-12,18-19,16-14:2x4 SP No.3

OTHERS 2x4 SP No.3

WEDGE Left: 2x4 SP No.3 Right: 2x4 SP No.3

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 3-0-9 oc purlins, except 2-0-0 oc purlins (4-11-7 max.): 5-7.

3OT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing. Except: 6-0-0 oc bracing: 15-20

WEBS 1 Row at midpt 6-13, 6-21

**REACTIONS** (lb/size) 2=1302/0-3-8, 10=1302/0-3-8 Max Horiz 2=189 (LC 12) Max Grav 2=1486 (LC 25), 10=1486 (LC 26)

**FORCES** (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/40, 2-3=-2105/0, 3-5=1951/12, 5-6=-1326/107, 6-7=-1326/107, 7-9=-1951/12, 9-10=-2105/0, 10-11=0/40

3OT CHORD 2-22=-11/1802, 21-22=0/1802, 19-21=0/1411, 14-19=0/1411, 13-14=0/1411, 12-13=0/1668, 10-12=0/1668, 18-20=-104/0, 16-18=-104/0, 15-16=-104/0

WEBS 3-22=-102/6, 3-21=-381/227, 5-21=0/792, 7-13=0/792, 9-13=-381/227, 9-12=-102/6, 6-15=-151/147, 13-15=-262/53, 20-21=-262/55, 6-20=-151/148, 18-19=-27/24, 14-16=-27/24

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) 0-11-8 to 2-1-12, Interior (1) 2-1-12 to 13-4-5, Exterior (2) 13-4-5 to 22-0-4, Interior (1) 22-0-4 to 31-11-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0
- 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, 15-6-0 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, with BCDL = 10.0psf.
- One RT7A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 10. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 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

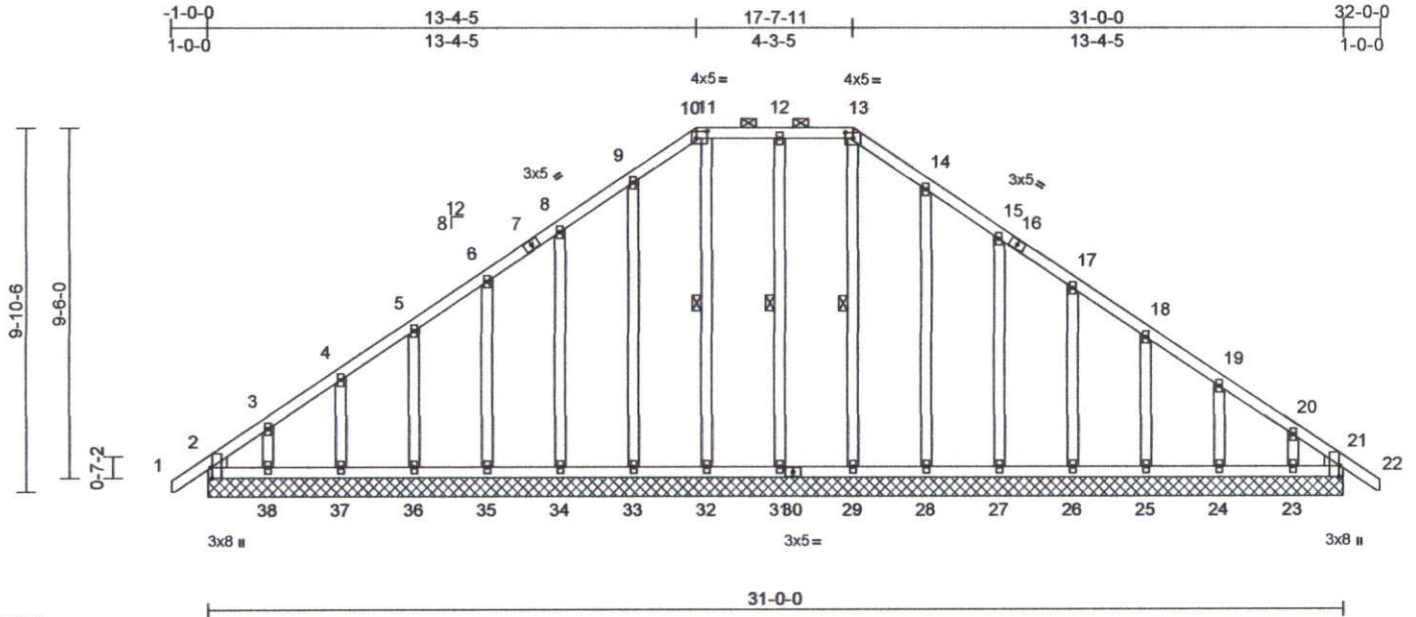


Job 21090142-A	Truss A12	Truss Type Piggyback Base Supported Gable	Qty 1	Ply 1	Antioch Church-Riddle 2-Roof Job Reference (optional)	148455887
-------------------	--------------	--	----------	----------	--	-----------

Carter Components (Sanford), Sanford, NC - 27332.

Run: 8.52 S Oct 11 2021 Print: 8.520 S Oct 11 2021 MiTek Industries, Inc. Wed Oct 20 14:29:33  
ID:OolcyqbEsOkZMx\_DCHJnoyTIQ2-RfC?PsB70Hq3NSgPqnlL8w3uITxbGKwCDoi7J4zJC7f

Page: 1



Scale = 1:62.9

Plate Offsets (X, Y): [2:0-3-8,Edge], [10:0-3-8,0-2-4], [13:0-2-8,0-1-13], [21:0-3-8,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	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.14	Horz(CT)	0.01	21	n/a	n/a		
3CLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
3CDL	10.0											
											Weight: 223 lb	FT = 20%

**WOOD**  
**TOP CHORD** 2x4 SP No.2  
**BOT CHORD** 2x4 SP No.2  
**OTHERS** 2x4 SP No.2 \*Except\*  
 36-5,37-4,38-3,26-17,25-18,24-19,23-20:2x4 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, except 2-0-0 oc purlins (6-0-0 max.): 10-13.  
**BOT CHORD** Rigid ceiling directly applied or 10-0-0 oc bracing.  
**WEBS** 1 Row at midpt 13-29, 12-31, 11-32  
**REACTIONS** (lb/size) 2=115/31-0-0, 21=108/31-0-0, 23=102/31-0-0, 24=141/31-0-0, 25=134/31-0-0, 26=136/31-0-0, 27=135/31-0-0, 28=140/31-0-0, 29=128/31-0-0, 31=164/31-0-0, 32=137/31-0-0, 33=134/31-0-0, 34=136/31-0-0, 35=136/31-0-0, 36=134/31-0-0, 37=140/31-0-0, 38=115/31-0-0, 39=115/31-0-0, 43=108/31-0-0  
 Max Horiz 2=190 (LC 11), 39=190 (LC 11)  
 Max Uplift 2=61 (LC 9), 21=16 (LC 10), 23=49 (LC 14), 24=28 (LC 14), 25=30 (LC 14), 26=29 (LC 14), 27=31 (LC 14), 28=30 (LC 14), 31=11 (LC 9), 33=21 (LC 13), 34=33 (LC 13), 35=29 (LC 13), 36=31 (LC 13), 37=25 (LC 13), 38=56 (LC 13), 39=61 (LC 9), 43=16 (LC 10)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
**TOP CHORD** 1-2=0/40, 2-3=170/155, 3-4=140/134, 4-5=120/114, 5-6=110/108, 6-8=112/124, 8-9=163/186, 9-10=205/232, 10-11=180/214, 11-12=180/214, 12-13=180/214, 13-14=206/234, 14-15=155/175, 15-17=106/116, 17-18=57/58, 18-19=67/44, 19-20=79/76, 20-21=128/122, 21-22=0/40  
**BOT CHORD** 2-38=106/148, 37-38=106/148, 36-37=106/148, 35-36=106/148, 34-35=106/148, 33-34=106/148, 32-33=106/148, 31-32=106/148, 29-31=106/148, 28-29=106/148, 27-28=106/148, 26-27=106/148, 25-26=106/148, 24-25=106/148, 23-24=106/148, 21-23=106/148  
**WEBS** 13-29=102/25, 12-31=132/56, 11-32=117/26, 9-33=128/64, 8-34=133/88, 6-35=127/80, 5-36=127/81, 4-37=129/83, 3-38=129/80, 14-28=133/81, 15-27=129/83, 17-26=127/81, 18-25=127/81, 19-24=131/83, 20-23=124/78

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Corner (3) 0-11-8 to 2-1-12, Exterior (2) 2-1-12 to 13-4-5, Corner (3) 13-4-5 to 16-5-9, Exterior (2) 16-5-9 to 17-7-11, Corner (3) 17-7-11 to 20-8-14, Exterior (2) 20-8-14 to 31-11-8 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), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0

**NOTES**



October 21, 2021

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 ANSITP11 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 21090142-A	Truss A12	Truss Type Piggyback Base Supported Gable	Qty 1	Ply 1	Antioch Church-Riddle 2-Roof Job Reference (optional) I48455887
-------------------	--------------	--	----------	----------	---

Carter Components (Sanford), Sanford, NC - 27332.

Run: 8.52 S Oct 11 2021 Print: 8.520 S Oct 11 2021 MiTek Industries, Inc. Wed Oct 20 14:29:33  
ID:OolcyqbEsOkZMlx\_DCHJnoyTIQ2-RfC?PsB70Hq3NSgPqnL8w3uITxbGKWrcDoi7J4zJC7f

Page: 2

- 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.
- 3) Provide adequate drainage to prevent water ponding.
- 7) All plates are 2x4 MT20 unless otherwise indicated.
- 3) Gable requires continuous bottom chord bearing.
- 3) Gable studs spaced at 2-0-0 oc.
- 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 MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 21, 29, 31, 32, 33, 34, 35, 36, 37, 38, 28, 27, 26, 25, 24, and 23. This connection is for uplift only and does not consider lateral forces.
- 12) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 13) 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

**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



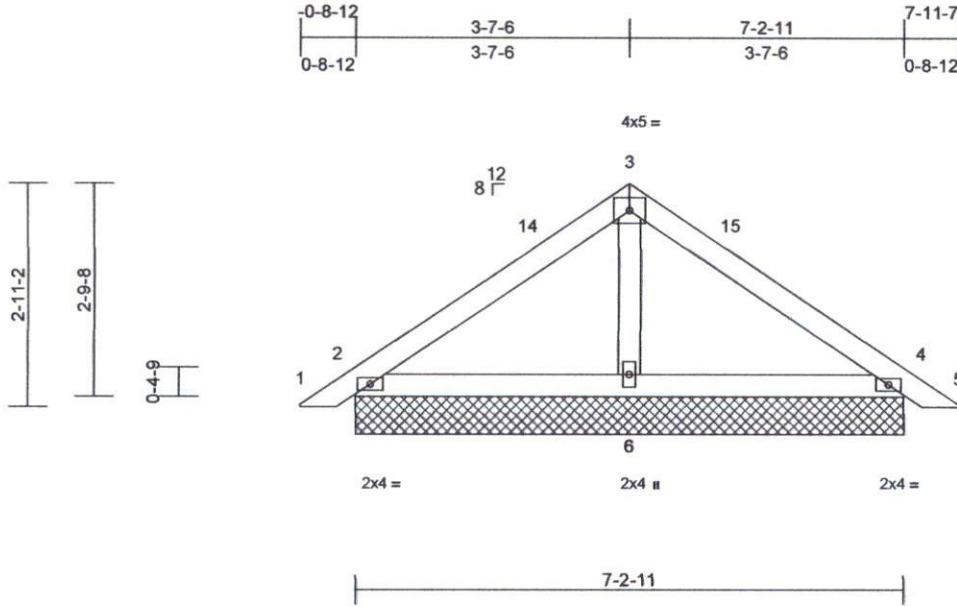
818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Antioch Church-Riddle 2-Roof	1848455888
21090142-A	PB01	Piggyback	1	1	Job Reference (optional)	

Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.52 S Oct 11 2021 Print: 8.520 S Oct 11 2021 MiTek Industries, Inc. Wed Oct 20 14:29:34  
 ID:mir3NRUoVbSbJA?643DFyTG8L-RIC?PsB70Hq3NSgPqnL8w3ulTXbGKWrcDoi7J4zJC?f

Page: 1



Scale = 1:30.4

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	0.16	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.17	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.00	2	n/a		
3CLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP							
3CDL	10.0									Weight: 30 lb	FT = 20%

**UMBER**  
 TOP CHORD 2x4 SP No.2  
 3OT CHORD 2x4 SP No.2  
 OTHERS 2x4 SP No.3

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

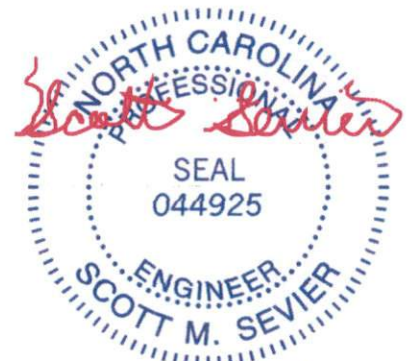
**REACTIONS** (lb/size)  
 2=168/7-2-11, 4=168/7-2-11, 6=199/7-2-11, 7=168/7-2-11, 11=168/7-2-11  
 Max Horiz 2=54 (LC 12), 7=54 (LC 12)  
 Max Uplift 2=15 (LC 13), 4=20 (LC 14), 7=15 (LC 13), 11=20 (LC 14)  
 Max Grav 2=203 (LC 2), 4=203 (LC 2), 6=231 (LC 2), 7=203 (LC 2), 11=203 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-2=0/20, 2-3=136/75, 3-4=136/77, 4-5=0/20  
 3OT CHORD 2-6=-13/71, 4-6=-15/71  
 MEBS 3-6=90/3

**NOTES**  
 1) Unbalanced roof live loads have been considered for this design.  
 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) 0-3-7 to 3-3-7, Interior (1) 3-3-7 to 4-4-11, Exterior (2) 4-4-11 to 7-7-5, Interior (1) 7-7-5 to 8-5-14 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 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- 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 4-0-0 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 MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 4, and 6. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

**LOAD CASE(S)** Standard



October 21, 2021

**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



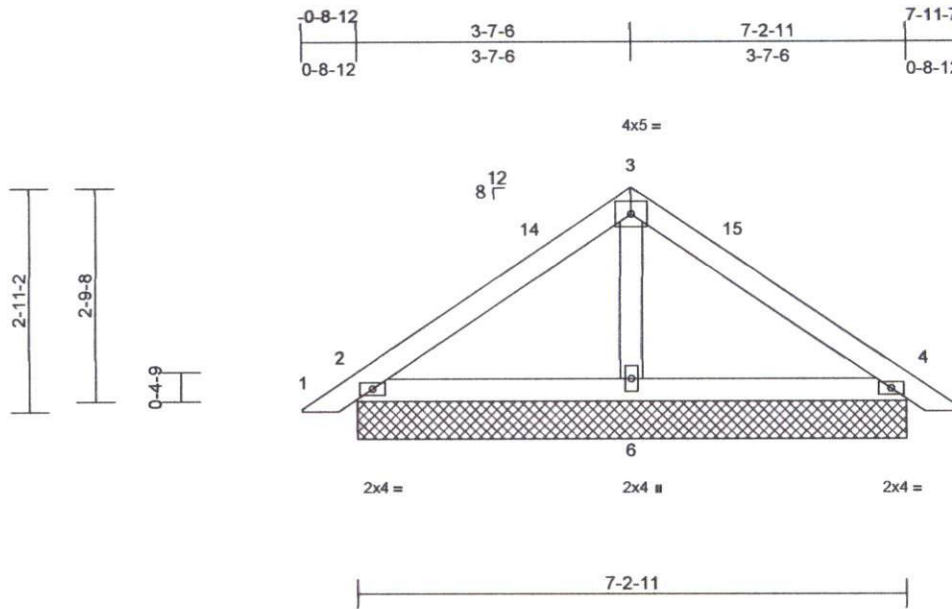
818 Soundside Road  
 Edenton, NC 27932

Job 21090142-A	Truss PB02	Truss Type Piggyback	Qty 16	Ply 1	Antioch Church-Riddle 2-Roof Job Reference (optional)	148455889
-------------------	---------------	-------------------------	-----------	----------	--	-----------

Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.52 S Oct 11 2021 Print: 8.520 S Oct 11 2021 MiTek Industries, Inc. Wed Oct 20 14:29:34  
ID:10NRChv62BhVe5fDxRGBV\_yTIQw-RfC?PsB70Hq3NSgPqnLw3ulTXbGKWrcDoi7J4zJC?f

Page: 1



Scale = 1:30.4

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	0.16	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.17	Vert(CT)	n/a	-	n/a		
TCDL	10.0	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.00	2	n/a		
3CLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP							
3CDL	10.0									Weight: 30 lb	FT = 20%

**LUMBER**

TOP CHORD	2x4 SP No.2
3OT CHORD	2x4 SP No.2
OTHERS	2x4 SP No.3

**BRACING**

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

**REACTIONS**

(lb/size)	2=168/7-2-11, 4=168/7-2-11, 6=199/7-2-11, 7=168/7-2-11, 11=168/7-2-11
Max Horiz	2=54 (LC 12), 7=54 (LC 12)
Max Uplift	2=15 (LC 13), 4=20 (LC 14), 7=15 (LC 13), 11=20 (LC 14)
Max Grav	2=203 (LC 2), 4=203 (LC 2), 6=231 (LC 2), 7=203 (LC 2), 11=203 (LC 2)

**FORCES**

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/20, 2-3=-136/75, 3-4=-136/77, 4-5=0/20
3OT CHORD	2-6=-13/71, 4-6=-15/71
MEBS	3-6=-90/3

**NOTES**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) 0-3-7 to 3-3-7, Interior (1) 3-3-7 to 4-4-11, Exterior (2) 4-4-11 to 7-7-5, Interior (1) 7-7-5 to 8-5-14 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 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- 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 4-0-0 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 MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 4, and 6. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

**LOAD CASE(S)** Standard



October 21, 2021

**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



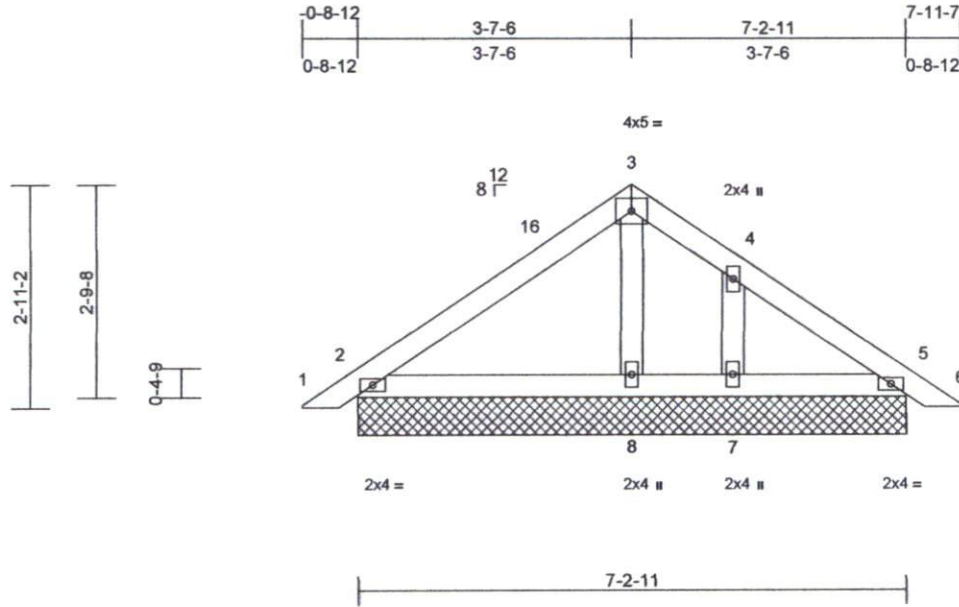
818 Soundside Road  
Edenton, NC 27932

Job 21090142-A	Truss PB03	Truss Type Piggyback	Qty 1	Ply 1	Antioch Church-Riddle 2-Roof Job Reference (optional)	148455890
-------------------	---------------	-------------------------	----------	----------	--	-----------

Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.52 S Oct 11 2021 Print: 8.520 S Oct 11 2021 MITek Industries, Inc. Wed Oct 20 14:29:34  
ID:10NRChv62BhVe5fDxRGBV\_yTIQw-RfC?PsB70Hq3NSgPqnL8w3uITXbGKwRCDo7J4zJC?f

Page: 1



Scale = 1:30.4

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.17	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.16	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	2	n/a	n/a		
3CLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
3CDL	10.0									Weight: 32 lb	FT = 20%	

**UMBER**

TOP CHORD 2x4 SP No.2  
3OT CHORD 2x4 SP No.2  
OTHERS 2x4 SP No.3

**BRACING**

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

**REACTIONS**

(lb/size) 2=160/7-2-11, 5=117/7-2-11, 7=116/7-2-11, 8=142/7-2-11, 9=160/7-2-11, 12=117/7-2-11  
Max Horiz 2=54 (LC 11), 9=54 (LC 11)  
Max Uplift 2=13 (LC 13), 5=1 (LC 14), 7=41 (LC 14), 9=13 (LC 13), 12=1 (LC 14)  
Max Grav 2=192 (LC 2), 5=141 (LC 2), 7=156 (LC 30), 8=172 (LC 25), 9=192 (LC 2), 12=141 (LC 2)

**FORCES**

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/20, 2-3=-108/57, 3-4=-112/86, 4-5=-71/31, 5-6=0/20  
3OT CHORD 2-8=-15/59, 7-8=-6/56, 5-7=-6/56  
MEBS 3-8=-58/5, 4-7=-145/92

**NOTES**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf, BCDL=6.0psf, h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) 0-3-7 to 3-3-7, Interior (1) 3-3-7 to 4-4-11, Exterior (2) 4-4-11 to 7-7-5, Interior (1) 7-7-5 to 8-5-14 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 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- 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 1-4-0 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 MITek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 5, 8, and 7. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

**LOAD CASE(S)** Standard



October 21, 2021

**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

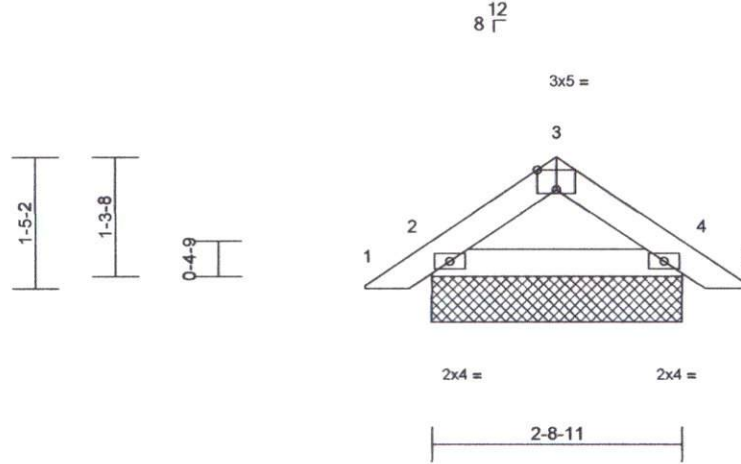
Job 21090142-A	Truss PB04	Truss Type Piggyback	Qty 5	Ply 1	Antioch Church-Riddle 2-Roof Job Reference (optional)	148455891
-------------------	---------------	-------------------------	----------	----------	--	-----------

Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.52 S Oct 11 2021 Print: 8.520 S Oct 11 2021 MITek Industries, Inc. Wed Oct 20 14:29:34  
ID:10NRChv62BhVe5fDxRGBV\_yTIQw-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrcDol7J4zJC?f

Page: 1

-0-8-12	1-4-6	3-5-7
0-8-12	1-4-6	2-1-2



Scale = 1:25.1

Plate Offsets (X, Y): [3:0-2-8,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	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	Horz(CT)	0.00	10	n/a	n/a		
3CCL	0.0*	Code	IRC2015/TPI2014	Matrix-MP							
3CDL	10.0									Weight: 12 lb	FT = 20%

**LUMBER**

TOP CHORD 2x4 SP No.2  
3OT CHORD 2x4 SP No.2

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 4-3-5 oc purlins.  
3OT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS**

(lb/size) 2=116/2-8-11, 4=123/2-8-11, 6=116/2-8-11, 10=123/2-8-11  
Max Horiz 2=-24 (LC 11), 6=-24 (LC 11)  
Max Uplift 2=-4 (LC 13), 6=-4 (LC 13)  
Max Grav 2=139 (LC 2), 4=146 (LC 2), 6=139 (LC 2), 10=146 (LC 2)

**FORCES**

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/20, 2-3=-78/29, 3-4=-79/27, 4-5=0/20  
3OT CHORD 2-4=0/63

**NOTES**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=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 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10

- 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 4-0-0 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 MITek 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 2015 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



October 21, 2021

**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



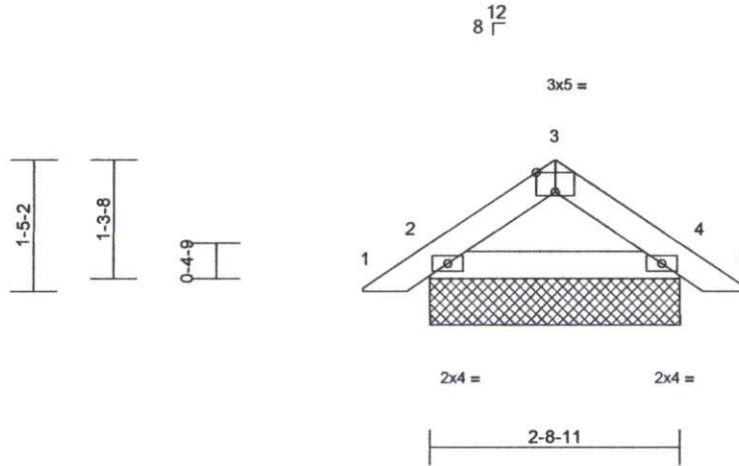
Job 21090142-A	Truss PB05	Truss Type Piggyback	Qty 1	Ply 1	Antioch Church-Riddle 2-Roof Job Reference (optional)	I48455892
-------------------	---------------	-------------------------	----------	----------	--	-----------

Carter Components (Sanford), Sanford, NC - 27332.

Run: 8.52 S Oct 11 2021 Print: 8.52 S Oct 11 2021 MiTek Industries, Inc. Wed Oct 20 14:29:35  
ID:10NRChv62BhVe5fDxRGBV\_yTIQw-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWwCdoi7J4zJC?l

Page: 1

-0-8-12	1-4-6	3-5-7
0-8-12	1-4-6	2-1-2



Scale = 1:25.1

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.03	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	10	n/a	n/a		
3CLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
3CDL	10.0											
										Weight: 12 lb	FT = 20%	

**UMBER**

TOP CHORD 2x4 SP No.2  
3OT CHORD 2x4 SP No.2

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 4-3-5 oc purlins.  
3OT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS**

(lb/size) 2=116/2-8-11, 4=123/2-8-11, 6=116/2-8-11, 10=123/2-8-11  
Max Horiz 2=24 (LC 11), 6=24 (LC 11)  
Max Uplift 2=4 (LC 13), 6=4 (LC 13)  
Max Grav 2=139 (LC 2), 4=146 (LC 2), 6=139 (LC 2), 10=146 (LC 2)

**FORCES**

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/20, 2-3=78/29, 3-4=79/27, 4-5=0/20  
3OT CHORD 2-4=0/63

**NOTES**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=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 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10

- 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 1-4-0 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 MiTek 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 2015 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



October 21, 2021

**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

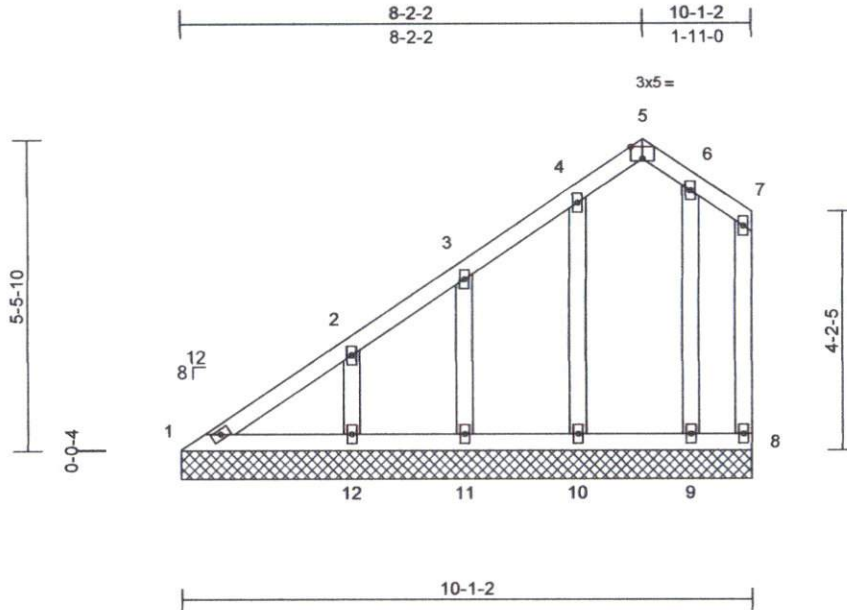
816 Soundside Road  
Edenton, NC 27932

Job 21090142-A	Truss VL01	Truss Type Valley	Qty 1	Ply 1	Antioch Church-Riddle 2-Roof Job Reference (optional)	148455893
-------------------	---------------	----------------------	----------	----------	--	-----------

Carter Components (Sanford), Sanford, NC - 27332.

Run: 8.52 S Oct 11 2021 Print: 8.520 S Oct 11 2021 MiTek Industries, Inc. Wed Oct 20 14:29:35  
ID:af3RPNkvj34w\_6vmZfCeU5yTFmj-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKwCdoi7J4zJC7f

Page: 1



Scale = 1:40.8

Plate Offsets (X, Y): [5:0-2-8,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	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	Horiz(TL)	0.00	8	n/a	n/a		
3CLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH							
3CDL	10.0									Weight: 57 lb	FT = 20%

**LUMBER**

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

**BRACING**

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
3OT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS**

(lb/size)	1=84/10-1-2, 8=16/10-1-2, 9=109/10-1-2, 10=147/10-1-2, 11=108/10-1-2, 12=209/10-1-2
Max Horiz	1=148 (LC 10)
Max Uplift	1=-7 (LC 9), 8=-37 (LC 9), 10=-17 (LC 10), 11=-37 (LC 13), 12=-32 (LC 13)
Max Grav	1=124 (LC 25), 8=55 (LC 12), 9=129 (LC 2), 10=186 (LC 24), 11=133 (LC 24), 12=251 (LC 24)

**FORCES**

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-185/196, 2-3=-128/125, 3-4=-97/96, 4-5=-104/107, 5-6=-89/88, 6-7=-118/133, 7-8=-115/123
3OT CHORD	1-12=-92/172, 11-12=-68/75, 10-11=-68/75, 9-10=-68/75, 8-9=-68/75
WEBS	3-11=-134/84, 2-12=-169/89, 4-10=-147/93, 6-9=-139/85

**NOTES**

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

- 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) 0-0-6 to 3-0-9, Interior (1) 3-0-9 to 8-2-8, Exterior (2) 8-2-8 to 9-11-12 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- 5) All plates are 2x4 MT20 unless otherwise indicated.
- 6) Gable requires continuous bottom chord bearing.
- 7) Gable studs spaced at 2-0-0 oc.
- 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 7 lb uplift at joint 1.
- 10) One RT7A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 8, 11, 12, 10, and 9. This connection is for uplift only and does not consider lateral forces.
- 11) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



October 21, 2021

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MI-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



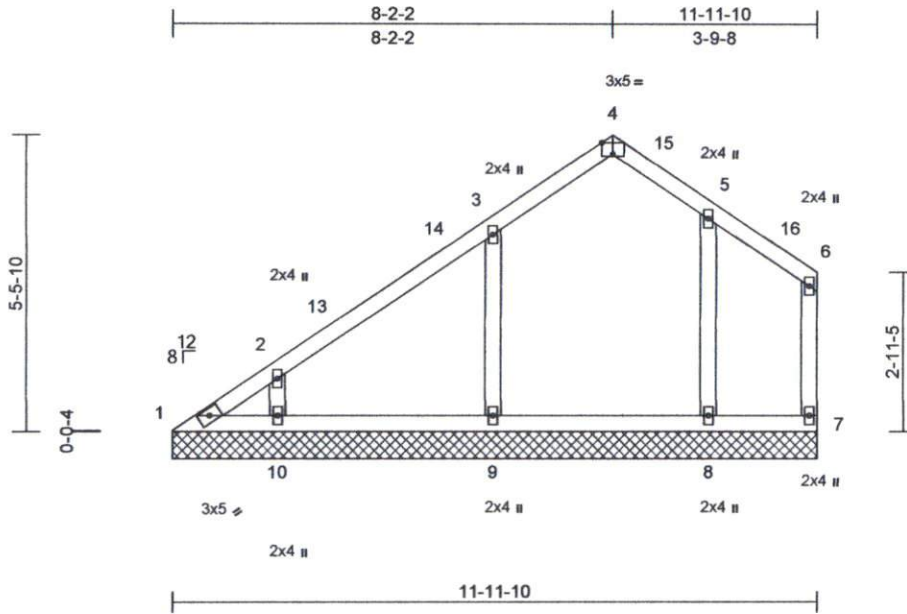
818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Antioch Church-Riddle 2-Roof	148455894
21090142-A	VL02	Valley	1	1	Job Reference (optional)	

Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.52 S Oct 11 2021 Print: 8.520 S Oct 11 2021 MiTek Industries, Inc. Wed Oct 20 14:29:35  
 ID:2rdpcjXUNCncGuz7Njt1JyTFmi-RfC?PsB70Hq3NSgPqnl8w3uITxbGKWrcDoi7J4zJC7f

Page: 1



Scale = 1:42.8

Plate Offsets (X, Y): [4:0-2-8, 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	0.20	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.14	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.08	Horiz(TL)	0.00	7	n/a	n/a		
3CLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
3CDL	10.0											
										Weight: 54 lb	FT = 20%	

**LUMBER**

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

**BRACING**

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
3OT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS**

(lb/size)	1=36/11-11-10, 7=50/11-11-10, 8=201/11-11-10, 9=284/11-11-10, 10=229/11-11-10
Max Horiz	1=134 (LC 10)
Max Uplift	1=24 (LC 9), 7=17 (LC 9), 9=22 (LC 13), 10=52 (LC 13)
Max Grav	1=78 (LC 25), 7=61 (LC 2), 8=291 (LC 25), 9=420 (LC 24), 10=274 (LC 28)

**FORCES**

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-144/156, 2-3=-131/100, 3-4=-124/112, 4-5=-107/94, 5-6=-81/83, 6-7=-93/79
3OT CHORD	1-10=-52/64, 9-10=-52/64, 8-9=-52/64, 7-8=-52/64
WEBS	3-9=-267/130, 2-10=-255/173, 5-8=-180/77

**NOTES**

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

- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) 0-0-6 to 3-0-6, Interior (1) 3-0-6 to 8-2-8, Exterior (2) 8-2-8 to 11-2-8, Interior (1) 11-2-8 to 11-10-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
- 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 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 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, with BCDL = 10.0psf.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 24 lb uplift at joint 1.
- One RT7A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 7, 9, 10, and 8. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



October 21, 2021

**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 ANSITP1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



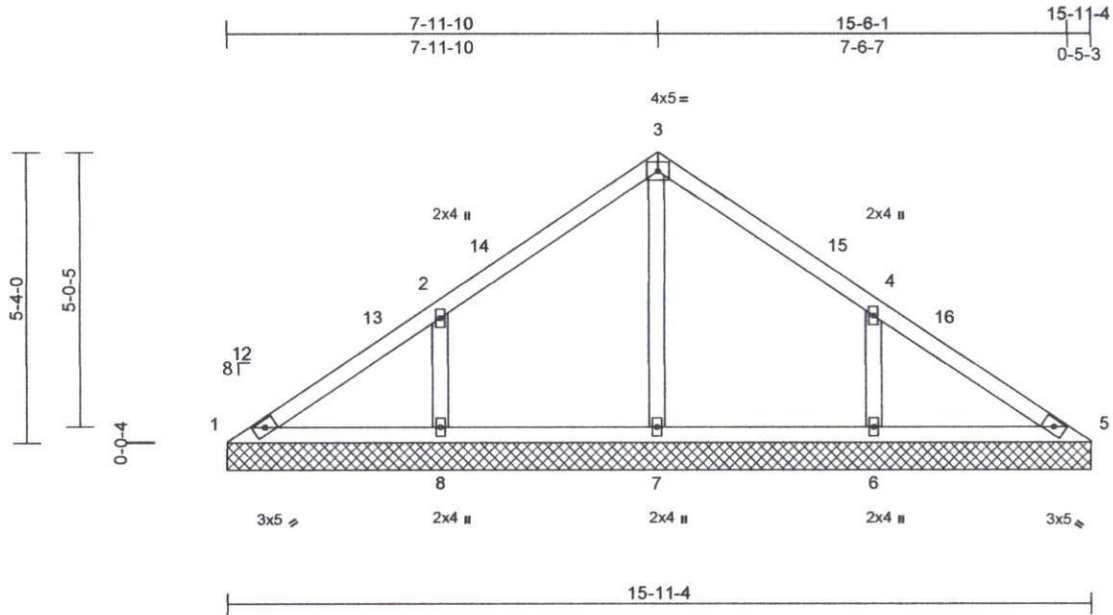
818 Soundside Road  
 Edenton, NC 27932

Job 21090142-A	Truss VL03	Truss Type Valley	Qty 1	Ply 1	Antioch Church-Riddle 2-Roof Job Reference (optional)	148455895
-------------------	---------------	----------------------	----------	----------	--	-----------

Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.52 S Oct 11 2021 Print: 8.520 S Oct 11 2021 MiTek Industries, Inc. Wed Oct 20 14:29:35  
ID:ngzShB0bozn3K?p0fIRizCyTG3E-RfC?P#B70Hq3NSgPqnL8w3uITXbGKWwCD0i7J4zJC7f

Page: 1



Scale = 1:42.5

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.23	Vert(LL)	n/a	-	n/a	999	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.13	Vert(TL)	n/a	-	n/a	999	
TCDL	10.0	Rep Stress Incr	YES	WB	0.14	Horiz(TL)	0.00	5	n/a	n/a	
3CLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH							
3CDL	10.0										
										Weight: 64 lb	FT = 20%

**LUMBER**

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

**BRACING**

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

**REACTIONS**

(lb/size) 1=77/15-11-4, 5=80/15-11-4, 6=313/15-11-4, 7=298/15-11-4, 8=312/15-11-4  
Max Horiz 1=102 (LC 9)  
Max Uplift 1=2 (LC 9), 6=67 (LC 14), 8=69 (LC 13)  
Max Grav 1=98 (LC 25), 5=100 (LC 29), 6=384 (LC 25), 7=348 (LC 2), 8=385 (LC 24)

**FORCES**

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=125/170, 2-3=34/130, 3-4=36/119, 4-5=120/139  
BOT CHORD 1-8=113/117, 7-8=113/71, 6-7=112/71, 5-6=112/96  
MEMBS 3-7=281/3, 2-8=279/144, 4-6=277/143

**NOTES**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) 0-0-6 to 3-0-6, Interior (1) 3-0-6 to 8-0-0, Exterior (2) 8-0-0 to 11-0-0, Interior (1) 11-0-0 to 15-11-10 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 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 2 lb uplift at joint 1.
- One RT7A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 7, 8, and 6. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



October 21, 2021

**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



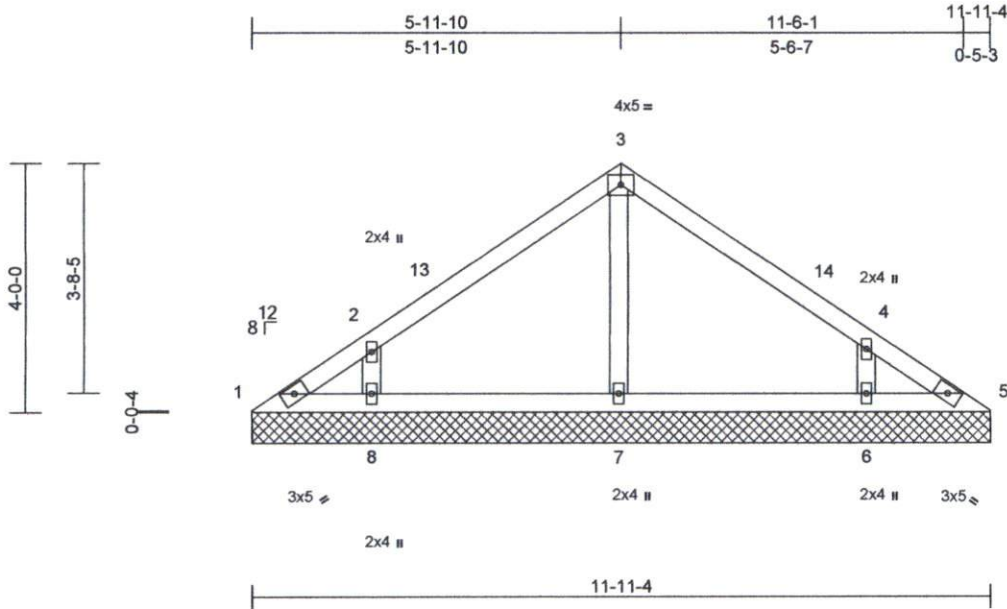
818 Soundside Road  
Edenton, NC 27932

Job 21090142-A	Truss VL04	Truss Type Valley	Qty 1	Ply 1	Antioch Church-Riddle 2-Roof Job Reference (optional)	148455896
-------------------	---------------	----------------------	----------	----------	--	-----------

Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.52 S Oct 11 2021 Print: 8.520 S Oct 11 2021 MiTek Industries, Inc. Wed Oct 20 14:29:36  
ID:Mpj1U\_3vpsxJB0Jv0mARylyTFI?-RfC?PsB70Hq3NSgPqnl8w3uTXbGKwCDoi7J4zJC7f

Page: 1



Scale = 1:37.2

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	0.18	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(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.05	Horiz(TL)	0.00	5	n/a	n/a		
3CLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
3CDL	10.0										Weight: 45 lb	FT = 20%

**UMBER**

TOP CHORD 2x4 SP No.2  
3OT CHORD 2x4 SP No.2  
OTHERS 2x4 SP No.3

**BRACING**

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

**REACTIONS** (lb/size)

1=39/11-11-4, 5=44/11-11-4,  
6=250/11-11-4, 7=224/11-11-4,  
8=252/11-11-4  
Max Horiz 1=-76 (LC 9)  
Max Uplift 1=-16 (LC 9), 6=-54 (LC 14), 8=-57 (LC 13)  
Max Grav 1=62 (LC 25), 5=54 (LC 24), 6=307 (LC 25), 7=260 (LC 2), 8=311 (LC 24)

**FORCES** (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-78/70, 2-3=-121/86, 3-4=-117/86,  
4-5=-65/39  
3OT CHORD 1-8=-18/50, 7-8=-15/50, 6-7=-14/51,  
5-6=-14/51  
WEBS 3-7=-173/10, 2-8=-262/161, 4-6=-254/156

**NOTES**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) 0-0-6 to 3-0-6, Interior (1) 3-0-6 to 6-0-0, Exterior (2) 6-0-0 to 9-0-0, Interior (1) 9-0-0 to 11-11-10 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) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 4-0-0 oc.
- 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 16 lb uplift at joint 1.
- 9) One RT7A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 7, 8, and 6. This connection is for uplift only and does not consider lateral forces.
- 10) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



October 21, 2021

**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 ANS/TP1 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

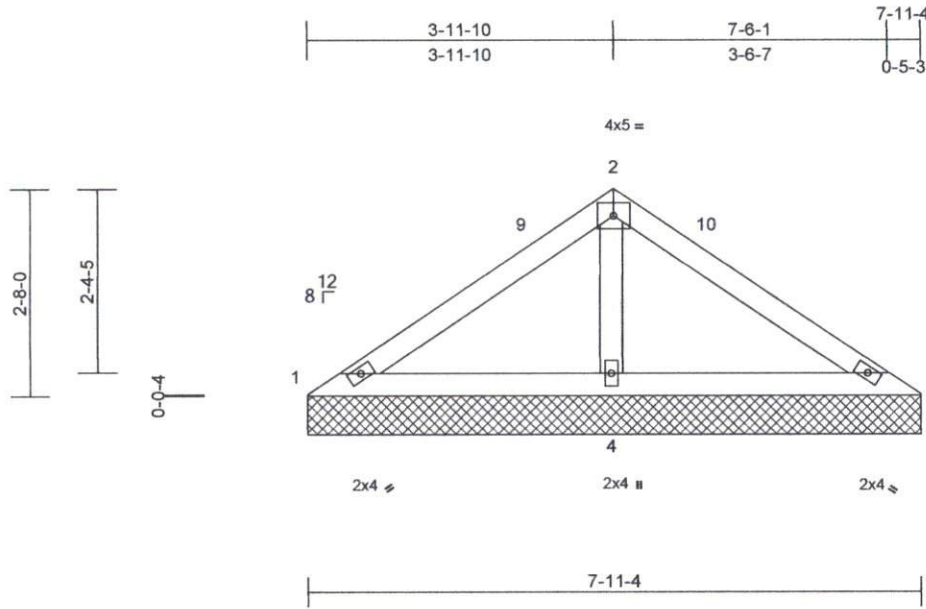
818 Soundside Road  
Edenton, NC 27932

Job 21090142-A	Truss VL05	Truss Type Valley	Qty 1	Ply 1	Antioch Church-Riddle 2-Roof Job Reference (optional)	148455897
-------------------	---------------	----------------------	----------	----------	--	-----------

Carter Components (Sanford), Sanford, NC - 27332.

Run: 8.52 S Oct 11 2021 Print: 8.520 S Oct 11 2021 MiTek Industries, Inc. Wed Oct 20 14:29:36  
ID:Mpj1U\_3vpsxJB0Jv0mARylyTFI?-RfC?PsB70Hq3NSgPqnL8w3uITxBGKWrCDoi7J4zJC7f

Page: 1



Scale = 1:29.9

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	0.20	Vert(LL)	n/a	-	n/a	999	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.19	Vert(TL)	n/a	-	n/a	999	
TCDL	10.0	Rep Stress Incr	YES	WB	0.09	Horiz(TL)	0.00	3	n/a	n/a	
3CCL	0.0*	Code	IRC2015/TPI2014	Matrix-MP							
3CDL	10.0										
										Weight: 27 lb	FT = 20%

**LUMBER**

TOP CHORD 2x4 SP No.2  
3OT CHORD 2x4 SP No.2  
OTHERS 2x4 SP No.3

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 7-11-4 oc purlins.  
3OT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

**REACTIONS** (lb/size) 1=31/7-11-4, 3=34/7-11-4, 4=472/7-11-4  
Max Horiz 1=49 (LC 10)  
Max Uplift 1=12 (LC 29), 3=9 (LC 28), 4=7 (LC 13)  
Max Grav 1=67 (LC 28), 3=70 (LC 29), 4=558 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-70/247, 2-3=-68/241  
3OT CHORD 1-4=-215/111, 3-4=-210/110  
WEBS 2-4=-401/133

**NOTES**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) 0-0-6 to 3-0-6, Interior (1) 3-0-6 to 4-0-0, Exterior (2) 4-0-0 to 7-0-7, Interior (1) 7-0-7 to 7-11-10 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) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- 4) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 4-0-0 oc.
- 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 12 lb uplift at joint 1 and 9 lb uplift at joint 3.
- 9) One RT7A MiTek 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.
- 10) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



October 21, 2021

**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

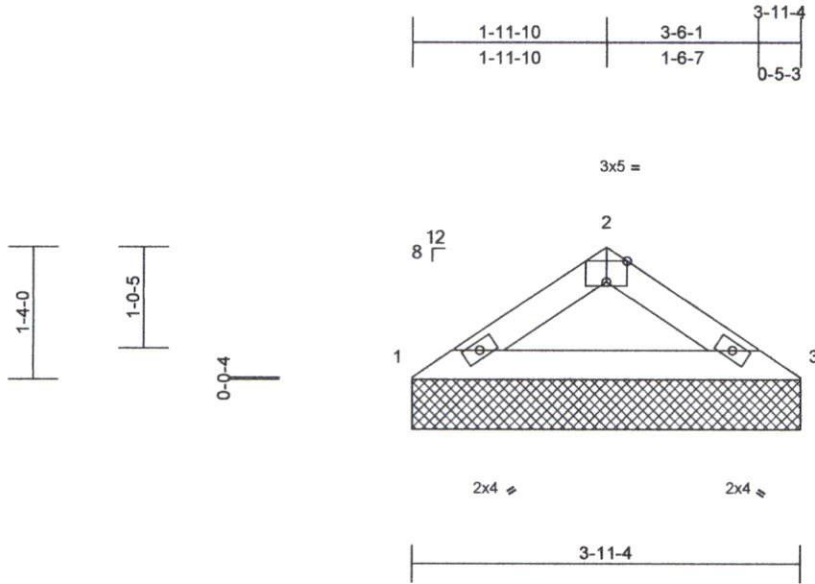
818 Soundside Road  
Edenton, NC 27932

Job 21090142-A	Truss VL06	Truss Type Valley	Qty 1	Ply 1	Antioch Church-Riddle 2-Roof Job Reference (optional)	148455898
-------------------	---------------	----------------------	----------	----------	--	-----------

Carter Components (Sanford), Sanford, NC - 27332.

Run: 8.52 S Oct 11 2021 Print: 8.520 S Oct 11 2021 MiTek Industries, Inc. Wed Oct 20 14:29:36  
ID: oZcafW54ZSbMNRdISA14cyTFiq-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC7f

Page: 1



Scale = 1:23.4

Plate Offsets (X, Y): [2:0-2-8,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	0.11	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.10	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
3CLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
3CDL	10.0										Weight: 11 lb	FT = 20%

**LUMBER**

TOP CHORD 2x4 SP No.2  
3OT CHORD 2x4 SP No.2

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 3-11-4 oc purlins.  
3OT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (lb/size) 1=133/3-11-4, 3=133/3-11-4  
Max Horiz 1=23 (LC 12)  
Max Grav 1=157 (LC 2), 3=157 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-235/54, 2-3=-235/54  
3OT CHORD 1-3=-35/188

**NOTES**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=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 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 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.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



October 21, 2021

**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



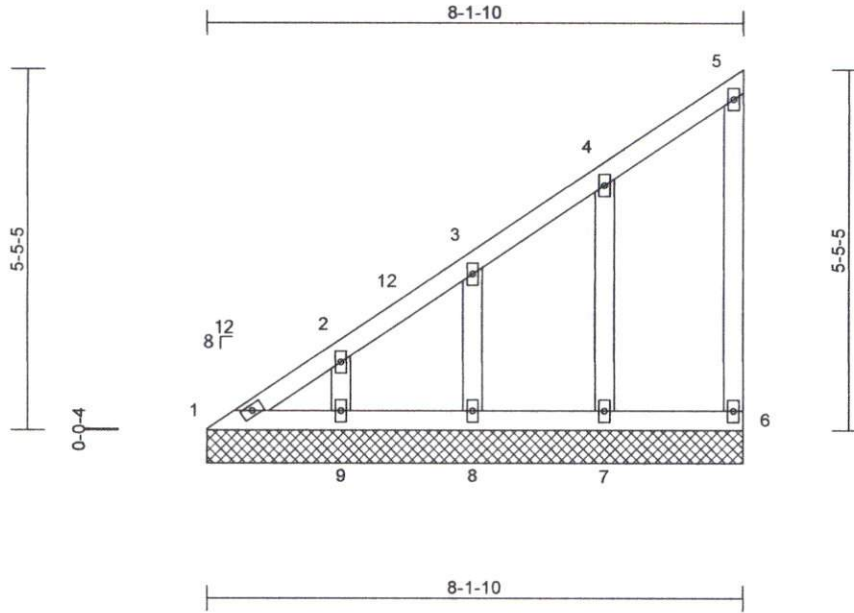
818 Soundside Road  
Edenton, NC 27932

Job 21090142-A	Truss VL07	Truss Type Valley	Qty 1	Ply 1	Antioch Church-Riddle 2-Roof Job Reference (optional)	148455899
-------------------	---------------	----------------------	----------	----------	--	-----------

Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.52 S Oct 11 2021 Print: 8.520 S Oct 11 2021 MiTek Industries, Inc. Wed Oct 20 14:29:36  
ID: Mpj1U\_3vpsxJB0Jv0mARylyTFI?-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrcDai7J4zJC7f

Page: 1



Scale = 1:35

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	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	Horiz(TL)	0.00	6	n/a	n/a		
3CCL	0.0*	Code	IRC2015/TPI2014	Matrix-MP							
3CDL	10.0										
										Weight: 43 lb	FT = 20%

**LUMBER**

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

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  
3OT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (lb/size) 1=55/8-1-10, 6=52/8-1-10, 7=151/8-1-10, 8=128/8-1-10, 9=154/8-1-10  
Max Horiz 1=157 (LC 10)  
Max Uplift 1=10 (LC 9), 6=22 (LC 10), 7=31 (LC 13), 8=33 (LC 13), 9=17 (LC 13)  
Max Grav 1=96 (LC 25), 6=72 (LC 24), 7=185 (LC 24), 8=159 (LC 24), 9=184 (LC 24)

**FORCES**

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-275/267, 2-3=-235/220, 3-4=-175/169, 4-5=-104/107, 5-6=-96/75  
3OT CHORD 1-9=-106/150, 8-9=-87/95, 7-8=-87/95, 6-7=-87/95  
WEBS 3-8=-133/86, 2-9=-126/76, 4-7=-147/103

**NOTES**

1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) 0-0-6 to 3-0-6, Interior (1) 3-0-6 to 8-0-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33

- 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 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 10 lb uplift at joint 1.
- One RT7A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 6, 8, 9, and 7. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



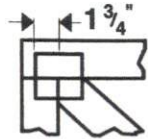
**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**  
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before 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

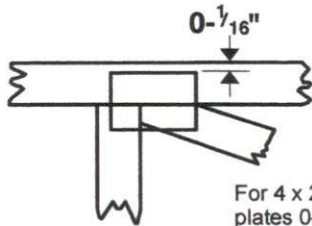


# Symbols

## 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

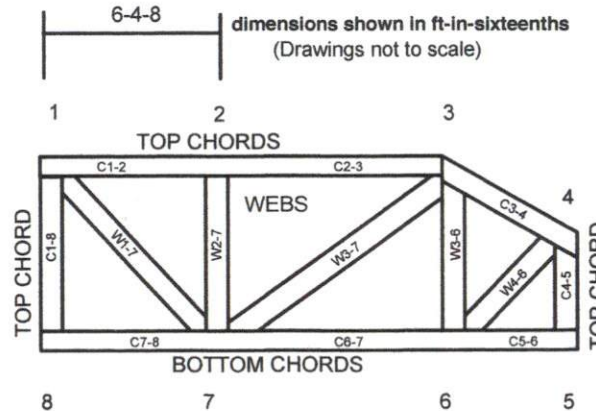


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

### Industry Standards:

- ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
- DSB-89: Design Standard for Bracing.
- BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

# Numbering System



**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.

© 2012 MiTek® All Rights Reserved



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