

Trenco  
818 Soundside Rd  
Edenton, NC 27932

Re: P-5824-1  
Rob Grissom V2-Roof

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Peak Truss Builders, LLC.

Pages or sheets covered by this seal: E12981001 thru E12981001

My license renewal date for the state of North Carolina is December 31, 2019.

North Carolina COA: C-0844



May 1, 2019

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Gilbert, Eric

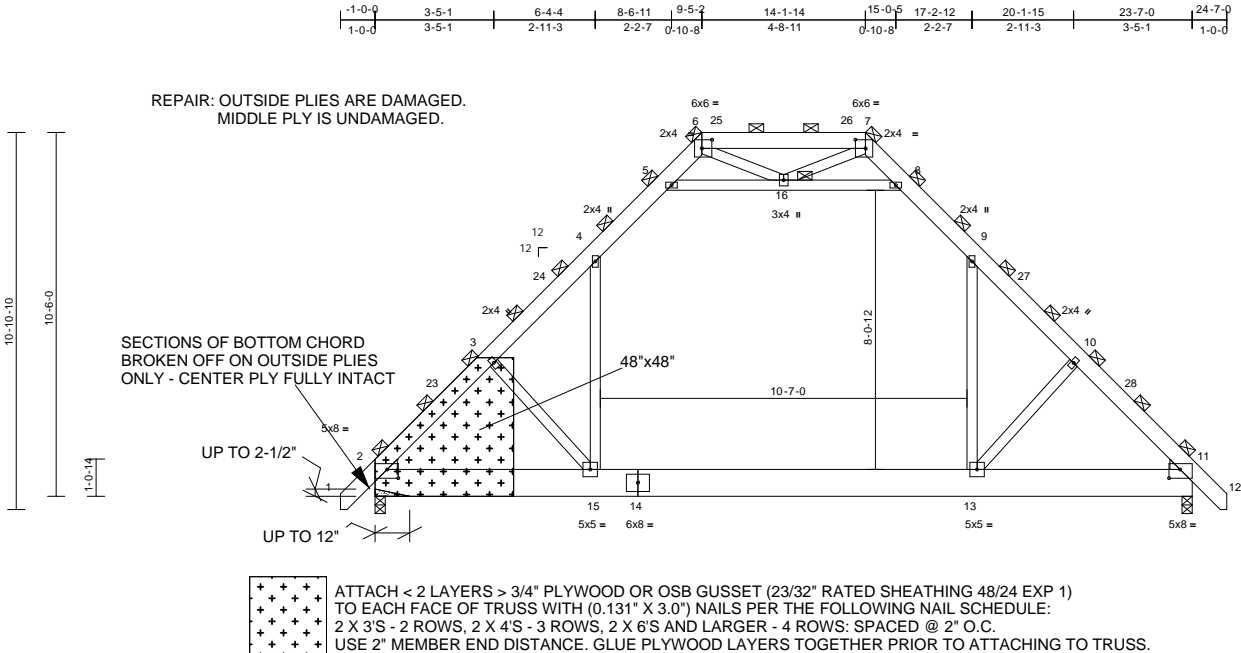
**IMPORTANT NOTE:** Truss Engineer's responsibility is solely for design of individual trusses based upon design parameters shown on referenced truss drawings. Parameters have not been verified as appropriate for any use. Any location identification specified is for file reference only and has not been used in preparing design. Suitability of truss designs for any particular building is the responsibility of the building designer, not the Truss Engineer, per ANSI/TPI-1, Chapter 2.

Job P-5824-1	Truss T3B	Truss Type Attic	Qty 2	Ply 3	Rob Grissom V2-Roof Job Reference (optional)	E12981001
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Peak Truss Builders, LLC, New Hill, NC - 27562,

Run: 8.23 S Nov 4 2018 Print: 8.240 S Apr 19 2019 MiTek Industries, Inc. Tue Apr 30 16:38:18  
ID:elqgJoiPHf6cNpEgFtywOLzL\_OJ-79Lvr8s03NkzdBTZ5sdWhYpUBHKDT99k?ABCGzLUP3

Page: 1



Scale = 1:66.5

Plate Offsets (X, Y): [2:0-3-13,0-3-0], [6:0-3-8,0-3-0], [7:0-3-8,0-3-0], [11:0-3-13,0-3-0]

Loading	(psf)	Spacing	5-4-0	CSI	DEFL	in (loc)	l/defl	L/d	PLATES	GRIP		
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.94	Vert(LL)	-0.17	13-15	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.82	Vert(TL)	-0.35	13-15	>801	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.42	Horiz(TL)	0.02	11	n/a	n/a		
BCDL	10.0	Code	IBC2009/TPI2007	Matrix-MS		Attic	-0.09	13-15	>999	360	Weight: 670 lb	FT = 20%

LUMBER		BRACING	
TOP CHORD	2x6 SP No.2	TOP CHORD	2-0-0 oc purlins (6-0-0 max.) (Switched from sheeted: Spacing > 2-0-0).
BOT CHORD	2x10 SP No.2	BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	2x4 SP No.3	JOINTS	1 Brace at Jt(s): 6, 7, 16
WEDGE	Left: 2x4 SP No.3 Right: 2x4 SP No.3		

**REACTIONS** (lb/size) 2=3274/0-3-8, 11=3274/0-3-8  
Max Horiz 2=591 (LC 9)  
Max Grav 2=3806 (LC 2), 11=3806 (LC 2)

**FORCES** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-23=-4805/0, 3-23=-4582/0, 3-24=-4616/0, 4-24=-4356/0, 4-5=-2610/268,  
5-6=-248/845, 6-25=0/1322, 25-26=0/1322, 7-26=0/1322, 7-8=-248/845,  
8-9=-2610/268, 9-27=-4356/0, 10-27=-4616/0, 10-28=-4582/0, 11-28=-4805/0  
BOT CHORD 2-15=-39/3280, 14-15=0/2818, 13-14=0/2818, 11-13=0/3280  
WEBS 4-15=0/2655, 9-13=0/2655, 5-16=-4012/19, 8-16=-4012/19, 3-15=-755/320,  
10-13=-755/320, 6-16=-74/299, 7-16=-74/299

- NOTES**
- 3-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.  
Bottom chords connected as follows: 2x10 - 2 rows staggered at 0-9-0 oc.  
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
  - All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
  - Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-05; 100mph; TCDL=6.0psf; BCDL=6.0psf; h=0ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (all heights) and C-C Exterior (2) -0-10-14 to 2-1-2, Interior (1) 2-1-2 to 9-5-2, Exterior (2) 9-5-2 to 13-8-1, Interior (1) 13-8-1 to 14-1-14, Exterior (2) 14-1-14 to 18-4-12, Interior (1) 18-4-12 to 24-5-14 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=1.60
  - This truss has been designed for basic load combinations, which include cases with reductions for multiple concurrent live loads.
  - Provide adequate drainage to prevent water ponding.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - Ceiling dead load (5.0 psf) on member(s). 4-5, 8-9, 5-16, 8-16; Wall dead load (5.0psf) on member(s). 4-15, 9-13
  - Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 13-15
  - Attic room checked for L/360 deflection.

**LOAD CASE(S)** Standard

This is a repair drawing for an existing truss. The original truss design was based upon the building code shown. This code was specified by the project engineer/architect, or building designer. The applicability of this code in any particular jurisdiction should be verified with the building official. This determination is not the responsibility of the component/truss designer.



May 1, 2019

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

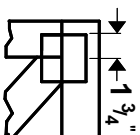
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



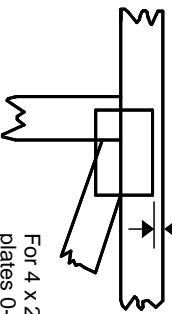
818 Soundside Road  
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# Symbols

## 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.

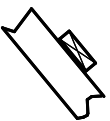
\* Plate location details available in **MITrak 20/20 software or upon request.**

## PLATE SIZE

4 X 4

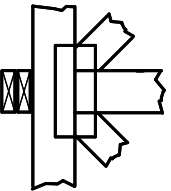
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## LATERAL BRACING LOCATION



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

## BEARING



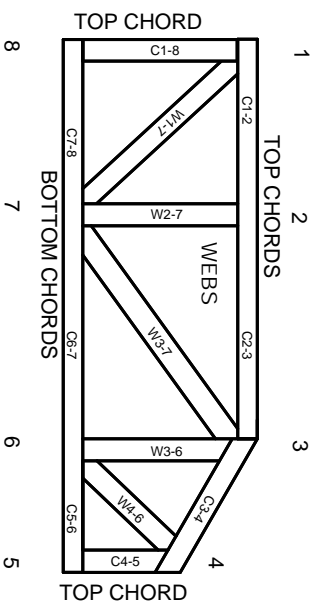
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

## Industry Standards:

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

# Numbering System

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



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

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

## PRODUCT CODE APPROVALS

ICC-ES Reports:

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

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

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

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MITteK Engineering Reference Sheet: MII-7473 rev. 10/03/2015



# 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.