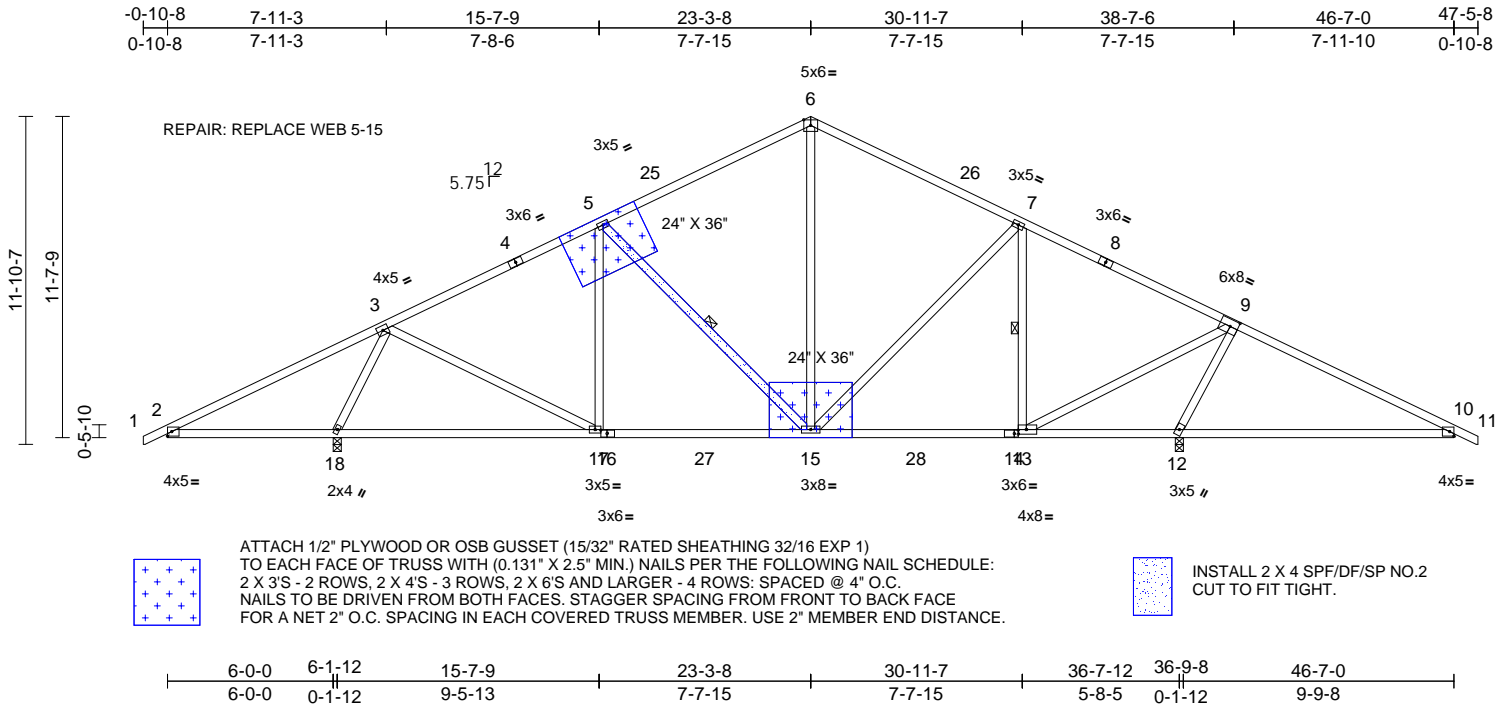


Job 21110102-A	Truss A	Truss Type Common	Qty 3	Ply 1	2 Fair Ridge Farm-Kristie-Roof Job Reference (optional)	I53855991
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Aug 11 2022 Print: 8.530 S Aug 11 2022 MiTek Industries, Inc. Thu Aug 25 07:03:23  
ID:yymmA5a8h9dWADfRH9jsTlmz04Se-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWRcD0i7J4zJC7f

Page: 1



Scale = 1:83.4

Plate Offsets (X, Y): [9:0-3-6,0-3-0], [13:0-3-8,0-2-0], [14:0-1-11,0-1-8], [16:0-2-11,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in (loc)	l/defl	L/d	PLATES	GRIP		
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.82	Vert(LL)	-0.11	15-17	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.64	Vert(CT)	-0.52	12-24	>232	120		
TCDL	10.0	Rep Stress Incr	YES	WB	0.93	Horz(CT)	0.01	12	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 256 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.1  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3 \*Except\* 15-5,15-6,15-7:2x4 SP No.2

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 5-1-1 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 3-8-6 oc bracing.  
WEBS 1 Row at midpt 5-15, 7-13

**REACTIONS** (size) 12=0-3-8, 18=0-3-8  
Max Horiz 18=114 (LC 15)  
Max Uplift 18=8 (LC 15)  
Max Grav 12=2221 (LC 2), 18=1712 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/28, 2-3=-453/724, 3-5=-982/136, 5-6=-737/202, 6-7=-736/202, 7-9=-502/80, 9-10=-521/854, 10-11=0/28  
BOT CHORD 2-18=-548/492, 17-18=-65/280, 15-17=0/880, 13-15=0/373, 12-13=-1722/944, 10-12=-654/546  
WEBS 3-17=-87/725, 5-17=-165/167, 5-15=-345/152, 6-15=-11/247, 7-15=-129/423, 7-13=-924/436, 9-13=-649/2215, 9-12=-2263/844, 3-18=-1623/583

- 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) 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
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 12 and 18. 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

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



# Symbols

## PLATE LOCATION AND ORIENTATION



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



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



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

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

## PLATE SIZE

4 X 4

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

## LATERAL BRACING LOCATION



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

## BEARING



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

### Industry Standards:

ANSI/TP1: National Design Specification for Metal Plate Connected Wood Truss Construction.  
DSB-89: Design Standard for Bracing, Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate  
BCSI: Connected Wood Trusses.

# Numbering System

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



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

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

## PRODUCT CODE APPROVALS

ICC-ES Reports:

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

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

Lumber design values are in accordance with ANSI/TP1 section 6.3 These truss designs rely on lumber values established by others.

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MITek Engineering Reference Sheet: MI1-7473 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/TP1 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TP1 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TP1 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.