60 PIKEWOOD CT

ENGINEERING BY
TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: 2501701-24035
497 Creekside Oaks South

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by 84 Lumber 2383 (Dunn, NC).

Pages or sheets covered by this seal: I73936626 thru I73936626

My license renewal date for the state of North Carolina is December 31, 2025.

North Carolina COA: C-0844

NORTH CAROLINA
PROFESSIONAL
SEAL
036322
ENGINEER
ERIC A. GILBERT

June 4,2025

Gilbert, Eric

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	Truss	Truss Type	Qty	Ply	497 Creekside Oaks South	
2501701-24035	A3_RP	ROOF TRUSS	4	1	Job Reference (optional)	I73936626

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Tue Jun 03 13:44:08   Page: 1
ID:No3derHDwkHocaZM86gtV2zFa64-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

REPAIR: SEE NOTE 1-3

HATCHED SECTION TO BE REMOVED IN FIELD

Scale = 1:96
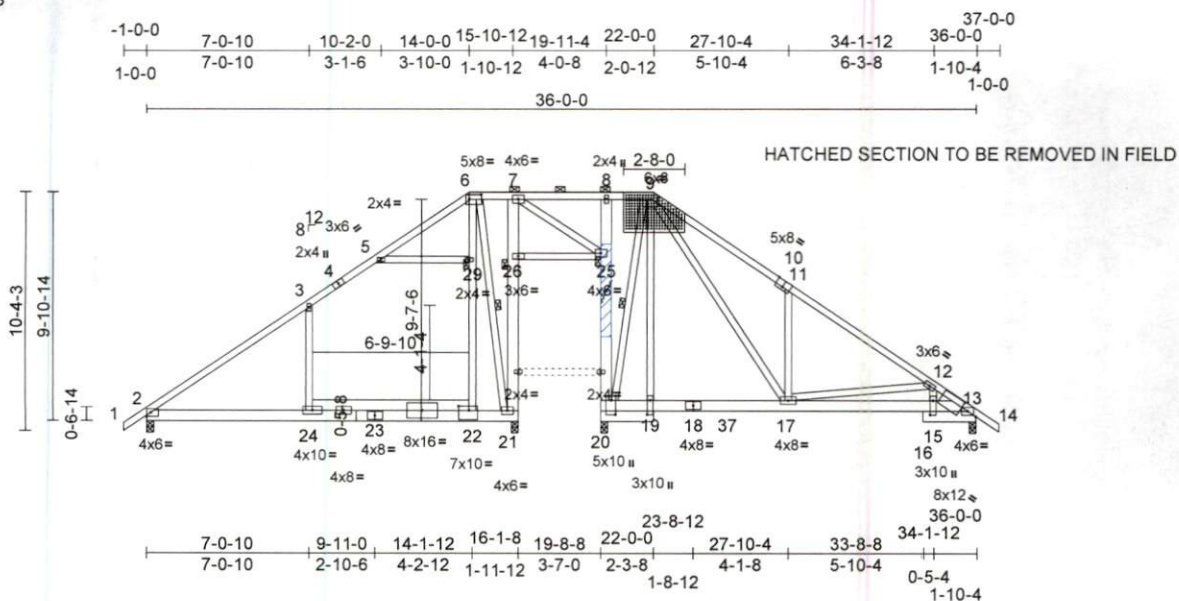
APPLY 2 X 6 X 4' SP NO.2 SCAB(S) TO EACH FACE OF TRUSS CENTERED
ON DAMAGE. ATTACH WITH (0.131" X 3") NAILS PER THE FOLLOWING NAIL
SCHEDULE: 2 x 3'S - 1 ROW, 2 x 4'S - 2 ROWS, 2 x 6'S AND LARGER - 3 ROWS:
SPACED @ 4" O.C. STAGGER NAIL SPACING FROM FRONT FACE AND BACK FACE
FOR A NET 2" O.C SPACING IN THE TRUSS. USE 2" MEMBER END DISTANCE.

Plate Offsets (X, Y): [6:0-6-4,0-2-4], [9:0-4-0,0-2-6], [10:0-4-0,Edge], [13:0-1-4,Edge], [13:0-8-12,0-3-1], [15:0-7-8,0-1-8], [19:0-7-8,0-1-8], [20:0-7-8,0-2-4], [22:0-5-8,0-2-4]

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	0.65	Vert(LL)	0.37	24-32	>504	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.65	Vert(CT)	-0.59	24-32	>320	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.97	Horz(CT)	0.03	20	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS		Attic	-0.13	22-24	>671	360	Weight: 325 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2 *Except* 2-23,23-21:2x6 SP
DSS, 19-9:2x4 SP No.2
WEBS 2x4 SP No.3 *Except*
22-6,17-9,17-12,21-6,9-20:2x4 SP No.2,
7-21,8-20:2x6 SP No.2
OTHERS 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied or
5-3-3 oc purlins, except
2-0-0 oc purlins (6-0-0 max.): 6-9.
BOT CHORD Rigid ceiling directly applied or 6-8-13 oc
bracing.
WEBS 1 Row at midpt 6-21, 9-20
JOINTS 1 Brace at Jt(s): 25,
26, 29

REACTIONS (size) 2=0-3-8, 13=0-3-8, 20=0-3-8,
21=0-3-8
Max Horiz 2=-249 (LC 10)
Max Uplift 2=-142 (LC 13), 13=-257 (LC 13),
21=-120 (LC 9)
Max Grav 2=709 (LC 1), 13=763 (LC 21),
20=765 (LC 1), 21=905 (LC 20)

FORCES (lb) - Maximum Compression/Maximum
Tension
TOP CHORD 1-2=0/33, 2-3=-628/271, 3-5=-632/409,
5-6=-444/387, 6-7=-301/382, 7-8=-286/373,
8-9=-298/381, 9-11=-967/578,
11-12=-865/386, 12-13=-1182/409,
13-14=0/38
BOT CHORD 2-24=-114/407, 22-24=-89/407,
21-22=-75/373, 9-19=0/219, 19-20=0/143,
17-19=0/116, 15-17=-300/988,
13-15=-261/935

WEBS 3-24=-343/279, 22-29=-382/1852,
6-29=-385/1859, 7-25=-24/7, 9-17=-290/847,
11-17=-431/285, 12-17=-422/145,
21-26=-178/124, 7-26=-178/124,
20-25=-214/98, 8-25=-210/102, 25-26=-3/13,
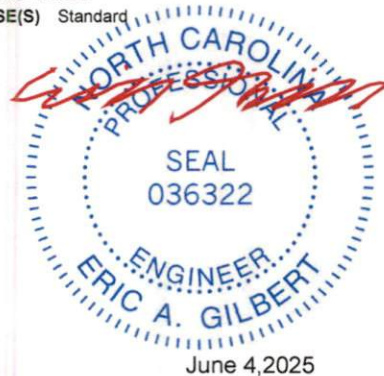6-21=-2097/420, 9-20=-640/0, 5-29=-212/67,
12-15=-45/183

NOTES

1) Repair Condition: web has 1-0-0 long break centered at
4-0-0 below joint 8.
2) Repair Condition: Missing or damaged plate(s) on one
side(s) of truss at joint(s) 9.
3) Attach 21"H X 32"W X 1/2" Plywood or OSB (15/32" APA
Rated Sheathing 32/16 Exposure 1) gusset to both sides
of truss at joint 9 with 8d (0.131"x2.5") nails from each
face, driven through both sheets of plywood. Connected
together as follows: 2x4 - 2 rows 0-4-0 o.c. Minimum
0-3-0 end distance.
4) N/A
5) N/A
6) Unbalanced roof live loads have been considered for
this design.
7) Wind: ASCE 7-10; Vult=130mph (3-second gust)
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat.
II; Exp B; Enclosed; MWFRS (envelope) exterior zone
and C-C Exterior (2) zone; cantilever left and right
exposed ; end vertical left and right exposed;C-C for
members and forces & MWFRS for reactions shown;
Lumber DOL=1.60 plate grip DOL=1.60
8) Provide adequate drainage to prevent water ponding.
9) This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.

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) Bottom chord live load (20.0 psf) and additional bottom
chord dead load (5.0 psf) applied only to room. 22-24
12) Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 142 lb uplift at joint
2, 257 lb uplift at joint 13 and 120 lb uplift at joint 21.
13) Graphical purlin representation does not depict the size
or the orientation of the purlin along the top and/or
bottom chord.
14) ATTIC SPACE SHOWN IS DESIGNED AS
UNINHABITABLE.

LOAD CASE(S) Standard

SEAL
036322

ERIC A. GILBERT
NORTH CAROLINA PROFESSIONAL ENGINEER

June 4,2025
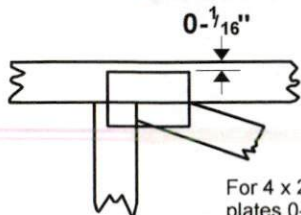
ENGINEERING BY
TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Symbols

PLATE LOCATION AND ORIENTATION

$\frac{1}{2}L$

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.

$0\text{-}\frac{1}{16}"$

For 4 x 2 orientation, locate plates 0- $\frac{1}{16}"$ from outside edge of truss.

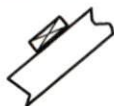This symbol indicates the required direction of slots in connector plates.

* Plate location details available in MiTek 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/letter 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-22: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses.

Numbering System

6-4-8   **dimensions shown in ft-in-sixteenths**
(Drawings not to scale)
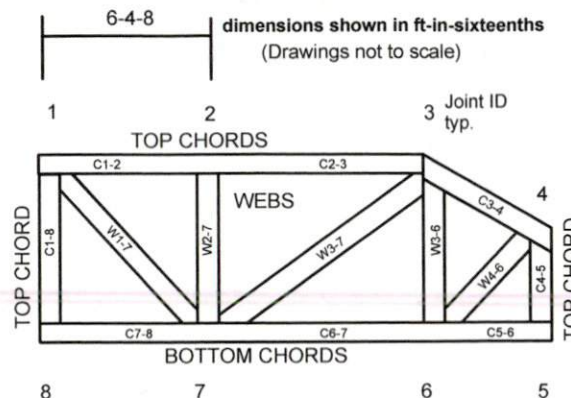
JOINTS ARE GENERALLY NUMBERED/LETTERED CLOCKWISE AROUND THE TRUSS STARTING AT THE JOINT FARTHEST TO THE LEFT.

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

Product Code Approvals

ICC-ES Reports:

ESR-1988, ESR-2362, ESR-2685, ESR-3282
ESR-4722, ESL-1388

Design General Notes

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.

© 2023 MiTek® All Rights Reserved

MiTek®

ENGINEERING BY TRENCO
A MiTek Affiliate

MiTek Engineering Reference Sheet: MII-7473 rev. 1/2/2023

⚠ General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.

2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative T or I bracing should be considered.

3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.

4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.

5. Cut members to bear tightly against each other.

6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI 1.

7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI 1.

8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.

9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.

10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.

11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.

12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.

13. Top chords must be sheathed or purlins provided at spacing indicated on design.

14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.

15. Connections not shown are the responsibility of others.

16. Do not cut or alter truss member or plate without prior approval of an engineer.

17. Install and load vertically unless indicated otherwise.

18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.

19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.

20. Design assumes manufacture in accordance with ANSI/TPI 1 Quality Criteria.

21. The design does not take into account any dynamic or other loads other than those expressly stated.