ENGINEERING BY TRENCO
A MiTek Affiliate

Re: 2933723
   Mattamy-Sequoia-Farmhouse-Lot 98 Providence Creek 2933723

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

Pages or sheets covered by this seal: I50809082 thru I50809082

My license renewal date for the state of North Carolina is   December 31, 2022.

North Carolina COA: C-0844

NORTH CAROLINA
PROFESSIONAL
SEAL
036322
ERIC A GILBERT
ENGINEER

March 17,2022

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.

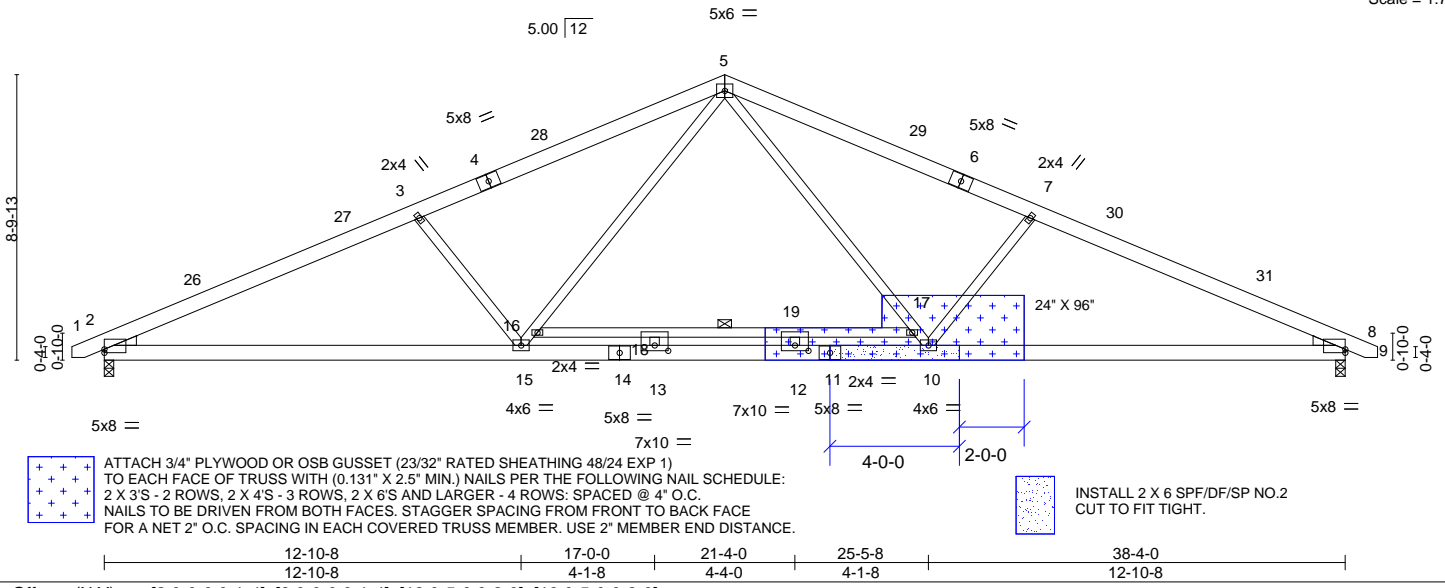| Job	Truss	Truss Type	Qty	Ply	Mattamy-Sequoia-Farmhouse-Lot 98 Providence Creek 2933723
2933723	A02	COMMON	3	1	I50809082
					Job Reference (optional) 1 UNIT YF

Builders FirstSource (Apex, NC),   Apex, NC - 27523,

8.530 s Dec 6 2021 MiTek Industries, Inc. Wed Mar 16 07:42:42 2022 Page 1
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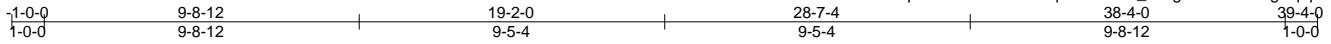
Scale = 1:71.2

ATTACH 3/4" PLYWOOD OR OSB GUSSET (23/32" RATED SHEATHING 48/24 EXP 1)
TO EACH FACE OF TRUSS WITH (0.131" X 2.5" MIN.) NAILS PER THE FOLLOWING NAIL SCHEDULE:
2 X 3'S - 2 ROWS, 2 X 4'S - 3 ROWS, 2 X 6'S AND LARGER - 4 ROWS: SPACED @ 4" O.C.
NAILS TO BE DRIVEN FROM BOTH FACES. STAGGER SPACING FROM FRONT TO BACK FACE
FOR A NET 2" O.C. SPACING IN EACH COVERED TRUSS MEMBER. USE 2" MEMBER END DISTANCE.

INSTALL 2 X 6 SPF/DF/SP NO.2
CUT TO FIT TIGHT.

Plate Offsets (X,Y)--   [2:0-0-0,0-1-4], [8:0-0-0,0-1-4], [18:0-5-0,0-2-0], [19:0-5-0,0-2-0]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.72	Vert(LL)	-0.46	12-13	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.53	Vert(CT)	-0.64	12-13	>721	240		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.63	Horz(CT)	0.07	8	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MS		Wind(LL)	0.08	12-13	>999	240	Weight: 258 lb	FT = 20%

LUMBER-
TOP CHORD   2x6 SP No.2
BOT CHORD   2x6 SP DSS
WEBS   2x4 SP No.3 *Except*
            16-17: 2x4 SP No.2
WEDGE
Left: 2x4 SP No.3 , Right: 2x4 SP No.3

BRACING-
TOP CHORD   Structural wood sheathing directly applied or 3-7-5 oc purlins.
BOT CHORD   Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS   1 Row at midpt   16-17

REACTIONS.   (size) 2=0-3-8, 8=0-3-8
            Max Horz 2=99(LC 12)
            Max Grav 2=1582(LC 1), 8=1582(LC 1)

FORCES.   (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD   2-3=-3018/145, 3-5=-2731/151, 5-7=-2731/151, 7-8=-3018/145
BOT CHORD   2-15=-56/2695, 13-15=0/2035, 12-13=0/2035, 10-12=0/2035, 8-10=-58/2695
WEBS   5-17=0/1117, 10-17=0/911, 7-10=-576/174, 15-16=0/911, 5-16=0/1117, 3-15=-576/174

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=32ft; Cat. II; Exp B; Enclosed; MWFRS (envelope)
   gable end zone and C-C Exterior(2) -0-9-10 to 3-0-6, Interior(1) 3-0-6 to 19-2-0, Exterior(2) 19-2-0 to 24-7-1, Interior(1) 24-7-1 to
   39-1-10 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=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide
   will fit between the bottom chord and any other members.
5) Load case(s) 2, 3, 18, 19, 20, 21, 22, 25, 26 has/have been modified. Building designer must review loads to verify that they are
   correct for the intended use of this truss.

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (plf)
        Vert: 1-5=-60, 5-9=-60, 20-23=-20
2) Dead + 0.75 Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (plf)
        Vert: 1-5=-50, 5-9=-50, 20-23=-20, 16-17=-30
3) Dead + Uninhabitable Attic Without Storage: Lumber Increase=1.25, Plate Increase=1.25
   Uniform Loads (plf)
        Vert: 1-5=-20, 5-9=-20, 20-23=-40, 16-17=-40

March 17,2022

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ENGINEERING BY
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Job	Truss	Truss Type	Qty	Ply	Mattamy-Sequoia-Farmhouse-Lot 98 Providence Creek 2933723
					I50809082
2933723	A02	COMMON	3	1	Job Reference (optional)

Builders FirstSource (Apex, NC),   Apex, NC - 27523,   8.530 s Dec 6 2021 MiTek Industries, Inc. Wed Mar 16 07:42:42 2022 Page 2
ID:NOHDxMFxGtHiYullGv8Cp8zfMF4-HFdlkad0q4DvQ3eHI_kRrgTilkDuEoeKgBq5pdzaQax

LOAD CASE(S) Standard

18) Dead: Lumber Increase=0.90, Plate Increase=0.90 Plt. metal=0.90
    Uniform Loads (plf)
        Vert: 1-5=-20, 5-9=-20, 20-23=-20, 16-17=-40
19) Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) Left): Lumber Increase=1.60, Plate Increase=1.60
    Uniform Loads (plf)
        Vert: 1-2=-37, 2-5=-40, 5-8=-41, 8-9=-38, 20-23=-20, 16-17=-30
        Horz: 1-2=-13, 2-5=-10, 5-8=9, 8-9=12
20) Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) Right): Lumber Increase=1.60, Plate Increase=1.60
    Uniform Loads (plf)
        Vert: 1-2=-38, 2-5=-41, 5-8=-40, 8-9=-37, 20-23=-20, 16-17=-30
        Horz: 1-2=-12, 2-5=-9, 5-8=10, 8-9=13
21) Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel): Lumber Increase=1.60, Plate Increase=1.60
    Uniform Loads (plf)
        Vert: 1-2=-30, 2-27=-34, 5-27=-41, 5-8=-46, 8-9=-43, 20-23=-20, 16-17=-30
        Horz: 1-2=-20, 2-27=-16, 5-27=-9, 5-8=4, 8-9=7
22) Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) 2nd Parallel): Lumber Increase=1.60, Plate Increase=1.60
    Uniform Loads (plf)
        Vert: 1-2=-43, 2-5=-46, 5-30=-41, 8-30=-34, 8-9=-30, 20-23=-20, 16-17=-30
        Horz: 1-2=-7, 2-5=-4, 5-30=9, 8-30=16, 8-9=20
25) 3rd Dead + 0.75 Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15
    Uniform Loads (plf)
        Vert: 1-5=-50, 5-9=-20, 20-23=-20, 16-17=-30
26) 4th Dead + 0.75 Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15
    Uniform Loads (plf)
        Vert: 1-5=-20, 5-9=-50, 20-23=-20, 16-17=-30

ENGINEERING BY
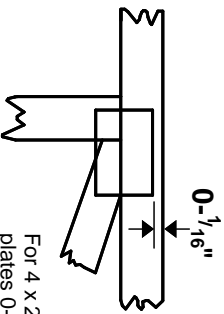**TRENCO**
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818 Soundside Road
Edenton, NC 27932

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.

↑ 1 ¾"

0- ¹⁄₁₆"

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

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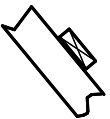This symbol indicates the required direction of slots in connector plates.

* Plate location details available in MiTek 20/20 software or upon request.
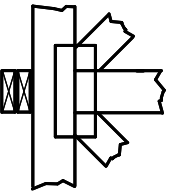
PLATE SIZE

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

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

6-4-8

TOP CHORD

TOP CHORDS

BOTTOM CHORDS

WEBS

TOP CHORD

C1-8 C1-2 C2-3 C3-4 C4-5
C7-8 W1-7 W2-7 W3-7 W3-6 W4-6 C5-6 C6-7

1 2 3 4
8 7 6 5

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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⚠ 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.

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