MiTek USA, Inc.
16023 Swingley Ridge Rd
Chesterfield, MO 63017
314-434-1200

RE: P210272 - Juneau Townhomes - Osage

Site Information:

Project Customer: Clover & Hive Project Name:
Lot/Block: Subdivision: Osage
Model: Juneau Townhomes
Address: SW Pryor Rd
City: Lee's Summit State: MO

General Truss Engineering Criteria & Design Loads (Individual Truss Design Drawings Show Special Loading Conditions):

Design Code: IRC2018/TPI2014
Design Program: MiTek 20/20 8.5
Wind Code: ASCE 7-16 [Low Rise] Wind Speed: 115 mph
Design Method: MWFRS (Envelope) ASCE 7-16 [Low Rise]
Roof Load: 45.0 psf
Floor Load: N/A psf

Mean Roof Height (feet): 25
Exposure Category: C

No.	Seal#	Truss Name	Date
1	I51928542	B3	5/13/22

The truss drawing(s) referenced above have been prepared by MiTek USA, Inc. under my direct supervision based on the parameters provided by Premier Building Supply (Springhill, KS)20300 W 207th Street.

Truss Design Engineer's Name: Sevier, Scott
My license renewal date for the state of Missouri is December 31, 2023.

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.

May 13,2022

Sevier, Scott

Job	Truss	Truss Type	Qty	Ply	Juneau Townhomes - Osage
P210272	B3	MONOPITCH GIRDER	2	2	I51928542

Job Reference (optional)

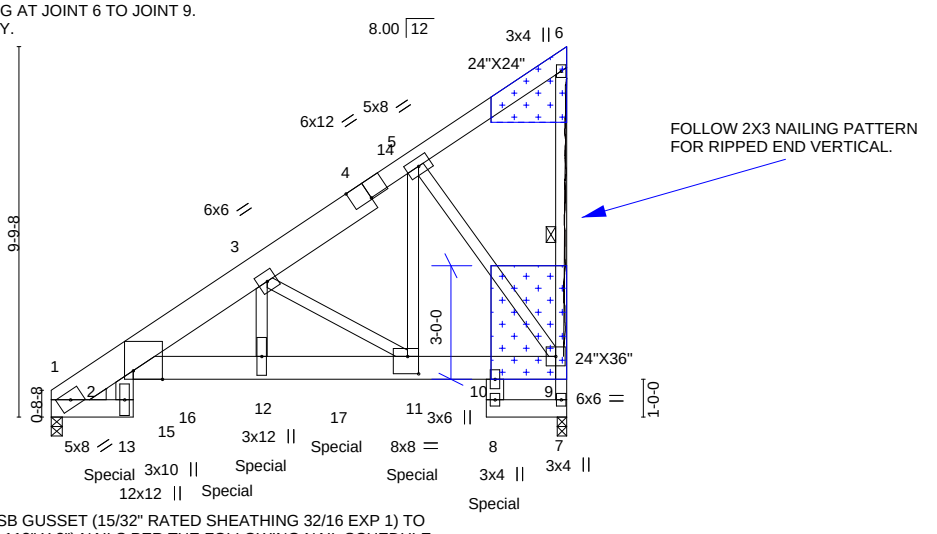
Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, 8.530 s Dec 6 2021 MiTek Industries, Inc. Thu May 12 16:24:56 2022 Page 1

ID:DUjzAB0GCWoOJpyMsoTzILz3uah-wDh0sx2Nx_U5GfwdQdgZ_PzxZqtKS2ACaz?97izHBVL

2-2-0	5-6-12	9-6-12	11-6-0	13-7-8
2-2-0	3-4-12	4-0-0	1-11-4	2-1-8

REPAIR:
0-0-12 TO 0-1-0 RIPPED OFF END VERTICAL STARTING AT JOINT 6 TO JOINT 9.
PLATE DAMAGED AT JOINT 6 AND 9 IN ONE PLY ONLY.

Scale = 1:60.9



ATTACH 1/2" PLYWOOD OR OSB GUSSET (15/32" RATED SHEATHING 32/16 EXP 1) TO ONE FACE OF TRUSS WITH (0.113" X 2") 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 @ 2" O.C. INTO EACH COVERED TRUSS MEMBER. USE 2" MEMBER END DISTANCE.

2-2-0	5-6-12	9-6-12	11-6-0	13-7-8
2-2-0	3-4-12	4-0-0	1-11-4	2-1-8

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

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.61	Vert(LL)	-0.09	2-12	>999	240	MT20	197/144
Snow (Pf/Pg)	17.3/25.0	Lumber DOL	1.15	BC	0.44	Vert(CT)	-0.15	2-12	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.71	Horz(CT)	0.13	7	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-SH							Weight: 275 lb	FT = 20%
BCDL	10.0											

LUMBER-

TOP CHORD	2x6 SPF No.2 *Except*
	1-4: 2x10 SP 2400F 2.0E
BOT CHORD	2x6 SPF No.2 *Except*
	1-13,7-8: 2x6 SP 2400F 2.0E, 2-9: 2x8 SP 2400F 2.0E
WEBS	2x4 SP No.2
WEDGE	
Left: 2x4 SP No.3	

BRACING-

TOP CHORD	Sheathed or 6-0-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 8-10.
WEBS	1 Row at midpt 6-7

REACTIONS. (size) 7=0-3-0, 1=0-3-8
Max Horz 1=353(LC 32)
Max Uplift 7=-686(LC 12), 1=-638(LC 12)
Max Grav 7=4451(LC 3), 1=4720(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-2920/478, 2-3=-6534/890, 3-5=-3112/427, 7-9=-4363/685
BOT CHORD 2-13=-241/1660, 2-12=-944/6060, 11-12=-953/6128, 10-11=-419/2512, 9-10=-419/2344
WEBS 5-11=-711/4990, 5-9=-4309/732, 3-11=-4308/746, 3-12=-382/3001

NOTES-

1) 2-ply truss to be connected together with 10d (0.120"x3") nails as follows:
Top chords connected as follows: 2x10 - 2 rows staggered at 0-9-0 oc, 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 3 rows staggered at 0-2-0 oc, 2x8 - 2 rows staggered at 0-5-0 oc.
Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) 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.
3) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
4) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=25.0 psf; Pf=17.3 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * 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.
8) Two H2.5T Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 7 and 1. This connection is for uplift only and does not consider lateral forces.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

May 13,2022

Continued on page 2

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

NOTES-

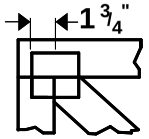
10) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1582 lb down and 233 lb up at 1-6-12, 1320 lb down and 214 lb up at 3-6-12, 1358 lb down and 179 lb up at 5-6-12, 1253 lb down and 167 lb up at 7-6-12, and 1253 lb down and 167 lb up at 9-6-12, and 1573 lb down and 206 lb up at 11-8-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

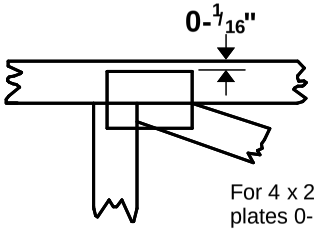
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (plf)
   Vert: 1-2=-55, 2-6=-55, 1-13=-20, 2-10=-20, 7-8=-20
   Concentrated Loads (lb)
   Vert: 10=-1254(B) 11=-1003(B) 12=-1358(B) 15=-1563(B) 16=-1320(B) 17=-1003(B)

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.

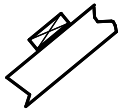
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

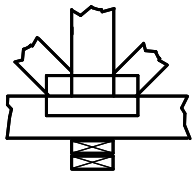
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

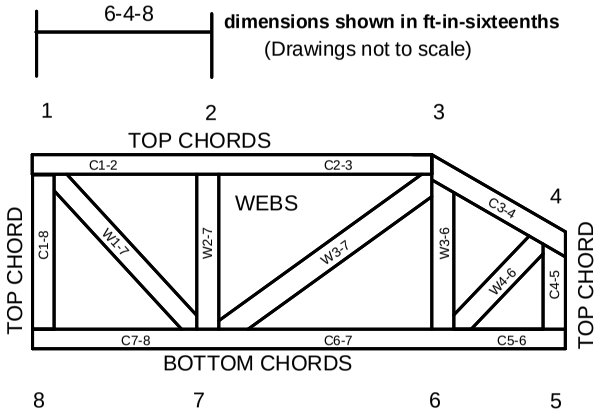


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

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.

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.