



MiTek, Inc.
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200

Re: RB-3F2
Residences At Blackwell

The truss drawing(s) referenced below have been prepared by MiTek USA, Inc. under my direct supervision based on the parameters provided by Mid America MO.

Pages or sheets covered by this seal: I67557504 thru I67557505

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

Missouri COA: Engineering 001193



August 16, 2024

Sevier, Scott ,Engineer

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	Residences At Blackwell
RB-3F2	F14	FLOOR	23	1	167557504

Mid America Truss, Jefferson City, MO - 65101, 8.630 s Jul 12 2024 MiTek Industries, Inc. Wed Aug 14 14:07:17 2024 Page 1
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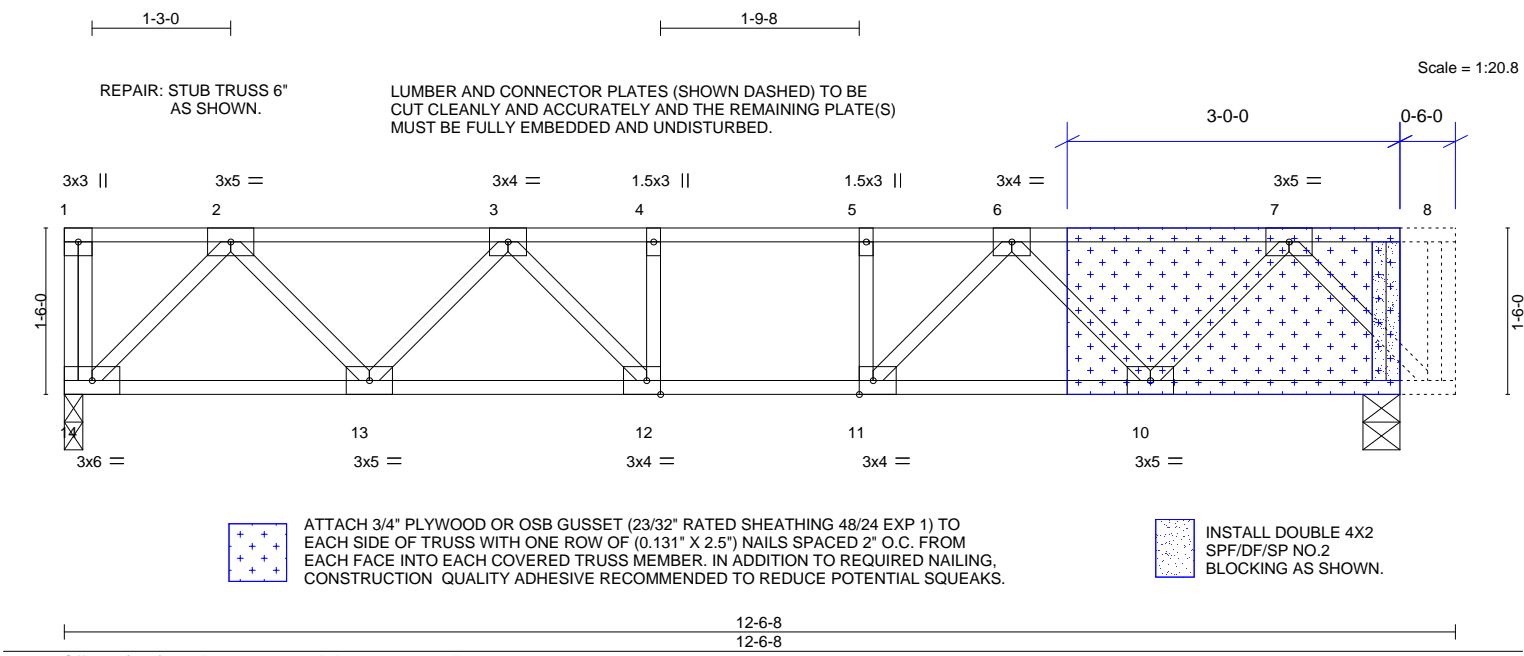


Plate Offsets (X,Y)--		[11:0-1-8,Edge], [12:0-1-8,Edge]	
LOADING (psf)	SPACING-	2-0-0	CSI.
TCLL 40.0	Plate Grip DOL	1.00	TC 0.49
TCDL 30.0	Lumber DOL	1.00	BC 0.70
BCLL 0.0	Rep Stress Incr	YES	WB 0.38
BCDL 10.0	Code IBC2018/TPI2014		Matrix-SH
DEFL.	in (loc)	l/defl	L/d
Vert(LL)	-0.07 12-13	>999	480
Vert(CT)	-0.12 12-13	>999	360
Horz(CT)	0.03 9	n/a	n/a
PLATES	GRIP		
MT20	244/190		
Weight: 69 lb		FT = 3%F, 3%E	

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2(flat)	TOP CHORD
BOT CHORD 2x4 SP No.2(flat)	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
WEBS 2x4 SP No.3(flat)	BOT CHORD
	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 14=0-2-0, 9=0-4-0
Max Grav 14=983(LC 1), 9=983(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1446/0, 3-4=-2164/0, 4-5=-2164/0, 5-6=-2164/0, 6-7=-1446/0
BOT CHORD 13-14=0/910, 12-13=0/1929, 11-12=0/2164, 10-11=0/1929, 9-10=0/910
WEBS 2-14=-1287/0, 2-13=0/798, 3-13=-717/0, 3-12=0/511, 7-9=-1287/0, 7-10=0/798, 6-10=-717/0, 6-11=0/511, 5-11=-277/0, 4-12=-277/0

NOTES-

- 1) Unbalanced floor live loads have been considered for this design.
- 2) Plates checked for a plus or minus 2 degree rotation about its center.
- 3) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 14.
- 4) This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
- 5) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.



August 16,2024

Job	Truss	Truss Type	Qty	Ply	Residences At Blackwell
RB-3F2	F35A	FLOOR	6	1	167557505
					Job Reference (optional)

Mid America Truss, Jefferson City, MO - 65101, 8.630 s Jul 12 2024 MiTek Industries, Inc. Wed Aug 14 14:07:17 2024 Page 1
ID:YwF9IQjkGCSIQea24RbNTzgLI2-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCdoi7J4zJC?f

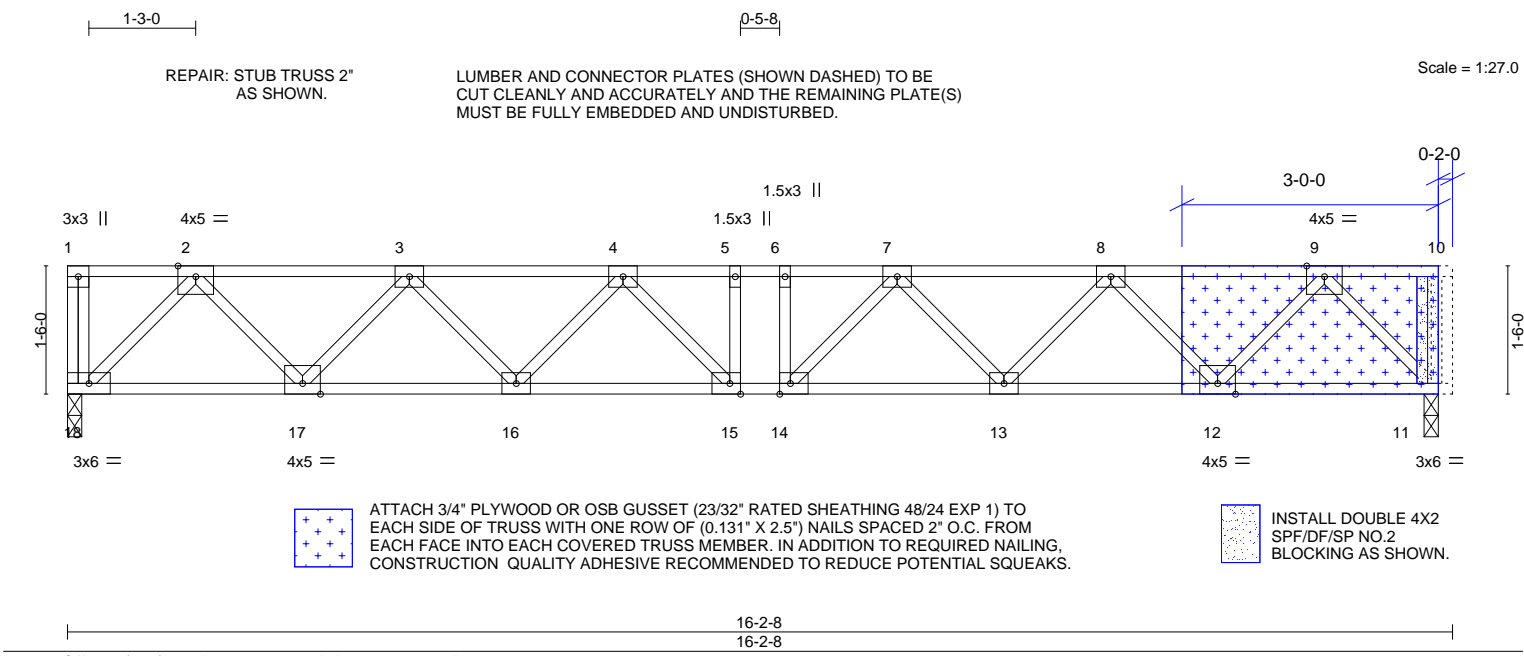


Plate Offsets (X,Y)--		[14:0-1-8,Edge], [15:0-1-8,Edge]										
LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.53	Vert(LL)	-0.12	15	>999	480	MT20	244/190
TCDL	30.0	Lumber DOL	1.00	BC	0.69	Vert(CT)	-0.24	15	>782	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.58	Horz(CT)	0.06	11	n/a	n/a		
BCDL	10.0	Code IBC2018/TPI2014		Matrix-SH							Weight: 91 lb	FT = 3%F, 3%E

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2(flat)	TOP CHORD
BOT CHORD 2x4 SP No.1(flat)	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
WEBS 2x4 SP No.3(flat)	BOT CHORD
	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 18=0-2-0, 11=0-2-0
Max Grav 18=1277(LC 1), 11=1277(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2010/0, 3-4=-3198/0, 4-5=-3696/0, 5-6=-3696/0, 6-7=-3696/0, 7-8=-3198/0, 8-9=-2010/0
BOT CHORD 17-18=0/1196, 16-17=0/2772, 15-16=0/3579, 14-15=0/3696, 13-14=0/3579, 12-13=0/2772, 11-12=0/1196
WEBS 2-18=-1691/0, 2-17=0/1210, 3-17=-1134/0, 3-16=0/633, 4-16=-566/0, 4-15=-78/377, 9-11=-1691/0, 9-12=0/1210, 8-12=-1134/0, 8-13=0/633, 7-13=-566/0, 7-14=-78/377

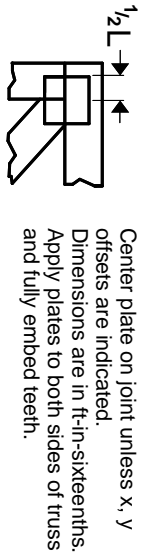
- NOTES-
- 1) Unbalanced floor live loads have been considered for this design.
 - 2) All plates are 3x4 MT20 unless otherwise indicated.
 - 3) Plates checked for a plus or minus 2 degree rotation about its center.
 - 4) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 18, 11.
 - 5) This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
 - 6) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.



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Symbols

PLATE LOCATION AND ORIENTATION



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 SIZE

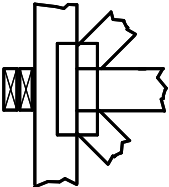
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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.

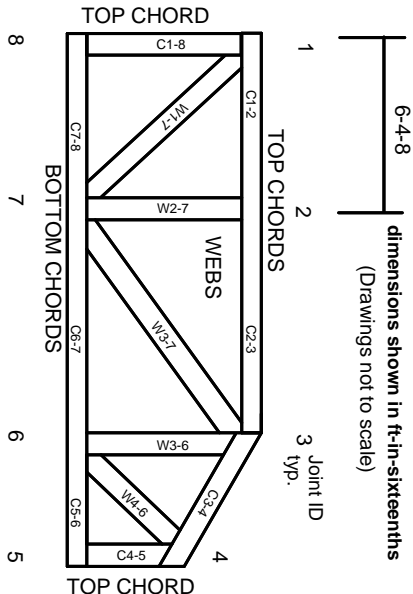
BEARING



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/TP1: 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



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/TP1 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 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.