

1501 Lakestone Village Ln. #103 Fuquay-Varina, NC 27526 NC Firm License No.: P-2854

VA Business Entity License No.: 009365

Date: October 13, 2025

To: Jaylon Martin

Re: 25-FRM-217

Rear Patio Addition 63 Thomas Gage Dr. Fuquay-Varina, NC 27526

Mr. Martin:

At your request, a site visit was made to the above referenced single family residence to address the modifications needed to construct a 20' wide by 14' deep covered porch in lieu of the plan specified 20'x20' covered porch.

Observations:

You indicated a 20' wide by 14' deep covered porch will be constructed in lieu of the plan specified 20'x20' covered porch off of the right rear corner of the existing residence. The plans indicate the roof will be constructed with engineered roof trusses, spanning the width of the covered porch. An existing 18'-0" wide by 20'-0" deep concrete patio is located against the right rear corner of the existing residence.

Analysis and Recommendations:

An 18"x18"x8" lug footing is to be excavated at the left and right sides of the porch slab to provide support for the corner posts. (2) #4 rebar dowels are to be embedded into each face of the existing slab.

The perimeter porch beams are to be (2) 1 3/4" x 11 1/6" LVL dropped beams. The rear corners of the porch are to be supported with a 6x6 pressure treated post. Weave the plies of the perimeter beams for full bearing on the posts. Attach the posts to the lug footings with a Simpson Strong-Tie ABU66Z post base and attach the posts to the perimeter beams at each corner with a pair of Simpson Strong-Tie LCE4 post caps. The front bearing end of the left and right perimeter beams are to be supported within the rear exterior wall with a (3) 2x4 stud column.

Framing lumber is to be SPF #2 or SYP #2. New construction shall conform to the 2018 North Carolina Residential Code and is to be verified by a municipal inspector. Footings are to be excavated to firm soil with a minimum bearing capacity of 2,000psf. Soil bearing capacity and rebar installation are to be verified by a municipal inspector or qualified design professional prior to concrete placement. The porch footings and framing installed in the prescribed manners above will provide the required support for all imposed loads.

Please contact us if you have any questions.



Digitally signed by Zachary H. Hayes, PE Date: 2025.11.11 15:09:25 -05'00'

Garrett Scott Structural Engineering Technician (919) 980-2756 garrett@hayesstructural.com

REVISED 11/11/2025

Zachary H. Hayes, PE President & Principal Engineer (919) 210-3480 zach@hayesstructural.com



Trenco

818 Soundside Rd Edenton, NC 27932

Re: P-11670-1

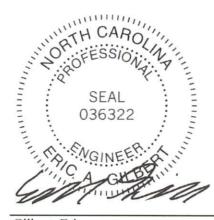
Martin Patio-Roof

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

Pages or sheets covered by this seal: I77419353 thru I77419354

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

North Carolina COA: C-0844



October 30,2025

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.

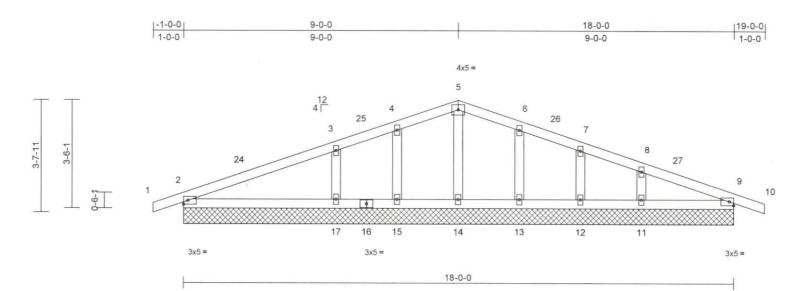
 Job
 Truss
 Truss Type
 Qty
 Ply
 Martin Patio-Roof

 P-11670-1
 A01
 Common
 1
 1
 Job Reference (optional)

Peak Truss Builders, LLC, New Hill, NC - 27562

Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Wed Oct 29 14:22:37 ID:wvIPA3rSt0GiaGxn8jvkVsyR9OX-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:37.7

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.26	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.17	Vert(CT)	n/a	-	n/a	999	2005-300	
BCLL	0.0*	Rep Stress Incr	YES	WB	0.08	Horz(CT)	-0.01	11	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS						30000000	Weight: 76 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.1 BOT CHORD 2x4 SP No.1 OTHERS 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied or

10-0-0 oc purlins

BOT CHORD Rigid ceiling directly applied or 6-0-0 oc

bracing

REACTIONS (size) 2=18-0-0, 9=18-0-0, 11=18-0-0,

12=18-0-0, 13=18-0-0, 14=18-0-0, 15=18-0-0, 17=18-0-0

Max Horiz 2=31 (LC 10)

Max Uplift 2=-25 (LC 7), 11=-77 (LC 11),

13=-38 (LC 11), 14=-33 (LC 11), 15=-9 (LC 11), 17=-74 (LC 11)

Max Grav 2=182 (LC 20), 11=387 (LC 1),

12=27 (LC 21), 13=203 (LC 21),

14=370 (LC 1), 15=47 (LC 20),

17=434 (LC 1)

FORCES (lb) - Maximum Compression/Maximum

Tension

TOP CHORD 1-2=0/19, 2-3=-211/377, 3-4=-152/329,

4-5=-120/344, 5-6=-112/346, 6-7=-141/355,

7-8=-155/332, 8-9=-206/370, 9-10=0/19 BOT CHORD 2-17=-314/237 15-17=-314/237

2-17=-314/237, 15-17=-314/237, 14-15=-314/237, 13-14=-314/237

12 13 - 314/237, 13-14-314/237,

12-13=-314/237, 11-12=-314/237,

9-11=-314/237

5-14=-320/137, 4-15=-57/77, 3-17=-289/132,

6-13=-149/109, 7-12=-52/44, 8-11=-237/128

WEBS NOTES

 Unbalanced roof live loads have been considered for this design.

- 2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=20ft; L=20ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner (3) -1-0-0 to 2-0-0, Exterior (2) 2-0-0 to 9-0-0, Corner (3) 9-0-0 to 12-0-0, Exterior (2) 12-0-0 to 19-0-0 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
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) All plates are 2x4 MT20 unless otherwise indicated.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 2-0-0 oc.
- 7) * 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.
- 8) All bearings are assumed to be SPF No.2.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 25 lb uplift at joint 2, 33 lb uplift at joint 14, 9 lb uplift at joint 15, 74 lb uplift at joint 17, 38 lb uplift at joint 13, 77 lb uplift at joint 11 and 25 lb uplift at joint 2.

LOAD CASE(S) Standard



WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TPI1 Quality Criteria and DSB-22 available from Truss Plate Institute (www.tpinst.org) and BCSI Building Component Safety Information available from the Structural Building Component Association (www.sbcacomponents.com)

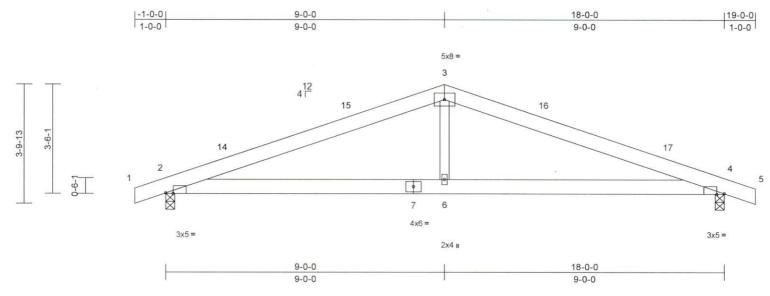


Job	Truss	Truss Type	Qty	Ply	Martin Patio-Roof		
P-11670-1	A02	Common	9	1	Job Reference (optional)	177419354	

Peak Truss Builders, LLC, New Hill, NC - 27562,

Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Wed Oct 29 14:22:38 ID:wvIPA3rSt0GiaGxn8jvkVsyR9OX-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:37.2

Plate Offsets (X, Y): [2:0-2-14,Edge], [4:0-2-14,Edge]												
Loading	(psf)	Spacing	2-0-0	csı		DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.44	Vert(LL)	-0.07	6-10	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	ВС	0.53	Vert(CT)	-0.14	6-10	>999	180	100000000000000000000000000000000000000	
BCLL	0.0*	Rep Stress Incr	YES	WB	0.12	Horz(CT)	0.02	4	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 96 lb	FT = 20%

Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 124 lb uplift at joint

2 and 124 lb uplift at joint 4.

LOAD CASE(S) Standard

LUMBER

TOP CHORD 2x6 SP No.2 **BOT CHORD** 2x6 SP No.2 **WEBS** 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied or

5-5-5 oc purlins.

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc

bracing.

REACTIONS (size)

2=0-3-8, 4=0-3-8 Max Horiz 2=31 (LC 10)

Max Uplift 2=-124 (LC 11), 4=-124 (LC 11) Max Grav 2=780 (LC 1), 4=780 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/19, 2-3=-1352/177, 3-4=-1352/177,

4-5=0/19

BOT CHORD 2-6=-80/1235, 4-6=-80/1235

WEBS 3-6=0/302

NOTES

- Unbalanced roof live loads have been considered for 1) this design
- Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=20ft; L=20ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 9-0-0, Exterior (2) 9-0-0 to 12-0-0, Interior (1) 12-0-0 to 19-0-0 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
- * 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
- 4) All bearings are assumed to be SPF No.2



October 30,2025

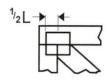
MARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE Design valid for use only with MITek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see _ANSI/TPI1 Quality Criteria and DSB-22 available from Truss Plate Institute (www.tpinst.org) and BCSI Building Component Safety Information available from the Structural Building Component Association (www.sbcacomponents.com)



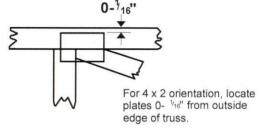
Edenton, NC 27932

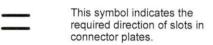
Symbols

PLATE LOCATION AND ORIENTATION



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





* 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:

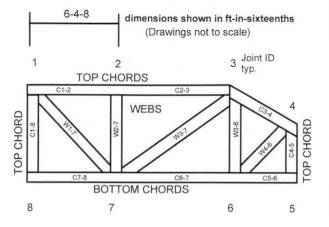
ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.

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



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.

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MiTek[®]

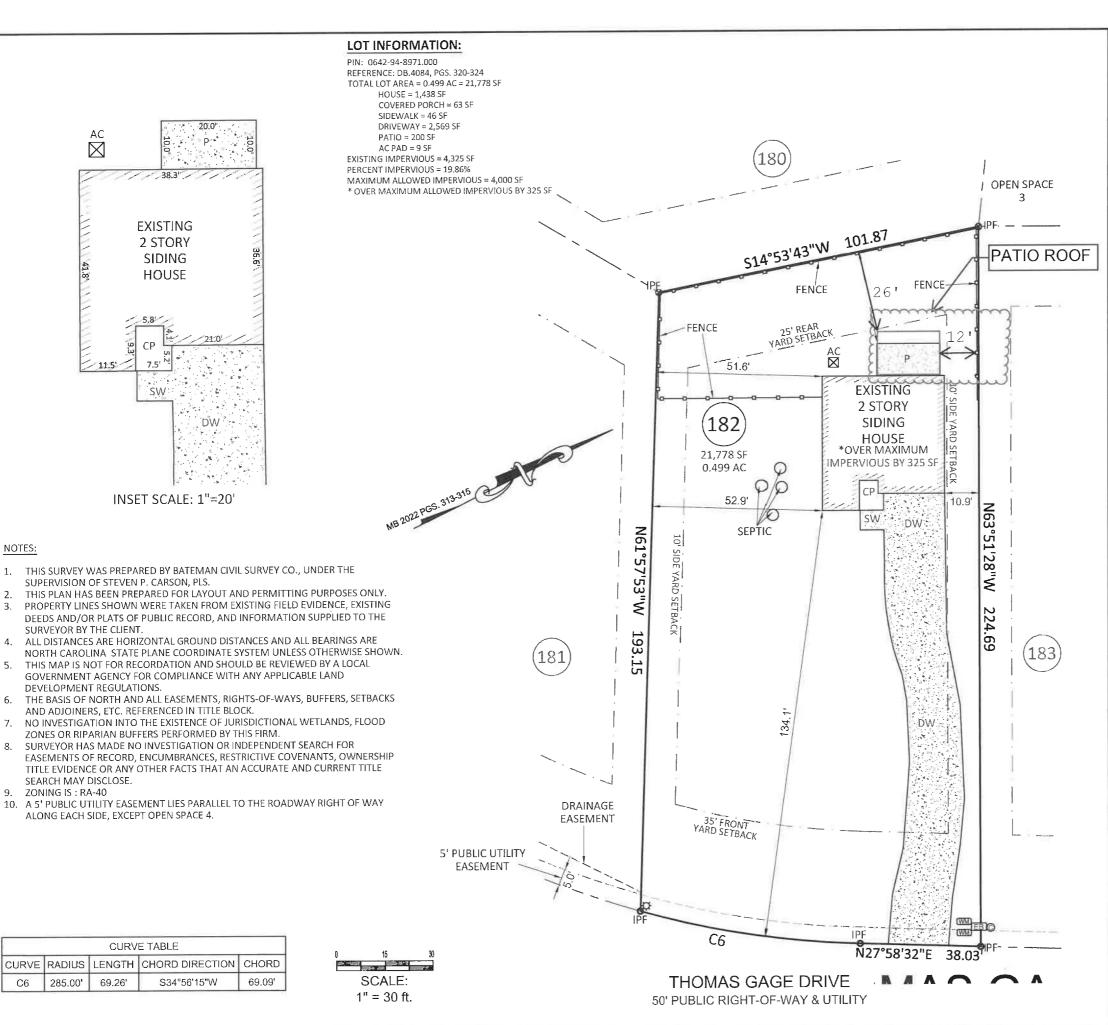


MiTek Engineering Reference Sheet: MII-7473 rev. 1/2/2023

▲ 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 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.

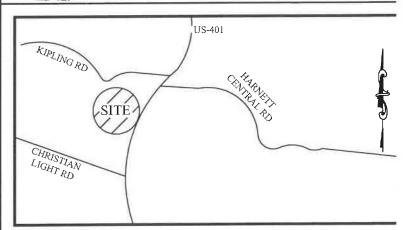




Bateman Civil Survey Company

Engineers • Surveyors • Planners

2524 Reliance Avenue, Apex, NC 27539 Ph: 919.577.1080 Fax: 919.577.108 www.batemancivilsurvey.com info@batemancivilsurvey.com NCBELS Firm No. C-2378



VICINITY MAP

(Not to Scale)

LEGEND

PO = PORCH

P = PATIO SP = SCREENED PORCH OR PATIO

CP = COVERED PORCH OR PATIO
WD= WOOD DECK
SW= SIDEWALK

DW= CONC DRIVEWAY

S = COMPUTED POINT

IRON PIPE FOUND (IPF)

● = IRON PIPE FOUND (IF ● = IRON PIPE SET (IPS) WM = WATER METER

CO = CLEANOUT AC = AIR CONDITIONER

EB = ELECTRIC BOX

© = CABLE BOX

T = TELEPHONE PEDESTAL

E LIGHT POLE

CI = CURB INLET

YI = YARD INLET

FH = FIRE HYDRANT

HP = HANDICAP PORTAJOHN WITH SCREENING

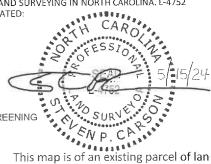
S = SEWER MANHOLE

FIRE HYDRANT

₩ = LIGHT POLE

BUILDING SETBACKS: FRONT = 35 ft

SIDF = 10 ft REAR = 25 ft I, STEVEN P. CARSON, CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY DIRECT SUPERVISION FROM A SURVEY MADE UNDER MY SUPERVISION (PLAT BOOK REFERENCED IN TITLE BLOCK); THAT THE BOUNDARII NOT SURVEYED ARE CLEARLY INDICATED AS DRAWN FROM INFORMATION LISTED UNDER REFERENCES; THAT THE RATIO OF PRECISION AS CALCULATED IS 1:10,000+; AND THAT THIS MAP MEETS THE REQUIREMENTS OF THE STANDARD OF PRACTICE FOR LAND SURVEYING IN NORTH CAROLINA. L-4752



and is only intended for the parties an purposes shown. This map not for recordation. No title report provided

FINAL SURVEY FOR

JAYLON MARTIN &

PAIGE SINGER

BIRCHWOOD GROVE - PHASE 2 - LOT 182 63 THOMAS GAGE DRIVE, FUQUAY-VARINA, NC HECTORS CREEK TOWNSHIP, HARNETT COUNTY

DATE: 5/15/24

DRAWN BY: DOM CHECKED BY: SP(

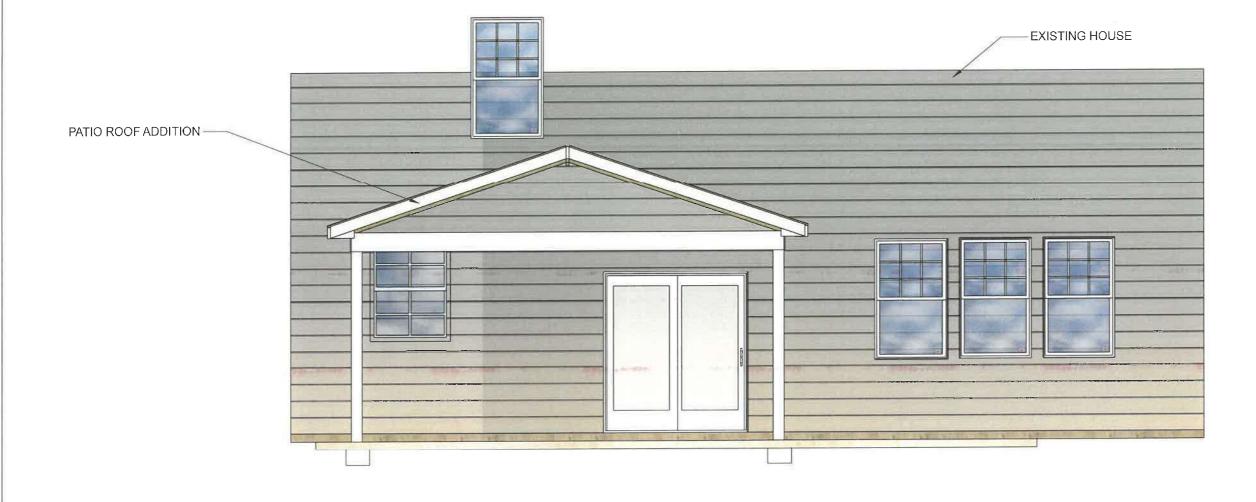
REFERENCE: MB 2022 PGS, 313-315 PROJECT# 220207

PATIO PORCH ROOF ADDITION

63 THOMAS GAGE DRIVE, FUQUAY VARINA, NC

JAYLON MARTIN

ADDRESS 63 THOMAS GAGE DR, FUQUAY VARINA, NC



REAR ELEVATION

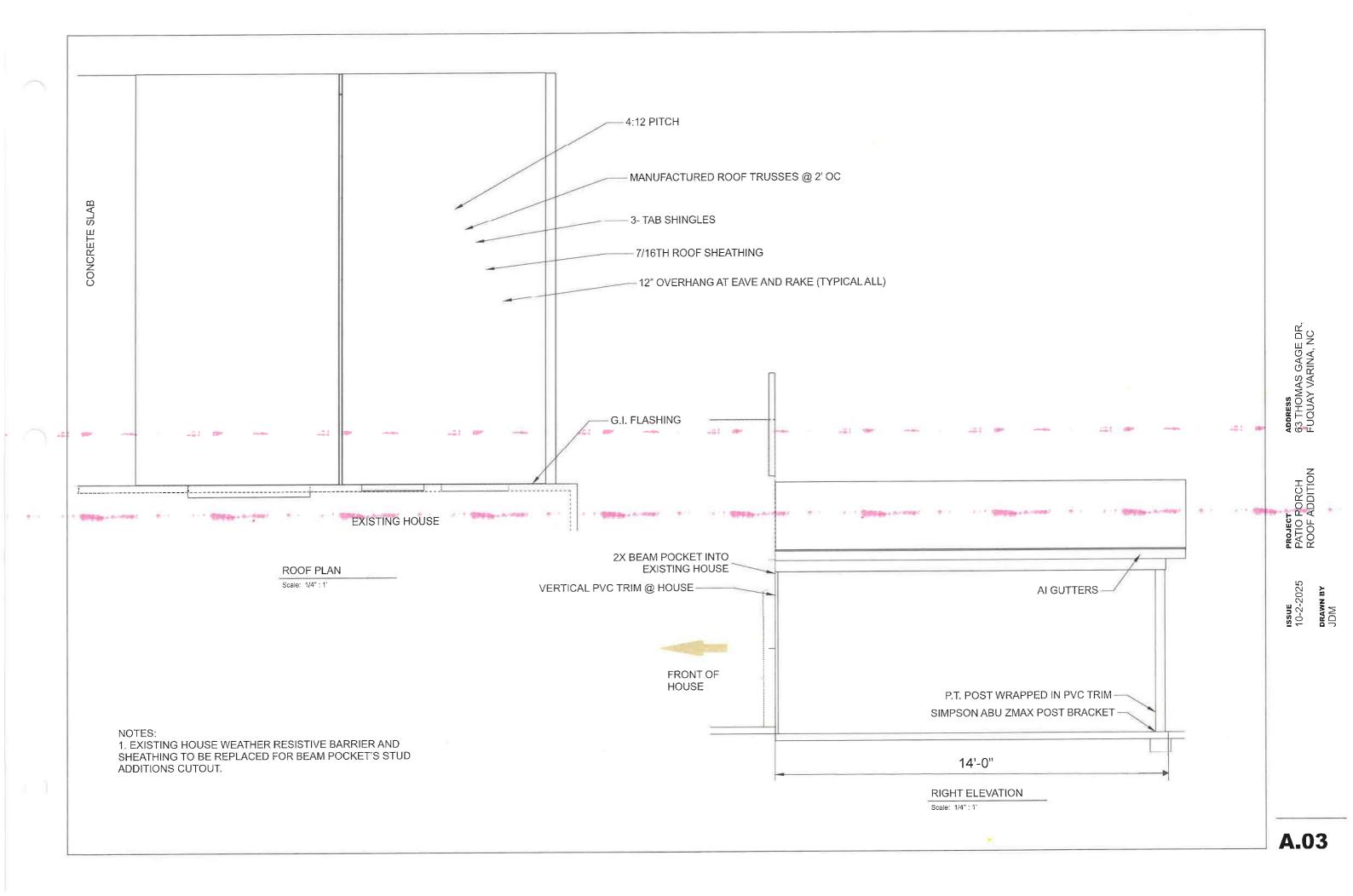
Scale: 1/4":1'

NOTES: 1. ALL WINDOWS AND DOORS ARE EXISTING

ADDRESS
63 THOMAS GAGE DR,
FLIQUAY VARINA NC

PROJECT
PATIO PORCH

10-2-2025 Drawn BY JDM



CONSTRUCTION COPY-P-11670 FOR FIELD USE # Job Notes: 1. Exterior dimensions shown are

> 63 Thomas Gage Dr Fuquay Varina NC Martin Patio

> > Layout Creation Date:

Peak Truss Builders, LLC

Roof Trusses

Overhang: 12" Depth: N/A

Load Bearing

THIS LAYOUT IS TO BE USED AS A TRUSS PLACEMENT GUIDE ONLY. PLEASE REFER TO BUILDING PLANS FOR BUILDING CONSTRUCTION AND DETAILS, SUCH AS PLUMBING OR DUCT DROPS.

Design based on plans and/or revisions dated :

10/02/2025

Plans and/or revisions received on

10/20/2025



EXISTING

assumed to be: Out-to-out of sheathing

 XOut-to-out of Beam
 2. Adjust truss locations as needed for plumbing and mechanical clearance. Unless otherwise noted, trusses may be shifted as long as O.C. spacing

shown is not exceeded.
3. Do not cut, drill, or otherwise damage any part of any truss without prior approval from Peak Truss.
4. Do not approve drawings if any

information herein is unclear. Once ordered trusses will be fabricated as approved. 5. Please contact Peak Truss Builders with any questions. We

are available to help any way we can. We can be reached at 919-545-5555 or sales@peaktruss.com

Roof Truss Loading specified by building designer on Residential jobs

Top Chord Live Load Top Chord Dead Load Bottom Chord Live Load 10.0 lb/ft² 0.0 lb/ft² Bottom Chord Dead Load

Trusses are designed for additional storage load wherever a 42"x24" box will fit between the webs.

Floor Truss Loading specified by building designer on Residential jobs

Top Chord Live Load Top Chord Dead Load Bottom Chord Live Load

Floor Live Load deflection limit L/480 Roof Live Load deflection limit L/240

This layout has been designed using the IRC2015 building code.

Model created using a wind speed of 120 mph specified for Harnett County.



Scan for EWP

- This symbol denotes left end of truss as shown on truss

drawings
- Approximate location of toilet drop. Builder please confirm.

Truss connections by others:

 $\langle N \rangle$ -Nailed (L) -Ledger

Spacing: 2' OC

Wall Types

Non Load Bearing

11/5/2025

Valued Customer