

RE: MASTER - H&H, Southport (A_2), A, Lot 688, MANOR @ LEXINGTON PLANTATION

818 Soundside Rd
Edenton, NC 27932

Site Information:

Project Customer: H and H Project Name:
Lot/Block: 688 Subdivision: MANOR @ LEXINGTON PLANTATION
Address:
City: CAMERON State: NC

Name Address and License # of Structural Engineer of Record, If there is one, for the building.

Name: License #:
Address:
City, County: State:

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

Design Code: IRC2015/TPI2014 Design Program: MiTek 20/20 8.5
Wind Code: ASCE 7-10 Design Method: MWFRS (Envelope)/C-C hybrid Wind ASCE 7-10
Wind Speed: 150 mph
Roof Load: 40.0 psf Floor Load: N/A psf

This package includes 1 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Job ID#	Truss Name	Date
1	155994976	MASTER	A04	1/5/23

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

Truss Design Engineer's Name: Gilbert, Eric
My license renewal date for the state of North Carolina 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.



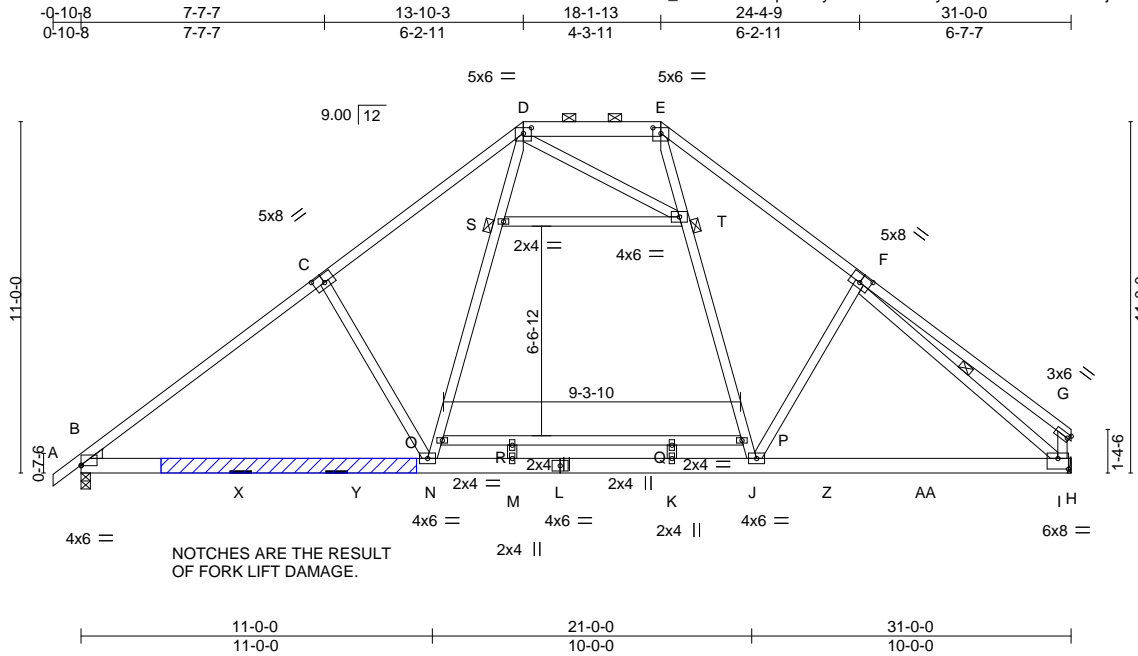
January 5, 2023

Gilbert, Eric

Job MASTER	Truss A04	Truss Type Piggyback Base	Qty 4	Ply 1	H&H, Southport (A_2), A, Lot 688, MANOR @ LEXINGTON PLANTATION 155994976
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Builders FirstSource, Sumter, SC 29153

8.530 s May 26 2022 MiTek Industries, Inc. Thu Jan 5 10:36:40 2023 Page 1
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Scale = 1:72.1

Plate Offsets (X,Y)-- [B:0-0-0,0-0-4], [C:0-4-0,0-3-0], [D:0-3-0,0-2-2], [E:0-3-0,0-2-2], [F:0-4-0,0-3-0], [I:0-4-0,0-4-0]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.73	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.57	Vert(LL) -0.20 N-W >999 360		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.97	Vert(CT) -0.30 N-W >999 240		
BCDL 10.0	Rep Stress Incr YES	Matrix-AS	Horz(CT) 0.04 I n/a n/a		
	Code IRC2015/TPI2014		Wind(LL) 0.26 N-W >999 240	Weight: 231 lb	FT = 20%

LUMBER-

TOP CHORD 2x4 SP No.2 *Except*
D-E: 2x6 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3 *Except*
O-P: 2x4 SP No.2

WEDGE

Left: 2x4 SP No.3

REACTIONS.

(size) B=0-3-8, l=Mechanical
Max Horz B=476(LC 9)
Max Uplift B=450(LC 12), l=376(LC 13)
Max Grav B=1378(LC 1), l=1338(LC 1)



APPLY 2 X 6 X 8' SPF/DF/SP NO.2 SCAB(S) TO EACH FACE OF TRUSS CENTERED ON DAMAGE/SPLICE OR AS SHOWN. 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.

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

TOP CHORD B-C=-1933/742, C-D=-1921/851, D-E=-1323/712, E-F=-1801/798, F-G=-573/403,
G-I=-539/382
BOT CHORD B-N=-521/1529, M-N=-111/997, K-M=-111/997, J-K=-111/997, I-J=-380/1232
WEBS C-N=-638/608, N-O=-323/938, O-S=-301/945, D-S=-284/935, E-T=-178/745, P-T=-216/704,
J-P=-229/688, F-J=-429/561, F-I=-1297/314, D-T=-270/237

NOTES-

- 1) Repair Condition: 0-8-0 wide x 0-0-12 deep notch with a thickness of 0-0-12. Notch is 0-0-6 from the bottom edge to the center of the notch and is centered at 5-0-0 to the right of joint B on the front face.
- 2) Repair Condition: 0-8-0 wide x 0-0-12 deep notch with a thickness of 0-0-12. Notch is 0-0-6 from the bottom edge to the center of the notch and is centered at 7-0-0 to the left of joint L on the front face.
- 3) N/A
- 4) Unbalanced roof live loads have been considered for this design.
- 5) Wind: ASCE 7-10; Vult=150mph Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; end vertical left exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 6) 200.0lb AC unit load placed on the bottom chord, 16-0-0 from left end, supported at two points, 5-0-0 apart.
- 7) Provide adequate drainage to prevent water ponding.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) * 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, with BCDL = 10.0psf.
- 10) All bearings are assumed to be User Defined crushing capacity of 565 psi.
- 11) Refer to girder(s) for truss to truss connections.



January 5, 2023

Continued on page 2

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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/TPI Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



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Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	H&H, Southport (A_2), A, Lot 688, MANOR @ LEXINGTON PLANTATION I55994976
MASTER	A04	Piggyback Base	4	1	Job Reference (optional)

Builders FirstSource, Sumter, SC 29153

8.530 s May 26 2022 MiTek Industries, Inc. Thu Jan 5 10:36:41 2023 Page 2
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- NOTES-**
- 12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 450 lb uplift at joint B and 376 lb uplift at joint I.
 - 13) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
 - 14) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
 - 15) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

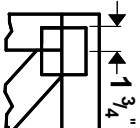
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall 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, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



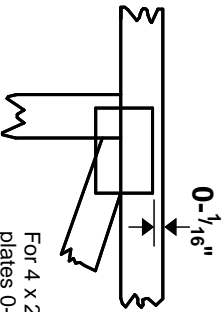
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Symbols

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



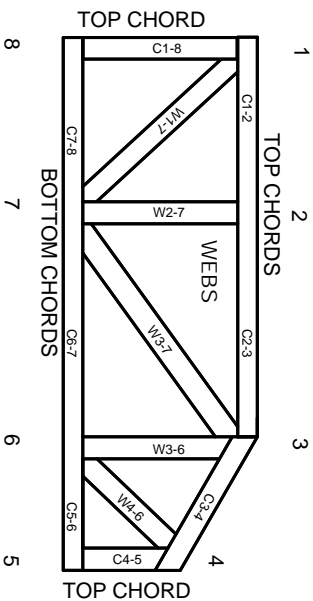
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TFP 1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Design Standard for Bracing, Building Component Safety Information, Guide to Good Practice for Handling, Installing & 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-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/TFP 1 section 6.3 These truss designs rely on lumber values established by others.

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MITek Engineering Reference Sheet: Mill-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/TFP 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TFP 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/TFP 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.