

RE: 2846001 - H&H, Topsail (B\_2), B, Lot 323, OAKMONT

Trenco  
 818 Soundside Rd  
 Edenton, NC 27932

**Site Information:**

Project Customer:      Project Name:  
 Lot/Block:                                  Subdivision:  
 Address:  
 City:    State:

**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 8.4  
 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

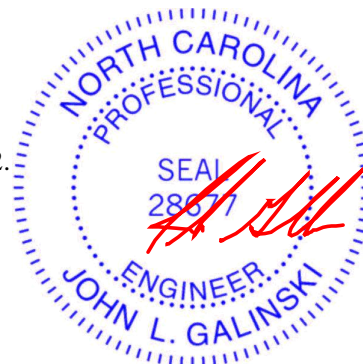
This package includes 2 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Job ID#	Truss Name	Date
1	152677909	2846001	A04	6/23/22
2	152677910	2846001		6/23/22

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

**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.

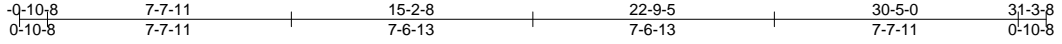


June 23,2022

Galinski, John

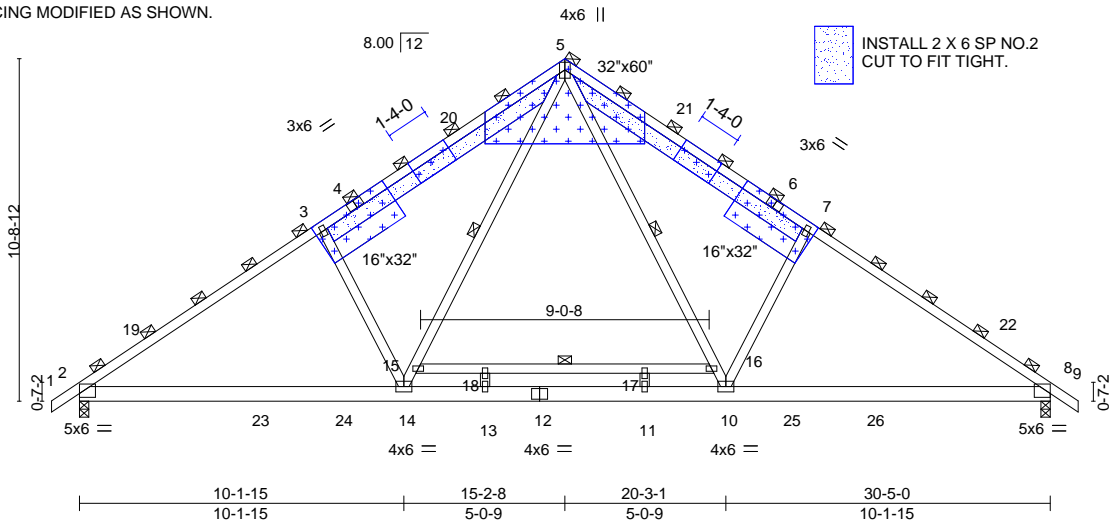
Job 2846001	Truss A04	Truss Type COMMON	Qty 3	Ply 1	H&H, Topsail (B_2), B, Lot 323, OAKMONT	152677909
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Builders FirstSource (Sumter, SC), Sumter, SC - 29153, ID:X87q8Dmm5MnjRaLGAgsDs0yzEGbe-JUZj8I3ltjh\_qLxdQWjzGDR0UrRRLLE5KYnmQmz3SFW 8.430 e Oct 22 2021 MiTek Industries, Inc. Thu Jun 23 08:48:13 2022 Page 1



Scale = 1:72.2

REPAIR: TRUSS SPACING MODIFIED AS SHOWN.



INSTALL 2 X 6 SP NO.2 CUT TO FIT TIGHT.

ATTACH 7/16" OSB GUSSET (7/16" RATED SHEATHING 24/16 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.

Plate Offsets (X,Y)-- [2:Edge,0-1-7], [8:Edge,0-1-7]									
<b>LOADING</b> (psf)	<b>SPACING-</b>	2-2-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL	1.15	TC 0.86	Vert(LL)	-0.10 8-10	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.69	Vert(CT)	-0.20 11-13	>999	240		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.48	Horz(CT)	0.05 8	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S	Wind(LL)	0.13 2-14	>999	240	Weight: 234 lb	FT = 20%

<b>LUMBER-</b>		<b>BRACING-</b>	
TOP CHORD	2x4 SP No.1 *Except* 3-5,5-7: 2x6 SP No.2	TOP CHORD	2-0-0 oc purlins (3-2-7 max.) [PSA] (Switched from sheeted: Spacing > 2-0-0).
BOT CHORD	2x6 SP No.2	BOT CHORD	Rigid ceiling directly applied or 9-0-9 oc bracing.
WEBS	2x4 SP No.3 *Except* 15-16: 2x4 SP No.2	WEBS	1 Row at midpt 5-10, 5-14, 15-16

**REACTIONS.** (size) 2=0-3-8, 8=0-3-8  
 Max Horz 2=500(LC 11)  
 Max Uplift 2=-516(LC 12), 8=-520(LC 13)  
 Max Grav 2=1504(LC 19), 8=1508(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-2350/604, 3-5=-2291/725, 5-7=-2284/728, 7-8=-2350/605  
 BOT CHORD 2-14=-597/1904, 13-14=-162/1342, 11-13=-162/1342, 10-11=-162/1342, 8-10=-295/1771  
 WEBS 5-16=-387/1035, 10-16=-395/970, 7-10=-596/627, 14-15=-399/984, 5-15=-388/1047,  
 3-14=-617/632

- NOTES-** (10)
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) 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) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 15-1-4, Exterior(2) 15-1-4 to 18-1-4, Interior(1) 18-1-4 to 31-3-8 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) 200.0lb AC unit load placed on the bottom chord, 15-2-8 from left end, supported at two points, 5-0-0 apart.
  - 4) All plates are 2x4 MT20 unless otherwise indicated.
  - 5) N/A
  - 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, with BCDL = 10.0psf.
  - 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 516 lb uplift at joint 2 and 520 lb uplift at joint 8.
  - 9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



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/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



Job 2846001	Truss A04	Truss Type COMMON	Qty 3	Ply 1	H&H, Topsail (B_2), B, Lot 323, OAKMONT Job Reference (optional)	152677909
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8.430 e Oct 22 2021 MiTek Industries, Inc. Thu Jun 23 08:48:13 2022 Page 2  
 ID:X87q8Dmm5MnjRaLGAgDs0yzEGbe-JUZj813ltjh\_qLxdQWjzGDR0UrRRLE5KYnamQmz3SFW

10) This manufactured truss is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.

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

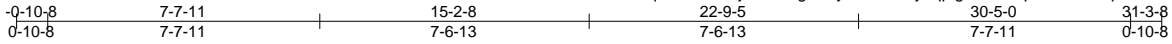
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall 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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Job 2846001	Truss A04A	Truss Type COMMON	Qty 1	Ply 1	H&H, Topsail (B_2), B, Lot 323, OAKMONT	152677910
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Builders FirstSource (Sumter, SC), Sumter, SC - 29153, ID: X87q8Dmm5MnjRaLGAgsDs0yzEGbe-Icy8qplgoJ86zhqcUJbKMeAp?GVAZ\_T0fUWld9z3S4l 8.430 s Oct 22 2021 MiTek Industries, Inc. Thu Jun 23 09:00:11 2022 Page 1

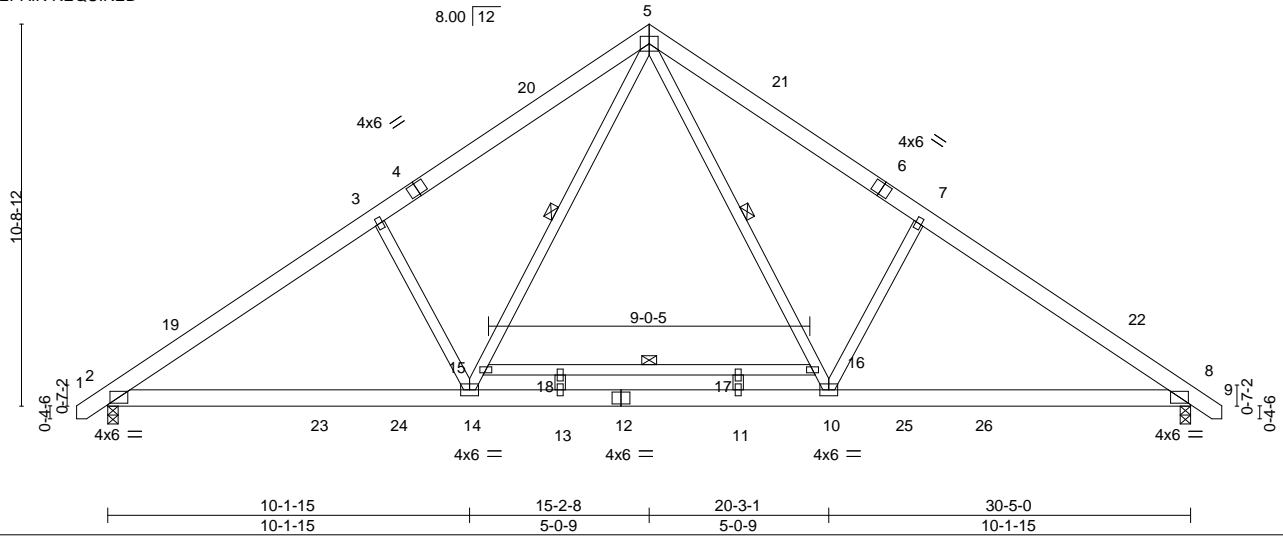


TRUSS SPACING MODIFIED AS SHOWN.

5x6 =

Scale = 1:64.7

NO REPAIR REQUIRED



<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL	1.15	TC 0.43	Vert(LL)	-0.08 8-10	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.58	Vert(CT)	-0.20 11-13	>999	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.44	Horz(CT)	0.04 8	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S	Wind(LL)	0.08 2-14	>999	240		
								Weight: 226 lb	FT = 20%

**LUMBER-**  
TOP CHORD 2x6 SP No.2  
BOT CHORD 2x6 SP No.2  
WEBS 2x4 SP No.3 \*Except\*  
15-16: 2x4 SP No.2

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 4-6-15 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 9-5-9 oc bracing.  
WEBS 1 Row at midpt 5-10, 5-14, 15-16

**REACTIONS.** (size) 2=0-3-8, 8=0-3-8  
Max Horz 2=472(LC 11)  
Max Uplift 2=-461(LC 12), 8=-461(LC 13)  
Max Grav 2=1375(LC 19), 8=1375(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-2200/551, 3-5=-2201/673, 5-7=-2201/673, 7-8=-2200/552  
BOT CHORD 2-14=-569/1800, 13-14=-129/1209, 11-13=-129/1209, 10-11=-129/1209, 8-10=-281/1687  
WEBS 5-16=-377/1054, 10-16=-384/992, 7-10=-675/634, 14-15=-385/992, 5-15=-376/1054,  
3-14=-675/633

- NOTES-** (8)
- Unbalanced roof live loads have been considered for this design.
  - 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) -0-8-13 to 2-3-3, Interior(1) 2-3-3 to 15-2-8, Exterior(2) 15-2-8 to 18-2-8, Interior(1) 18-2-8 to 31-1-13 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
  - 200.0lb AC unit load placed on the bottom chord, 15-2-8 from left end, supported at two points, 5-0-0 apart.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* 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.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 461 lb uplift at joint 2 and 461 lb uplift at joint 8.
  - This manufactured truss is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.



June 23, 2022

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



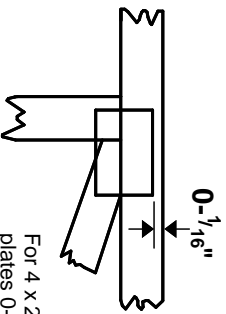
818 Soundside Road  
Edenton, NC 27932

# 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.



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**

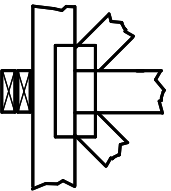
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## 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.  
BCSI: 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: 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/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.