

Trenco  
818 Soundside Rd  
Edenton, NC 27932

Re: J0523-2269  
Glover Design/Doyle Residence/Harnett

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Comtech, Inc - Fayetteville.

Pages or sheets covered by this seal: I61714600 thru I61714600

My license renewal date for the state of North Carolina is December 31, 2023.

North Carolina COA: C-0844



October 30, 2023

Gilbert, Eric

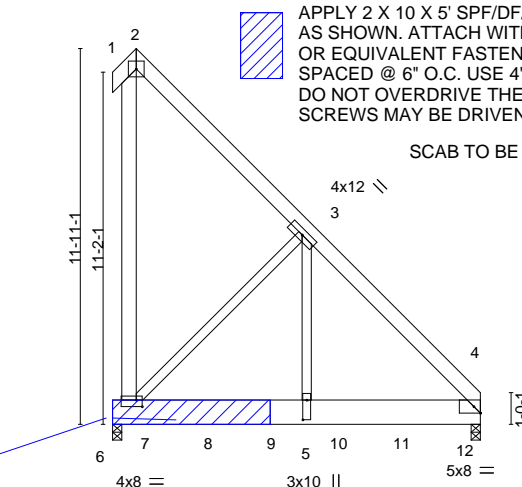
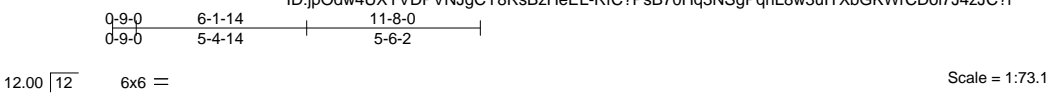
**IMPORTANT NOTE:** The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), 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	Glover Design/Doyle Residence/Harnett	I61714600
J0523-2269	C3GR	Common Girder	1	2	Job Reference (optional)	

Comtech, Inc. Fayetteville, NC - 28314,

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**APPLY 2 X 10 X 5' SPF/DF/SP NO.2 SCAB(S) TO UNLOADED FACE OF TRUSS AS SHOWN. ATTACH WITH MiTek Pro Series WS/WSWH45 WOOD SCREWS OR EQUIVALENT FASTENER PER THE FOLLOWING SCHEDULE: 3 ROWS: SPACED @ 6" O.C. USE 4" MEMBER END DISTANCE AND 1-1/4" EDGE DISTANCE. DO NOT OVERDRIVE THE SCREWS OR DRILL THROUGH METAL CONNECTOR PLATES. SCREWS MAY BE DRIVEN FROM THE LOADED FACE.**

SCAB TO BE CLAMPED IN PLACE DURING SCREW INSTALLATION.

+/- 24" LONG CRACK IN LOADED PLY, AT APPROXIMATE LOCATION. (ONLY ONE PLY DAMAGED)

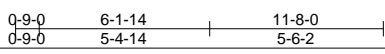


Plate Offsets (X,Y)-- [4:0-2-8,Edge], [5:0-7-8,0-1-8], [6:0-2-4,0-2-8]

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.12	Vert(LL)	-0.03 5-6	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.55	Vert(CT)	-0.06 5-6	>999	240		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.78	Horz(CT)	0.01 4	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S	Wind(LL)	0.02 5-6	>999	240	Weight: 260 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x10 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.2 *Except* 2-6: 2x6 SP No.1	

**REACTIONS.** (size) 4=0-3-8, 6=0-3-8  
 Max Horz 6=-355(LC 9)  
 Max Uplift 4=-60(LC 5), 6=-384(LC 9)  
 Max Grav 4=4693(LC 2), 6=4651(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 3-4=-3558/82  
 BOT CHORD 5-6=-47/2398, 4-5=-47/2385  
 WEBS 3-5=-111/4689, 3-6=-3428/329

- NOTES-**
- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
 Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.  
 Bottom chords connected as follows: 2x10 - 2 rows staggered at 0-4-0 oc.  
 Webs connected as follows: 2x4 - 1 row at 0-9-0 oc, 2x6 - 2 rows staggered at 0-9-0 oc.
  - 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.
  - Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); Lumber DOL=1.60 plate grip DOL=1.60
  - 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 30.0psf 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.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4 except (it=lb) 6=384.
  - Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1424 lb down and 63 lb up at 1-0-12, 1424 lb down and 63 lb up at 3-0-12, 1424 lb down and 63 lb up at 5-0-12, 1424 lb down and 63 lb up at 7-0-12, and 1424 lb down and 63 lb up at 9-0-12, and 1429 lb down and 58 lb up at 11-0-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

**LOAD CASE(S)** Standard  
 1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15  
 Uniform Loads (plf)  
 Vert: 1-2=-60, 2-4=-60, 4-6=-20



Continued on page 2

<p><b>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.</b></p> <p>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 <b>ANSI/TP1 Quality Criteria and DSB-22</b> available from Truss Plate Institute (www.tpinst.org) and <b>BCSI Building Component Safety Information</b> available from the Structural Building Component Association (www.sbcacomponents.com)</p>	<p><b>ENGINEERING BY</b>  <b>TRENCO</b>  <small>A MiTek Affiliate</small></p> <p>818 Soundside Road        Edenton, NC 27932</p>
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Job	Truss	Truss Type	Qty	Ply	Glover Design/Doyle Residence/Harnett	I61714600
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 ID:jpOdw4UXYVDPVNjgCY8RsBzHeEL-RfC?PsB70Hq3NSgPqnL&w3uITXbGKWwCDoi7J4zJC?f

**LOAD CASE(S)** Standard  
 Concentrated Loads (lb)  
 Vert: 7=-1249(B) 8=-1249(B) 9=-1249(B) 10=-1249(B) 11=-1249(B) 12=-1255(B)

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

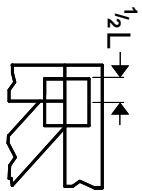
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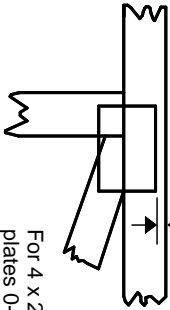
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# Symbols

## 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 software or upon request.

## PLATE SIZE

4 X 4

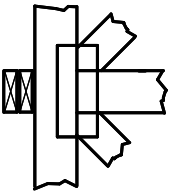
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## 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



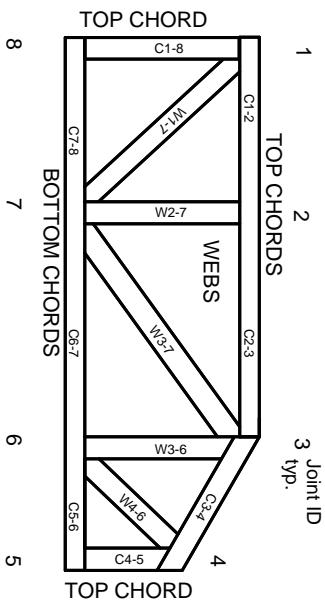
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

## Industry Standards:

ANSI/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

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-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 section 6.3. These truss designs rely on lumber values established by others.

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**MITek**

ENGINEERING BY  
**TRENGO**  
A MITek Affiliate

MITek Engineering Reference Sheet: MIL-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/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.