

PLAN:  
Hayek w/  
Porch

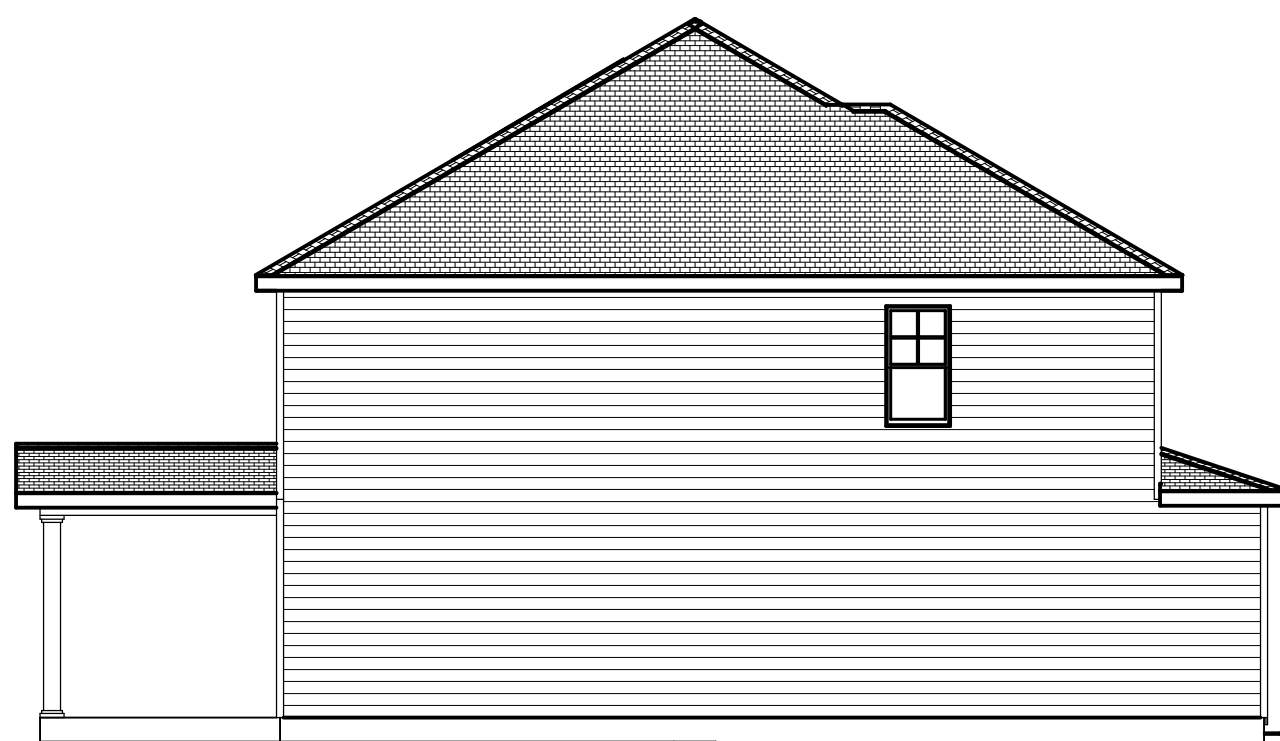
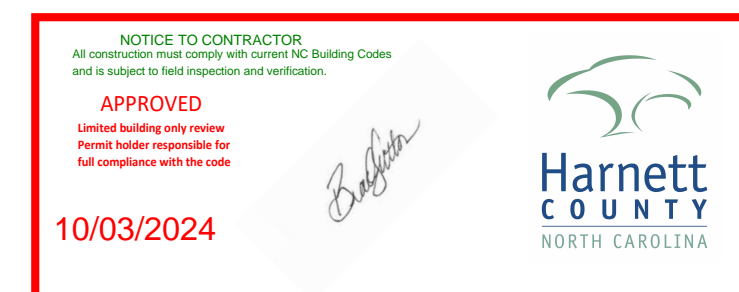


**FRONT ELEVATION**

Scale: 1/4" = 1'0"

9'0" CEILING HEIGHT FIRST FLOOR  
(HEADER HEIGHT 7'6")  
8'0" CEILING HEIGHT SECOND FLOOR  
(Frame Headers to Top Plates)

FRAME WINDOWS TO HEADER HEIGHT



**LEFT ELEVATION**

Scale: 1/8" = 1'0"



**REAR ELEVATION**

Scale: 1/8" = 1'0"



**RIGHT ELEVATION**

Scale: 1/8" = 1'0"

SHEET TITLE:

**ELEVATIONS**

PROJECT ADDRESS:  
Magnolia Hills Lot 7

DESIGNED BY:

Precision Custom Homes  
Raeferd, NC  
Shaun@PrecisionCustomHomesNC.com

DATE:

9/10/24

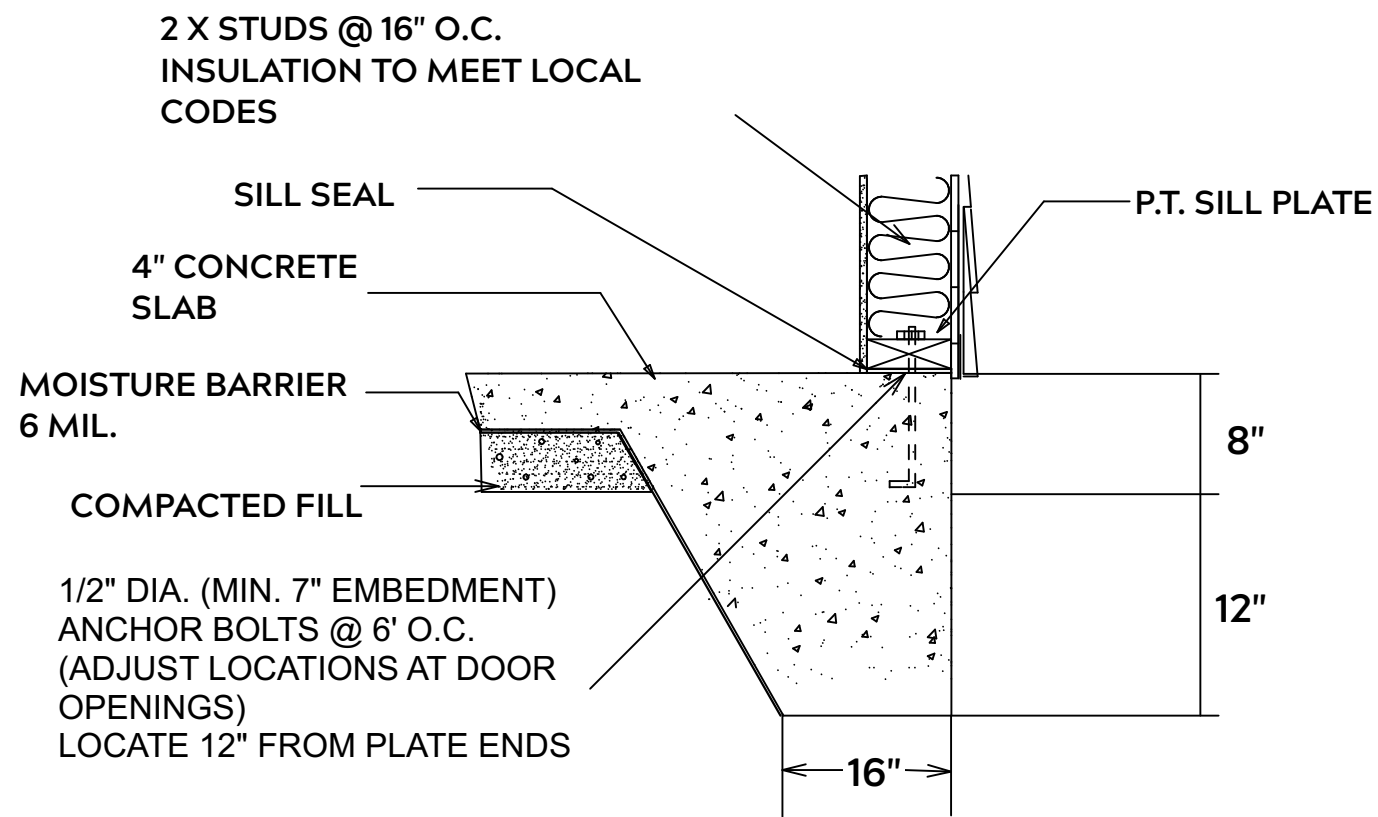
SCALE:

1/4" = 1'

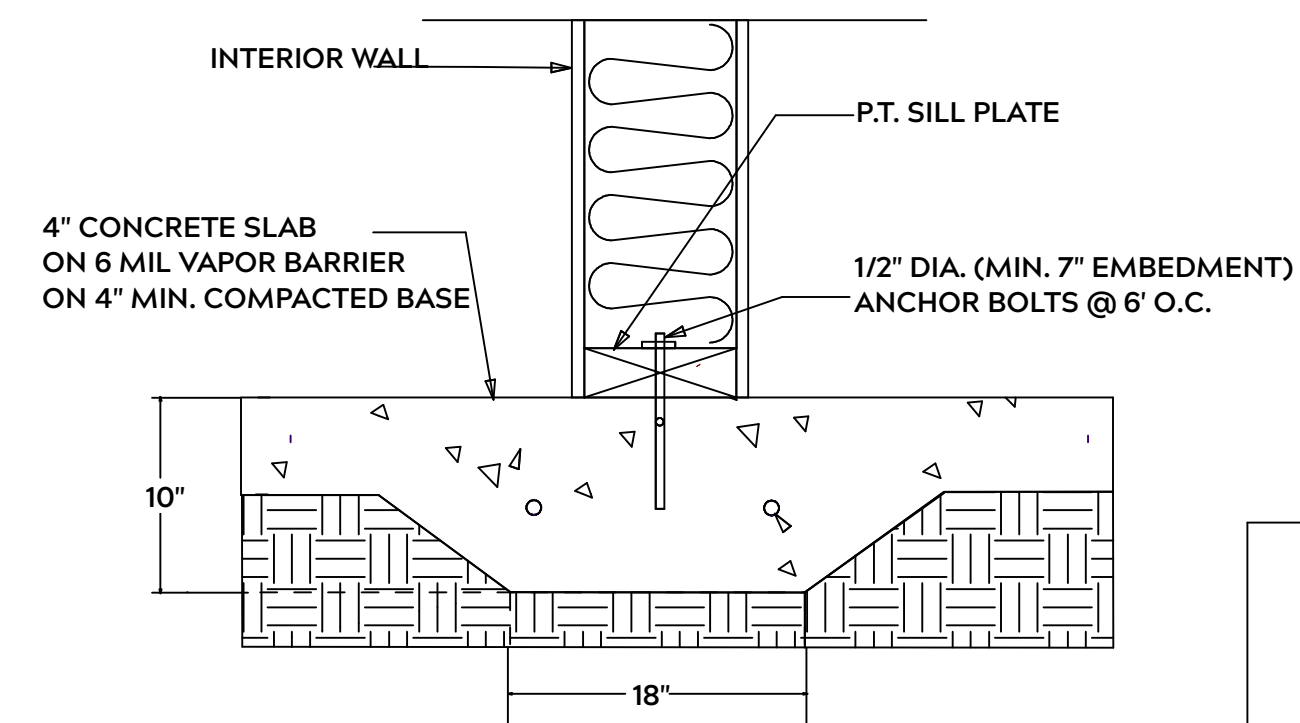
SHEET:

**A-1**

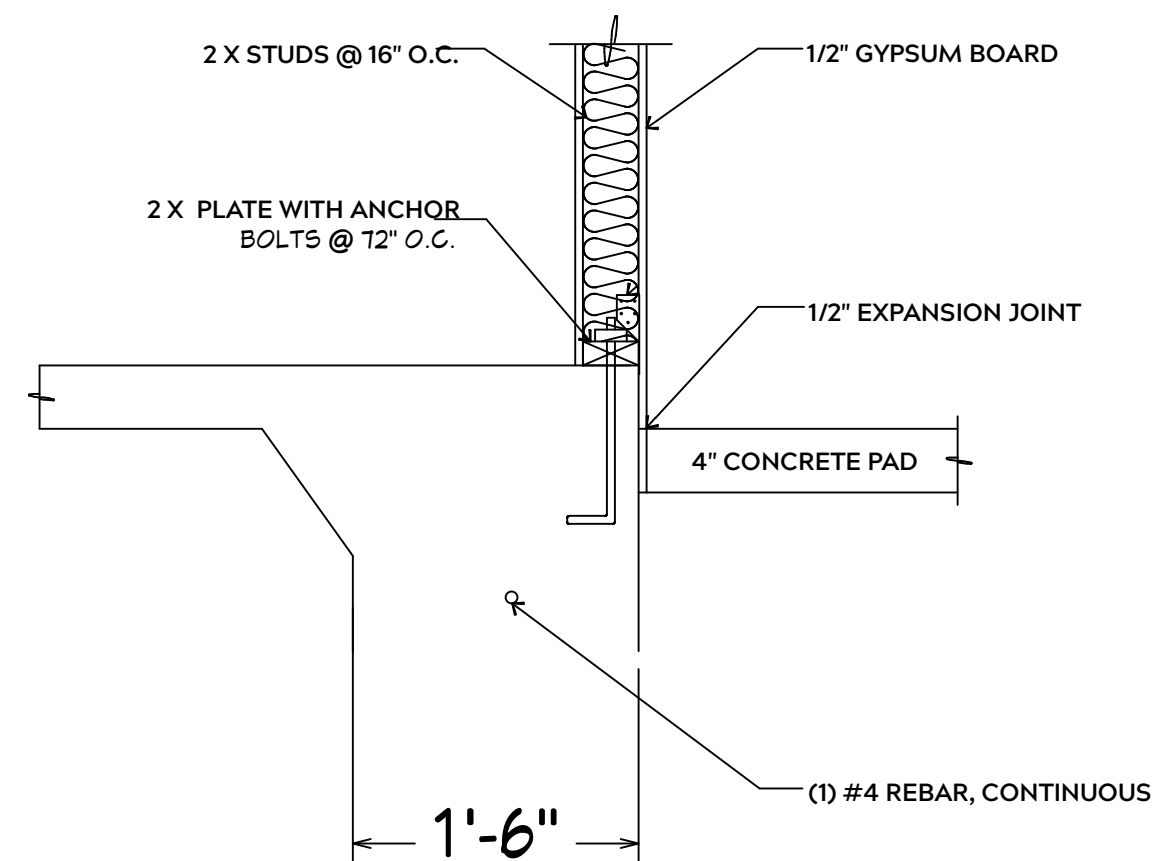




**MONOLITHIC SLAB**



**LUG FOOTING**



**INTERIOR WALL @ GARAGE STEP DOWN**

**FOUNDATION NOTES:**

ALL FOOTINGS SHALL BEAR ON ORIGINAL UNDISTURBED SOIL  
THE 28 DAY COMPRESSIVE STRENGTH OF ALL FOOTINGS IS 3000 PSI

PROVIDE WATER PROOFING AND PERIMTER DRAINS AS REQUIRED

FOOTING WIDTHS ARE BASED ON A LOAD BEARING SOIL CAPACITY OF 2000 PSI

PROVIDE 6 MIL POLY VAPOR BARRIER TO COVER GROUND IN CRAWL SPACE AND GROUND UNDER POURED CONCRETE

ALL ANCHOR BOLTS TO BE 1/2" X 12" LONG. ANCHOR BOLTS SHALL BE SPACED AT A MAXIMUM OF 6' ON CENTER AND NO MORE THEN 1' FROM EACH CORNER

**GENERAL FRAMING NOTES:**

ALL LUMBER IN CONTACT WITH CONCRETE OR MASONRY SHALLE BE PRESSURE TREATED

FRAMING LUMBER SHALL BE SYP #2 GRADE AND / OR SPRUCE PINE FIR #1 AND / OR KILN DRIED

WHERE PRE-ENGINEERED JOISTS AND TRUSSES ARE USED, MANUFACTURER SHALL PROVIDE DRAWINGS / SCHEMATICS, WHICH SHALL BEAR OF A N.C. ENGINEER

STUDS AND JOISTS SHALL NOT BE CUT TO INSTALL PLUMBING OR WIRING WITHOUT ADDING METAL OR WOOD SIDE PANELS TO STRENGTHEN MEMBER TO ITS ORIGINAL CAPACITY

NAIL MULTIPLE MEMBERS WITH 2 ROWS OF 16d NAILS STAGGERED 32" O.C. AND USE 3 X 16d NAILS 2" IN AT EACH END.

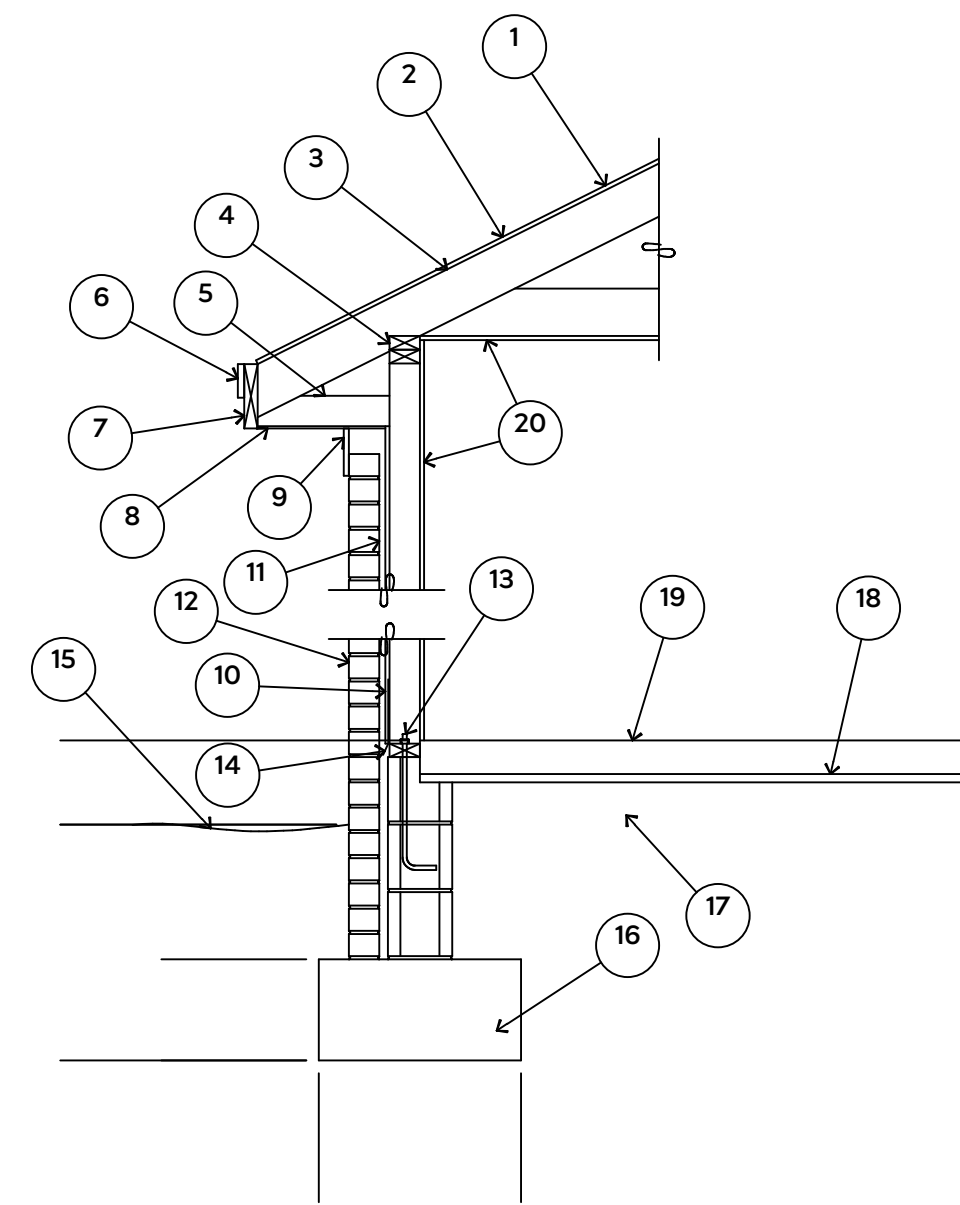
NAIL FLOOR JOISTS TO SILL PLATE WITH WITH 8d TOE NAILS

ALL EXPOSED FRAMING ON PORCHES OR DECKS SHALL BE PRESSURE TREATED

PROVIDE WATERPROOFING AND DRAINS AS REQUIRED

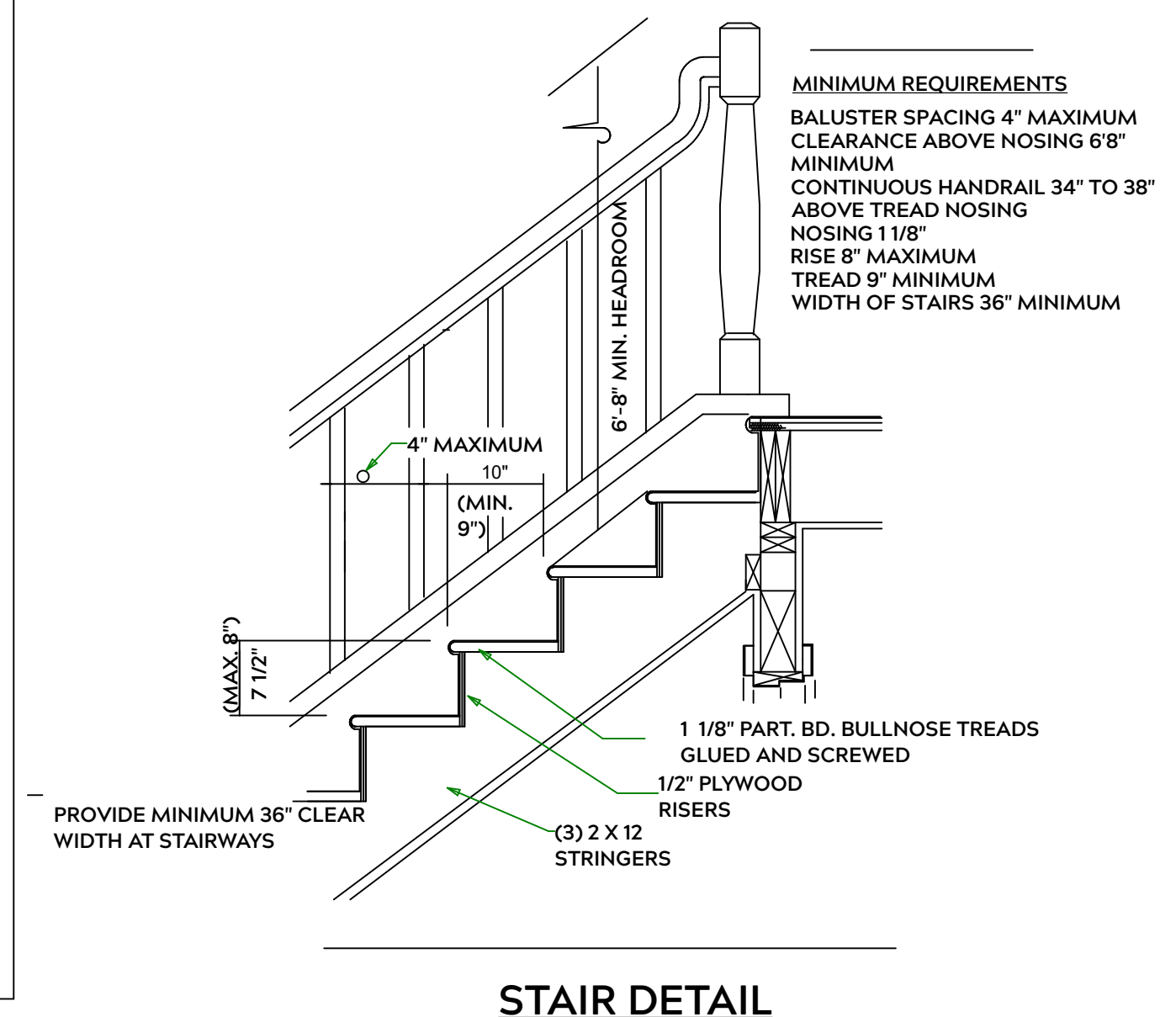
ALL FRAMING TO BE 16" O.C. WALL FRAMING DIMENSIONS ARE BASED ON 2X4 OR 2X6 EXTERIOR WALLS AND 2X4 INTERIOR WALLS. DOULBE / TRIPLE JACK STUDS AS NECESSARY UNDER HEADERS AS REQUIRED

LVL'S TO BE SIZED BY OTHERS (TRUSS MANUFACTURER)



1. 15# FELT UNDERLAYMENT UNDER COMPOSITION SHINGLES.
2. ROOF DECKING.
3. 2 X RAFTERS / ENGINEERED TRUSSES
4. DOUBLE TOP PLATE.
5. 2 X 4 RETURN.
6. 3/4" FASCIA OR PVC TRIM COIL
7. 2 X FASCIA
8. 1/4" PLYWOOD OR VINYL SOFFIT
9. 1 X FREIZE BOARD (TO BE USED WITH BRICK VENEERS)
10. INSULATION BOARD OR HOUSE WRAP
11. AIR SPACE.
12. BRICK WITH BRICK TIES PER MANUFACTURER'S SPECIFICATIONS.
13. 1/2" X 12" ANCHOR BOLTS, 6'-0" O.C., 12" FROM CORNERS.
14. FLASHING WITH WEEP HOLES @ 48" O.C.
15. FINISHED GRADE.
16. FOOTING
17. COMPACTED EARTH FILL.
18. 6 MIL. VAPOR BARRIER
19. 4" CONCRETE SLAB, 3,000 P.S.I. WITH 6" X 6" 10 GA. X 10 GA. WELDED WIRE FABRIC.
20. 1/2" GYPSUM BOARD.

**EXTERIOR WALL SECTION**



**STAIR DETAIL**

PLAN:  
Hayek w/  
Porch

SHEET TITLE:  
**DETAIL SHEETS**

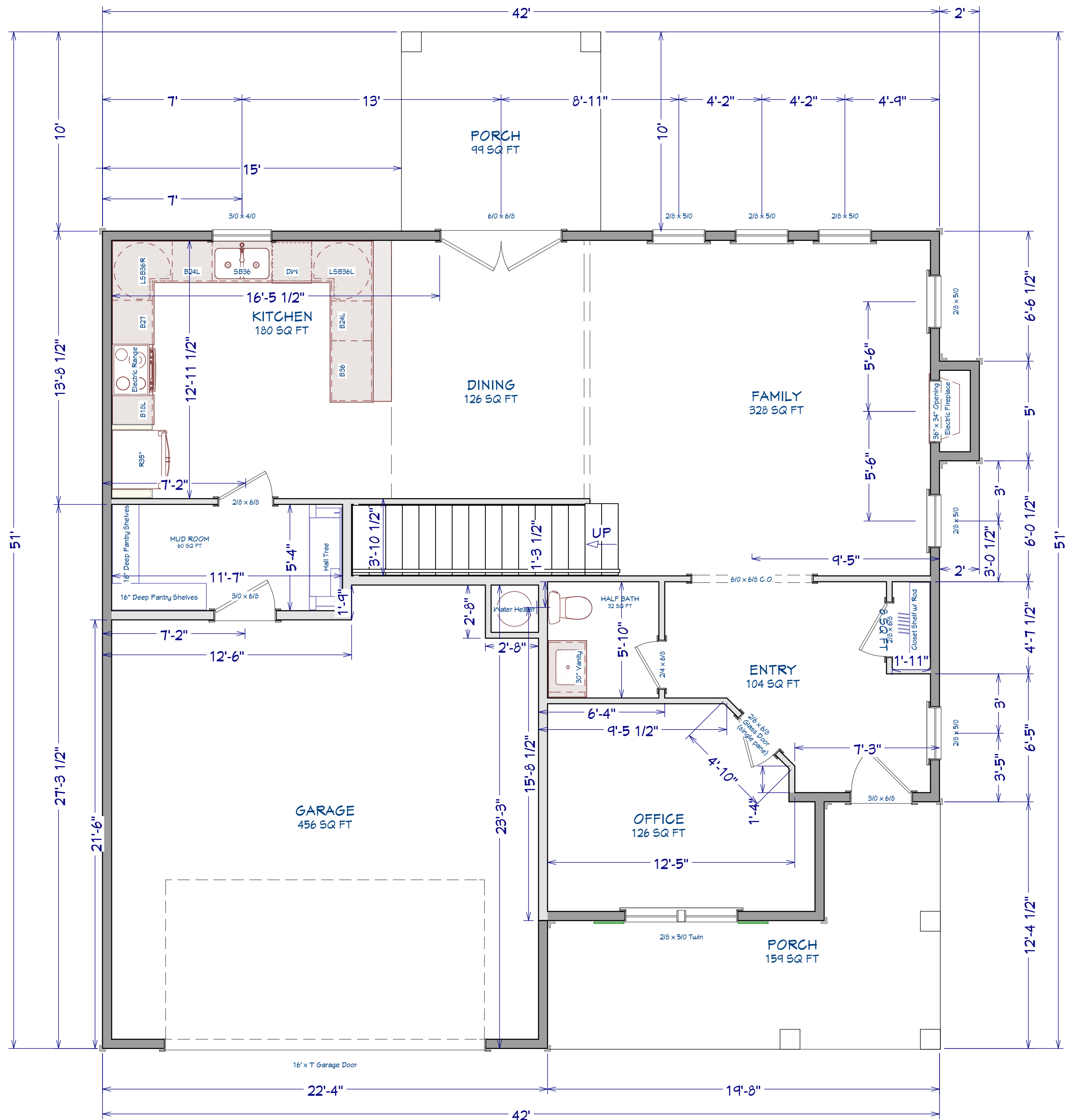
PROJECT ADDRESS:  
Magnolia Hills Lot 7

DESIGNED BY:  
Precision Custom Homes  
Rae ford, NC  
Shaun@PrecisionCustomHomesNC.com

DATE:  
9/10/24

SCALE:  
1/4" = 1'

SHEET:  
**A-3**



AREA SCHEDULE	
NAME	AREA
1st FLOOR	1070 SF
2nd FLOOR	1,410 SF
GARAGE	489 SF
COVERED FRONT PORCH	164 SF
BACK PORCH	100SF
<b>TOTAL HEATED</b>	<b>2,480 SF</b>
<b>TOTAL UNDER ROOF</b>	<b>3,233 SF</b>

SHEET TITLE:  
**1st FLOOR**

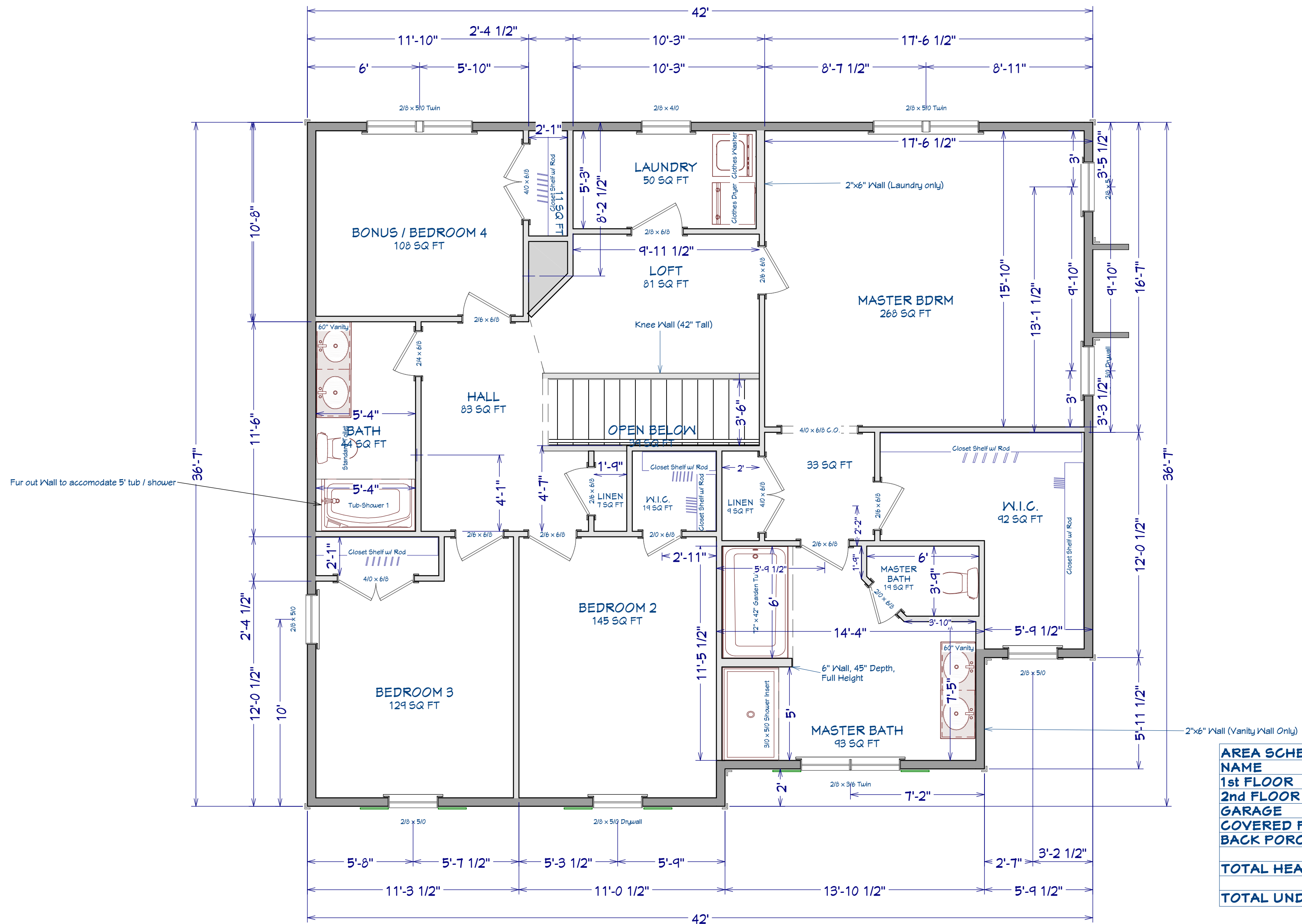
PROJECT ADDRESS:  
**Magnolia Hills Lot 7**

DESIGNED BY:  
Precision Custom Homes  
Raeferd, NC  
Shaun@PrecisionCustomHomesNC.com

DATE:  
9/10/24

SCALE:  
1/4" = 1'

SHEET:  
**A-4**



AREA SCHEDULE	
NAME	AREA
1st FLOOR	1070 SF
2nd FLOOR	1,410 SF
GARAGE	489 SF
COVERED FRONT PORCH	164 SF
BACK PORCH	100 SF
<b>TOTAL HEATED</b>	<b>2,480 SF</b>
<b>TOTAL UNDER ROOF</b>	<b>3,233 SF</b>



# ROOF & FLOOR TRUSSES & BEAMS

Reilly Road Industrial Park  
Fayetteville, N.C. 28309  
Phone: (910) 864-8787  
Fax: (910) 864-4444

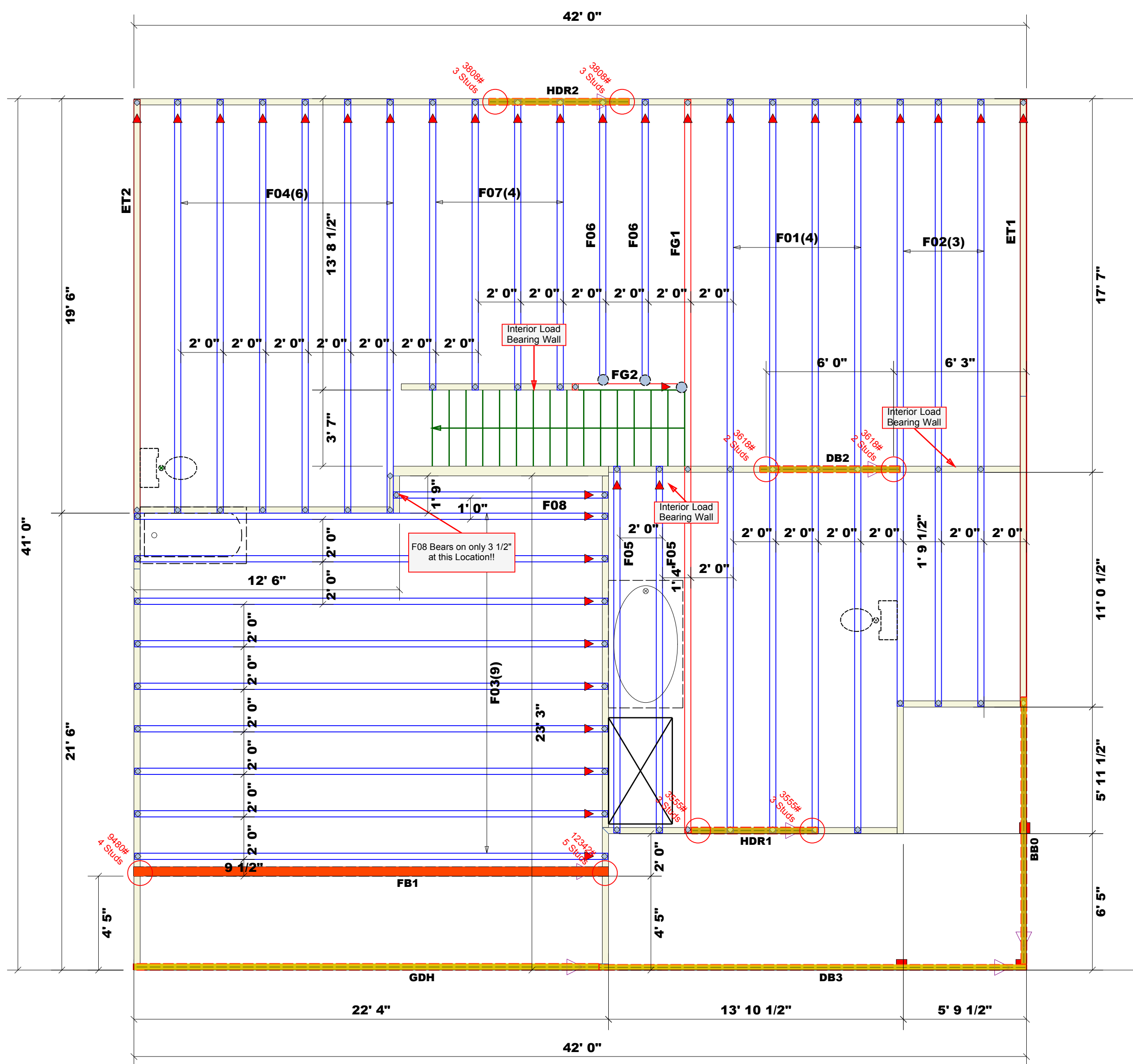
Bearing reactions less than or equal to 3000# are deemed to comply with the prescriptive Code requirements. The contractor shall refer to the attached Tables ( derived from the prescriptive Code requirements ) to determine the minimum foundation size and number of wood studs required to support reactions greater than 3000# but not greater than 15000#. A registered design professional shall be retained to design the support system for any reaction that exceeds those specified in the attached Tables. A registered design professional shall be retained to design the support system for all reactions that exceed 15000#.

Signature  
**Neil Baggett**

### LOAD CHART FOR JACK STUDS

(BASED ON TABLES R502.5(1) & (b))  
NUMBER OF JACK STUDS REQUIRED @ EA END OF HEADER/GIRDER

END REACTION (UP TO)	REQ. D. STUDS FOR (1) 1/2" HEADER	END REACTION (UP TO)	REQ. D. STUDS FOR (1) 1/2" HEADER	END REACTION (UP TO)	REQ. D. STUDS FOR (1) 1/2" HEADER
1700	1	2550	1	3400	1
3400	2	5100	2	6800	2
5100	3	7650	3	10200	3
6800	4	10200	4	13600	4
8500	5	12750	5	17000	5
10200	6	15300	6		
11900	7				
13600	8				
15300	9				



**Dimension Notes**

- All exterior wall to wall dimensions are to face of stud unless noted otherwise
- All interior wall dimensions are to face of stud unless noted otherwise
- All exterior wall to truss dimensions are to face of stud unless noted otherwise

**Plumbing Drop Notes**

- Plumbing drop locations shown are NOT exact.
- Contractor to verify ALL plumbing drop locations prior to setting Floor Trusses.
- Adjust spacing as needed not to exceed 24" oc.

Roof Area = 2533.62 sq.ft.  
Ridge Line = 20.42 ft.  
Hip Line = 180.1 ft.  
Horiz. OH = 254.58 ft.  
Raked OH = 26 ft.  
Decking = 87 sheets

All Walls Shown Are Considered Load Bearing

▲ = Indicates Left End of Truss (Reference Engineered Truss Drawing)  
Do Not Erect Trusses Backwards

1 Truss Placement Plan  
Scale: 1/4"=1'

**Hatch Legend**

- Flush Beam
- Padded HVAC
- 2nd Floor Walls @ 8' 1 1/2" UNO
- Drop Beam

Connector Information				Nail Information	
Sym	Product	Manuf	Qty	Supported Member	Header / Truss
	HJC26	USP	7	Varies	16d/3-1/2" / 10d/3"
	MSH422	USP	3	Varies	10d/3" / 10d/3"

Products					
PlotID	Length	Product	Plies	Net Qty	Fab Type
DB2	7' 0"	1-3/4"x 9-1/4" LVL Kerto-S	2	2	FF
HDR2	7' 0"	1-3/4"x 9-1/4" LVL Kerto-S	2	2	FF
HDR1	6' 0"	1-3/4"x 9-1/4" LVL Kerto-S	2	2	FF
GDH	22' 0"	1-3/4"x 11-7/8" LVL Kerto-S	2	2	FF
FB1	23' 0"	1-3/4"x 23-7/8" LVL Kerto-S	3	3	FF
DB3	22' 0"	2x12 SP No.2	2	2	FF

Products					
PlotID	Length	Product	Plies	Net Qty	Fab Type
HDR3	6' 0"	1-3/4"x 9-1/4" LVL Kerto-S	2	2	FF

All Truss Reactions are Less than 3,000 lbs. Unless Noted Otherwise.

○ -- Denotes Reaction Greater than 3,000 lbs. Reaction / # of Studs

BUILDER	JOB NAME	PLAN	SEAL DATE	QUOTE #	JOB #
Precision Custom Homes	Lot 7 Magnolia Hills	Hayek w/CP	9/10/2024	N/A	J0724-4090
Harnett	Lot 7 Magnolia Hills, Cameron, NC	Floor	9/13/2024	Neil Baggett	Neil Baggett
COUNTY	ADDRESS	MODEL	DATE REV.	DRAWN BY	SALESMAN

**THIS IS A TRUSS PLACEMENT DIAGRAM ONLY.**  
These trusses are designed as individual building components to be incorporated into the building design at the specification of the building designer. See individual design sheets for each truss design identified on the placement drawing. The building designer is responsible for temporary and permanent bracing of the roof and floor system and for the overall structure. The design of the truss support structure including headers, beams, walls, and columns is the responsibility of the building designer. For general guidance regarding bracing, consult BCSI-B1 and BCSI-B3 provided with the truss delivery package or online @ sbciindustry.com

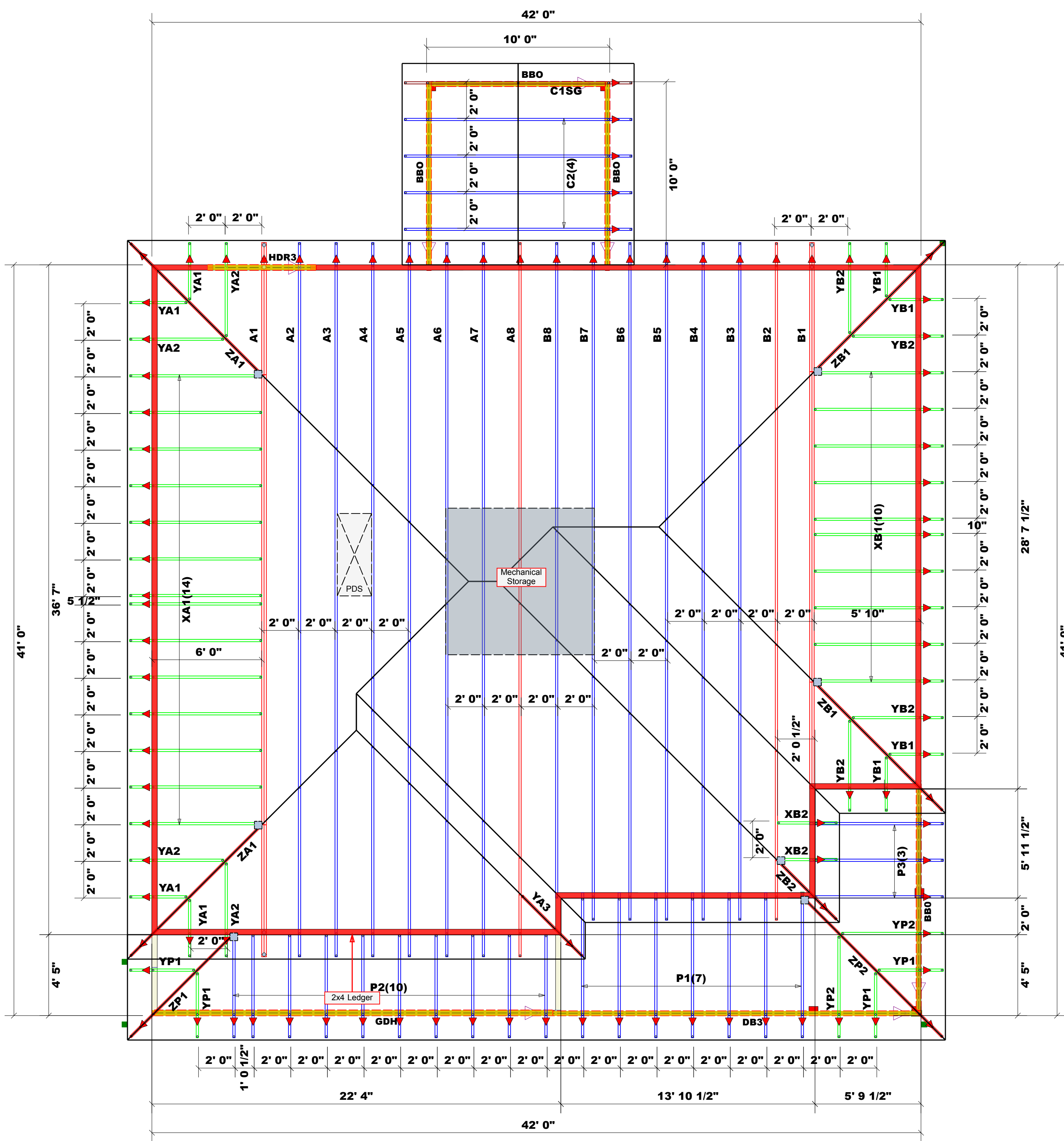


# ROOF & FLOOR TRUSSES & BEAMS

Reilly Road Industrial Park  
Fayetteville, N.C. 28309  
Phone: (910) 864-8787  
Fax: (910) 864-4444

Bearing reactions less than or equal to 3000# are deemed to comply with the prescriptive Code requirements. The contractor shall refer to the attached Tables ( derived from the prescriptive Code requirements ) to determine the minimum foundation size and number of wood studs required to support reactions greater than 3000# but not greater than 15000#. A registered design professional shall be retained to design the support system for any reaction that exceeds those specified in the attached Tables. A registered design professional shall be retained to design the support system for all reactions that exceed 15000#.

Signature \_\_\_\_\_  
**Neil Baggett**



**Dimension Notes**  
1. All exterior wall to wall dimensions are to face of stud unless noted otherwise.  
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3. All exterior wall to truss dimensions are to face of stud unless noted otherwise.

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1 Truss Placement Plan  
Scale: 1/4"=1'

**Hatch Legend**

[Orange Box]	Flush Beam
[Grey Box]	Padded HVAC
[Red Box]	2nd Floor Walls @ 8' 1 1/2" UNO
[Yellow Box]	Drop Beam

Connector Information				Nail Information		
Sym	Product	Manuf	Qty	Supported Member	Header	Truss
[Blue Box]	HJC26	USP	7	Varies	16d/3-1/2"	10d/3"
[Blue Circle]	MSH422	USP	3	Varies	10d/3"	10d/3"

Products					
PlotID	Length	Product	Plies	Net Qty	Fab Type
DB2	7' 0"	1-3/4"x 9-1/4" LVL Kerto-S	2	2	FF
HDR2	7' 0"	1-3/4"x 9-1/4" LVL Kerto-S	2	2	FF
HDR1	6' 0"	1-3/4"x 9-1/4" LVL Kerto-S	2	2	FF
GDH	22' 0"	1-3/4"x 11-7/8" LVL Kerto-S	2	2	FF
FB1	23' 0"	1-3/4"x 23-7/8" LVL Kerto-S	3	3	FF
DB3	22' 0"	2x12 SP No.2	2	2	FF

Products					
PlotID	Length	Product	Plies	Net Qty	Fab Type
HDR3	6' 0"	1-3/4"x 9-1/4" LVL Kerto-S	2	2	FF

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○ -- Denotes Reaction Greater than 3,000 lbs. Reaction / # of Studs

### LOAD CHART FOR JACK STUDS

(BASED ON TABLES R502.5(1) & (b))  
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1700	1	2550	1	3400	1
3400	2	5100	2	6800	2
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6800	4	10200	4	13600	4
8500	5	12750	5	17000	5
10200	6	15300	6		
11900	7				
13600	8				
15300	9				

BUILDER	JOB NAME	PLAN	SEAL DATE	QUOTE #	JOB #	COUNTY	ADDRESS	MODEL	DATE REV.	DRAWN BY	SALESMAN
Harnett	Lot 7 Magnolia Hills, Cameron, NC	Roof	9/13/2024	Neil Baggett	Neil Baggett	Precision Custom Homes	Lot 7 Magnolia Hills	Hayek w/CP	9/10/24	N/A	J0724-4089

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RE: J0724-4089  
 Lot 7 Magnolia Hills

**Trenco**  
 818 Soundside Rd  
 Edenton, NC 27932

**Site Information:**

Customer: Project Name: J0724-4089  
 Lot/Block: Model:  
 Address: Subdivision:  
 City: State:

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

Design Code: IRC2015/TPI2014 Design Program: MiTek 20/20 8.6  
 Wind Code: ASCE 7-10 Wind Speed: 130 mph  
 Roof Load: 40.0 psf Floor Load: N/A psf

This package includes 36 individual, dated Truss Design Drawings and 5 Additional Drawings.

No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	I67767572	A1	8/23/2024	21	I67767592	P3	8/23/2024
2	I67767573	A2	8/23/2024	22	I67767593	XA1	8/23/2024
3	I67767574	A3	8/23/2024	23	I67767594	XB1	8/23/2024
4	I67767575	A4	8/23/2024	24	I67767595	XB2	8/23/2024
5	I67767576	A5	8/23/2024	25	I67767596	YA1	8/23/2024
6	I67767577	A6	8/23/2024	26	I67767597	YA2	8/23/2024
7	I67767578	A7	8/23/2024	27	I67767598	YA3	8/23/2024
8	I67767579	A8	8/23/2024	28	I67767599	YB1	8/23/2024
9	I67767580	B1	8/23/2024	29	I67767600	YB2	8/23/2024
10	I67767581	B2	8/23/2024	30	I67767601	YP1	8/23/2024
11	I67767582	B3	8/23/2024	31	I67767602	YP2	8/23/2024
12	I67767583	B4	8/23/2024	32	I67767603	ZA1	8/23/2024
13	I67767584	B5	8/23/2024	33	I67767604	ZB1	8/23/2024
14	I67767585	B6	8/23/2024	34	I67767605	ZB2	8/23/2024
15	I67767586	B7	8/23/2024	35	I67767606	ZP1	8/23/2024
16	I67767587	B8	8/23/2024	36	I67767607	ZP2	8/23/2024
17	I67767588	C1SG	8/23/2024				
18	I67767589	C2	8/23/2024				
19	I67767590	P1	8/23/2024				
20	I67767591	P2	8/23/2024				

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

Truss Design Engineer's Name: Tony Miller

My license renewal date for the state of North Carolina is December 31, 2024.

North Carolina COA: C-0844

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 TRENCO. Any project specific information included is for TRENCO customers file reference purpose only, and was not taken into account in the preparation of these designs. 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.



August 23, 2024

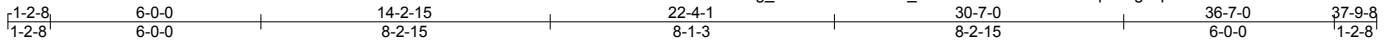


Job J0724-4089	Truss A1	Truss Type HIP GIRDER	Qty 1	Ply 2	Lot 7 Magnolia Hills 167767572
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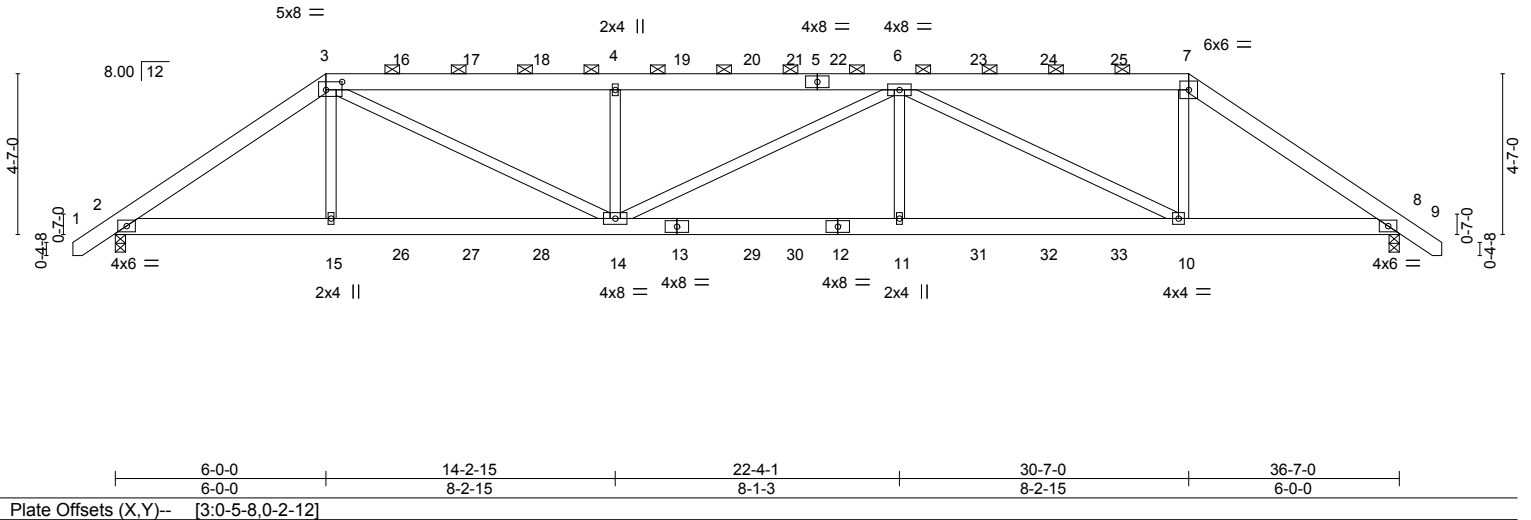
Comtech, Inc. Fayetteville, NC - 28314,

8.630 s Jul 12 2024 MiTek Industries, Inc. Fri Aug 23 09:52:18 2024 Page 1

ID:3YJEG\_u8zX16RsP?VvW\_V6zd0wB-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrcDoi7J4zJC?f



Scale = 1:65.6



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.36	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.50	Vert(LL) -0.15 11-14 >999 360		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.90	Vert(CT) -0.31 11-14 >999 240		
BCDL 10.0	Rep Stress Incr NO	Matrix-S	Horz(CT) 0.08 8 n/a n/a		
	Code IRC2015/TPI2014		Wind(LL) 0.17 11-14 >999 240	Weight: 489 lb	FT = 20%

**LUMBER-**  
TOP CHORD 2x6 SP No.1  
BOT CHORD 2x6 SP No.1  
WEBS 2x4 SP No.2

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 3-7.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 2=0-3-8, 8=0-3-8  
Max Horz 2=-114(LC 25)  
Max Uplift 2=-653(LC 8), 8=-653(LC 9)  
Max Grav 2=2833(LC 1), 8=2833(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-4582/1150, 3-4=-6352/1681, 4-6=-6351/1681, 6-7=-3751/991, 7-8=-4580/1148  
BOT CHORD 2-15=-975/3684, 14-15=-974/3704, 11-14=-1652/6353, 10-11=-1652/6353,  
8-10=-874/3682  
WEBS 3-15=0/728, 3-14=-865/3006, 4-14=-993/579, 6-11=0/674, 6-10=-2969/860,  
7-10=-359/1914

- 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: 2x6 - 2 rows staggered at 0-9-0 oc.  
Webs connected as follows: 2x4 - 1 row 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; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); Lumber DOL=1.60 plate grip DOL=1.60
  - Provide adequate drainage to prevent water ponding.
  - 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) except (jt=lb) 2=653, 8=653.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



August 23, 2024

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/TPI1 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>	 818 Soundside Road Edenton, NC 27932
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Job J0724-4089	Truss A1	Truss Type HIP GIRDER	Qty 1	Ply <b>2</b>	Lot 7 Magnolia Hills Job Reference (optional)	I67767572
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Comtech, Inc. Fayetteville, NC - 28314,

8.630 s Jul 12 2024 MiTek Industries, Inc. Fri Aug 23 09:52:18 2024 Page 2

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**NOTES-**

10) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 137 lb down and 121 lb up at 6-0-0, 142 lb down and 118 lb up at 8-0-12, 142 lb down and 118 lb up at 10-0-12, 142 lb down and 118 lb up at 12-0-12, 142 lb down and 118 lb up at 14-0-12, 142 lb down and 118 lb up at 16-0-12, 142 lb down and 118 lb up at 18-0-12, 142 lb down and 118 lb up at 18-6-4, 142 lb down and 118 lb up at 20-6-4, 142 lb down and 118 lb up at 22-6-4, 142 lb down and 118 lb up at 24-6-4, 142 lb down and 118 lb up at 26-6-4, and 142 lb down and 118 lb up at 28-6-4, and 137 lb down and 121 lb up at 30-7-0 on top chord, and 351 lb down and 123 lb up at 6-0-0, 76 lb down at 8-0-12, 76 lb down at 10-0-12, 76 lb down at 12-0-12, 76 lb down at 14-0-12, 76 lb down at 16-0-12, 76 lb down at 18-0-12, 76 lb down at 18-6-4, 76 lb down at 20-6-4, 76 lb down at 22-6-4, 76 lb down at 24-6-4, 76 lb down at 26-6-4, and 76 lb down at 28-6-4, and 351 lb down and 123 lb up at 30-6-4 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: 1-3=-60, 3-7=-60, 7-9=-60, 2-8=-20

Concentrated Loads (lb)

Vert: 3=-104(B) 7=-104(B) 13=-38(B) 15=-351(B) 14=-38(B) 4=-104(B) 11=-38(B) 10=-351(B) 6=-104(B) 12=-38(B) 16=-104(B) 17=-104(B) 18=-104(B) 19=-104(B) 20=-104(B) 21=-104(B) 22=-104(B) 23=-104(B) 24=-104(B) 25=-104(B) 26=-38(B) 27=-38(B) 28=-38(B) 29=-38(B) 30=-38(B) 31=-38(B) 32=-38(B) 33=-38(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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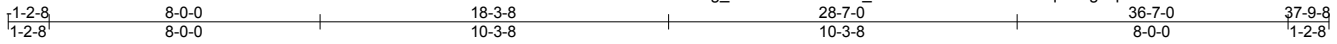
818 Soundside Road  
Edenton, NC 27932

Job J0724-4089	Truss A2	Truss Type HIP	Qty 1	Ply 1	Lot 7 Magnolia Hills Job Reference (optional)	167767573
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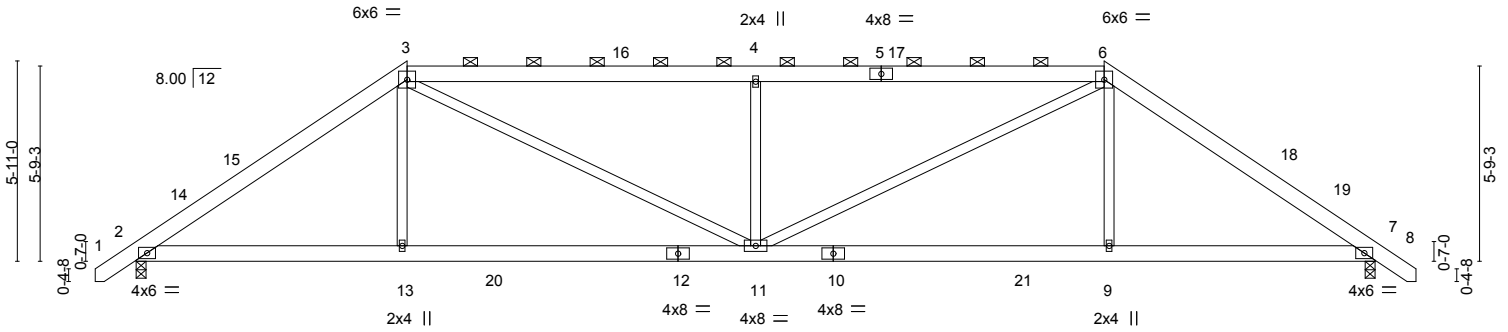
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8.630 s Jul 12 2024 MiTek Industries, Inc. Fri Aug 23 09:52:18 2024 Page 1

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Scale = 1:68.0



LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.50	Vert(LL) -0.10	11	>999	360	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.36	Vert(CT) -0.22	9-11	>999	240		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.54	Horz(CT) 0.06	7	n/a	n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Wind(LL) 0.08	11	>999	240		
	Code IRC2015/TPI2014						Weight: 241 lb	FT = 20%

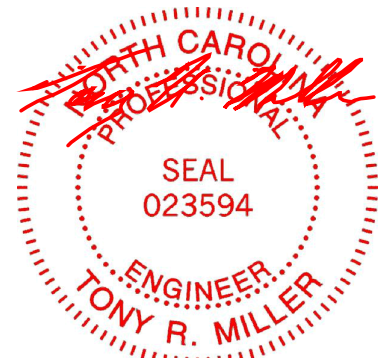
**LUMBER-**  
 TOP CHORD 2x6 SP No.1  
 BOT CHORD 2x6 SP No.1  
 WEBS 2x4 SP No.2

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 4-11-1 oc purlins, except  
 2-0-0 oc purlins (4-2-15 max.): 3-6.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 2=0-3-8, 7=0-3-8  
 Max Horz 2=-144(LC 10)  
 Max Uplift 2=-55(LC 9), 7=-55(LC 8)  
 Max Grav 2=1525(LC 1), 7=1525(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-2234/504, 3-4=-2621/698, 4-6=-2620/697, 6-7=-2235/504  
 BOT CHORD 2-13=-247/1741, 11-13=-250/1735, 9-11=-256/1737, 7-9=-253/1743  
 WEBS 3-13=0/400, 3-11=-226/1090, 4-11=-729/346, 6-11=-226/1088, 6-9=0/400

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCCL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-0-15 to 3-3-14, Interior(1) 3-3-14 to 8-0-0, Exterior(2) 8-0-0 to 14-2-11, Interior(1) 14-2-11 to 28-7-0, Exterior(2) 28-7-0 to 34-9-11, Interior(1) 34-9-11 to 37-7-15 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Provide adequate drainage to prevent water ponding.
  - 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, with BCDL = 10.0psf.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 7.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



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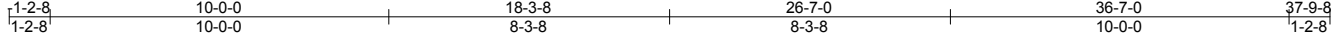
818 Soundside Road  
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 7 Magnolia Hills	167767574
J0724-4089	A3	HIP	1	1		

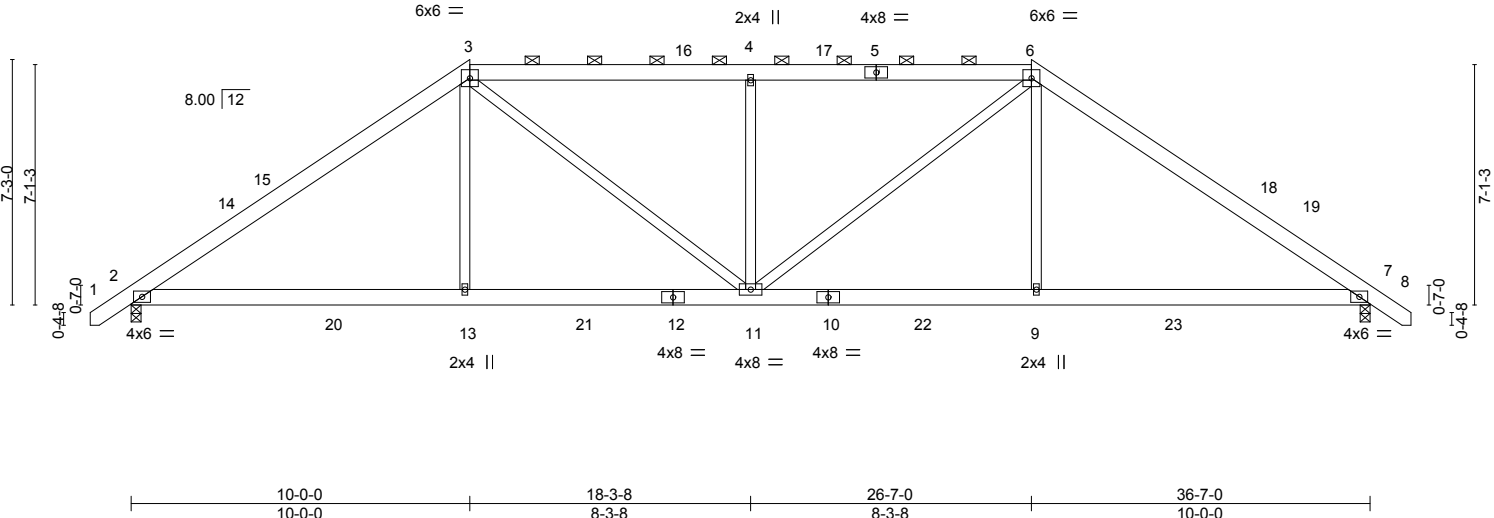
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8.630 s Jul 12 2024 MiTek Industries, Inc. Fri Aug 23 09:52:19 2024 Page 1

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Scale = 1:68.0



<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 0.61	Vert(LL)	-0.10 2-13	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.49	Vert(CT)	-0.19 2-13	>999	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.42	Horz(CT)	0.06 7	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S	Wind(LL)	0.06 2-13	>999	240	Weight: 246 lb	FT = 20%

**LUMBER-**  
 TOP CHORD 2x6 SP No.1  
 BOT CHORD 2x6 SP No.1  
 WEBS 2x4 SP No.2

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 4-1-5 oc purlins, except 2-0-0 oc purlins (5-0-0 max.); 3-6.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 2=0-3-8, 7=0-3-8  
 Max Horz 2=-176(LC 10)  
 Max Uplift 2=-50(LC 12), 7=-50(LC 13)  
 Max Grav 2=1664(LC 2), 7=1664(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-2419/486, 3-4=-2262/594, 4-6=-2261/593, 6-7=-2420/487  
 BOT CHORD 2-13=-206/1891, 11-13=-208/1879, 9-11=-216/1880, 7-9=-214/1892  
 WEBS 3-13=0/613, 3-11=-176/655, 4-11=-564/255, 6-11=-176/653, 6-9=0/613

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCCL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 1-0-15 to 3-3-14, Interior(1) 3-3-14 to 10-0-0, Exterior(2) 10-0-0 to 16-2-11, Interior(1) 16-2-11 to 26-7-0, Exterior(2) 26-7-0 to 32-9-11, Interior(1) 32-9-11 to 37-7-15 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Provide adequate drainage to prevent water ponding.
  - 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 5) \* 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, with BCDL = 10.0psf.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 7.
  - 7) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



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Job	Truss	Truss Type	Qty	Ply	Lot 7 Magnolia Hills	167767575
J0724-4089	A4	ROOF SPECIAL	1	1	Job Reference (optional)	

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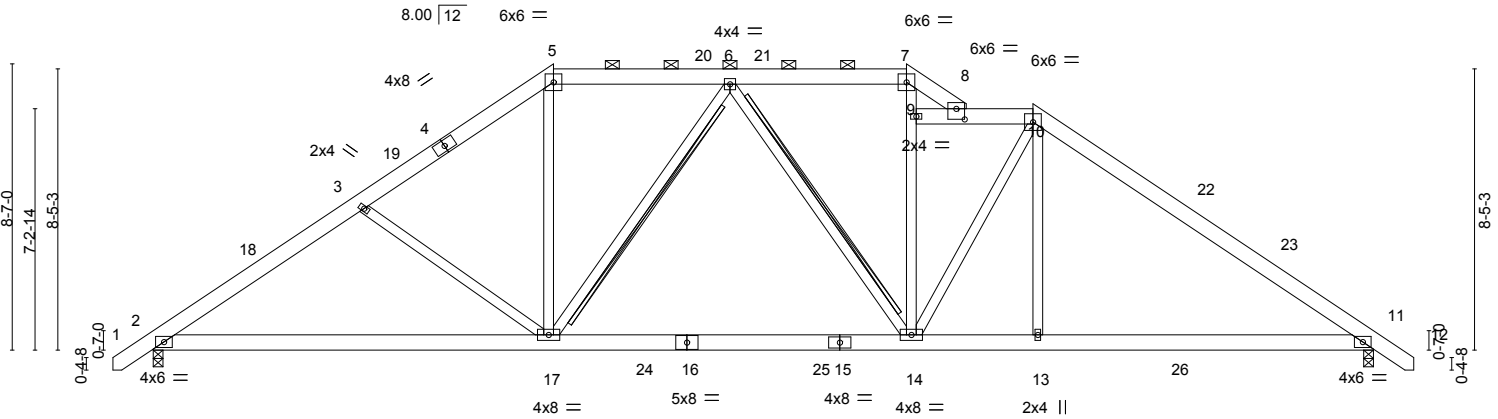


Plate Offsets (X,Y)--	[8:0-3:0,0-3:13]
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<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL 1.15	TC 0.73	Vert(LL) -0.22 14-17 >999 360	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.57	Vert(CT) -0.34 14-17 >999 240		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.34	Horz(CT) 0.06 11 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-S	Wind(LL) 0.06 11-13 >999 240	Weight: 274 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 4-3-12 oc purlins, except
BOT CHORD 2x6 SP No.1	2-0-0 oc purlins (4-5-0 max.): 5-7, 9-10.
WEBS 2x4 SP No.2	Rigid ceiling directly applied or 10-0-0 oc bracing.
	T-Brace: 2x4 SPF No.2 - 6-17, 6-14
	Fasten (2X) T and I braces to narrow edge of web with 10d (0.131"x3") nails, 6in o.c., with 3in minimum end distance.
	Brace must cover 90% of web length.

**REACTIONS.** (size) 2=0-3-8, 11=0-3-8  
 Max Horz 2=210(LC 11)  
 Max Uplift 2=64(LC 12), 11=-79(LC 13)  
 Max Grav 2=1525(LC 1), 11=1591(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-2201/526, 3-5=-1970/485, 5-6=-1560/463, 6-7=-1722/497, 7-8=-1999/548, 8-10=-1713/447, 10-11=-2269/479  
 BOT CHORD 2-17=-305/1849, 14-17=-191/1732, 13-14=-213/1765, 11-13=-212/1772  
 WEBS 3-17=-408/238, 5-17=-105/777, 6-17=-389/173, 9-14=-71/371, 7-9=-162/732, 10-13=0/334

- NOTES-**
- 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) and C-C Exterior(2) -1-0-15 to 3-3-14, Interior(1) 3-3-14 to 12-0-0, Exterior(2) 12-0-0 to 16-4-13, Interior(1) 16-4-13 to 22-7-0, Exterior(2) 22-7-0 to 24-4-8, Interior(1) 24-4-8 to 26-4-8, Exterior(2) 26-4-8 to 30-9-5, Interior(1) 30-9-5 to 37-7-15 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Provide adequate drainage to prevent water ponding.
  - 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, with BCDL = 10.0psf.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 11.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.



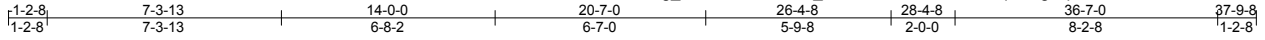
August 23, 2024

Job	Truss	Truss Type	Qty	Ply	Lot 7 Magnolia Hills	167767576
J0724-4089	A5	ROOF SPECIAL	1	1	Job Reference (optional)	

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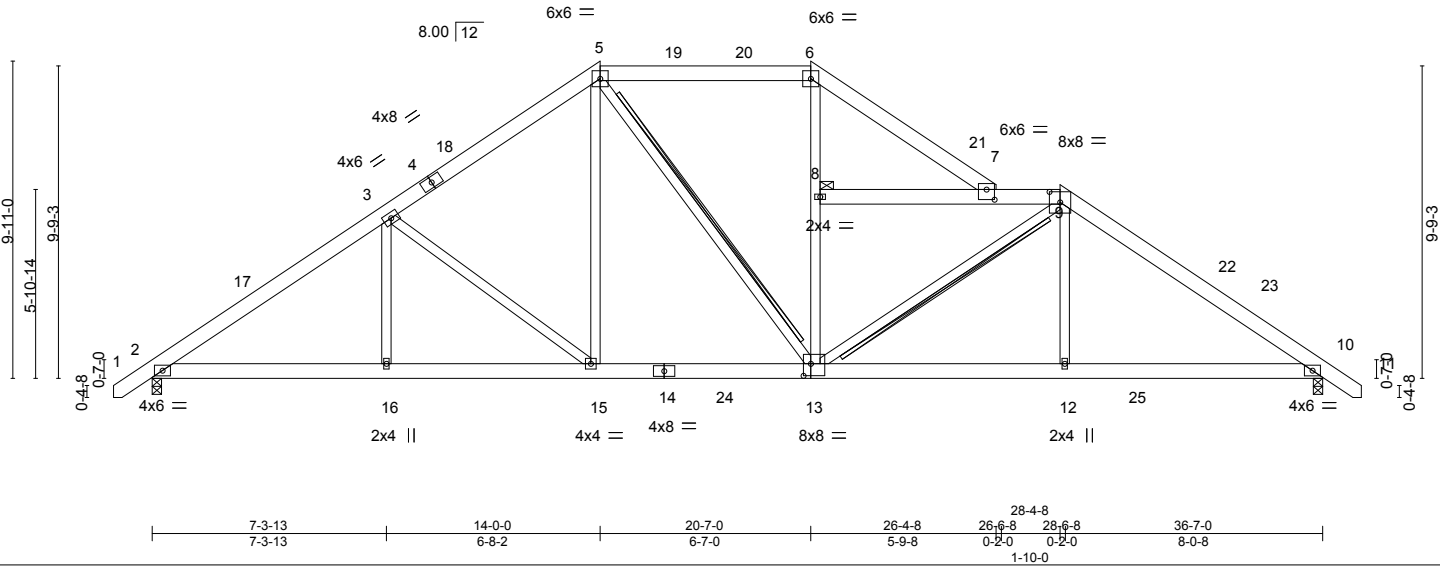


Plate Offsets (X,Y)--	[7:0-3-0,0-3-13], [9:0-4-0,0-3-15], [13:0-2-12,0-4-8]
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LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP	
TCLL 20.0	Plate Grip DOL	1.15	TC 0.99	Vert(LL)	-0.14	13-15	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.32	Vert(CT)	-0.25	13-15	>999	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.70	Horz(CT)	0.06	10	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S	Wind(LL)	0.09	13	>999	240	Weight: 287 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 5-0-2 oc purlins, except 2-0-0 oc purlins (2-2-0 max.): 5-6, 8-9.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.2	WEBS T-Brace: 2x4 SPF No.2 - 9-13, 5-13 Fasten (2X) T and I braces to narrow edge of web with 10d (0.131"x3") nails, 6in o.c., with 3in minimum end distance. Brace must cover 90% of web length.
	JOINTS 1 Brace at Jt(s): 8


**REACTIONS.** (size) 2=0-3-8, 10=0-3-8  
 Max Horz 2=241(LC 11)  
 Max Uplift 2=-76(LC 12), 10=-90(LC 13)  
 Max Grav 2=1525(LC 1), 10=1525(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-2229/479, 3-5=-1740/503, 5-6=-1410/499, 6-7=-1721/497, 7-9=-1390/334, 9-10=-2246/490  
 BOT CHORD 2-16=-246/1844, 15-16=-246/1844, 13-15=-73/1411, 12-13=-265/1764, 10-12=-263/1769  
 WEBS 3-16=0/295, 3-15=-619/215, 5-15=-59/606, 8-13=0/398, 6-8=-49/557, 9-13=-520/208, 9-12=0/349, 5-13=-113/250

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-0-15 to 3-3-14, Interior(1) 3-3-14 to 14-0-0, Exterior(2) 14-0-0 to 18-4-13, Interior(1) 18-4-13 to 20-7-0, Exterior(2) 20-7-0 to 24-11-13, Interior(1) 24-11-13 to 28-4-8, Exterior(2) 28-4-8 to 32-9-5, Interior(1) 32-9-5 to 37-7-15 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Provide adequate drainage to prevent water ponding.
  - 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 5) \* 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, with BCDL = 10.0psf.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 10.
  - 7) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - 8) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.



August 23, 2024

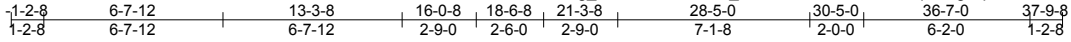
<p><b>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.</b></p> <p>Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. 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/TPI 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>818 Soundside Road Edenton, NC 27932</p>
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Job	Truss	Truss Type	Qty	Ply	Lot 7 Magnolia Hills	167767577
J0724-4089	A6	ROOF SPECIAL	1	1	Job Reference (optional)	

Comtech, Inc. Fayetteville, NC - 28314,

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ID:3YJEG\_u8zX16RsP?VvW\_V6zd0wB-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:85.5

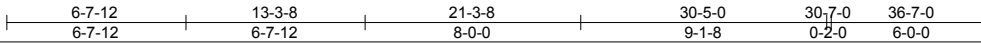
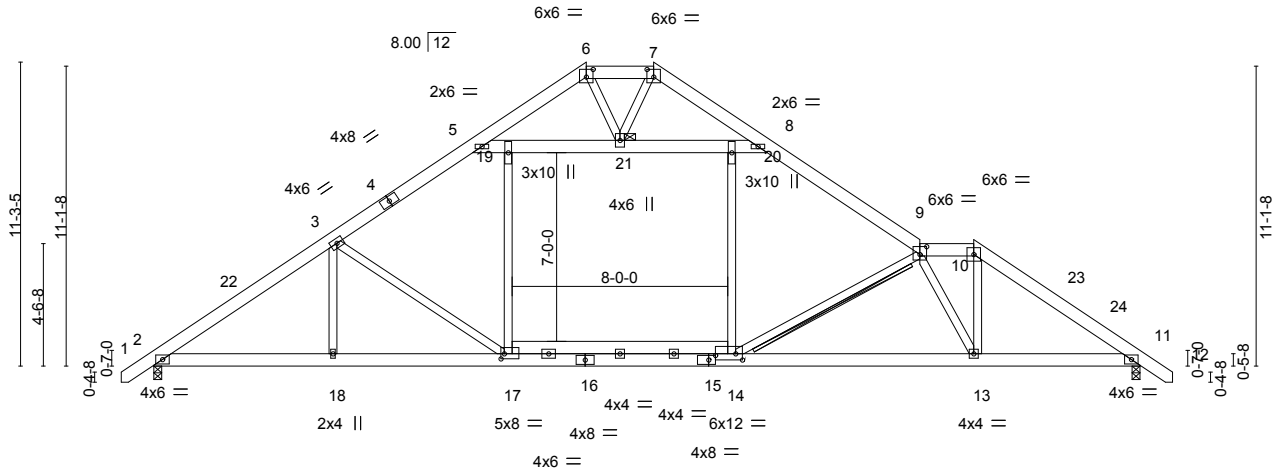


Plate Offsets (X,Y)--	[6:0-3-0,0-3-6], [7:0-3-0,0-3-6], [9:0-3-0,0-3-8], [14:0-3-0,0-2-12], [15:0-3-0,0-2-0], [17:0-1-8,0-2-4]
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LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.40	Vert(LL)	-0.24	13-14	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.70	Vert(CT)	-0.39	13-14	>999		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.61	Horz(CT)	0.06	11	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S	Wind(LL)	0.18	13-14	>999		
								Weight: 309 lb	FT = 20%

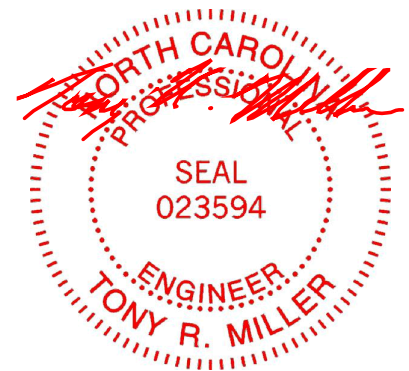
**LUMBER-**  
 TOP CHORD 2x6 SP No.1  
 BOT CHORD 2x6 SP No.1  
 WEBS 2x4 SP No.2 \*Except\*  
 5-8: 2x6 SP No.1

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 4-11-7 oc purlins, except  
 2-0-0 oc purlins (5-9-6 max.): 6-7, 9-10.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
 WEBS T-Brace: 2x4 SPF No.2 - 9-14  
 Fasten (2X) T and I braces to narrow edge of web with 10d (0.131"x3") nails, 6in o.c., with 3in minimum end distance.  
 Brace must cover 90% of web length.  
 JOINTS 1 Brace at Jt(s): 21

**REACTIONS.** (size) 2=0-3-8, 11=0-3-8  
 Max Horz 2=272(LC 11)  
 Max Uplift 2=-85(LC 12), 11=-98(LC 13)  
 Max Grav 2=1594(LC 19), 11=1552(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-2339/435, 3-5=-1982/477, 5-6=-752/192, 6-7=-673/201, 7-8=-759/195,  
 8-9=-2017/464, 9-10=-1846/441, 10-11=-2342/452  
 BOT CHORD 2-18=-215/2027, 17-18=-215/2027, 14-17=-111/1688, 13-14=-340/2238, 11-13=-251/1836  
 WEBS 3-17=-492/195, 17-19=-21/593, 14-20=-12/707, 9-13=-952/222, 10-13=-112/1045,  
 9-14=-877/285, 5-19=-1122/365, 19-21=-1122/365, 20-21=-1061/355, 8-20=-1061/355,  
 6-21=-56/391, 7-21=-79/302

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-0-15 to 3-3-14, Interior(1) 3-3-14 to 16-0-8, Exterior(2) 16-0-8 to 22-9-14, Interior(1) 22-9-14 to 30-5-0, Exterior(2) 30-5-0 to 34-9-13, Interior(1) 34-9-13 to 37-7-15 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Provide adequate drainage to prevent water ponding.
  - 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 5) \* 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, with BCDL = 10.0psf.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 11.
  - 7) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - 8) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.

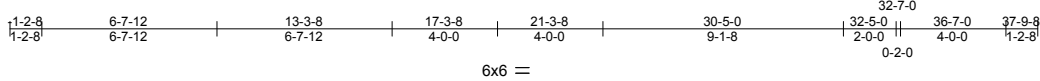


Job J0724-4089	Truss A7	Truss Type ROOF SPECIAL	Qty 1	Ply 1	Lot 7 Magnolia Hills Job Reference (optional)	167767578
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Comtech, Inc. Fayetteville, NC - 28314,

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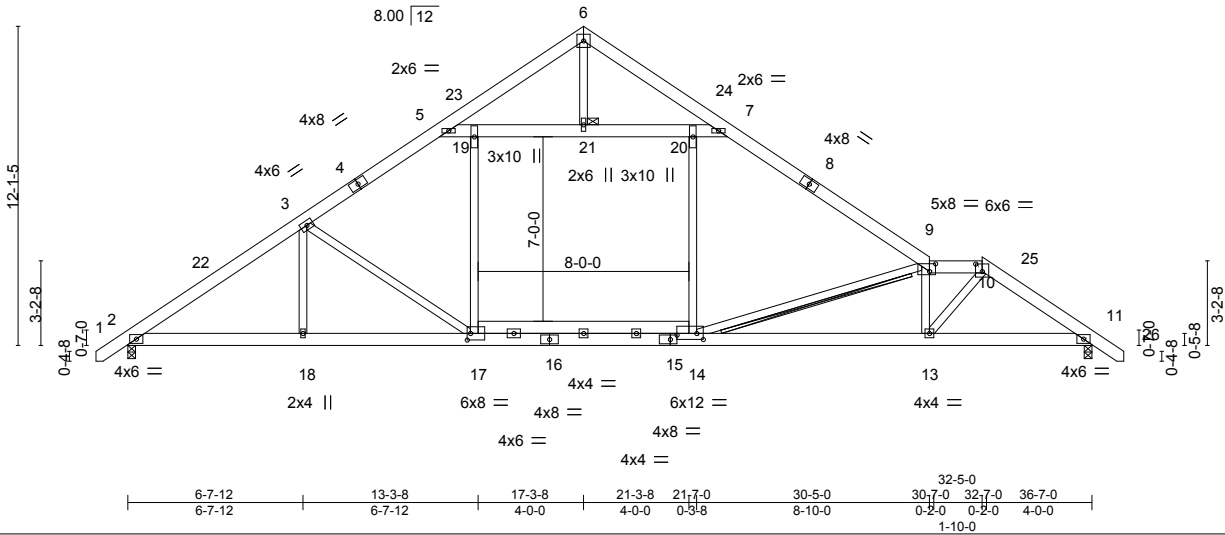


Plate Offsets (X,Y)--	[9:0-2-12,0-3-8], [10:0-3-0,0-3-6], [14:0-3-0,0-2-12], [15:0-3-0,0-2-0], [17:0-1-8,0-3-0]
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LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.38	Vert(LL)	-0.30	13-14	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.79	Vert(CT)	-0.47	13-14	>934		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.62	Horz(CT)	0.07	11	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S	Wind(LL)	0.22	13-14	>999		
								Weight: 306 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 4-11-3 oc purlins, except
BOT CHORD 2x6 SP No.1	2-0-0 oc purlins (4-7-10 max.): 9-10.
WEBS 2x4 SP No.2 *Except*	Rigid ceiling directly applied or 10-0-0 oc bracing.
5-7: 2x6 SP No.1	T-Brace: 2x4 SPF No.2 - 9-14
	Fasten (2X) T and I braces to narrow edge of web with 10d (0.131"x3") nails, 6in o.c., with 3in minimum end distance.
	Brace must cover 90% of web length.
	JOINTS 1 Brace at Jt(s): 21


**REACTIONS.** (size) 2=0-3-8, 11=0-3-8  
 Max Horz 2=-294(LC 10)  
 Max Uplift 2=-90(LC 12), 11=-102(LC 13)  
 Max Grav 2=1611(LC 19), 11=1564(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-2365/404, 3-5=-2055/454, 5-6=-720/137, 6-7=-746/136, 7-9=-2111/430,  
 9-10=-2856/559, 10-11=-2381/450  
 BOT CHORD 2-18=-184/2063, 17-18=-184/2063, 14-17=-97/1739, 13-14=-390/2769, 11-13=-261/1887  
 WEBS 3-17=-495/220, 9-13=-1025/288, 10-13=-246/1539, 9-14=-1289/325, 5-19=-1209/415,  
 19-21=-1209/415, 20-21=-1209/415, 7-20=-1209/415, 17-19=-21/588, 14-20=0/686,  
 6-21=0/467

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-0-15 to 3-3-14, Interior(1) 3-3-14 to 17-3-8, Exterior(2) 17-3-8 to 21-8-5, Interior(1) 21-8-5 to 32-5-0, Exterior(2) 32-5-0 to 36-9-13, Interior(1) 36-9-13 to 37-7-15 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Provide adequate drainage to prevent water ponding.
  - 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 5) \* 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, with BCDL = 10.0psf.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2 except (jt=1b) 11=102.
  - 7) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - 8) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.



August 23, 2024

<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.sbccomponents.com)</p>	 <p>818 Soundside Road Edenton, NC 27932</p>
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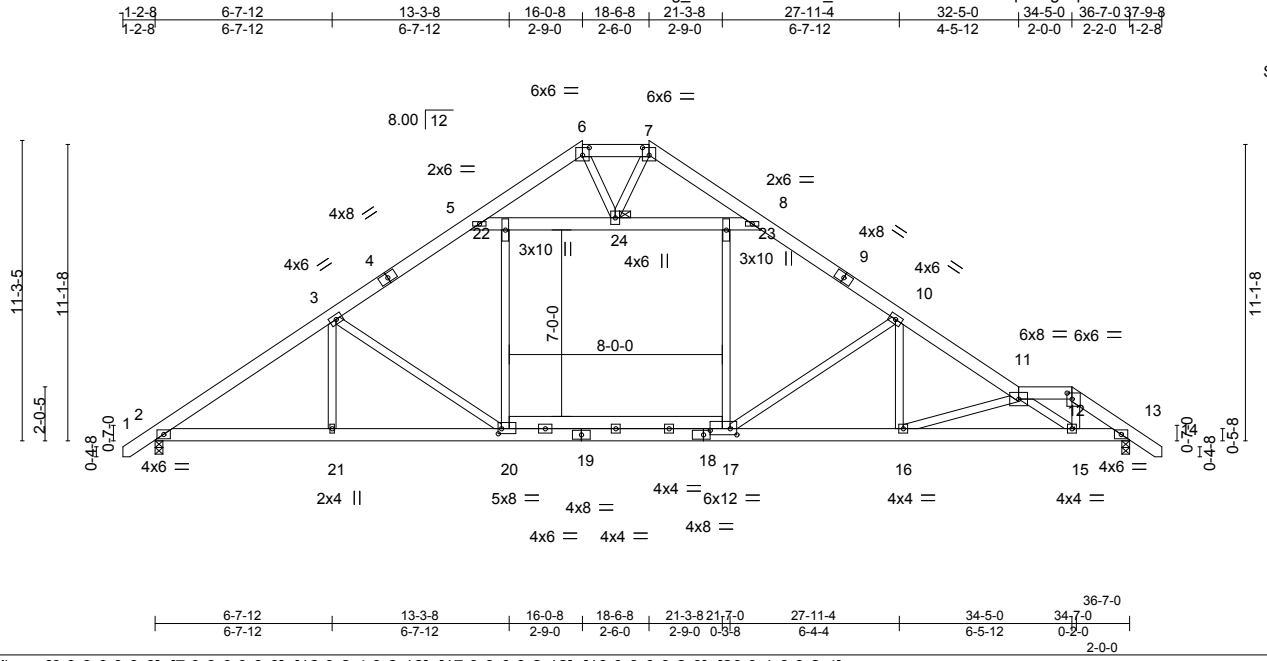


Job	Truss	Truss Type	Qty	Ply	Lot 7 Magnolia Hills	167767579
J0724-4089	A8	ROOF SPECIAL GIRDER	1	1	Job Reference (optional)	

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Scale = 1:86.5

Plate Offsets (X,Y)--	[6:0-3-0,0-3-6], [7:0-3-0,0-3-6], [12:0-2-4,0-2-12], [17:0-3-0,0-2-12], [18:0-3-0,0-2-0], [20:0-1-8,0-2-4]
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LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.39	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.72	Vert(LL) -0.22 16-17 >999 360		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.97	Vert(CT) -0.36 16-17 >999 240		
BCDL 10.0	Rep Stress Incr NO	Matrix-S	Horz(CT) 0.07 13 n/a n/a		
	Code IRC2015/TP12014		Wind(LL) 0.17 16-17 >999 240	Weight: 315 lb	FT = 20%

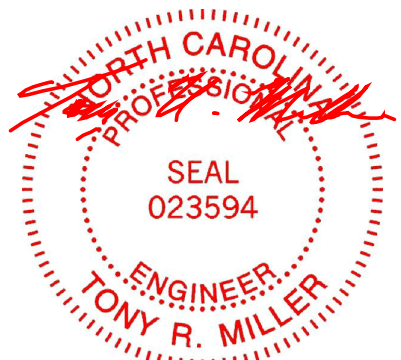
<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 4-8-2 oc purlins, except
BOT CHORD 2x6 SP No.1	2-0-0 oc purlins (6-0-0 max.): 6-7, 11-12.
WEBS 2x4 SP No.2 *Except*	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
5-8: 2x6 SP No.1	JOINTS 1 Brace at Jt(s): 24

<b>REACTIONS.</b>	(size) 2=0-3-8, 13=0-3-8
	Max Horz 2=273(LC 26)
	Max Uplift 2=-86(LC 8), 13=-101(LC 9)
	Max Grav 2=1595(LC 33), 13=1563(LC 34)

<b>FORCES.</b>	(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD	2-3=-2343/123, 3-5=-1978/151, 5-6=-770/54, 6-7=-692/60, 7-8=-762/57, 8-10=-2021/142, 10-11=-2742/161, 11-12=-1683/79, 12-13=-2245/74
BOT CHORD	2-21=-135/2030, 20-21=-135/2030, 17-20=0/1686, 16-17=-21/2238, 15-16=-133/3325, 13-15=-12/1770
WEBS	3-20=-491/192, 20-22=0/593, 17-23=0/736, 11-15=-2041/152, 12-15=0/1156, 10-17=-920/208, 10-16=0/565, 11-16=-1155/118, 5-22=-1086/173, 22-24=-1086/173, 23-24=-1050/168, 8-23=-1050/168, 7-24=-71/303, 6-24=-60/399

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Provide adequate drainage to prevent water ponding.
  - 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 5) \* 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, with BCDL = 10.0psf.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2 except (jt=lb) 13=101.
  - 7) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - 8) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 66 lb down and 36 lb up at 34-5-0 on top chord, and 10 lb down at 34-5-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
  - 9) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).


<b>LOAD CASE(S)</b>	Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15	
Uniform Loads (plf)	
Vert: 1-6=-60, 6-7=-60, 7-11=-60, 11-12=-60, 12-14=-60, 2-13=-20	



August 23, 2024

**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/TP1 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)

**ENGINEERING BY**  
  
 A MiTek Affiliate

818 Soundside Road  
 Edenton, NC 27932

Job J0724-4089	Truss B1	Truss Type HIP GIRDER	Qty 1	Ply 2	Lot 7 Magnolia Hills 167767580
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Comtech, Inc. Fayetteville, NC - 28314,

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Job Reference (optional)



Scale = 1:50.8

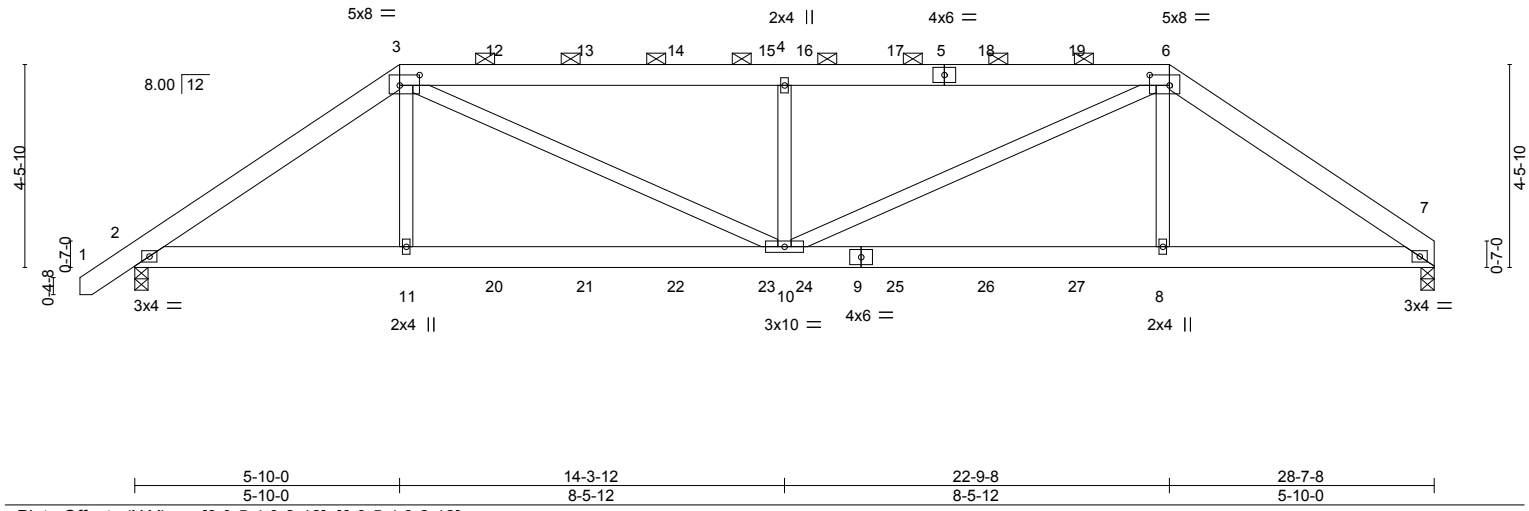


Plate Offsets (X,Y)--	[3:0-5-4,0-2-12], [6:0-5-4,0-2-12]				
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL 1.15	TC 0.32	Vert(LL) -0.07 10 >999 360	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.28	Vert(CT) -0.13 10-11 >999 240		
BCLL 0.0 *	Rep Stress Incr NO	WB 0.21	Horz(CT) 0.04 7 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-S	Wind(LL) 0.07 10 >999 240	Weight: 372 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except
BOT CHORD 2x6 SP No.1	2-0-0 oc purlins (6-0-0 max.): 3-6.
WEBS 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 7=0-3-8, 2=0-3-8  
 Max Horz 2=106(LC 24)  
 Max Uplift 7=-483(LC 9), 2=-501(LC 8)  
 Max Grav 7=2100(LC 1), 2=2177(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-3447/843, 3-4=-4284/1127, 4-6=-4285/1127, 6-7=-3431/844  
 BOT CHORD 2-11=-732/2755, 10-11=-731/2776, 8-10=-646/2782, 7-8=-647/2761  
 WEBS 3-11=0/714, 3-10=-536/1723, 4-10=-1085/640, 6-10=-536/1720, 6-8=0/716

- 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: 2x6 - 2 rows staggered at 0-9-0 oc.  
 Webs connected as follows: 2x4 - 1 row 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
  - Provide adequate drainage to prevent water ponding.
  - 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) except (jt=lb) 7=483, 2=501.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 134 lb down and 118 lb up at 5-10-0, 139 lb down and 115 lb up at 7-10-12, 139 lb down and 115 lb up at 9-10-12, 139 lb down and 115 lb up at 11-10-12, 139 lb down and 115 lb up at 13-10-12, 139 lb down and 115 lb up at 14-8-12, 139 lb down and 115 lb up at 16-8-12, 139 lb down and 115 lb up at 18-8-12, and 139 lb down and 115 lb up at 20-8-12, and 134 lb down and 118 lb up at 22-9-8 on top chord, and 329 lb down and 119 lb up at 5-10-0, 73 lb down at 7-10-12, 73 lb down at 9-10-12, 73 lb down at 11-10-12, 73 lb down at 13-10-12, 73 lb down at 14-8-12, 73 lb down at 16-8-12, 73 lb down at 18-8-12, and 73 lb down at 20-8-12, and 329 lb down and 119 lb up at 22-8-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.



**LOAD CASE(S)** Standard  
 Continued on page 2

**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/TPH 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.sbccomponents.com)

**ENGINEERING BY**  
**TRENCO**  
 A MiTek Affiliate  
 818 Soundside Road  
 Edenton, NC 27932

Job J0724-4089	Truss B1	Truss Type HIP GIRDER	Qty 1	Ply <b>2</b>	Lot 7 Magnolia Hills Job Reference (optional)	I67767580
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8.630 s Jul 12 2024 MiTek Industries, Inc. Fri Aug 23 09:52:24 2024 Page 2  
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**LOAD CASE(S)** Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (plf)

Vert: 1-3=-60, 3-6=-60, 6-7=-60, 2-7=-20

Concentrated Loads (lb)

Vert: 3=-99(F) 6=-99(F) 11=-329(F) 8=-329(F) 12=-99(F) 13=-99(F) 14=-99(F) 15=-99(F) 16=-99(F) 17=-99(F) 18=-99(F) 19=-99(F) 20=-36(F) 21=-36(F) 22=-36(F) 23=-36(F) 24=-36(F) 25=-36(F) 26=-36(F) 27=-36(F)

**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/TP1 Quality Criteria and DSB-22** available from Truss Plate Institute ([www.tpinst.org](http://www.tpinst.org)) and **BCSI Building Component Safety Information** available from the Structural Building Component Association ([www.sbcacomponents.com](http://www.sbcacomponents.com))



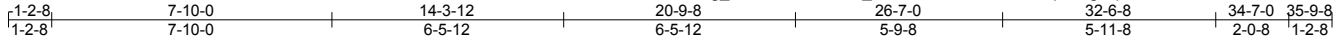
818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 7 Magnolia Hills	167767581
J0724-4089	B2	ROOF SPECIAL GIRDER	1	1		
					Job Reference (optional)	

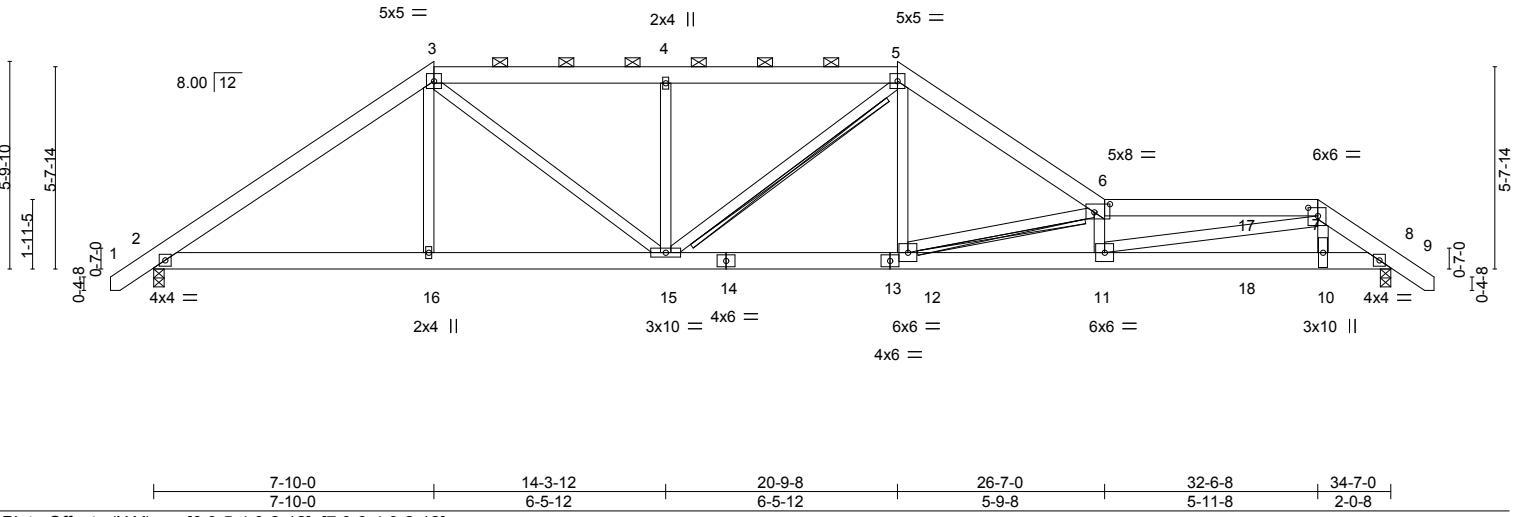
Comtech, Inc. Fayetteville, NC - 28314,

8.630 s Jul 12 2024 MiTek Industries, Inc. Fri Aug 23 09:52:24 2024 Page 1

ID:3YJEg\_u8zX16RsP?VvW\_V6zd0wB-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale: 3/16"=1'



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.51	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.57	Vert(LL) -0.26 11-12 >999 360		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.83	Vert(CT) -0.53 11-12 >776 240		
BCDL 10.0	Rep Stress Incr NO	Matrix-S	Horz(CT) 0.07 8 n/a n/a		
	Code IRC2015/TPI2014		Wind(LL) 0.18 11-12 >999 240	Weight: 242 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 4-5-1 oc purlins, except 2-0-0 oc purlins (3-1-1 max.): 3-5, 6-7.
BOT CHORD 2x6 SP No.1 *Except* 8-13: 2x6 SP 2400F 2.0E	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.2	WEBS T-Brace: 2x4 SPF No.2 - 5-15, 6-12 Fasten (2X) T and I braces to narrow edge of web with 10d (0.131"x3") nails, 6in o.c., with 3in minimum end distance. Brace must cover 90% of web length.

**REACTIONS.** (size) 2=0-3-8, 8=0-3-8  
 Max Horz 2=142(LC 26)  
 Max Uplift 2=-39(LC 8), 8=-93(LC 9)  
 Max Grav 2=1445(LC 1), 8=1445(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-2078/53, 3-4=-2225/85, 4-5=-2225/85, 5-6=-2717/82, 6-7=-5290/211,  
 7-8=-2543/104  
 BOT CHORD 2-16=-78/1610, 15-16=-80/1605, 12-15=0/2203, 11-12=-136/5193, 10-11=-48/1988,  
 8-10=-42/2029  
 WEBS 3-16=0/325, 3-15=-138/880, 4-15=-451/161, 5-12=0/1051, 6-12=-3058/216,  
 6-11=-971/107, 7-11=-102/3398, 7-10=0/463

- NOTES-**
- 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
  - Provide adequate drainage to prevent water ponding.
  - 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) 2, 8.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 64 lb down and 27 lb up at 30-5-12, and 132 lb down and 62 lb up at 32-6-8 on top chord, and 6 lb down at 30-5-12, and 15 lb down at 32-5-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
  - Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.
  - In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard  
 1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15



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Continued on page 2

**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/TP1 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	Lot 7 Magnolia Hills	I67767581
J0724-4089	B2	ROOF SPECIAL GIRDER	1	1	Job Reference (optional)	

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8.630 s Jul 12 2024 MiTek Industries, Inc. Fri Aug 23 09:52:24 2024 Page 2  
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**LOAD CASE(S)** Standard

Uniform Loads (plf)

Vert: 1-3=-60, 3-5=-60, 5-6=-60, 6-7=-60, 7-9=-60, 2-8=-20

**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/TP1 Quality Criteria and DSB-22** available from Truss Plate Institute ([www.tpinst.org](http://www.tpinst.org)) and **BCSI Building Component Safety Information** available from the Structural Building Component Association ([www.sbcacomponents.com](http://www.sbcacomponents.com))



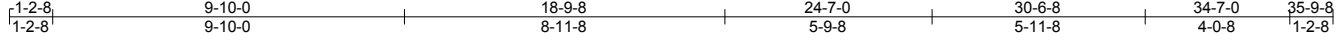
818 Soundside Road  
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 7 Magnolia Hills	667767582
J0724-4089	B3	ROOF SPECIAL	1	1		

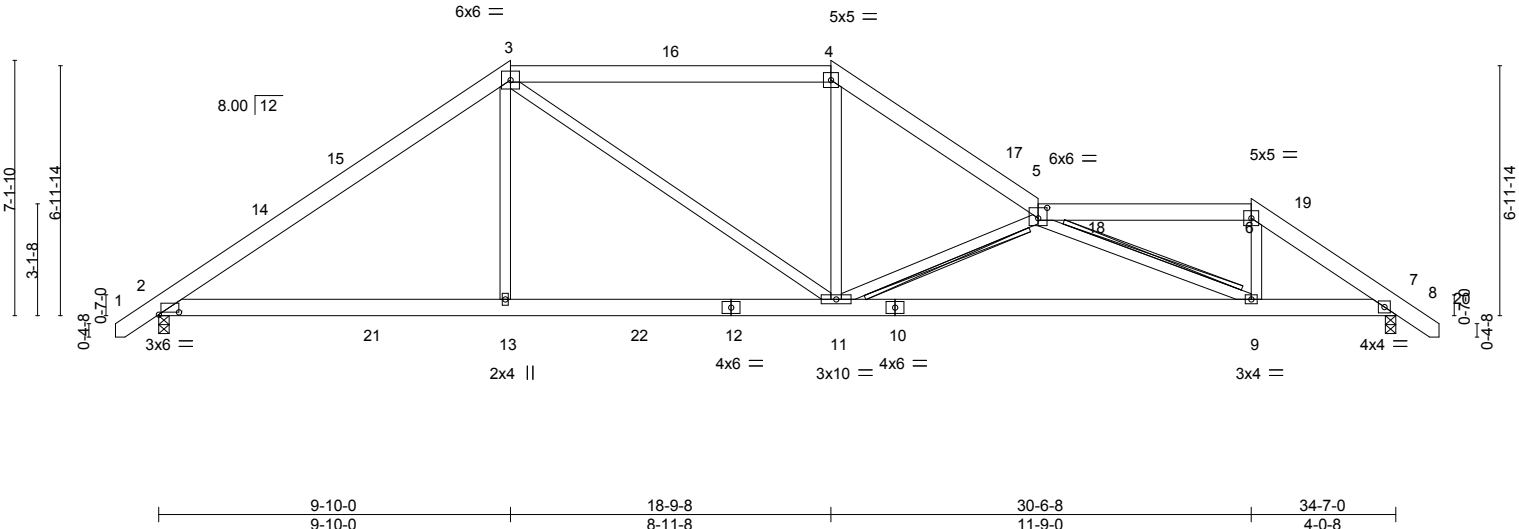
Comtech, Inc. Fayetteville, NC - 28314,

8.630 s Jul 12 2024 MiTek Industries, Inc. Fri Aug 23 09:52:25 2024 Page 1

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Scale: 3/16"=1'

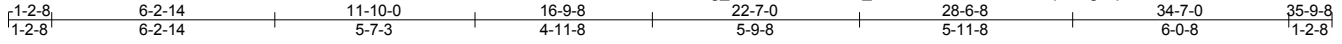


Job	Truss	Truss Type	Qty	Ply	Lot 7 Magnolia Hills	167767583
J0724-4089	B4	ROOF SPECIAL	1	1	Job Reference (optional)	

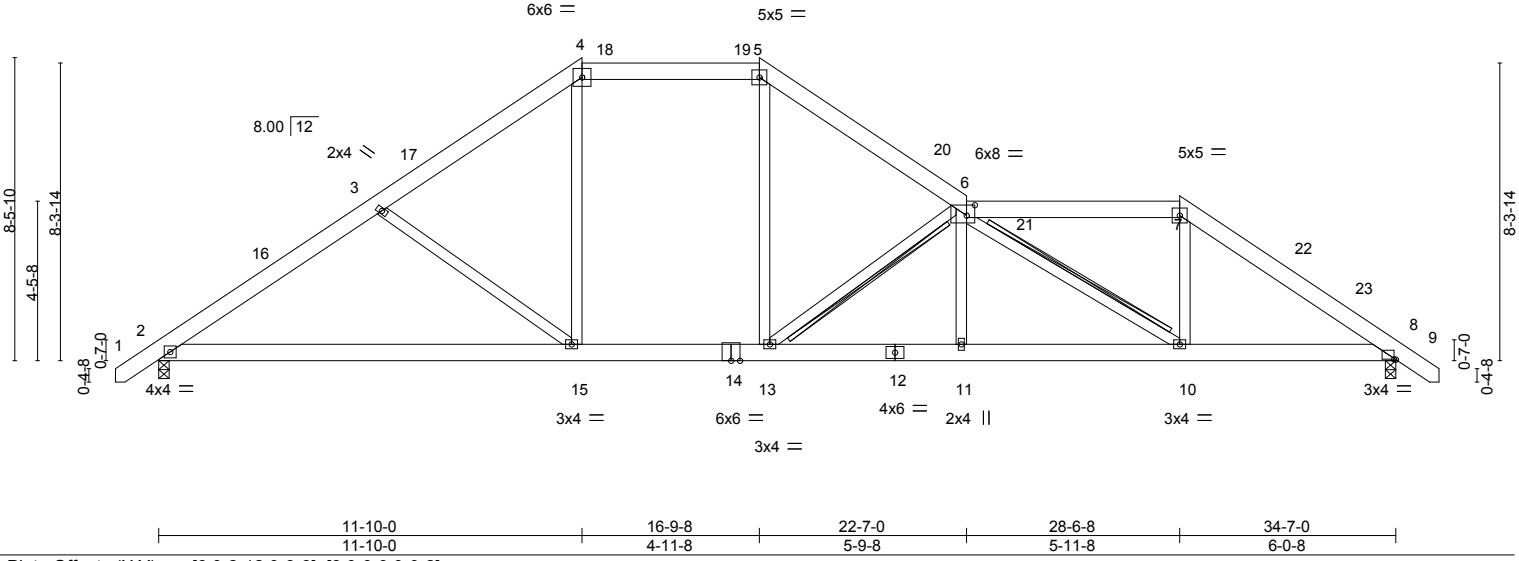
Comtech, Inc. Fayetteville, NC - 28314,

8.630 s Jul 12 2024 MiTek Industries, Inc. Fri Aug 23 09:52:26 2024 Page 1

ID:3YJEG\_u8zX16RsP?VvW\_V6zd0wB-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrcDoi7J4zJC?f



Scale: 3/16"=1'



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.28	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.72	Vert(LL) -0.24 11-13 >999 360		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.41	Vert(CT) -0.40 11-13 >999 240		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.06 8 n/a n/a		
	Code IRC2015/TPI2014		Wind(LL) 0.17 11-13 >999 240	Weight: 244 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 5-2-13 oc purlins, except
BOT CHORD 2x6 SP No.1	2-0-0 oc purlins (5-10-12 max.): 4-5, 6-7.
WEBS 2x4 SP No.2	Rigid ceiling directly applied or 10-0-0 oc bracing.
	T-Brace: 2x4 SPF No.2 - 6-13, 6-10
	Fasten (2X) T and I braces to narrow edge of web with 10d (0.131"x3") nails, 6in o.c., with 3in minimum end distance.
	Brace must cover 90% of web length.

**REACTIONS.** (size) 2=0-3-8, 8=0-3-8  
 Max Horz 2=205(LC 11)  
 Max Uplift 2=64(LC 12), 8=-105(LC 13)  
 Max Grav 2=1445(LC 1), 8=1445(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-2081/517, 3-4=-1826/490, 4-5=-1461/471, 5-6=-1871/506, 6-7=-1658/453, 7-8=-2144/481  
 BOT CHORD 2-15=-294/1741, 13-15=-120/1480, 11-13=-476/2661, 10-11=-478/2654, 8-10=-263/1687  
 WEBS 3-15=-366/214, 4-15=-60/610, 5-13=-146/818, 6-13=-1508/446, 6-11=0/290, 6-10=-1216/271, 7-10=-80/807

**NOTES-**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-0-15 to 3-3-14, Interior(1) 3-3-14 to 11-10-0, Exterior(2) 11-10-0 to 16-2-13, Interior(1) 16-2-13 to 16-9-8, Exterior(2) 16-9-8 to 21-2-5, Interior(1) 21-2-5 to 28-6-8, Exterior(2) 28-6-8 to 32-11-5, Interior(1) 32-11-5 to 35-7-15 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Provide adequate drainage to prevent water ponding.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) \* 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, with BCDL = 10.0psf.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2 except (jt=1b) 8=105.
- 7) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 8) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.



August 23, 2024

Job	Truss	Truss Type	Qty	Ply	Lot 7 Magnolia Hills	167767584
J0724-4089	B5	ROOF SPECIAL	1	1		

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1-2-8	7-2-14	13-10-0	14-9-8	20-7-0	26-6-8	34-7-0	35-9-8
1-2-8	7-2-14	6-7-3	0-11-8	5-9-8	5-11-8	8-0-8	1-2-8

Scale = 1:66.4

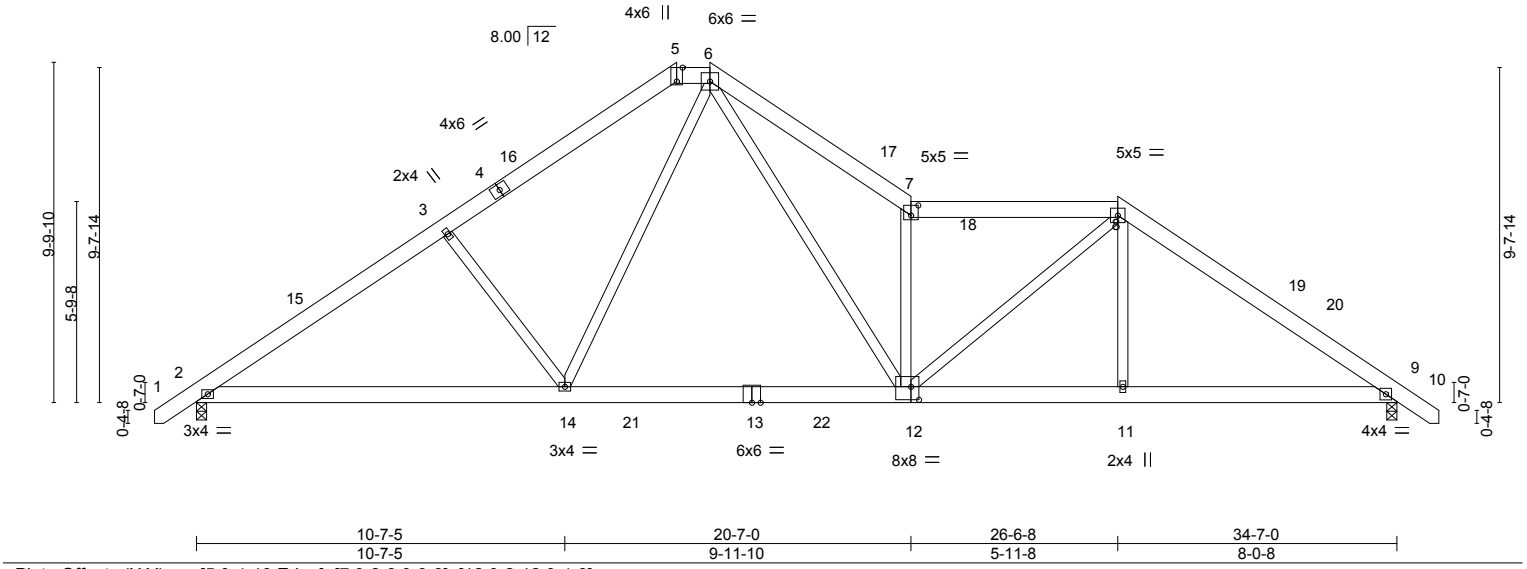


Plate Offsets (X,Y)--	[5:0-4-13,Edge], [7:0-2-8,0-3-8], [12:0-2-12,0-4-8]
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LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.34	Vert(LL)	-0.22	12-14	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.48	Vert(CT)	-0.36	12-14	>999		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.93	Horz(CT)	0.05	9	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S	Wind(LL)	0.09	12-14	>999	Weight: 248 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 4-5-0 oc purlins, except
BOT CHORD 2x6 SP No.1	2-0-0 oc purlins (5-3-2 max.): 5-6, 7-8.
WEBS 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 2=0-3-8, 9=0-3-8  
 Max Horz 2=237(LC 11)  
 Max Uplift 2=-75(LC 12), 9=-112(LC 13)  
 Max Grav 2=1461(LC 19), 9=1445(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-2074/448, 3-5=-1866/484, 5-6=-1544/480, 6-7=-2712/753, 7-8=-2168/541, 8-9=-2067/449  
 BOT CHORD 2-14=-226/1774, 12-14=-45/1312, 11-12=-208/1594, 9-11=-207/1599  
 WEBS 3-14=-364/250, 6-14=-81/696, 6-12=-463/1767, 7-12=-1787/570, 8-12=-124/879, 8-11=0/301

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-0-15 to 3-3-14, Interior(1) 3-3-14 to 13-10-0, Exterior(2) 13-10-0 to 19-2-5, Interior(1) 19-2-5 to 26-6-8, Exterior(2) 26-6-8 to 30-11-5, Interior(1) 30-11-5 to 35-7-15 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Provide adequate drainage to prevent water ponding.
  - 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 5) \* 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, with BCDL = 10.0psf.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2 except (jt=lb) 9=112.
  - 7) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.





Job J0724-4089	Truss B6	Truss Type ROOF SPECIAL	Qty 1	Ply 1	Lot 7 Magnolia Hills Job Reference (optional)	167767585
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Comtech, Inc. Fayetteville, NC - 28314,

8.630 s Jul 12 2024 MiTek Industries, Inc. Fri Aug 23 09:52:27 2024 Page 1

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1-2-8	7-5-11	14-3-12	18-7-0	24-6-8	34-7-0	35-9-8
1-2-8	7-5-11	6-10-1	4-3-4	5-11-8	10-0-8	1-2-8

Scale = 1:69.5

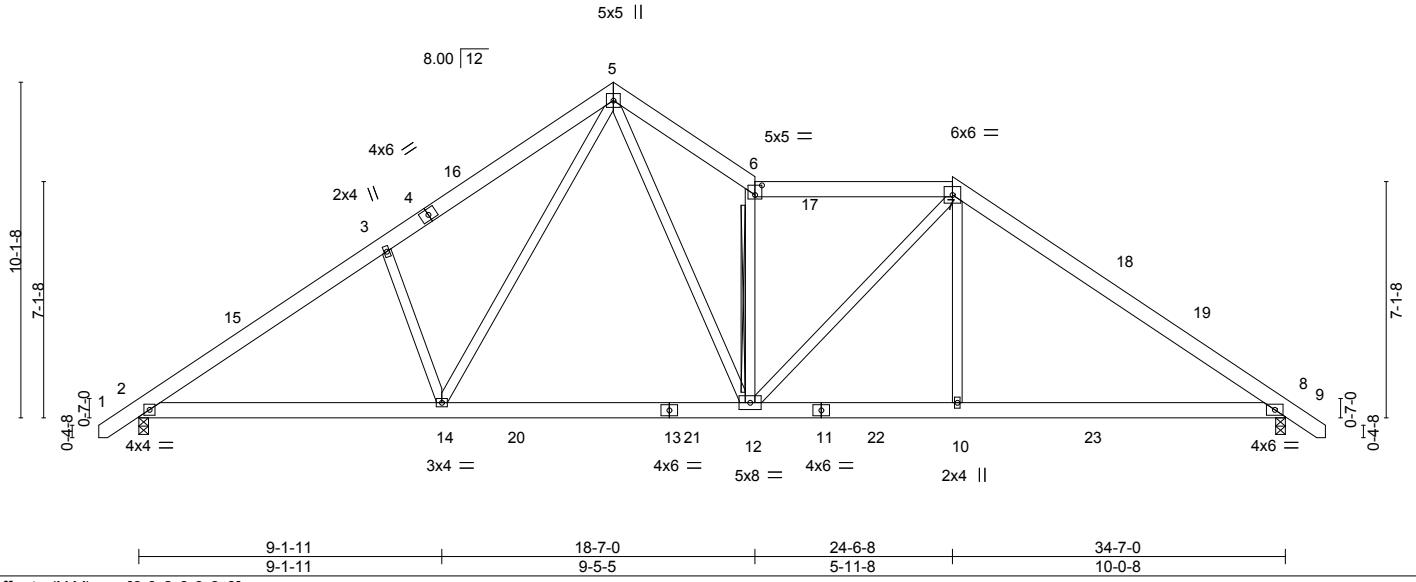


Plate Offsets (X,Y)--	[6:0-2-8,0-3-8]									
<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>	
TCLL 20.0	Plate Grip DOL	1.15	TC 0.60	Vert(LL)	-0.18	12-14	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.48	Vert(CT)	-0.28	12-14	>999	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.69	Horz(CT)	0.05	8	n/a	n/a		
BCDL 10.0	Code IRC2015/TP12014		Matrix-S	Wind(LL)	0.06	8-10	>999	240		
									Weight: 253 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 4-3-8 oc purlins, except 2-0-0 oc purlins (5-5-7 max.): 6-7.
BOT CHORD 2x6 SP No.1	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.2	T-Brace: 2x4 SPF No.2 - 6-12
	Fasten (2X) T and I braces to narrow edge of web with 10d (0.131"x3") nails, 6in o.c., with 3in minimum end distance.
	Brace must cover 90% of web length.

**REACTIONS.** (size) 2=0-3-8, 8=0-3-8  
 Max Horz 2=246(LC 11)  
 Max Uplift 2=-78(LC 12), 8=-113(LC 13)  
 Max Grav 2=1551(LC 19), 8=1599(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-2273/436, 3-5=-2172/553, 5-6=-2397/642, 6-7=-2005/485, 7-8=-2243/428  
 BOT CHORD 2-14=-211/1950, 12-14=-30/1420, 10-12=-161/1757, 8-10=-160/1766  
 WEBS 3-14=-477/288, 5-14=-181/837, 5-12=-371/1629, 6-12=-1501/461, 7-12=-56/452, 7-10=0/507

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-0-15 to 3-3-14, Interior(1) 3-3-14 to 14-3-12, Exterior(2) 14-3-12 to 18-7-0, Interior(1) 18-7-0 to 24-6-8, Exterior(2) 24-6-8 to 28-11-5, Interior(1) 28-11-5 to 35-7-15 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Provide adequate drainage to prevent water ponding.
  - 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, with BCDL = 10.0psf.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2 except (jt=lb) 8=113.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.



August 23, 2024



Job J0724-4089	Truss B8	Truss Type ROOF SPECIAL	Qty 1	Ply 1	Lot 7 Magnolia Hills Job Reference (optional)	167767587
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1-2-8	6-7-12	6-9-8	14-3-12	14-7-0	20-6-8	27-11-4	34-7-0
1-2-8	6-7-12	0-1-12	7-6-4	0-3-4	5-11-8	7-4-12	6-7-12

Scale = 1:75.7

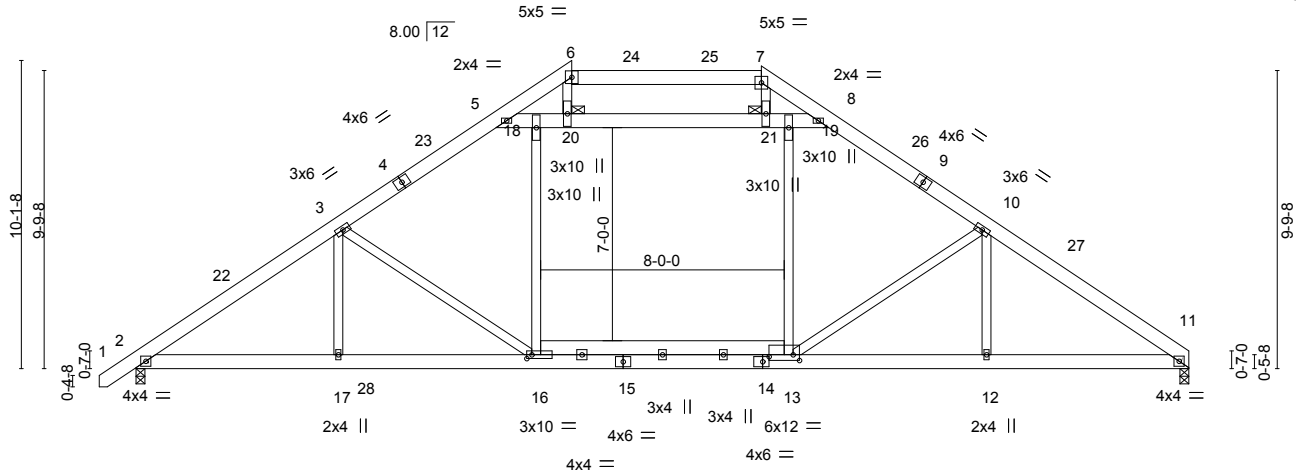


Plate Offsets (X,Y)--	[13:0-2-8,0-2-4], [14:0-2-8,0-2-0], [16:0-2-0,0-1-8]
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LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.25	Vert(LL)	-0.24	16-17	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.72	Vert(CT)	-0.28	16-17	>999		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.70	Horz(CT)	0.06	11	n/a		
BCDL 10.0	Code IRC2015/TP12014		Matrix-S	Wind(LL)	0.12	12-13	>999	Weight: 284 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 4-9-15 oc purlins, except
BOT CHORD 2x6 SP No.1	2-0-0 oc purlins (6-0-0 max.): 6-7.
WEBS 2x4 SP No.2 *Except* 5-8: 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
	JOINTS 1 Brace at Jt(s): 20, 21

REACTIONS.	(size)
2=0-3-8, 11=0-3-8	
Max Horz 2=234(LC 9)	
Max Uplift 2=-78(LC 12), 11=-59(LC 13)	
Max Grav 2=1673(LC 19), 11=1495(LC 20)	

FORCES.	(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD	2-3=-2540/436, 3-5=-1997/454, 5-6=-1189/292, 6-7=-974/272, 7-8=-1265/300, 8-10=-1962/462, 10-11=-2279/447
BOT CHORD	2-17=-259/2169, 16-17=-259/2169, 13-16=-119/1620, 12-13=-263/1798, 11-12=-263/1798
WEBS	3-17=0/314, 16-18=-14/763, 13-19=-25/607, 3-16=-668/190, 10-12=0/261, 10-13=-547/195, 5-18=-620/210, 18-20=-620/210, 20-21=-652/212, 19-21=-608/213, 8-19=-608/213, 6-20=-16/444, 7-21=-20/528

- NOTES-**
- 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) and C-C Exterior(2) -1-0-15 to 3-3-14, Interior(1) 3-3-14 to 14-3-12, Exterior(2) 14-3-12 to 18-8-9, Interior(1) 18-8-9 to 20-6-8, Exterior(2) 20-6-8 to 24-11-5, Interior(1) 24-11-5 to 34-5-4 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Provide adequate drainage to prevent water ponding.
  - 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, with BCDL = 10.0psf.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 11.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



August 23, 2024

<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>ENGINEERING BY</p> <p><b>TRENCO</b></p> <p>A MiTek Affiliate</p> <p>818 Soundside Road Edenton, NC 27932</p>
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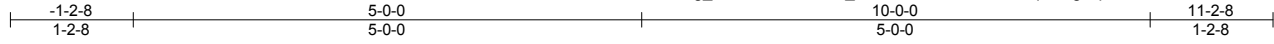
Job	Truss	Truss Type	Qty	Ply	Lot 7 Magnolia Hills	167767588
J0724-4089	C1SG	GABLE	1	1		

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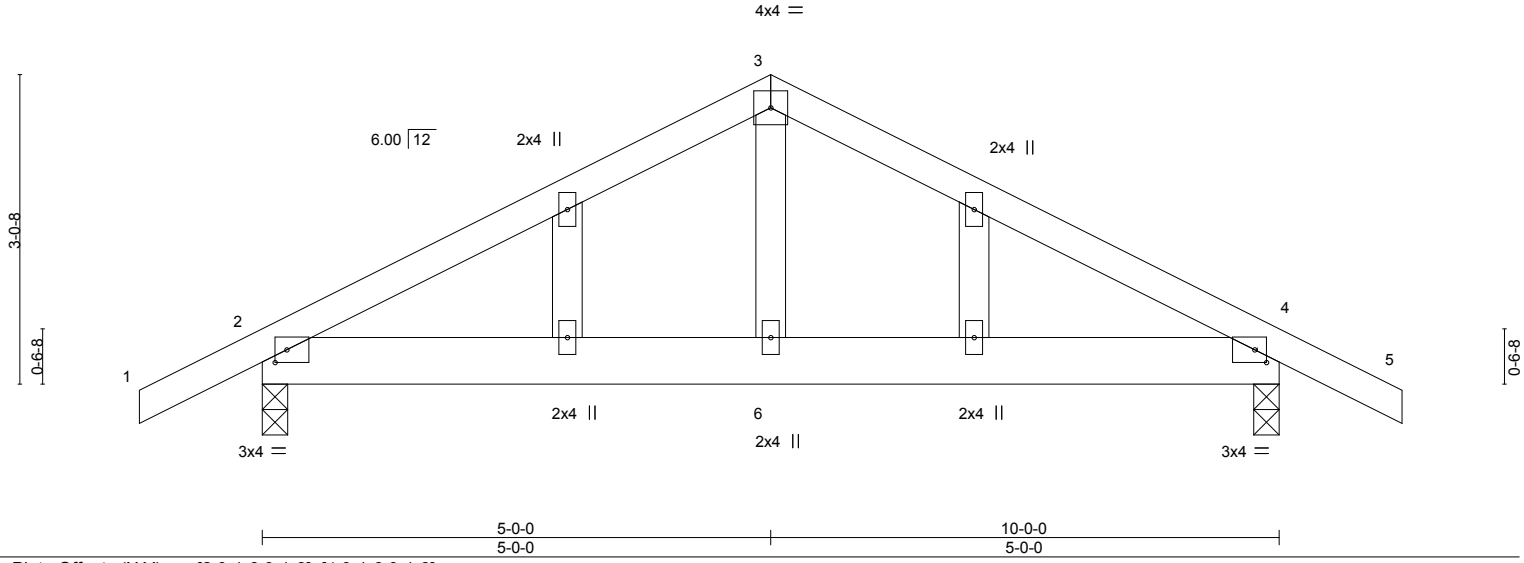
8.630 s Jul 12 2024 MiTek Industries, Inc. Fri Aug 23 09:52:29 2024 Page 1

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Job Reference (optional)



Scale = 1:22.7



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.20	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.10	Vert(LL) 0.02 4-6 >999 240		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.05	Vert(CT) -0.01 4-6 >999 240		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.00 4 n/a n/a		
	Code IRC2015/TPI2014			Weight: 52 lb	FT = 20%

**LUMBER-**  
TOP CHORD 2x4 SP No.1  
BOT CHORD 2x6 SP No.1  
WEBS 2x4 SP No.2  
OTHERS 2x4 SP No.2

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 2=0-3-0, 4=0-3-0  
Max Horz 2=63(LC 16)  
Max Uplift 2=-121(LC 9), 4=-121(LC 8)  
Max Grav 2=470(LC 1), 4=470(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-515/590, 3-4=-515/590  
BOT CHORD 2-6=-397/387, 4-6=-397/387  
WEBS 3-6=-326/240

**NOTES-**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) 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) Gable studs spaced at 2-0-0 oc.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) \* 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.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=121, 4=121.



August 23, 2024

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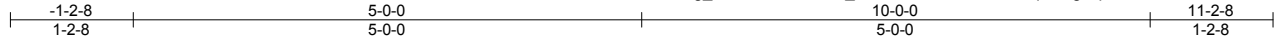
818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 7 Magnolia Hills
J0724-4089	C2	COMMON	4	1	167767589

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8.630 s Jul 12 2024 MiTek Industries, Inc. Fri Aug 23 09:52:29 2024 Page 1

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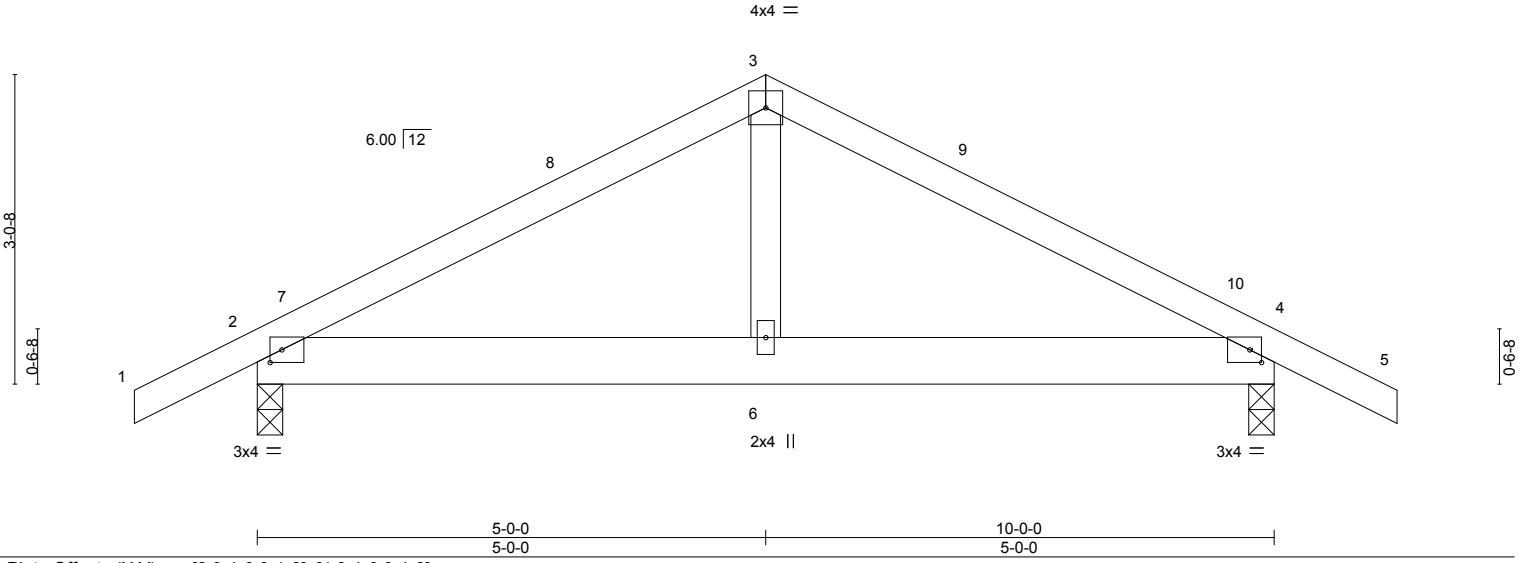


Plate Offsets (X,Y)--	[2:0-1-6,0-1-8], [4:0-1-6,0-1-8]				
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL 1.15	TC 0.21	Vert(LL) -0.01 6 >999 360	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.10	Vert(CT) -0.01 4-6 >999 240		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.05	Horz(CT) 0.00 4 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-S	Wind(LL) 0.02 4-6 >999 240	Weight: 48 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.2	

**REACTIONS.** (size) 2=0-3-0, 4=0-3-0  
 Max Horz 2=40(LC 11)  
 Max Uplift 2=-91(LC 9), 4=-91(LC 8)  
 Max Grav 2=470(LC 1), 4=470(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-515/568, 3-4=-515/568  
 BOT CHORD 2-6=-376/387, 4-6=-376/387  
 WEBS 3-6=-327/240

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-2-8 to 3-2-5, Interior(1) 3-2-5 to 5-0-0, Exterior(2) 5-0-0 to 9-4-13, Interior(1) 9-4-13 to 11-2-8 zone; porch 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 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) 2, 4.



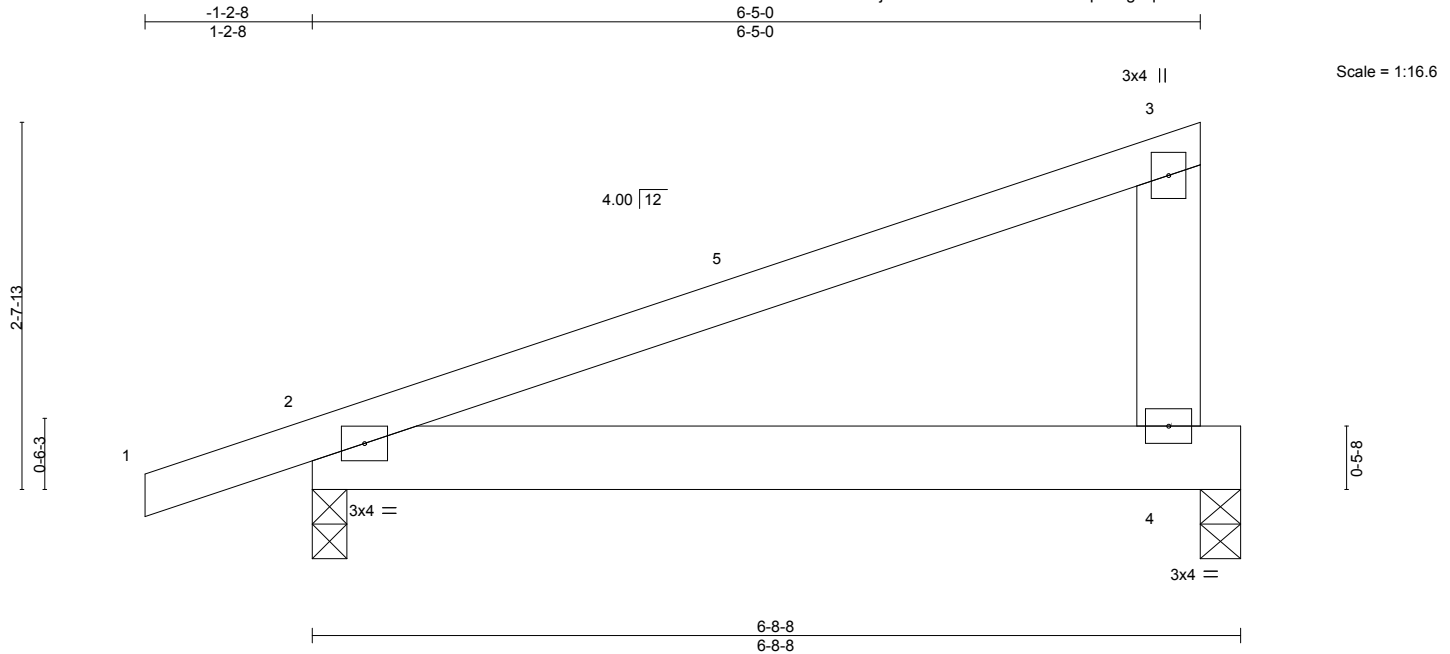
August 23, 2024

Job J0724-4089	Truss P1	Truss Type ROOF SPECIAL	Qty 7	Ply 1	Lot 7 Magnolia Hills Job Reference (optional)	167767590
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8.630 s Jul 12 2024 MiTek Industries, Inc. Fri Aug 23 09:52:30 2024 Page 1

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6-5-0  
6-5-0



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 0.57	Vert(LL)	-0.02 2-4	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.16	Vert(CT)	-0.04 2-4	>999	240		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.00	Horz(CT)	0.00	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-P	Wind(LL)	0.04 2-4	>999	240	Weight: 32 lb	FT = 20%

**LUMBER-**

TOP CHORD 2x4 SP No.1  
BOT CHORD 2x6 SP No.1  
WEBS 2x6 SP No.1

**BRACING-**

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.**

(size) 4=0-3-8, 2=0-3-0  
Max Horz 2=85(LC 8)  
Max Uplift 4=294(LC 8), 2=134(LC 8)  
Max Grav 4=734(LC 1), 2=331(LC 1)

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

**NOTES-**

- 1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-2-8 to 3-2-5, Interior(1) 3-2-5 to 6-2-4 zone; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* 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.
- 4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 4=294, 2=134.
- 5) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 500 lb down and 669 lb up at 6-2-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- 6) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard

- 1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-3=-60, 2-4=-20  
Concentrated Loads (lb)  
Vert: 4=500(F)



August 23, 2024

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ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932



Job	Truss	Truss Type	Qty	Ply	Lot 7 Magnolia Hills	167767592
J0724-4089	P3	MONOPICH	3	1		

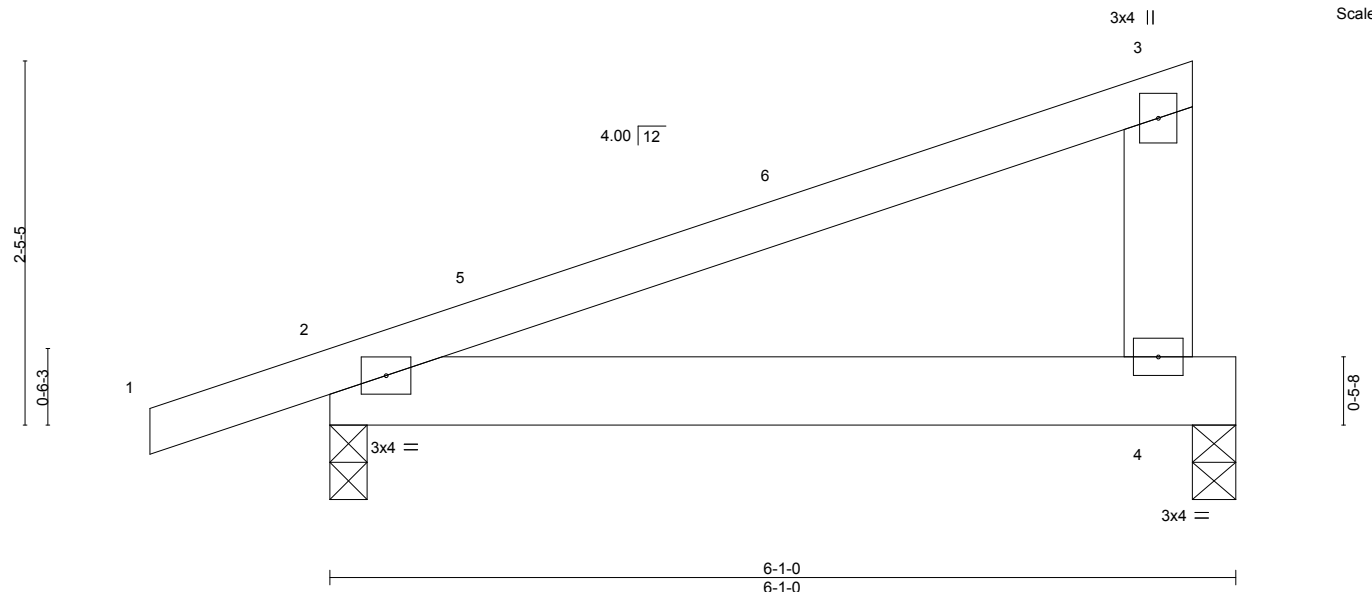
Comtech, Inc. Fayetteville, NC - 28314,

8.630 s Jul 12 2024 MiTek Industries, Inc. Fri Aug 23 09:52:32 2024 Page 1

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Scale = 1:15.5



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 0.38	Vert(LL)	-0.01 2-4	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.11	Vert(CT)	-0.02 2-4	>999	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.00	Horz(CT)	0.00	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-P	Wind(LL)	0.03 2-4	>999	240	Weight: 29 lb	FT = 20%

**LUMBER-**  
 TOP CHORD 2x4 SP No.1  
 BOT CHORD 2x6 SP No.1  
 WEBS 2x6 SP No.1

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 5-9-8 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 4=0-3-8, 2=0-3-0  
 Max Horz 2=78(LC 8)  
 Max Uplift 4=90(LC 8), 2=127(LC 8)  
 Max Grav 4=208(LC 1), 2=307(LC 1)

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

**NOTES-**

- 1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-2-8 to 3-2-5, Interior(1) 3-2-5 to 5-6-12 zone; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* 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.
- 4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4 except (jt=lb) 2=127.



August 23, 2024

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 Edenton, NC 27932

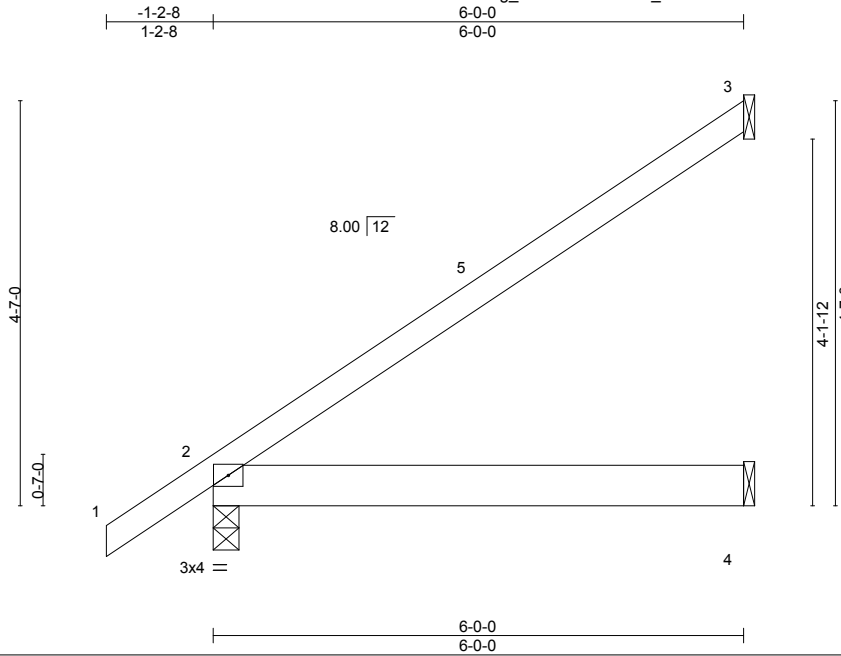


Job	Truss	Truss Type	Qty	Ply	Lot 7 Magnolia Hills	167767593
J0724-4089	XA1	JACK-OPEN	14	1	Job Reference (optional)	

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8.630 s Jul 12 2024 MiTek Industries, Inc. Fri Aug 23 09:52:32 2024 Page 1

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Scale = 1:26.1

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.51	Vert(LL)	-0.02	2-4	>999	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.13	Vert(CT)	-0.03	2-4	>999		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.00	Horz(CT)	-0.00	3	n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-P	Wind(LL)	0.00	2	****	Weight: 27 lb	FT = 20%
	Code IRC2015/TPI2014							

**LUMBER-**  
 TOP CHORD 2x4 SP No.1  
 BOT CHORD 2x6 SP No.1

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 3=Mechanical, 2=0-3-8, 4=Mechanical  
 Max Horz 2=151(LC 12)  
 Max Uplift 3=-105(LC 12)  
 Max Grav 3=184(LC 19), 2=322(LC 1), 4=116(LC 3)

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

**NOTES-**

- 1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-2-8 to 3-2-5, Interior(1) 3-2-5 to 5-11-4 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* 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.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 3=105.



August 23, 2024

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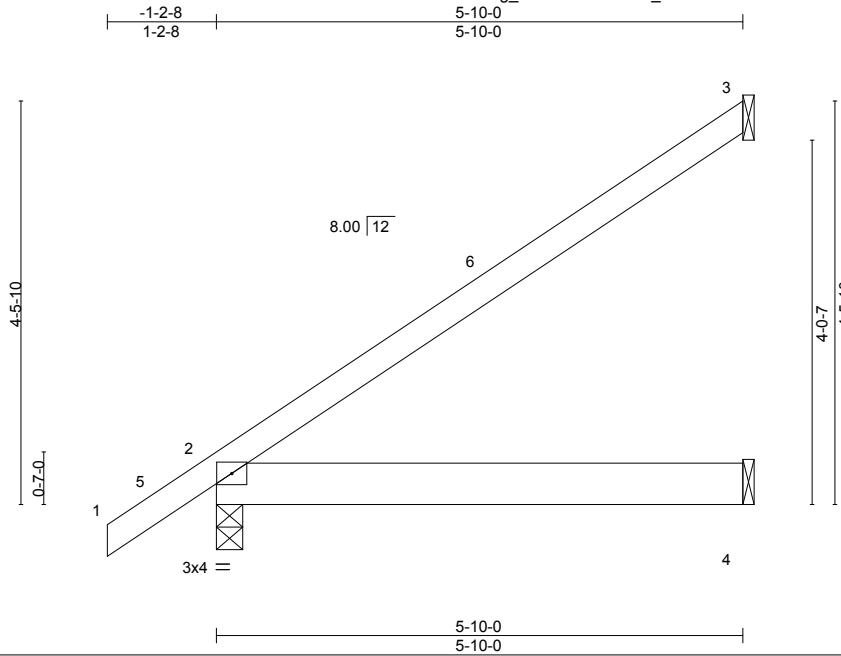
Job	Truss	Truss Type	Qty	Ply	Lot 7 Magnolia Hills	167767594
J0724-4089	XB1	JACK-OPEN	10	1		

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8.630 s Jul 12 2024 MiTek Industries, Inc. Fri Aug 23 09:52:32 2024 Page 1

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Job Reference (optional)



LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.49	Vert(LL)	-0.01 2-4	>999	360	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.12	Vert(CT)	-0.03 2-4	>999	240		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.00	Horz(CT)	-0.00 3	n/a	n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-P	Wind(LL)	0.00 2	****	240		
	Code IRC2015/TPI2014						Weight: 27 lb	FT = 20%

**LUMBER-**  
 TOP CHORD 2x4 SP No.1  
 BOT CHORD 2x6 SP No.1

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 5-10-0 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 3=Mechanical, 2=0-3-8, 4=Mechanical  
 Max Horz 2=147(LC 12)  
 Max Uplift 3=-102(LC 12)  
 Max Grav 3=178(LC 19), 2=316(LC 1), 4=113(LC 3)

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

**NOTES-**

- 1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-2-8 to 3-2-5, Interior(1) 3-2-5 to 5-9-4 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* 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.
- 4) Refer to girder(s) for truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 3=102.



August 23, 2024

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818 Soundside Road  
 Edenton, NC 27932

Job J0724-4089	Truss XB2	Truss Type JACK-OPEN	Qty 2	Ply 1	Lot 7 Magnolia Hills Job Reference (optional)	167767595
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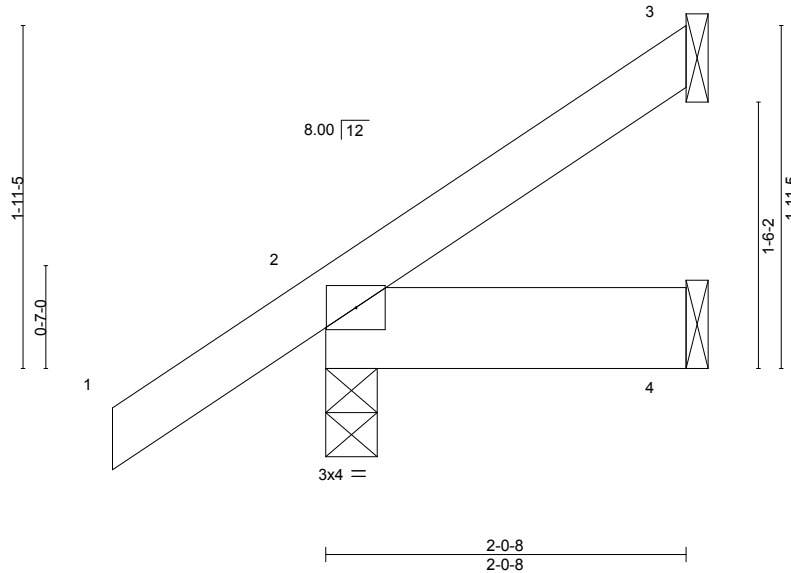
Comtech, Inc. Fayetteville, NC - 28314,

8.630 s Jul 12 2024 MiTek Industries, Inc. Fri Aug 23 09:52:33 2024 Page 1

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Scale = 1:13.1



LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.09	Vert(LL)	-0.00	2	>999	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.01	Vert(CT)	-0.00	2	>999		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.00	Horz(CT)	0.00	3	n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-P	Wind(LL)	0.00	2	****		
	Code IRC2015/TPI2014						Weight: 11 lb	FT = 20%

**LUMBER-**  
TOP CHORD 2x4 SP No.1  
BOT CHORD 2x6 SP No.1

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 2-0-8 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 3=Mechanical, 2=0-3-8, 4=Mechanical  
Max Horz 2=65(LC 12)  
Max Uplift 3=-29(LC 12), 2=-16(LC 12)  
Max Grav 3=34(LC 19), 2=185(LC 1), 4=37(LC 3)

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

- NOTES-**
- 1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 3) \* 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.
  - 4) Refer to girder(s) for truss to truss connections.
  - 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 2.



August 23, 2024

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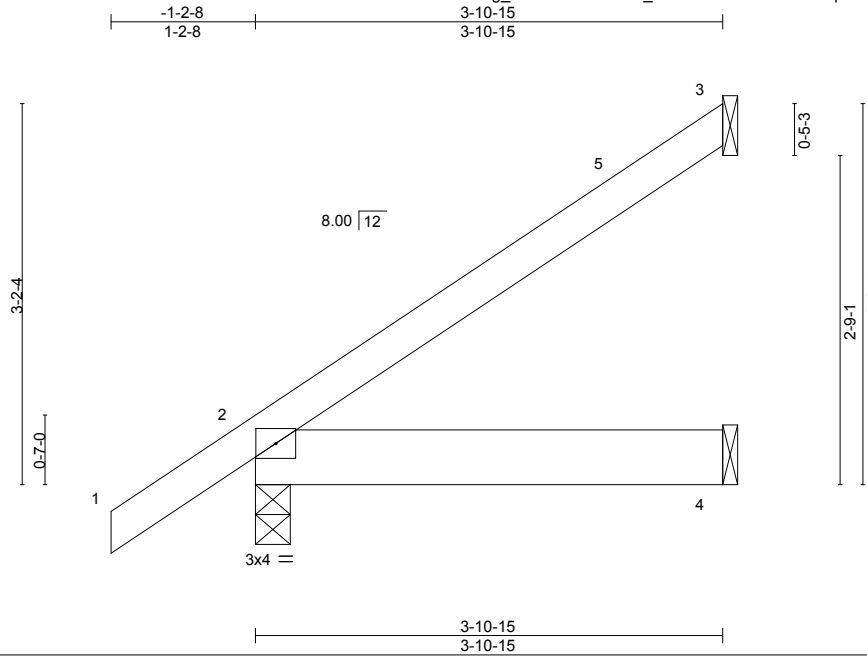


Job J0724-4089	Truss YA2	Truss Type JACK-OPEN	Qty 4	Ply 1	Lot 7 Magnolia Hills Job Reference (optional)	167767597
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8.630 s Jul 12 2024 MiTek Industries, Inc. Fri Aug 23 09:52:34 2024 Page 1

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Scale = 1:19.3

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.21	Vert(LL)	-0.00	2-4	>999	MT20	244/190
TCDL 10.0	1.15	BC 0.05	Vert(CT)	-0.01	2-4	>999		
BCLL 0.0 *	1.15	WB 0.00	Horz(CT)	-0.00	3	n/a		
BCDL 10.0	YES	Matrix-P	Wind(LL)	0.00	2	****		
	Code IRC2015/TPI2014						Weight: 19 lb	FT = 20%

**LUMBER-**  
TOP CHORD 2x4 SP No.1  
BOT CHORD 2x6 SP No.1

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 3-10-15 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 3=Mechanical, 2=0-3-8, 4=Mechanical  
Max Horz 2=106(LC 12)  
Max Uplift 3=-66(LC 12), 2=-6(LC 12)  
Max Grav 3=110(LC 19), 2=244(LC 1), 4=74(LC 3)

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

**NOTES-**

- 1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-2-8 to 3-2-5, Interior(1) 3-2-5 to 3-10-3 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* 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.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 2.



August 23, 2024

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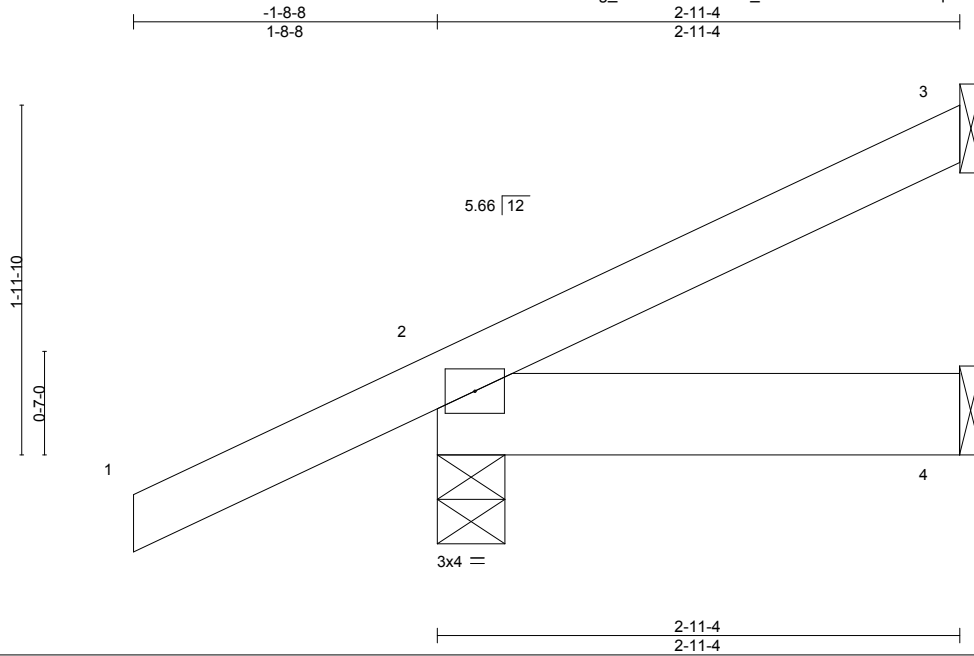
818 Soundside Road  
Edenton, NC 27932

Job J0724-4089	Truss YA3	Truss Type Half Hip Girder	Qty 1	Ply 1	Lot 7 Magnolia Hills Job Reference (optional)	167767598
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8.630 s Jul 12 2024 MiTek Industries, Inc. Fri Aug 23 09:52:34 2024 Page 1

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Scale = 1:13.0

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.18	Vert(LL)	-0.00	2	>999	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.02	Vert(CT)	-0.00	2-4	>999		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.00	Horz(CT)	-0.00	3	n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-P	Wind(LL)	0.00	2	****		
	Code IRC2015/TPI2014						Weight: 15 lb	FT = 20%

**LUMBER-**  
TOP CHORD 2x4 SP No.1  
BOT CHORD 2x6 SP No.1

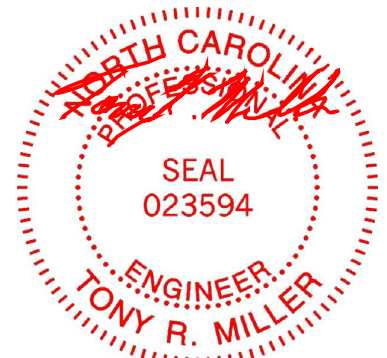
**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 2-11-4 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 3=Mechanical, 2=0-4-9, 4=Mechanical  
Max Horz 2=66(LC 12)  
Max Uplift 3=-31(LC 12), 2=-34(LC 12)  
Max Grav 3=40(LC 1), 2=262(LC 1), 4=54(LC 3)

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

**NOTES-**

- 1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* 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.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 2.



August 23, 2024

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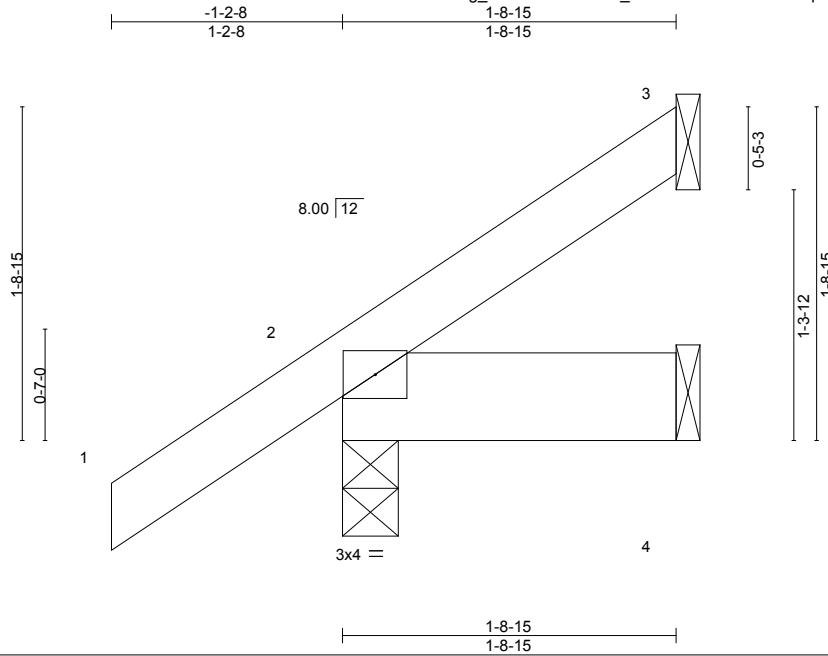
818 Soundside Road  
Edenton, NC 27932

Job J0724-4089	Truss YB1	Truss Type JACK-OPEN	Qty 4	Ply 1	Lot 7 Magnolia Hills Job Reference (optional)	167767599
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8.630 s Jul 12 2024 MiTek Industries, Inc. Fri Aug 23 09:52:35 2024 Page 1

ID:3YJEg\_u8zX16RsP?VvW\_V6zd0wB-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrcDoi7J4zJC?f



LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.08	Vert(LL)	-0.00	2	>999	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.01	Vert(CT)	-0.00	2	>999		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.00	Horz(CT)	0.00	3	n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-P	Wind(LL)	0.00	2	****	Weight: 10 lb	FT = 20%
	Code IRC2015/TPI2014							

**LUMBER-**  
 TOP CHORD 2x4 SP No.1  
 BOT CHORD 2x6 SP No.1

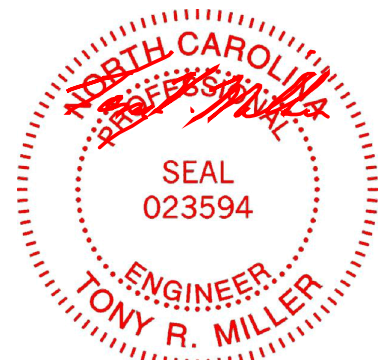
**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 1-8-15 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 3=Mechanical, 2=0-3-8, 4=Mechanical  
 Max Horz 2=60(LC 12)  
 Max Uplift 3=-25(LC 12), 2=-17(LC 12)  
 Max Grav 3=32(LC 19), 2=169(LC 1), 4=34(LC 3)

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

**NOTES-**

- 1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* 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.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 2.



August 23, 2024

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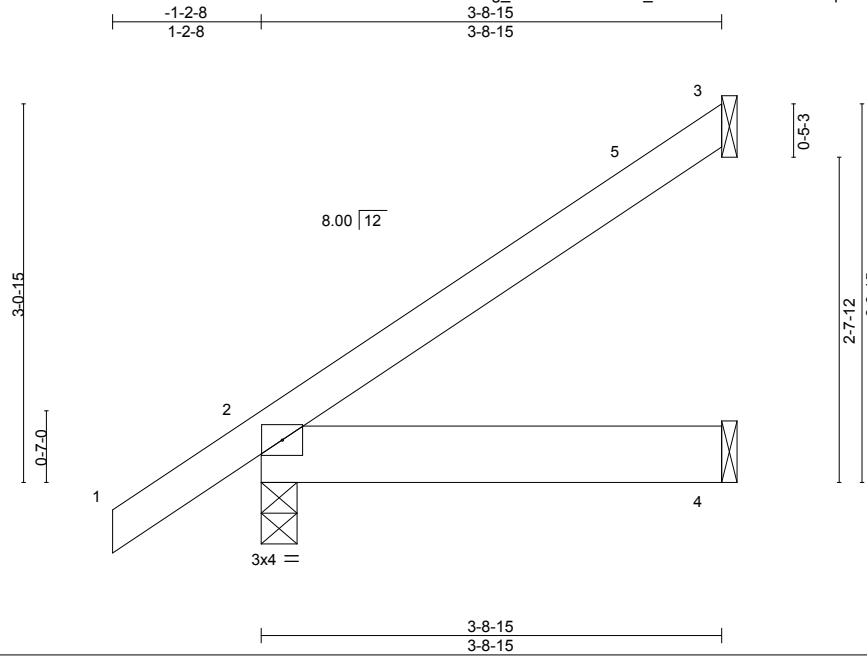
818 Soundside Road  
 Edenton, NC 27932

Job J0724-4089	Truss YB2	Truss Type JACK-OPEN	Qty 4	Ply 1	Lot 7 Magnolia Hills Job Reference (optional)	167767600
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8.630 s Jul 12 2024 MiTek Industries, Inc. Fri Aug 23 09:52:35 2024 Page 1

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Scale = 1:18.7

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.19	Vert(LL)	-0.00 2-4	>999	360	MT20	244/190
TCDL 10.0	1.15	BC 0.04	Vert(CT)	-0.00 2-4	>999	240		
BCLL 0.0 *	1.15	WB 0.00	Horz(CT)	-0.00 3	n/a	n/a		
BCDL 10.0	YES	Matrix-P	Wind(LL)	0.00 2	****	240		
	Code IRC2015/TPI2014						Weight: 18 lb	FT = 20%

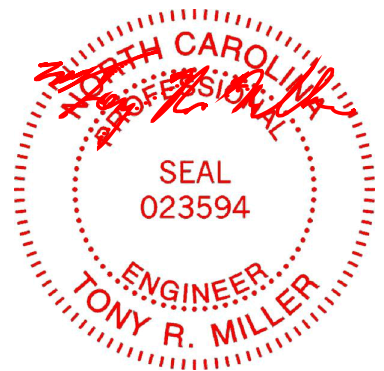
**LUMBER-**  
TOP CHORD 2x4 SP No.1  
BOT CHORD 2x6 SP No.1

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 3-8-15 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 3=Mechanical, 2=0-3-8, 4=Mechanical  
Max Horz 2=102(LC 12)  
Max Uplift 3=-63(LC 12), 2=-7(LC 12)  
Max Grav 3=104(LC 19), 2=238(LC 1), 4=71(LC 3)

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

- NOTES-**
- 1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-2-8 to 3-2-5, Interior(1) 3-2-5 to 3-8-3 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 3) \* 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.
  - 4) Refer to girder(s) for truss to truss connections.
  - 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 2.



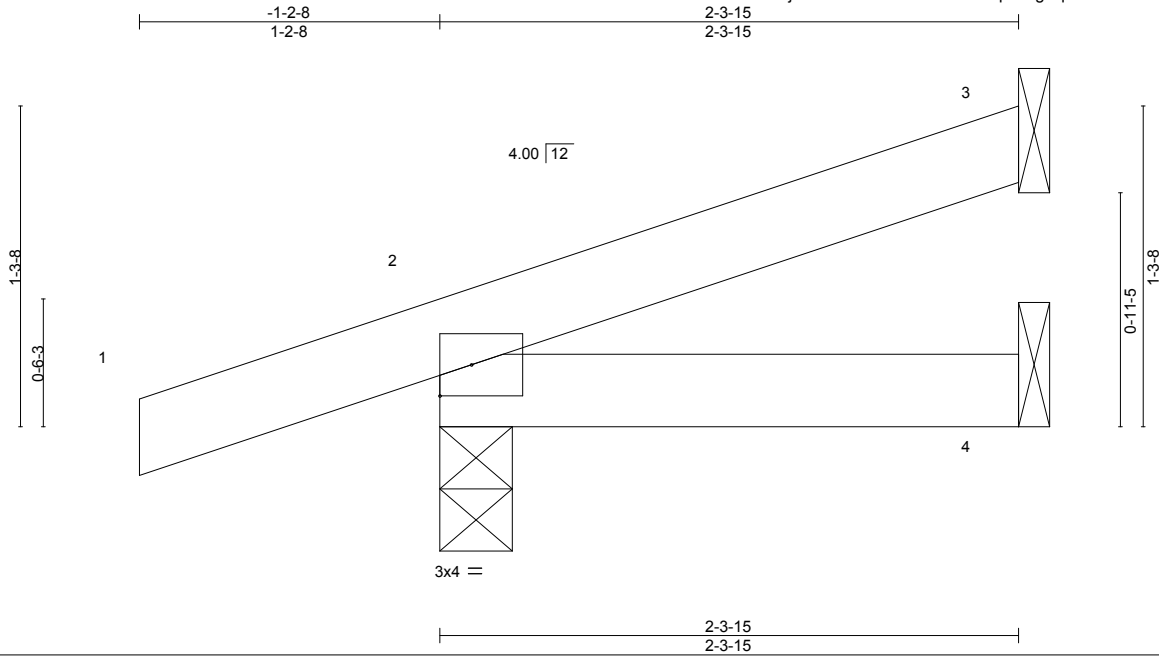
August 23, 2024



Job J0724-4089	Truss YP1	Truss Type JACK-OPEN	Qty 4	Ply 1	Lot 7 Magnolia Hills Job Reference (optional)	167767601
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8.630 s Jul 12 2024 MiTek Industries, Inc. Fri Aug 23 09:52:35 2024 Page 1  
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Scale = 1:9.3

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.09	Vert(LL)	-0.00	2-4	>999	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.04	Vert(CT)	-0.00	2-4	>999		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.00	Horz(CT)	-0.00	3	n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-P	Wind(LL)	0.00	2	****		
	Code IRC2015/TPI2014						Weight: 9 lb	FT = 20%

**LUMBER-**  
TOP CHORD 2x4 SP No.1  
BOT CHORD 2x4 SP No.1

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 2-3-15 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 3=Mechanical, 2=0-3-8, 4=Mechanical  
Max Horz 2=41(LC 8)  
Max Uplift 3=-23(LC 12), 2=-67(LC 8)  
Max Grav 3=38(LC 1), 2=192(LC 1), 4=42(LC 3)

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

**NOTES-**

- 1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* 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.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 2.



August 23, 2024

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**TRENCO**  
A MiTek Affiliate

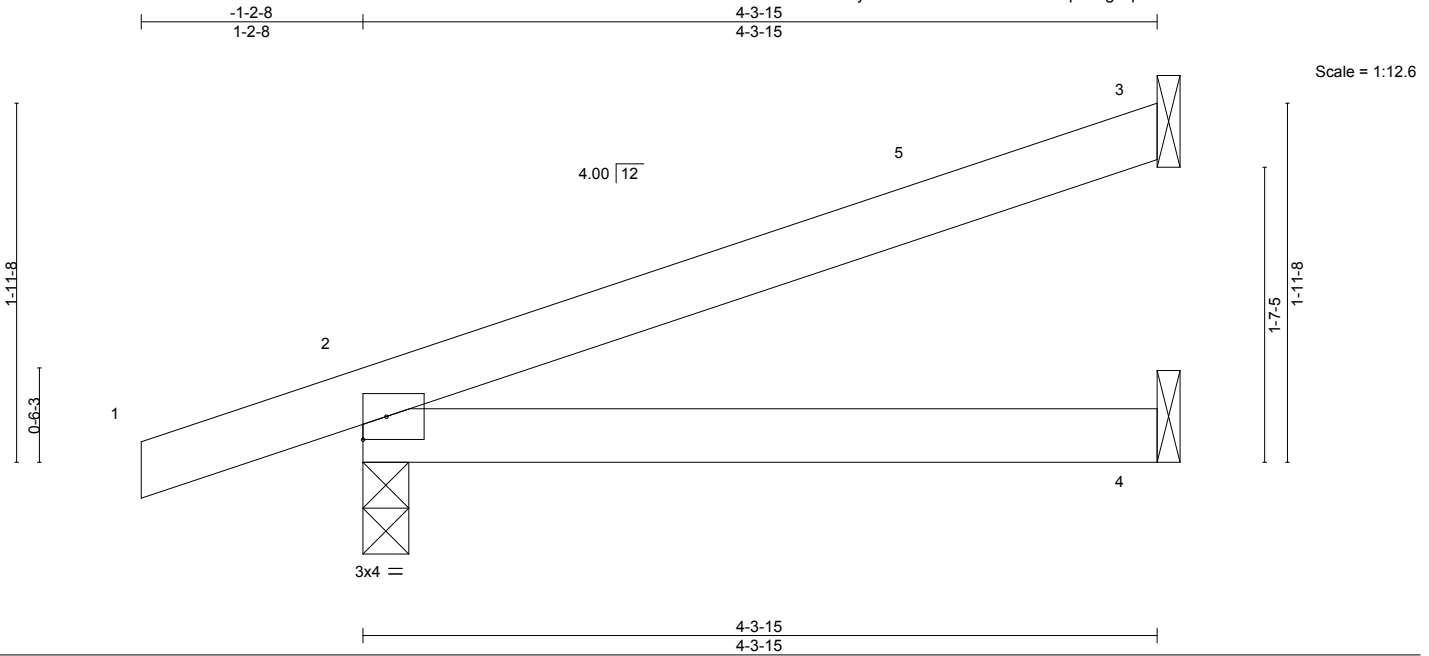
818 Soundside Road  
Edenton, NC 27932

Job J0724-4089	Truss YP2	Truss Type JACK-OPEN	Qty 2	Ply 1	Lot 7 Magnolia Hills Job Reference (optional)	167767602
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Comtech, Inc. Fayetteville, NC - 28314,

8.630 s Jul 12 2024 MiTek Industries, Inc. Fri Aug 23 09:52:36 2024 Page 1

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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 0.19	Vert(LL)	-0.02 2-4	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.15	Vert(CT)	-0.03 2-4	>999	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.00	Horz(CT)	-0.00 3	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-P	Wind(LL)	0.00 2	****	240	Weight: 15 lb	FT = 20%

**LUMBER-**  
 TOP CHORD 2x4 SP No.1  
 BOT CHORD 2x4 SP No.1

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 4-3-15 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 3=Mechanical, 2=0-3-0, 4=Mechanical  
 Max Horz 2=62(LC 8)  
 Max Uplift 3=-50(LC 12), 2=-63(LC 8)  
 Max Grav 3=111(LC 1), 2=259(LC 1), 4=83(LC 3)

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

**NOTES-**

- 1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-2-8 to 3-2-5, Interior(1) 3-2-5 to 4-3-3 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* 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.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 2.



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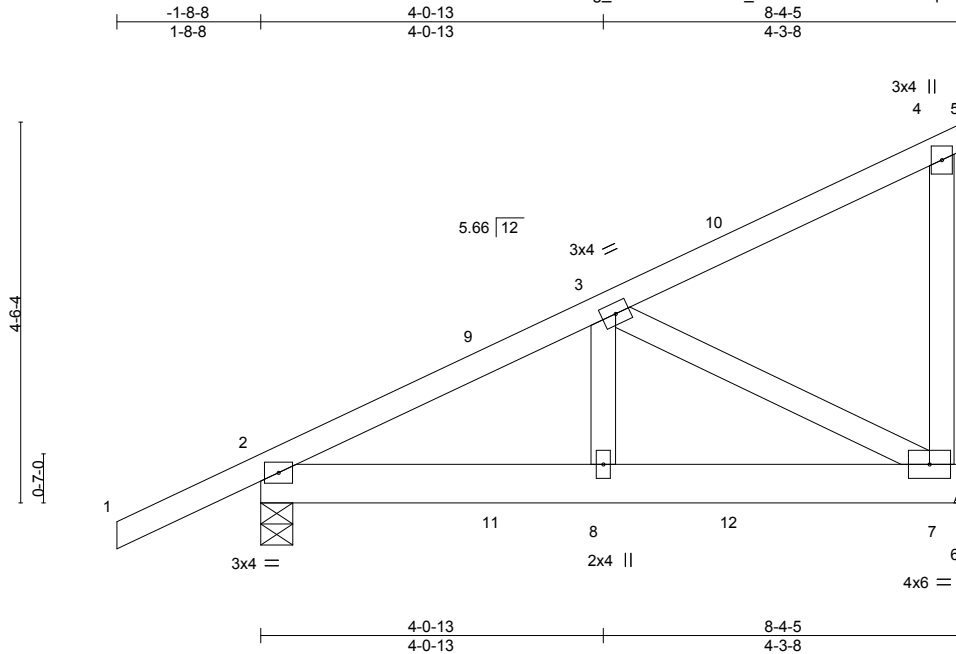
818 Soundside Road  
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Job	Truss	Truss Type	Qty	Ply	Lot 7 Magnolia Hills	167767603
J0724-4089	ZA1	DIAGONAL HIP GIRDER	2	1		

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Scale = 1:27.4

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 0.21	Vert(LL)	-0.00 7-8	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.09	Vert(CT)	-0.01 7-8	>999	240		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.15	Horz(CT)	0.00 7	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-P	Wind(LL)	0.00 8	>999	240		
								Weight: 51 lb	FT = 20%

**LUMBER-**  
 TOP CHORD 2x4 SP No.1  
 BOT CHORD 2x6 SP No.1  
 WEBS 2x4 SP No.2

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 7=Mechanical, 2=0-4-9  
 Max Horz 2=150(LC 8)  
 Max Uplift 7=-110(LC 8), 2=-50(LC 8)  
 Max Grav 7=353(LC 29), 2=456(LC 1)

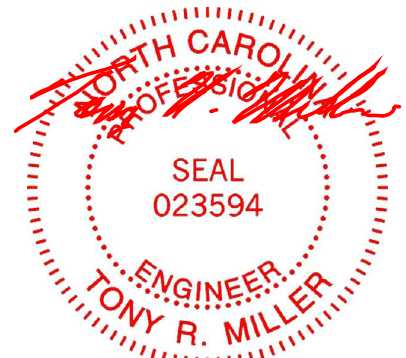
**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-523/31  
 BOT CHORD 2-8=-118/381, 7-8=-118/381  
 WEBS 3-7=-430/133

**NOTES-**

- 1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCCL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* 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.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2 except (jt=1b) 7=110.
- 6) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 75 lb down and 33 lb up at 2-9-8, 75 lb down and 33 lb up at 2-9-8, and 107 lb down and 84 lb up at 5-7-7, and 107 lb down and 84 lb up at 5-7-7 on top chord, and 2 lb down at 2-9-8, 2 lb down at 2-9-8, and 20 lb down at 5-7-7, and 20 lb down at 5-7-7 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- 7) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard

- 1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15  
 Uniform Loads (plf)  
 Vert: 1-4=-60, 4-5=-20, 2-6=-20  
 Concentrated Loads (lb)  
 Vert: 10=-23(F=-11, B=-11) 12=-17(F=-9, B=-9)



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Job	Truss	Truss Type	Qty	Ply	Lot 7 Magnolia Hills	167767604
J0724-4089	ZB1	DIAGONAL HIP GIRDER	2	1		

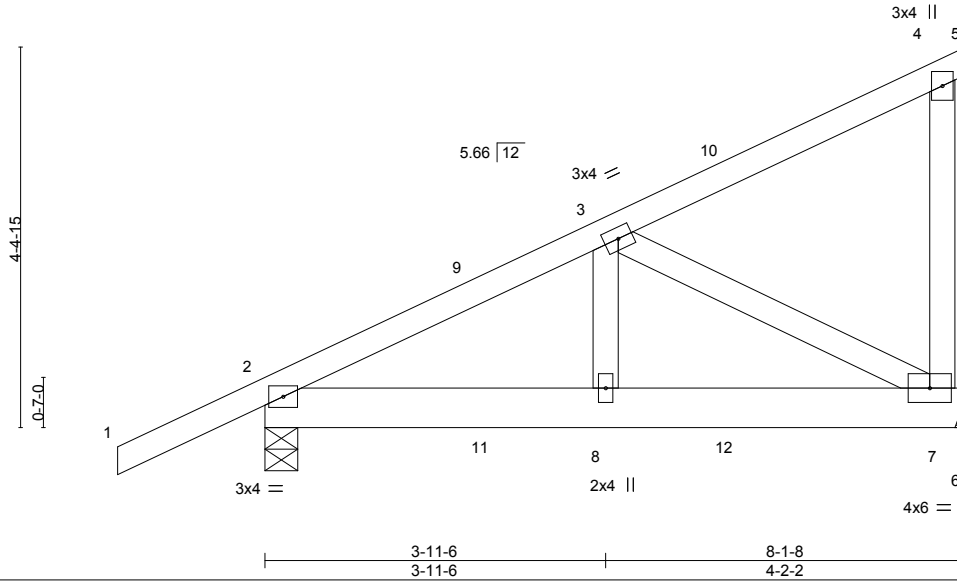
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Scale = 1:26.7



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 0.21	Vert(LL)	-0.00 7-8	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.08	Vert(CT)	-0.01 7-8	>999	240		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.13	Horz(CT)	0.00 7	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-P	Wind(LL)	0.00 8	>999	240		
								Weight: 49 lb	FT = 20%

**LUMBER-**  
 TOP CHORD 2x4 SP No.1  
 BOT CHORD 2x6 SP No.1  
 WEBS 2x4 SP No.2

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 7=Mechanical, 2=0-4-9  
 Max Horz 2=146(LC 8)  
 Max Uplift 7=-104(LC 8), 2=-48(LC 8)  
 Max Grav 7=336(LC 29), 2=443(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-502/26  
 BOT CHORD 2-8=-112/361, 7-8=-112/361  
 WEBS 3-7=-408/127

- NOTES-**
- 1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCCL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); Lumber DOL=1.60 plate grip DOL=1.60
  - 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 3) \* 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.
  - 4) Refer to girder(s) for truss to truss connections.
  - 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2 except (jt=1b) 7=104.
  - 6) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 74 lb down and 28 lb up at 2-6-11, 74 lb down and 28 lb up at 2-6-11, and 104 lb down and 79 lb up at 5-4-10, and 104 lb down and 79 lb up at 5-4-10 on top chord, and 0 lb down at 2-6-11, 0 lb down at 2-6-11, and 18 lb down at 5-4-10, and 18 lb down at 5-4-10 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
  - 7) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard  
 1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15  
 Uniform Loads (plf)  
 Vert: 1-4=-60, 4-5=-20, 2-6=-20  
 Concentrated Loads (lb)  
 Vert: 10=-11(F=-6, B=-6) 12=-14(F=-7, B=-7)



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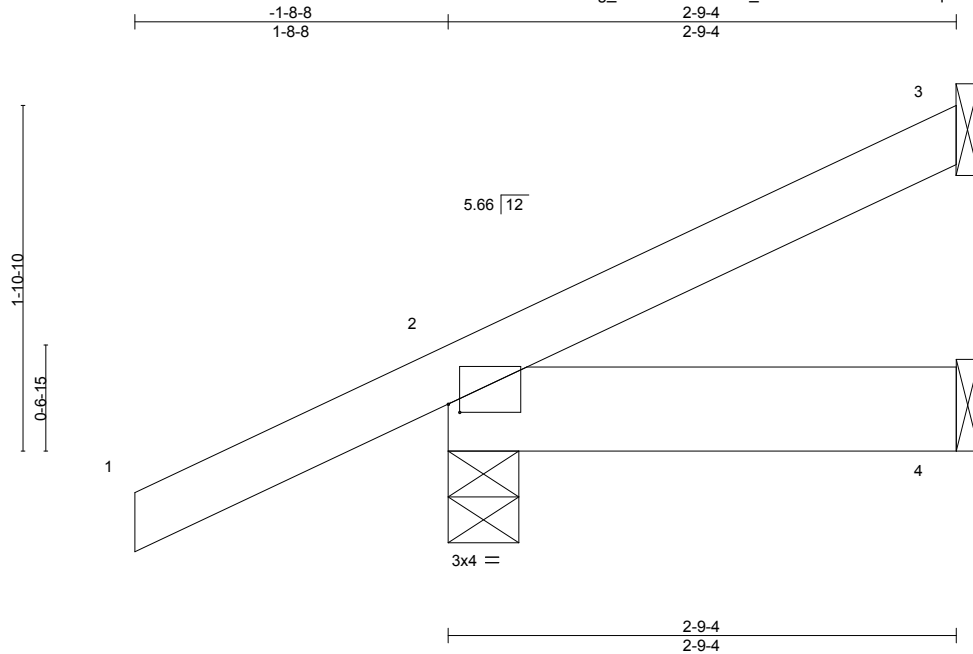
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Job	Truss	Truss Type	Qty	Ply	Lot 7 Magnolia Hills	167767605
J0724-4089	ZB2	JACK-OPEN	1	1		

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Scale = 1:12.6

Plate Offsets (X,Y)--	[2:0-0-12,0-0-9]				
<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 0.30	Vert(LL) -0.00 2 >999 360	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.02	Vert(CT) -0.00 2-4 >999 240		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.00	Horz(CT) -0.00 3 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-P	Wind(LL) 0.00 2 **** 240	Weight: 14 lb	FT = 20%

**LUMBER-**  
 TOP CHORD 2x4 SP No.1  
 BOT CHORD 2x6 SP No.1

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 2-9-4 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 3=Mechanical, 2=0-4-10, 4=Mechanical  
 Max Horz 2=64(LC 12)  
 Max Uplift 3=28(LC 12), 2=35(LC 12)  
 Max Grav 3=32(LC 1), 2=258(LC 1), 4=50(LC 3)

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

**NOTES-**

- 1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Corner(3) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* 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.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 2.



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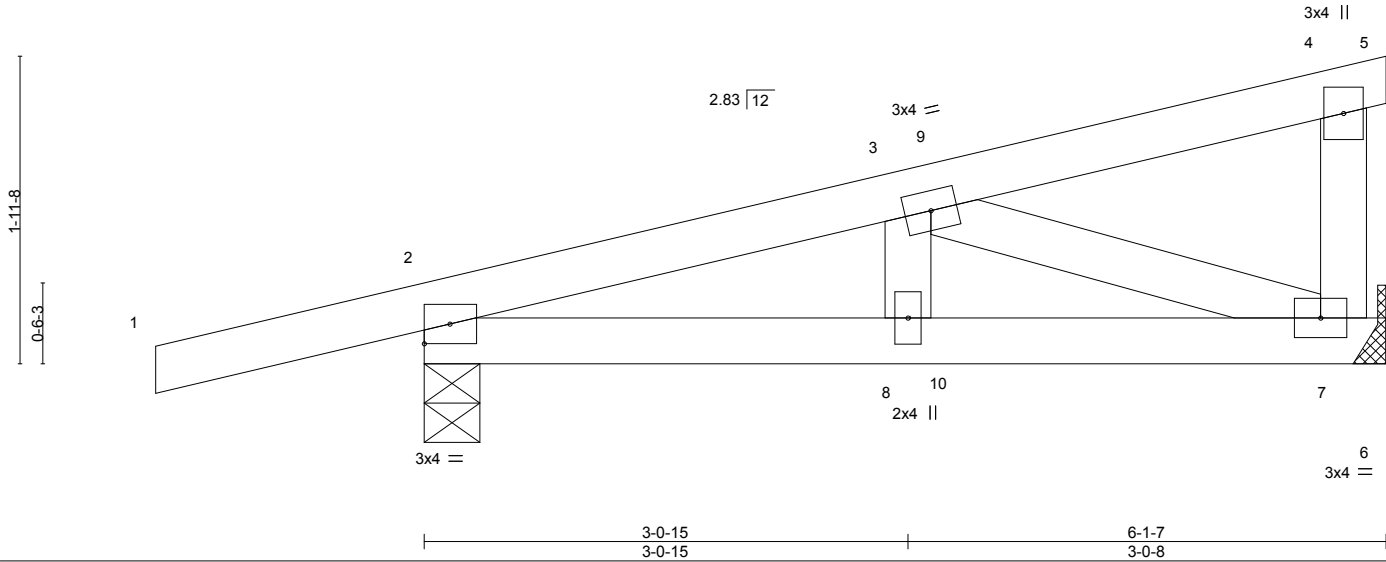
Job	Truss	Truss Type	Qty	Ply	Lot 7 Magnolia Hills	167767606
J0724-4089	ZP1	DIAGONAL HIP GIRDER	1	1		

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Scale = 1:14.7



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 0.21	Vert(LL)	-0.00	8	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.21	Vert(CT)	-0.01	8	>999		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.06	Horz(CT)	0.00	7	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-P	Wind(LL)	0.00	8	>999		
								Weight: 28 lb	FT = 20%

**LUMBER-**  
 TOP CHORD 2x4 SP No.1  
 BOT CHORD 2x4 SP No.1  
 WEBS 2x4 SP No.2

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 7=Mechanical, 2=0-4-4  
 Max Horz 2=63(LC 19)  
 Max Uplift 7=-28(LC 8), 2=-96(LC 4)  
 Max Grav 7=219(LC 1), 2=359(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-360/8  
 BOT CHORD 2-8=-40/308, 7-8=-40/308  
 WEBS 3-7=-325/42

- NOTES-**
- 1) 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
  - 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 3) \* 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.
  - 4) Refer to girder(s) for truss to truss connections.
  - 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 7, 2.
  - 6) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 18 lb down and 20 lb up at 3-4-9, and 18 lb down and 20 lb up at 3-4-9 on top chord, and 4 lb down at 3-4-9, and 4 lb down at 3-4-9 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
  - 7) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard  
 1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15  
 Uniform Loads (plf)  
 Vert: 1-4=-60, 4-5=-20, 2-6=-20



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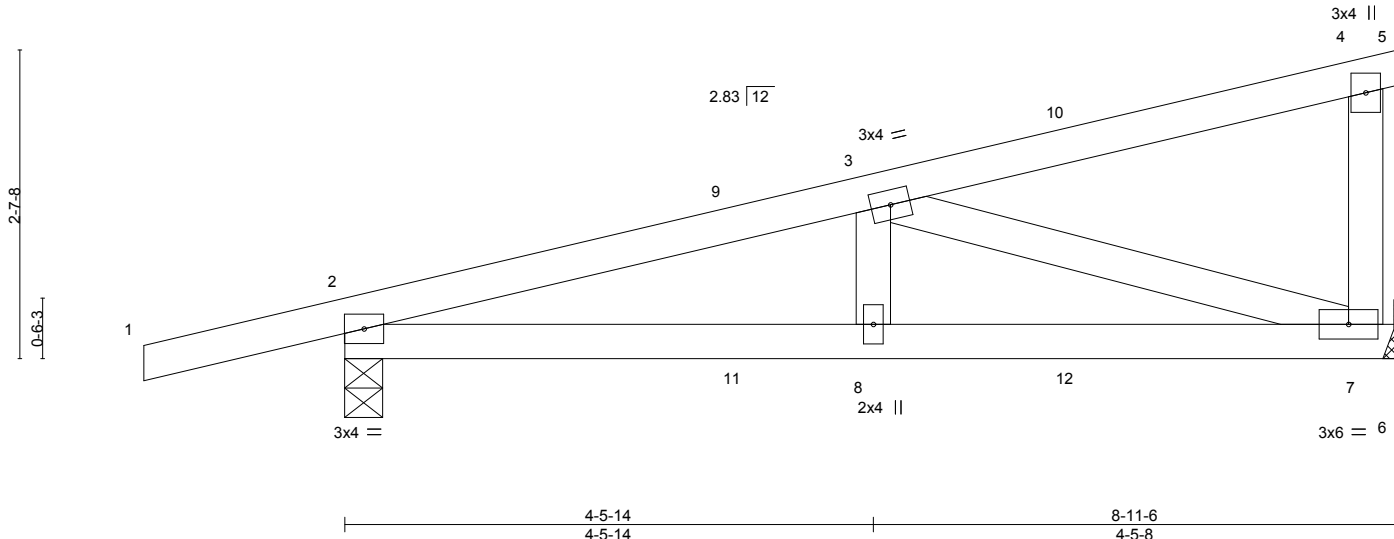
Job	Truss	Truss Type	Qty	Ply	Lot 7 Magnolia Hills	167767607
J0724-4089	ZP2	DIAGONAL HIP GIRDER	1	1	Job Reference (optional)	

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Scale = 1:19.6



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 0.33	Vert(LL)	0.03 2-8	>999	240	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.28	Vert(CT)	-0.04 7-8	>999	240		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.25	Horz(CT)	0.01 7	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-P					Weight: 40 lb	FT = 20%

**LUMBER-**  
 TOP CHORD 2x4 SP No.1  
 BOT CHORD 2x4 SP No.1  
 WEBS 2x4 SP No.2

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 7=Mechanical, 2=0-3-14  
 Max Horz 2=84(LC 4)  
 Max Uplift 7=-153(LC 4), 2=-204(LC 4)  
 Max Grav 7=396(LC 1), 2=488(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-777/243  
 BOT CHORD 2-8=-279/710, 7-8=-279/710  
 WEBS 3-7=-742/292

- NOTES-**
- 1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCCL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); porch left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 3) \* 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.
  - 4) Refer to girder(s) for truss to truss connections.
  - 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 7=153, 2=204.
  - 6) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 18 lb down and 20 lb up at 3-4-9, 18 lb down and 20 lb up at 3-4-9, and 46 lb down and 62 lb up at 6-2-8, and 46 lb down and 62 lb up at 6-2-8 on top chord, and 4 lb down at 3-4-9, 4 lb down at 3-4-9, and 26 lb down at 6-2-8, and 26 lb down at 6-2-8 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
  - 7) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

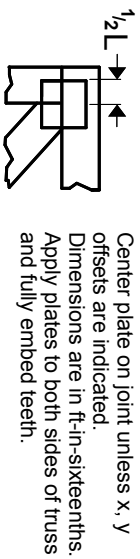
**LOAD CASE(S)** Standard  
 1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15  
 Uniform Loads (plf)  
 Vert: 1-4=-60, 4-5=-20, 2-6=-20  
 Concentrated Loads (lb)  
 Vert: 10=-53(F=-26, B=-26) 12=-26(F=-13, B=-13)



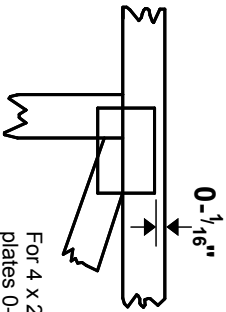
August 23, 2024

# Symbols

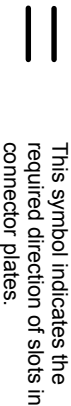
## PLATE LOCATION AND ORIENTATION



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-  $\frac{1}{16}$ \"/>



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

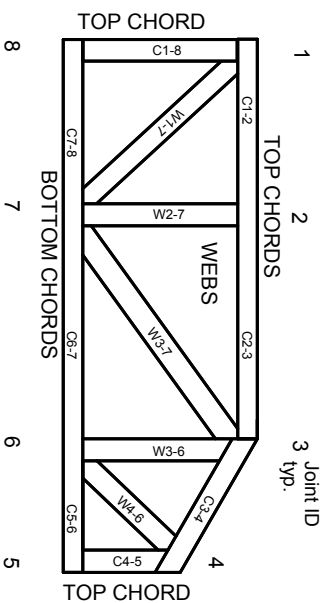


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

## 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



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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# 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 Tor1 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.

**MITek**

ENGINEERING BY  
**TRENGO**  
A MITek Affiliate

MITek Engineering Reference Sheet: MIL-7473 rev. 1/2/2023



RE: J0724-4090  
Lot 7 Magnolia Hills

**Trenco**  
818 Soundside Rd  
Edenton, NC 27932

**Site Information:**

Customer: Project Name: J0724-4090  
Lot/Block: Model:  
Address: Subdivision:  
City: State:

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

Design Code: IRC2015/TPI2014 Design Program: MiTek 20/20 8.6  
Wind Code: N/A Wind Speed: N/A mph  
Roof Load: N/A psf Floor Load: 55.0 psf

This package includes 12 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date
1	I67767608	ET1	8/23/2024
2	I67767609	ET2	8/23/2024
3	I67767610	F01	8/23/2024
4	I67767611	F02	8/23/2024
5	I67767612	F03	8/23/2024
6	I67767613	F04	8/23/2024
7	I67767614	F05	8/23/2024
8	I67767615	F06	8/23/2024
9	I67767616	F07	8/23/2024
10	I67767617	F08	8/23/2024
11	I67767618	FG1	8/23/2024
12	I67767619	FG2	8/23/2024

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

Truss Design Engineer's Name: Tony Miller

My license renewal date for the state of North Carolina is December 31, 2024.

North Carolina COA: C-0844

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 TRENCO. Any project specific information included is for TRENCO customers file reference purpose only, and was not taken into account in the preparation of these designs. 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.



August 23, 2024

Job	Truss	Truss Type	Qty	Ply	Lot 7 Magnolia Hills	167767608
J0724-4090	ET1	GABLE	1	1	Job Reference (optional)	

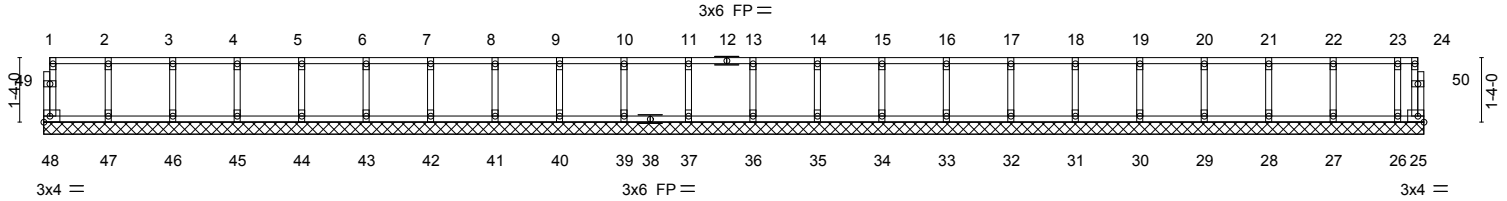
Comtech, Inc. Fayetteville, NC - 28314,

8.630 s Jul 12 2024 MiTek Industries, Inc. Fri Aug 23 09:51:51 2024 Page 1  
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0-1/8

0-1/8

Scale: 1/4"=1'



1-4-0	2-8-0	4-0-0	5-4-0	6-8-0	8-0-0	9-4-0	10-8-0	12-0-0	13-4-0	14-8-0	16-0-0	17-4-0	18-8-0	20-0-0	21-4-0	22-8-0	24-0-0	25-4-0	26-8-0	28-0-0	28-6-8
1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	0-6-8

<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 40.0	Plate Grip DOL	1.00	TC 0.06	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL 10.0	Lumber DOL	1.00	BC 0.01	Vert(CT)	n/a	-	n/a	999		
BCLL 0.0	Rep Stress Incr	YES	WB 0.03	Horz(CT)	0.00	25	n/a	n/a		
BCDL 5.0	Code IRC2015/TPI2014		Matrix-R							
									Weight: 124 lb	FT = 20%F, 11%E

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

**REACTIONS.** All bearings 28-6-8.  
 (lb) - Max Grav All reactions 250 lb or less at joint(s) 48, 25, 47, 46, 45, 44, 43, 42, 41, 40, 39, 37, 36, 35, 34, 33, 32, 31, 30, 29, 28, 27, 26

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

- NOTES-**
- All plates are 1.5x3 MT20 unless otherwise indicated.
  - Plates checked for a plus or minus 1 degree rotation about its center.
  - Gable requires continuous bottom chord bearing.
  - Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
  - Gable studs spaced at 1-4-0 oc.
  - 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 23, 2024

<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/TPI1 Quality Criteria and DSB-22</b> available from Truss Plate Institute (<a href="http://www.tpinst.org">www.tpinst.org</a>) and <b>BCSI Building Component Safety Information</b> available from the Structural Building Component Association (<a href="http://www.sbcacomponents.com">www.sbcacomponents.com</a>)</p>	<p>ENGINEERING BY</p> <p><b>TRENCO</b></p> <p>A MiTek Affiliate</p> <p>818 Soundside Road        Edenton, NC 27932</p>
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Job J0724-4090	Truss ET2	Truss Type GABLE	Qty 1	Ply 1	Lot 7 Magnolia Hills Job Reference (optional)	167767609
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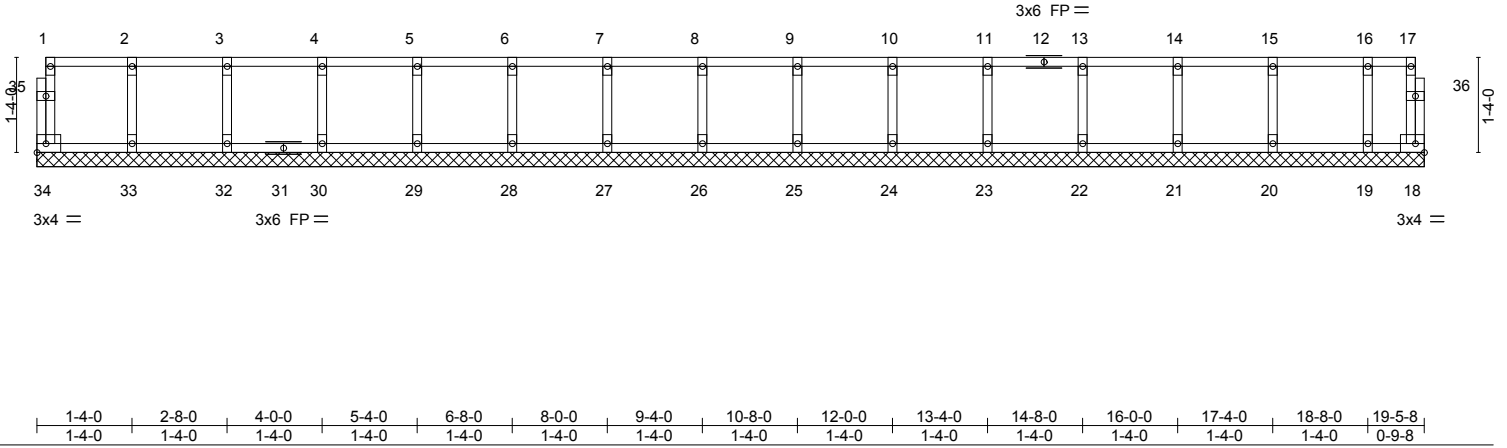
Comtech, Inc. Fayetteville, NC - 28314,

8.630 s Jul 12 2024 MiTek Industries, Inc. Fri Aug 23 09:51:52 2024 Page 1  
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0-1/8

0-1/8

Scale: 3/8"=1'



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 0.06	Vert(LL)	n/a	-	n/a	MT20	244/190
TCDL 10.0	Lumber DOL	1.00	BC 0.01	Vert(CT)	n/a	-	n/a		
BCLL 0.0	Rep Stress Incr	YES	WB 0.03	Horz(CT)	0.00	18	n/a		
BCDL 5.0	Code IRC2015/TPI2014		Matrix-R					Weight: 86 lb	FT = 20%F, 11%E

**LUMBER-**  
 TOP CHORD 2x4 SP No.1(flat)  
 BOT CHORD 2x4 SP No.1(flat)  
 WEBS 2x4 SP No.3(flat)  
 OTHERS 2x4 SP No.3(flat)

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** All bearings 19-5-8.  
 (lb) - Max Grav All reactions 250 lb or less at joint(s) 34, 18, 33, 32, 30, 29, 28, 27, 26, 25, 24, 23, 22, 21, 20, 19

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

- NOTES-**
- All plates are 1.5x3 MT20 unless otherwise indicated.
  - Plates checked for a plus or minus 1 degree rotation about its center.
  - Gable requires continuous bottom chord bearing.
  - Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
  - Gable studs spaced at 1-4-0 oc.
  - 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 23, 2024

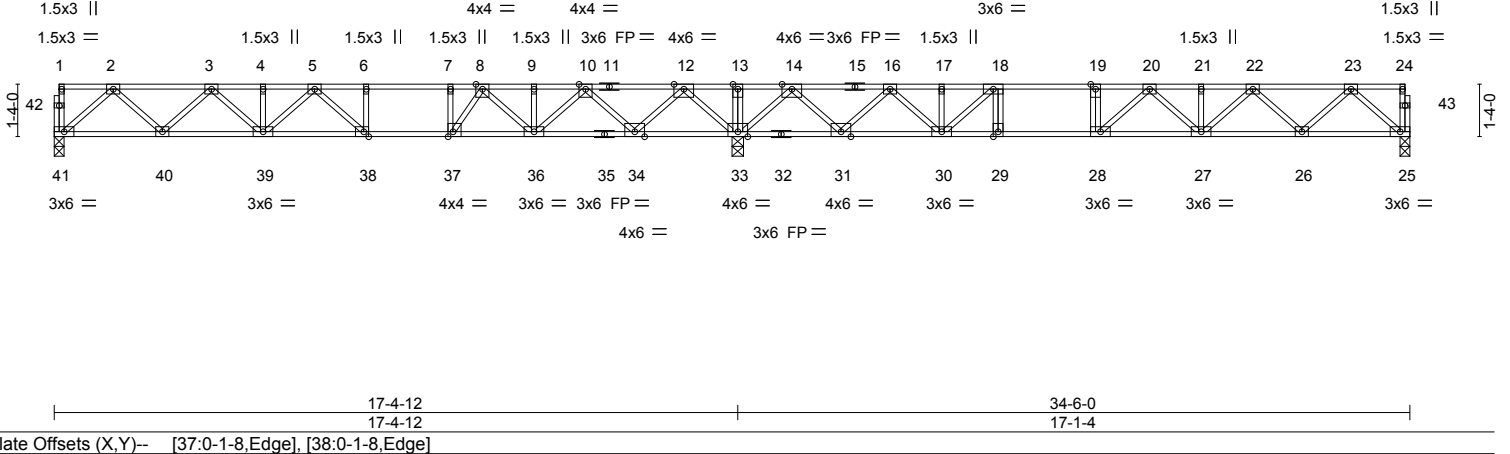
**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**  
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before 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	Lot 7 Magnolia Hills	167767610
J0724-4090	F01	Floor	4	1	Job Reference (optional)	

Comtech, Inc. Fayetteville, NC - 28314,

8.630 s Jul 12 2024 MiTek Industries, Inc. Fri Aug 23 09:51:52 2024 Page 1  
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LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 40.0	2-0-0	TC 0.97	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.00	BC 0.86	Vert(LL) -0.22 27-28 >919 480	Weight: 184 lb FT = 20%F, 11%E	
BCLL 0.0	Lumber DOL 1.00	WB 0.56	Vert(CT) -0.30 27-28 >679 360		
BCDL 5.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.06 25 n/a n/a		
	Code IRC2015/TP12014				

**LUMBER-**  
 TOP CHORD 2x4 SP No.1(flat) \*Except\*  
 15-24: 2x4 SP 2400F 2.0E(flat)  
 BOT CHORD 2x4 SP No.1(flat) \*Except\*  
 25-32: 2x4 SP 2400F 2.0E(flat)  
 WEBS 2x4 SP No.3(flat)

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:  
 6-0-0 oc bracing: 34-36,33-34,31-33,30-31.

**REACTIONS.** (size) 41=0-3-0, 25=0-3-0, 33=0-3-8  
 Max Grav 41=839(LC 3), 25=841(LC 4), 33=2184(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1491/0, 3-4=-2414/0, 4-5=-2414/0, 5-6=-2597/0, 6-7=-2597/0, 7-8=-2597/0,  
 8-9=-1806/70, 9-10=-1806/70, 10-12=-462/549, 12-13=0/2124, 13-14=0/2124,  
 14-16=-668/787, 16-17=-1903/301, 17-18=-1903/301, 18-19=-2577/0, 19-20=-2577/0,  
 20-21=-2426/0, 21-22=-2426/0, 22-23=-1494/0  
 BOT CHORD 40-41=0/903, 39-40=0/2059, 38-39=0/2624, 37-38=0/2597, 36-37=0/2266,  
 34-36=-293/1230, 33-34=-992/0, 31-33=-1132/0, 30-31=-513/1405, 29-30=0/2577,  
 28-29=0/2577, 27-28=0/2632, 26-27=0/2068, 25-26=0/904  
 WEBS 2-41=-1200/0, 2-40=0/819, 3-40=-790/0, 3-39=0/482, 12-33=-1566/0, 12-34=0/1182,  
 10-34=-1133/0, 10-36=0/850, 5-39=-286/16, 5-38=-363/174, 8-36=-701/0, 8-37=0/905,  
 7-37=-566/0, 23-25=-1201/0, 23-26=0/821, 22-26=-798/0, 22-27=0/488, 14-33=-1538/0,  
 14-31=0/1170, 16-31=-1116/0, 16-30=0/752, 18-30=-1224/0, 20-27=-280/60,  
 20-28=-447/82, 18-29=0/292

- 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 1 degree rotation about its center.
  - 4) 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.
  - 5) CAUTION, Do not erect truss backwards.



August 23, 2024

**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/TP1 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 J0724-4090	Truss F02	Truss Type Floor	Qty 3	Ply 1	Lot 7 Magnolia Hills Job Reference (optional)	167767611
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Comtech, Inc. Fayetteville, NC - 28314,

8.630 s Jul 12 2024 MiTek Industries, Inc. Fri Aug 23 09:51:53 2024 Page 1

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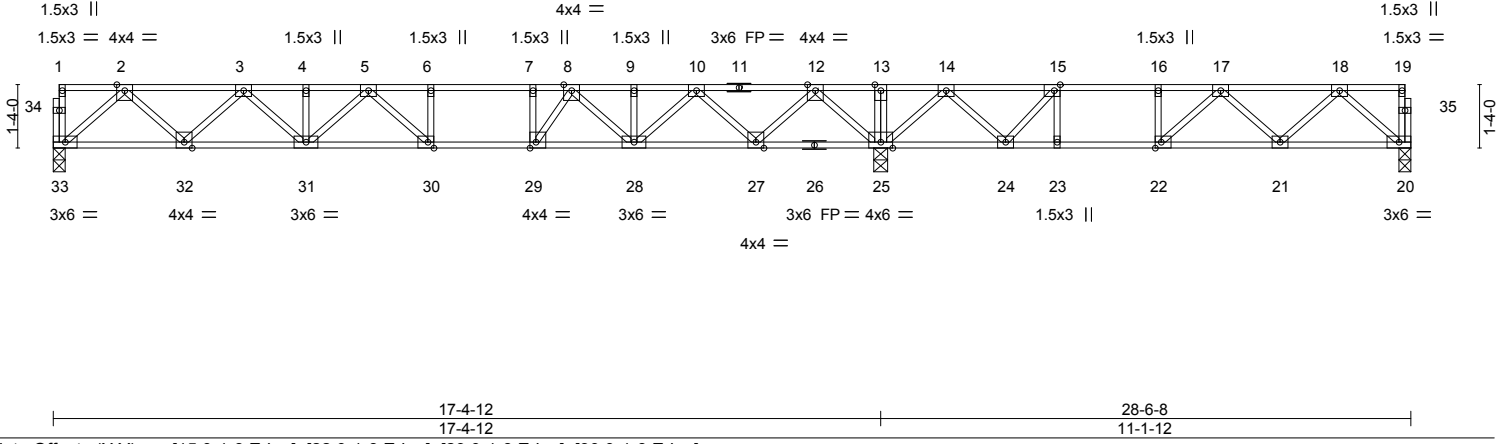
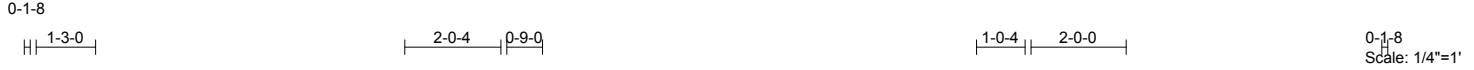


Plate Offsets (X,Y)--	[15:0-1-8,Edge], [22:0-1-8,Edge], [29:0-1-8,Edge], [30:0-1-8,Edge]				
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 40.0	Plate Grip DOL 1.00	TC 0.80	Vert(LL) -0.20 30-31 >999 480	MT20	244/190
TCDL 10.0	Lumber DOL 1.00	BC 0.80	Vert(CT) -0.28 30-31 >737 360		
BCLL 0.0	Rep Stress Incr YES	WB 0.53	Horz(CT) 0.05 20 n/a n/a		
BCDL 5.0	Code IRC2015/TP12014	Matrix-S		Weight: 149 lb	FT = 20%F, 11%E

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

**REACTIONS.** (size) 33=0-3-0, 20=0-3-0, 25=0-3-8  
 Max Grav 33=870(LC 10), 20=551(LC 4), 25=1787(LC 1)

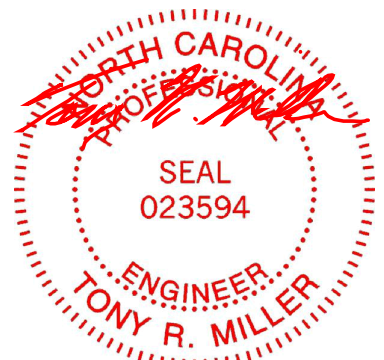
**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

TOP CHORD 2-3=-1558/0, 3-4=-2542/0, 4-5=-2542/0, 5-6=-2818/0, 6-7=-2818/0, 7-8=-2818/0, 8-9=-2111/0, 9-10=-2111/0, 10-12=-826/0, 12-13=0/1418, 13-14=0/1418, 14-15=-650/619, 15-16=-1081/304, 16-17=-1081/304, 17-18=-883/0

BOT CHORD 32-33=0/938, 31-32=0/2155, 30-31=0/2787, 29-30=0/2818, 28-29=0/2533, 27-28=0/1567, 25-27=-305/58, 24-25=-893/218, 23-24=-304/1081, 22-23=-304/1081, 21-22=-76/1124, 20-21=0/581

WEBS 2-33=-1246/0, 2-32=0/863, 3-32=-831/0, 3-31=0/526, 5-31=-333/0, 5-30=-218/326, 7-29=-478/0, 12-25=-1482/0, 12-27=0/1109, 10-27=-1068/0, 10-28=0/779, 8-28=-620/0, 18-20=-770/0, 18-21=-19/421, 17-21=-334/119, 17-22=-362/0, 15-23=0/294, 14-25=-959/0, 14-24=0/763, 8-29=0/756, 15-24=-884/0

- 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 1 degree rotation about its center.
  - 4) 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.
  - 5) CAUTION, Do not erect truss backwards.



August 23, 2024

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Job	Truss	Truss Type	Qty	Ply	Lot 7 Magnolia Hills	67767612
J0724-4090	F03	FLOOR	9	1	Job Reference (optional)	

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8.630 s Jul 12 2024 MiTek Industries, Inc. Fri Aug 23 09:51:54 2024 Page 1  
 ID:3YJEG\_u8zX16RsP?VvW\_V6zd0wB-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrcD0i7J4zJC?f

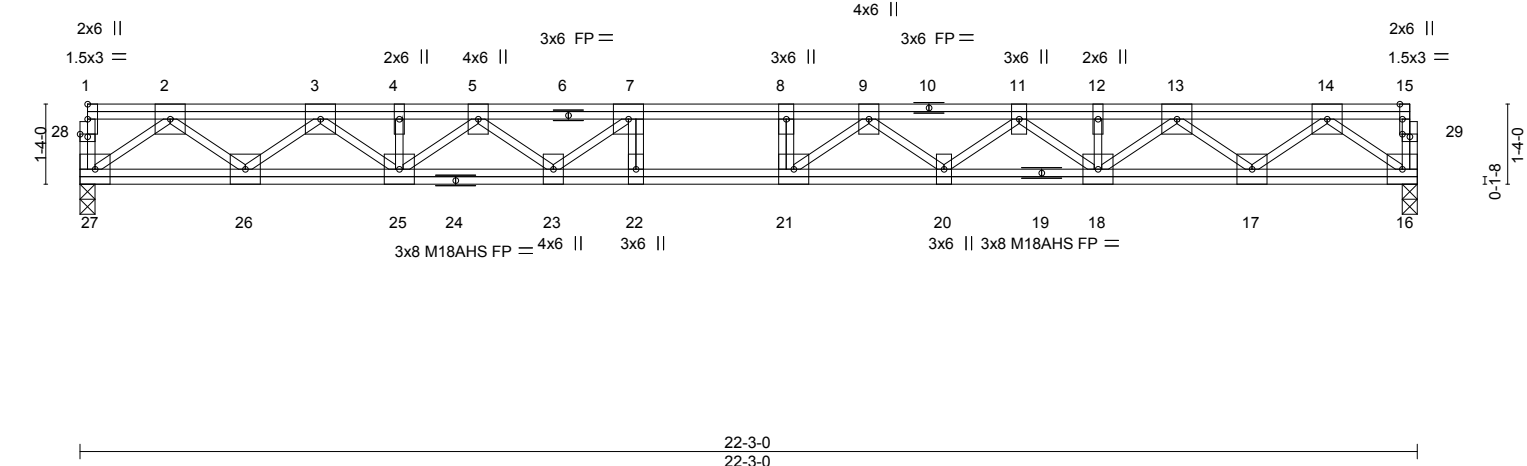
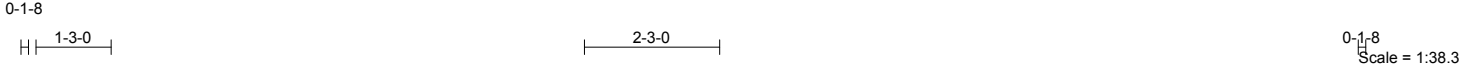


Plate Offsets (X,Y)-- [15:0-3-0,Edge], [28:0-1-8,0-0-8], [29:0-1-8,0-0-8]

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 0.29	Vert(LL)	-0.32	21	>820	480	MT20	244/190
TCDL 10.0	Lumber DOL	1.00	BC 0.63	Vert(CT)	-0.44	21	>596	360	M18AHS	186/179
BCLL 0.0	Rep Stress Incr	YES	WB 0.62	Horz(CT)	0.05	16	n/a	n/a		
BCDL 5.0	Code IRC2015/TP12014		Matrix-S							
									Weight: 177 lb	FT = 20%F, 11%E

**LUMBER-**  
 TOP CHORD 2x4 SP No.1(flat)  
 BOT CHORD 2x4 SP No.1(flat)  
 WEBS 2x4 SP No.3(flat)

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 27=0-3-0, 16=0-3-0  
 Max Grav 27=1203(LC 1), 16=1203(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-2456/0, 3-4=-4314/0, 4-5=-4314/0, 5-7=-5453/0, 7-8=-5953/0, 8-9=-5953/0, 9-11=-5456/0, 11-12=-4309/0, 12-13=-4309/0, 13-14=-2456/0  
 BOT CHORD 26-27=0/1471, 25-26=0/3495, 23-25=0/5013, 22-23=0/5953, 21-22=0/5953, 20-21=0/5834, 18-20=0/5027, 17-18=0/3494, 16-17=0/1472  
 WEBS 2-27=-1819/0, 2-26=0/1306, 3-26=-1375/0, 3-25=0/1063, 5-25=-906/0, 5-23=0/717, 7-23=-941/0, 14-16=-1819/0, 14-17=0/1306, 13-17=-1373/0, 13-18=0/1057, 11-18=-930/0, 11-20=0/568, 9-20=-536/0, 9-21=-298/676, 8-21=-288/42

- NOTES-**
- 1) Unbalanced floor live loads have been considered for this design.
  - 2) All plates are MT20 plates unless otherwise indicated.
  - 3) All plates are 6x6 MT20 unless otherwise indicated.
  - 4) Plates checked for a plus or minus 1 degree rotation about its center.
  - 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.



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**ENGINEERING BY**  
**TRENCO**  
 A MiTek Affiliate

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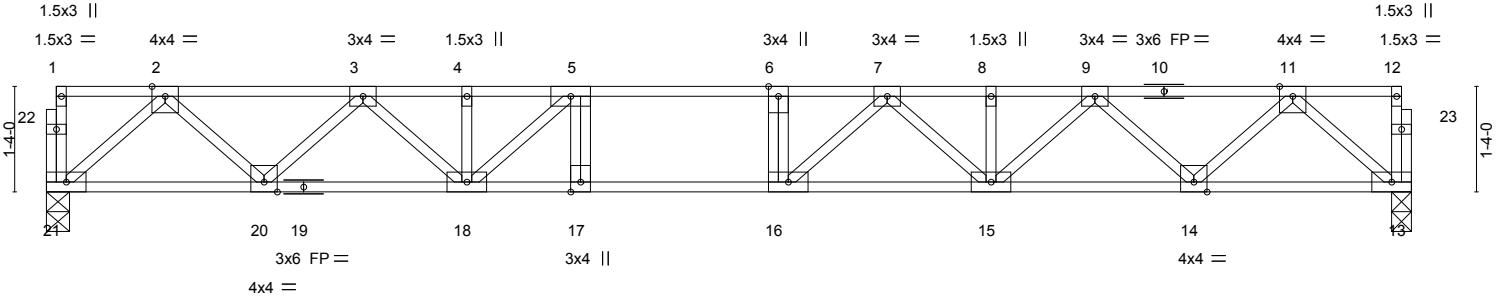
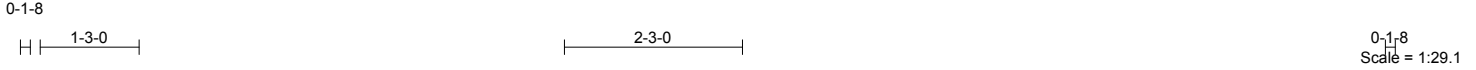


Job	Truss	Truss Type	Qty	Ply	Lot 7 Magnolia Hills	167767614
J0724-4090	F05	FLOOR	2	1	Job Reference (optional)	

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17-3-0  
17-3-0

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 0.47	Vert(LL)	-0.23 15-16	>887	480	MT20	244/190
TCDL 10.0	Lumber DOL	1.00	BC 0.89	Vert(CT)	-0.31 15-16	>663	360		
BCLL 0.0	Rep Stress Incr	YES	WB 0.45	Horz(CT)	0.05 13	n/a	n/a		
BCDL 5.0	Code IRC2015/TPI2014		Matrix-S					Weight: 94 lb	FT = 20%F, 11%E

**LUMBER-**  
TOP CHORD 2x4 SP 2400F 2.0E(flat)  
BOT CHORD 2x4 SP No.1(flat)  
WEBS 2x4 SP No.3(flat)

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 21=0-3-8, 13=0-3-0  
Max Grav 21=929(LC 1), 13=929(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-1690/0, 3-4=-2767/0, 4-5=-2767/0, 5-6=-3229/0, 6-7=-3229/0, 7-8=-2794/0, 8-9=-2794/0, 9-11=-1685/0  
BOT CHORD 20-21=0/1006, 18-20=0/2339, 17-18=0/3229, 16-17=0/3229, 15-16=0/3101, 14-15=0/2342, 13-14=0/1005  
WEBS 11-13=-1335/0, 11-14=0/947, 9-14=-913/0, 9-15=0/615, 7-15=-417/0, 7-16=-130/522, 6-16=-269/6, 2-21=-1336/0, 2-20=0/951, 3-20=-903/0, 3-18=0/582, 5-18=-858/0

**NOTES-**  
1) Unbalanced floor live loads have been considered for this design.  
2) All plates are 3x6 MT20 unless otherwise indicated.  
3) Plates checked for a plus or minus 1 degree rotation about its center.  
4) 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 23, 2024

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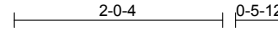
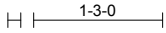
Job	Truss	Truss Type	Qty	Ply	Lot 7 Magnolia Hills
J0724-4090	F06	Floor	2	1	167767615

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0-1-8



Scale = 1:22.3

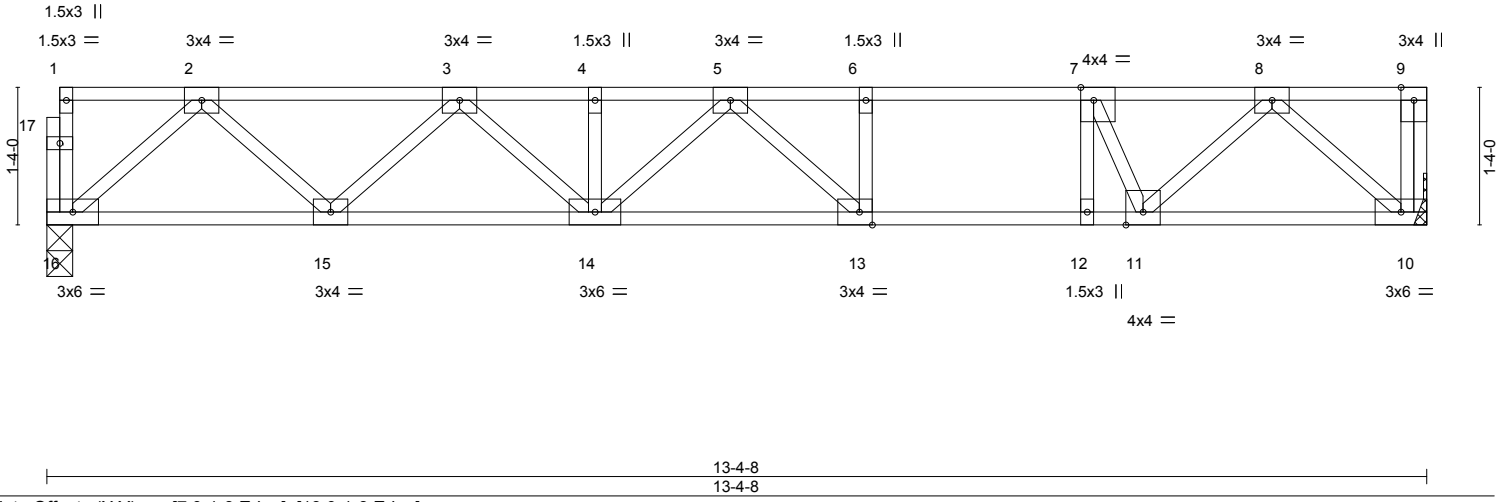


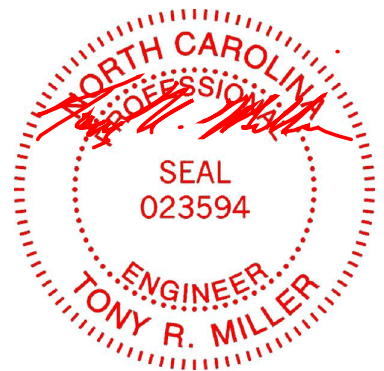
Plate Offsets (X,Y)--	[7:0-1-8,Edge], [13:0-1-8,Edge]				
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 40.0	Plate Grip DOL 1.00	TC 0.74	Vert(LL) -0.19 13-14 >820 480	MT20	244/190
TCDL 10.0	Lumber DOL 1.00	BC 0.75	Vert(CT) -0.26 13-14 >603 360		
BCLL 0.0	Rep Stress Incr YES	WB 0.39	Horz(CT) 0.02 10 n/a n/a		
BCDL 5.0	Code IRC2015/TPI2014	Matrix-S		Weight: 72 lb	FT = 20%F, 11%E

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.1(flat)	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x4 SP 2400F 2.0E(flat)	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3(flat)	

**REACTIONS.** (size) 16=0-3-0, 10=Mechanical  
Max Grav 16=716(LC 1), 10=722(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-1220/0, 3-4=-1896/0, 4-5=-1896/0, 5-6=-1704/0, 6-7=-1704/0, 7-8=-1302/0  
BOT CHORD 15-16=0/760, 14-15=0/1670, 13-14=0/1949, 12-13=0/1704, 11-12=0/1704, 10-11=0/716  
WEBS 2-16=-1010/0, 2-15=0/639, 3-15=-626/0, 3-14=0/308, 5-13=-412/72, 7-12=0/568, 8-10=-953/0, 8-11=0/815, 7-11=-1014/0

- NOTES-**
- 1) Unbalanced floor live loads have been considered for this design.
  - 2) Plates checked for a plus or minus 1 degree rotation about its center.
  - 3) Refer to girder(s) for truss to truss connections.
  - 4) 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.
  - 5) CAUTION, Do not erect truss backwards.



August 23, 2024

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Job J0724-4090	Truss F07	Truss Type Floor	Qty 4	Ply 1	Lot 7 Magnolia Hills Job Reference (optional)	167767616
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8.630 s Jul 12 2024 MiTek Industries, Inc. Fri Aug 23 09:51:55 2024 Page 1  
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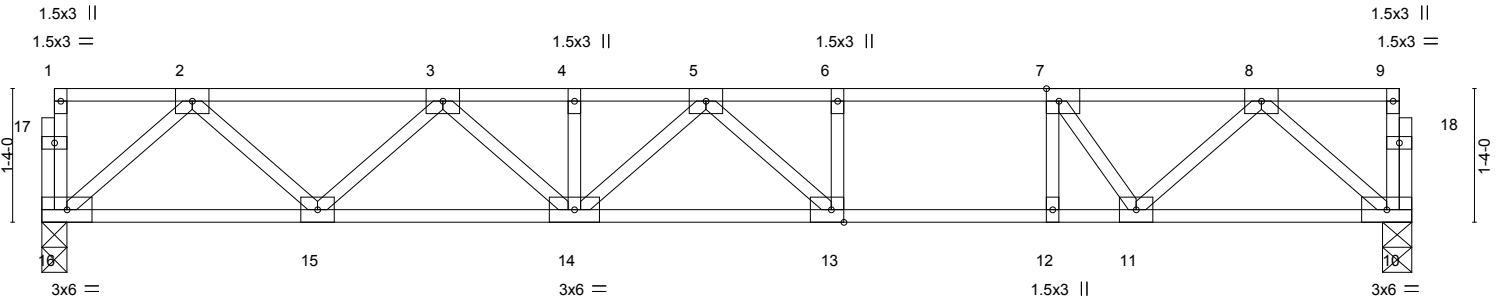


Plate Offsets (X, Y)-- [7:0-1-8,Edge], [13:0-1-8,Edge]		13-8-0 13-8-0					
<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d
TCLL 40.0	Plate Grip DOL	1.00	TC 0.71	Vert(LL)	-0.20 13-14	>823	480
TCDL 10.0	Lumber DOL	1.00	BC 0.71	Vert(CT)	-0.26 13-14	>608	360
BCLL 0.0	Rep Stress Incr	YES	WB 0.38	Horz(CT)	0.02 10	n/a	n/a
BCDL 5.0	Code IRC2015/TPI2014		Matrix-S				
				<b>PLATES</b>	<b>GRIP</b>		
				MT20	244/190		
				Weight: 73 lb	FT = 20%F, 11%E		

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.1(flat)	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x4 SP 2400F 2.0E(flat)	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3(flat)	

**REACTIONS.** (size) 16=0-3-0, 10=0-3-8  
Max Grav 16=732(LC 1), 10=732(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-1255/0, 3-4=-1964/0, 4-5=-1964/0, 5-6=-1816/0, 6-7=-1816/0, 7-8=-1303/0  
BOT CHORD 15-16=0/779, 14-15=0/1721, 13-14=0/2036, 12-13=0/1816, 11-12=0/1816, 10-11=0/736  
WEBS 2-16=-1034/0, 2-15=0/662, 3-15=-648/0, 3-14=0/330, 5-13=-393/101, 7-12=0/417, 8-10=-975/0, 8-11=0/789, 7-11=-918/0

- 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 1 degree rotation about its center.
  - 4) 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 23, 2024

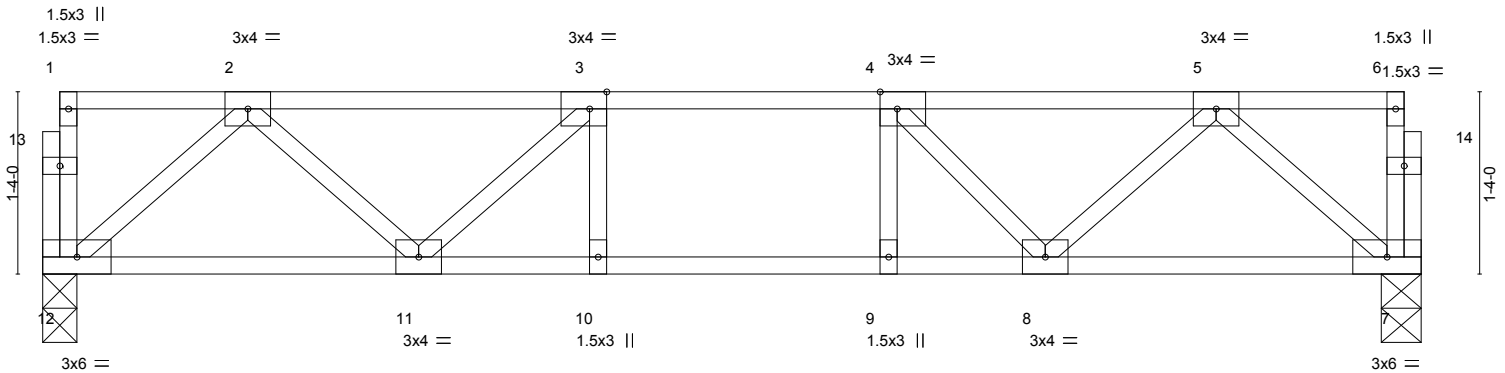
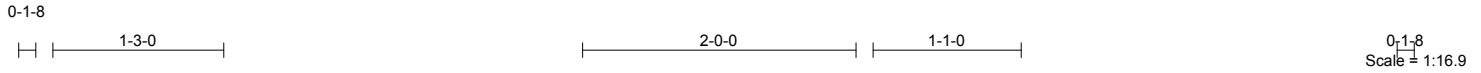
<p><b>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.</b></p> <p>Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. 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/TPI 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>ENGINEERING BY</p> <p>A MiTek Affiliate</p> <p>818 Soundside Road Edenton, NC 27932</p>
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Job J0724-4090	Truss F08	Truss Type Floor	Qty 1	Ply 1	Lot 7 Magnolia Hills Job Reference (optional)	167767617
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8.630 s Jul 12 2024 MiTek Industries, Inc. Fri Aug 23 09:51:55 2024 Page 1

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10-1-0  
10-1-0

Plate Offsets (X,Y)-- [3:0-1-8,Edge], [4:0-1-8,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 0.26	Vert(LL)	-0.05	10-11	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.00	BC 0.40	Vert(CT)	-0.06	10	>999		
BCLL 0.0	Rep Stress Incr	YES	WB 0.19	Horz(CT)	0.01	7	n/a		
BCDL 5.0	Code IRC2015/TPI2014		Matrix-S						
								Weight: 53 lb	FT = 20%F, 11%E

**LUMBER-**

TOP CHORD 2x4 SP No.1(flat)  
BOT CHORD 2x4 SP No.1(flat)  
WEBS 2x4 SP No.3(flat)

**BRACING-**

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.**

(size) 12=0-3-0, 7=0-3-8  
Max Grav 12=535(LC 1), 7=535(LC 1)

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

TOP CHORD 2-3=-833/0, 3-4=-1083/0, 4-5=-838/0  
BOT CHORD 11-12=0/561, 10-11=0/1083, 9-10=0/1083, 8-9=0/1083, 7-8=0/553  
WEBS 2-12=-745/0, 2-11=0/377, 3-11=-379/0, 5-7=-734/0, 5-8=0/396, 4-8=-397/0

**NOTES-**

- 1) Unbalanced floor live loads have been considered for this design.
- 2) Plates checked for a plus or minus 1 degree rotation about its center.
- 3) 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 23, 2024

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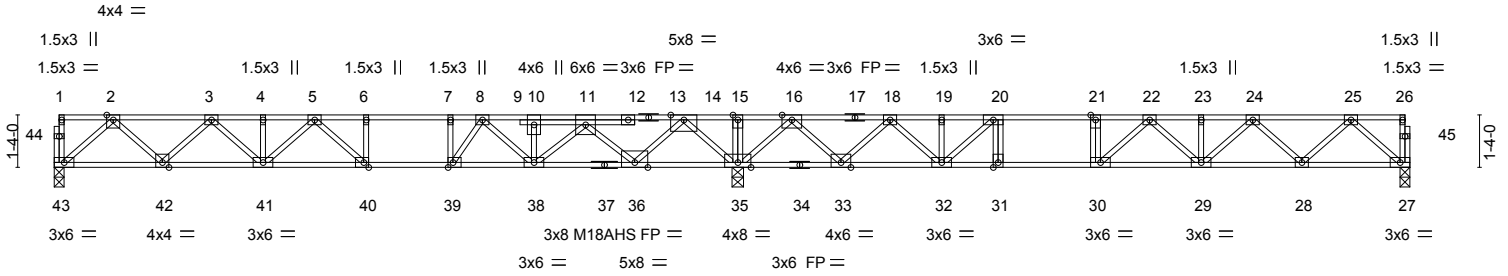
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Job	Truss	Truss Type	Qty	Ply	Lot 7 Magnolia Hills	167767618
J0724-4090	FG1	Floor	1	1		

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	17-4-12	34-6-0
	17-4-12	17-1-4
Plate Offsets (X,Y)--	[39:0-1-8,Edge], [40:0-1-8,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 0.95	Vert(LL)	-0.23	29-30	>878	MT20	244/190
TCDL 10.0	Lumber DOL	1.00	BC 0.85	Vert(CT)	-0.31	29-30	>648	M18AHS	186/179
BCLL 0.0	Rep Stress Incr	NO	WB 0.62	Horz(CT)	0.06	27	n/a		
BCDL 5.0	Code IRC2015/TP12014		Matrix-S						
								Weight: 187 lb	FT = 20%F, 11%E

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.1(flat) *Except* 17-26: 2x4 SP 2400F 2.0E(flat)	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.1(flat) *Except* 27-34: 2x4 SP 2400F 2.0E(flat)	BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 2x4 SP No.3(flat) *Except* 14-36: 2x4 SP No.2(flat)	

**REACTIONS.** (size) 43=0-3-0, 27=0-3-0, 35=0-3-8  
Max Grav 43=953(LC 3), 27=765(LC 4), 35=2938(LC 1)

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

TOP CHORD 2-3=-1739/0, 3-4=-2892/0, 4-5=-2892/0, 5-6=-3424/0, 6-7=-3424/0, 7-8=-3424/0, 8-10=-3016/0, 10-11=-3016/0, 11-14=-1021/0, 14-15=0/3063, 15-16=0/3063, 16-18=0/1580, 18-19=-1140/968, 19-20=-1140/968, 20-21=-2003/416, 21-22=-2003/416, 22-23=-2104/0, 23-24=-2104/0, 24-25=-1326/0

BOT CHORD 42-43=0/1033, 41-42=0/2417, 40-41=0/3231, 39-40=0/3424, 38-39=0/3244, 36-38=0/2605, 35-36=-1179/0, 33-35=-2004/0, 32-33=-1239/576, 31-32=-416/2003, 30-31=-416/2003, 29-30=-86/2221, 28-29=0/1826, 27-28=0/816

WEBS 2-43=-1373/0, 2-42=0/982, 3-42=-943/0, 3-41=0/646, 14-35=-2577/0, 14-36=0/2181, 11-36=-2209/0, 11-38=0/620, 5-41=-460/0, 5-40=-39/469, 8-38=-404/0, 8-39=0/599, 7-39=-391/0, 25-27=-1084/0, 25-28=0/710, 24-28=-695/0, 24-29=-73/378, 16-35=-1628/0, 16-33=0/1269, 18-33=-1212/0, 18-32=0/831, 19-32=0/283, 20-32=-1442/0, 22-30=-637/0, 20-31=0/355

- NOTES-**
- 1) Unbalanced floor live loads have been considered for this design.
  - 2) All plates are MT20 plates unless otherwise indicated.
  - 3) All plates are 3x4 MT20 unless otherwise indicated.
  - 4) Plates checked for a plus or minus 1 degree rotation about its center.
  - 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.
  - 6) CAUTION, Do not erect truss backwards.
  - 7) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 879 lb down at 13-6-4 on top chord. The design/selection of such connection device(s) is the responsibility of others.
  - 8) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard  
1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00



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.sbccomponents.com)</p>	<p><b>ENGINEERING BY</b> <b>TRENCO</b> A MiTek Affiliate</p> <p>818 Soundside Road Edenton, NC 27932</p>
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Job	Truss	Truss Type	Qty	Ply	Lot 7 Magnolia Hills	I67767618
J0724-4090	FG1	Floor	1	1	Job Reference (optional)	

Comtech, Inc. Fayetteville, NC - 28314,

8.630 s Jul 12 2024 MiTek Industries, Inc. Fri Aug 23 09:51:56 2024 Page 2  
 ID:3YJEg\_u8zX16RsP?VvW\_V6zd0wB-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

**LOAD CASE(S)** Standard

Uniform Loads (plf)

Vert: 27-43=-10, 1-26=-100

Concentrated Loads (lb)

Vert: 11=-799(B)

**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/TP1 Quality Criteria and DSB-22** available from Truss Plate Institute ([www.tpinst.org](http://www.tpinst.org)) and **BCSI Building Component Safety Information** available from the Structural Building Component Association ([www.sbccomponents.com](http://www.sbccomponents.com))



818 Soundside Road  
 Edenton, NC 27932

Job J0724-4090	Truss FG2	Truss Type FLOOR GIRDER	Qty 1	Ply 1	Lot 7 Magnolia Hills Job Reference (optional)	167767619
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Comtech, Inc. Fayetteville, NC - 28314,

8.630 s Jul 12 2024 MiTek Industries, Inc. Fri Aug 23 09:51:56 2024 Page 1

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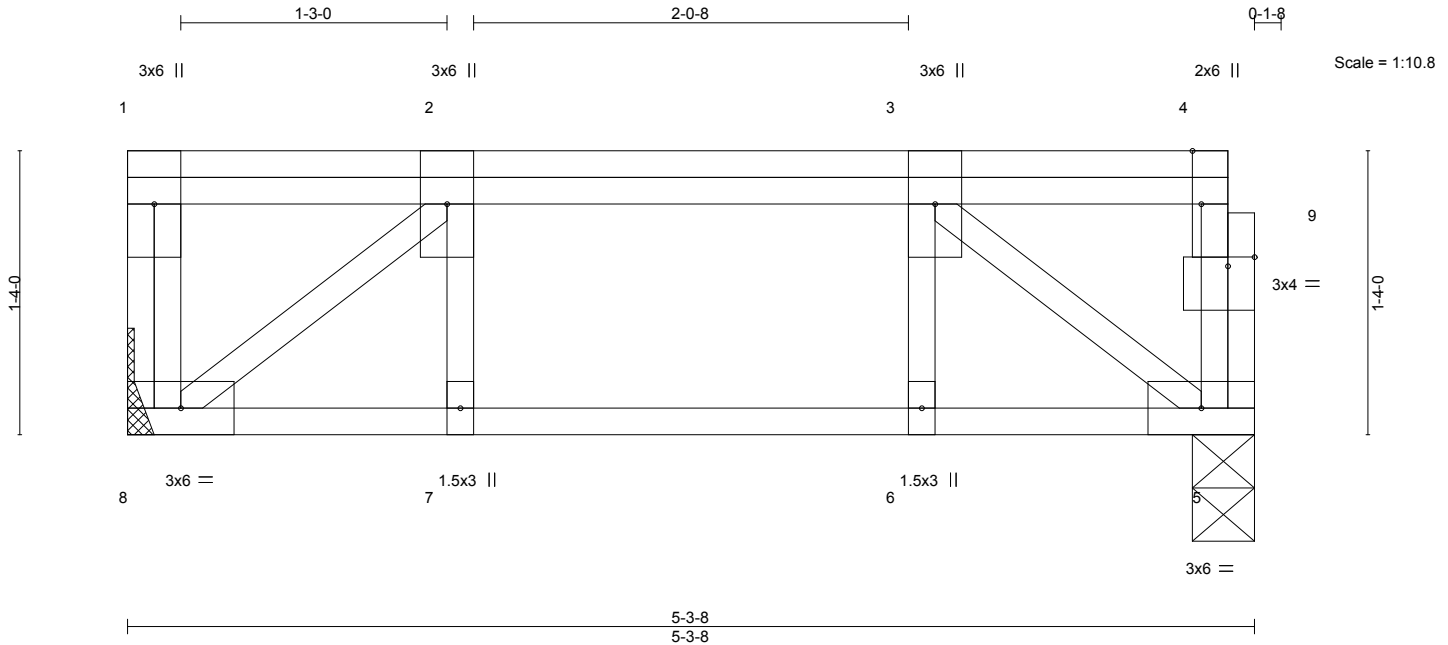


Plate Offsets (X,Y)--	[4:0-3-0,Edge], [9:0-1-8,0-0-8]				
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 40.0	Plate Grip DOL 1.00	TC 0.09	Vert(LL) -0.01 6-7 >999 480	MT20	244/190
TCDL 10.0	Lumber DOL 1.00	BC 0.24	Vert(CT) -0.02 6-7 >999 360		
BCLL 0.0	Rep Stress Incr NO	WB 0.31	Horz(CT) 0.01 5 n/a n/a		
BCDL 5.0	Code IRC2015/TPI2014	Matrix-S		Weight: 36 lb	FT = 20%F, 11%E

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.1(flat)	TOP CHORD Structural wood sheathing directly applied or 5-3-8 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.1(flat)	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3(flat)	

**REACTIONS.** (size) 8=Mechanical, 5=0-3-8  
Max Grav 8=899(LC 1), 5=893(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-1036/0  
BOT CHORD 7-8=0/1036, 6-7=0/1036, 5-6=0/1036  
WEBS 2-8=-1325/0, 3-5=-1321/0

- NOTES-**
- 1) Unbalanced floor live loads have been considered for this design.
  - 2) Plates checked for a plus or minus 1 degree rotation about its center.
  - 3) Refer to girder(s) for truss to truss connections.
  - 4) 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.
  - 5) CAUTION, Do not erect truss backwards.
  - 6) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 650 lb down at 1-10-4, and 667 lb down at 3-10-4 on top chord. The design/selection of such connection device(s) is the responsibility of others.
  - 7) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard

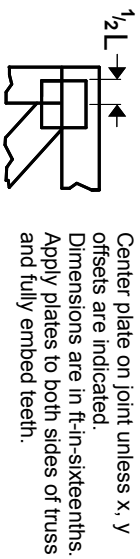
- 1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 5-8=10, 1-4=-100  
Concentrated Loads (lb)  
Vert: 2=-622(B) 3=-622(B)



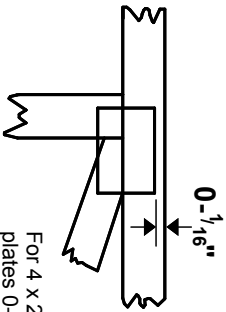
August 23, 2024

# Symbols

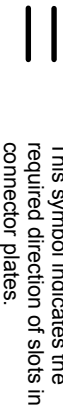
## PLATE LOCATION AND ORIENTATION



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

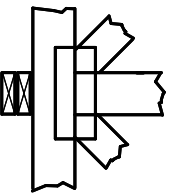
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## 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

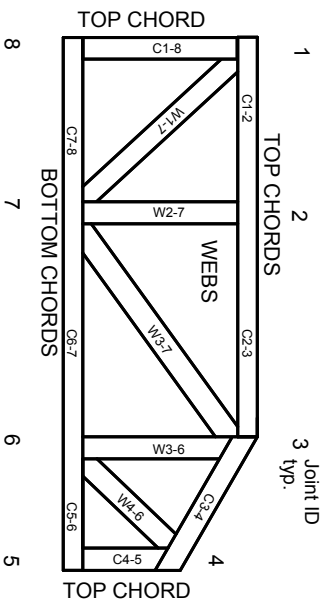


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

## 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



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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# 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 Tor1 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.

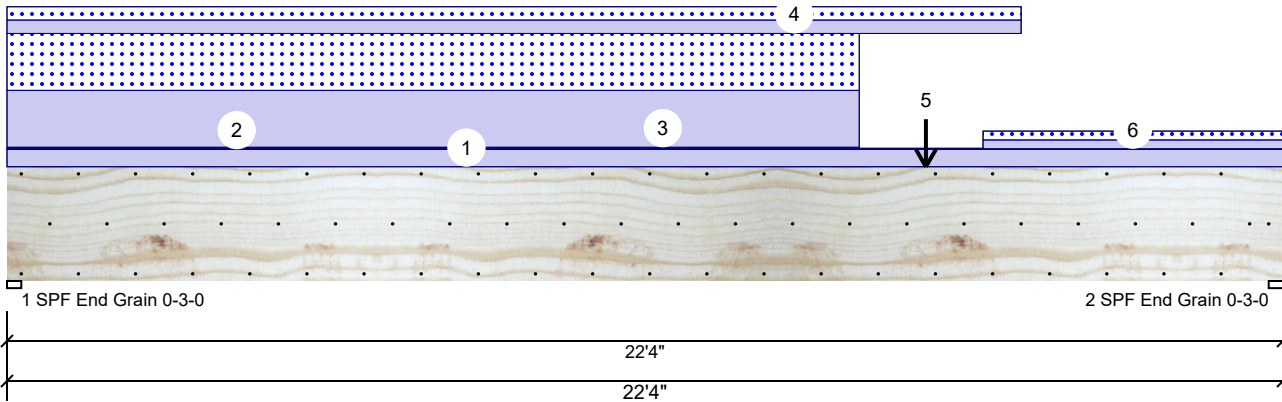
**MITek**

ENGINEERING BY  
**TRENGO**  
A MITek Affiliate

MITek Engineering Reference Sheet: MI1-7473 rev. 1/2/2023

**FB1 Kerto-S LVL 1.750" X 24.000" 3-Ply - PASSED**

Level: Level



**Member Information**

Type:	Girder	Application:	Floor
Plies:	3	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	480	Load Sharing:	Yes
Deflection TL:	360	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

**Reactions UNPATTERNED lb (Uplift)**

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	112	7018	5324	0	0
2	Vertical	112	5588	3893	0	0

**Bearings**

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.000"	Vert	93%	7018 / 5324	12342	L	D+S
2 - SPF End Grain	3.000"	Vert	72%	5588 / 3893	9480	L	D+S

**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	65847 ft-lb	11' 1/4"	131295 ft-lb	0.502 (50%)	D+S	L
Unbraced	65847 ft-lb	11' 1/4"	66073 ft-lb	0.997 (100%)	D+S	L
Shear	9886 lb	2'3"	30912 lb	0.320 (32%)	D+S	L
LL Defl inch	0.228 (L/1158)	11'1"	0.549 (L/480)	0.414 (41%)	S	L
TL Defl inch	0.530 (L/498)	11'1 1/4"	0.733 (L/360)	0.723 (72%)	D+S	L

**Design Notes**

- Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6". Nail from both sides.
- Refer to last page of calculations for fasteners required for specified loads.
- Girders are designed to be supported on the bottom edge only.
- Top loads must be supported equally by all plies.
- Top must be laterally braced at a maximum of 3'11 15/16" o.c.
- Bottom must be laterally braced at end bearings.
- Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Top	120 PLF	0 PLF	0 PLF	0 PLF	0 PLF	WALL
2	Tie-In Far	0-0-0 to 22-4-0	0-3-0	Far Face	15 PSF	40 PSF	0 PSF	0 PSF	0 PSF	FLOOR LOADING
2	Tie-In Near	0-0-0 to 22-4-0	0-0-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	0 PSF	FLOOR LOADING
3	Part. Uniform	0-0-0 to 14-11-0		Top	392 PLF	0 PLF	392 PLF	0 PLF	0 PLF	A TRUSSES

Continued on page 2...

**Notes**

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

**Lumber**

- Dry service conditions, unless noted otherwise
- LVL not to be treated with fire retardant or corrosive

chemicals

**Handling & Installation**

- LVL beams must not be cut or drilled
- Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
- Damaged Beams must not be used
- Design assumes top edge is laterally restrained
- Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 6/28/2026

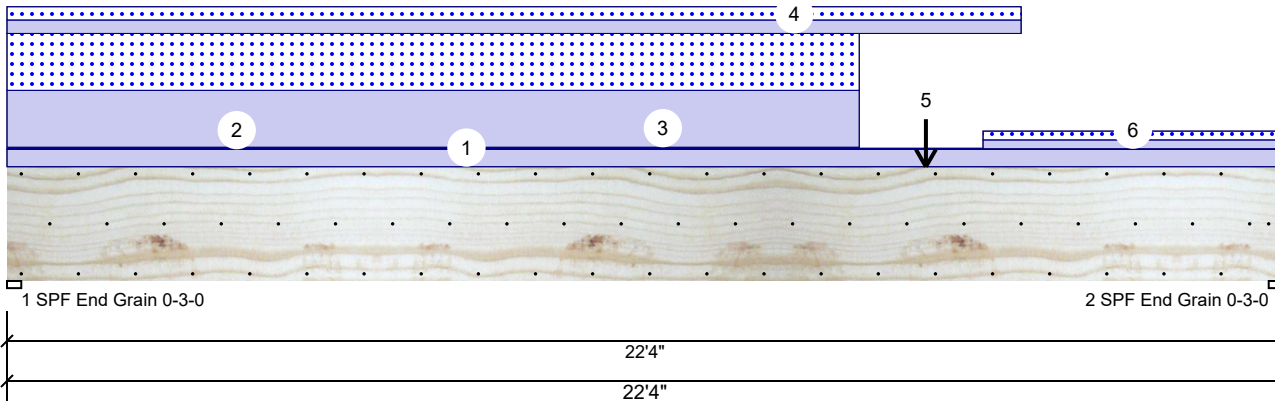
**Manufacturer Info**

Metsä Wood  
301 Merritt 7 Building, 2nd Floor  
Norwalk, CT 06851  
(800) 622-5850  
www.metsawood.com/us



**FB1 Kerto-S LVL 1.750" X 24.000" 3-Ply - PASSED**

Level: Level



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
4	Part. Uniform	0-0-0 to 17-9-0		Near Face	92 PLF	0 PLF	92 PLF	0 PLF	0 PLF	P TRUSSES
5	Point	16-1-0		Top	1416 lb	0 lb	1416 lb	0 lb	0 lb	A1
	Bearing Length	0-3-8								
6	Part. Uniform	17-1-0 to 22-4-0		Top	61 PLF	0 PLF	61 PLF	0 PLF	0 PLF	Y TRUSSES
	Self Weight				28 PLF					

**Notes**

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

**Lumber**

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive

**Handling & Installation**

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

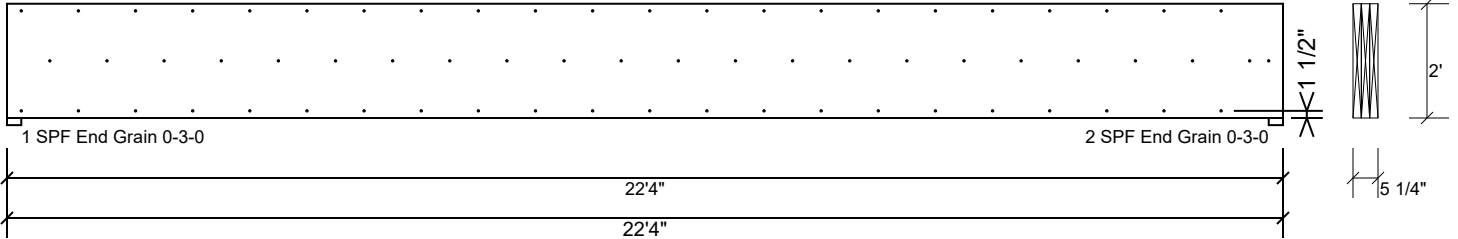
This design is valid until 6/28/2026

**Manufacturer Info**

Metsä Wood  
301 Merritt 7 Building, 2nd Floor  
Norwalk, CT 06851  
(800) 622-5850  
www.metsawood.com/us

**FB1 Kerto-S LVL 1.750" X 24.000" 3-Ply - PASSED**

Level: Level



### Multi-Ply Analysis

Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c.. Nail from both sides. Maximum end distance not to exceed 6".

Capacity	43.4 %
Load	122.7 PLF
Yield Limit per Foot	282.4 PLF
Yield Limit per Fastener	94.1 lb.
C <sub>m</sub>	1
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	D+S
Duration Factor	1.15

### Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

### Lumber

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

### Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

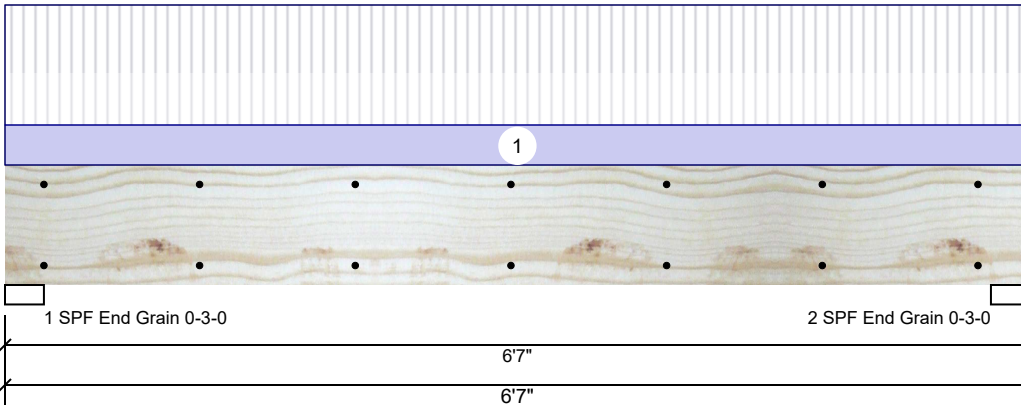
This design is valid until 6/28/2026

### Manufacturer Info

Metsä Wood  
301 Merritt 7 Building, 2nd Floor  
Norwalk, CT 06851  
(800) 622-5850  
[www.metsawood.com/us](http://www.metsawood.com/us)

**DB2 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED**

Level: Level



**Member Information**

Type:	Girder	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	480	Load Sharing:	No
Deflection TL:	360	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

**Reactions UNPATTERNED lb (Uplift)**

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	2696	922	0	0	0
2	Vertical	2696	922	0	0	0

**Bearings**

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.000"	Vert	41%	922 / 2696	3618	L	D+L
2 - SPF End Grain	3.000"	Vert	41%	922 / 2696	3618	L	D+L

**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	5296 ft-lb	3'3 1/2"	12542 ft-lb	0.422 (42%)	D+L	L
Unbraced	5296 ft-lb	3'3 1/2"	9872 ft-lb	0.536 (54%)	D+L	L
Shear	2502 lb	1' 1/4"	6907 lb	0.362 (36%)	D+L	L
LL Defl inch	0.073 (L/1016)	3'3 1/2"	0.155 (L/480)	0.473 (47%)	L	L
TL Defl inch	0.098 (L/757)	3'3 1/2"	0.207 (L/360)	0.476 (48%)	D+L	L

**Design Notes**

- Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- Refer to last page of calculations for fasteners required for specified loads.
- Girders are designed to be supported on the bottom edge only.
- Top loads must be supported equally by all plies.
- Top must be laterally braced at end bearings.
- Bottom must be laterally braced at end bearings.
- Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Top	273 PLF	819 PLF	0 PLF	0 PLF	0 PLF	F01
	Self Weight				7 PLF					

**Notes**

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

**Lumber**

- Dry service conditions, unless noted otherwise
- LVL not to be treated with fire retardant or corrosive chemicals

**Handling & Installation**

- LVL beams must not be cut or drilled
- Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
- Damaged Beams must not be used
- Design assumes top edge is laterally restrained
- Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

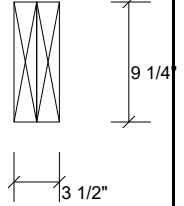
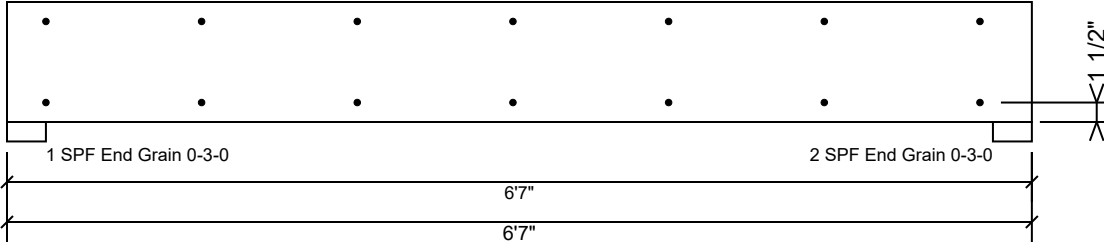
This design is valid until 6/28/2026

**Manufacturer Info**

Metsä Wood  
301 Merritt 7 Building, 2nd Floor  
Norwalk, CT 06851  
(800) 622-5850  
www.metsawood.com/us

**DB2 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED**

Level: Level



**Multi-Ply Analysis**

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6".

Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	163.7 PLF
Yield Limit per Fastener	81.9 lb.
C <sub>m</sub>	1
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

**Notes**

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

**Lumber**

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

**Handling & Installation**

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

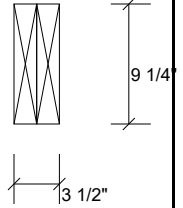
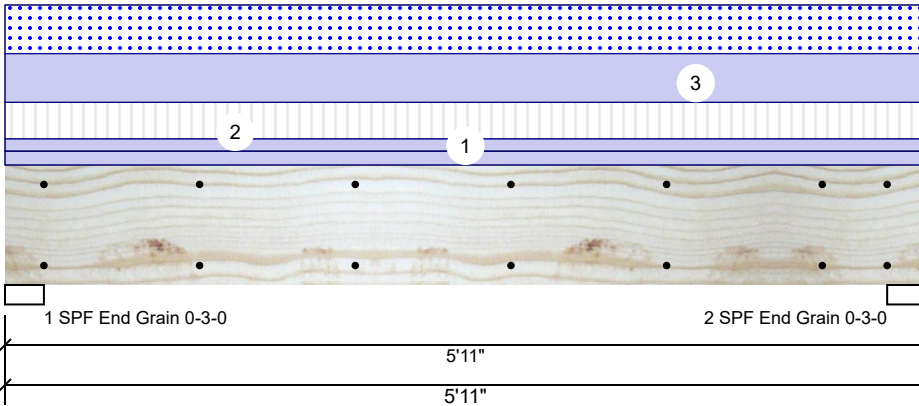
This design is valid until 6/28/2026

**Manufacturer Info**

Metsä Wood  
301 Merritt 7 Building, 2nd Floor  
Norwalk, CT 06851  
(800) 622-5850  
www.metsawood.com/us

**HDR1 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED**

Level: Level



**Member Information**

Type:	Girder
Plies:	2
Moisture Condition:	Dry
Deflection LL:	480
Deflection TL:	360
Importance:	Normal - II
Temperature:	Temp <= 100°F

Application:	Floor
Design Method:	ASD
Building Code:	IBC/IRC 2015
Load Sharing:	No
Deck:	Not Checked

**Reactions UNPATTERNED lb (Uplift)**

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	932	1926	1240	0	0
2	Vertical	932	1926	1240	0	0

**Bearings**

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.000"	Vert	40%	1926 / 1629	3555	L	D+0.75(L+S)
2 - SPF End Grain	3.000"	Vert	40%	1926 / 1629	3555	L	D+0.75(L+S)

**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	4613 ft-lb	2'11 1/2"	14423 ft-lb	0.320 (32%)	D+0.75(L+S)	L
Unbraced	4613 ft-lb	2'11 1/2"	11027 ft-lb	0.418 (42%)	D+0.75(L+S)	L
Shear	2334 lb	4'10 3/4"	7943 lb	0.294 (29%)	D+0.75(L+S)	L
LL Defl inch	0.033 (L/2026)	2'11 1/2"	0.139 (L/480)	0.237 (24%)	0.75(L+S)	L
TL Defl inch	0.072 (L/928)	2'11 1/2"	0.185 (L/360)	0.388 (39%)	D+0.75(L+S)	L

**Design Notes**

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 3 Refer to last page of calculations for fasteners required for specified loads.
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Top loads must be supported equally by all plies.
- 6 Top must be laterally braced at end bearings.
- 7 Bottom must be laterally braced at end bearings.
- 8 Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Top	120 PLF	0 PLF	0 PLF	0 PLF	0 PLF	WALL
2	Uniform			Top	105 PLF	315 PLF	0 PLF	0 PLF	0 PLF	FLOOR TRUSSES
3	Uniform			Top	419 PLF	0 PLF	419 PLF	0 PLF	0 PLF	ROOF TRUSSES
	Self Weight				7 PLF					

**Notes**

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

**Lumber**

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive

chemicals

**Handling & Installation**

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

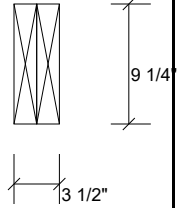
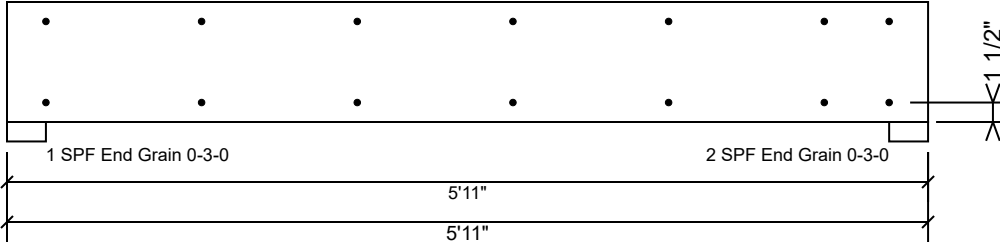
This design is valid until 6/28/2026

**Manufacturer Info**

Metsä Wood  
301 Merritt 7 Building, 2nd Floor  
Norwalk, CT 06851  
(800) 622-5850  
www.metsawood.com/us

**HDR1 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED**

Level: Level



**Multi-Ply Analysis**

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6".

Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	163.7 PLF
Yield Limit per Fastener	81.9 lb.
C <sub>m</sub>	1
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

**Notes**

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

**Lumber**

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

**Handling & Installation**

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

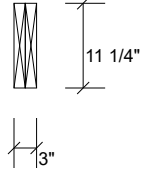
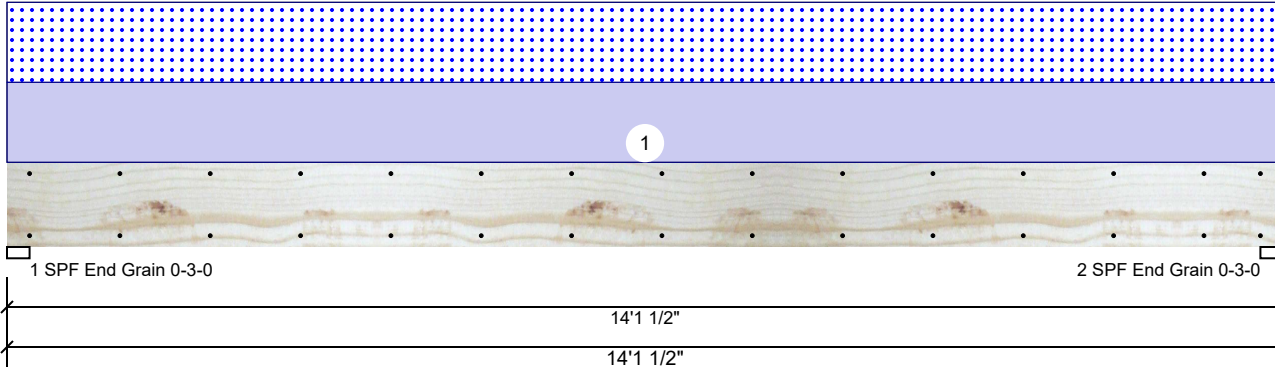
This design is valid until 6/28/2026

**Manufacturer Info**

Metsä Wood  
301 Merritt 7 Building, 2nd Floor  
Norwalk, CT 06851  
(800) 622-5850  
www.metsawood.com/us

**DB3 SP #2 2.000" X 12.000" 2-Ply - PASSED**

Level: Level



**Member Information**

Type:	Girder	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	480	Load Sharing:	No
Deflection TL:	360	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

**Reactions UNPATTERNED Ib (Uplift)**

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	0	586	586	0	0
2	Vertical	0	586	586	0	0

**Bearings**

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.000"	Vert	23%	586 / 586	1172	L	D+S
2 - SPF End Grain	3.000"	Vert	23%	586 / 586	1172	L	D+S

**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3923 ft-lb	7' 3/4"	4548 ft-lb	0.863 (86%)	D+S	L
Unbraced	3923 ft-lb	7' 3/4"	3925 ft-lb	1.000 (100%)	D+S	L
Shear	975 lb	1'2 1/4"	4528 lb	0.215 (22%)	D+S	L
LL Defl inch	0.134 (L/1232)	7' 13/16"	0.344 (L/480)	0.390 (39%)	S	L
TL Defl inch	0.268 (L/616)	7' 13/16"	0.458 (L/360)	0.585 (58%)	D+S	L

**Design Notes**

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 3 Refer to last page of calculations for fasteners required for specified loads.
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Top loads must be supported equally by all plies.
- 6 Top must be laterally braced at a maximum of 7'2 3/8" o.c.
- 7 Bottom must be laterally braced at end bearings.
- 8 Lateral slenderness ratio based on single ply width.

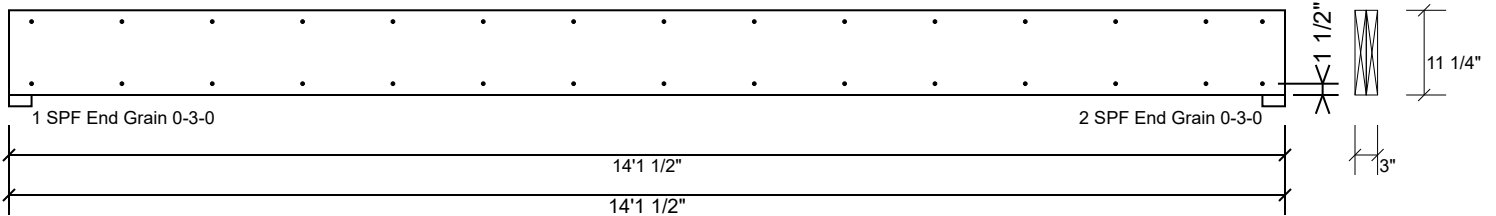
ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Top	83 PLF	0 PLF	83 PLF	0 PLF	0 PLF	P TRUSSES

**Manufacturer Info**

This design is valid until 6/28/2026

**DB3 SP #2 2.000" X 12.000" 2-Ply - PASSED**

Level: Level



**Multi-Ply Analysis**

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6".

Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	202.6 PLF
Yield Limit per Fastener	101.3 lb.
C <sub>m</sub>	1
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

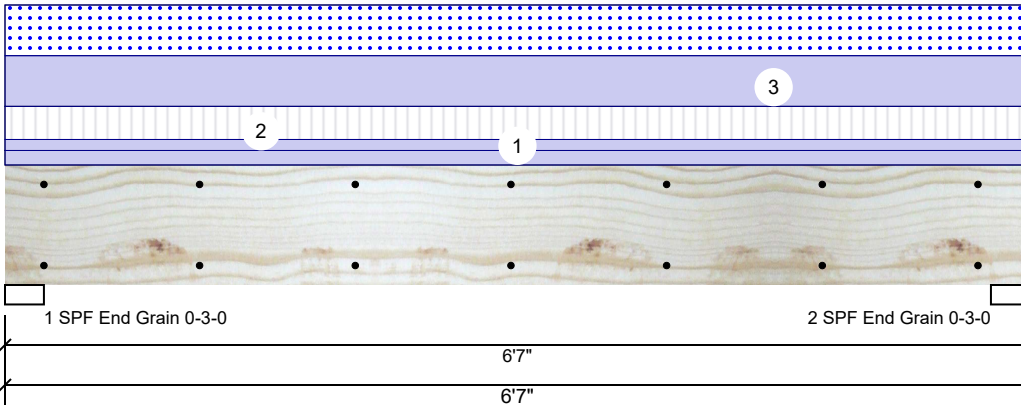
<b>Manufacturer Info</b>	

This design is valid until 6/28/2026



**HDR2 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED**

Level: Level



**Member Information**

Type:	Girder	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	480	Load Sharing:	No
Deflection TL:	360	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

**Reactions UNPATTERNED lb (Uplift)**

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	902	2097	1379	0	0
2	Vertical	902	2097	1379	0	0

**Bearings**

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.000"	Vert	43%	2097 / 1711	3808	L	D+0.75(L+S)
2 - SPF End Grain	3.000"	Vert	43%	2097 / 1711	3808	L	D+0.75(L+S)

**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	5574 ft-lb	3' 1/2"	14423 ft-lb	0.386 (39%)	D+0.75(L+S)	L
Unbraced	5574 ft-lb	3' 1/2"	10370 ft-lb	0.538 (54%)	D+0.75(L+S)	L
Shear	2633 lb	1' 1/4"	7943 lb	0.331 (33%)	D+0.75(L+S)	L
LL Defl inch	0.047 (L/1601)	3' 1/2"	0.155 (L/480)	0.300 (30%)	0.75(L+S)	L
TL Defl inch	0.104 (L/719)	3' 1/2"	0.207 (L/360)	0.501 (50%)	D+0.75(L+S)	L

**Design Notes**

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 3 Refer to last page of calculations for fasteners required for specified loads.
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Top loads must be supported equally by all plies.
- 6 Top must be laterally braced at end bearings.
- 7 Bottom must be laterally braced at end bearings.
- 8 Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Top	120 PLF	0 PLF	0 PLF	0 PLF	0 PLF	WALL
2	Uniform			Top	91 PLF	274 PLF	0 PLF	0 PLF	0 PLF	FLOOR TRUSSES
3	Uniform			Top	419 PLF	0 PLF	419 PLF	0 PLF	0 PLF	ROOF TRUSSES
	Self Weight				7 PLF					

**Notes**

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

**Lumber**

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive

**Handling & Installation**

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

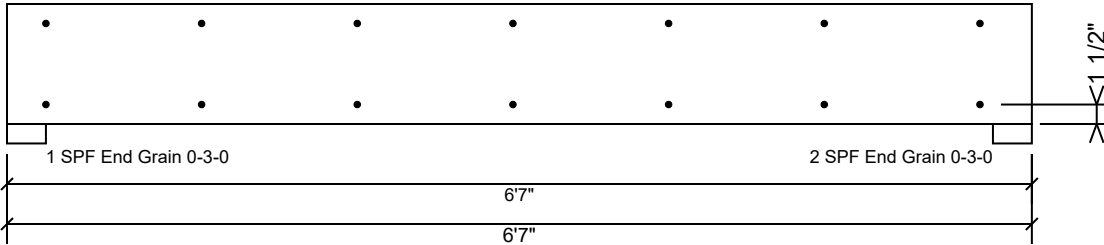
This design is valid until 6/28/2026

**Manufacturer Info**

Metsä Wood  
301 Merritt 7 Building, 2nd Floor  
Norwalk, CT 06851  
(800) 622-5850  
www.metsawood.com/us

**HDR2 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED**

Level: Level



**Multi-Ply Analysis**

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6".

Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	163.7 PLF
Yield Limit per Fastener	81.9 lb.
C <sub>m</sub>	1
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

**Notes**

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

**Lumber**

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive

chemicals

**Handling & Installation**

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

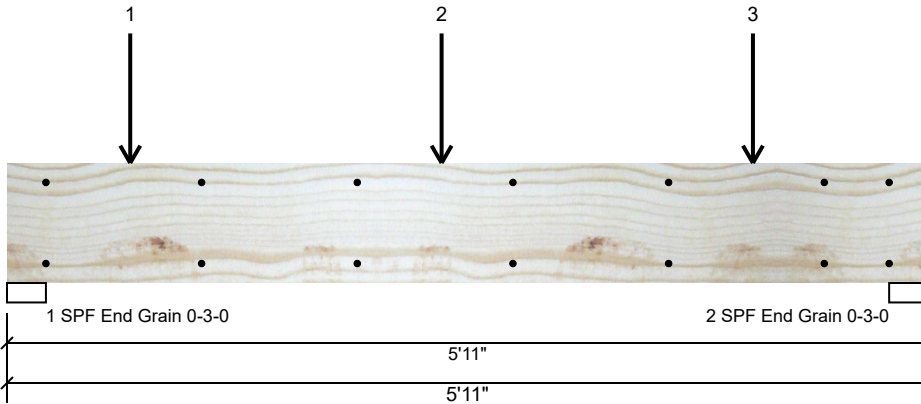
This design is valid until 6/28/2026

**Manufacturer Info**

Metsä Wood  
301 Merritt 7 Building, 2nd Floor  
Norwalk, CT 06851  
(800) 622-5850  
www.metsawood.com/us

**HDR3 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED**

Level: Level



**Member Information**

Type:	Girder
Plies:	2
Moisture Condition:	Dry
Deflection LL:	480
Deflection TL:	360
Importance:	Normal - II
Temperature:	Temp <= 100°F

Application:	Floor
Design Method:	ASD
Building Code:	IBC/IRC 2015
Load Sharing:	No
Deck:	Not Checked

**Reactions UNPATTERNED lb (Uplift)**

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	0	1472	1451	0	0
2	Vertical	0	871	850	0	0

**Bearings**

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.000"	Vert	33%	1472 / 1451	2923	L	D+S
2 - SPF End Grain	3.000"	Vert	20%	871 / 850	1721	L	D+S

**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	4533 ft-lb	2'9 1/2"	14423 ft-lb	0.314 (31%)	D+S	L
Unbraced	4533 ft-lb	2'9 1/2"	11027 ft-lb	0.411 (41%)	D+S	L
Shear	2468 lb	1' 1/4"	7943 lb	0.311 (31%)	D+S	L
LL Defl inch	0.031 (L/2162)	2'9 1/2"	0.139 (L/480)	0.222 (22%)	S	L
TL Defl inch	0.062 (L/1074)	2'9 1/2"	0.185 (L/360)	0.335 (34%)	D+S	L

**Design Notes**

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 3 Refer to last page of calculations for fasteners required for specified loads.
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Top loads must be supported equally by all plies.
- 6 Top must be laterally braced at end bearings.
- 7 Bottom must be laterally braced at end bearings.
- 8 Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Point	0-9-8		Top	763 lb	0 lb	763 lb	0 lb	0 lb	A2
	Bearing Length	0-3-8								
2	Point	2-9-8		Top	1416 lb	0 lb	1416 lb	0 lb	0 lb	A1
	Bearing Length	0-3-8								
3	Point	4-9-8		Top	122 lb	0 lb	122 lb	0 lb	0 lb	YA2

Continued on page 2...

**Notes**

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

**Lumber**

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

**Handling & Installation**

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

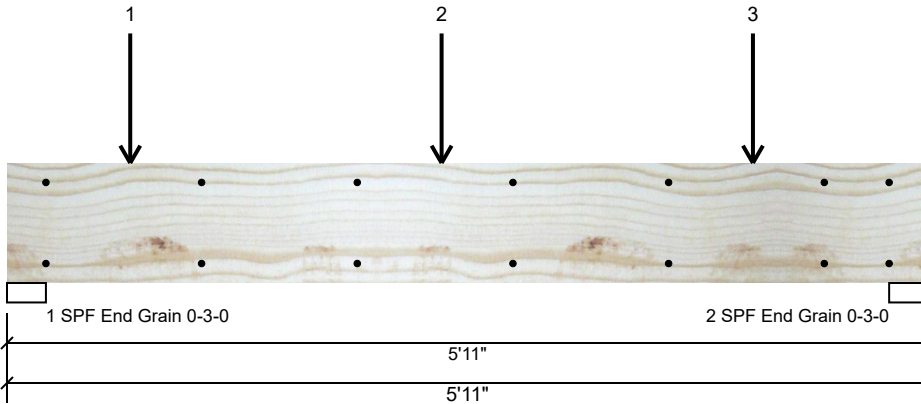
This design is valid until 6/28/2026

**Manufacturer Info**

Metsä Wood  
301 Merritt 7 Building, 2nd Floor  
Norwalk, CT 06851  
(800) 622-5850  
www.metsawood.com/us

**HDR3 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED**

Level: Level



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
	Bearing Length	0-3-8								
	Self Weight				7 PLF					

**Notes**

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

**Lumber**

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive

chemicals

**Handling & Installation**

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

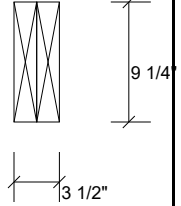
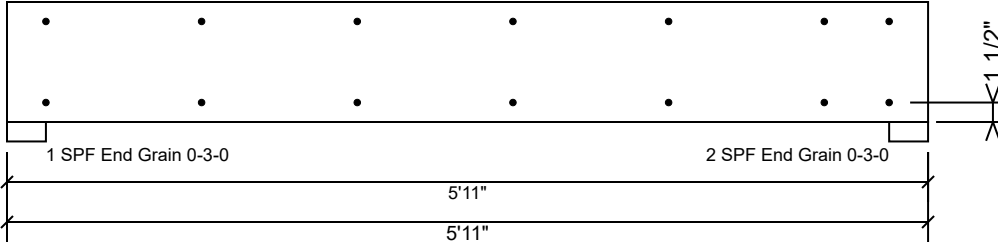
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(800) 622-5850  
www.metsawood.com/us

**HDR3 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED**

Level: Level



**Multi-Ply Analysis**

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6".

Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	163.7 PLF
Yield Limit per Fastener	81.9 lb.
C <sub>m</sub>	1
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

**Notes**

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

**Lumber**

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive

chemicals

**Handling & Installation**

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

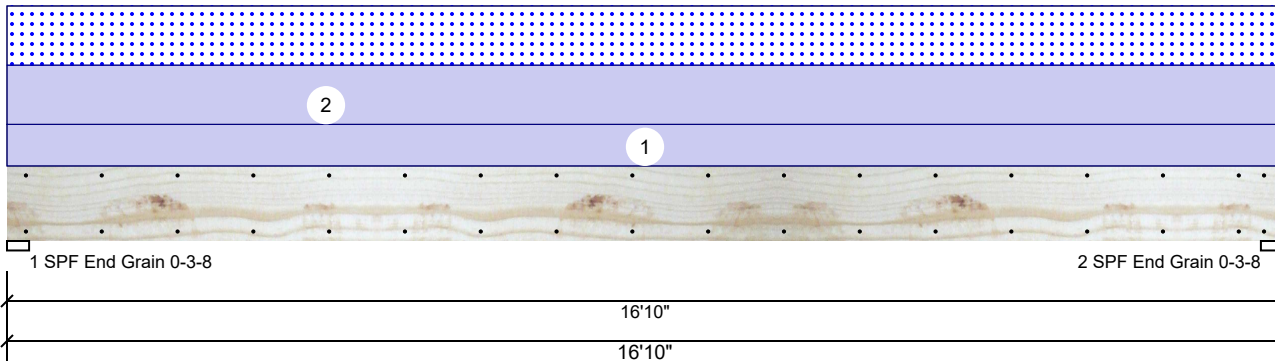
This design is valid until 6/28/2026

**Manufacturer Info**

Metsä Wood  
301 Merritt 7 Building, 2nd Floor  
Norwalk, CT 06851  
(800) 622-5850  
www.metsawood.com/us

**GDH Kerto-S LVL 1.750" X 11.875" 2-Ply - PASSED**

Level: Level



**Member Information**

Type:	Girder	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	480	Load Sharing:	No
Deflection TL:	360	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

**Reactions UNPATTERNED Ib (Uplift)**

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	0	995	539	0	0
2	Vertical	0	995	539	0	0

**Bearings**

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	Vert	15%	995 / 539	1534	L	D+S
2 - SPF End Grain	3.500"	Vert	15%	995 / 539	1534	L	D+S

**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	6108 ft-lb	8'5"	22897 ft-lb	0.267 (27%)	D+S	L
Unbraced	6108 ft-lb	8'5"	6109 ft-lb	1.000 (100%)	D+S	L
Shear	1309 lb	1'3 3/8"	10197 lb	0.128 (13%)	D+S	L
LL Defl inch	0.112 (L/1755)	8'5 1/16"	0.409 (L/480)	0.273 (27%)	S	L
TL Defl inch	0.319 (L/617)	8'5 1/16"	0.546 (L/360)	0.584 (58%)	D+S	L

**Design Notes**

- Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- Refer to last page of calculations for fasteners required for specified loads.
- Girders are designed to be supported on the bottom edge only.
- Top loads must be supported equally by all plies.
- Top must be laterally braced at a maximum of 16'3 3/4" o.c.
- Bottom must be laterally braced at end bearings.
- Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Top	45 PLF	0 PLF	0 PLF	0 PLF	0 PLF	WALL
2	Uniform			Top	64 PLF	0 PLF	64 PLF	0 PLF	0 PLF	P2
	Self Weight				9 PLF					

**Notes**

Calculated Structural Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

**Lumber**

- Dry service conditions, unless noted otherwise
- LVL not to be treated with fire retardant or corrosive chemicals

**Handling & Installation**

- LVL beams must not be cut or drilled
- Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
- Damaged Beams must not be used
- Design assumes top edge is laterally restrained
- Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

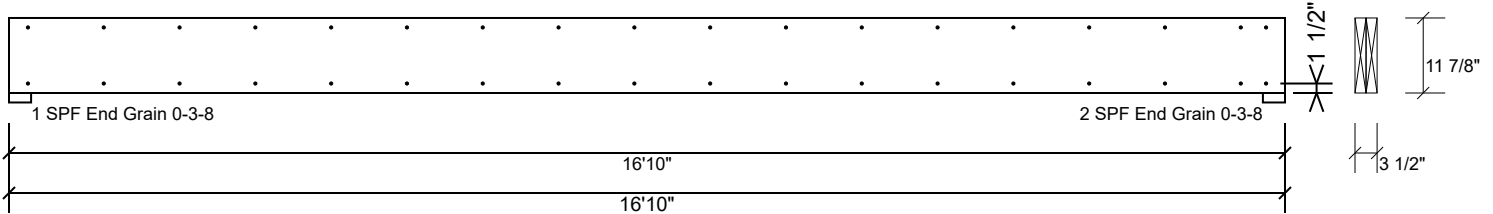
This design is valid until 6/28/2026

**Manufacturer Info**

Metsä Wood  
301 Merritt 7 Building, 2nd Floor  
Norwalk, CT 06851  
(800) 622-5850  
www.metsawood.com/us

**GDH Kerto-S LVL 1.750" X 11.875" 2-Ply - PASSED**

Level: Level



**Multi-Ply Analysis**

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6".

Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	163.7 PLF
Yield Limit per Fastener	81.9 lb.
C <sub>m</sub>	1
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

**Notes**

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

**Lumber**

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive

chemicals

**Handling & Installation**

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 6/28/2026

**Manufacturer Info**

Metsä Wood  
301 Merritt 7 Building, 2nd Floor  
Norwalk, CT 06851  
(800) 622-5850  
www.metsawood.com/us

# North Carolina 2018 - R402.1.5 Total UA



## Property

Sears Dr  
Cameron, NC 28326  
Model: Hayek  
Community: Liberty Meadows

## Organization

Southern Energy Manager  
Justin Smith

## Inspection Status

Results are projected

## Builder

SMG Precision Properties

Template - SMG Precision - Liberty  
Meadows Lot 27 - CZ 4 slab -  
Liberty Meadows Lot 27

**This report is based on a proposed design and does not confirm field enforcement of design elements.**

## Building UA

Elements	NC Reference	As Designed
Ceilings	42.3	40.2
Above-Grade Walls	177.3	131.7
Windows, Doors and Skylights	127.7	115.2
Slab Floor:	74.0	95.9
Framed Floors	16.0	17.4
Foundation Walls	0.0	0.0
Rim Joists	8.7	7.0
<b>Overall UA (Design must be equal or lower):</b>	<b>446.0</b>	<b>407.4</b>

## Requirements

✓	R402.1.5	Total UA alternative compliance passes by 8.7%. The proposed home meets the UA requirement by 8.7%
✓	402.3.2	Average SHGC: 0.28 Max SHGC: 0.30 Average SHGC of 0.28 is greater than the maximum of 0.30.
✓	R402.4.2.2	Air Leakage Testing Air sealing is 4.80 ACH at 50 Pa. It must not exceed 5.00 ACH at 50 Pa.
✓	R402.5	Area-weighted average fenestration SHGC Area-weighted average fenestration SHGC is 0.28. The maximum allowed value is [No Limit].
✓	R402.5	Area-weighted average fenestration U-Factor
✓	R404.1	Lighting Equipment At least 75.0% of fixtures shall be high-efficacy lamps, currently 90.0% are high-efficacy.
✓	Mandatory Checklist	Mandatory code requirements that are not checked by Ekotrope must be met. 2015 IECC Mandatory Checklist must be checked as complete.
✓	R403.3.1	Duct Insulation Duct insulation meets the requirements specified in North Carolina 2018 Code Section 403.3.1.
✓	403.3.3	Duct Testing

**Design exceeds requirements for North Carolina 2018 Prescriptive compliance by 8.7%.**

Name: Justin Smith Signature: Justin Smith  
Organization: Southern Energy Management Digitally signed: 3/30/23 at 11:56 AM

## Ekotrope RATER - Version 4.1.0.3129

North Carolina 2018 Prescriptive compliance results calculated using Ekotrope RATER's energy and code compliance algorithm, including appropriate amendments. Ekotrope RATER is a RESNET Accredited HERS Rating Tool. All results are based on data entered by Ekotrope users. Ekotrope disclaims all liability for the information shown on this report.



# Building Summary



**SOUTHERN ENERGY**  
MANAGEMENT  
ENERGY EFFICIENCY & SOLAR POWER

## Property

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Cameron, NC 28326  
Model: Hayek  
Community: Liberty Meadows

## Organization

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SMG Precision Properties

Template - SMG Precision - Liberty Meadows Lot 27  
- CZ 4 slab - ecoSelect  
Liberty Meadows Lot 27

## General Building Information

Number Of Bedrooms	4
Number Of Floors	2
Conditioned Floor Area [sq. ft.]	2,480
Has Electric Vehicle Ready Space	No
Unconditioned, attached garage?	Yes
Conditioned Volume [cu. ft.]	21,980
Total Units in Building	1
Residence Type	Single family detached
Number of Floors in Building	-
Floor Number	-
Model	Hayek
Community	Liberty Meadows
RESNET/IECC 2006-2018 Climate Zone	4A
IECC 2021 Climate Zone	3A

## Foundation Wall

None Present

## Foundation Wall Library List

None Present

## Slab

Name	Library Type	Perimeter	Floor Grade	Carpet R	Exposed Masonry Area	Surface Area	Location	Enclosing
slab	Uninsulated	156	On Grade	1	0	1,070.0 ft²	Exposed Exterior	Conditioned Space

## Slab Library List

Name	Wall Construction Type	Slab Completely Insulated?	Underslab Insulation Width [ft]	Perimeter Insulation Depth [ft]	Perimeter Insulation R Value	Thermal Break	Effective R-value
Uninsulated	Wood Frame / Other	No	0	0	0	No	0.00

# Building Summary



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SMG Precision Properties

Template - SMG Precision - Liberty Meadows Lot 27  
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Liberty Meadows Lot 27

## Framed Floor

Name	Library Type	Carpet R	Floor Grade	Surface Area	Location
over ambient	R 19, 16"OC G1 Carpet	0	Above Grade	89.0 ft <sup>2</sup>	Exposed Exterior
over garage	R 19, 16"OC G1 Carpet	0	Above Grade	251.0 ft <sup>2</sup>	Unconditioned, attached garage

## Framed Floor Library List

Name	Effective R-value
R 19, 16"OC G1 Carpet	19.566

## Rim Joist

Name	Library Type	Surface Area	Location
1st floor ambient	R 19 G1, 16"OC	116.0 ft <sup>2</sup>	Exposed Exterior
1st floor garage	R 19 G1, 16"OC	40.0 ft <sup>2</sup>	Unconditioned, attached garage

## Rim Joist Library List

Name	Effective Insulation R-value
R 19 G1, 16"OC	17.30

## Wall

Name	Library Type	Surface Color	Surface Area	Location
1st floor ambient	R 19 Adv. Framing G1 16" O.C	Medium	1,044.0 ft <sup>2</sup>	Exposed Exterior
1st floor garage	R 19 Adv. Framing G1 16" O.C	Medium	360.0 ft <sup>2</sup>	Unconditioned, attached garage
2nd floor ambient	R 19 Adv. Framing G1 16" O.C	Medium	1,264.0 ft <sup>2</sup>	Exposed Exterior

# Building Summary



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**SOUTHERN ENERGY MANAGEMENT**  
ENERGY EFFICIENCY & SOLAR POWER

Template - SMG Precision - Liberty Meadows Lot 27  
- CZ 4 slab - ecoSelect  
Liberty Meadows Lot 27

**Builder**  
SMG Precision Properties

## Wall Library List

Name	Effective R-value
R 19 Adv. Framing G1 16" O.C	17.492

## Glazing

Name	Library Type	Wall Assignment	Foundation Wall Assignment	Is Operable	Overhang Depth	Overhang Ft To Top	Overhang Ft To Bottom	Orientation	Surface Area
front 2nd unshaded	33/28	2nd floor ambient		Yes	0	0	0	Southeast	59.4 ft²
front shaded	33/28	1st floor ambient		Yes	6	1	6	Southeast	27.0 ft²
left 2nd unshaded	33/28	2nd floor ambient		Yes	0	0	0	Southwest	13.5 ft²
rear 2nd unshaded	33/28	2nd floor ambient		Yes	0	0	0	Northwest	64.8 ft²
rear shaded	33/28	1st floor ambient		Yes	10	2	9	Northwest	40.2 ft²
rear unshaded	33/28	1st floor ambient		Yes	0	0	0	Northwest	52.5 ft²
right 2nd unshaded	33/28	2nd floor ambient		Yes	0	0	0	Northeast	27.0 ft²
right unshaded	33/28	1st floor ambient		Yes	0	0	0	Northeast	40.5 ft²

## Glazing Library List

Name	Shgc	U-factor
33/28	0.28	0.330

## Skylight

None Present

## Skylight Library List

None Present

# Building Summary



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**Builder**  
SMG Precision Properties

Template - SMG Precision - Liberty Meadows Lot 27  
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Liberty Meadows Lot 27

## Opaque Door

Name	Library Type	Wall Assignment	Foundation Wall Assignment	Emittance	Solar Absorptance	Surface Color	Surface Area	Location
front entry	Fiberglass R-5	1st floor ambient		0.9	0.75	Medium	20.0 ft²	Exposed Exterior
garage entry	Fiberglass R-5	1st floor garage		0.9	0.75	Medium	20.0 ft²	Unconditioned, attached garage

## Opaque Door Library List

Name	Effective U-factor
Fiberglass R-5	0.200

## Roof Insulation

Name	Library Type	Attic Exterior Area [ft²]	Clay or Concrete Roof Tiles	Surface Color	Surface Area	Location
attic	R 38 Attic BLOWN FG G1 2x10 24"OC NO Radiant Barrier	2,072.7	No	Dark	1,410.0 ft²	Attic

## Roof Insulation Library List

Name	Has Radiant Barrier	Effective R-value
R 38 Attic BLOWN FG G1 2x10 24"OC NO Radiant Barrier	No	35.115

## Whole House Infiltration

Infiltration	Measurement Type	Shelter Class
1758 CFM at 50 Pa	Blower-door tested	4

## Mechanical Ventilation

None Present

# Building Summary



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SMG Precision Properties

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Liberty Meadows Lot 27

## Lighting

% Interior Fluorescent Lighting	% Interior LED Lighting	% Exterior Fluorescent Lighting	% Exterior LED Lighting	% Garage Fluorescent Lighting	% Garage LED Lighting
0	90	0	0	0	0

## Onsite Generation

None Present

## Onsite Generation Library List

None Present

## Solar Generation

None Present

## Dehumidifier

None Present

## Dehumidifier Library List

None Present

## Whole House Fan

None Present

# Building Summary



**SOUTHERN ENERGY**  
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**Builder**  
SMG Precision Properties

Template - SMG Precision - Liberty Meadows Lot 27  
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Liberty Meadows Lot 27

## Whole House Fan Library List

None Present

## Conditioning Equipment

Name	Library Type	Serial Number	Heating Percent Load	Cooling Percent Load	Hot Water Percent Load	Location
1st floor heat pump	z 24k 14 SEER 8.0hspf		43%	43%	0%	Attic
2nd floor heat pump	z 24k 14 SEER 8.0hspf		57%	57%	0%	Attic
Water Heating	z 50 gal. 0.95 EF Elec		0%	0%	100%	Unconditioned Garage

## Equipment Type: z 24k 14 SEER 8.0hspf

Equipment Type	Air Source Heat Pump
Fuel Type	Electric
Distribution Type	Forced Air
Motor Type	PSC (Single Speed)
Heating Efficiency	8 HSPF
Heating Capacity [kBtu/h]	24
Backup Fuel Type	Electric
Switchover Temperature [°F]	0
Backup Heating Efficiency	1 COP
Use default Supplemental Heat	Yes
Cooling Efficiency	14 SEER
Cooling Capacity [kBtu/h]	24

## Equipment Type: z 24k 14 SEER 8.0hspf

Equipment Type	Air Source Heat Pump
Fuel Type	Electric
Distribution Type	Forced Air
Motor Type	PSC (Single Speed)
Heating Efficiency	8 HSPF
Heating Capacity [kBtu/h]	24
Backup Fuel Type	Electric
Switchover Temperature [°F]	0
Backup Heating Efficiency	1 COP
Use default Supplemental Heat	Yes
Cooling Efficiency	14 SEER
Cooling Capacity [kBtu/h]	24

# Building Summary



## Property

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SMG Precision Properties

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Liberty Meadows Lot 27

## Equipment Type: z 50 gal. 0.95 EF Elec

Equipment Type	Residential Water Heater
Fuel Type	Electric
Distribution Type	Hydronic Delivery (Radiant)
Hot Water Efficiency	0.95 Energy Factor
Tank Capacity (gal.)	50
Hot Water Capacity [kBtu/h]	40
Recovery Efficiency	0.98

## Distribution System

Distribution Type	Forced Air
Heating Equipment	1st floor heat pump
Cooling Equipment	1st floor heat pump
Sq. Feet Served	1,070
# Return Grilles	2
Supply Duct R Value	8
Return Duct R Value	8
Supply Duct Area [ft <sup>2</sup> ]	288.9
Return Duct Area [ft <sup>2</sup> ]	107
Leakage to Outdoors	42 CFM @ 25Pa (3.93 / 100 ft <sup>2</sup> )
Total Leakage	42 CFM25
Total Leakage Duct Test Conditions	Post-Construction
Use Default Flow Rate	Yes
Duct 1	
Duct Location	Attic (well vented)
Percent Supply Area	70
Percent Return Area	70
Duct 2	
Duct Location	Conditioned Space
Percent Supply Area	30
Percent Return Area	30
Duct 3	
Duct Location	Conditioned Space
Percent Supply Area	0
Percent Return Area	0
Duct 4	
Duct Location	Conditioned Space
Percent Supply Area	0
Percent Return Area	0
Duct 5	
Duct Location	Conditioned Space
Percent Supply Area	0
Percent Return Area	0
Duct 6	
Duct Location	Conditioned Space
Percent Supply Area	0
Percent Return Area	0

# Building Summary



**SOUTHERN ENERGY**  
MANAGEMENT  
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Results are projected

**Builder**

SMG Precision Properties

Template - SMG Precision - Liberty Meadows Lot 27  
- CZ 4 slab - ecoSelect  
Liberty Meadows Lot 27

## Distribution System

Distribution Type	Forced Air
Heating Equipment	2nd floor heat pump
Cooling Equipment	2nd floor heat pump
Sq. Feet Served	1,410
# Return Grilles	2
Supply Duct R Value	8
Return Duct R Value	8
Supply Duct Area [ft <sup>2</sup> ]	380.7
Return Duct Area [ft <sup>2</sup> ]	141
Leakage to Outdoors	56 CFM @ 25Pa (3.97 / 100 ft <sup>2</sup> )
Total Leakage	56 CFM25
Total Leakage Duct Test Conditions	Post-Construction
Use Default Flow Rate	Yes
Duct 1	
Duct Location	Attic (well vented)
Percent Supply Area	100
Percent Return Area	100
Duct 2	
Duct Location	Conditioned Space
Percent Supply Area	0
Percent Return Area	0
Duct 3	
Duct Location	Conditioned Space
Percent Supply Area	0
Percent Return Area	0
Duct 4	
Duct Location	Conditioned Space
Percent Supply Area	0
Percent Return Area	0
Duct 5	
Duct Location	Conditioned Space
Percent Supply Area	0
Percent Return Area	0
Duct 6	
Duct Location	Conditioned Space
Percent Supply Area	0
Percent Return Area	0

## HVAC Grading

HVAC Grading Not Conducted

## Ceiling Fan

Has Ceiling Fan	No
Cfm Per Watt	100



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Template - SMG Precision - Liberty Meadows Lot 27  
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Liberty Meadows Lot 27

## Builder

SMG Precision Properties

## Water Distribution

Water Fixture Type	Low-flow
Use Default Hot Water Pipe Length	No
Hot Water Pipe Length [ft]	78
At Least R3 Pipe Insulation?	No
Hot Water Recirculation System?	No
Recirculation System Pipe Loop Length [ft]	20
Drain Water Heat Recovery?	No

## Clothes Dryer

Cef	3.01
Fuel Type	Electric
Field Utilization	Timer Controls
Is Outside Conditioned Space	No
Clothes Dryer Available	Yes
Defaults Type	HERS Reference

## Clothes Washer

Label Energy Rating	153 kWh/Year
Annual Gas Cost	\$12.00
Electric Rate	\$0.11/kWh
Gas Rate	\$1.22/Therm
Capacity	3.31
Imef	2.1547
Defaults Type	Custom
Load Type	Front-load
Loads Per Week	6
Is Outside Conditioned Space	No
Clothes Washer Available	Yes

## Dishwasher

Dishwasher Efficiency	270 kWh
Dishwasher Size	Standard
Annual Gas Cost	\$22.23
Electric Rate	\$0.12/kWh
Gas Rate	\$1.09/Therm
Is Outside Conditioned Space	No

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Liberty Meadows Lot 27

**Builder**  
SMG Precision Properties

## Appliances and Controls

Thermostat Cooling Setpoint	*** 75.0
Thermostat Heating Setpoint	*** 70.0
Range/Oven Fuel	Electric
Convection Oven?	No
Induction Range?	No
Range/Oven Outside Conditioned Space?	No
Refrigerator Consumption	538 kWh/Year
Refrigerator Outside Conditioned Space?	No

## Notes

Initial Inputs \_\_\_\_\_ JS 03/30/23 \_\_\_\_\_

- confirm HVAC specs
- confirm water heater specs
- confirm ventilation entry
- modeled to worst case orientation
- confirm cfl lighting %