

RE: J0225-1029
Lot 19 Magnolia Hills

Trenco
818 Soundside Rd
Edenton, NC 27932

Site Information:

Customer: Project Name: J0225-1029
Lot/Block: Model:
Address: Subdivision:
City: State:

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

Design Code: IRC2021/TPI2014 Design Program: MiTek 20/20 8.6
Wind Code: ASCE 7-16 Wind Speed: 130 mph
Roof Load: 40.0 psf Floor Load: N/A psf

This package includes 18 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date
1	I73798211	A1-GE	5/29/2025
2	I73798212	A2	5/29/2025
3	I73798213	A3	5/29/2025
4	I73798214	A4-GE	5/29/2025
5	I73798215	B1-GE	5/29/2025
6	I73798216	B2	5/29/2025
7	I73798217	C1-GE	5/29/2025
8	I73798218	C2	5/29/2025
9	I73798219	C3	5/29/2025
10	I73798220	C4	5/29/2025
11	I73798221	D1-GE	5/29/2025
12	I73798222	D2	5/29/2025
13	I73798223	G1-SG	5/29/2025
14	I73798224	G2	5/29/2025
15	I73798225	P1-GE	5/29/2025
16	I73798226	P2	5/29/2025
17	I73798227	VD1	5/29/2025
18	I73798228	VD2	5/29/2025

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: Gilbert, Eric

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

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.



Job	Truss	Truss Type	Qty	Ply	Lot 19 Magnolia Hills
J0225-1029	A1-GE	GABLE	1	1	173798211

Comtech, Inc., Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Wed May 28 12:21:47 2025 Page 1
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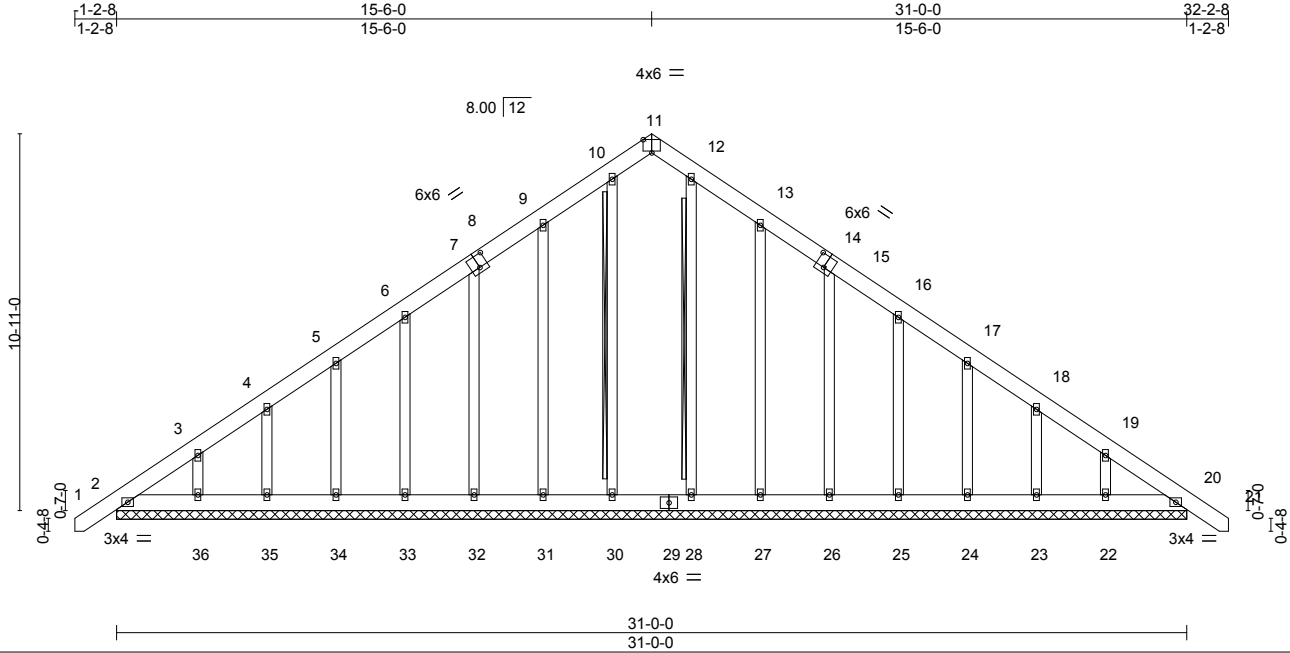


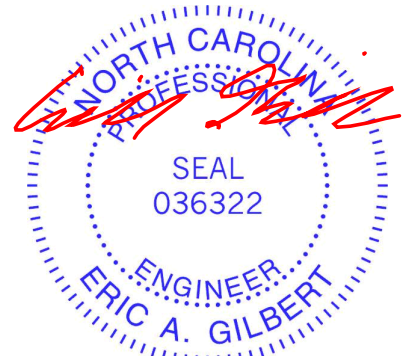
Plate Offsets (X,Y)--		[8:0-3-0,0-4-4], [11:0-3-0,Edge], [14:0-3-0,0-4-4]	
LOADING (psf)	SPACING-	2-0-0	CSI.
TCLL 20.0	Plate Grip DOL	1.15	TC 0.07
TCDL 10.0	Lumber DOL	1.15	BC 0.03
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.16
BCDL 10.0	Code	IRC2021/TPI2014	Matrix-S
		DEFL.	in (loc) l/defl L/d
		Vert(LL)	-0.00 20 n/r 120
		Vert(CT)	0.00 20 n/r 120
		Horz(CT)	0.01 20 n/a n/a
		PLATES	GRIP
		MT20	244/190
		Weight: 276 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS 2x4 SP No.2	WEBS T-Brace: 2x4 SPF No.2 - 10-30, 12-28
	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. All bearings 31-0-0.
(lb) - Max Horz 2=-331(LC 10)
Max Uplift All uplift 100 lb or less at joint(s) 2, 20, 32, 33, 34, 35, 26, 25, 24, 23 except 31=-104(LC 12),
36=-103(LC 12), 27=-109(LC 13), 22=-101(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 2, 20, 31, 32, 33, 34, 35, 36, 28, 27, 26, 25, 24, 23, 22
except 30=257(LC 22)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-350/234, 3-4=-262/198, 19-20=-286/143
BOT CHORD 2-36=-130/294, 35-36=-130/294, 34-35=-130/294, 33-34=-130/294, 32-33=-130/294,
31-32=-130/294, 30-31=-130/294, 28-30=-130/294, 27-28=-130/294, 26-27=-130/294,
25-26=-130/294, 24-25=-130/294, 23-24=-130/294, 22-23=-130/294, 20-22=-130/294

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; Gable Roof; Common Truss; MWFRS (envelope) gable end zone and C-C Corner(3E) -1-0-15 to 3-3-14, Exterior(2N) 3-3-14 to 15-6-0, Corner(3R) 15-6-0 to 19-10-13, Exterior(2N) 19-10-13 to 32-0-15 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
 - All plates are 2x4 MT20 unless otherwise indicated.
 - Gable requires continuous bottom chord bearing.
 - Gable studs spaced at 2-0-0 oc.
 - 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, 20, 32, 33, 34, 35, 26, 25, 24, 23 except (jt=lb) 31=104, 36=103, 27=109, 22=101.
 - Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.



May 29, 2025

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

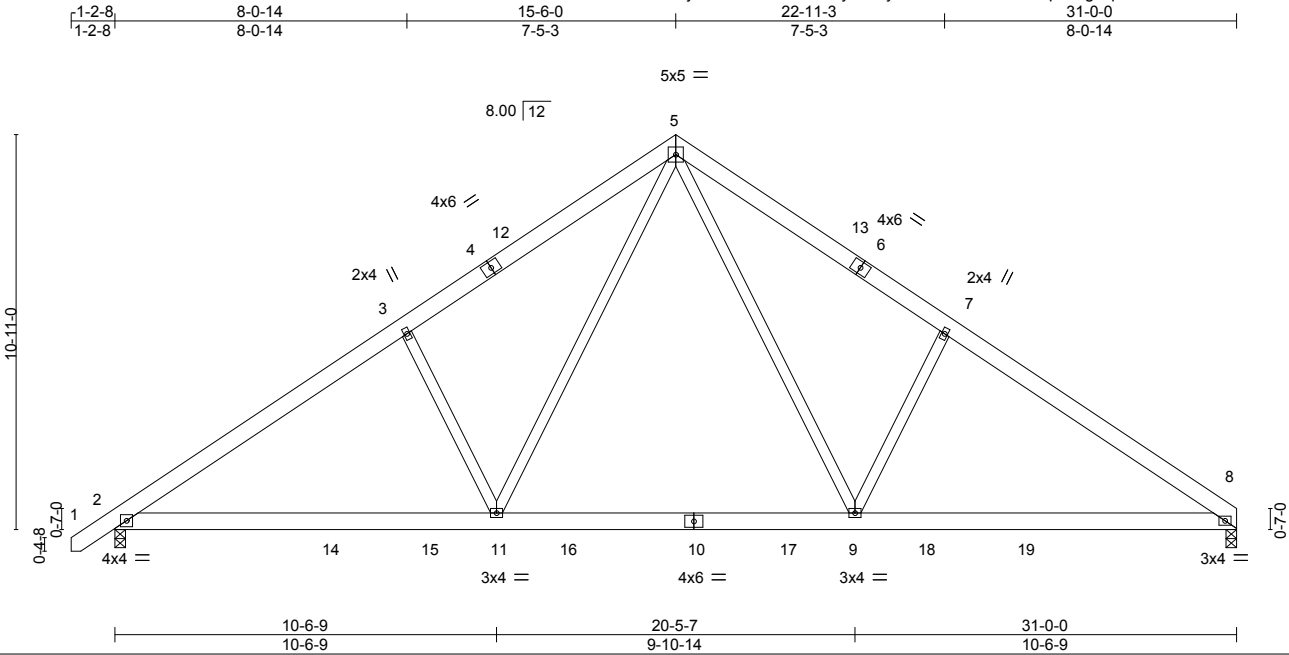
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall 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)

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 19 Magnolia Hills
J0225-1029	A2	COMMON	6	1	173798212

Comtech, Inc,	Fayetteville, NC - 28314,	8.630 s Sep 26 2024 MiTek Industries, Inc. Wed May 28 12:21:47 2025 Page 1
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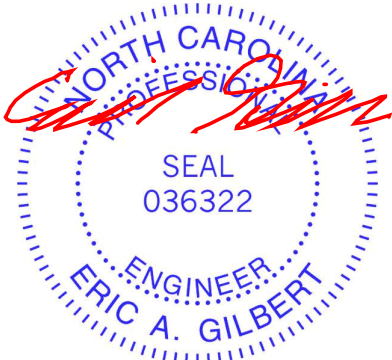
LOADING (psf)	SPACING-		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	2-0-0	TC 0.27		Vert(LL)	-0.12	9-11	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.56		Vert(CT)	-0.22	8-9	>999	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.40		Horz(CT)	0.04	8	n/a	n/a		
BCDL 10.0	Code IRC2021/TPI2014		Matrix-S		Wind(LL)	0.04	2-11	>999	240	Weight: 214 lb	FT = 20%

LUMBER-		BRACING-	
TOP CHORD	2x6 SP No.1	TOP CHORD	Structural wood sheathing directly applied or 5-0-2 oc purlins. Rigid ceiling directly applied or 10-0-0 oc bracing.
BOT CHORD	2x6 SP No.1	BOT CHORD	
WEBS	2x4 SP No.2		

REACTIONS. (size) 2=0-3-8, 8=0-3-8
Max Horz 2=260(LC 9)
Max Uplift 2=-82(LC 12), 8=-65(LC 13)
Max Grav 2=1616(LC 19), 8=1545(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2171/361, 3-5=-2041/454, 5-7=-2047/460, 7-8=-2176/366
BOT CHORD 2-11=-201/1896, 9-11=0/1233, 8-9=-190/1724
WEBS 5-9=-172/1082, 7-9=-471/311, 5-11=-170/1073, 3-11=-467/305

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-15 to 3-3-14, Interior(1) 3-3-14 to 15-6-0, Exterior(2R) 15-6-0 to 19-10-13, Interior(1) 19-10-13 to 30-10-4 zone;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, with BCDL = 10.0psf.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 8.



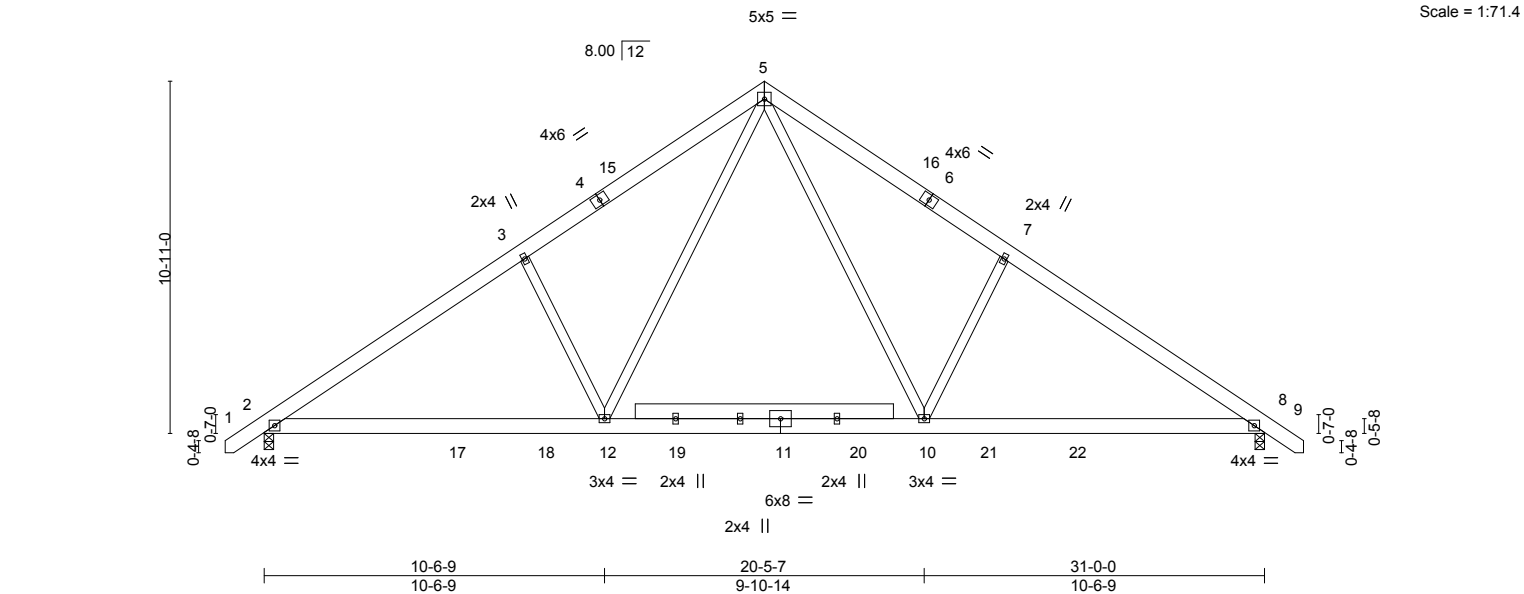
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Job	Truss	Truss Type	Qty	Ply	Lot 19 Magnolia Hills
J0225-1029	A3	COMMON	7	1	173798213

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Job Reference (optional)



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.26	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.55	Vert(LL) -0.12 10-12 >999 360		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.39	Vert(CT) -0.21 2-12 >999 240		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.04 8 n/a n/a		
	Code IRC2021/TPI2014		Wind(LL) 0.04 2-12 >999 240		
				Weight: 235 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 5-0-15 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=0-3-8, 8=0-3-8

Max Horz 2=-265(LC 10)

Max Uplift 2=-82(LC 12), 8=-82(LC 13)

Max Grav 2=1608(LC 19), 8=1608(LC 20)

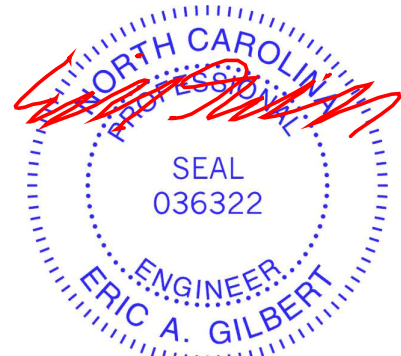
FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

TOP CHORD 2-3=-2156/360, 3-5=-2026/452, 5-7=-2027/452, 7-8=-2157/360

BOT CHORD 2-12=-160/1892, 10-12=0/1232, 8-10=-158/1717

WEBS 5-10=-169/1067, 7-10=-468/305, 5-12=-169/1066, 3-12=-467/305

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-15 to 3-3-14, Interior(1) 3-3-14 to 15-6-0, Exterior(2R) 15-6-0 to 19-10-13, Interior(1) 19-10-13 to 32-0-15 zone;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, with BCDL = 10.0psf.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 8.



May 29,2025

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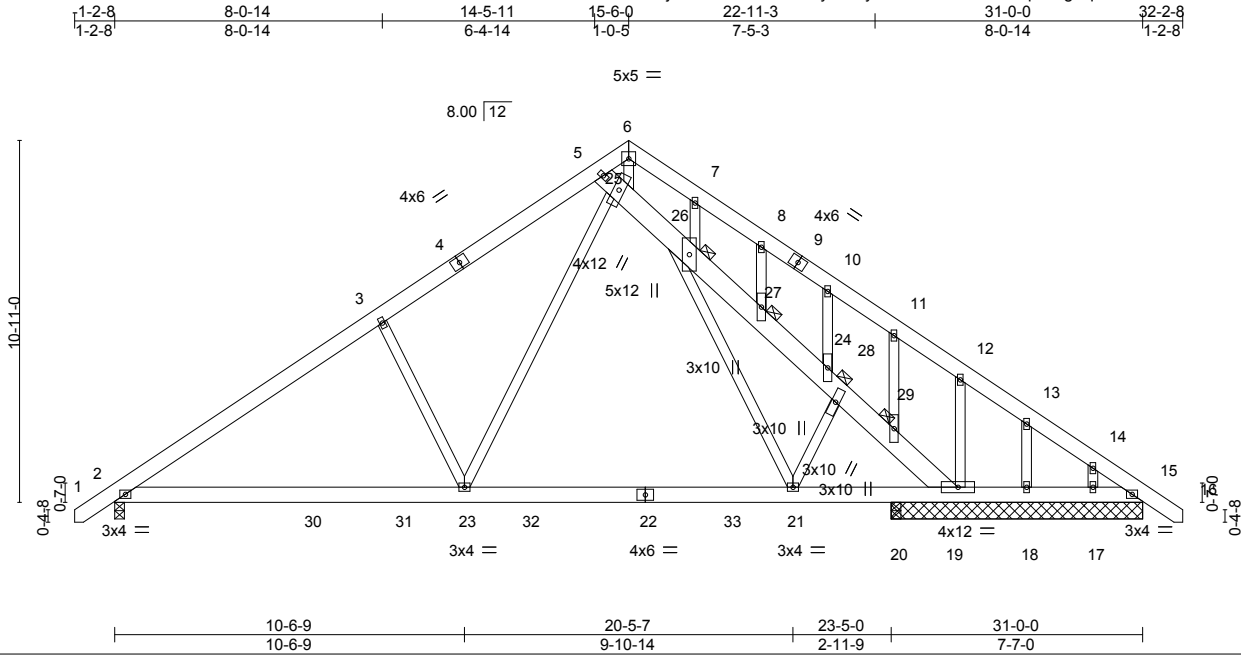
Job	Truss	Truss Type	Qty	Ply	Lot 19 Magnolia Hills
J0225-1029	A4-GE	GABLE	1	1	173798214

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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 0.29	Vert(LL)	-0.16	21-23	>999	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.57	Vert(CT)	-0.24	21-23	>999		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.43	Horz(CT)	0.03	15	n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Wind(LL)	0.05	2-23	>999		
	Code IRC2021/TPI2014						Weight: 275 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 5-4-7 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 *Except*	JOINTS 1 Brace at Jt(s): 24, 26, 27, 29
5-19: 2x8 SP No.1	
OTHERS 2x4 SP No.2	

REACTIONS. All bearings 7-7-0 except (jt=length) 2=0-3-8, 20=0-3-8.
(lb) - Max Horz 2=-331(LC 10)
Max Uplift All uplift 100 lb or less at joint(s) 18, 17, 20 except 2=-228(LC 12), 19=-150(LC 12)
Max Grav All reactions 250 lb or less at joint(s) 18, 17 except 2=1417(LC 19), 15=626(LC 20), 19=530(LC 19), 20=336(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1800/262, 3-5=-1659/361, 5-6=-1138/406, 6-7=-871/344, 7-8=-932/289, 8-10=-964/241, 10-11=-891/144, 11-12=-908/82, 12-13=-822/4, 13-14=-869/0, 14-15=-884/0
BOT CHORD 2-23=-273/1632, 21-23=-3/956, 20-21=-40/1254, 19-20=-40/1254, 18-19=0/720, 17-18=0/720, 15-17=0/720
WEBS 21-26=-86/642, 21-24=-392/232, 23-25=-238/1080, 3-23=-392/367, 5-25=-794/284, 25-26=-267/208, 26-27=-701/158, 27-28=-701/174, 24-28=-796/223, 24-29=-719/190, 19-29=-731/217, 6-25=-358/1167, 12-19=-287/131

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; Gable Roof; Common Truss; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-0-15 to 3-3-14, Interior(1) 3-3-14 to 15-6-0, Exterior(2R) 15-6-0 to 19-10-13, Interior(1) 19-10-13 to 32-0-15 zone;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) All plates are 2x4 MT20 unless otherwise indicated.
 - 5) Gable studs spaced at 2-0-0 oc.
 - 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - 7) * This truss has been designed for a live load of 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.
 - 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 18, 17, 20 except (jt=lb) 2=228, 19=150.



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Job	Truss	Truss Type	Qty	Ply	Lot 19 Magnolia Hills
J0225-1029	B1-GE	GABLE	1	1	173798215

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8.630 s Sep 26 2024 MiTek Industries, Inc. Wed May 28 12:21:49 2025 Page 1
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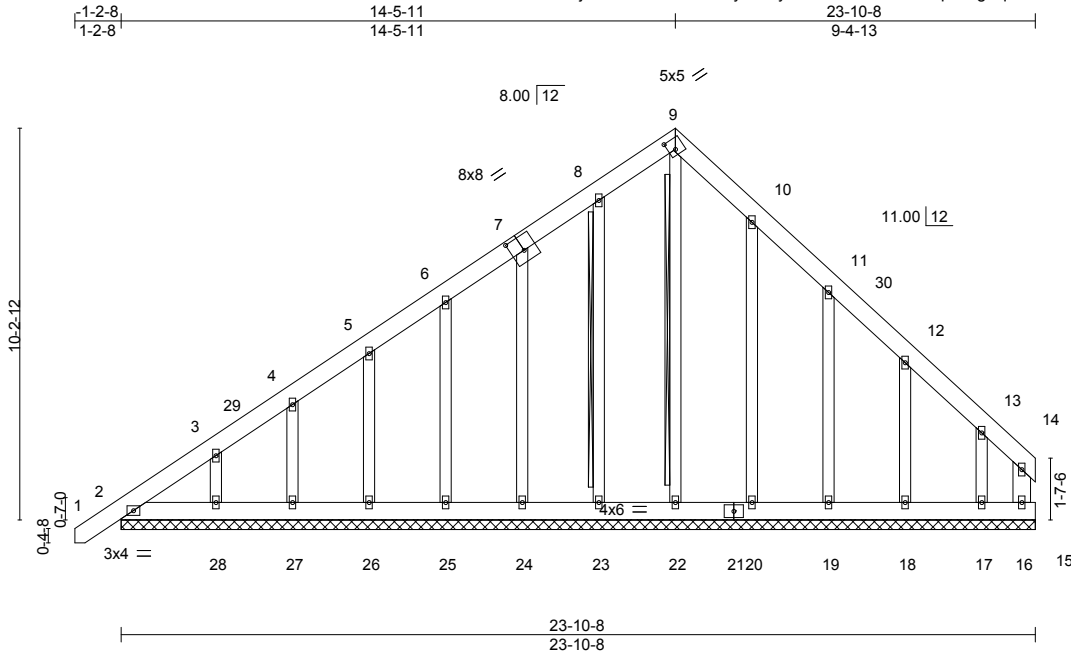


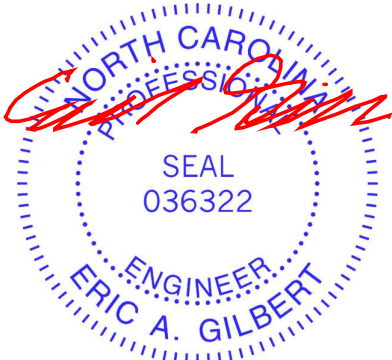
Plate Offsets (X,Y)--		[7:0-4-0,0-4-8], [9:0-2-3,0-3-4]	
LOADING (psf)	SPACING-	2-0-0	CSI.
TCLL 20.0	Plate Grip DOL	1.15	TC 0.07
TCDL 10.0	Lumber DOL	1.15	BC 0.01
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.21
BCDL 10.0	Code	IRC2021/TPI2014	Matrix-S
			DEFL.
			in (loc) l/defl L/d
			Vert(LL) 0.00 1 n/r 120
			Vert(CT) 0.00 1 n/r 120
			Horz(CT) 0.00 15 n/a n/a
			PLATES GRIP
			MT20 244/190
			Weight: 217 lb FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing. Except:
WEBS 2x6 SP No.1	10-0-0 oc bracing: 16-17,15-16.
OTHERS 2x4 SP No.2	T-Brace: 2x4 SPF No.2 - 9-22, 8-23
	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.	All bearings 23-10-8.
(lb) - Max Horz	2=299(LC 9)
Max Uplift	All uplift 100 lb or less at joint(s) 22, 23, 25, 26, 27, 20, 16 except
	2=149(LC 8), 24=102(LC 12), 28=104(LC 12), 19=152(LC 13), 18=126(LC 13),
	17=104(LC 13)
Max Grav	All reactions 250 lb or less at joint(s) 2, 15, 23, 24, 25, 26, 27, 28, 20,
	19, 18, 17, 16 except 22=436(LC 13)

FORCES.	(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD	2-3=-327/327, 3-4=-295/300, 4-5=-271/296, 5-6=-252/325, 6-7=-231/367, 7-8=-212/420,
	8-9=-227/421, 9-10=-249/461, 10-11=-213/397, 11-12=-140/265
WEBS	9-22=-412/160

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; Gable Roof; Common Truss; MWFRS (envelope) gable end zone and C-C Corner(3E) -1-0-15 to 3-3-14, Exterior(2N) 3-3-14 to 14-5-11, Corner(3R) 14-5-11 to 18-10-8, Exterior(2N) 18-10-8 to 23-6-4 zone; 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) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * 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.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 22, 23, 25, 26, 27, 20, 16 except (jt=lb) 2=149, 24=102, 28=104, 19=152, 18=126, 17=104.
10) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.



May 29,2025

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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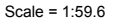
ENGINEERING BY
TRENCO
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818 Soundside Road
Edenton, NC 27932

Comtech, Inc. Fayetteville, NC - 28314, 8.630 s Sep 26 2024 MiTek Industries, Inc. Wed May 28 12:21:49 2025 Page 1

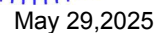
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1-2-8	4-2-14	8-5-11	14-5-11	18-5-11	23-10-8
1-2-8	4-2-14	4-2-14	6-0-0	4-0-0	5-4-13



NOTES-

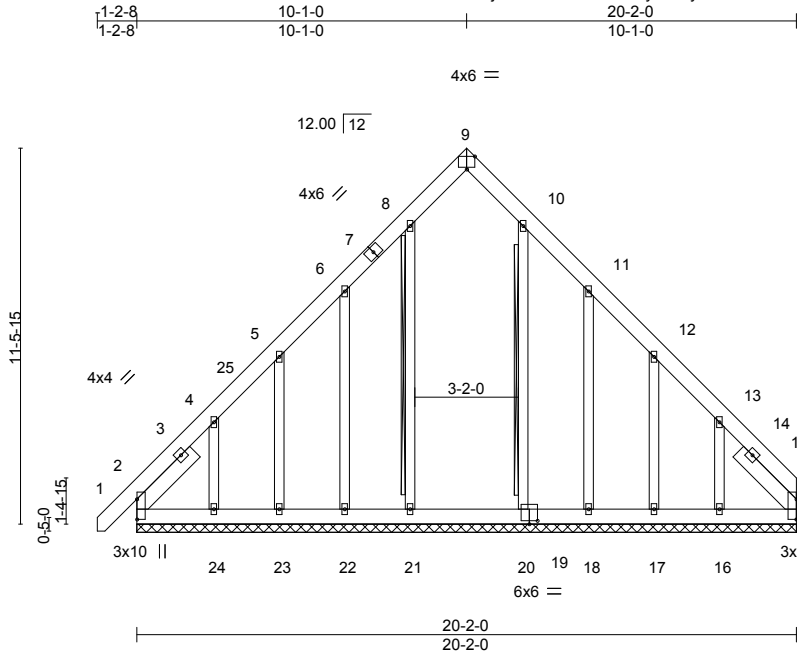
- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-15 to 3-3-14, Interior(1) 3-3-14 to 14-5-11, Exterior(2R) 14-5-11 to 18-7-9, Interior(1) 18-7-9 to 23-6-4 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) * 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.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 12.



Job	Truss	Truss Type	Qty	Ply	Lot 19 Magnolia Hills
J0225-1029	C1-GE	GABLE	1	1	173798217

Comtech, Inc., Fayetteville, NC - 28314,

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Scale = 1:70.4

Plate Offsets (X,Y)-- [2:0-7-7,0-0-1], [9:0-3-0,Edge], [15:0-7-7,0-0-1], [19:0-3-0,0-1-4]									
LOADING (psf)		SPACING-	2-0-0	CSI.	DEFL.			L/d	PLATES
TCLL	20.0	Plate Grip DOL	1.15	TC	0.07	in	(loc)	l/defl	GRIP
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(LL)	-0.00	1	n/r
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.14	Vert(CT)	-0.00	1	n/r
BCDL	10.0	Code	IRC2021/TP12014	Matrix-S		Horz(CT)	0.01	15	n/a
									Weight: 200 lb
									FT = 20%

LUMBER-		BRACING-
TOP CHORD	2x6 SP No.1	TOP CHORD
BOT CHORD	2x6 SP No.1	BOT CHORD
OTHERS	2x4 SP No.2	WEBS
SLIDER	Left 2x6 SP No.1 2-6-0, Right 2x6 SP No.1 2-6-0	
		Structural wood sheathing directly applied or 6-0-0 oc purlins.
		Rigid ceiling directly applied or 10-0-0 oc bracing.
		T-Brace: 2x4 SPF No.2 - 8-21, 10-20
		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. All bearings 20-2-0.

(lb) - Max Horz 2=333(LC 9)

Max Uplift All uplift 100 lb or less at joint(s) 21, 20 except 15=122(LC 11), 2=107(LC 10), 22=172(LC 12), 23=114(LC 12), 24=330(LC 12), 18=177(LC 13), 17=114(LC 13), 16=333(LC 13)

Max Grav All reactions 250 lb or less at joint(s) 22, 23, 18, 17 except 15=432(LC 13), 2=411(LC 12), 21=320(LC 19), 24=287(LC 19), 20=300(LC 20), 16=300(LC 20)

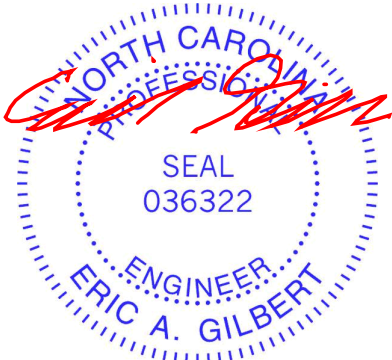
FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

TOP CHORD 2-4=558/249, 4-5=294/151, 12-13=276/124, 13-15=564/240

BOT CHORD 2-24=175/420, 23-24=177/421, 22-23=177/422, 21-22=177/422, 20-21=177/422, 18-20=177/422, 17-18=177/422, 16-17=177/421, 15-16=175/419

WEBS 4-24=227/360, 13-16=228/390

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; Gable Roof; Common Truss; MWFRS (envelope) gable end zone and C-C Corner(3E) -1-1-2 to 3-3-11, Exterior(2N) 3-3-11 to 10-1-0, Corner(3R) 10-1-0 to 14-5-13, Exterior(2N) 14-5-13 to 20-2-0 zone;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/TP1 1.
 - 4) All plates are 2x4 MT20 unless otherwise indicated.
 - 5) Gable requires continuous bottom chord bearing.
 - 6) Gable studs spaced at 2-0-0 oc.
 - 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - 8) * 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.
 - 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 21, 20 except (jt=lb) 15=122, 2=107, 22=172, 23=114, 24=330, 18=177, 17=114, 16=333.
 - 10) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.



May 29,2025

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818 Soundside Road
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 19 Magnolia Hills
J0225-1029	C2	COMMON	2	1	173798218

Comtech, Inc., Fayetteville, NC - 28314,

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ID:jUlCoITBhC0nIVImGynse8yuZYG-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

Job Reference (optional)

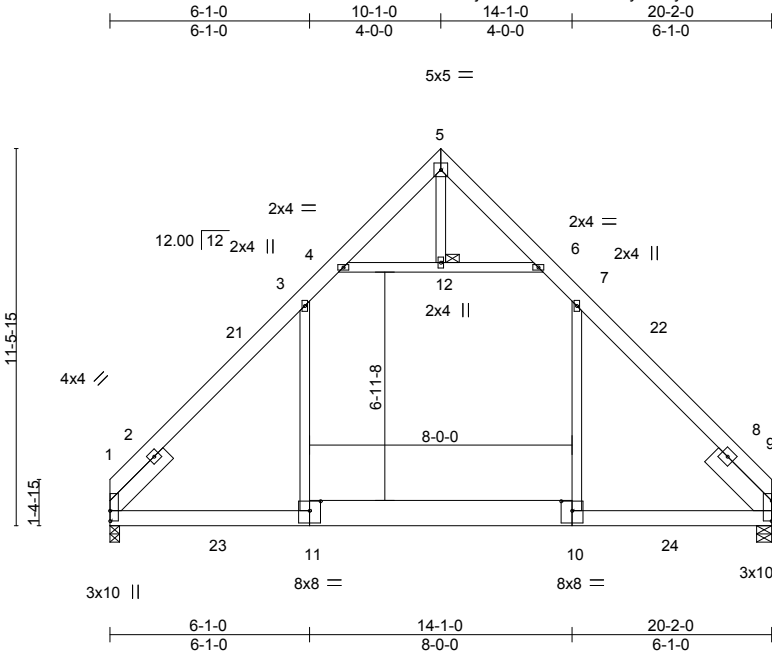


Plate Offsets (X,Y)--		[1:0-3-12,0-0-1], [9:0-7-7,0-0-1], [10:0-4-0,0-3-8], [11:0-4-0,0-3-8]	
LOADING (psf)	SPACING-	2-0-0	CSI.
TCLL 20.0	Plate Grip DOL	1.15	TC 0.23
TCDL 10.0	Lumber DOL	1.15	BC 0.30
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.12
BCDL 10.0	Code	IRC2021/TPI2014	Matrix-MS
			DEFL.
			in (loc) l/defl L/d
			Vert(LL) 0.10 11-15 >999 240
			Vert(CT) -0.11 11-15 >999 180
			Horz(CT) 0.04 9 n/a n/a
			PLATES GRIP
			MT20 244/190
			Weight: 175 lb FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x6 SP No.1 *Except*	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
10-11: 2x10 SP No.1	JOINTS 1 Brace at Jt(s): 12
WEBS 2x4 SP No.2	
SLIDER Left 2x6 SP No.1 2-6-0, Right 2x8 SP No.1 2-6-0	

REACTIONS. (size) 1=0-3-8, 9=0-5-8
Max Horz 1=242(LC 9)
Max Uplift 1=31(LC 13), 9=31(LC 12)
Max Grav 1=1091(LC 20), 9=1091(LC 19)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-3=-1213/228, 3-4=-695/264, 6-7=-694/262, 7-9=-1214/231
BOT CHORD 1-11=-25/789, 10-11=-23/798, 9-10=-24/786
WEBS 7-10=-29/533, 3-11=-28/534, 4-12=-736/334, 6-12=-736/334

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-0-0 to 4-4-13, Interior(1) 4-4-13 to 10-1-0, Exterior(2R) 10-1-0 to 14-2-15, Interior(1) 14-2-15 to 20-2-0 zone;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, with BCDL = 10.0psf.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 9.



May 29,2025

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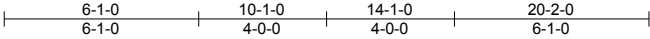
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 19 Magnolia Hills
J0225-1029	C3	COMMON	4	1	173798219

Comtech, Inc., Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Wed May 28 12:21:51 2025 Page 1

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5x5 =

Scale = 1:72.1

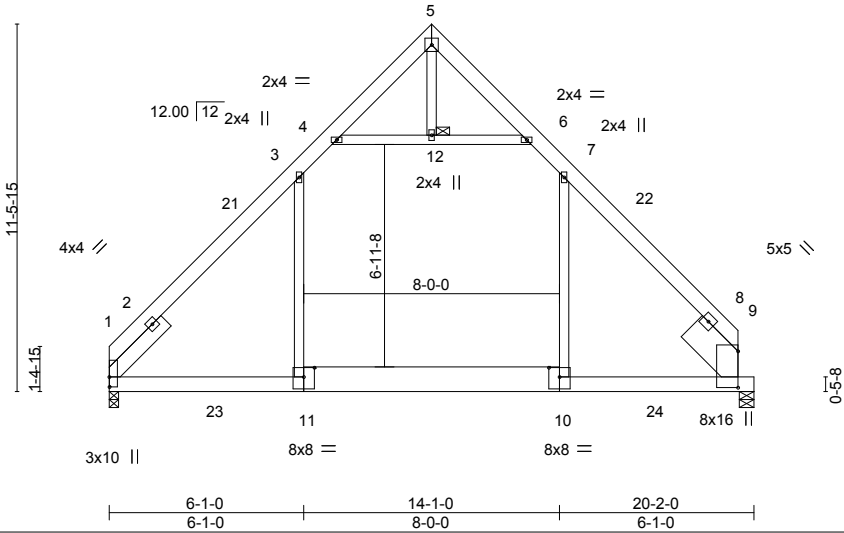


Plate Offsets (X,Y)-- [1:0-3-12,0-0-1], [9:1-1-11,0-0-0], [10:0-4-0,0-3-8], [11:0-4-0,0-3-8]									
LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL. in (loc) l/defl L/d		PLATES GRIP	
TCLL	20.0	Plate Grip DOL	1.15	TC	0.23	Vert(LL)	0.10 11-15 >999	240	MT20 244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.30	Vert(CT)	-0.11 11-15 >999	180	
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.12	Horz(CT)	0.04 9 n/a	n/a	
BCDL	10.0	Code IRC2021/TPI2014		Matrix-MS					Weight: 176 lb FT = 20%

LUMBER-

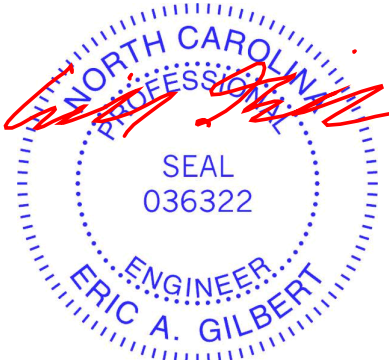
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1 *Except*
10-11: 2x10 SP No.1
WEBS 2x4 SP No.2
SLIDER Left 2x6 SP No.1 2-6-0, Right 2x12 SP No.1 2-1-12

REACTIONS. (size) 1=0-3-8, 9=0-5-8, 9=0-5-8
Max Horz 1=242(LC 9)
Max Uplift 1=31(LC 13), 9=31(LC 12)
Max Grav 1=1091(LC 20), 9=1091(LC 19), 9=807(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-3=-1213/228, 3-4=-695/264, 6-7=-694/262, 7-9=-1214/231
BOT CHORD 1-11=-25/789, 10-11=-23/798, 9-10=-24/786
WEBS 7-10=-29/534, 3-11=-28/533, 4-12=-736/334, 6-12=-736/334

NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-0-0 to 4-4-13, Interior(1) 4-4-13 to 10-1-0, Exterior(2R) 10-1-0 to 14-2-15, Interior(1) 14-2-15 to 20-2-0 zone;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, with BCDL = 10.0psf.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 9, 9.



May 29,2025

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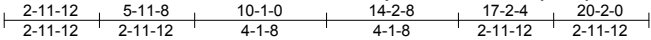
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 19 Magnolia Hills
J0225-1029	C4	COMMON	1	3	173798220

Comtech, Inc., Fayetteville, NC - 28314,

8.630 s Aug 30 2023 MiTek Industries, Inc. Thu May 29 09:12:09 2025 Page 1

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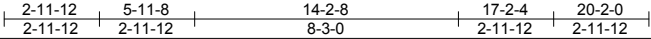
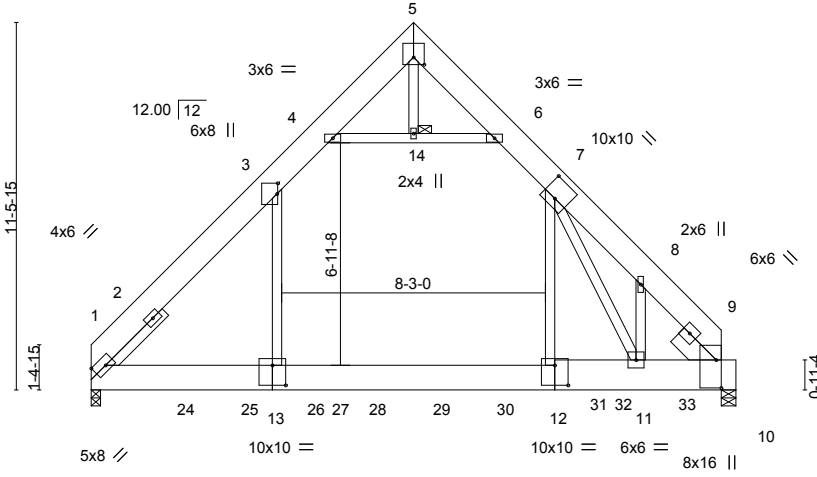


Plate Offsets (X,Y)--										[1:0-4-10,Edge], [3:0-4-0,0-0-4], [5:0-4-0,0-2-12], [7:0-5-0,0-7-0], [10:0-10-8,0-1-14], [12:0-5-0,0-7-8], [13:0-5-0,0-7-8]									
LOADING (psf)		SPACING-		2-0-0		CSI.		DEFL.		in (loc)		l/defl		L/d		PLATES		GRIP	
TCLL 20.0		Plate Grip DOL		1.15		TC 0.56		Vert(LL)		-0.13 12-13		>999		360		MT20		244/190	
TCDL 10.0		Lumber DOL		1.15		BC 0.62		Vert(CT)		-0.18 12-13		>999		240					
BCLL 0.0 *		Rep Stress Incr		NO		WB 0.51		Horz(CT)		0.02 10		n/a		n/a					
BCDL 10.0		Code IRC2021/TPI2014				Matrix-MS		Wind(LL)		0.01 13		>999		240		Weight: 742 lb		FT = 20%	

LUMBER-	BRACING-
TOP CHORD 2x10 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x10 SP No.1 *Except*	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
1-13: 2x10 SP 2400F 2.0E, 10-12: 2x12 SP No.1	JOINTS 1 Brace at Jt(s): 14
WEBS 2x4 SP No.2	
SLIDER Left 2x4 SP No.2 2-6-0, Right 2x8 SP No.1 1-4-15	

REACTIONS. (size) 1=0-3-8 (min. 0-2-9), 10=0-5-8 (min. 0-3-7)
Max Horz 1=257(LC 8)
Max Grav 1=9337(LC 14), 10=8817(LC 14)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-6716/0, 2-3=-8677/0, 3-4=-3960/20, 4-5=-160/538, 5-6=-104/526, 6-7=-3970/131, 7-8=-8721/51, 8-9=-8328/50, 9-10=-38/8568
BOT CHORD 1-24=-76/5541, 24-25=-76/5541, 13-25=-76/5541, 13-26=-77/5520, 26-27=-77/5520, 27-28=-77/5520, 28-29=-77/5520, 29-30=-77/5520, 30-31=-77/5520, 12-31=-77/5520, 12-32=-77/5556, 32-33=-77/5613, 11-33=-76/5672, 10-11=-18/5620
WEBS 7-12=-90/6771, 3-13=0/6640, 4-14=-6576/126, 6-14=-6576/126, 5-14=-11/593, 8-11=-646/0, 7-11=-286/143

- NOTES-
- 3-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x10 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x10 - 2 rows staggered at 0-4-0 oc, 2x12 - 3 rows staggered at 0-4-0 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 7-16; Vult=130mph (3-second gust) 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
 - 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.
 - Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1829 lb down at 0-10-4, 1826 lb down at 2-10-4, 1826 lb down at 4-10-4, 1826 lb down at 6-10-4, 1826 lb down at 8-10-4, 1826 lb down at 12-10-4, 1826 lb down at 14-10-4, 1826 lb down at 16-10-4, and 1783 lb down at 18-10-4, and 464 lb down and 49 lb up at 10-10-4 on bottom chord.
The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard



May 29,2025

Continued on page 2

Job	Truss	Truss Type	Qty	Ply	Lot 19 Magnolia Hills	173798220
J0225-1029	C4	COMMON	1	3	Job Reference (optional)	

Comtech, Inc., Fayetteville, NC 28309

8.630 s Aug 30 2023 MiTek Industries, Inc. Thu May 29 09:12:10 2025 Page 2
ID:jUICoITBhC0nIVImGynse8yuZYG-UAeoX7gN9j?pRjmFzDIZkgaSLovc3lF5wJsP6ozBro3

LOAD CASE(S) Standard

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

Uniform Loads (plf)

Vert: 1-5=-60, 5-9=-60, 9-22=60, 21-22=-60, 10-15=-20

Concentrated Loads (lb)

Vert: 17=-462(F) 20=-448(F) 24=-459(F) 25=-459(F) 27=-459(F) 28=-459(F) 29=-459(F) 30=-459(F) 32=-459(F) 33=-459(F)

Eric A. Gilbert



May 29,2025

Job	Truss	Truss Type	Qty	Ply	Lot 19 Magnolia Hills
J0225-1029	D1-GE	COMMON SUPPORTED GAB	1	1	173798221

Comtech, Inc., Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Wed May 28 12:21:52 2025 Page 1
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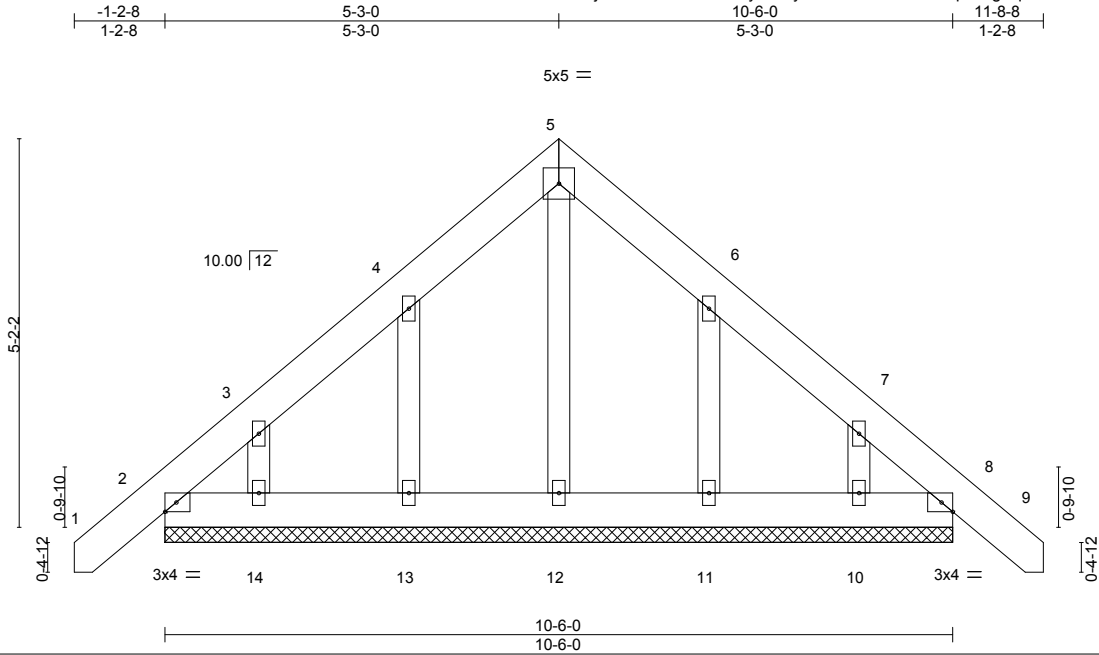


Plate Offsets (X,Y)-- [8:0-1-13,Edge]								PLATES	GRIP
LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in	(loc)	l/defl	L/d	
TCLL 20.0	Plate Grip DOL	1.15	TC 0.04	Vert(LL)	-0.00	8	n/r	120	MT20 244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.03	Vert(CT)	-0.00	8	n/r	120	
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.04	Horz(CT)	0.00	8	n/a	n/a	
BCDL 10.0	Code	IRC2021/TPI2014	Matrix-S						Weight: 82 lb FT = 20%

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

REACTIONS. All bearings 10-6-0.
(lb) - Max Horz 2=-158(LC 10)
Max Uplift All uplift 100 lb or less at joint(s) 2, 8 except 13=-112(LC 12), 14=-106(LC 12), 11=-109(LC 13), 10=-103(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 2, 8, 12, 13, 14, 11, 10

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

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; Gable Roof; Common Truss; MWFRS (envelope) gable end zone and C-C Corner(3E) -1-1-1 to 3-3-0, Exterior(2N) 3-3-0 to 5-3-0, Corner(3R) 5-3-0 to 9-7-13, Exterior(2N) 9-7-13 to 11-7-1 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
 - All plates are 2x4 MT20 unless otherwise indicated.
 - Gable requires continuous bottom chord bearing.
 - Gable studs spaced at 2-0-0 oc.
 - 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 except (jt=lb) 13=112, 14=106, 11=109, 10=103.
 - Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 2.

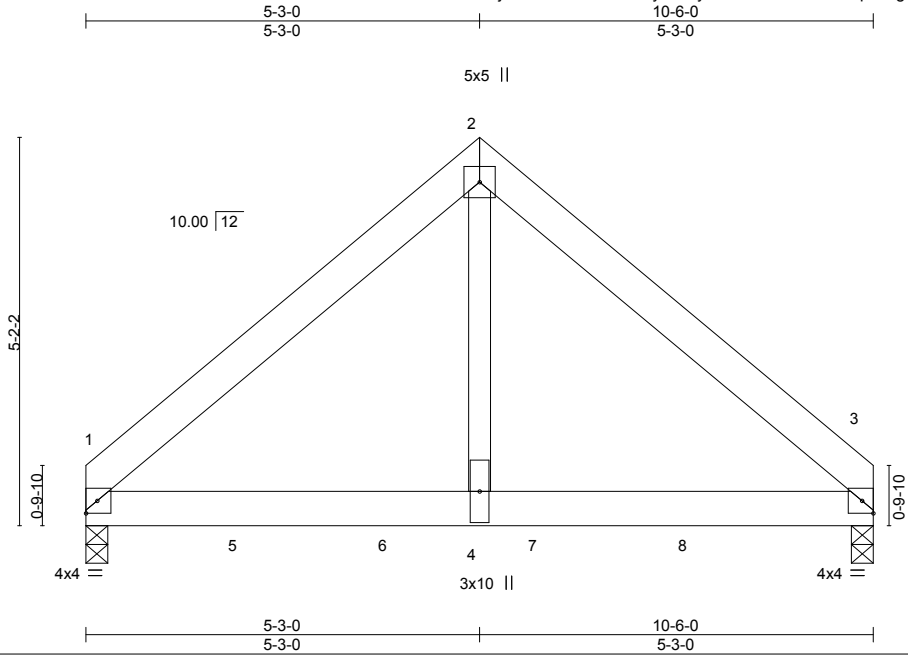


May 29,2025

Job	Truss	Truss Type	Qty	Ply	Lot 19 Magnolia Hills
J0225-1029	D2	COMMON GIRDER	1	2	173798222

Comtech, Inc., Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Wed May 28 12:21:53 2025 Page 1
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Scale = 1:30.7

LOADING (psf)	SPACING-	CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.17	Vert(LL)	-0.04	1-4	>999	360	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.52	Vert(CT)	-0.08	1-4	>999	240		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.53	Horz(CT)	0.01	3	n/a	n/a		
BCDL 10.0	Rep Stress Incr NO	Matrix-S	Wind(LL)	0.02	1-4	>999	240		
	Code IRC2021/TPI2014							Weight: 129 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x6 SP 2400F 2.0E	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.2	

REACTIONS. (size) 1=0-3-8, 3=0-3-8
Max Horz 1=112(LC 28)
Max Uplift 1=-175(LC 8), 3=-236(LC 9)
Max Grav 1=3379(LC 2), 3=4630(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-3547/224, 2-3=-3553/224
BOT CHORD 1-4=-115/2610, 3-4=-115/2610
WEBS 2-4=-168/4354

- 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 0-7-0 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 7-16; Vult=130mph (3-second gust) 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
 - 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) 1=175, 3=236.
 - Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1457 lb down and 85 lb up at 2-0-12, 1457 lb down and 85 lb up at 4-0-12, 1457 lb down and 85 lb up at 6-0-12, and 1457 lb down and 85 lb up at 8-0-12, and 1464 lb down and 78 lb up at 10-4-4 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: 1-2=-60, 2-3=-60, 1-3=-20

Concentrated Loads (lb)

Vert: 3=-1214(B) 5=-1207(B) 6=-1207(B) 7=-1207(B) 8=-1207(B)



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

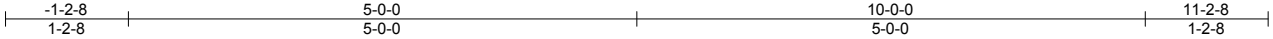
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall 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/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.sbcacompnents.com)

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

Job	Truss	Truss Type	Qty	Ply	Lot 19 Magnolia Hills
J0225-1029	G1-SG	GABLE	1	1	173798223

Comtech, Inc., Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Wed May 28 12:21:53 2025 Page 1
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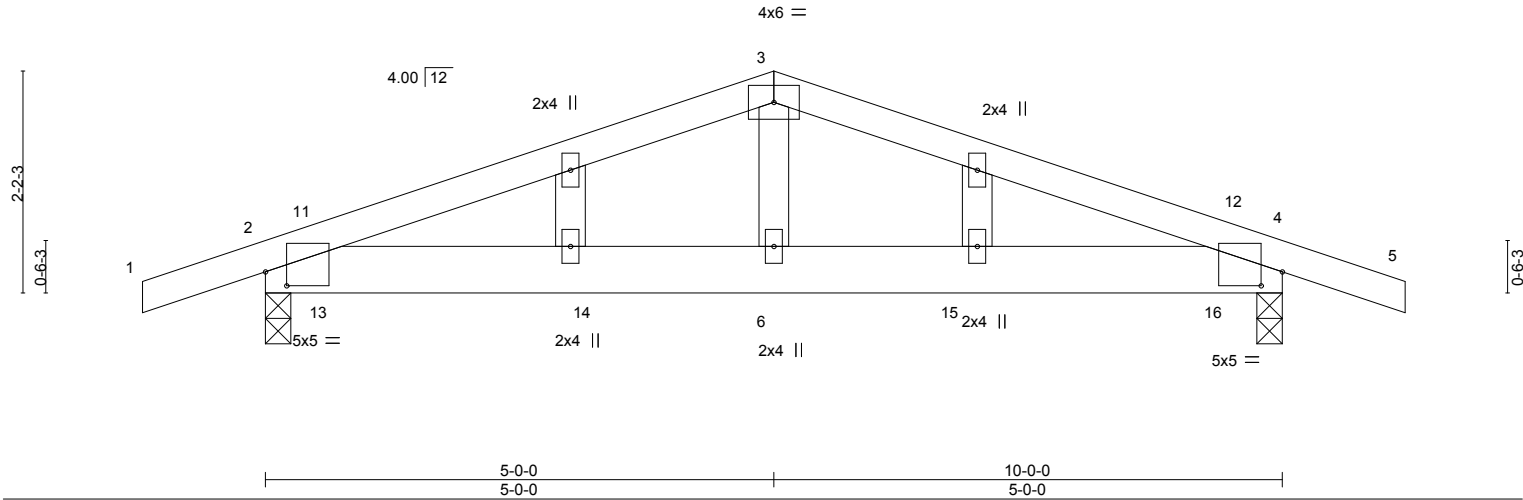


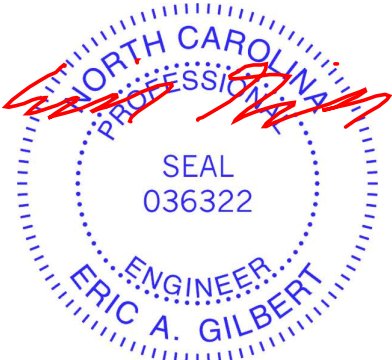
Plate Offsets (X,Y)--		[2:0-2-8,0-1-10], [4:0-2-8,0-1-10]	
LOADING (psf)	SPACING-	2-0-0	CSI.
TCLL 20.0	Plate Grip DOL	1.15	TC 0.42
TCDL 10.0	Lumber DOL	1.15	BC 0.18
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.06
BCDL 10.0	Code	IRC2021/TPI2014	Matrix-S
			DEFL.
			in (loc) l/defl L/d
			Vert(LL) 0.05 2-6 >999 240
			Vert(CT) -0.02 6 >999 240
			Horz(CT) -0.01 4 n/a n/a
			PLATES GRIP
			MT20 244/190
			Weight: 48 lb FT = 20%

LUMBER-	BRACING-
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 6-5-5 oc bracing.
WEBS 2x4 SP No.2	
OTHERS 2x4 SP No.2	

REACTIONS. (size) 2=0-3-0, 4=0-3-0
Max Horz 2=42(LC 16)
Max Uplift 2=270(LC 8), 4=270(LC 9)
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=-647/1554, 3-4=-647/1554
BOT CHORD 2-6=-1332/556, 4-6=-1332/556
WEBS 3-6=-660/232

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; Gable Roof; Common Truss; MWFRS (envelope) gable end zone and C-C Corner(3E) -1-2-8 to 3-2-5, Exterior(2N) 3-2-5 to 5-0-0, Corner(3R) 5-0-0 to 9-4-13, Exterior(2N) 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
 - 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.
 - Gable studs spaced at 2-0-0 oc.
 - 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=270, 4=270.



May 29,2025

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)

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

Job	Truss	Truss Type	Qty	Ply	Lot 19 Magnolia Hills
J0225-1029	G2	COMMON	4	1	173798224

Comtech, Inc., Fayetteville, NC - 28314,

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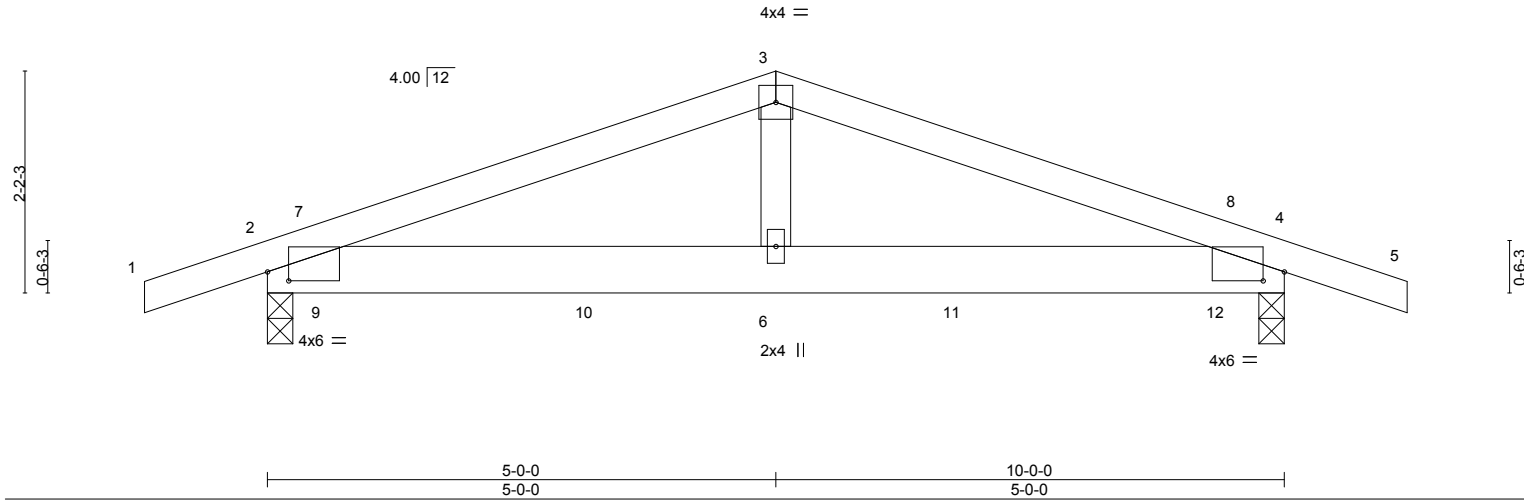


Plate Offsets (X,Y)-- [2:0-2-8,0-1-1], [4:0-2-8,0-1-1]									
LOADING (psf)		SPACING-		CSI.		DEFL.		PLATES	
TCLL	20.0	Plate Grip DOL	1.15	TC	0.35	Vert(LL)	-0.01 6 >999 360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.16	Vert(CT)	-0.02 6 >999 240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.05	Horz(CT)	-0.01 4 n/a n/a		
BCDL	10.0	Code IRC2021/TPI2014		Matrix-S		Wind(LL)	0.04 2-6 >999 240	Weight: 45 lb	FT = 20%

LUMBER-		BRACING-	
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 7'-3-14 oc bracing.
WEBS	2x4 SP No.2		

REACTIONS. (size) 2=0-3-0, 4=0-3-0
Max Horz 2=25(LC 16)
Max Uplift 2=-190(LC 8), 4=-190(LC 9)
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=-647/1203, 3-4=-647/1203
BOT CHORD 2-6=-1038/556, 4-6=-1038/556
WEBS 3-6=-511/232

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCdL=6.0psf; BCdL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-2-8 to 3-2-5, Interior(1) 3-2-5 to 5-0-0, Exterior(2R) 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) except (jt=lb) 2=190, 4=190.



May 29,2025

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

Job	Truss	Truss Type	Qty	Ply	Lot 19 Magnolia Hills
J0225-1029	P1-GE	GABLE	1	1	173798225

Comtech, Inc., Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Wed May 28 12:21:54 2025 Page 1
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6-0-0
6-0-0

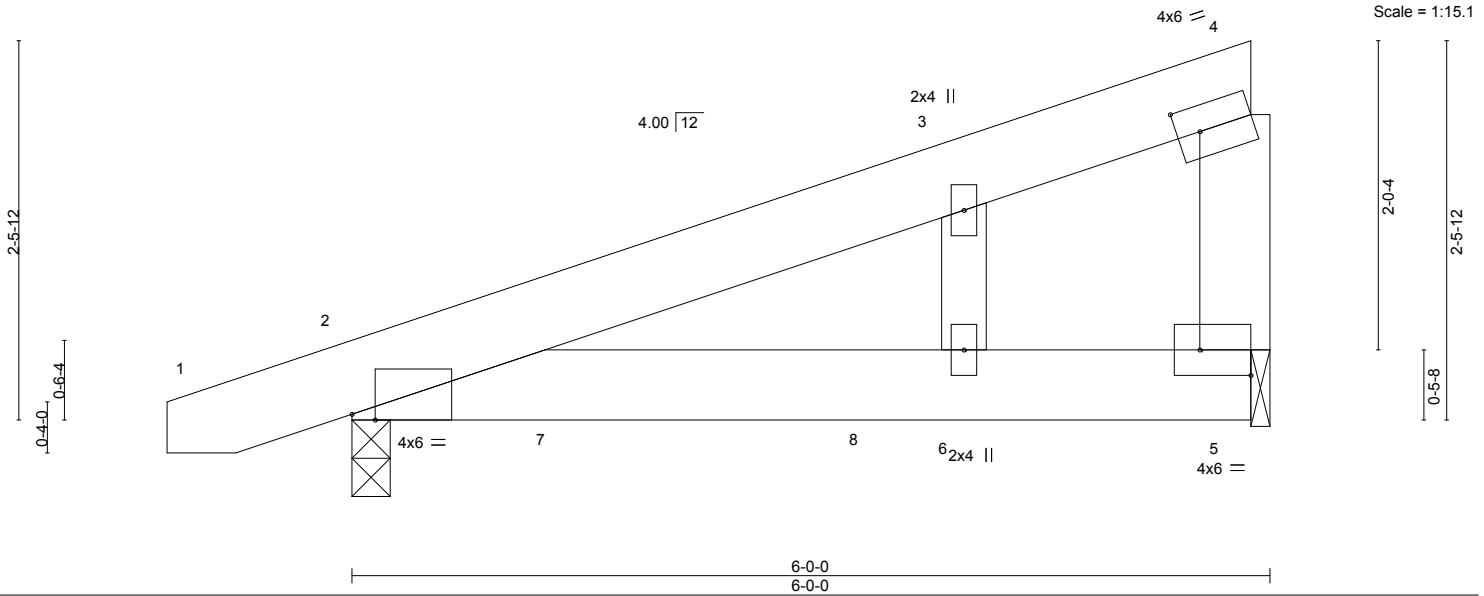


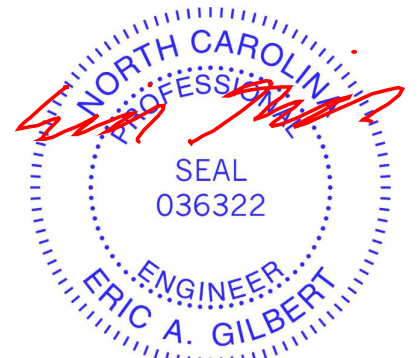
Plate Offsets (X,Y)--		[2:0-1-13,Edge], [4:0-1-13,0-2-0], [5:Edge,0-2-0]																	
LOADING (psf)		SPACING-		2-0-0		CSI.		DEFL.		in (loc)		l/defl		L/d		PLATES		GRIP	
TCLL	20.0	Plate Grip DOL		1.15		TC	0.20	Vert(LL)	0.04	2-6	>999	240		MT20		244/190			
TCDL	10.0	Lumber DOL		1.15		BC	0.21	Vert(CT)	-0.02	2-6	>999	240							
BCLL	0.0 *	Rep Stress Incr		YES		WB	0.02	Horz(CT)	-0.00	5	n/a	n/a							
BCDL	10.0	Code IRC2021/TPI2014				Matrix-S								Weight: 36 lb		FT = 20%			

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x6 SP No.1	
OTHERS 2x4 SP No.2	

REACTIONS.	(size) 2=0-3-0, 5=0-1-8
	Max Horz 2=110(LC 8)
	Max Uplift 2=173(LC 8), 5=138(LC 8)
	Max Grav 2=299(LC 1), 5=219(LC 1)

FORCES.	(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD	4-5=-99/291
BOT CHORD	2-6=-290/89, 5-6=-290/89

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; Gable Roof; Common Truss; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-11-13 to 3-5-0, Exterior(2N) 3-5-0 to 5-9-4 zone; porch left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - 2) 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.
 - 3) Gable studs spaced at 2-0-0 oc.
 - 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.
 - 6) Bearing at joint(s) 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
 - 7) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 5.
 - 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=173, 5=138.



May 29,2025

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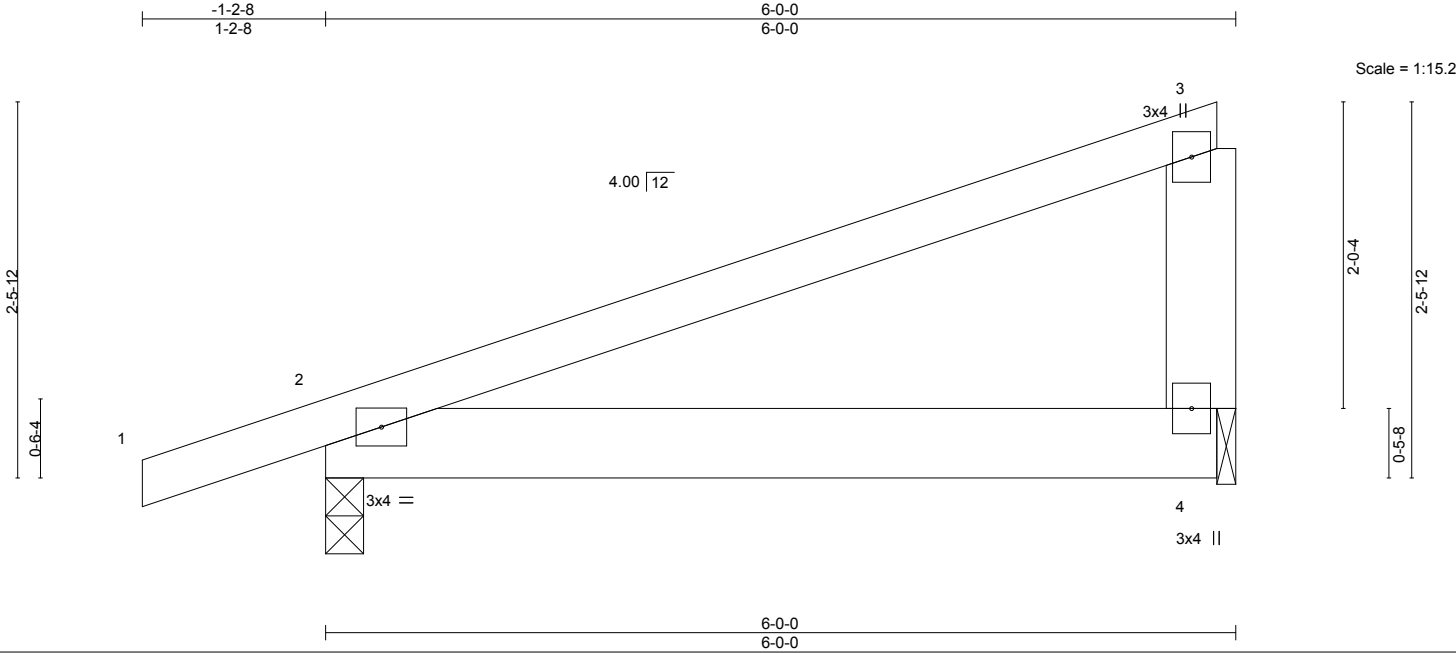
ENGINEERING BY
TRENCO
A MiTek Affiliate

818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 19 Magnolia Hills
J0225-1029	P2	MONOPITCH	6	1	173798226

Comtech, Inc., Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Wed May 28 12:21:54 2025 Page 1
ID:jUlCoITBhC0nIVImGynse8yuZYG-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrcDoi7J4zJC?f



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 0.42	Vert(LL) -0.01 2-4 >999 360	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.20	Vert(CT) -0.03 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 IRC2021/TPI2014	Matrix-P	Wind(LL) 0.05 2-4 >999 240	Weight: 29 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x6 SP No.1	

REACTIONS. (size) 2=0-3-0, 4=0-1-8
Max Horz 2=80(LC 8)
Max Uplift 2=-129(LC 8), 4=-93(LC 8)
Max Grav 2=315(LC 1), 4=216(LC 1)

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

NOTES-
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-2-8 to 3-2-5, Interior(1) 3-2-5 to 5-9-4 zone; porch left 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) Bearing at joint(s) 4 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
5) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 4.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4 except (jt=lb) 2=129.



May 29,2025

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.sbcacompoments.com)

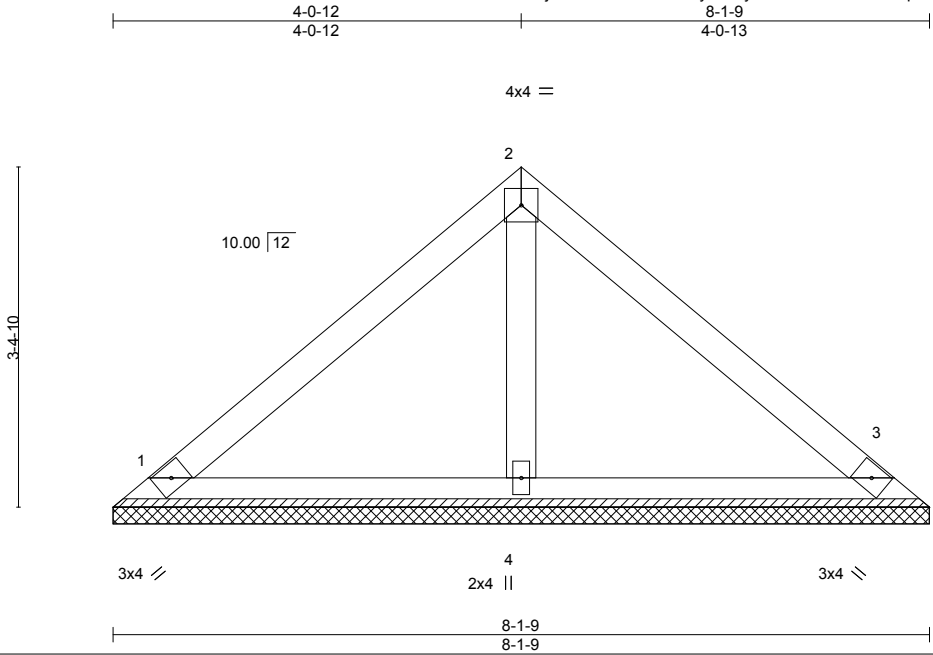
ENGINEERING BY
TRENCO
A MiTek Affiliate

818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 19 Magnolia Hills
J0225-1029	VD1	VALLEY	1	1	173798227

Comtech, Inc., Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Wed May 28 12:21:55 2025 Page 1
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LOADING (psf)	SPACING-	CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.24	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.10	Vert(CT)	n/a	-	n/a	999		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.03	Horz(CT)	0.00	3	n/a	n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-P						Weight: 31 lb	FT = 20%
	Code IRC2021/TPI2014								

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x4 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS 2x4 SP No.2	

REACTIONS. (size) 1=8-1-9, 3=8-1-9, 4=8-1-9
Max Horz 1=-73(LC 8)
Max Uplift 1=-26(LC 13), 3=-32(LC 13)
Max Grav 1=169(LC 1), 3=169(LC 1), 4=247(LC 1)

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

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - 4) * 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.
 - 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
 - 6) Non Standard bearing condition. Review required.



May 29,2025

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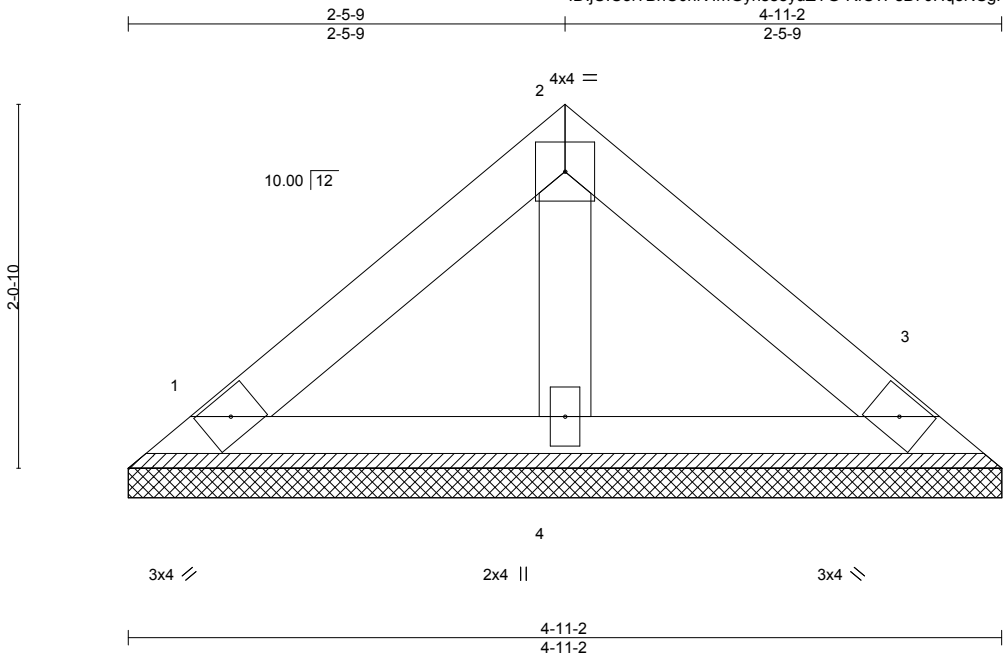
ENGINEERING BY
TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 19 Magnolia Hills
J0225-1029	VD2	VALLEY	1	1	173798228

Comtech, Inc., Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Wed May 28 12:21:55 2025 Page 1
ID:jUlCoITBhC0nIVImGynse8yuZYG-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrcD0i7J4zJC?f

Job Reference (optional)



LOADING (psf)	SPACING-	CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.09	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.03	Vert(CT)	n/a	-	n/a	999		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.01	Horz(CT)	0.00	3	n/a	n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-P						Weight: 18 lb	FT = 20%
	Code IRC2021/TPI2014								

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.1	TOP CHORD Structural wood sheathing directly applied or 4-11-2 oc purlins.
BOT CHORD 2x4 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS 2x4 SP No.2	

REACTIONS. (size) 1=4-11-2, 3=4-11-2, 4=4-11-2
Max Horz 1=-41(LC 10)
Max Uplift 1=-14(LC 13), 3=-18(LC 13)
Max Grav 1=95(LC 1), 3=95(LC 1), 4=139(LC 1)

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

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - 3) Gable requires continuous bottom chord bearing.
 - 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.
 - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.



May 29,2025

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

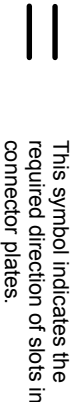
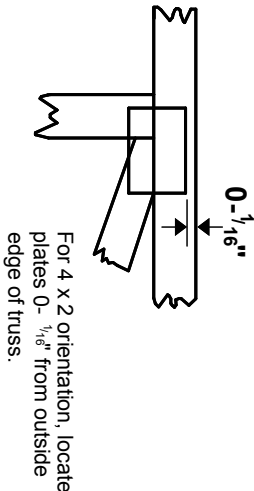
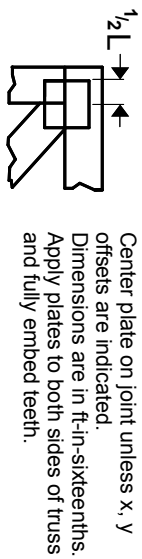
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall 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.sbcacompnents.com)

ENGINEERING BY
TRENCO
A MiTek Affiliate

818 Soundside Road
Edenton, NC 27932

Symbols

PLATE LOCATION AND ORIENTATION



* Plate location details available in MITek software or upon request.

PLATE SIZE

4 X 4

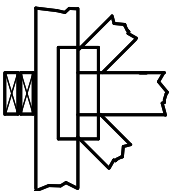
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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.

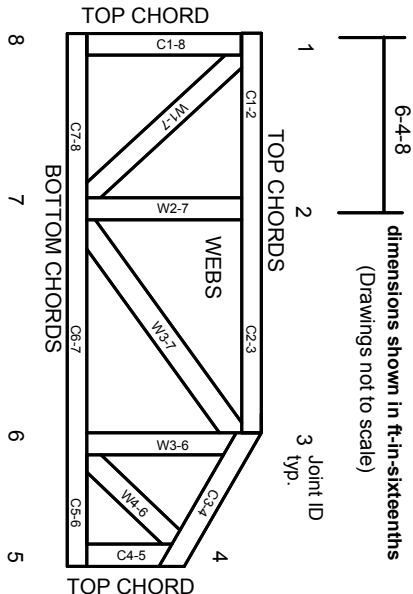
BEARING



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: 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 1 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 Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TP1 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TP1 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TP1 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.

MITek®

ENGINEERING BY
TRENCO
A MITek Affiliate

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

RE: J0225-1030
Lot 19 Magnolia Hills

Trenco
818 Soundside Rd
Edenton, NC 27932

Site Information:

Customer: Project Name: J0225-1030
Lot/Block: Model:
Address: Subdivision:
City: State:

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

Design Code: IRC2021/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 16 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date
1	I72421093	ET1	4/2/2025
2	I72421094	ET2	4/2/2025
3	I72421095	ET3	4/2/2025
4	I72421096	ET4	4/2/2025
5	I72421097	F1	4/2/2025
6	I72421098	F2	4/2/2025
7	I72421099	F3	4/2/2025
8	I72421100	F4	4/2/2025
9	I72421101	F5	4/2/2025
10	I72421102	F6	4/2/2025
11	I72421103	F7	4/2/2025
12	I72421104	FG1	4/2/2025
13	I72421105	FG2	4/2/2025
14	I72421106	FG3	4/2/2025
15	I72421107	FG4	4/2/2025
16	I72421108	FG5	4/2/2025

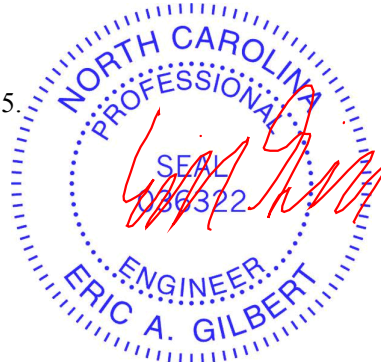
The truss drawing(s) referenced above have been prepared by
Truss Engineering Co. under my direct supervision
based on the parameters provided by Comtech, Inc - Fayetteville.

Truss Design Engineer's Name: Gilbert, Eric

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

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.

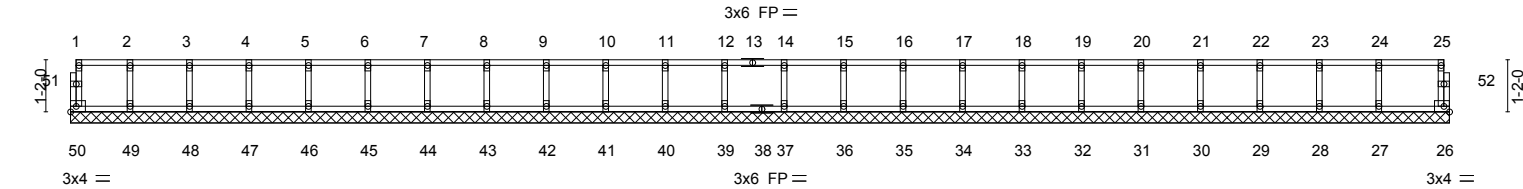


Job	Truss	Truss Type	Qty	Ply	Lot 19 Magnolia Hills
J0225-1030	ET1	GABLE	1	1	172421093

Comtech, Inc., Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Tue Apr 1 07:27:10 2025 Page 1
ID:1NaocfdXFgYT90ywZp05ZYzwAzd-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrcDoi7J4zJC?f

0-1-8
Scale = 1:51.7



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	29-4-0	30-11-0
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	1-4-0	1-4-0	1-7-0
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 0.08		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		26		n/a		n/a						
BCDL 5.0		Code IRC2021/TPI2014				Matrix-R												Weight: 127 lb		FT = 20%F, 11%E		

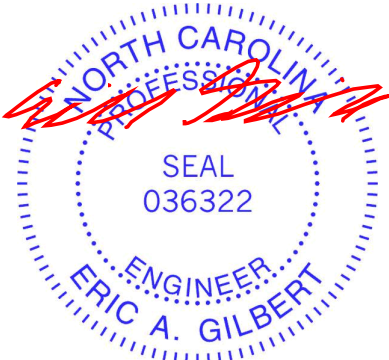
LUMBER-	BRACING-
TOP CHORD 2x4 SP No.1(flat)	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.1(flat)	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3(flat)	
OTHERS 2x4 SP No.3(flat)	

REACTIONS. All bearings 30-11-0.
(lb) - Max Grav All reactions 250 lb or less at joint(s) 50, 26, 49, 48, 47, 46, 45, 44, 43, 42, 41, 40, 39, 37, 36, 35, 34, 33, 32, 31, 30, 29, 28, 27

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

NOTES-

- 1) All plates are 1.5x3 MT20 unless otherwise indicated.
- 2) Plates checked for a plus or minus 1 degree rotation about its center.
- 3) Gable requires continuous bottom chord bearing.
- 4) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 5) Gable studs spaced at 1-4-0 oc.
- 6) 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.



April 2,2025

Job	Truss	Truss Type	Qty	Ply	Lot 19 Magnolia Hills
J0225-1030	ET2	GABLE	1	1	172421094
Job Reference (optional)					

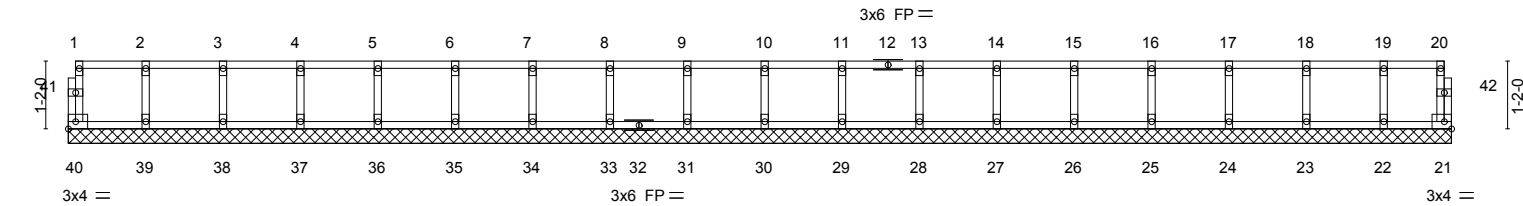
Comtech, Inc., Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Tue Apr 1 07:27:11 2025 Page 1
ID:1NaocfdXFgYT90ywZp05ZYzwAzd-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrcDdoi7J4zJC?f

0-1-8

0-1-8

Scale = 1:39.7



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	23-10-0
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	1-2-0
LOADING (psf)		SPACING-		CSI.		DEFL.		PLATES		GRIP							
TCLL	40.0	Plate Grip DOL	2-0-0	TC	0.06	Vert(LL)	in (loc)	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 21 n/a n/a										
BCDL	5.0	Code IRC2021/TPI2014		Matrix-R													
												Weight: 99 lb		FT = 20%F, 11%E			

LUMBER-		BRACING-	
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 23-10-0.
(lb) - Max Grav All reactions 250 lb or less at joint(s) 40, 21, 39, 38, 37, 36, 35, 34, 33, 31, 30, 29, 28, 27, 26, 25, 24, 23, 22

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

NOTES-
1) All plates are 1.5x3 MT20 unless otherwise indicated.
2) Plates checked for a plus or minus 1 degree rotation about its center.
3) Gable requires continuous bottom chord bearing.
4) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
5) Gable studs spaced at 1-4-0 oc.
6) 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.



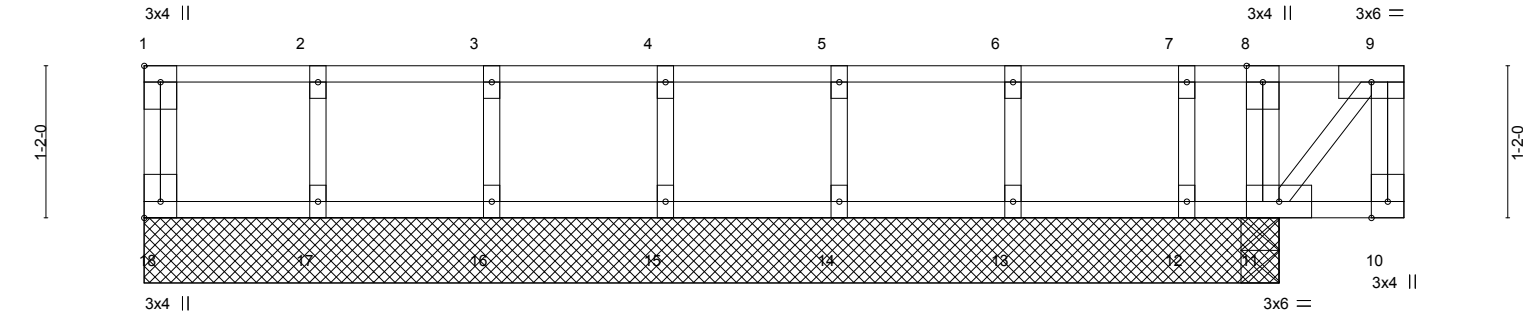
April 2,2025

Job	Truss	Truss Type	Qty	Ply	Lot 19 Magnolia Hills
J0225-1030	ET3	GABLE	1	1	172421095
Job Reference (optional)					

Comtech, Inc., Fayetteville, NC - 28314, 8.630 s Sep 26 2024 MiTek Industries, Inc. Tue Apr 1 07:27:11 2025 Page 1
ID:1NaocfdXFgYT90ywZp05ZYwAzd-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

8-2-8 0-8-8

Scale = 1:17.7



1-4-0	2-8-0	4-0-0	5-4-0	6-8-0	8-0-0	8-7-0	8-8-8	9-4-0	9-8-0
1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	0-7-0	0-1-8	0-7-8	0-4-0
Plate Offsets (X,Y)-- [1:Edge,0-1-8], [18:Edge,0-1-8]									

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 0.26	Vert(LL) 0.00 12 >999 480	MT20	244/190
TCDL 10.0	Lumber DOL 1.00	BC 0.22	Vert(CT) 0.00 12 >999 360		
BCLL 0.0	Rep Stress Incr NO	WB 0.05	Horz(CT) -0.00 11 n/a n/a		
BCDL 5.0	Code IRC2021/TPI2014	Matrix-S		Weight: 47 lb	FT = 20%F, 11%E

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.1(flat)	TOP CHORD Structural wood sheathing directly applied or 9-8-0 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 8-8-8.
(lb) - Max Uplift All uplift 100 lb or less at joint(s) except 12=190(LC 4)
Max Grav All reactions 250 lb or less at joint(s) 18, 17, 16, 15, 14, 13 except 11=441(LC 1), 11=441(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 8-11=294/0

- NOTES-**
- Unbalanced floor live loads have been considered for this design.
 - All plates are 1.5x3 MT20 unless otherwise indicated.
 - Plates checked for a plus or minus 1 degree rotation about its center.
 - 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.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 190 lb uplift at joint 12.
 - 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.
 - CAUTION, Do not erect truss backwards.

LOAD CASE(S) Standard
1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (plf)
Vert: 10-18=-10, 1-8=-100, 8-9=-220



April 2, 2025

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.sbcacompoments.com)

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8.630 s Sep 26 2024 MiTek Industries, Inc. Tue Apr 1 07:27:11 2025 Page 1
ID:1NaocfdXFgYT90ywZp05ZYzwAzd-RfC?PsB70Hq3NSgPqnL8w3uITxbGKWwRCDoi7J4zJC?f

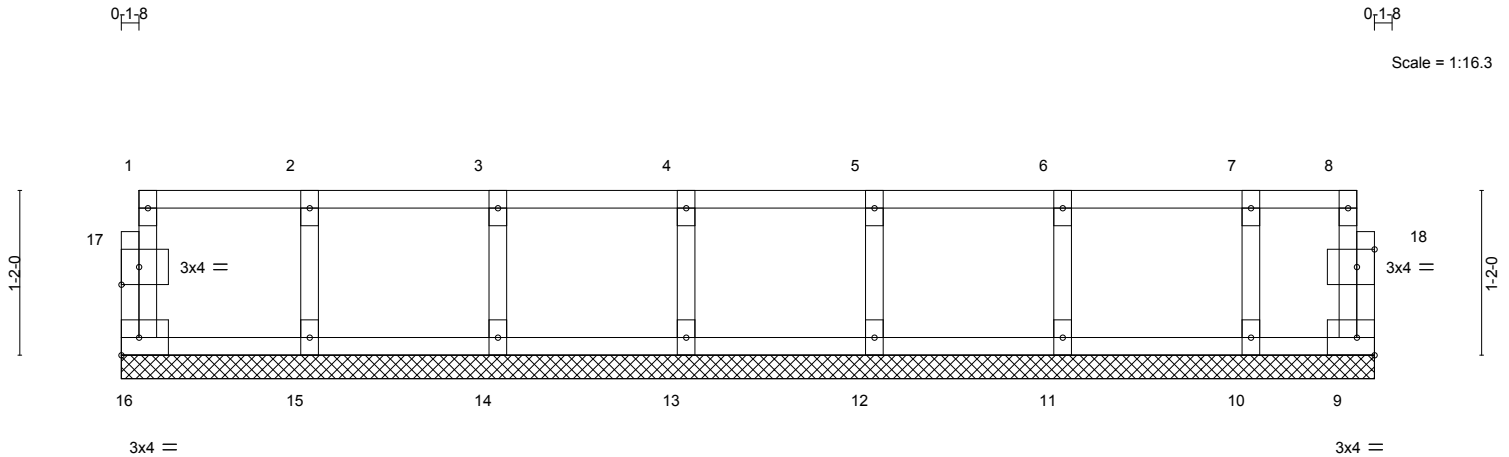


Plate Offsets (X,Y)-- [17:0-1-8,0-1-8], [18:0-1-8,0-1-8]									
LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL. in (loc) l/defl L/d		PLATES GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.06	Vert(LL)	n/a - n/a	999	MT20 244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.01	Vert(CT)	n/a - n/a	999	
BCLL	0.0	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00 9 n/a	n/a	
BCDL	5.0	Code IRC2021/TP12014		Matrix-R					Weight: 39 lb FT = 20%F, 11%E

LUMBER-		BRACING-	
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	
WEBS	2x4 SP No.3(flat)		Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS	2x4 SP No.3(flat)		

REACTIONS. All bearings 8-10-8.
(lb) - Max Grav All reactions 250 lb or less at joint(s) 16, 9, 15, 14, 13, 12, 11, 10

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

NOTES-

- 1) All plates are 1.5x3 MT20 unless otherwise indicated.
- 2) Plates checked for a plus or minus 1 degree rotation about its center.
- 3) Gable requires continuous bottom chord bearing.
- 4) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 5) Gable studs spaced at 1-4-0 oc.
- 6) 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.



April 2, 2025

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

WARNING – Verify design parameters and READ NOTES ON THIS AND INCLUDED MITTEL REFERENCE PAGE MIT-TR-17-169: 1/2/2023 FOR ONE 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)



818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 19 Magnolia Hills
J0225-1030	F1	Floor	6	1	172421097

Comtech, Inc., Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Tue Apr 1 07:27:12 2025 Page 1
ID:1NaocfdXFgYT90ywZp05ZYzwAzd-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

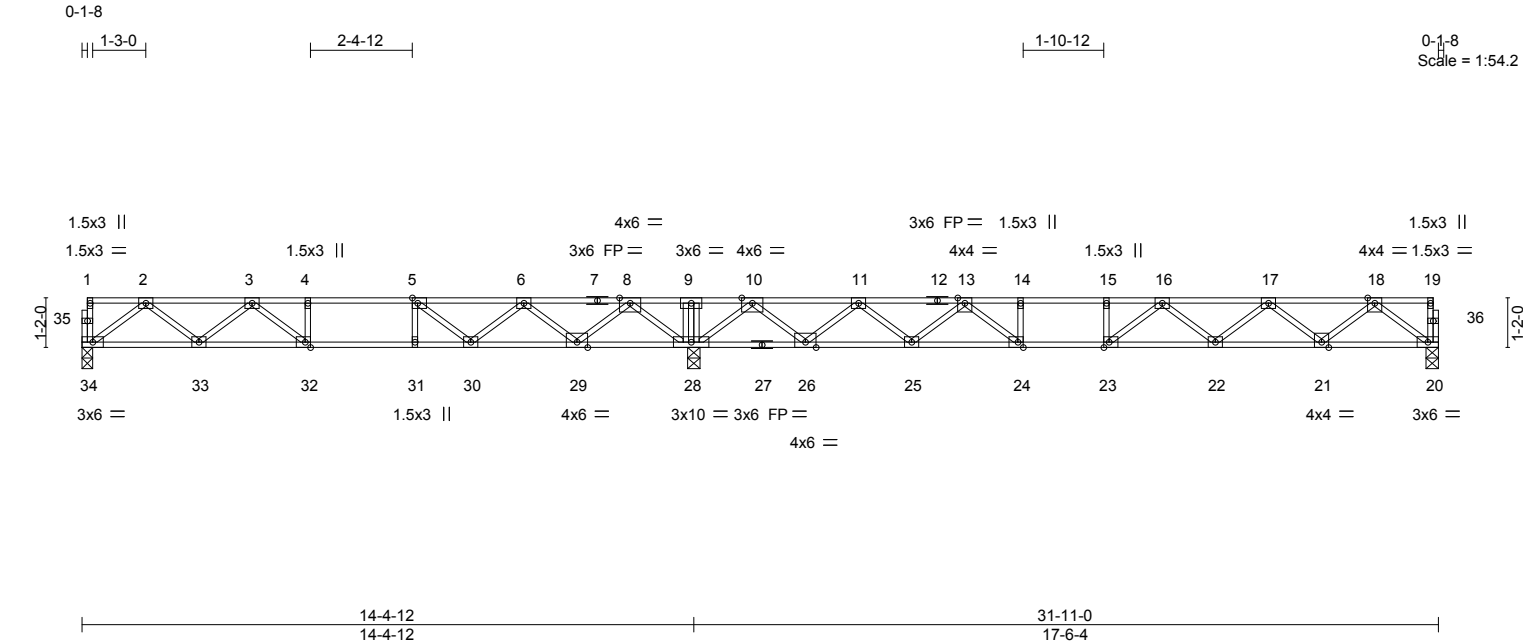


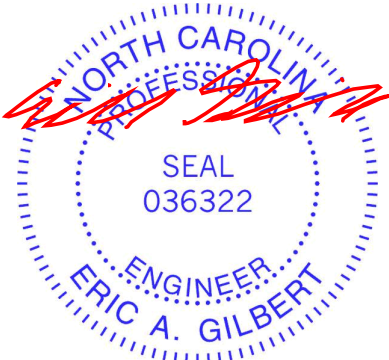
Plate Offsets (X,Y)-- [5:0-1-8,Edge], [23:0-1-8,Edge], [24:0-1-8,Edge], [32:0-1-8,Edge]									
LOADING (psf)		SPACING-		CSI.		DEFL.		PLATES	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.80	Vert(LL)	-0.24 22-23 >858 480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.90	Vert(CT)	-0.33 22-23 >632 360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.63	Horz(CT)	0.05 20 n/a n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S				Weight: 157 lb	FT = 20%F, 11%E

LUMBER-		BRACING-	
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) 34=0-3-0, 28=0-3-8, 20=0-3-8
Max Grav 34=667(LC 3), 28=2085(LC 1), 20=846(LC 4)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1302/0, 3-4=-1928/111, 4-5=-1928/111, 5-6=-1510/467, 6-8=-413/1022, 8-9=0/2607, 9-10=0/2607, 10-11=-539/669, 11-13=-2039/130, 13-14=-3079/0, 14-15=-3079/0, 15-16=-3079/0, 16-17=-2782/0, 17-18=-1749/0
BOT CHORD 33-34=0/824, 32-33=0/1736, 31-32=-111/1928, 30-31=-111/1928, 29-30=-737/1111, 28-29=-1475/0, 26-28=-1179/0, 25-26=-363/1455, 24-25=0/2624, 23-24=0/3079, 22-23=0/3080, 21-22=0/2421, 20-21=0/1051
WEBS 2-34=-1031/0, 2-33=0/622, 3-33=-565/55, 8-28=-1524/0, 8-29=0/1065, 10-28=-1764/0, 10-26=0/1316, 11-26=-1268/0, 11-25=0/830, 13-25=-850/0, 13-24=0/928, 14-24=-405/0, 18-20=-1315/0, 6-29=-1019/0, 6-30=0/675, 5-30=-864/0, 18-21=0/908, 17-21=-876/0, 17-22=0/469, 16-22=-389/12, 16-23=-394/235

- 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.



April 2,2025

Job	Truss	Truss Type	Qty	Ply	Lot 19 Magnolia Hills
J0225-1030	F2	Floor	3	1	172421098
Job Reference (optional)					

Comtech, Inc., Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Tue Apr 1 07:27:13 2025 Page 1
ID:1NaocfdXFgYT90ywZp05ZYzwAzd-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrcDdoi7J4zJC?f

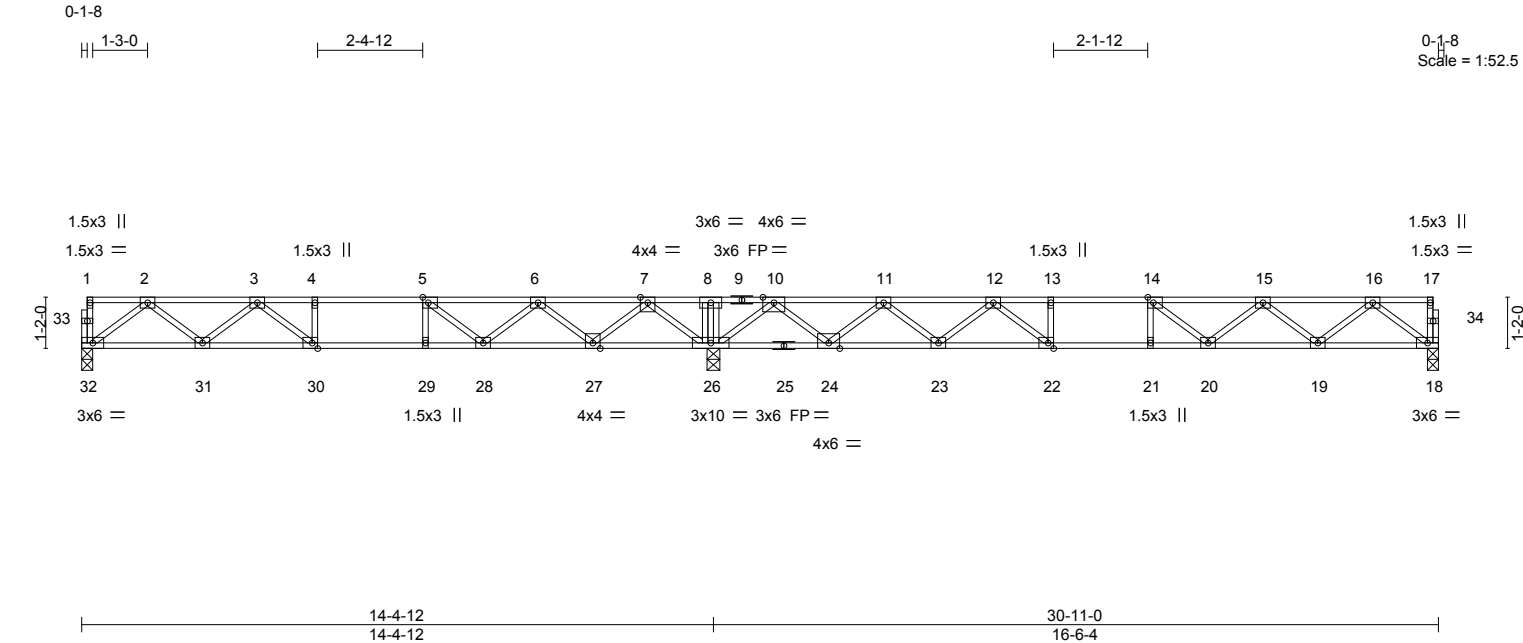


Plate Offsets (X,Y)--		[5:0-1-8,Edge], [14:0-1-8,Edge], [22:0-1-8,Edge], [30:0-1-8,Edge]	
LOADING (psf)		SPACING-	
TCLL	40.0	Plate Grip DOL	1.00
TCDL	10.0	Lumber DOL	1.00
BCLL	0.0	Rep Stress Incr	YES
BCDL	5.0	Code	IRC2021/TPI2014
		CSI.	
		TC	0.64
		BC	0.88
		WB	0.58
		Matrix-S	
		DEFL.	
		in (loc)	l/defl
		Vert(LL)	-0.18 21 >999 480
		Vert(CT)	-0.24 21 >829 360
		Horz(CT)	0.05 18 n/a n/a
		PLATES	
		MT20	244/190
		GRIP	
		Weight: 152 lb	FT = 20%F, 11%E

LUMBER-		BRACING-	
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) 32=0-3-0, 26=0-3-8, 18=0-3-0
Max Grav 32=672(LC 3), 26=2015(LC 1), 18=795(LC 4)

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

TOP CHORD 2-3=-1313/0, 3-4=-1956/36, 4-5=-1956/36, 5-6=-1548/363, 6-7=-462/889, 7-8=0/2427, 8-10=0/2427, 10-11=-551/643, 11-12=-1918/136, 12-13=-2754/0, 13-14=-2754/0, 14-15=-2516/0, 15-16=-1624/0

BOT CHORD 31-32=0/830, 30-31=0/1753, 29-30=-36/1956, 28-29=-36/1956, 27-28=-616/1155, 26-27=-1313/0, 24-26=-1115/0, 23-24=-353/1398, 22-23=0/2425, 21-22=0/2754, 20-21=0/2754, 19-20=0/2235, 18-19=0/983

WEBS 2-32=-1039/0, 2-31=0/629, 3-31=-573/33, 3-30=-205/259, 7-26=-1501/0, 7-27=0/1046, 6-27=-1001/0, 6-28=0/650, 5-28=-826/0, 10-26=-1668/0, 10-24=0/1226, 11-24=-1181/0, 11-23=0/749, 12-23=-756/0, 12-22=0/799, 13-22=-330/0, 16-18=-1230/0, 16-19=0/835, 15-19=-795/0, 15-20=-1/365, 14-20=-336/121

- 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.



April 2,2025

Job	Truss	Truss Type	Qty	Ply	Lot 19 Magnolia Hills
J0225-1030	F3	Floor	10	1	172421099
Job Reference (optional)					

Comtech, Inc., Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Tue Apr 1 07:27:13 2025 Page 1
ID:1NaocfdXFgYT90ywZp05ZYwAzd-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

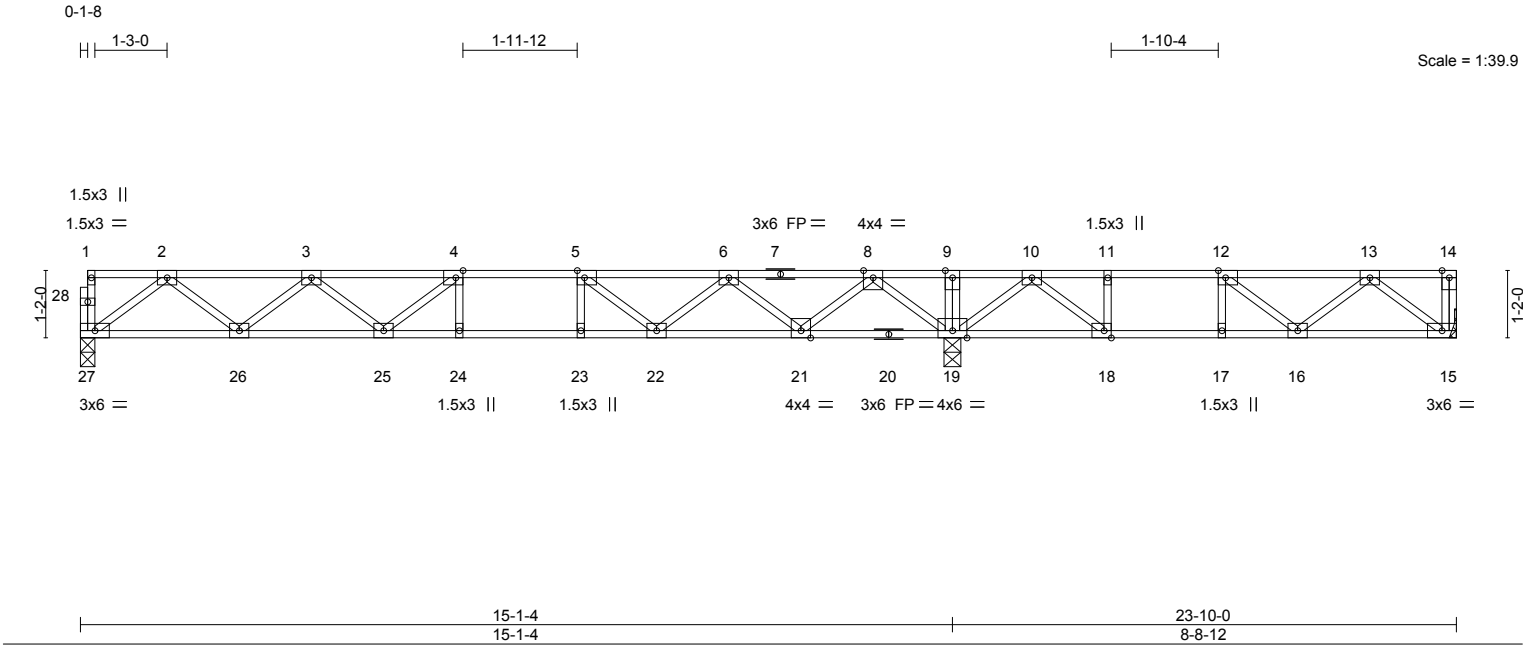


Plate Offsets (X,Y)-- [4:0-1-8,Edge], [5:0-1-8,Edge], [12:0-1-8,Edge], [18:0-1-8,Edge]									
LOADING (psf)		SPACING-		CSI.		DEFL.		PLATES	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.66	in (loc)	l/defl	L/d	GRIP
TCDL	10.0	Lumber DOL	1.00	BC	0.89	Vert(LL)	-0.15 24-25	>999	480
BCLL	0.0	Rep Stress Incr	NO	WB	0.47	Vert(CT)	-0.21 24-25	>861	360
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S		Horz(CT)	0.04 15	n/a	n/a
								Weight: 119 lb	FT = 20%F, 11%E

LUMBER-		BRACING-	
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) 15=Mechanical, 27=0-3-0, 19=0-3-8
Max Grav 15=1846(LC 4), 27=762(LC 10), 19=1476(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 14-15=-1426/0, 2-3=-1542/0, 3-4=-2351/0, 4-5=-2532/0, 5-6=-2102/0, 6-8=-1024/0, 8-9=0/1105, 9-10=0/1105, 10-11=-805/300, 11-12=-805/300, 12-13=-721/79
BOT CHORD 26-27=0/938, 25-26=0/2116, 24-25=0/2532, 23-24=0/2532, 22-23=0/2532, 21-22=0/1715, 19-21=-8/283, 18-19=-670/345, 17-18=-300/805, 16-17=-300/805, 15-16=0/544
WEBS 2-27=-1174/0, 2-26=0/786, 3-26=-747/0, 3-25=0/351, 4-25=-392/14, 8-19=-1376/0, 8-21=0/991, 6-21=-934/0, 6-22=0/546, 5-22=-652/0, 10-19=-841/0, 10-18=0/828, 13-15=-682/0, 12-16=-107/282, 11-18=-358/0

- 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) Refer to girder(s) for truss to truss connections.
 - 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.

LOAD CASE(S) Standard

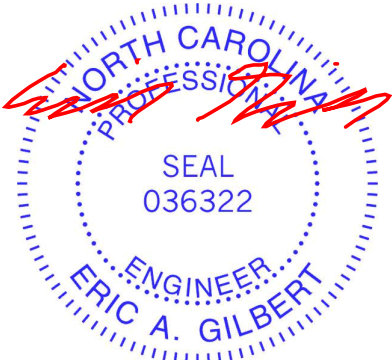
1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00

Uniform Loads (plf)

Vert: 15-27=-10, 1-14=-100

Concentrated Loads (lb)

Vert: 14=-1400



April 2,2025

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 19 Magnolia Hills
J0225-1030	F4	Floor	1	1	172421100

Comtech, Inc., Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Tue Apr 1 07:27:13 2025 Page 1
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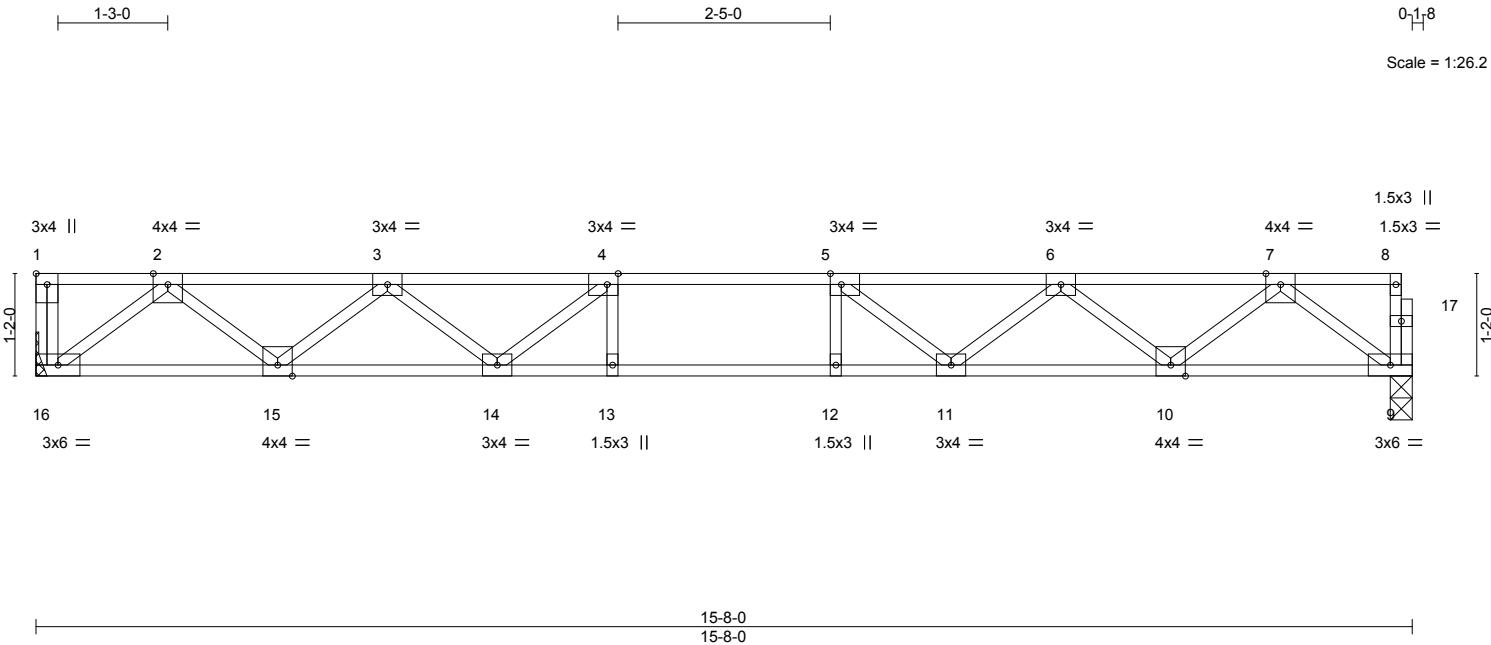


Plate Offsets (X,Y)-- [1:Edge,0-1-8], [4:0-1-8,Edge], [5:0-1-8,Edge]									
LOADING (psf)		SPACING-		CSI.		DEFL.		PLATES	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.46	in (loc)	L/def	MT20	GRIP
TCDL	10.0	Lumber DOL	1.00	BC	0.85	Vert(LL)	>956		244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.43	Vert(CT)	>728		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S		Horz(CT)	0.05 9 n/a n/a		
								Weight: 77 lb	FT = 20%F, 11%E

LUMBER-		BRACING-	
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)		

REACTIONS. (size) 16=Mechanical, 9=0-3-0
Max Grav 16=848(LC 1), 9=842(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1741/0, 3-4=-2748/0, 4-5=-3091/0, 5-6=-2748/0, 6-7=-1741/0
BOT CHORD 15-16=0/1047, 14-15=0/2401, 13-14=0/3091, 12-13=0/3091, 11-12=0/3091, 10-11=0/2401, 9-10=0/1047
WEBS 2-16=-1314/0, 2-15=0/903, 3-15=-858/0, 3-14=0/513, 7-9=-1310/0, 7-10=0/904, 6-10=-859/0, 6-11=0/513, 5-11=-640/0, 4-14=-640/0

- 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.



April 2,2025

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8.630 s Sep 26 2024 MiTek Industries, Inc. Tue Apr 1 07:27:14 2025 Page 1
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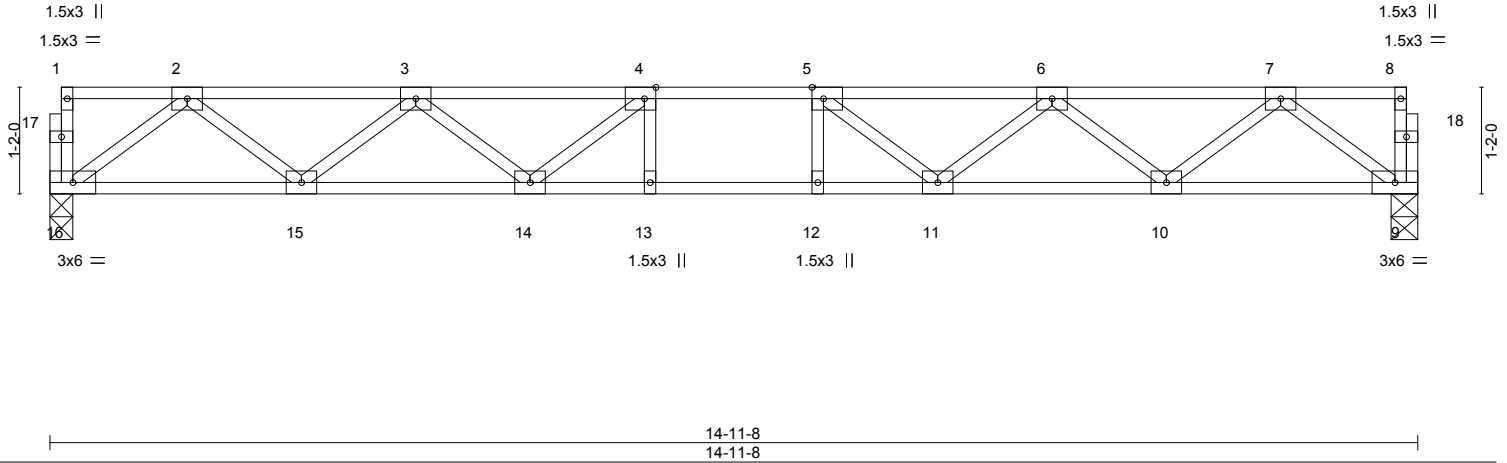
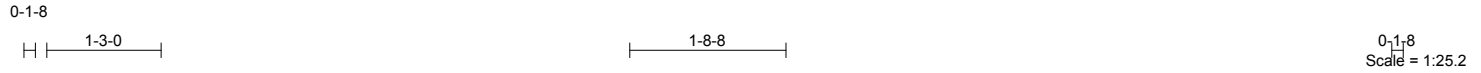


Plate Offsets (X,Y)-- [4:0-1-8,Edge], [5:0-1-8,Edge]												
LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL. in (loc) l/defl L/d			PLATES	GRIP		
TCLL	40.0	Plate Grip DOL	1.00	TC	0.34	Vert(LL)	-0.14	12-13	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.70	Vert(CT)	-0.20	12-13	>901	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.40	Horz(CT)	0.04	9	n/a	n/a		
BCDL	5.0	Code IRC2021/TPI2014		Matrix-S							Weight: 75 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) 16=0-3-0, 9=0-3-8
Max Grav 16=803(LC 1), 9=803(LC 1)

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

TOP CHORD 2-3=-1644/0, 3-4=-2552/0, 4-5=-2836/0, 5-6=-2552/0, 6-7=-1644/0
BOT CHORD 15-16=0/994, 14-15=0/2260, 13-14=0/2836, 12-13=0/2836, 11-12=0/2836, 10-11=0/2260,
9-10=0/994
WEBS 2-16=-1244/0, 2-15=0/847, 3-15=-802/0, 3-14=0/439, 7-9=-1244/0, 7-10=0/847,
6-10=-802/0, 6-11=0/439, 5-11=-533/0, 4-14=-533/0

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" 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.



April 2, 2025

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

WARNING – Verify design parameters and READ NOTES ON THIS AND INCLUDED MITTEL REFERENCE PAGE MIT-TR-17-169: 1/2/2023 FOR ONE 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)



818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 19 Magnolia Hills
J0225-1030	F6	Floor	2	1	172421102
Job Reference (optional)					

Comtech, Inc., Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Tue Apr 1 07:27:14 2025 Page 1
ID:1NaocfdXFgYT90ywZp05ZYzwAzd-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrcD0i7J4zJC?f

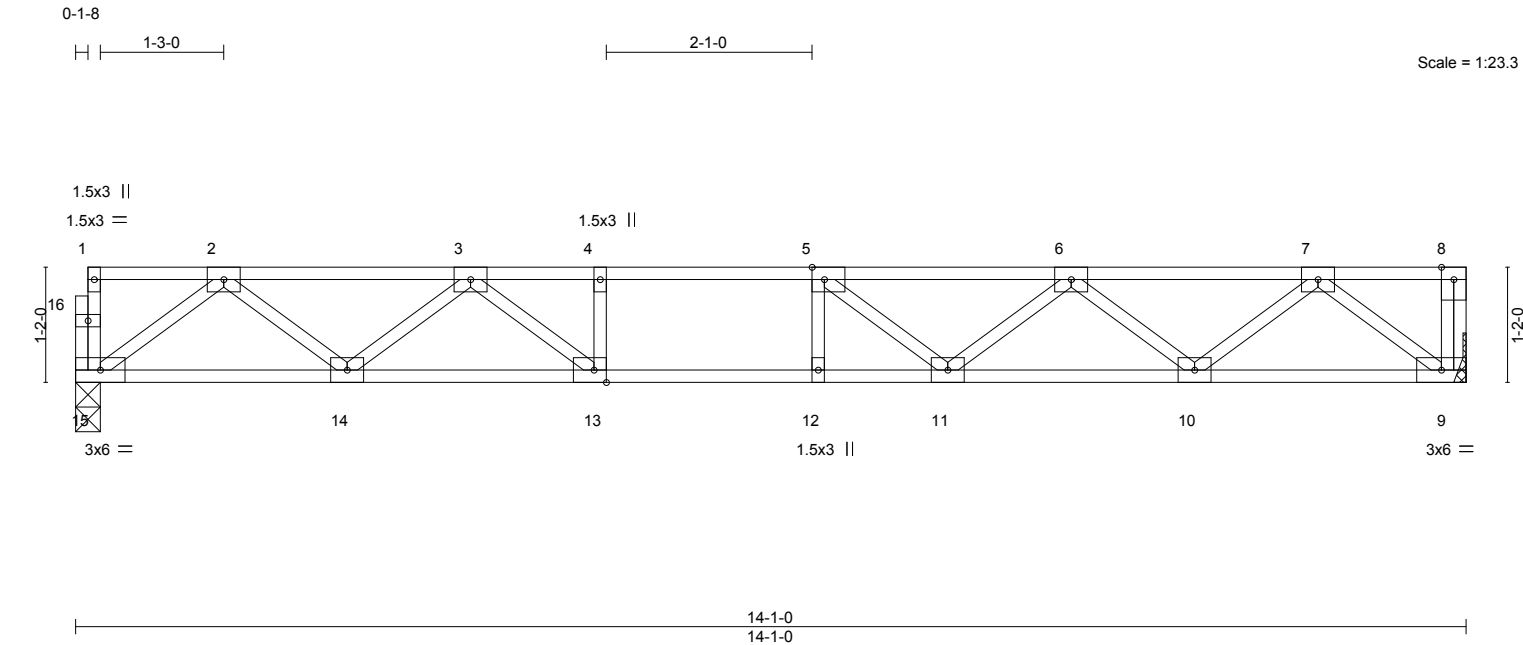


Plate Offsets (X,Y)--		[5:0-1-8,Edge], [13:0-1-8,Edge]	
LOADING (psf)	SPACING-	2-0-0	CSI.
TCLL 40.0	Plate Grip DOL	1.00	TC 0.53
TCDL 10.0	Lumber DOL	1.00	BC 0.81
BCLL 0.0	Rep Stress Incr	YES	WB 0.37
BCDL 5.0	Code	IRC2021/TPI2014	Matrix-S
			DEFL.
			in (loc) l/defl L/d
			Vert(LL) -0.16 11-12 >999 480
			Vert(CT) -0.22 11-12 >772 360
			Horz(CT) 0.03 9 n/a n/a
			PLATES
			MT20
			GRIP
			244/190
			Weight: 70 lb FT = 20%F, 11%E

LUMBER-	BRACING-
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)	

REACTIONS. (size) 15=0-3-0, 9=Mechanical
Max Grav 15=755(LC 1), 9=761(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1505/0, 3-4=-2467/0, 4-5=-2467/0, 5-6=-2316/0, 6-7=-1525/0
BOT CHORD 14-15=0/935, 13-14=0/2068, 12-13=0/2467, 11-12=0/2467, 10-11=0/2092, 9-10=0/928
WEBS 2-15=-1171/0, 2-14=0/742, 3-14=-733/0, 3-13=0/690, 7-9=-1165/0, 7-10=0/776, 6-10=-739/0, 6-11=0/374, 5-11=-406/31, 4-13=-289/0

- 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) Refer to girder(s) for truss to truss connections.
 - 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.



April 2,2025

Job	Truss	Truss Type	Qty	Ply	Lot 19 Magnolia Hills
J0225-1030	F7	Floor	2	1	I72421103

Comtech, Inc., Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Tue Apr 1 07:27:14 2025 Page 1
ID:1NaocfdXFgYT90ywZp05ZYzwAzd-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrcD0i7J4zJC?f

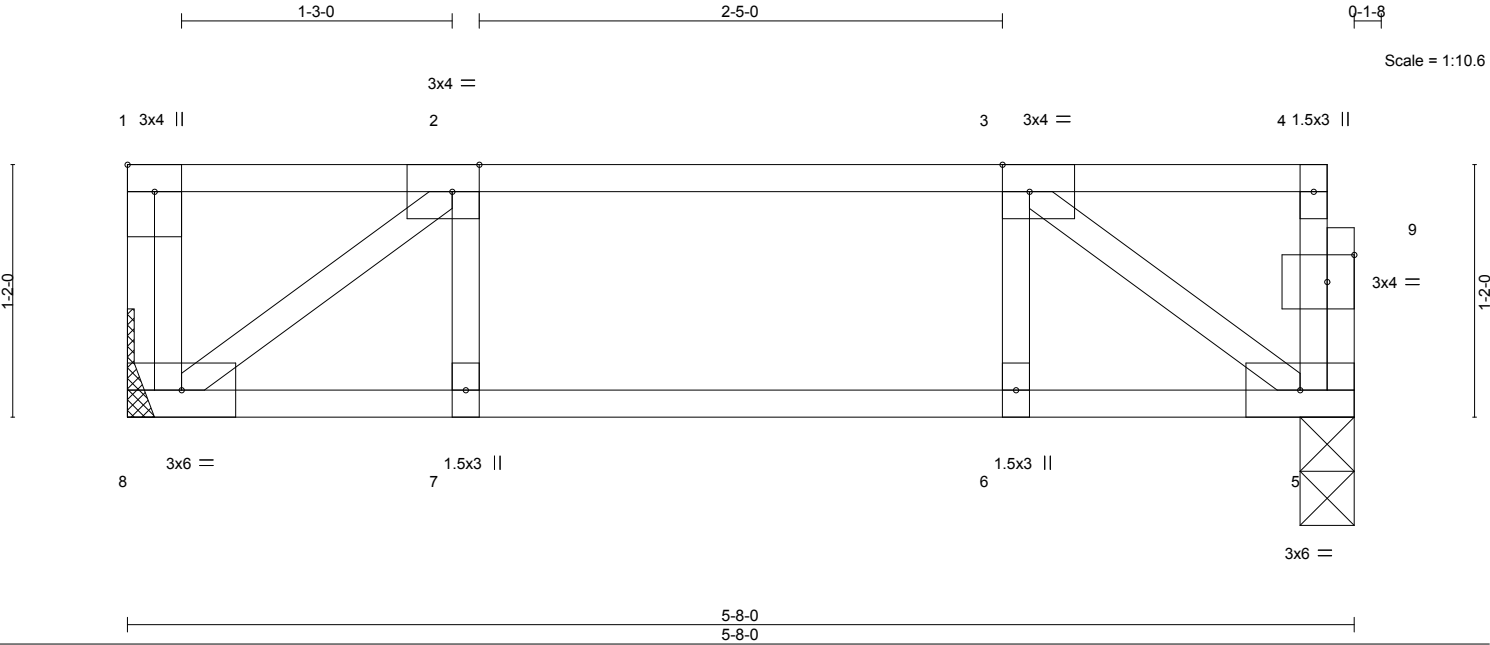


Plate Offsets (X,Y)-- [1:Edge,0-1-8], [2:0-1-8,Edge], [3:0-1-8,Edge], [9:0-1-8,0-1-8]					
LOADING (psf)		SPACING-	CSI.	DEFL.	PLATES
TCLL	40.0	2-0-0	TC 0.21	in (loc) l/def L/d	MT20
TCDL	10.0	Plate Grip DOL 1.00	BC 0.12	Vert(LL) -0.01 7 >999 480	GRIP 244/190
BCLL	0.0	Lumber DOL 1.00	WB 0.10	Vert(CT) -0.01 7 >999 360	
BCDL	5.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.00 5 n/a n/a	
		Code IRC2021/TPI2014			Weight: 29 lb FT = 20%F, 11%E

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

REACTIONS. (size) 8=Mechanical, 5=0-3-0
Max Grav 8=298(LC 1), 5=292(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-347/0
BOT CHORD 7-8=0/347, 6-7=0/347, 5-6=0/347
WEBS 2-8=-429/0, 3-5=-426/0

- 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.



April 2,2025

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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.sbcacompnents.com)

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

Job	Truss	Truss Type	Qty	Ply	Lot 19 Magnolia Hills
J0225-1030	FG1	Floor	1	1	172421104
Job Reference (optional)					

Comtech, Inc., Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Tue Apr 1 07:27:15 2025 Page 1
ID:1NaocfdXFgYT90ywZp05ZYzwAzd-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

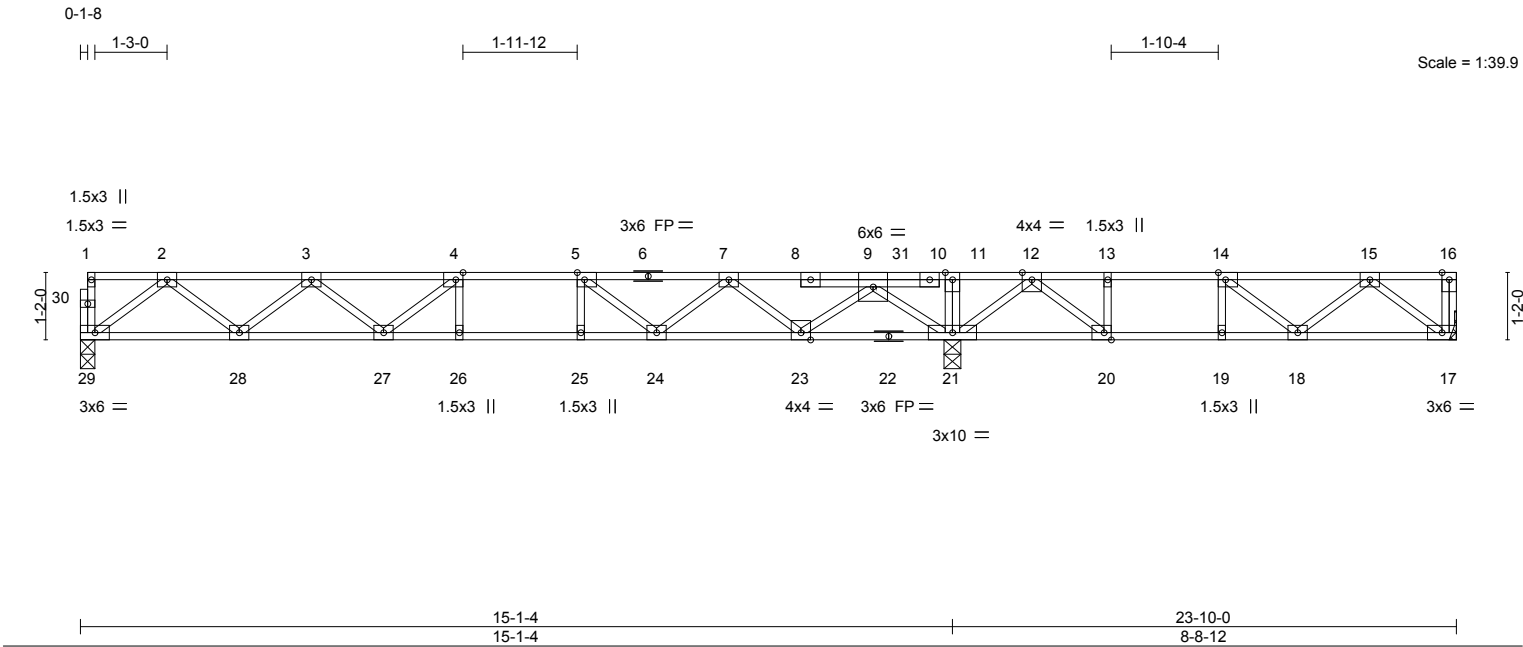


Plate Offsets (X,Y)--		[4:0-1-8,Edge], [5:0-1-8,Edge], [14:0-1-8,Edge], [20:0-1-8,Edge]	
LOADING (psf)	SPACING-	2-0-0	CSI.
TCLL 40.0	Plate Grip DOL	1.00	TC 0.84
TCDL 10.0	Lumber DOL	1.00	BC 0.82
BCLL 0.0	Rep Stress Incr	NO	WB 0.52
BCDL 5.0	Code	IRC2021/TPI2014	Matrix-S
			DEFL.
			in (loc) l/defl L/d
			Vert(LL) -0.15 26-27 >999 480
			Vert(CT) -0.21 26-27 >860 360
			Horz(CT) 0.04 21 n/a n/a
			PLATES
			MT20
			GRIP
			244/190
			Weight: 122 lb FT = 20%F, 11%E

LUMBER-	BRACING-
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) 17=Mechanical, 29=0-3-0, 21=0-3-8
Max Grav 17=1803(LC 4), 29=789(LC 10), 21=2349(LC 1)

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

TOP CHORD 16-17=-1421/0, 2-3=-1610/0, 3-4=-2485/0, 4-5=-2730/0, 5-7=-2350/0, 7-9=-1398/0, 9-11=0/1413, 11-12=0/1393, 12-13=-607/486, 13-14=-607/486, 14-15=-613/181

BOT CHORD 28-29=0/975, 27-28=0/2213, 26-27=0/2730, 25-26=0/2730, 24-25=0/2730, 23-24=0/1988, 21-23=0/704, 20-21=-953/43, 19-20=-486/607, 18-19=-486/607, 17-18=-28/496

WEBS 11-21=-594/0, 2-29=-1220/0, 2-28=0/827, 3-28=-784/0, 3-27=0/399, 4-27=-471/0, 9-21=-2210/0, 9-23=0/906, 7-23=-817/0, 7-24=0/514, 5-24=-577/0, 15-17=-622/36, 14-18=0/390, 12-21=-842/0, 12-20=0/952, 13-20=-410/0

- 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) Refer to girder(s) for truss to truss connections.
 - 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) 936 lb down at 14-2-12 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

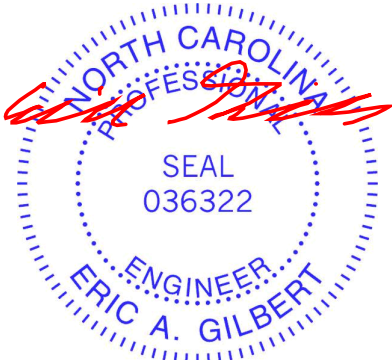
1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00

Uniform Loads (plf)

Vert: 17-29=-10, 1-16=-100

Concentrated Loads (lb)

Vert: 16=-1400 31=-861(F)



April 2,2025

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

Job	Truss	Truss Type	Qty	Ply	Lot 19 Magnolia Hills
J0225-1030	FG2	FLOOR	1	1	172421105
Job Reference (optional)					

Comtech, Inc., Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Tue Apr 1 07:27:15 2025 Page 1
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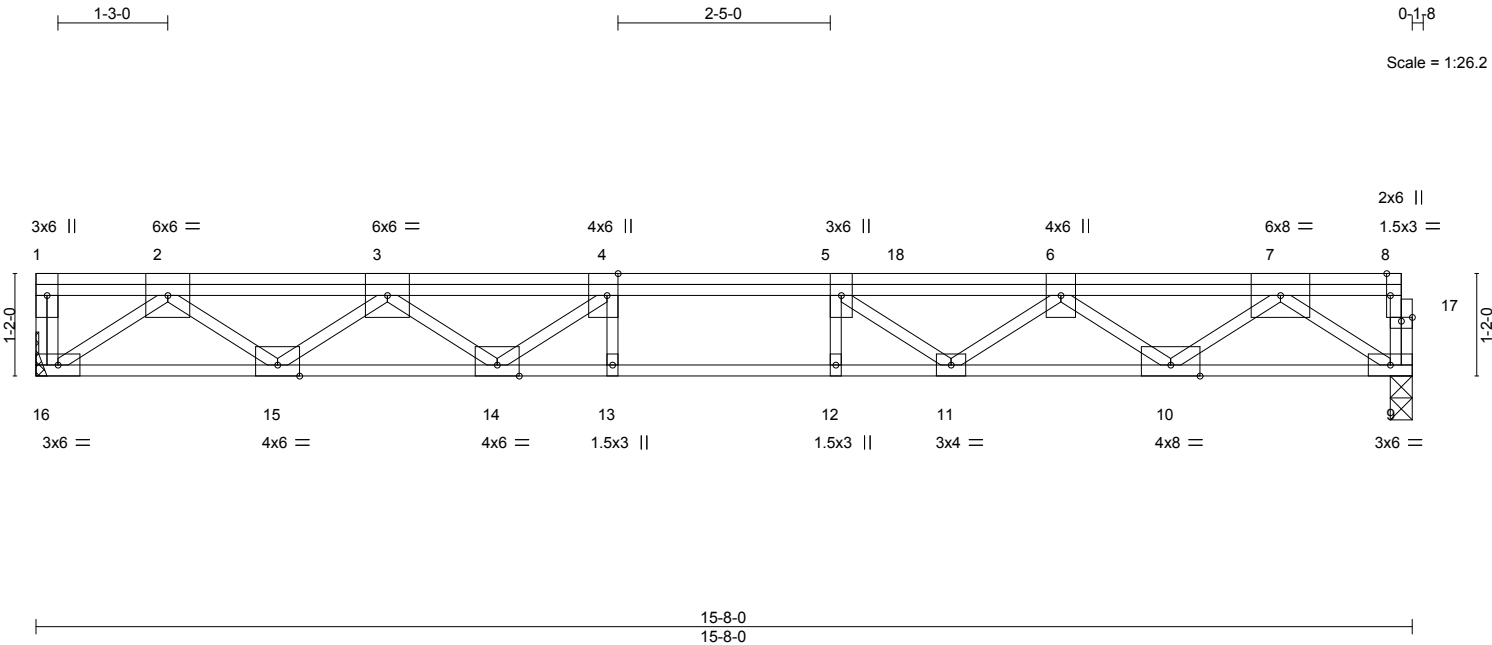


Plate Offsets (X,Y)-- [4:0-3-0,Edge], [8:0-3-0,Edge], [17:0-1-8,0-0-8]									
LOADING (psf)		SPACING-		CSI.		DEFL.		PLATES	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.71	Vert(LL)	-0.24 12 >760 480	MT20	GRIP 244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.93	Vert(CT)	-0.34 12 >545 360		
BCLL	0.0	Rep Stress Incr	NO	WB	0.86	Horz(CT)	0.06 9 n/a n/a		
BCDL	5.0	Code IRC2021/TPI2014		Matrix-S				Weight: 99 lb	FT = 20%F, 11%E

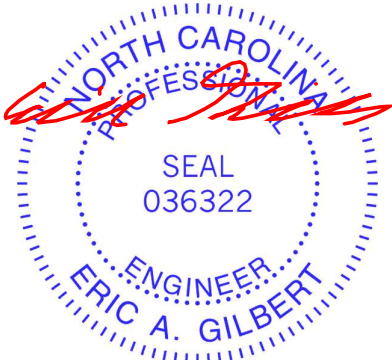
LUMBER-		BRACING-	
TOP CHORD	2x4 SP 2400F 2.0E(flat)	TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD	2x4 SP 2400F 2.0E(flat)	BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	2x4 SP No.3(flat)		

REACTIONS. (size) 16=Mechanical, 9=0-3-0
Max Grav 16=1114(LC 1), 9=1297(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2517/0, 3-4=-4365/0, 4-5=-5379/0, 5-6=-5004/0, 6-7=-3095/0
BOT CHORD 15-16=0/1492, 14-15=0/3494, 13-14=0/5379, 12-13=0/5379, 11-12=0/5379, 10-11=0/4498, 9-10=0/1670
WEBS 2-16=-1832/0, 2-15=0/1302, 3-15=-1241/0, 3-14=0/1217, 4-14=-1435/0, 7-9=-2043/0, 7-10=0/1809, 6-10=-1782/0, 6-11=0/771, 5-11=-640/0

- NOTES-**
- Unbalanced floor live loads have been considered for this design.
 - Plates checked for a plus or minus 1 degree rotation about its center.
 - Refer to girder(s) for truss to truss connections.
 - 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.
 - CAUTION, Do not erect truss backwards.
 - Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 791 lb down at 9-10-4 on top chord. The design/selection of such connection device(s) is the responsibility of others.
 - 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: 9-16=-10, 1-8=-100
Concentrated Loads (lb)
Vert: 18=-721(B)



April 2,2025

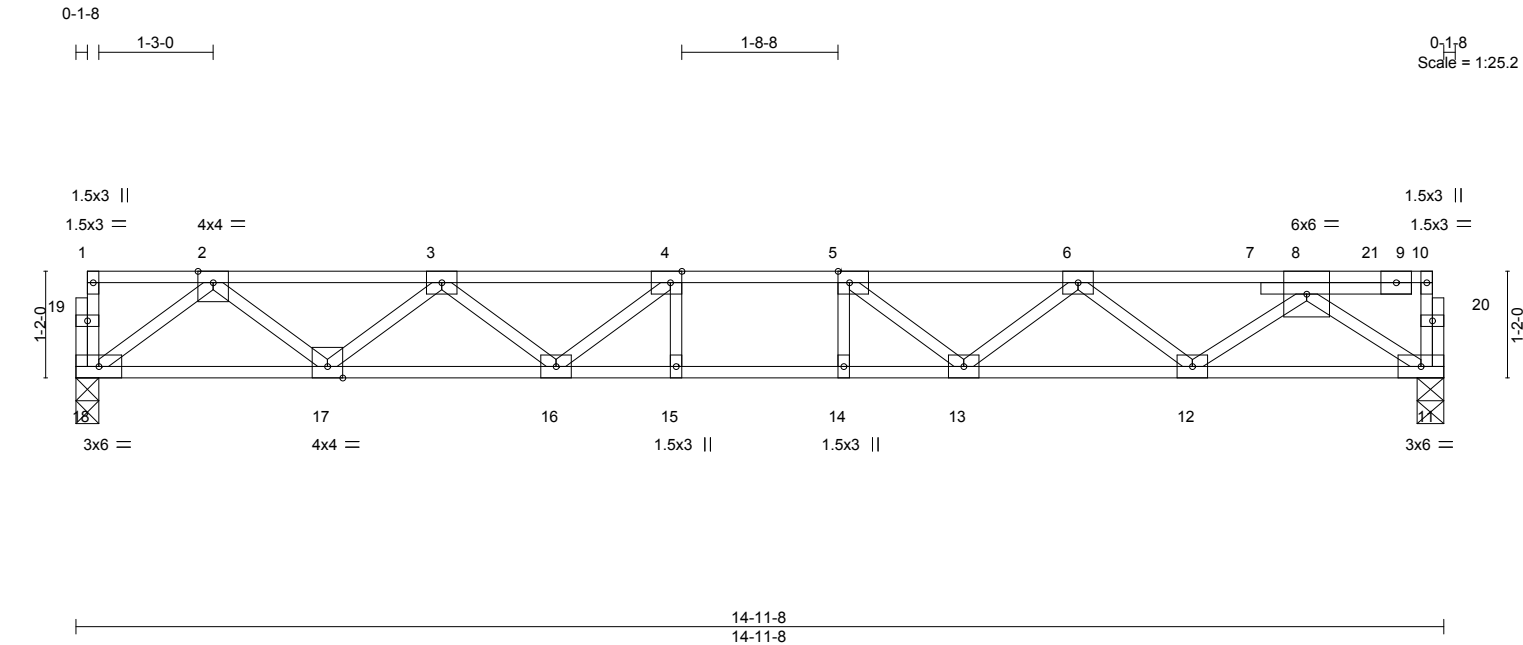
WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.
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ENGINEERING BY
TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 19 Magnolia Hills
J0225-1030	FG3	Floor	1	1	172421106
Job Reference (optional)					

Comtech, Inc., Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Tue Apr 1 07:27:16 2025 Page 1
ID:1NaocfdXFgYT90ywZp05ZYzwAzd-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrcDoi7J4zJC?f



LOADING (psf)		SPACING-		CSI.		DEFL.		PLATES		GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.56	Vert(LL)	-0.16 14 >999 480	MT20		244/190	
TCDL	10.0	Lumber DOL	1.00	BC	0.94	Vert(CT)	-0.23 14 >779 360				
BCLL	0.0	Rep Stress Incr	NO	WB	0.43	Horz(CT)	0.05 11 n/a n/a				
BCDL	5.0	Code IRC2021/TPI2014		Matrix-S							
Weight: 77 lb										FT = 20%F, 11%E	

LUMBER-		BRACING-	
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)		

REACTIONS. (size) 18=0-3-0, 11=0-3-8
Max Grav 18=839(LC 1), 11=1650(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 10-11=-597/0, 2-3=-1735/0, 3-4=-2731/0, 4-5=-3093/0, 5-6=-2878/0, 6-8=-2095/0
BOT CHORD 17-18=0/1043, 16-17=0/2390, 15-16=0/3093, 14-15=0/3093, 13-14=0/3093, 12-13=0/2623, 11-12=0/1497
WEBS 2-18=-1306/0, 2-17=0/901, 3-17=-852/0, 3-16=0/502, 4-16=-633/0, 8-11=-1793/0, 8-12=0/757, 6-12=-690/0, 6-13=0/383, 5-13=-437/41

- NOTES-**
- Unbalanced floor live loads have been considered for this design.
 - All plates are 3x4 MT20 unless otherwise indicated.
 - Plates checked for a plus or minus 1 degree rotation about its center.
 - 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.
 - Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 946 lb down at 14-2-12 on top chord. The design/selection of such connection device(s) is the responsibility of others.
 - 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: 11-18=-10, 1-10=-100
Concentrated Loads (lb)
Vert: 21=-884(B)



April 2,2025

Job	Truss	Truss Type	Qty	Ply	Lot 19 Magnolia Hills
J0225-1030	FG4	FLOOR GIRDER	1	1	I72421107
Job Reference (optional)					

Comtech, Inc., Fayetteville, NC - 28314,

8.630 s Sep 26 2024 MiTek Industries, Inc. Tue Apr 1 07:27:16 2025 Page 1

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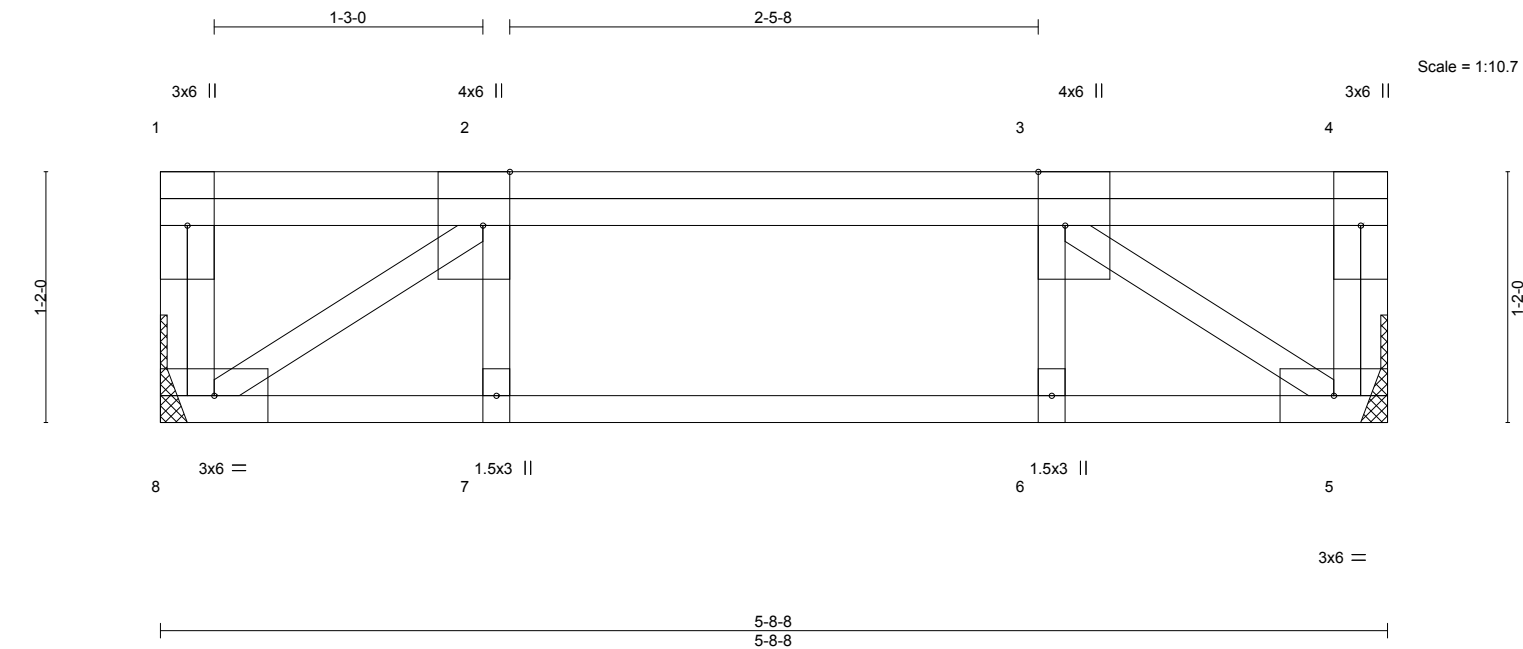


Plate Offsets (X,Y)-- [2:0-3-0,Edge], [3:0-3-0,Edge]		5-8-8		5-8-8	
LOADING (psf)		SPACING-		CSI.	
TCLL 40.0		2-0-0		TC 0.13	
TCDL 10.0		Plate Grip DOL 1.00		BC 0.30	
BCLL 0.0		Lumber DOL 1.00		WB 0.37	
BCDL 5.0		Rep Stress Incr NO		Matrix-S	
		Code IRC2021/TPI2014			
				DEFL.	
				in (loc) l/defl L/d	
				Vert(LL) -0.02 6-7 >999 480	
				Vert(CT) -0.03 6-7 >999 360	
				Horz(CT) 0.01 5 n/a n/a	
				PLATES	
				MT20	
				GRIP	
				244/190	
				Weight: 37 lb	
				FT = 20%F, 11%E	

LUMBER-		BRACING-	
TOP CHORD 2x4 SP No.1(flat)		TOP CHORD Structural wood sheathing directly applied or 5-8-8 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)			

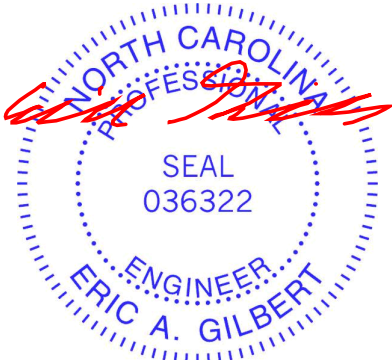
REACTIONS. (size) 8=Mechanical, 5=Mechanical
Max Grav 8=961(LC 1), 5=961(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1310/0
BOT CHORD 7-8=0/1310, 6-7=0/1310, 5-6=0/1310
WEBS 2-8=-1585/0, 3-5=-1585/0

- 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) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 689 lb down at 1-10-4, and 689 lb down at 3-10-4 on top 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 + 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=-661(B) 3=-661(B)



April 2,2025

Job	Truss	Truss Type	Qty	Ply	Lot 19 Magnolia Hills	172421108
J0225-1030	FG5	FLOOR GIRDER	1	1	Job Reference (optional)	

Comtech, Inc., Fayetteville, NC - 28314, 8.630 s Sep 26 2024 MiTek Industries, Inc. Tue Apr 1 07:27:16 2025 Page 1
ID:1NaocfdXFgYT90ywZp05ZYzwAzd-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

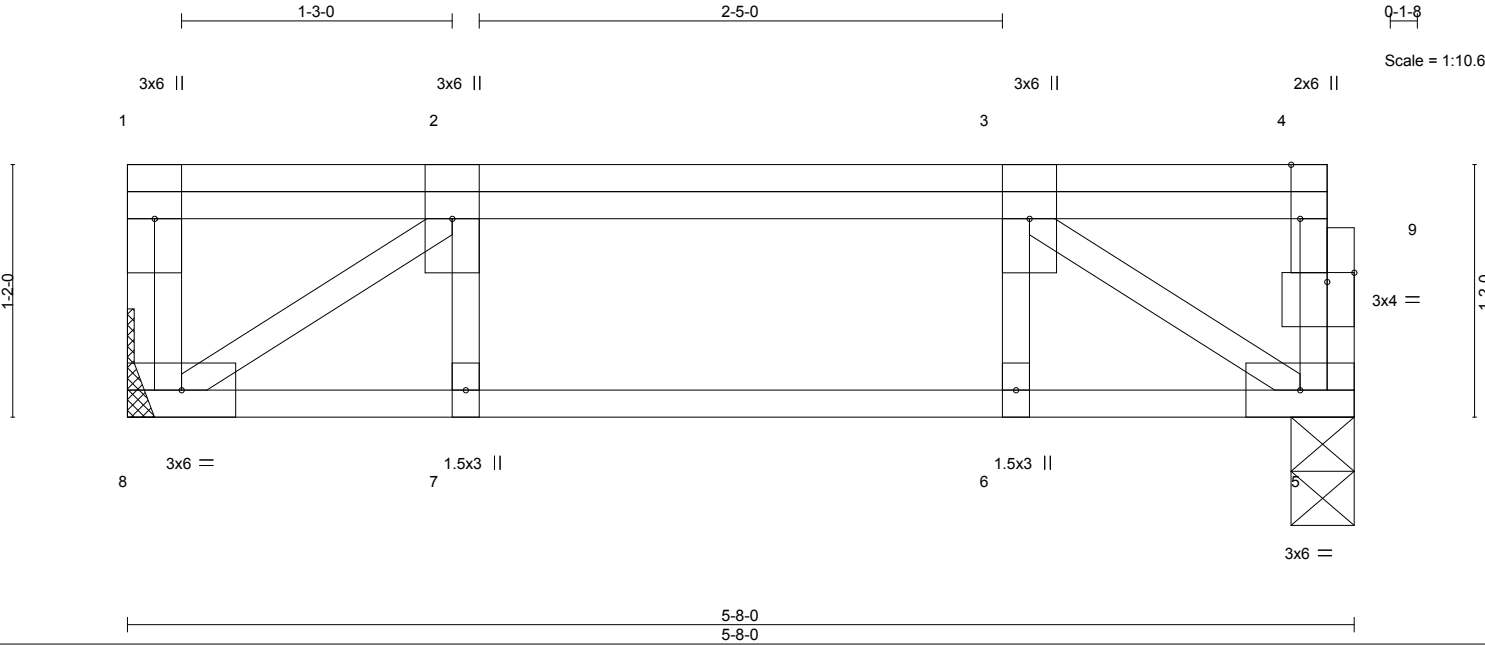


Plate Offsets (X,Y)-- [4:0-3-0,Edge], [9:0-1-8,0-0-8]		5-8-0 5-8-0							
LOADING (psf)		SPACING-		CSI.		DEFL.		PLATES	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.19	in (loc)	l/defl	L/d	GRIP
TCDL	10.0	Lumber DOL	1.00	BC	0.25	Vert(LL)	-0.01	6-7	>999
BCLL	0.0	Rep Stress Incr	NO	WB	0.29	Vert(CT)	-0.02	6-7	>999
BCDL	5.0	Code IRC2021/TPI2014		Matrix-S		Horz(CT)	0.01	5	n/a
								Weight: 36 lb FT = 20%F, 11%E	

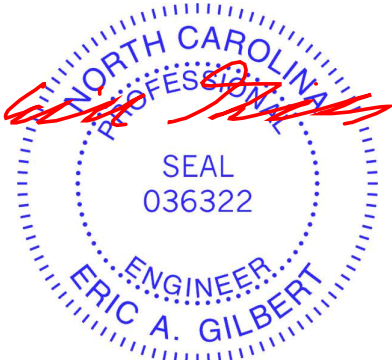
LUMBER-		BRACING-	
TOP CHORD	2x4 SP No.1(flat)	TOP CHORD	Structural wood sheathing directly applied or 5-8-0 oc purlins, except end verticals.
BOT CHORD	2x4 SP No.1(flat)	BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	2x4 SP No.3(flat)		

REACTIONS. (size) 8=Mechanical, 5=0-3-8
Max Grav 8=821(LC 1), 5=807(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1040/0
BOT CHORD 7-8=0/1040, 6-7=0/1040, 5-6=0/1040
WEBS 2-8=-1258/0, 3-5=-1250/0

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) 226 lb down at 1-10-4, and 228 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), loads applied to the face of the truss are noted as front (F) or back (B).

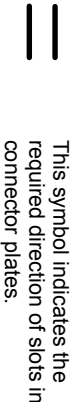
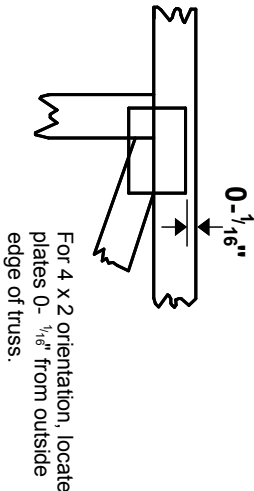
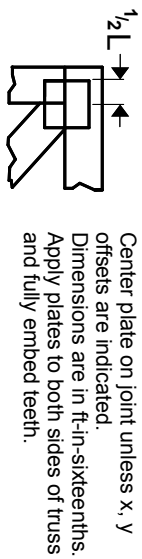
LOAD CASE(S) Standard
1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (plf)
Vert: 5-8=-10, 1-4=-220
Concentrated Loads (lb)
Vert: 2=-198(F) 3=-198(F)



April 2,2025

Symbols

PLATE LOCATION AND ORIENTATION



* Plate location details available in MITek software or upon request.

PLATE SIZE

4 X 4

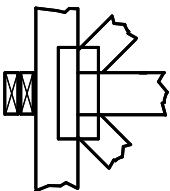
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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.

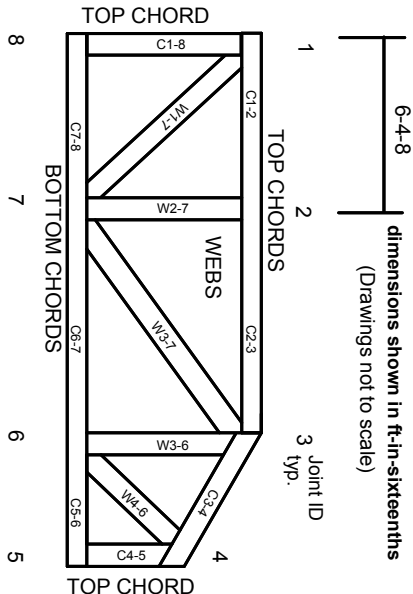
BEARING



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: 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 1 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 Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TP1 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TP1 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TP1 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.

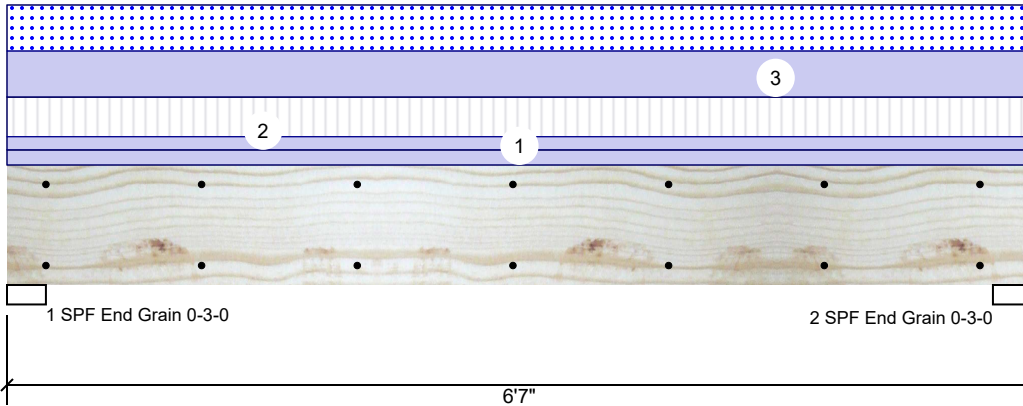
MITek

ENGINEERING BY
TRENCO
A MITek Affiliate

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

BM2 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	1034	1959	1198	0	0
2	Vertical	1034	1959	1198	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.000"	Vert	41%	1959 / 1674	3633	L	D+0.75(L+S)
2 - SPF End Grain	3.000"	Vert	41%	1959 / 1674	3633	L	D+0.75(L+S)

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	5318 ft-lb	3'3 1/2"	14423 ft-lb	37%	D+0.75(L+S)	L
Unbraced	5318 ft-lb	3'3 1/2"	10370 ft-lb	51%	D+0.75(L+S)	L
Shear	2506 lb	1' 1/4"	7943 lb	32%	D+0.75(L+S)	L
LL Defl inch	0.046 (L/1636)	3'3 1/2"	0.155 (L/480)	29%	0.75(L+S)	L
TL Defl inch	0.099 (L/754)	3'3 1/2"	0.207 (L/360)	48%	D+0.75(L+S)	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings.
- 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 bottom edge only and across their full width.
- 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	104 PLF	314 PLF	0 PLF	0 PLF	0 PLF	FG3
3	Uniform			Top	364 PLF	0 PLF	364 PLF	0 PLF	0 PLF	A3
	Self Weight				7 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

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

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 2/28/2028

Manufacturer Info

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

Comtech, Inc.
1001 S. Reilly Road, Suite #639
Fayetteville, NC
USA
28314
910-864-TRUS





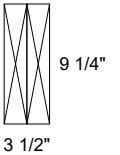
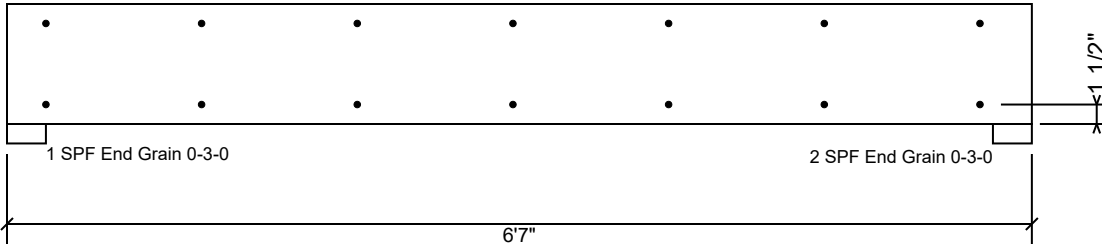
Client:
Project:
Address:

Date: 7/30/2025
Input by: Neal Baggett
Job Name: 19 MAGNOLIA HILLS
Project #:

Page 2 of 8

BM2 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 _m	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

Manufacturer Info

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

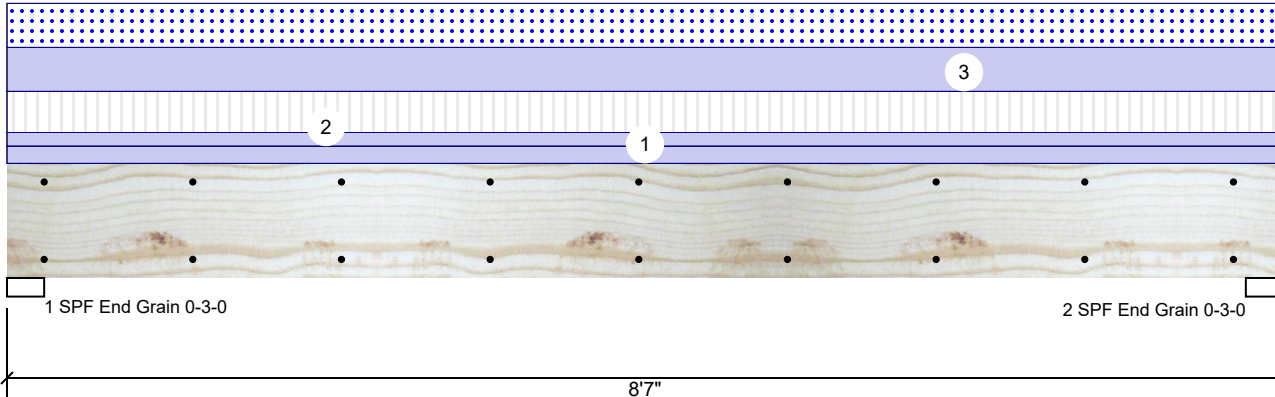
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1001 S. Reilly Road, Suite #639
Fayetteville, NC
USA
28314
910-864-TRUS



This design is valid until 2/28/2028

BM3 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	1227	2267	1313	0	0
2	Vertical	1227	2267	1313	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.000"	Vert	47%	2267 / 1906	4172	L	D+0.75(L+S)
2 - SPF End Grain	3.000"	Vert	47%	2267 / 1906	4172	L	D+0.75(L+S)

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	8188 ft-lb	4'3 1/2"	14423 ft-lb	57%	D+0.75(L+S)	L
Unbraced	8188 ft-lb	4'3 1/2"	8625 ft-lb	95%	D+0.75(L+S)	L
Shear	3180 lb	7'6 3/4"	7943 lb	40%	D+0.75(L+S)	L
LL Defl inch	0.112 (L/883)	4'3 9/16"	0.205 (L/480)	54%	0.75(L+S)	L
TL Defl inch	0.244 (L/403)	4'3 9/16"	0.274 (L/360)	89%	D+0.75(L+S)	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings.
- 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 bottom edge only and across their full width.
- 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	95 PLF	286 PLF	0 PLF	0 PLF	0 PLF	F3
3	Uniform			Top	306 PLF	0 PLF	306 PLF	0 PLF	0 PLF	B2
	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

Manufacturer Info

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This design is valid until 2/28/2028



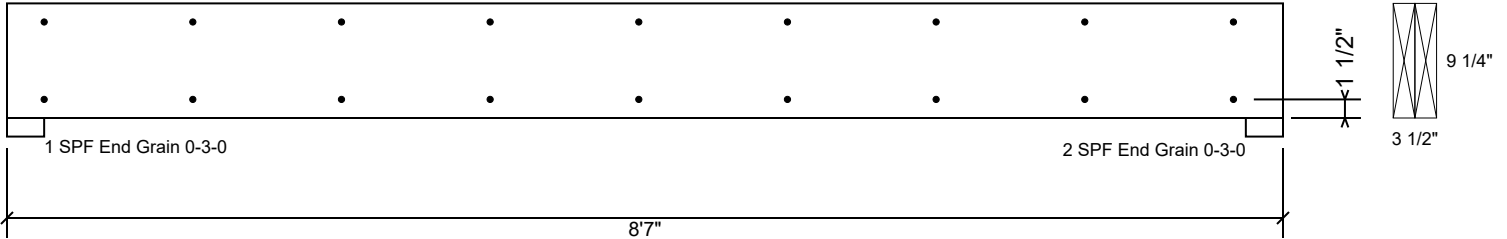
Client:
Project:
Address:

Date: 7/30/2025
Input by: Neal Baggett
Job Name: 19 MAGNOLIA HILLS
Project #:

Page 4 of 8

BM3 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 _m	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

Manufacturer Info

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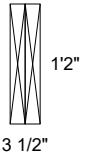
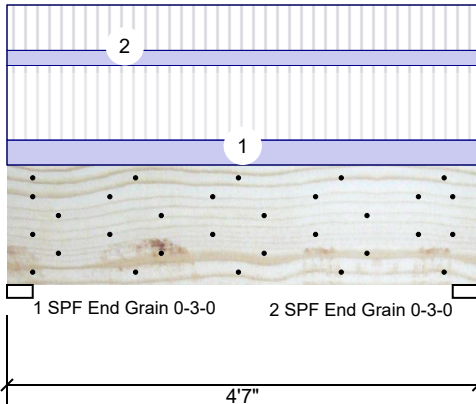
Comtech, Inc.
1001 S. Reilly Road, Suite #639
Fayetteville, NC
USA
28314
910-864-TRUS



This design is valid until 2/28/2028

BM4 Kerto-S LVL 1.750" X 14.000" 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	2278	783	0	0	0
2	Vertical	2278	783	0	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.000"	Vert	35%	783 / 2278	3061	L	D+L
2 - SPF End Grain	3.000"	Vert	35%	783 / 2278	3061	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2957 ft-lb	2'3 1/2"	26999 ft-lb	11%	D+L	L
Unbraced	2957 ft-lb	2'3 1/2"	21560 ft-lb	14%	D+L	L
Shear	2715 lb	1'5"	10453 lb	26%	D+L	L
LL Defl inch	0.010 (L/5285)	2'3 9/16"	0.105 (L/480)	9%	L	L
TL Defl inch	0.013 (L/3932)	2'3 9/16"	0.140 (L/360)	9%	D+L	L

Design Notes

- Provide support to prevent lateral movement and rotation at the end bearings.
- Fasten all plies using 6 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 bottom edge only and across their full width.
- 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			Far Face	206 PLF	618 PLF	0 PLF	0 PLF	0 PLF	FG3
2	Uniform			Near Face	125 PLF	376 PLF	0 PLF	0 PLF	0 PLF	FG2
	Self Weight				11 PLF					

Notes

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Lumber

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

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

- For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

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

Comtech, Inc.
1001 S. Reilly Road, Suite #639
Fayetteville, NC
USA
28314
910-864-TRUS



This design is valid until 2/28/2028



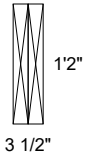
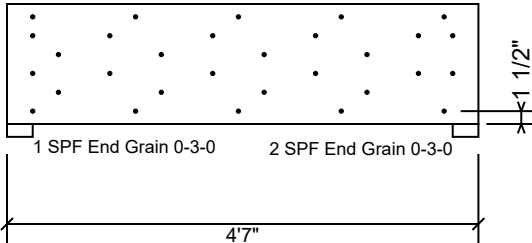
Client:
Project:
Address:

Date: 7/30/2025
Input by: Neal Baggett
Job Name: 19 MAGNOLIA HILLS
Project #:

Page 6 of 8

BM4 Kerto-S LVL 1.750" X 14.000" 2-Ply - PASSED

Level: Level



Multi-Ply Analysis

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

Capacity	83.9 %
Load	412.0 PLF
Yield Limit per Foot	491.1 PLF
Yield Limit per Fastener	81.9 lb.
C _m	1
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	D+L
Duration Factor	1.00

Notes

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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

Manufacturer Info

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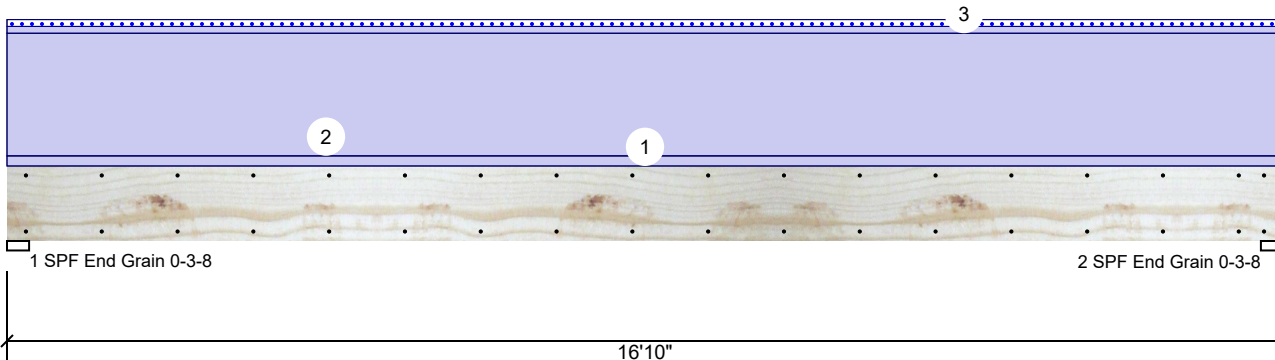
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GDH Kerto-S LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Level



11 7/8"
3 1/2"

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	1887	168	0	0
2	Vertical	0	1887	168	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	Vert	20%	1887 / 168	2056	L	D+S
2 - SPF End Grain	3.500"	Vert	20%	1887 / 168	2056	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	7516 ft-lb	8'5"	17919 ft-lb	42%	D	Uniform
Unbraced	8186 ft-lb	8'5"	8198 ft-lb	100%	D+S	L
Shear	1620 lb	15'6 5/8"	7980 lb	20%	D	Uniform
LL Defl inch	0.035 (L/5617)	8'5 1/16"	0.409 (L/480)	9%	S	L
TL Defl inch	0.427 (L/460)	8'5 1/16"	0.546 (L/360)	78%	D+S	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings.
- 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 bottom edge only and across their full width.
- 5 Top loads must be supported equally by all plies.
- 6 Top must be laterally braced at a maximum of 11'9 1/4" 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	15 PLF	0 PLF	0 PLF	0 PLF	0 PLF	WALL
2	Uniform			Top	180 PLF	0 PLF	0 PLF	0 PLF	0 PLF	WALL
3	Tie-In Far	0-0-0 to 16-10-0	1-0-0	Far Face	20 PSF	0 PSF	20 PSF	0 PSF	0 PSF	RAKE OH
3	Tie-In Near	0-0-0 to 16-10-0	0-0-0	Top	20 PSF	0 PSF	20 PSF	0 PSF	0 PSF	RAKE OH
	Self Weight				9 PLF					

Notes

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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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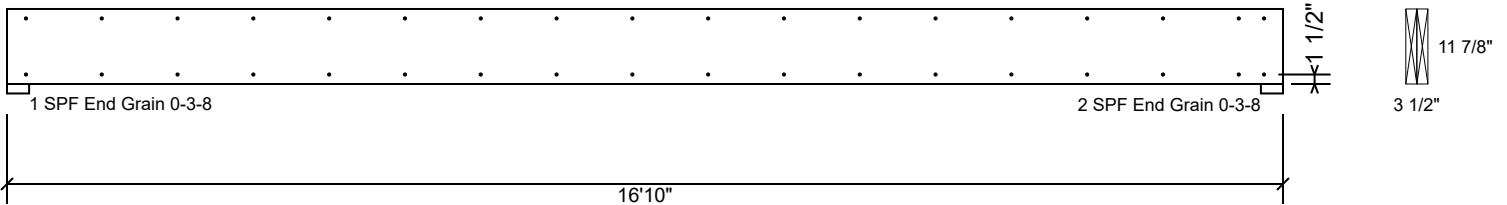
Client:
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Date: 7/30/2025
Input by: Neal Baggett
Job Name: 19 MAGNOLIA HILLS
Project #:

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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	10.6 %
Load	20.0 PLF
Yield Limit per Foot	188.3 PLF
Yield Limit per Fastener	94.1 lb.
C _m	1
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	D+S
Duration Factor	1.15

Notes

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