

Trenco

818 Soundside Rd
Edenton, NC 27932

Re: J0524-2976
Lot 86 Magnolia Hills

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

Pages or sheets covered by this seal: I68178947 thru I68178964

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

North Carolina COA: C-0844



September 13, 2024

Gilbert, Eric

IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which were given to MiTek or TRENCO. Any project specific information included is for MiTek's or TRENCO's customers file reference purpose only, and was not taken into account in the preparation of these designs. MiTek or TRENCO has not independently verified the applicability of the design parameters or the designs for any particular building. Before use, the building designer should verify applicability of design parameters and properly incorporate these designs into the overall building design per ANSI/TPI 1, Chapter 2.

Job J0524-2976	Truss A1-GE	Truss Type GABLE	Qty 1	Ply 1	Lot 86 Magnolia Hills Job Reference (optional)	168178947
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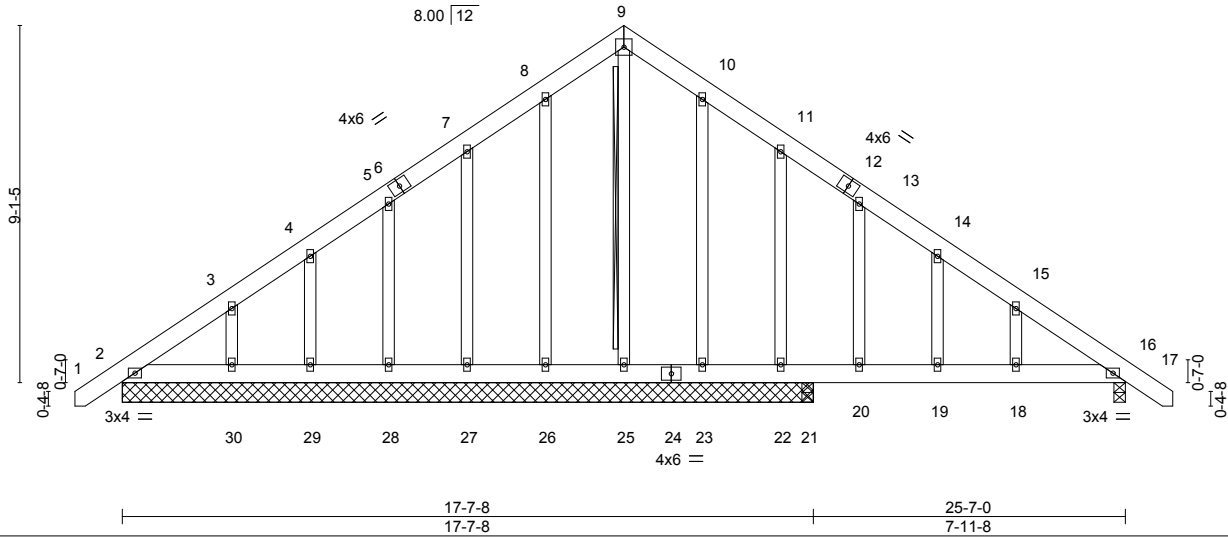
Comtech, Inc. Fayetteville, NC - 28314,

8.630 s Jul 12 2024 MiTek Industries, Inc. Thu Sep 12 11:08:21 2024 Page 1
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5x5 =

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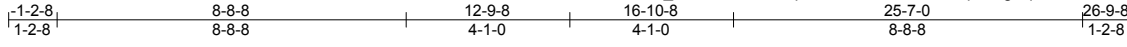


Job J0524-2976	Truss A2	Truss Type COMMON	Qty 5	Ply 1	Lot 86 Magnolia Hills Job Reference (optional)	168178948
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Comtech, Inc. Fayetteville, NC - 28314,

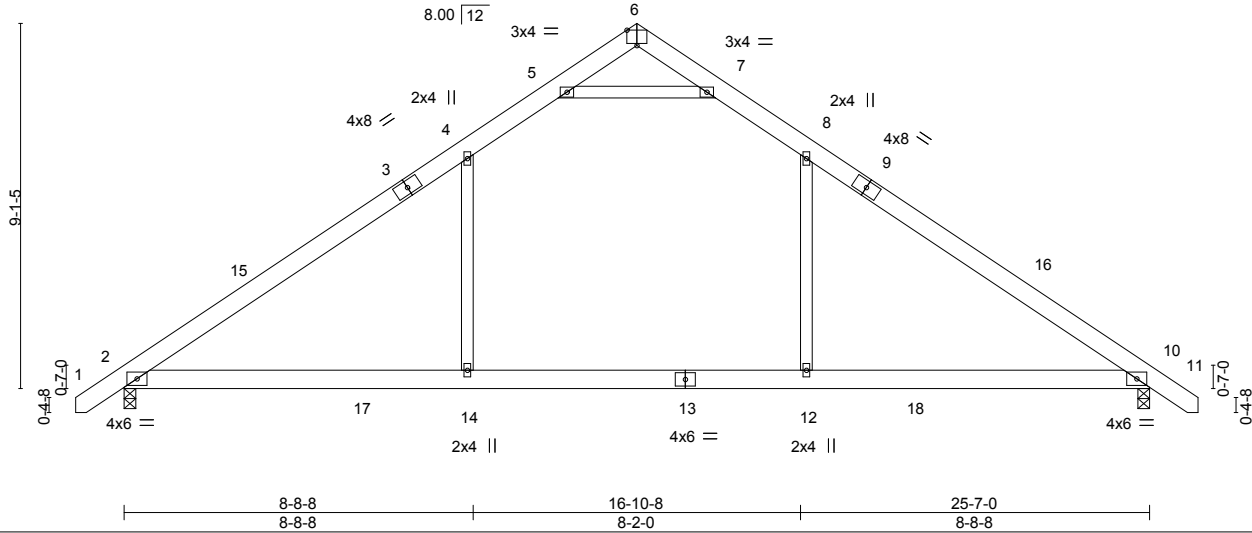
8.630 s Jul 12 2024 MiTek Industries, Inc. Thu Sep 12 11:08:21 2024 Page 1

ID:9fna8k_aSfLEiCIAbt3H8pzSXOz-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



4x6 =

Scale = 1:57.5



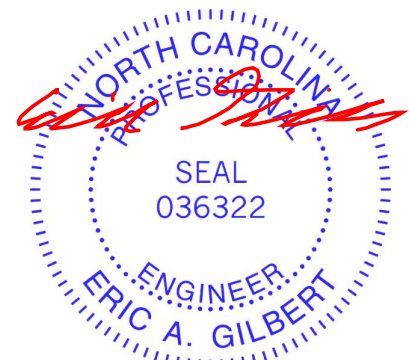
LOADING (psf)		SPACING-		CSI.		DEFL.				PLATES	GRIP	
TCLL	20.0	Plate Grip DOL	1.15	TC	0.84	Vert(LL)	-0.23	12-14	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.47	Vert(CT)	-0.33	12-14	>921	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.55	Horz(CT)	0.03	10	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.19	2-14	>999	240	Weight: 161 lb	FT = 20%

LUMBER-		BRACING-	
TOP CHORD	2x6 SP No.1	TOP CHORD	Structural wood sheathing directly applied or 4-10-5 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, 10=0-3-8
 Max Horz 2=222(LC 11)
 Max Uplift 2=-71(LC 12), 10=-71(LC 13)
 Max Grav 2=1320(LC 19), 10=1320(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 2-4=-1781/260, 4-5=-1224/322, 5-6=-171/751, 6-7=-171/752, 7-8=-1223/322, 8-10=-1781/260
 BOT CHORD 2-14=-38/1368, 12-14=-38/1368, 10-12=-38/1368
 WEBS 8-12=0/616, 4-14=0/616, 5-7=-2174/573

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-0-15 to 3-3-14, Interior(1) 3-3-14 to 12-9-8, Exterior(2) 12-9-8 to 17-0-4, Interior(1) 17-0-4 to 26-7-15 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, 10.



September 13, 2024

<p>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.</p> <p>Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see 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)</p>	 <p>818 Soundside Road Edenton, NC 27932</p>
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Job J0524-2976	Truss A3	Truss Type COMMON	Qty 2	Ply 1	Lot 86 Magnolia Hills Job Reference (optional)	168178949
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Comtech, Inc. Fayetteville, NC - 28314,

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ID:9fna8k_aSfLEiCIAbt3H8pzSXOz-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



4x6 =

Scale = 1:53.9

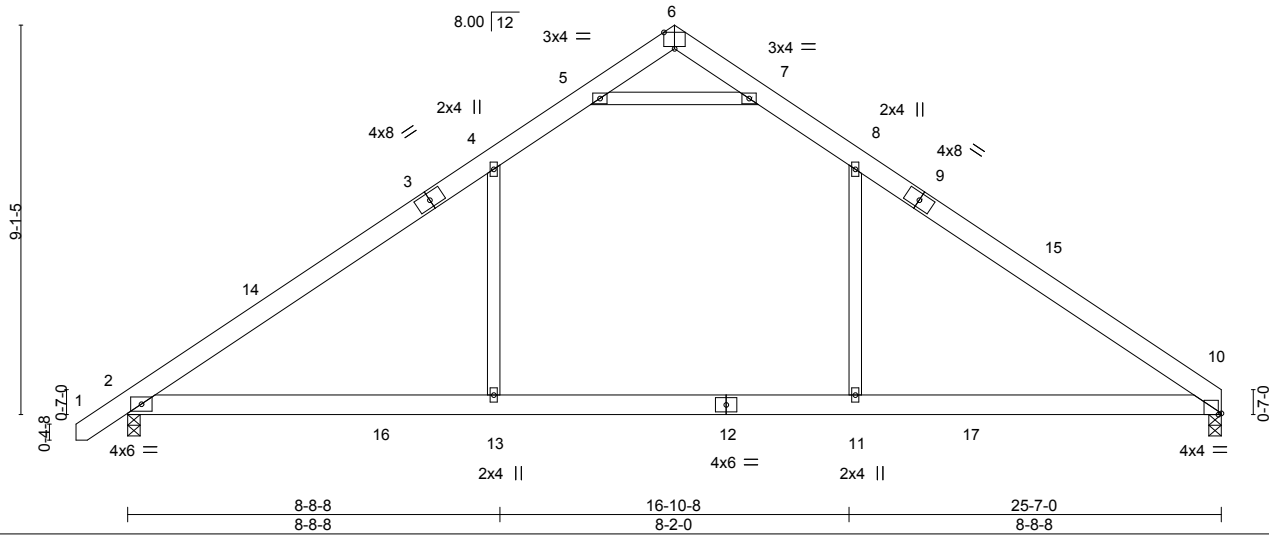


Plate Offsets (X,Y)--	[6:0-3-0,Edge], [10:0-0-14,Edge]
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LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.85	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.48	Vert(LL) -0.24 11-13 >999 360		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.56	Vert(CT) -0.34 11-13 >902 240		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.03 10 n/a n/a		
	Code IRC2015/TPI2014		Wind(LL) 0.19 2-13 >999 240	Weight: 158 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 4-7-14 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, 10=0-3-8
 Max Horz 2=217(LC 9)
 Max Uplift 2=-71(LC 12), 10=-53(LC 13)
 Max Grav 2=1321(LC 19), 10=1250(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 2-4=-1786/263, 4-5=-1226/323, 5-6=-188/759, 6-7=-176/761, 7-8=-1226/331, 8-10=-1779/264
 BOT CHORD 2-13=-65/1363, 11-13=-65/1363, 10-11=-65/1363
 WEBS 8-11=0/610, 4-13=0/618, 5-7=-2191/603

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-0-15 to 3-3-14, Interior(1) 3-3-14 to 12-9-8, Exterior(2) 12-9-8 to 17-0-4, Interior(1) 17-0-4 to 25-5-4 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, 10.



September 13, 2024

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Job J0524-2976	Truss A4	Truss Type COMMON	Qty 6	Ply 1	Lot 86 Magnolia Hills 168178950
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ID:9fna8k_aSfLEiCIAbt3H8pzSXOz-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



4x6 =

Scale = 1:57.5

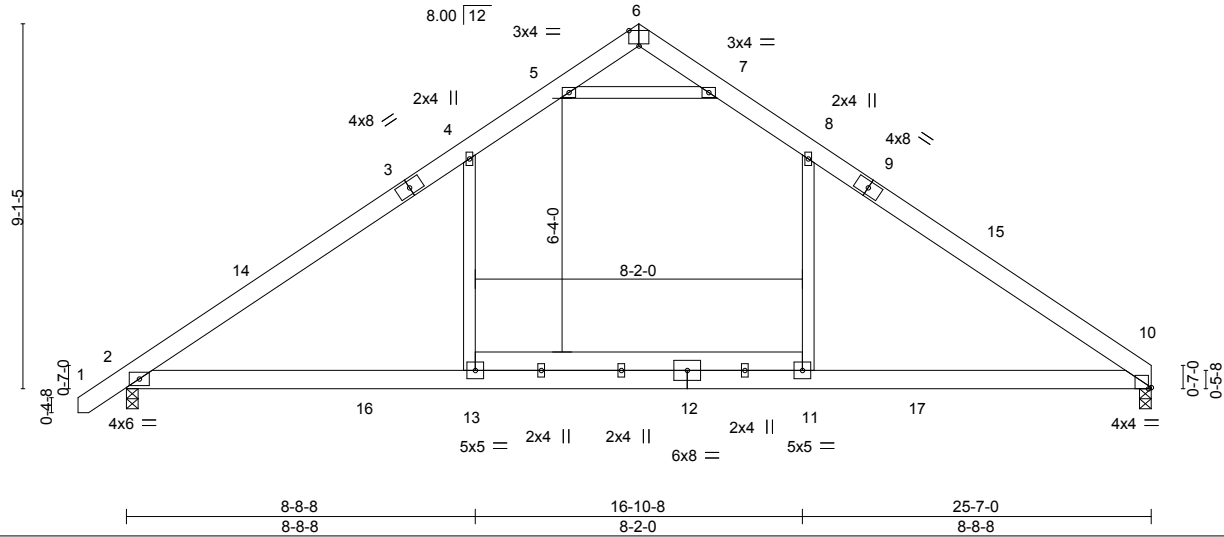


Plate Offsets (X,Y)--	[6:0-3-0,Edge], [10:0-0-14,Edge]
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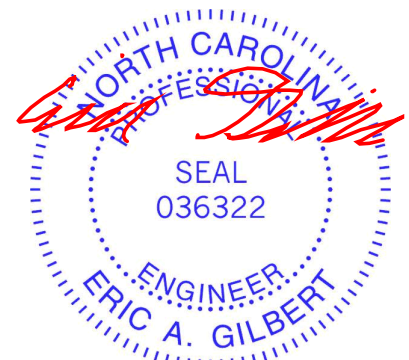
LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.85	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.48	Vert(LL) -0.24 11-13 >999 360		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.56	Vert(CT) -0.34 11-13 >902 240		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.03 10 n/a n/a		
	Code IRC2015/TPI2014		Wind(LL) 0.19 2-13 >999 240	Weight: 177 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 4-7-14 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, 10=0-3-8
 Max Horz 2=217(LC 9)
 Max Uplift 2=-71(LC 12), 10=-53(LC 13)
 Max Grav 2=1321(LC 19), 10=1250(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 2-4=-1786/263, 4-5=-1226/323, 5-6=-188/759, 6-7=-176/761, 7-8=-1226/331, 8-10=-1779/264
 BOT CHORD 2-13=-65/1363, 11-13=-65/1363, 10-11=-65/1363
 WEBS 8-11=0/610, 4-13=0/618, 5-7=-2191/603

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-0-15 to 3-3-14, Interior(1) 3-3-14 to 12-9-8, Exterior(2) 12-9-8 to 17-0-4, Interior(1) 17-0-4 to 25-5-4 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, 10.



September 13, 2024

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Job J0524-2976	Truss A5-GE	Truss Type GABLE	Qty 1	Ply 1	Lot 86 Magnolia Hills Job Reference (optional)	168178951
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ID:9fna8k_aSfLEiCIAbt3H8pzSXOz-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWRCDoi7J4zJC?f



5x8 ||

Scale = 1:53.3

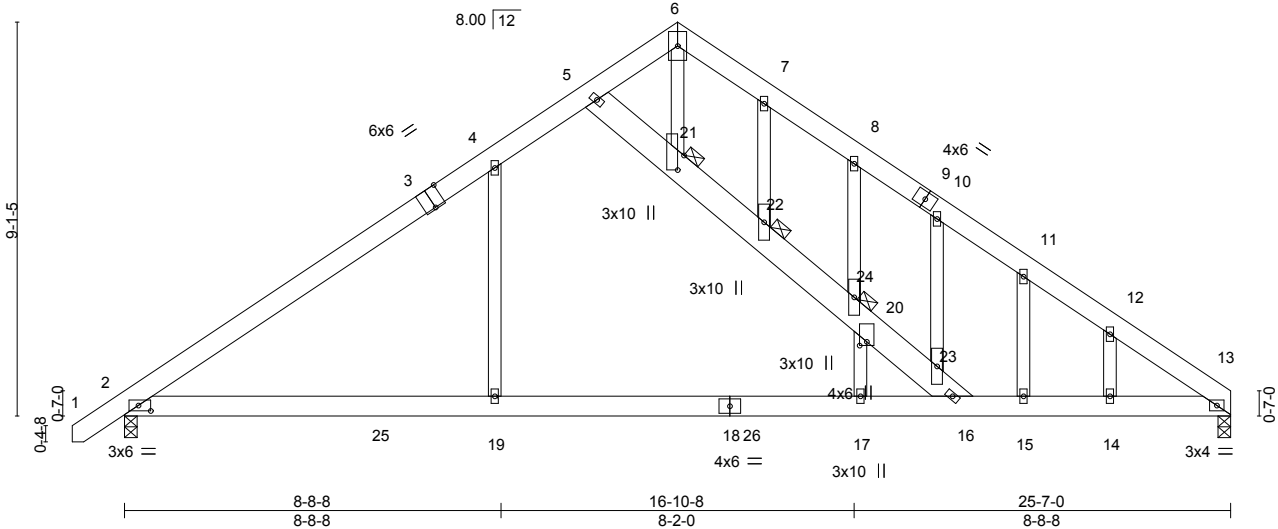


Plate Offsets (X,Y)--	[2:0-3-6,0-1-8], [3:0-3-0,Edge], [20:0-1-1,0-2-0], [21:0-4-1,0-1-12]
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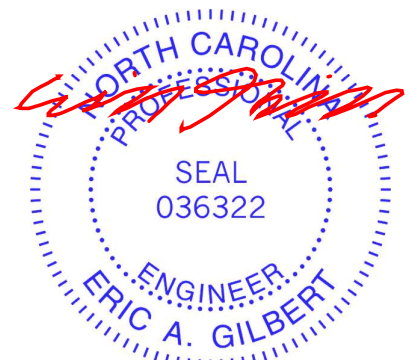
LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.61	Vert(LL)	-0.22	17-19	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.57	Vert(CT)	-0.38	2-19	>797		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.80	Horz(CT)	0.02	13	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S	Wind(LL)	0.24	2-19	>999		
								Weight: 206 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 4-7-10 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): 20, 21, 22
5-16: 2x8 SP No.1	
OTHERS 2x4 SP No.2	

REACTIONS. (size) 2=0-3-8, 13=0-3-8
 Max Horz 2=271(LC 9)
 Max Uplift 2=-231(LC 12), 13=-195(LC 13)
 Max Grav 2=1246(LC 19), 13=1094(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 2-4=-1527/297, 4-5=-1063/393, 5-6=-1491/603, 6-7=-1348/557, 7-8=-1280/474,
 8-10=-1396/435, 10-11=-1300/342, 11-12=-1351/309, 12-13=-1405/246
 BOT CHORD 2-19=-152/1242, 17-19=-152/1242, 16-17=-150/1224, 15-16=-129/1061, 14-15=-129/1061,
 13-14=-129/1061
 WEBS 17-20=-80/744, 4-19=0/518, 5-21=-720/259, 21-22=-323/538, 22-24=-254/433,
 20-24=-212/456, 20-23=-335/255, 16-23=-457/194, 6-21=-563/1416, 10-23=-288/154

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; 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) except (jt=lb) 2=231, 13=195.



September 13, 2024

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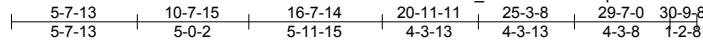
ENGINEERING BY
TRENCO
 A MiTek Affiliate
 818 Soundside Road
 Edenton, NC 27932

Job J0524-2976	Truss A6	Truss Type ROOF SPECIAL	Qty 6	Ply 1	Lot 86 Magnolia Hills 168178952
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Comtech, Inc. Fayetteville, NC - 28314,

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ID:9fna8k_aSfLEjCIAbt3H8pzSXOz-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:103.5

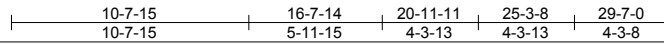
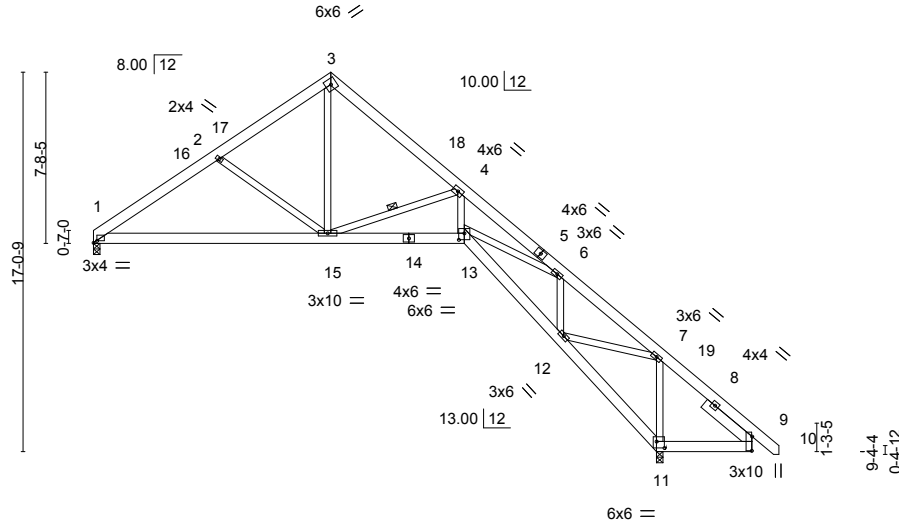


Plate Offsets (X,Y)-- [1:0-1-14,0-1-1], [9:0-7-11,0-0-3], [11:0-4-4,0-3-8], [13:0-3-0,0-3-8]

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 0.17	Vert(LL)	-0.11	13	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.40	Vert(CT)	-0.22	13	>999		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.37	Horz(CT)	0.27	11	n/a		
BCDL 10.0	Code IRC2015/TP12014		Matrix-S	Wind(LL)	-0.04	13	>999	Weight: 232 lb	FT = 20%

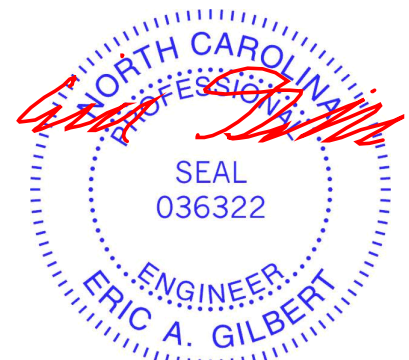
LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 4-5-1 oc purlins.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 2x4 SP No.2	WEBS 1 Row at midpt 4-15
SLIDER Right 2x6 SP No.1 2-8-15	

REACTIONS. (size) 1=0-3-8, 11=0-3-8
 Max Horz 1=-395(LC 13)
 Max Uplift 1=-9(LC 12), 11=-186(LC 13)
 Max Grav 1=964(LC 1), 11=1456(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 1-2=-1361/224, 2-3=-1103/185, 3-4=-1156/152, 4-6=-3127/0, 6-7=-1278/145, 7-9=-131/373
 BOT CHORD 1-15=0/1165, 13-15=0/2237, 9-11=-251/186, 12-13=0/1320, 11-12=-460/312
 WEBS 2-15=-361/228, 3-15=-35/911, 4-15=-1511/53, 4-13=0/1507, 6-13=0/1517, 6-12=-949/52, 7-12=0/1154, 7-11=-1100/236

NOTES-

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-1-12 to 4-6-9, Interior(1) 4-6-9 to 10-7-15, Exterior(2) 10-7-15 to 15-0-12, Interior(1) 15-0-12 to 30-8-1 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 except (jt=lb) 11=186.



September 13, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TP1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

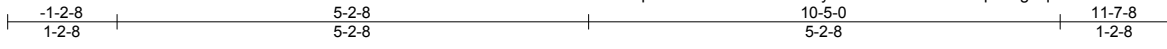
ENGINEERING BY
TRENCO
 A MiTek Affiliate
 818 Soundside Road
 Edenton, NC 27932

Job J0524-2976	Truss B1-GE	Truss Type GABLE	Qty 1	Ply 1	Lot 86 Magnolia Hills Job Reference (optional)	168178954
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Comtech, Inc. Fayetteville, NC - 28314,

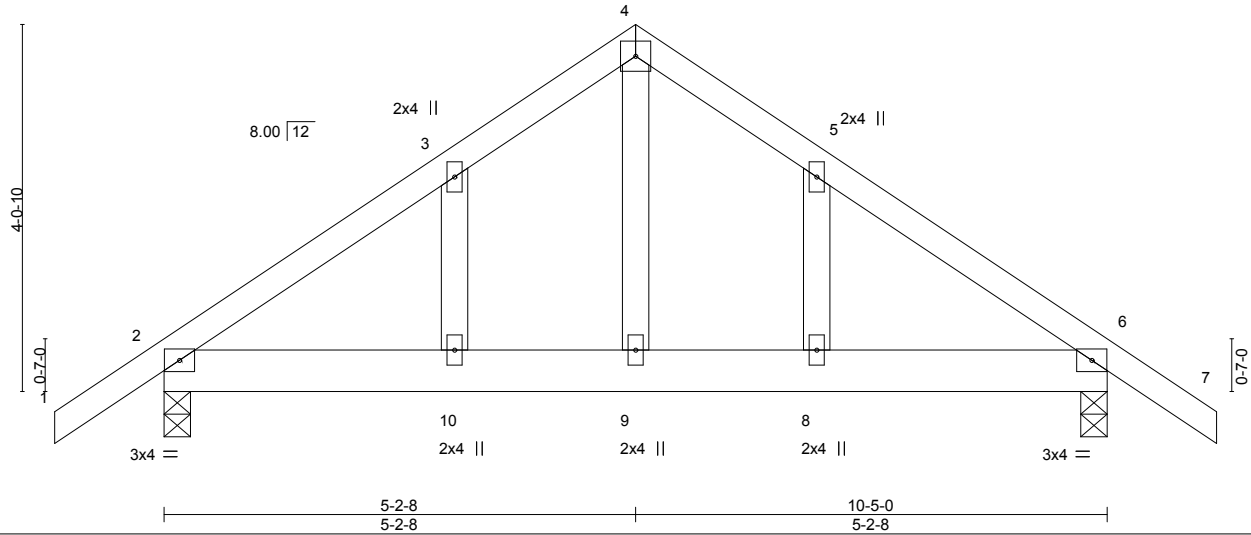
8.630 s Jul 12 2024 MiTek Industries, Inc. Thu Sep 12 11:08:24 2024 Page 1

ID:hxY3pmLvDCe?dFTuxKh62hywwcV-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



4x4 =

Scale = 1:25.4



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.09	Vert(LL)	-0.01	8	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.14	Vert(CT)	-0.02	8	>999		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.07	Horz(CT)	0.00	6	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S	Wind(LL)	0.01	10	>999		
								Weight: 59 lb	FT = 20%

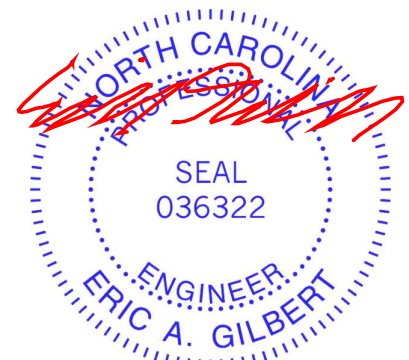
LUMBER-
 TOP CHORD 2x4 SP No.1
 BOT CHORD 2x6 SP No.1
 WEBS 2x4 SP No.2
 OTHERS 2x4 SP No.2

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

REACTIONS. (size) 2=0-3-8, 6=0-3-8
 Max Horz 2=-128(LC 10)
 Max Uplift 2=-117(LC 12), 6=-117(LC 13)
 Max Grav 2=486(LC 1), 6=486(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 2-3=-455/102, 3-4=-465/192, 4-5=-465/192, 5-6=-455/102
 BOT CHORD 2-10=-17/331, 9-10=-17/331, 8-9=-17/331, 6-8=-17/331
 WEBS 4-9=-137/374

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - 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=117, 6=117.



September 13, 2024

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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.sbcacomponents.com)

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

Job J0524-2976	Truss B2	Truss Type COMMON	Qty 1	Ply 1	Lot 86 Magnolia Hills Job Reference (optional)	168178955
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Comtech, Inc. Fayetteville, NC - 28314,

8.630 s Jul 12 2024 MiTek Industries, Inc. Thu Sep 12 11:08:25 2024 Page 1

ID:hxY3pmLvDCe?dFTuxKh62hywwcV-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



4x4 =

Scale = 1:25.4

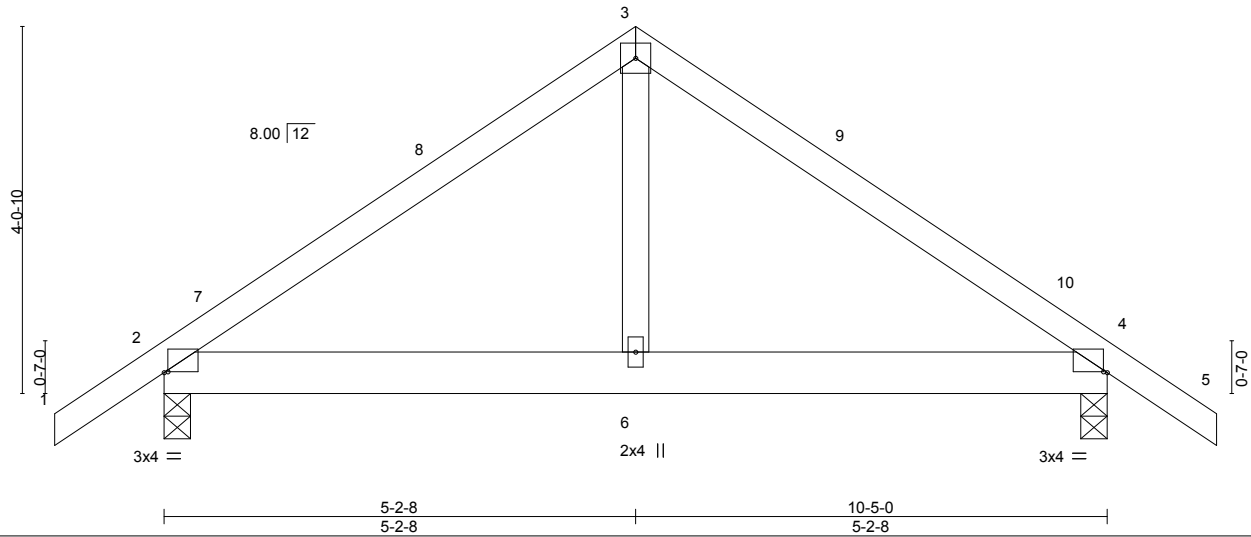


Plate Offsets (X,Y)--	[2:0-0-8,0-0-2], [4:0-0-8,0-0-2]
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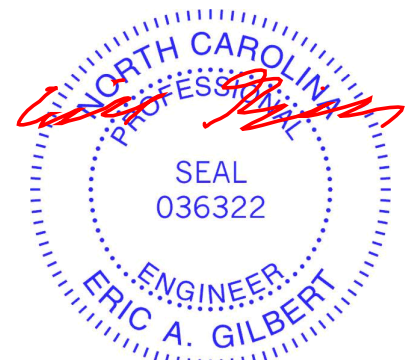
LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.22	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.12	Vert(LL) -0.01 4-6 >999 360		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.06	Vert(CT) -0.01 4-6 >999 240		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.00 4 n/a n/a		
	Code IRC2015/TPI2014		Wind(LL) -0.01 4-6 >999 240	Weight: 53 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 10-0-0 oc bracing.
WEBS 2x4 SP No.2	

REACTIONS.
(size) 2=0-3-8, 4=0-3-8
Max Horz 2=-103(LC 10)
Max Uplift 2=-41(LC 12), 4=-41(LC 13)
Max Grav 2=486(LC 1), 4=486(LC 1)

FORCES.
(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-474/129, 3-4=-474/129
BOT CHORD 2-6=0/317, 4-6=0/317
WEBS 3-6=0/253

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



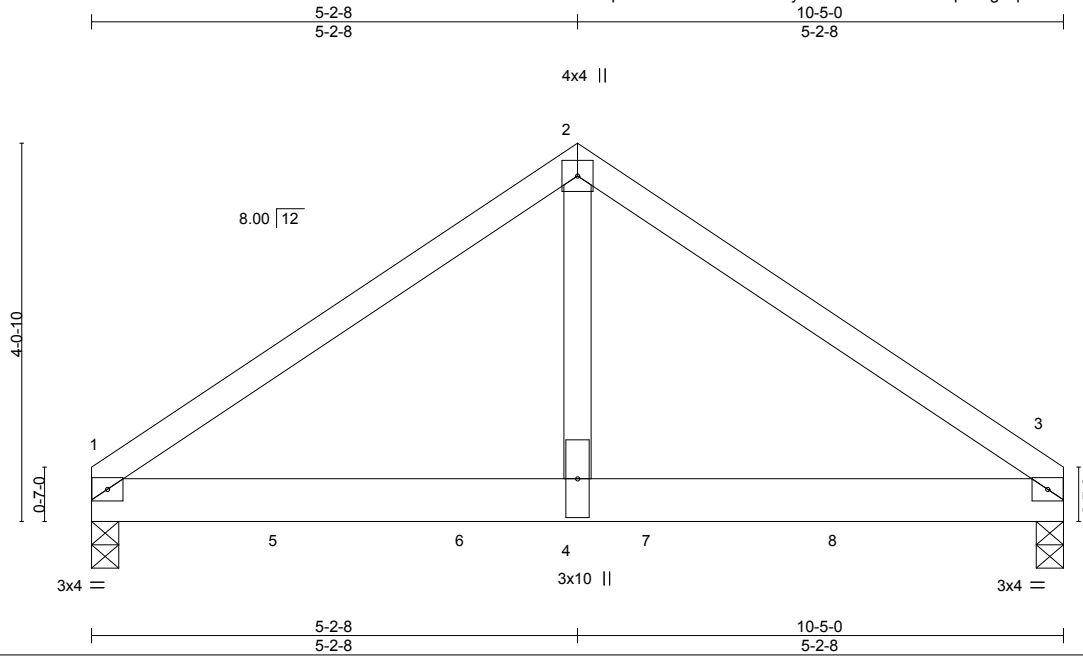
September 13, 2024

Job J0524-2976	Truss B3	Truss Type COMMON GIRDER	Qty 1	Ply 2	Lot 86 Magnolia Hills Job Reference (optional)	168178956
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Comtech, Inc. Fayetteville, NC - 28314,

8.630 s Jul 12 2024 MiTek Industries, Inc. Thu Sep 12 11:08:25 2024 Page 1

ID:hxY3pmLvDCe?dFTuxKh62hywwcV-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrcDoi7J4zJC?f



Scale = 1:24.7

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.26	Vert(LL)	-0.05	1-4	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.83	Vert(CT)	-0.08	1-4	>999		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.44	Horz(CT)	0.01	3	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S	Wind(LL)	0.03	1-4	>999		
								Weight: 97 lb	FT = 20%

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

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

REACTIONS. (size) 1=0-3-8, 3=0-3-8
Max Horz 1=-88(LC 23)
Max Uplift 1=-154(LC 8), 3=-207(LC 9)
Max Grav 1=2770(LC 2), 3=3818(LC 2)

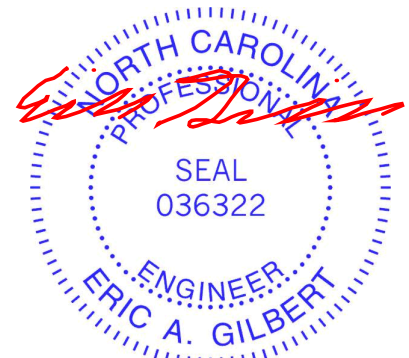
FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-3377/212, 2-3=-3378/212
BOT CHORD 1-4=-122/2704, 3-4=-122/2704
WEBS 2-4=-136/3593

NOTES-

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); Lumber DOL=1.60 plate grip DOL=1.60
- 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" tall by 2'-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=154, 3=207.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1174 lb down and 73 lb up at 2-0-12, 1174 lb down and 73 lb up at 4-0-12, 1174 lb down and 73 lb up at 6-0-12, and 1174 lb down and 73 lb up at 8-0-12, and 1182 lb down and 65 lb up at 10-3-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

- 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=-998(B) 5=-990(B) 6=-990(B) 7=-990(B) 8=-990(B)



September 13, 2024

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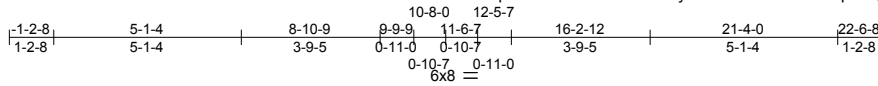
818 Soundside Road
Edenton, NC 27932

Job J0524-2976	Truss C1-GE	Truss Type ATTIC	Qty 1	Ply 1	Lot 86 Magnolia Hills Job Reference (optional)	168178957
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Comtech, Inc. Fayetteville, NC - 28314,

8.630 s Jul 12 2024 MiTek Industries, Inc. Thu Sep 12 11:08:26 2024 Page 1

ID:hxY3pmLvDCe?dFTuxKh62hywwcV-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCdoi7J4zJC?f



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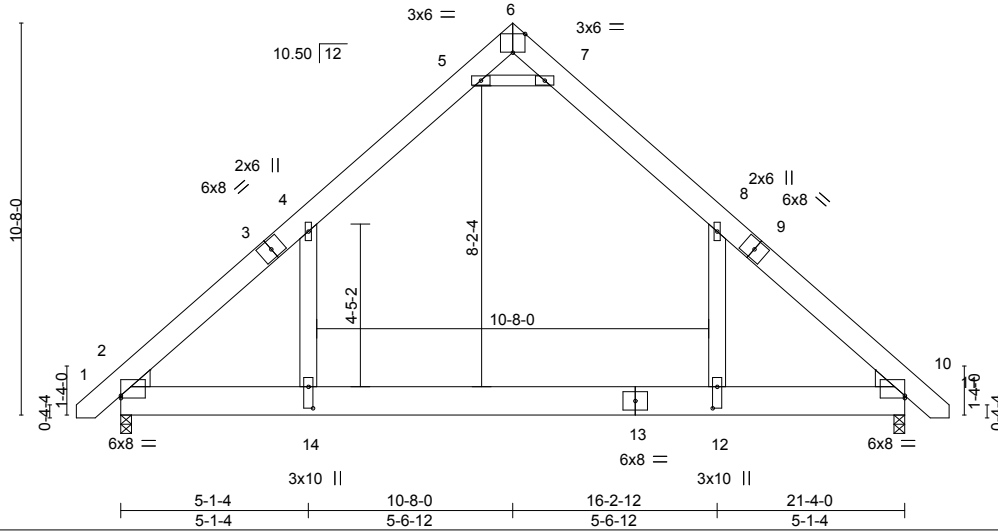


Plate Offsets (X,Y)--	[2:0-0-0,0-0-13], [6:0-4-0,Edge], [10:Edge,0-0-13], [12:0-7-0,0-1-8], [14:0-7-0,0-1-8]
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LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.78	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.69	Vert(LL) -0.21 12-14 >999 360		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.13	Vert(CT) -0.37 12-14 >677 240		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.01 10 n/a n/a		
	Code IRC2015/TPI2014		Wind(LL) 0.10 12-14 >999 240	Weight: 209 lb	FT = 20%

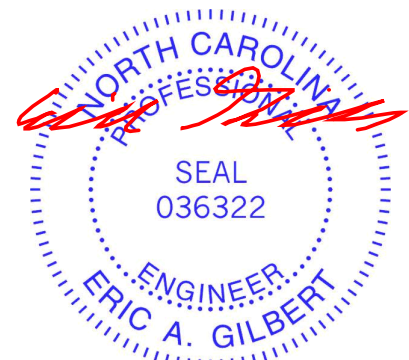
LUMBER-
TOP CHORD 2x8 SP No.1
BOT CHORD 2x10 SP No.1
WEBS 2x6 SP No.1 *Except*
5-7: 2x4 SP No.1
WEDGE
Left: 2x6 SP No.2 , Right: 2x6 SP No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-1-14 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.


REACTIONS. (size) 2=0-3-8, 10=0-3-8
Max Horz 2=305(LC 10)
Max Grav 2=1429(LC 20), 10=1429(LC 21)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-4=-1840/0, 4-5=-1041/173, 5-6=-112/1126, 6-7=-112/1128, 7-8=-1041/173,
8-10=-1840/0
BOT CHORD 2-14=0/1091, 12-14=0/1091, 10-12=0/1091
WEBS 8-12=0/904, 4-14=0/904, 5-7=-2435/392

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - 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) Ceiling dead load (10.0 psf) on member(s). 4-5, 7-8, 5-7; Wall dead load (5.0psf) on member(s). 8-12, 4-14
 - 6) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 12-14
 - 7) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.
 - 8) Attic room checked for L/360 deflection.



September 13, 2024

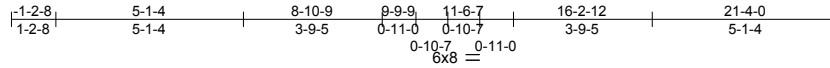
<p>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.</p> <p>Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see 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)</p>	<p>ENGINEERING BY</p>  <p>A MiTek Affiliate</p> <p>818 Soundside Road Edenton, NC 27932</p>
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Job J0524-2976	Truss C3	Truss Type ATTIC	Qty 2	Ply 1	Lot 86 Magnolia Hills Job Reference (optional)	168178959
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Comtech, Inc. Fayetteville, NC - 28314,

8.630 s Jul 12 2024 MiTek Industries, Inc. Thu Sep 12 11:08:27 2024 Page 1

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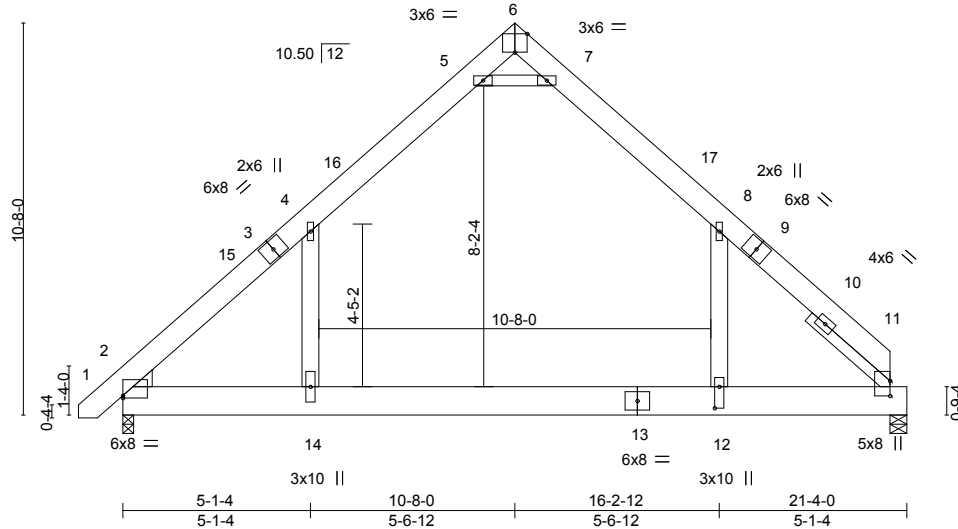


Plate Offsets (X,Y)-- [2:0-0-0,0-0-13], [6:0-4-0,Edge], [11:0-4-15,0-0-0], [12:0-7-0,0-1-8]

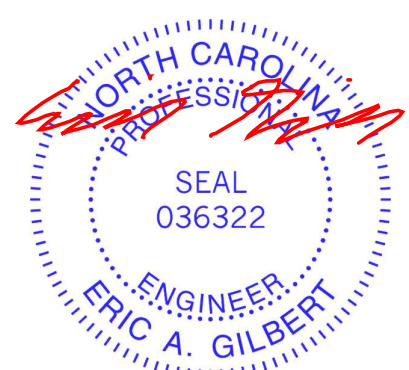
LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.75	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.68	Vert(LL) -0.20 12-14 >999 360		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.13	Vert(CT) -0.35 12-14 >713 240		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.01 11 n/a n/a		
	Code IRC2015/TP12014		Wind(LL) 0.07 12-14 >999 240	Weight: 206 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x8 SP No.1	TOP CHORD Structural wood sheathing directly applied or 5-3-4 oc purlins.
BOT CHORD 2x10 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x6 SP No.1 *Except* 5-7: 2x4 SP No.1	
WEDGE Left: 2x6 SP No.2	
SLIDER Right 2x4 SP No.2 2-11-0	

REACTIONS. (size) 2=0-3-8, 11=0-5-8
 Max Horz 2=241(LC 9)
 Max Grav 2=1412(LC 20), 11=1363(LC 21)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 2-4=-1777/0, 4-5=-1019/140, 5-6=-83/1062, 6-7=-71/1068, 7-8=-1016/145, 8-11=-1823/0
 BOT CHORD 2-14=0/1038, 12-14=0/1038, 11-12=0/1038
 WEBS 8-12=0/912, 4-14=0/867, 5-7=-2344/288

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2)-0-11-7 to 3-5-6, Interior(1) 3-5-6 to 10-8-0, Exterior(2) 10-8-0 to 15-0-13, Interior(1) 15-0-13 to 20-10-8 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.
 - Ceiling dead load (10.0 psf) on member(s). 4-5, 7-8, 5-7; Wall dead load (5.0psf) on member(s). 8-12, 4-14
 - Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 12-14
 - See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.
 - Attic room checked for L/360 deflection.

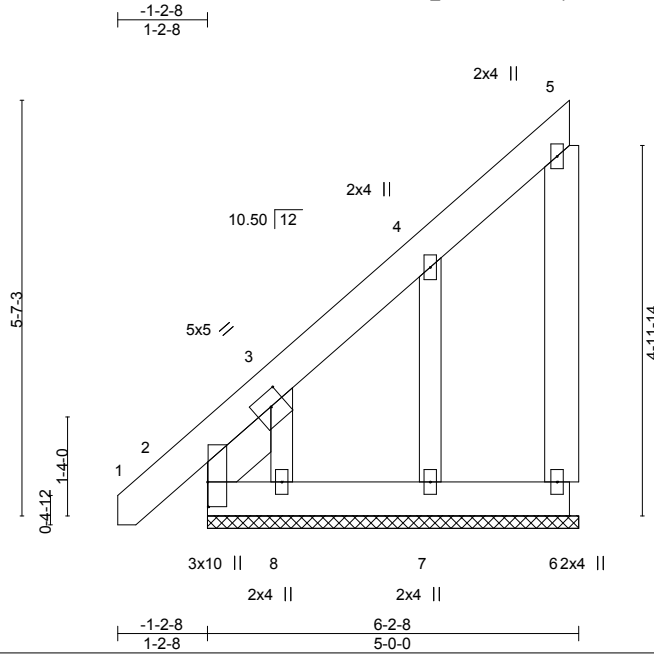


September 13, 2024

Job J0524-2976	Truss D1-GE	Truss Type GABLE	Qty 1	Ply 1	Lot 86 Magnolia Hills Job Reference (optional)	168178960
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Comtech, Inc. Fayetteville, NC - 28314,

8.630 s Jul 12 2024 MiTek Industries, Inc. Thu Sep 12 11:08:27 2024 Page 1
ID:9fna8k_aSfLEiCIAbt3H8pzSXOz-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:31.0

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.03	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.01	Vert(LL) -0.00 1 n/r 120		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.05	Vert(CT) -0.00 1 n/r 120		
BCDL 10.0	Rep Stress Incr YES	Matrix-P	Horz(CT) -0.00 6 n/a n/a		
	Code IRC2015/TPI2014			Weight: 51 lb	FT = 20%

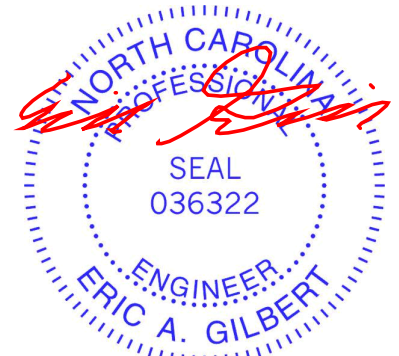
LUMBER-
 TOP CHORD 2x6 SP No.1
 BOT CHORD 2x6 SP No.1
 WEBS 2x6 SP No.1
 OTHERS 2x4 SP No.2
 SLIDER Left 2x6 SP No.1 1-3-12

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

REACTIONS. All bearings 5-0-0.
 (lb) - Max Horz 2=237(LC 12)
 Max Uplift All uplift 100 lb or less at joint(s) 6, 2 except 7=126(LC 12), 8=237(LC 12)
 Max Grav All reactions 250 lb or less at joint(s) 6, 7, 8 except 2=265(LC 12)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 2-3=-406/349
 WEBS 3-8=-299/285

- NOTES-**
- 1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - 2) 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 requires continuous bottom chord bearing.
 - 4) Gable studs spaced at 2-0-0 oc.
 - 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - 6) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
 - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 6, 2 except (jt=lb) 7=126, 8=237.
 - 8) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.



September 13, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



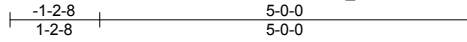
818 Soundside Road
 Edenton, NC 27932

Job J0524-2976	Truss D2	Truss Type MONOPITCH	Qty 4	Ply 1	Lot 86 Magnolia Hills Job Reference (optional)	168178961
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Comtech, Inc. Fayetteville, NC - 28314,

8.630 s Jul 12 2024 MiTek Industries, Inc. Thu Sep 12 11:08:28 2024 Page 1

ID:9fna8k_aSfLEiCiAbt3H8pzSXOz-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



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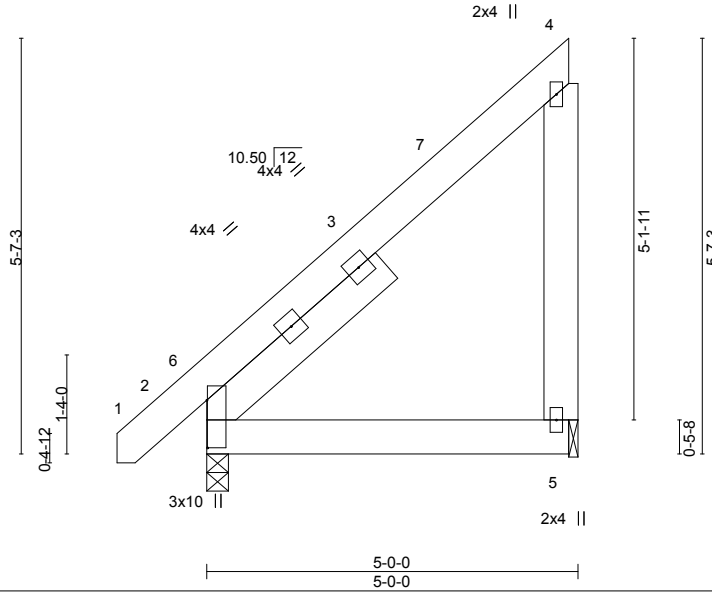


Plate Offsets (X,Y)--	[2:0-7-11,0-0-2]
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LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.21	Vert(LL)	-0.01	2-5	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.09	Vert(CT)	-0.01	2-5	>999		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.00	Horz(CT)	0.00	5	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-P	Wind(LL)	0.00	2	****	Weight: 49 lb	FT = 20%

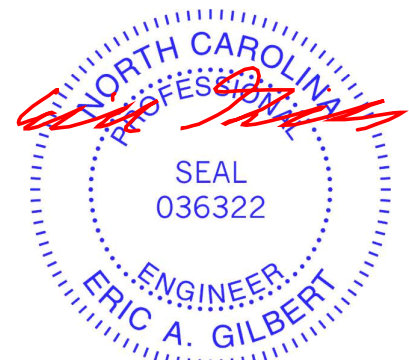
LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 5-0-0 oc purlins, except end verticals.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x6 SP No.1	
SLIDER Left 2x6 SP No.1 3-2-5	

REACTIONS. (size) 2=0-3-8, 5=0-1-8
 Max Horz 2=165(LC 12)
 Max Uplift 5=-101(LC 12)
 Max Grav 2=263(LC 1), 5=211(LC 19)

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

NOTES-

- 1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-1-1 to 3-3-12, Interior(1) 3-3-12 to 4-8-11 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) 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.
- 5) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 5.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 5=101.
- 7) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.



September 13, 2024

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Job	Truss	Truss Type	Qty	Ply	Lot 86 Magnolia Hills	168178962
J0524-2976	P1SG	GABLE	1	1		
Comtech, Inc. Fayetteville, NC - 28314,						Job Reference (optional)

8.630 s Jul 12 2024 MiTek Industries, Inc. Thu Sep 12 11:08:28 2024 Page 1
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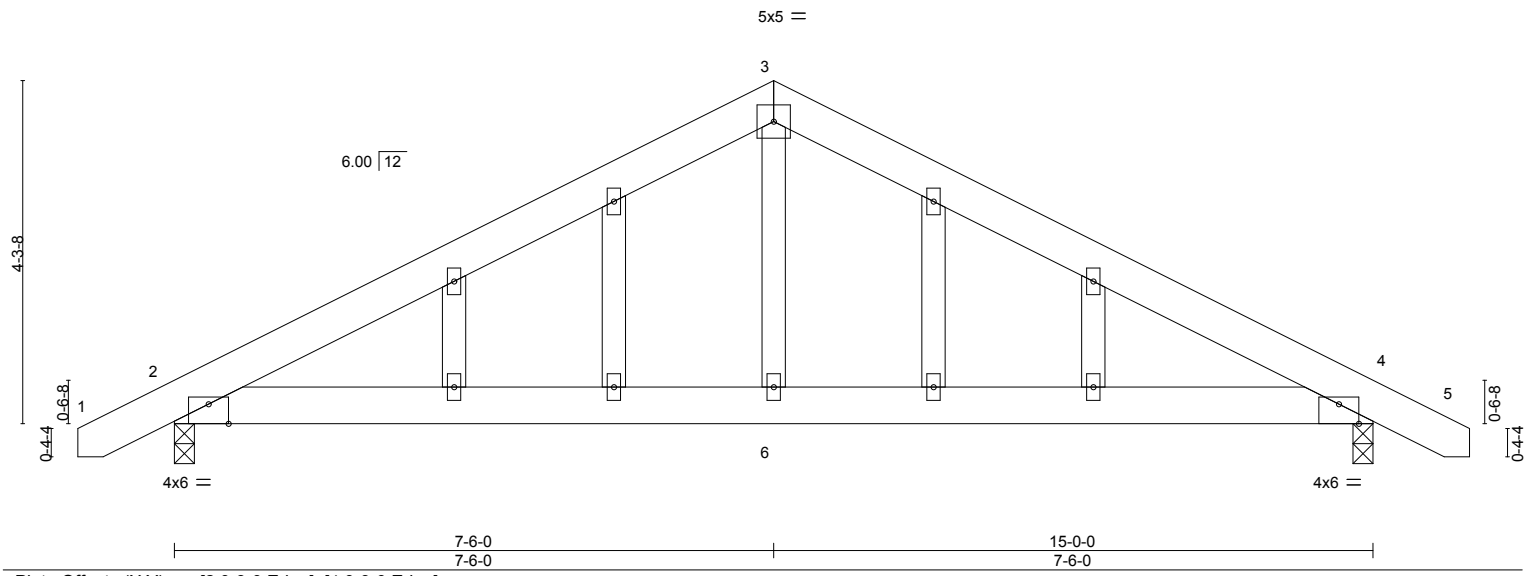


Plate Offsets (X,Y)-- [2:0-3-0,Edge], [4:0-3-0,Edge]

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.25	Vert(LL)	0.05	4-6	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.21	Vert(CT)	-0.04	2-6	>999		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.10	Horz(CT)	0.01	4	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S					Weight: 97 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 9-4-8 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=-86(LC 13)
 Max Uplift 2=-176(LC 9), 4=-176(LC 8)
 Max Grav 2=661(LC 1), 4=661(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 2-3=-830/878, 3-4=-830/878
 BOT CHORD 2-6=-642/650, 4-6=-642/650
 WEBS 3-6=-454/355

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
 - 4) 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.
 - 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=176, 4=176.



September 13, 2024

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Job J0524-2976	Truss P2	Truss Type COMMON	Qty 4	Ply 1	Lot 86 Magnolia Hills 168178963
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Comtech, Inc. Fayetteville, NC - 28314,

8.630 s Jul 12 2024 MiTek Industries, Inc. Thu Sep 12 11:08:28 2024 Page 1
ID:9fna8k_aSfLEiCiAbt3H8pzSXOz-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Job Reference (optional)



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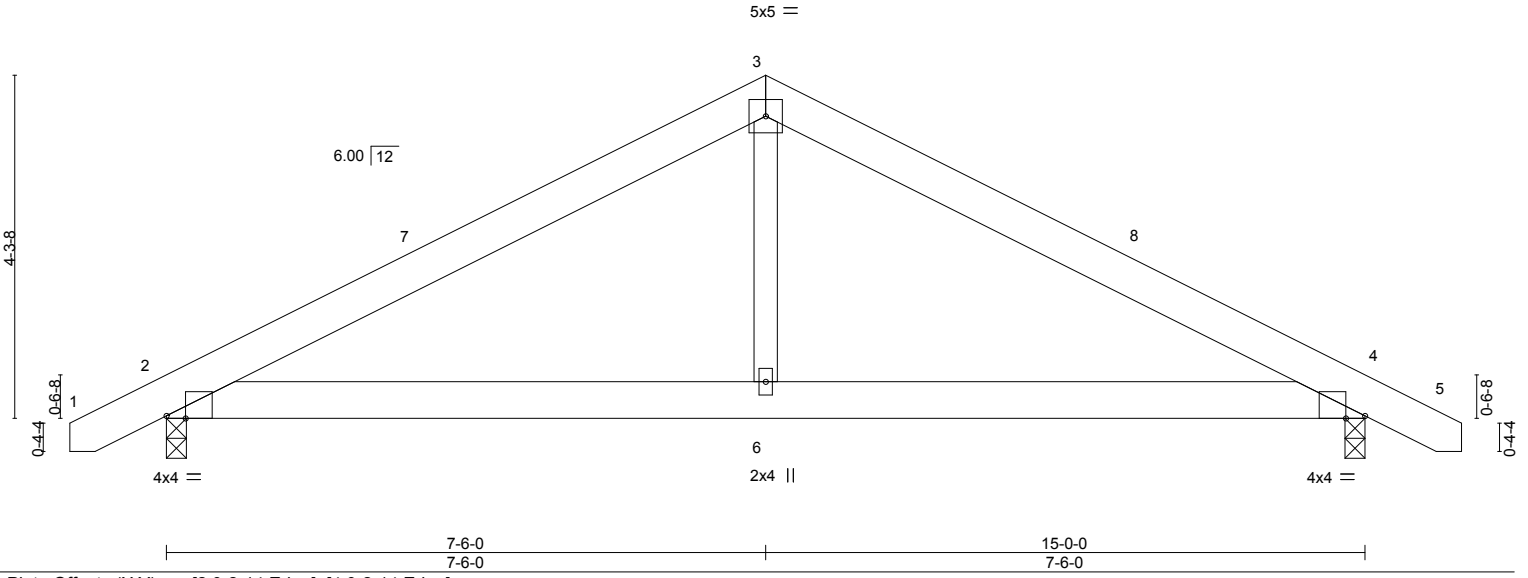


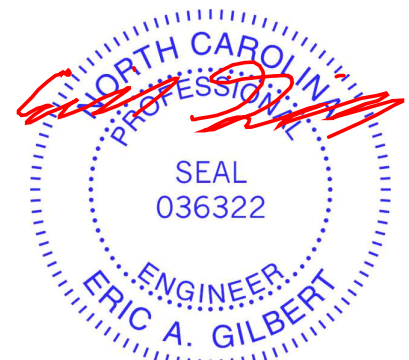
Plate Offsets (X,Y)--	[2:0-2-14,Edge], [4:0-2-14,Edge]				
LOADING (psf)	SPACING- 2-0-0	CSI.	DEFL. in (loc) l/defl L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.15	TC 0.25	Vert(LL) 0.05 4-6 >999 240	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.21	Vert(CT) -0.04 2-6 >999 240		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.10	Horz(CT) 0.01 4 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-S		Weight: 86 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 9-8-14 oc bracing.
WEBS 2x4 SP No.2	

REACTIONS. (size) 2=0-3-0, 4=0-3-0
 Max Horz 2=-56(LC 10)
 Max Uplift 2=-135(LC 9), 4=-135(LC 8)
 Max Grav 2=661(LC 1), 4=661(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 2-3=-830/815, 3-4=-830/810
 BOT CHORD 2-6=-594/650, 4-6=-594/650
 WEBS 3-6=-446/355

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-0-10 to 3-4-3, Interior(1) 3-4-3 to 7-6-0, Exterior(2) 7-6-0 to 11-10-13, Interior(1) 11-10-13 to 16-0-10 zone; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - 3) 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) except (jt=lb) 2=135, 4=135.



September 13, 2024

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Job J0524-2976	Truss VB1	Truss Type VALLEY	Qty 1	Ply 1	Lot 86 Magnolia Hills Job Reference (optional)	168178964
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Comtech, Inc. Fayetteville, NC - 28314,

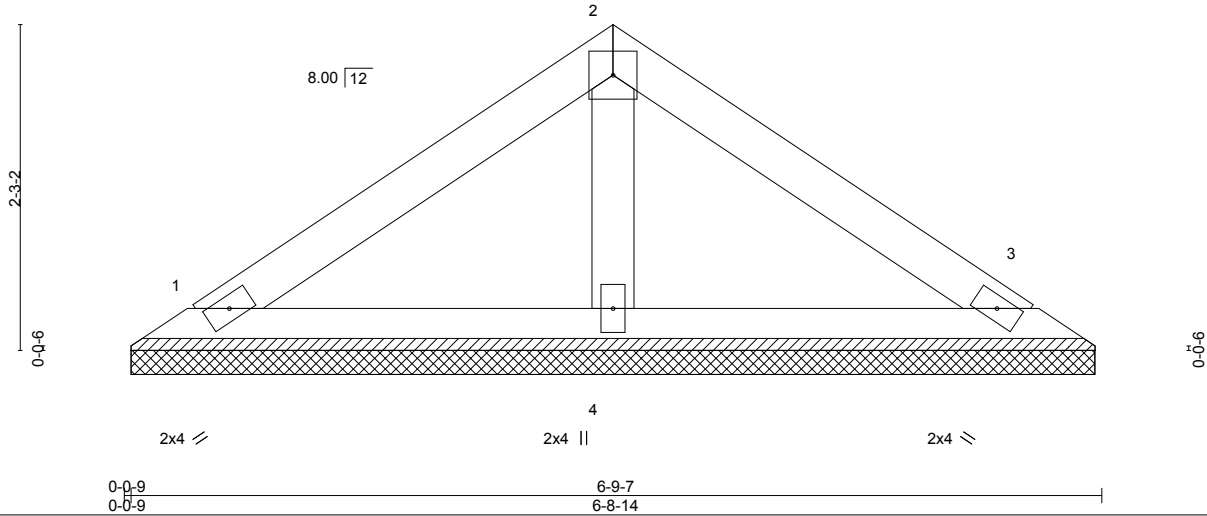
8.630 s Jul 12 2024 MiTek Industries, Inc. Thu Sep 12 11:08:29 2024 Page 1

ID:hxY3pmLvDCe?dFTuxKh62hywwcV-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrcDoi7J4zJC?f



4x4 =

Scale: 3/4"=1'



LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.11	Vert(LL)	n/a	-	n/a	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.06	Vert(CT)	n/a	-	n/a		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.02	Horz(CT)	0.00	3	n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-P					Weight: 23 lb	FT = 20%
	Code IRC2015/TPI2014							

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

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

REACTIONS. (size) 1=6-8-5, 3=6-8-5, 4=6-8-5
 Max Horz 1=47(LC 11)
 Max Uplift 1=20(LC 12), 3=24(LC 13)
 Max Grav 1=126(LC 1), 3=126(LC 1), 4=212(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 7-10; Vult=130mph Vasd=103mph; TCCL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 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.



September 13, 2024

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

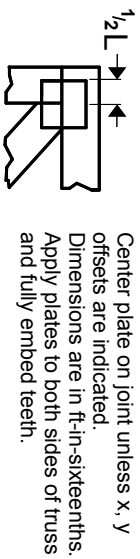
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



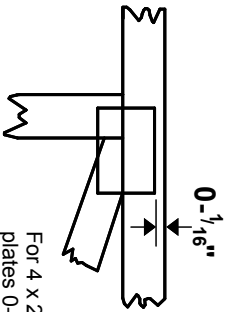
818 Soundside Road
 Edenton, NC 27932

Symbols

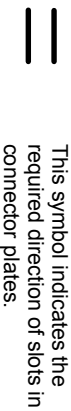
PLATE LOCATION AND ORIENTATION



Center plate on joint unless x, y offsets are indicated. Dimensions are in ft-in-sixteenths. Apply plates to both sides of truss and fully embed teeth.



For 4 x 2 orientation, locate plates 0- $\frac{1}{16}$ \" from outside edge of truss.



This symbol indicates the required direction of slots in connector plates.

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

PLATE SIZE

4 X 4

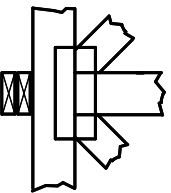
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



Indicated by symbol shown and/or by text in the bracing section of the output. Use T or I bracing if indicated.

BEARING

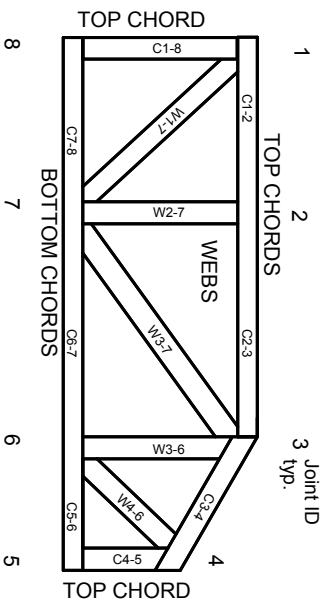


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TFP 1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-22: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



JOINTS ARE GENERALLY NUMBERED/LETTERED CLOCKWISE AROUND THE TRUSS STARTING AT THE JOINT FARTHEST TO THE LEFT.

CHORDS AND WEBS ARE IDENTIFIED BY END JOINT NUMBERS/LETTERS.

Product Code Approvals

ICC-ES Reports:

ESR-1988, ESR-2362, ESR-2685, ESR-3282
ESR-4722, ESL-1388

Design General Notes

Trusses are designed for wind loads in the plane of the truss unless otherwise shown.

Lumber design values are in accordance with ANSI/TFP 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/TFP 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TFP 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TFP 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.

MITek

ENGINEERING BY
TRENGO
A MITek Affiliate

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

Trenco

818 Soundside Rd
Edenton, NC 27932

Re: J0524-2977
Lot 86 Magnolia Hills

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

Pages or sheets covered by this seal: I68178965 thru I68178976

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

North Carolina COA: C-0844



September 13, 2024

Gilbert, Eric

IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which were given to MiTek or TRENCO. Any project specific information included is for MiTek's or TRENCO's customers file reference purpose only, and was not taken into account in the preparation of these designs. MiTek or TRENCO has not independently verified the applicability of the design parameters or the designs for any particular building. Before use, the building designer should verify applicability of design parameters and properly incorporate these designs into the overall building design per ANSI/TPI 1, Chapter 2.

Job J0524-2977	Truss ET1	Truss Type GABLE	Qty 1	Ply 1	Lot 86 Magnolia Hills Job Reference (optional)	168178965
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Comtech, Inc. Fayetteville, NC - 28314,

8.630 s Jul 12 2024 MiTek Industries, Inc. Thu Sep 12 11:08:33 2024 Page 1
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Scale = 1:42.9

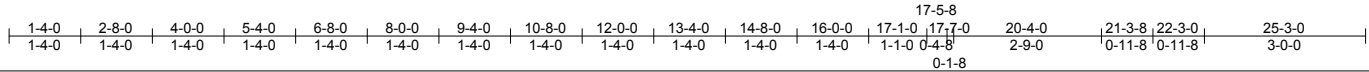
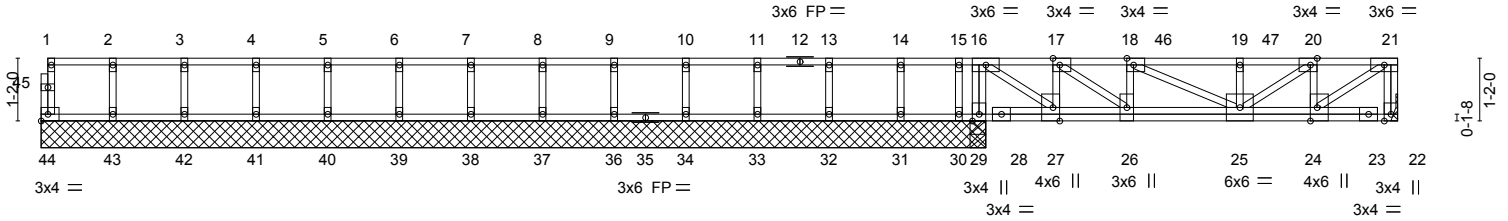


Plate Offsets (X,Y)--	[17:0-1-8,Edge], [18:0-1-8,Edge], [20:0-1-8,Edge], [24:0-3-0,Edge], [27:0-3-0,Edge]				
LOADING (psf)	SPACING- 2-0-0	CSI.	DEFL. in (loc) l/defl L/d	PLATES	GRIP
TCLL 40.0	Plate Grip DOL 1.00	TC 0.21	Vert(LL) -0.01 25 >999 480	MT20	244/190
TCDL 10.0	Lumber DOL 1.00	BC 0.13	Vert(CT) -0.02 25-26 >999 360		
BCLL 0.0	Rep Stress Incr NO	WB 0.37	Horz(CT) 0.00 22 n/a n/a		
BCDL 5.0	Code IRC2015/TPI2014	Matrix-S		Weight: 128 lb	FT = 20%F, 11%E

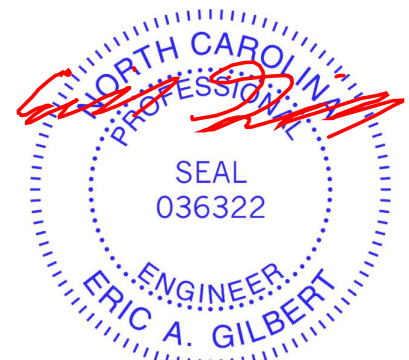
LUMBER-	BRACING-
TOP CHORD 2x4 SP No.1(flat)	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.1(flat)	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 27-29,22-24.
WEBS 2x4 SP No.3(flat)	
OTHERS 2x4 SP No.3(flat)	

REACTIONS. All bearings 17-7-0 except (jt=length) 22=Mechanical.
 (lb) - Max Uplift All uplift 100 lb or less at joint(s) except 30=-138(LC 4)
 Max Grav All reactions 250 lb or less at joint(s) 44, 30, 43, 42, 41, 40, 39, 38, 37, 36, 34, 33, 32, 31 except 22=591(LC 1), 29=711(LC 1), 29=711(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 21-22=-579/0, 16-17=-620/0, 17-18=-1006/0, 18-19=-1001/0, 19-20=-1001/0, 20-21=-648/0
 BOT CHORD 26-27=0/620, 25-26=0/1006, 24-25=0/648
 WEBS 16-29=-596/0, 16-27=0/748, 17-27=-443/0, 17-26=0/473, 21-24=0/784, 20-24=-423/0, 20-25=0/434

- NOTES-**
- 1) Unbalanced floor live loads have been considered for this design.
 - 2) All plates are 1.5x3 MT20 unless otherwise indicated.
 - 3) Plates checked for a plus or minus 1 degree rotation about its center.
 - 4) Gable studs spaced at 1-4-0 oc.
 - 5) Refer to girder(s) for truss to truss connections.
 - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 138 lb uplift at joint 30.
 - 7) 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.
 - 8) 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: 22-44=-10, 1-21=-100
 Concentrated Loads (lb)
 Vert: 17=-72 21=-80 46=-72 47=-72



September 13, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TP1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

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

Job	Truss	Truss Type	Qty	Ply	Lot 86 Magnolia Hills	68178966
J0524-2977	ET2	GABLE	1	1	Job Reference (optional)	

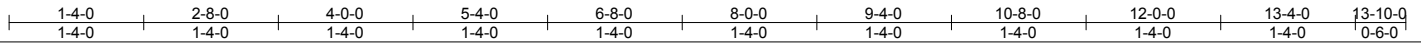
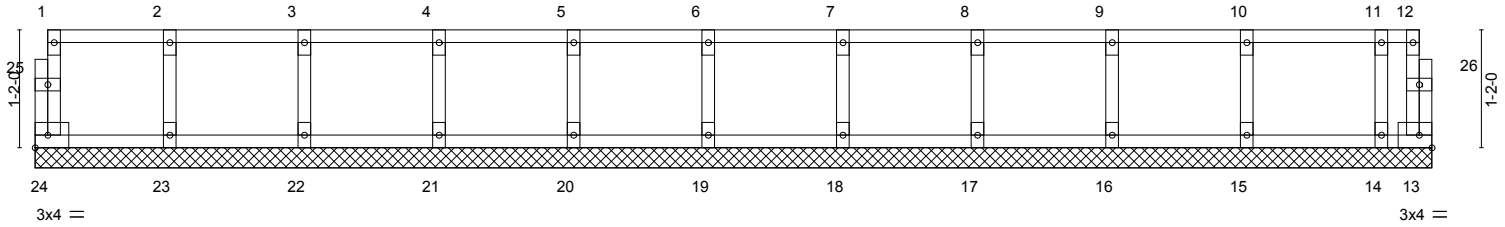
Comtech, Inc. Fayetteville, NC - 28314,

8.630 s Jul 12 2024 MiTek Industries, Inc. Thu Sep 12 11:08:34 2024 Page 1
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0₁8

0₁8

Scale = 1:22.8



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	MT20	244/190
TCDL 10.0	Lumber DOL	1.00	BC 0.02	Vert(CT)	n/a	-	n/a		
BCLL 0.0	Rep Stress Incr	YES	WB 0.03	Horz(CT)	0.00	13	n/a		
BCDL 5.0	Code IRC2015/TPI2014		Matrix-R					Weight: 59 lb	FT = 20%F, 11%E

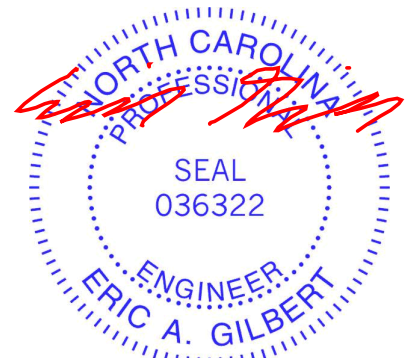
LUMBER-
 TOP CHORD 2x4 SP No.1(flat)
 BOT CHORD 2x4 SP No.1(flat)
 WEBS 2x4 SP No.3(flat)
 OTHERS 2x4 SP No.3(flat)

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

REACTIONS. All bearings 13-10-0.
 (lb) - Max Grav All reactions 250 lb or less at joint(s) 24, 13, 23, 22, 21, 20, 19, 18, 17, 16, 15, 14

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.



September 13, 2024

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

Job J0524-2977	Truss ET3	Truss Type GABLE	Qty 1	Ply 1	Lot 86 Magnolia Hills Job Reference (optional)	I68178967
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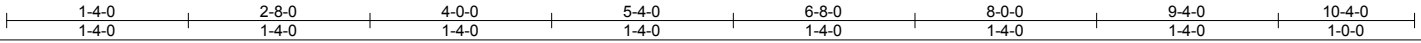
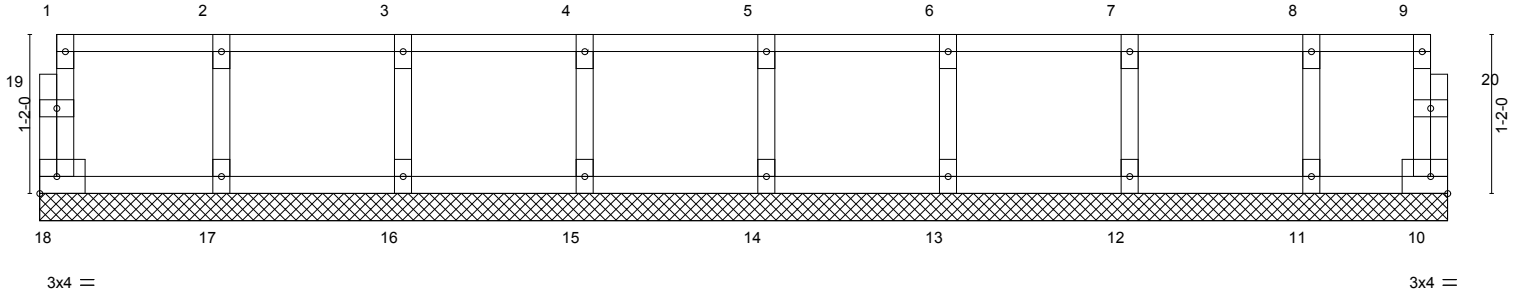
Comtech, Inc. Fayetteville, NC - 28314,

8.630 s Jul 12 2024 MiTek Industries, Inc. Thu Sep 12 11:08:34 2024 Page 1
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0r1-8

0r1-8

Scale = 1:16.9



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	10	n/a	n/a		
BCDL 5.0	Code IRC2015/TPI2014		Matrix-R							
									Weight: 45 lb	FT = 20%F, 11%E

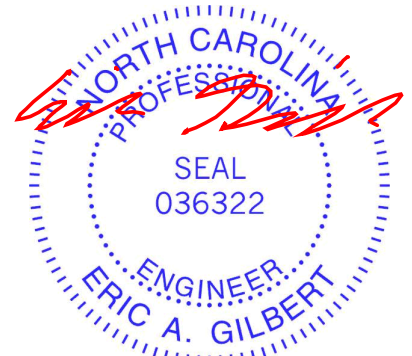
LUMBER-
TOP CHORD 2x4 SP No.1(flat)
BOT CHORD 2x4 SP No.1(flat)
WEBS 2x4 SP No.3(flat)
OTHERS 2x4 SP No.3(flat)

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

REACTIONS. All bearings 10-4-0.
(lb) - Max Grav All reactions 250 lb or less at joint(s) 18, 10, 17, 16, 15, 14, 13, 12, 11

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.



September 13, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TP1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

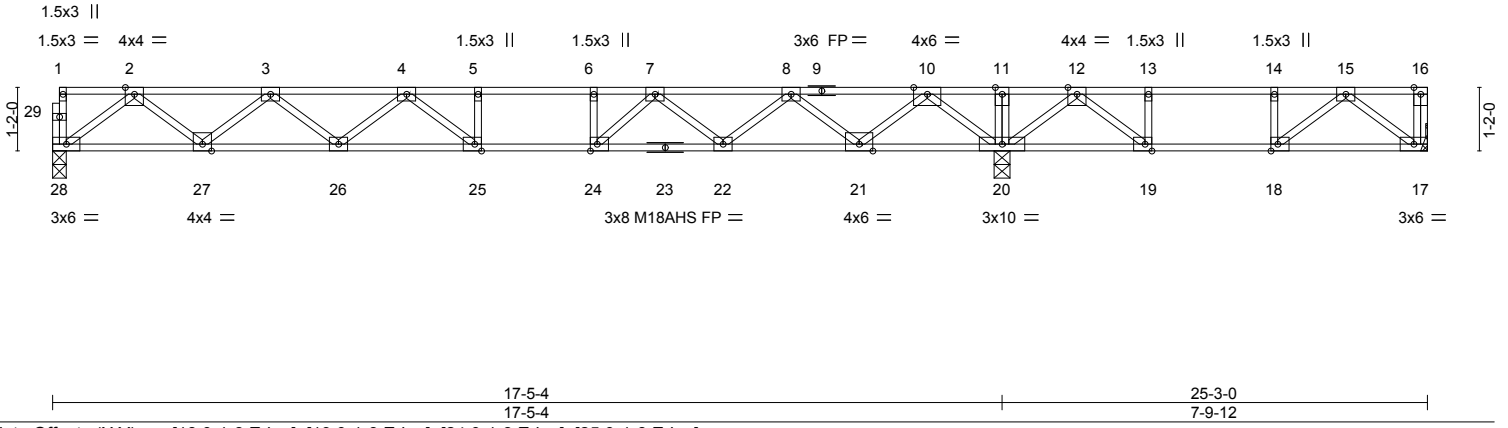


818 Soundside Road
Edenton, NC 27932

Job J0524-2977	Truss F1	Truss Type Floor	Qty 8	Ply 1	Lot 86 Magnolia Hills Job Reference (optional)	168178968
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Comtech, Inc. Fayetteville, NC - 28314,

8.630 s Jul 12 2024 MiTek Industries, Inc. Thu Sep 12 11:08:35 2024 Page 1
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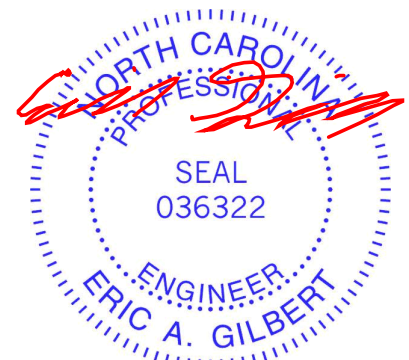
LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 40.0	Plate Grip DOL 1.00	TC 0.72	in (loc) l/defl L/d	MT20 244/190	
TCDL 10.0	Lumber DOL 1.00	BC 0.86	Vert(LL) -0.25 25-26 >830 480	M18AHS 186/179	
BCLL 0.0	Rep Stress Incr YES	WB 0.58	Vert(CT) -0.34 25-26 >604 360		
BCDL 5.0	Code IRC2015/TPI2014	Matrix-S	Horz(CT) 0.05 20 n/a n/a		
				Weight: 125 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) 28=0-3-0, 17=Mechanical, 20=0-3-8
 Max Uplift 17=-47(LC 3)
 Max Grav 28=879(LC 10), 17=366(LC 4), 20=1624(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 2-3=-1833/0, 3-4=-2940/0, 4-5=-3350/0, 5-6=-3350/0, 6-7=-3350/0, 7-8=-2466/0, 8-10=-1071/0, 10-11=0/1363, 11-12=0/1363, 12-13=-536/389, 13-14=-536/389, 14-15=-536/389
 BOT CHORD 27-28=0/1094, 26-27=0/2544, 25-26=0/3283, 24-25=0/3350, 22-24=0/3000, 21-22=0/1934, 19-20=-856/119, 18-19=-389/536, 17-18=-100/385
 WEBS 2-28=-1370/0, 2-27=0/961, 3-27=-926/0, 3-26=0/516, 4-26=-446/0, 4-25=-216/422, 6-24=-369/0, 15-17=-484/126, 15-18=-368/192, 12-20=-837/0, 10-20=-1586/0, 10-21=0/1212, 8-21=-1151/0, 8-22=0/717, 7-22=-725/0, 7-24=0/747, 12-19=0/884, 13-19=-425/0

- NOTES-**
- 1) Unbalanced floor live loads have been considered for this design.
 - 2) All plates are MT20 plates unless otherwise indicated.
 - 3) All plates are 3x4 MT20 unless otherwise indicated.
 - 4) Plates checked for a plus or minus 1 degree rotation about its center.
 - 5) Refer to girder(s) for truss to truss connections.
 - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 47 lb uplift at joint 17.
 - 7) 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.
 - 8) CAUTION, Do not erect truss backwards.



September 13, 2024

<p>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.</p> <p>Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see 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)</p>	<p>ENGINEERING BY</p> <p>A MiTek Affiliate</p> <p>818 Soundside Road Edenton, NC 27932</p>
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Job J0524-2977	Truss F2	Truss Type Floor	Qty 5	Ply 1	Lot 86 Magnolia Hills Job Reference (optional)	168178969
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Comtech, Inc. Fayetteville, NC - 28314,

8.630 s Jul 12 2024 MiTek Industries, Inc. Thu Sep 12 11:08:35 2024 Page 1

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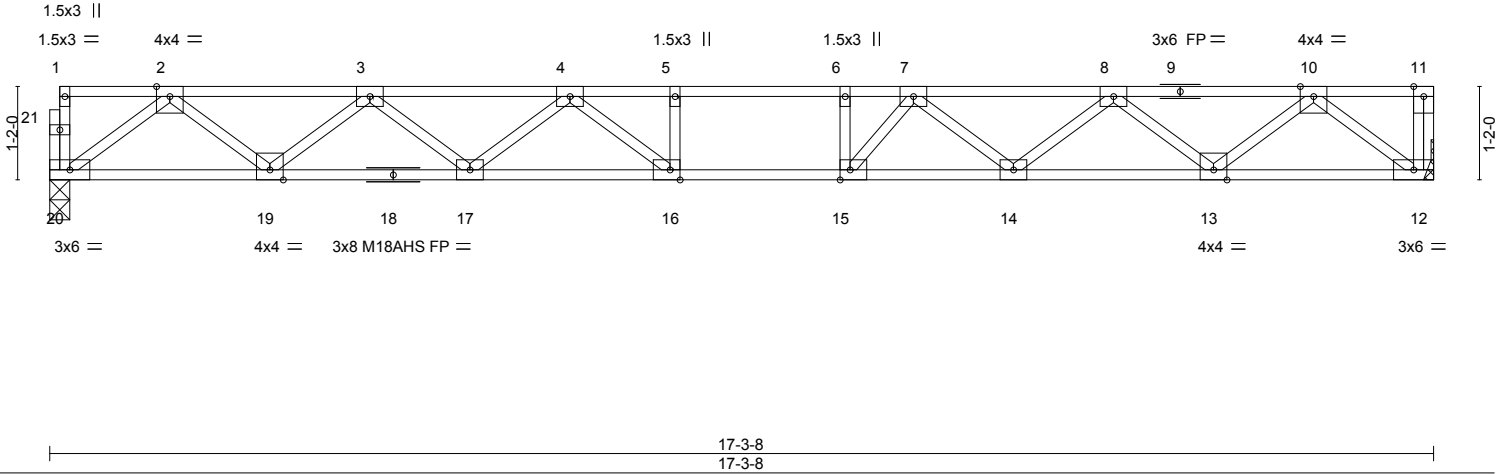
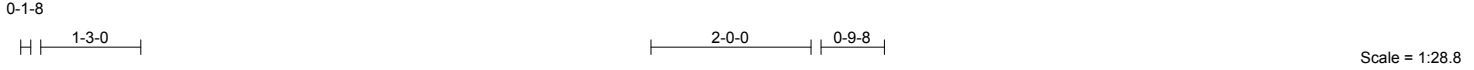


Plate Offsets (X,Y)--	[15:0-1-8,Edge], [16:0-1-8,Edge]				
LOADING (psf)	SPACING- 2-0-0	CSI.	DEFL. in (loc) l/defl L/d	PLATES	GRIP
TCLL 40.0	Plate Grip DOL 1.00	TC 0.55	Vert(LL) -0.23 16 >886 480	MT20	244/190
TCDL 10.0	Lumber DOL 1.00	BC 0.48	Vert(CT) -0.32 16 >644 360	M18AHS	186/179
BCLL 0.0	Rep Stress Incr YES	WB 0.50	Horz(CT) 0.05 12 n/a n/a		
BCDL 5.0	Code IRC2015/TPI2014	Matrix-S		Weight: 86 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 2400F 2.0E(flat)	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3(flat)	

REACTIONS. (size) 20=0-3-0, 12=Mechanical
Max Grav 20=931(LC 1), 12=937(LC 1)

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

TOP CHORD 2-3=-1964/0, 3-4=-3187/0, 4-5=-3783/0, 5-6=-3783/0, 6-7=-3783/0, 7-8=-3178/0, 8-10=-1967/0

BOT CHORD 19-20=0/1163, 17-19=0/2735, 16-17=0/3601, 15-16=0/3783, 14-15=0/3608, 13-14=0/2734, 12-13=0/1164

WEBS 2-20=-1456/0, 2-19=0/1044, 3-19=-1004/0, 3-17=0/588, 4-17=-538/0, 4-16=-106/569, 5-16=-253/0, 6-15=-343/11, 10-12=-1460/0, 10-13=0/1045, 8-13=-998/0, 8-14=0/579, 7-14=-559/0, 7-15=-99/610

- NOTES-**
- 1) Unbalanced floor live loads have been considered for this design.
 - 2) All plates are MT20 plates unless otherwise indicated.
 - 3) All plates are 3x4 MT20 unless otherwise indicated.
 - 4) Plates checked for a plus or minus 1 degree rotation about its center.
 - 5) Refer to girder(s) for truss to truss connections.
 - 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.
 - 7) CAUTION, Do not erect truss backwards.



September 13, 2024

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ENGINEERING BY
TRENCO
A MiTek Affiliate

818 Soundside Road
Edenton, NC 27932

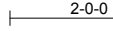
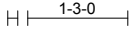
Job J0524-2977	Truss F3	Truss Type Floor	Qty 1	Ply 1	Lot 86 Magnolia Hills 168178970
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Comtech, Inc. Fayetteville, NC - 28314,

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ID:hxY3pmLvDCe?dFTuxKh62hywwcV-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

0-1-8



Scale = 1:28.8

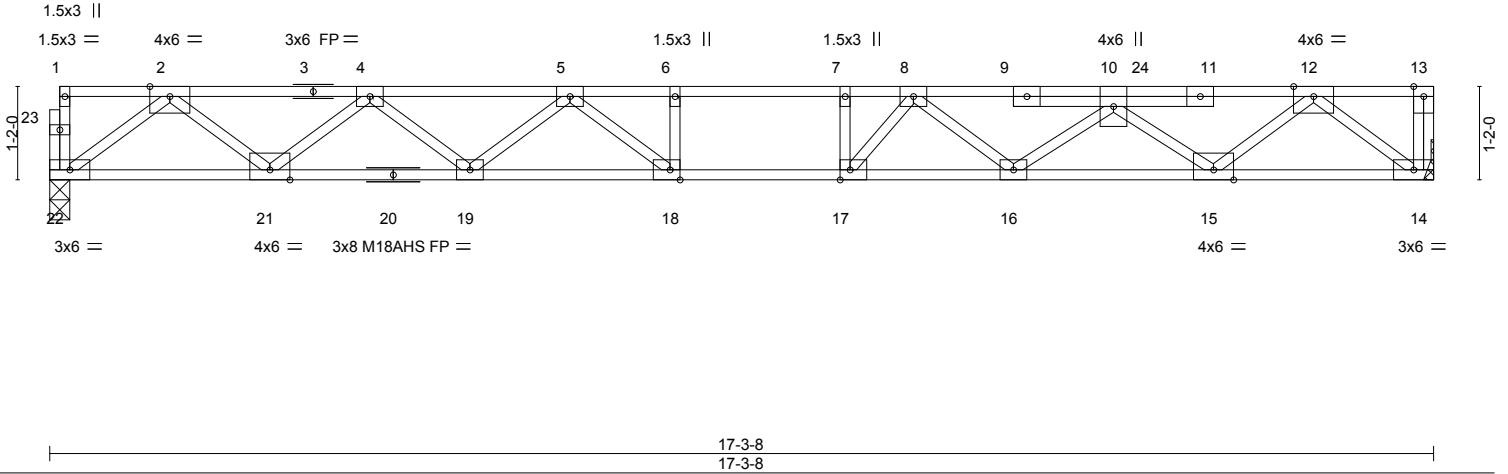


Plate Offsets (X, Y)--	[17:0-1-8,Edge], [18:0-1-8,Edge]						
LOADING (psf)	SPACING- 2-0-0	CSI.	DEFL. in (loc) l/defl L/d	PLATES	GRIP		
TCLL 40.0	Plate Grip DOL 1.00	TC 0.59	Vert(LL) -0.24 17 >835 480	MT20	244/190		
TCDL 10.0	Lumber DOL 1.00	BC 0.66	Vert(CT) -0.34 17 >602 360	M18AHS	186/179		
BCLL 0.0	Rep Stress Incr NO	WB 0.72	Horz(CT) 0.06 14 n/a n/a			Weight: 90 lb	FT = 20%F, 11%E
BCDL 5.0	Code IRC2015/TPI2014	Matrix-S					

LUMBER-

TOP CHORD 2x4 SP 2400F 2.0E(flat)
 BOT CHORD 2x4 SP 2400F 2.0E(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) 22=0-3-0, 14=Mechanical
 Max Grav 22=1013(LC 1), 14=1256(LC 1)

FORCES.

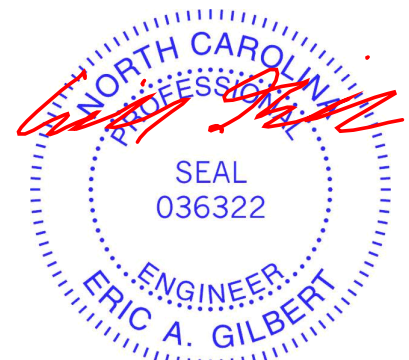
(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 2-4=-2172/0, 4-5=-3574/0, 5-6=-4464/0, 6-7=-4464/0, 7-8=-4464/0, 8-10=-4203/0, 10-12=-2768/0
 BOT CHORD 21-22=0/1270, 19-21=0/3037, 18-19=0/4102, 17-18=0/4464, 16-17=0/4380, 15-16=0/3951, 14-15=0/1588
 WEBS 2-22=-1590/0, 2-21=0/1174, 4-21=-1125/0, 4-19=0/700, 5-19=-686/0, 5-18=0/804, 6-18=-356/0, 7-17=-270/89, 12-14=-1993/0, 12-15=0/1509, 10-15=-1528/0, 10-16=0/313, 8-17=-259/413

NOTES-

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All plates are MT20 plates unless otherwise indicated.
- 3) All plates are 3x4 MT20 unless otherwise indicated.
- 4) Plates checked for a plus or minus 1 degree rotation about its center.
- 5) Refer to girder(s) for truss to truss connections.
- 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.
- 7) CAUTION, Do not erect truss backwards.
- 8) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 480 lb down at 13-8-4 on top chord. The design/selection of such connection device(s) is the responsibility of others.
- 9) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard

- 1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00
 Uniform Loads (plf)
 Vert: 14-22=-10, 1-13=-100
 Concentrated Loads (lb)
 Vert: 24=-400(B)



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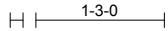


Job J0524-2977	Truss F4	Truss Type Floor	Qty 1	Ply 1	Lot 86 Magnolia Hills Job Reference (optional)	68178971
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Comtech, Inc. Fayetteville, NC - 28314,

8.630 s Jul 12 2024 MiTek Industries, Inc. Thu Sep 12 11:08:36 2024 Page 1
ID:hxY3pmLvDCe?dFTuxKh62hywwcV-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

0-1-8



Scale = 1:22.4

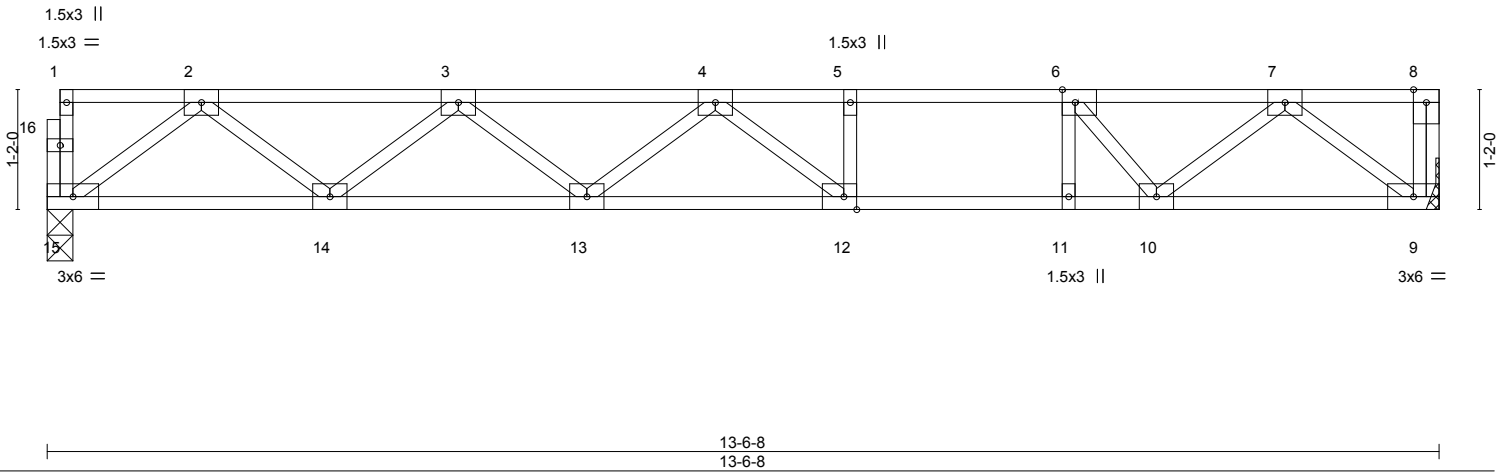


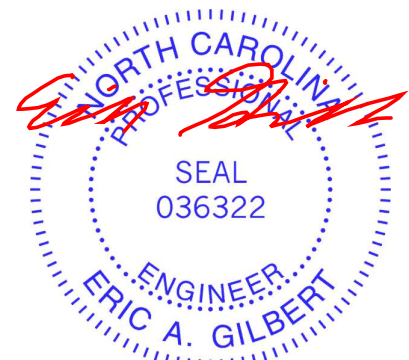
Plate Offsets (X, Y)--	[6:0-1-8,Edge], [12:0-1-8,Edge]								
LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 40.0	Plate Grip DOL 1.00		TC 0.47	Vert(LL) -0.18	12-13	>874	480	MT20	244/190
TCDL 10.0	Lumber DOL 1.00		BC 0.65	Vert(CT) -0.25	12-13	>642	360		
BCLL 0.0	Rep Stress Incr YES		WB 0.40	Horz(CT) 0.02	9	n/a	n/a		
BCDL 5.0	Code IRC2015/TPI2014		Matrix-S					Weight: 68 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) 15=0-3-0, 9=Mechanical
Max Grav 15=725(LC 1), 9=731(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1440/0, 3-4=-2207/0, 4-5=-2072/0, 5-6=-2072/0, 6-7=-1495/0
BOT CHORD 14-15=0/890, 13-14=0/1975, 12-13=0/2333, 11-12=0/2072, 10-11=0/2072, 9-10=0/844
WEBS 2-15=-1114/0, 2-14=0/715, 3-14=-697/0, 3-13=0/302, 4-12=-438/111, 6-11=0/359, 7-9=-1059/0, 7-10=0/848, 6-10=-921/0

- 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.



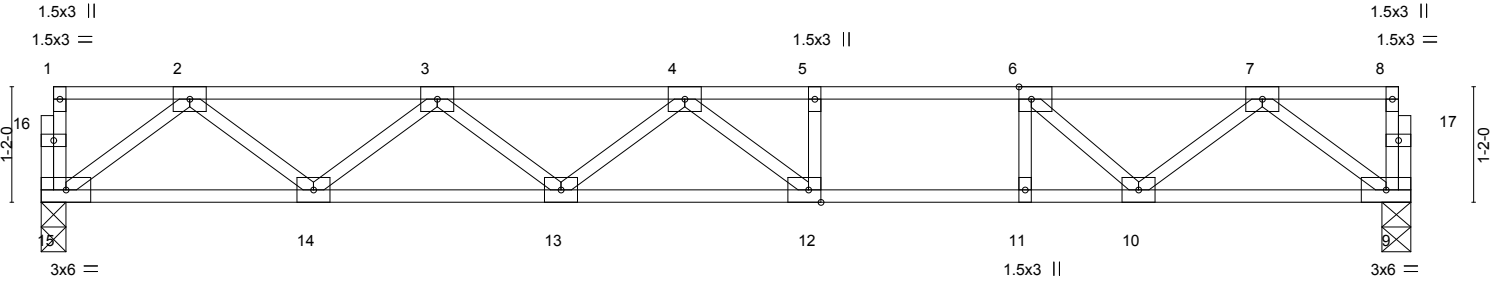
September 13, 2024

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Job J0524-2977	Truss F5	Truss Type Floor	Qty 4	Ply 1	Lot 86 Magnolia Hills Job Reference (optional)	168178972
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13-10-0
13-10-0

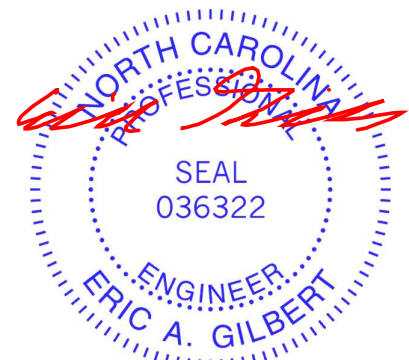
Plate Offsets (X,Y)--	[6:0-1-8,Edge], [12:0-1-8,Edge]						
LOADING (psf)	SPACING- 2-0-0	CSI.	DEFL. in (loc) l/defl L/d	PLATES	GRIP		
TCLL 40.0	Plate Grip DOL 1.00	TC 0.46	Vert(LL) -0.19 12-13 >872 480	MT20	244/190		
TCDL 10.0	Lumber DOL 1.00	BC 0.62	Vert(CT) -0.25 12-13 >643 360				
BCLL 0.0	Rep Stress Incr YES	WB 0.39	Horz(CT) 0.03 9 n/a n/a				
BCDL 5.0	Code IRC2015/TPI2014	Matrix-S					Weight: 69 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) 15=0-3-0, 9=0-3-8
Max Grav 15=741(LC 1), 9=741(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1481/0, 3-4=-2283/0, 4-5=-2202/0, 5-6=-2202/0, 6-7=-1508/0
BOT CHORD 14-15=0/912, 13-14=0/2034, 12-13=0/2433, 11-12=0/2202, 10-11=0/2202, 9-10=0/873
WEBS 2-15=-1141/0, 2-14=0/741, 3-14=-720/0, 3-13=0/324, 4-12=-418/145, 6-11=0/291, 7-9=-1090/0, 7-10=0/827, 6-10=-938/0

- NOTES-**
- 1) Unbalanced floor live loads have been considered for this design.
 - 2) All plates are 3x4 MT20 unless otherwise indicated.
 - 3) Plates checked for a plus or minus 1 degree rotation about its center.
 - 4) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.



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Job J0524-2977	Truss F6	Truss Type Floor	Qty 2	Ply 1	Lot 86 Magnolia Hills Job Reference (optional)	168178973
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8.630 s Jul 12 2024 MiTek Industries, Inc. Thu Sep 12 11:08:36 2024 Page 1
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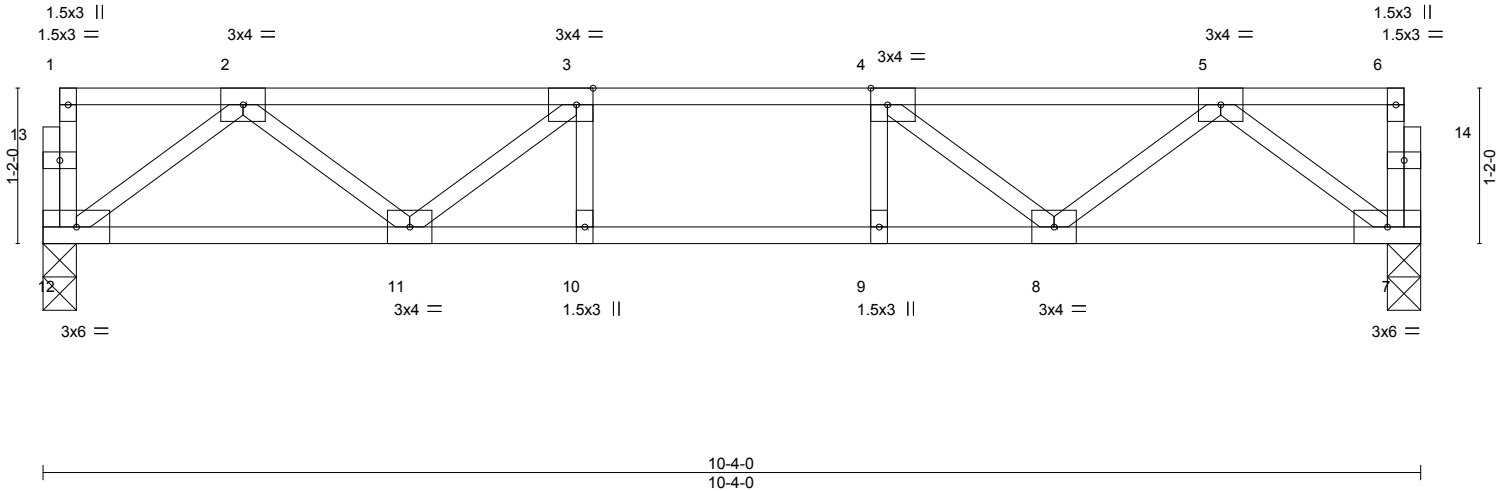
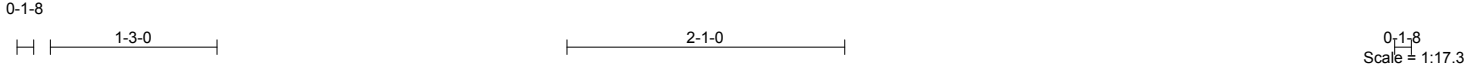


Plate Offsets (X,Y)-- [3:0-1-8,Edge], [4:0-1-8,Edge]

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 40.0	Plate Grip DOL	1.00	TC 0.24	Vert(LL)	-0.06	10-11	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.00	BC 0.42	Vert(CT)	-0.07	10	>999		
BCLL 0.0	Rep Stress Incr	YES	WB 0.21	Horz(CT)	0.01	7	n/a		
BCDL 5.0	Code IRC2015/TPI2014		Matrix-S						
								Weight: 52 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) 12=0-3-0, 7=0-3-0
Max Grav 12=548(LC 1), 7=548(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-999/0, 3-4=-1319/0, 4-5=-999/0
BOT CHORD 11-12=0/666, 10-11=0/1319, 9-10=0/1319, 8-9=0/1319, 7-8=0/666
WEBS 2-12=-833/0, 2-11=0/434, 3-11=-449/0, 5-7=-833/0, 5-8=0/434, 4-8=-449/0

NOTES-
1) Unbalanced floor live loads have been considered for this design.
2) Plates checked for a plus or minus 1 degree rotation about its center.
3) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.



Job J0524-2977	Truss F7	Truss Type Floor	Qty 4	Ply 1	Lot 86 Magnolia Hills Job Reference (optional)	168178974
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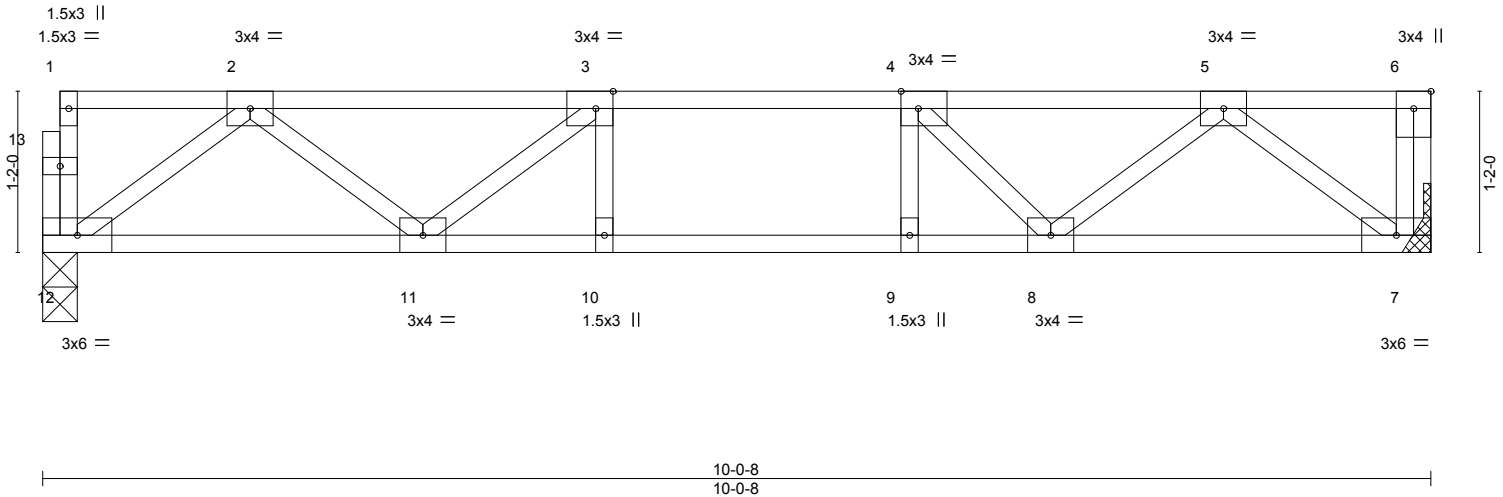
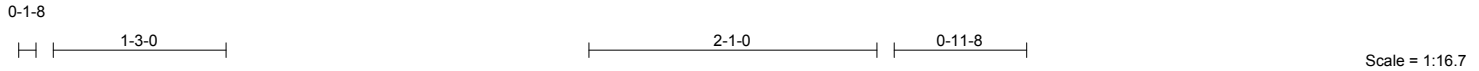


Plate Offsets (X, Y)--	[3:0-1-8,Edge], [4:0-1-8,Edge]				
LOADING (psf)	SPACING- 2-0-0	CSI.	DEFL. in (loc) l/defl L/d	PLATES	GRIP
TCLL 40.0	Plate Grip DOL 1.00	TC 0.28	Vert(LL) -0.06 10-11 >999 480	MT20	244/190
TCDL 10.0	Lumber DOL 1.00	BC 0.44	Vert(CT) -0.07 10 >999 360		
BCLL 0.0	Rep Stress Incr YES	WB 0.21	Horz(CT) 0.01 7 n/a n/a		
BCDL 5.0	Code IRC2015/TPI2014	Matrix-S			
				Weight: 51 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) 12=0-3-0, 7=Mechanical
Max Grav 12=532(LC 1), 7=539(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-959/0, 3-4=-1240/0, 4-5=-971/0
BOT CHORD 11-12=0/648, 10-11=0/1240, 9-10=0/1240, 8-9=0/1240, 7-8=0/633
WEBS 2-12=-811/0, 2-11=0/405, 3-11=-402/0, 5-7=-794/0, 5-8=0/440, 4-8=-432/0

- 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.



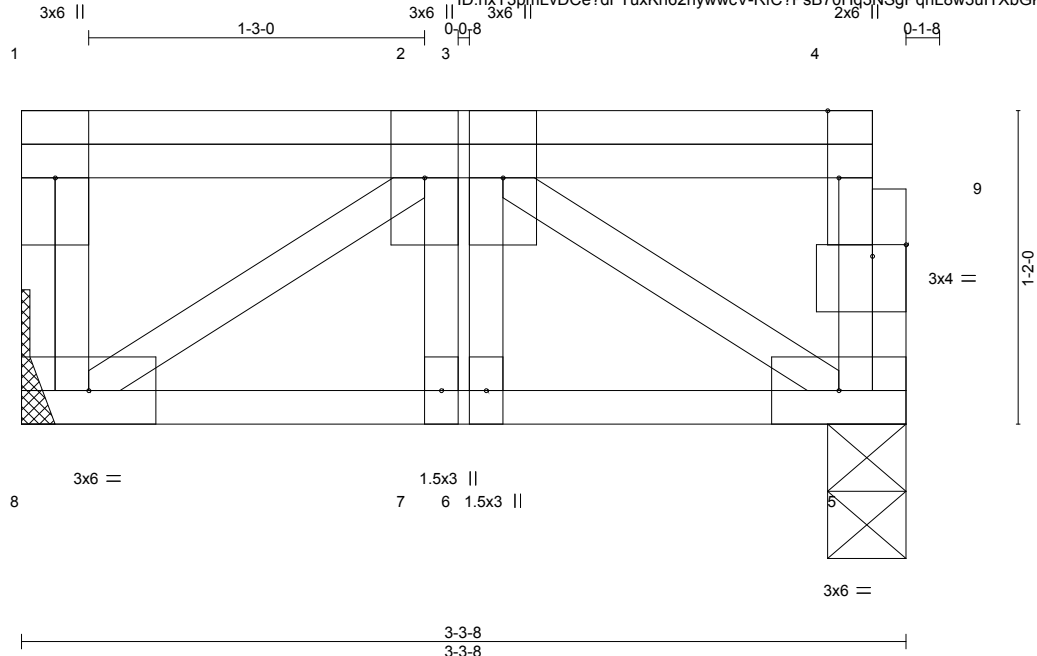
September 13, 2024

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Job J0524-2977	Truss F8	Truss Type FLOOR GIRDER	Qty 1	Ply 1	Lot 86 Magnolia Hills Job Reference (optional)	168178975
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Scale = 1:8.6

Plate Offsets (X,Y)--	[4:0-3-0,Edge], [9:0-1-8,0-0-8]
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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)	-0.00	7	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.00	BC 0.15	Vert(CT)	-0.01	7	>999		
BCLL 0.0	Rep Stress Incr	NO	WB 0.16	Horz(CT)	0.00	5	n/a		
BCDL 5.0	Code IRC2015/TPI2014		Matrix-S						
								Weight: 26 lb	FT = 20%F, 11%E

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

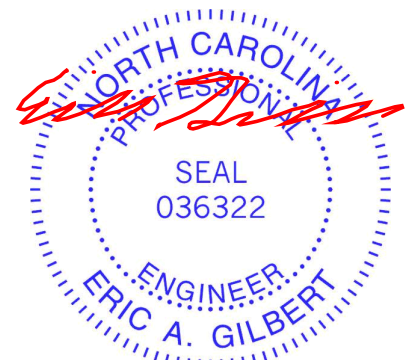
REACTIONS. (size) 8=Mechanical, 5=0-3-8
Max Grav 8=500(LC 1), 5=459(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-578/0
BOT CHORD 7-8=0/578, 6-7=0/578, 5-6=0/578
WEBS 2-8=-700/0, 3-5=-695/0

- 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) 676 lb down at 1-10-4 on top chord. The design/selection of such connection device(s) is the responsibility of others.
 - 7) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard

- 1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (plf)
Vert: 5-8=10, 1-4=-100
Concentrated Loads (lb)
Vert: 2=-631(B)

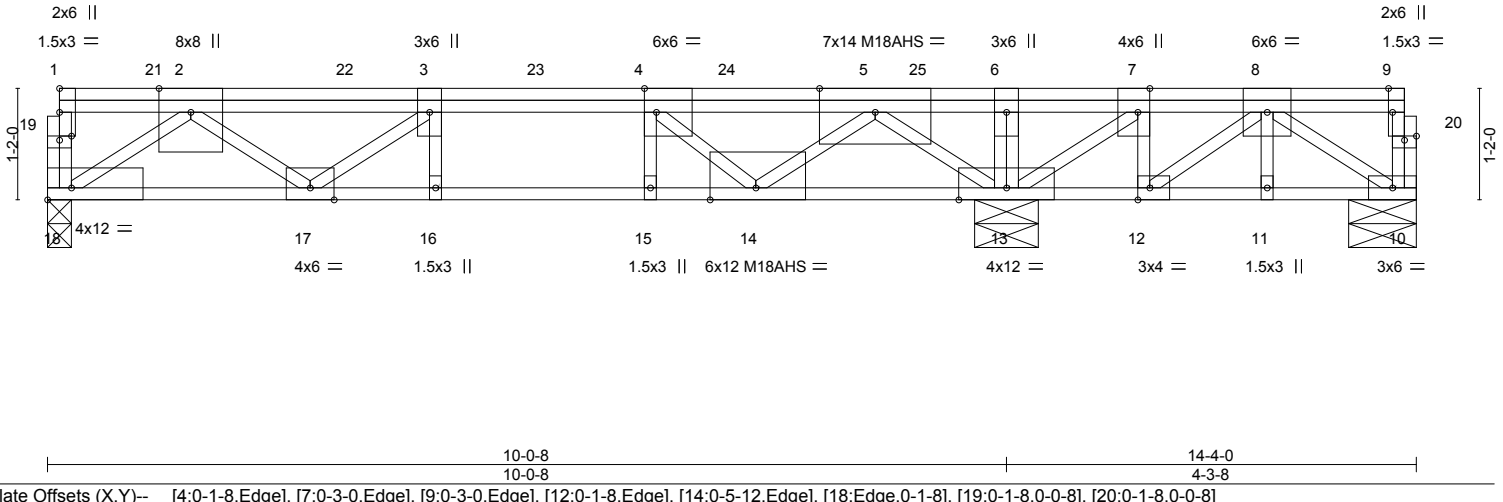
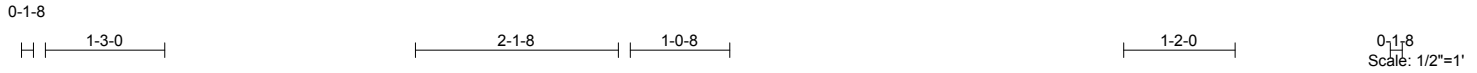


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Job J0524-2977	Truss F9	Truss Type FLOOR GIRDER	Qty 1	Ply 1	Lot 86 Magnolia Hills Job Reference (optional)	168178976
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8.630 s Jul 12 2024 MiTek Industries, Inc. Thu Sep 12 11:08:38 2024 Page 1
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LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 40.0	2-0-0	TC 0.60	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.00	BC 0.85	Vert(LL) -0.13 16 >904 480	M18AHS	186/179
BCLL 0.0	Lumber DOL 1.00	WB 0.97	Vert(CT) -0.18 16 >653 360		
BCDL 5.0	Rep Stress Incr NO	Matrix-S	Horz(CT) 0.04 13 n/a n/a		
	Code IRC2015/TPI2014			Weight: 94 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP 2400F 2.0E(flat)
BOT CHORD 2x4 SP 2400F 2.0E(flat)
WEBS 2x4 SP No.3(flat) *Except*
5-14: 2x4 SP No.2(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 6-0-0 oc bracing.

REACTIONS. (size) 18=0-3-0, 10=0-8-8, 13=0-8-0
Max Uplift 10=-195(LC 3)
Max Grav 18=2302(LC 3), 13=4644(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-4136/0, 3-4=-5059/0, 4-5=-2994/0, 5-6=0/2644, 6-7=0/2644, 7-8=0/763
BOT CHORD 17-18=0/3120, 16-17=0/5059, 15-16=0/5059, 14-15=0/5059, 13-14=0/786, 12-13=-763/0,
11-12=-285/0, 10-11=-285/0
WEBS 2-18=-3825/0, 2-17=0/1291, 3-17=-1151/0, 5-13=-4141/0, 5-14=0/2812, 4-14=-2767/0,
8-10=0/344, 7-13=-2342/0, 7-12=0/362, 6-13=-863/0, 8-12=-663/0

- NOTES-**
- 1) Unbalanced floor live loads have been considered for this design.
 - 2) All plates are MT20 plates unless otherwise indicated.
 - 3) Plates checked for a plus or minus 1 degree rotation about its center.
 - 4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 195 lb uplift at joint 10.
 - 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) 917 lb down at 1-2-4, 917 lb down at 3-2-4, 917 lb down at 5-2-4, 917 lb down at 7-2-4, and 911 lb down at 11-2-4 on top chord. The design/selection of such connection device(s) is the responsibility of others.
 - 8) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

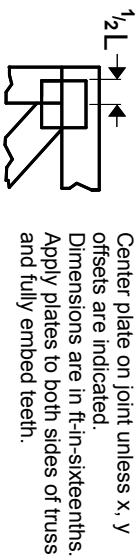
LOAD CASE(S) Standard
1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (plf)
Vert: 10-18=-10, 1-9=-100
Concentrated Loads (lb)
Vert: 7=-1156(B) 21=-837(B) 22=-837(B) 23=-837(B) 24=-837(B) 25=-837(B)



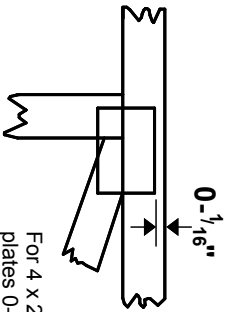
September 13, 2024

Symbols

PLATE LOCATION AND ORIENTATION



Center plate on joint unless x, y offsets are indicated. Dimensions are in ft-in-sixteenths. Apply plates to both sides of truss and fully embed teeth.



For 4 x 2 orientation, locate plates 0- 1/16\" from outside edge of truss.



This symbol indicates the required direction of slots in connector plates.

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

PLATE SIZE

4 X 4

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

LATERAL BRACING LOCATION



Indicated by symbol shown and/or by text in the bracing section of the output. Use T or I bracing if indicated.

BEARING

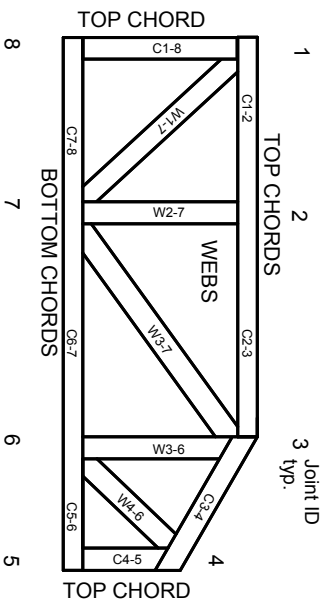


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TFP 1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-22: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



JOINTS ARE GENERALLY NUMBERED/LETTERED CLOCKWISE AROUND THE TRUSS STARTING AT THE JOINT FARTHEST TO THE LEFT.

CHORDS AND WEBS ARE IDENTIFIED BY END JOINT NUMBERS/LETTERS.

Product Code Approvals

ICC-ES Reports:

ESR-1988, ESR-2362, ESR-2685, ESR-3282
ESR-4722, ESL-1388

Design General Notes

Trusses are designed for wind loads in the plane of the truss unless otherwise shown.

Lumber design values are in accordance with ANSI/TFP 1 section 6.3. These truss designs rely on Lumber values established by others.

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MITek

ENGINEERING BY
TRANGO
A MITek Affiliate

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

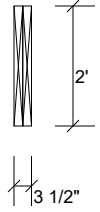
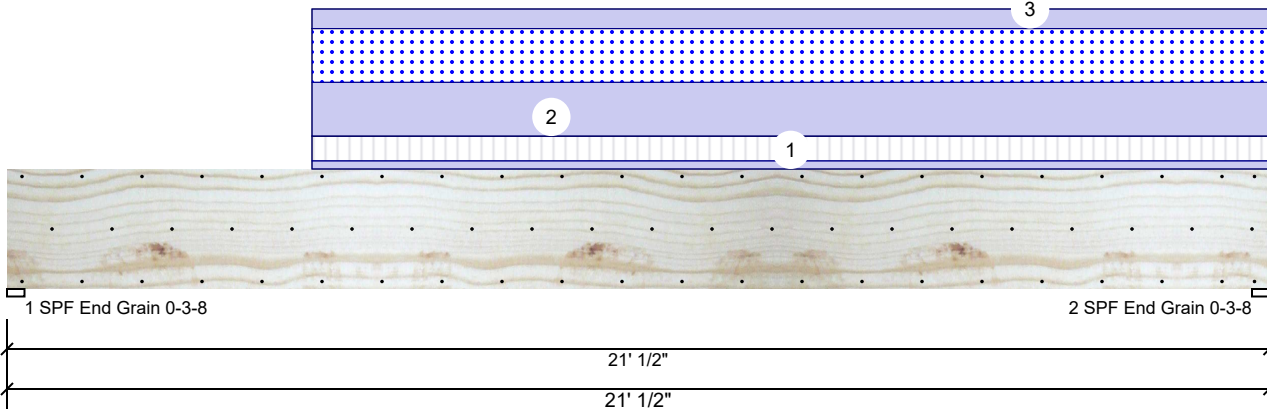
General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

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

BM2 Kerto-S LVL 1.750" X 24.000" 2-Ply - PASSED

Level: Level



Member Information

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

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	914	3202	1984	0	0
2	Vertical	1512	5170	3282	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	Vert	52%	3202 / 2173	5376	L	D+0.75(L+S)
2 - SPF End Grain	3.500"	Vert	85%	5170 / 3596	8765	L	D+0.75(L+S)

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	41750 ft-lb	11'1"	84163 ft-lb	0.496 (50%)	D+0.75(L+S)	L
Unbraced	41750 ft-lb	11'1"	42041 ft-lb	0.993 (99%)	D+0.75(L+S)	L
Shear	6786 lb	18'9"	20608 lb	0.329 (33%)	D+0.75(L+S)	L
LL Defl inch	0.182 (L/1360)	10'9 1/8"	0.515 (L/480)	0.353 (35%)	0.75(L+S)	L
TL Defl inch	0.444 (L/557)	10'9"	0.687 (L/360)	0.647 (65%)	D+0.75(L+S)	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 3 Refer to last page of calculations for fasteners required for specified loads.
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Top loads must be supported equally by all plies.
- 6 Top must be laterally braced at a maximum of 4'2 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	Part. Uniform	5-1-0 to 21-0-8		Near Face	50 PLF	152 PLF	0 PLF	0 PLF	0 PLF	F1
2	Part. Uniform	5-1-0 to 21-0-8		Top	330 PLF	0 PLF	330 PLF	0 PLF	0 PLF	A TRUSSES
3	Part. Uniform	5-1-0 to 21-0-8		Top	120 PLF	0 PLF	0 PLF	0 PLF	0 PLF	WALL
	Self Weight				19 PLF					

Notes

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

Lumber

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

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

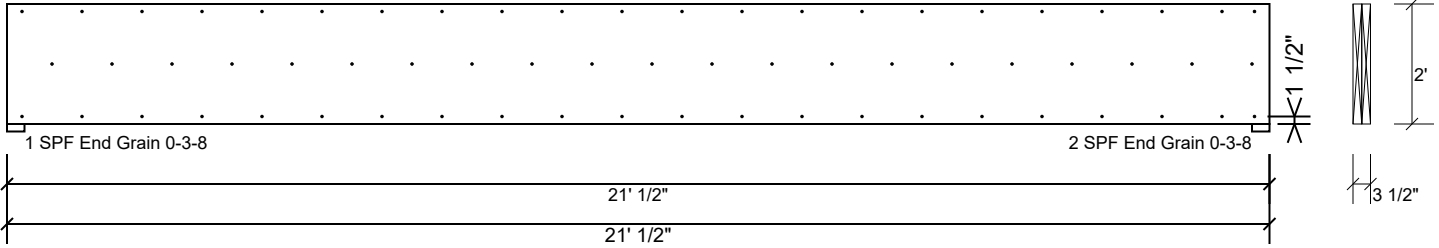
This design is valid until 6/28/2026

Manufacturer Info

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

BM2 Kerto-S LVL 1.750" X 24.000" 2-Ply - PASSED

Level: Level



Multi-Ply Analysis

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

Capacity	41.1 %
Load	101.0 PLF
Yield Limit per Foot	245.6 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

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

Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

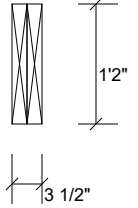
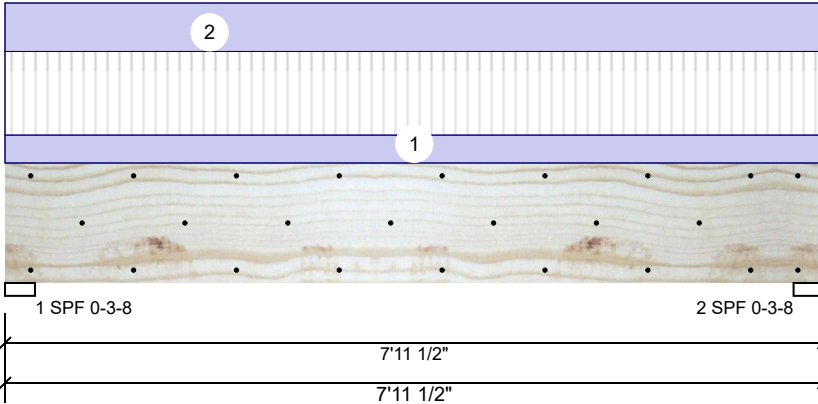
This design is valid until 6/28/2026

Manufacturer Info

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Norwalk, CT 06851
(800) 622-5850
www.metsawood.com/us

BM1 Kerto-S LVL 1.750" X 14.000" 2-Ply - PASSED

Level: Level



Member Information

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

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	824	795	0	0	0
2	Vertical	824	795	0	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	31%	795 / 824	1619	L	D+L
2 - SPF	3.500"	Vert	31%	795 / 824	1619	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2861 ft-lb	3'11 3/4"	26999 ft-lb	0.106 (11%)	D+L	L
Unbraced	2861 ft-lb	3'11 3/4"	13588 ft-lb	0.211 (21%)	D+L	L
Shear	1360 lb	6'6"	10453 lb	0.130 (13%)	D+L	L
LL Defl inch	0.013 (L/7127)	3'11 13/16"	0.188 (L/480)	0.067 (7%)	L	L
TL Defl inch	0.025 (L/3626)	3'11 13/16"	0.250 (L/360)	0.099 (10%)	D+L	L

Design Notes

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

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Near Face	69 PLF	207 PLF	0 PLF	0 PLF	0 PLF	F7
2	Uniform			Top	120 PLF	0 PLF	0 PLF	0 PLF	0 PLF	WALL
	Self Weight				11 PLF					

Notes

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

Lumber

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

chemicals

Handling & Installation

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

- For flat roofs provide proper drainage to prevent ponding

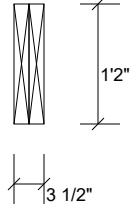
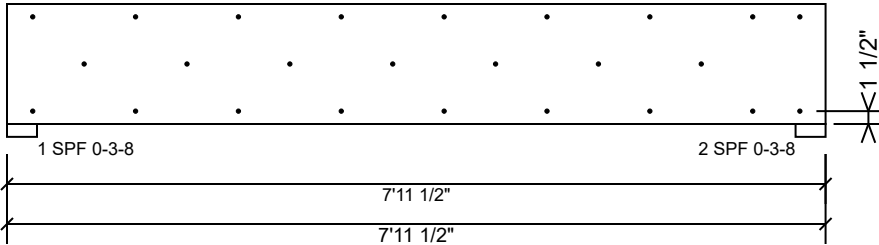
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Manufacturer Info

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

BM1 Kerto-S LVL 1.750" X 14.000" 2-Ply - PASSED

Level: Level



Multi-Ply Analysis

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

Capacity	56.2 %
Load	138.0 PLF
Yield Limit per Foot	245.6 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

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

Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

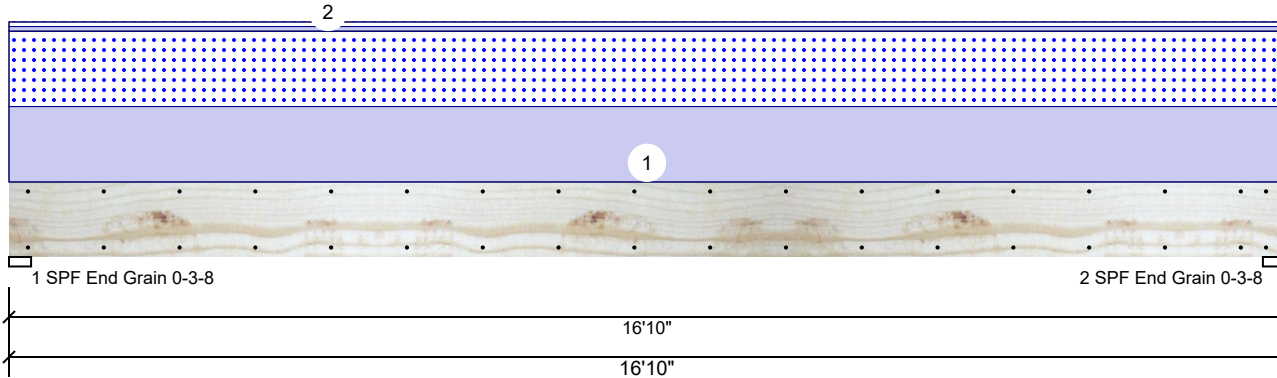
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Manufacturer Info

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

Level: Level



Member Information

Type:	Header	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Header Supports:	No
Importance:	Normal - II	Glass:	
Temperature:	Temp <= 100°F	Deck:	Not Checked

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	0	1551	1473	0	0
2	Vertical	0	1551	1473	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	Vert	29%	1551 / 1473	3024	L	D+S
2 - SPF End Grain	3.500"	Vert	29%	1551 / 1473	3024	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	12041 ft-lb	8'5"	22897 ft-lb	0.526 (53%)	D+S	L
Unbraced	12041 ft-lb	8'5"	22897 ft-lb	0.526 (53%)	D+S	L
Shear	2572 lb	1'3 3/8"	10197 lb	0.252 (25%)	D+S	L
LL Defl inch	0.306 (L/642)	8'5 1/16"	0.546 (L/360)	0.561 (56%)	S	L
TL Defl inch	0.628 (L/313)	8'5 1/16"	0.819 (L/240)	0.767 (77%)	D+S	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 3 Refer to last page of calculations for fasteners required for specified loads.
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Top loads must be supported equally by all plies.
- 6 Top must be continuously laterally braced.
- 7 Bottom must be laterally braced at 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	165 PLF	0 PLF	165 PLF	0 PLF	0 PLF	C1-GE
2	Tie-In	0-0-0 to 16-10-0	0-6-0	Top	20 PSF	0 PSF	20 PSF	0 PSF	0 PSF	RAKE OH
	Self Weight				9 PLF					

Notes

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

Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

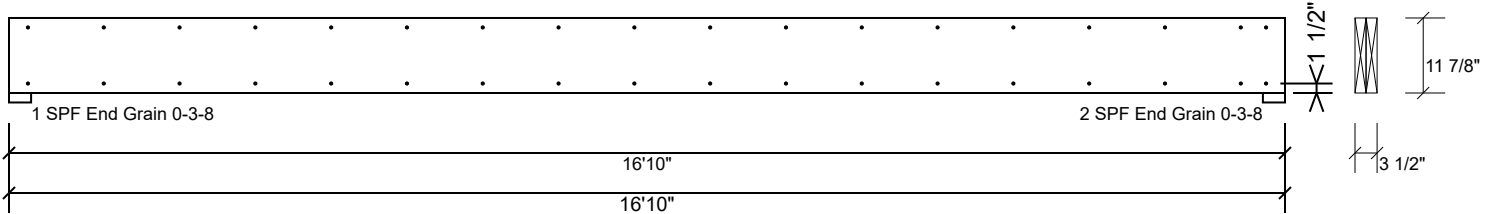
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GDH Kerto-S LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Level



Multi-Ply Analysis

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

Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	163.7 PLF
Yield Limit per Fastener	81.9 lb.
C _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

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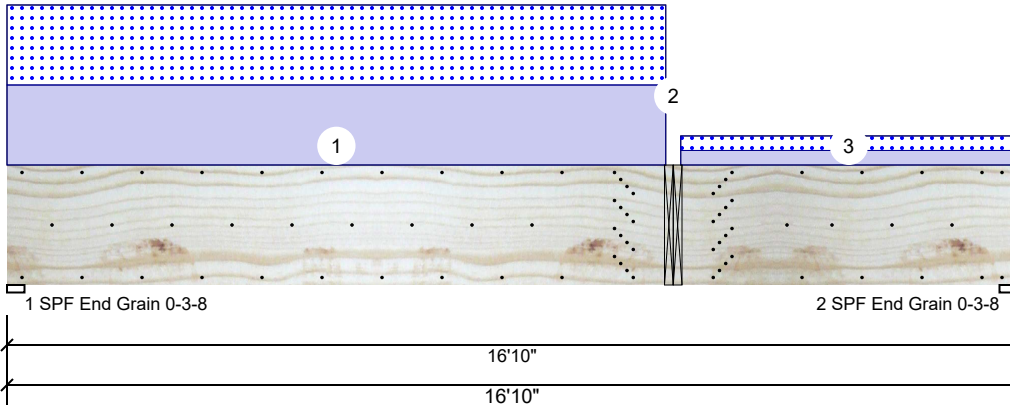
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Manufacturer Info

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GDH-SL Kerto-S LVL 1.750" X 24.000" 2-Ply - PASSED

Level: Level



Member Information

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

Reactions UNPATTERNED Ib (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	307	3957	3391	0	0
2	Vertical	607	3854	2888	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	Vert	71%	3957 / 3391	7348	L	D+S
2 - SPF End Grain	3.500"	Vert	66%	3854 / 2888	6742	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	35157 ft-lb	10'	84163 ft-lb	0.418 (42%)	D+S	L
Unbraced	35157 ft-lb	10'	35353 ft-lb	0.994 (99%)	D+S	L
Shear	6439 lb	14'6 1/2"	20608 lb	0.312 (31%)	D+S	L
LL Defl inch	0.111 (L/1776)	8'7 13/16"	0.410 (L/480)	0.270 (27%)	S	L
TL Defl inch	0.252 (L/782)	8'9 1/16"	0.547 (L/360)	0.460 (46%)	D+S	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Fasten all plies using 3 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 Concentrated load fastener specification is in addition to hanger fasteners if a hanger is present.
- 5 Girders are designed to be supported on the bottom edge only.
- 6 Top loads must be supported equally by all plies.
- 7 Top must be laterally braced at a maximum of 5' 5/16" o.c.
- 8 Bottom must be laterally braced at end bearings.
- 9 Lateral slenderness ratio based on single ply width.

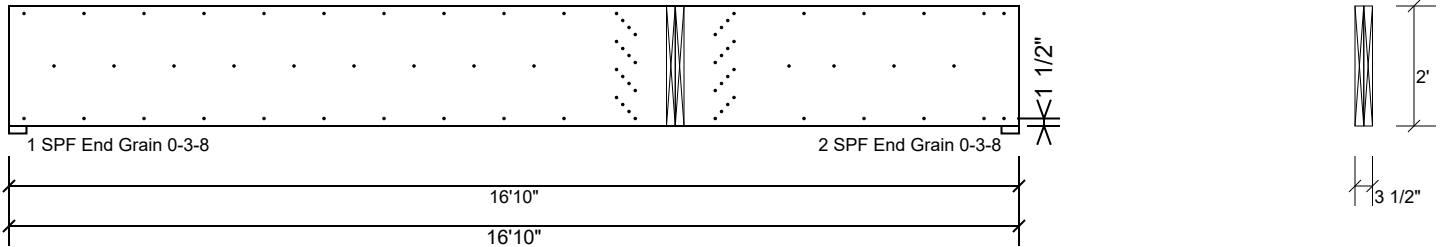
ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Part. Uniform	0-0-0 to 10-11-12		Top	358 PLF	0 PLF	358 PLF	0 PLF	0 PLF	C TRUSSES
2	Point	11-1-4		Near Face	3202 lb	914 lb	1984 lb	0 lb	0 lb	BM2 Brg 1
3	Part. Uniform	11-2-12 to 16-10-0		Top	65 PLF	0 PLF	65 PLF	0 PLF	0 PLF	D2
	Self Weight				19 PLF					

<p>Notes</p> <p>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.</p> <p>Lumber</p> <ol style="list-style-type: none"> 1. Dry service conditions, unless noted otherwise 2. LVL not to be treated with fire retardant or corrosive chemicals 	<p>Handling & Installation</p> <ol style="list-style-type: none"> 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 	<p>6. For flat roofs provide proper drainage to prevent ponding</p>	<p>Manufacturer Info</p> <p>Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us</p>
			<p>This design is valid until 6/28/2026</p>

GDH-SL Kerto-S LVL 1.750" X 24.000" 2-Ply - PASSED

Level: Level

1



Multi-Ply Analysis

Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c.. except for regions covered by concentrated load fastening. Maximum end distance not to exceed 6".

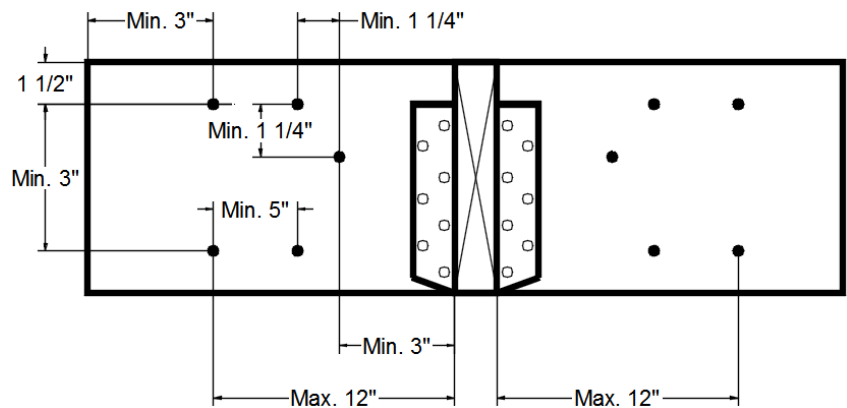
Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	245.6 PLF
Yield Limit per Fastener	81.9 lb.
C _m	1
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

Concentrated Load

Fasten at concentrated side load at 11-1-4 with a minimum of (32) – 10d Box nails (.128x3") in the pattern shown.

Capacity	89.3 %
Load	2687.8lb.
Total Yield Limit	3010.4 lb.
C _g	0.9994
C _m	1
Yield Limit per Fastener	94.1 lb.
Yield Mode	IV
Load Combination	D+0.75(L+S)
Duration Factor	1.15

Min/Max fastener distances for Concentrated Side Loads



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

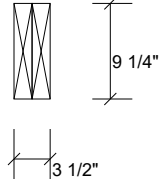
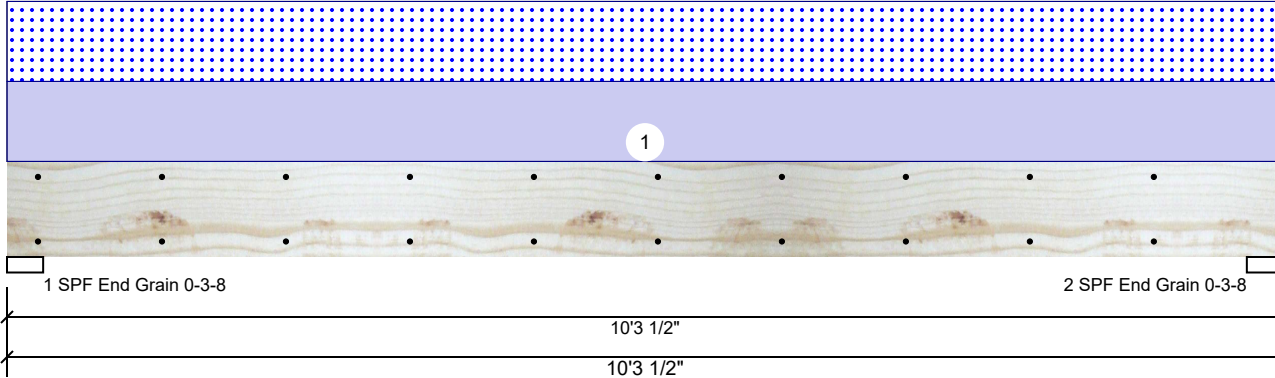
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Manufacturer Info

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

BM3 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED

Level: Level



Member Information

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

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	0	891	854	0	0
2	Vertical	0	891	854	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	Vert	17%	891 / 854	1745	L	D+S
2 - SPF End Grain	3.500"	Vert	17%	891 / 854	1745	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	4100 ft-lb	5'1 3/4"	14423 ft-lb	0.284 (28%)	D+S	L
Unbraced	4100 ft-lb	5'1 3/4"	7519 ft-lb	0.545 (55%)	D+S	L
Shear	1391 lb	1' 3/4"	7943 lb	0.175 (18%)	D+S	L
LL Defl inch	0.083 (L/1425)	5'1 3/4"	0.246 (L/480)	0.337 (34%)	S	L
TL Defl inch	0.169 (L/698)	5'1 3/4"	0.328 (L/360)	0.516 (52%)	D+S	L

Design Notes

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

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Top	166 PLF	0 PLF	166 PLF	0 PLF	0 PLF	P2
	Self Weight				7 PLF					

Notes

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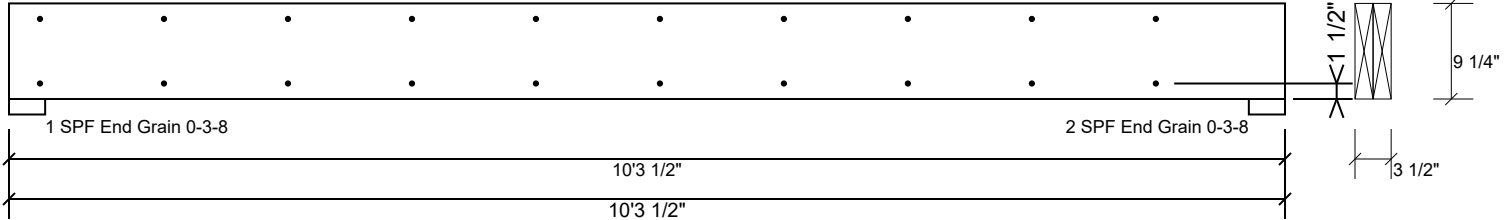
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BM3 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED

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

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