

Trenco  
818 Soundside Rd  
Edenton, NC 27932

Re: J1021-6184  
Precision/Lot 13 Liberty Meadows/Harnet

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: I52793023 thru I52793042

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

North Carolina COA: C-0844



June 28, 2022

Gilbert, Eric

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

Job	Truss	Truss Type	Qty	Ply	Precision/Lot 13 Liberty Meadows/Harnet	I52793023
J1021-6184	A1-GE	GABLE	1	1		

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Aug 16 2021 MiTek Industries, Inc. Tue Jun 28 08:42:16 2022 Page 1  
 ID:JjP3\_bNirdpeLXA5mDh?57y7p3U-KHMfpm?O9H6maK3WCb1GIHwelkBWxbPIQQvrbz1ot5



Scale = 1:74.2

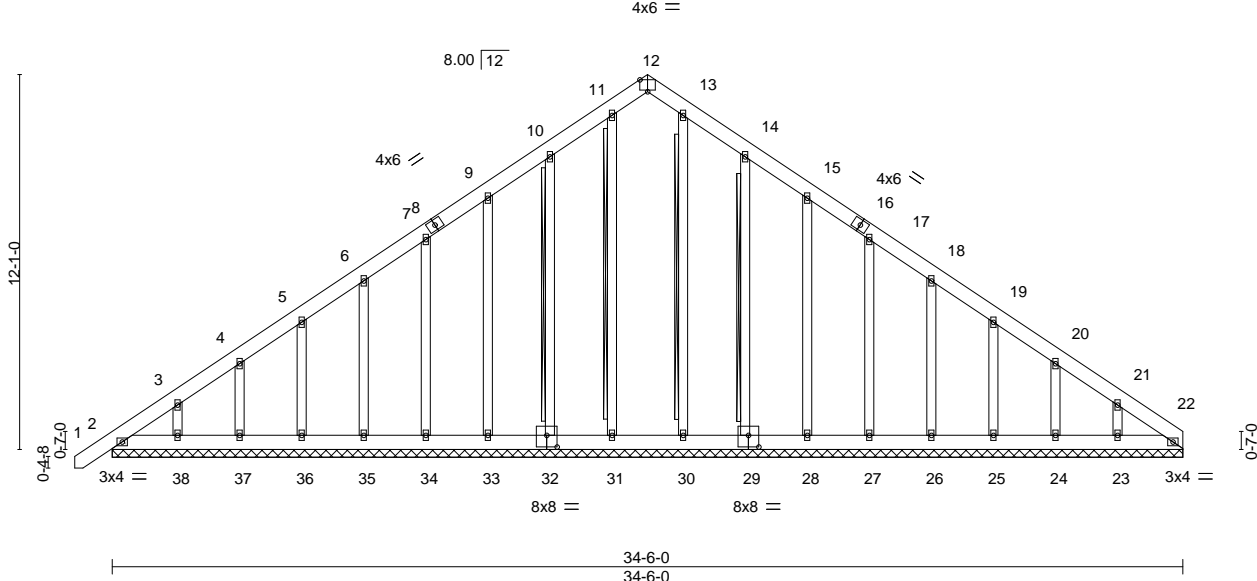


Plate Offsets (X,Y)-- [12:0-3-0,Edge], [29:0-4-0,0-4-8], [32:0-4-0,0-4-8]

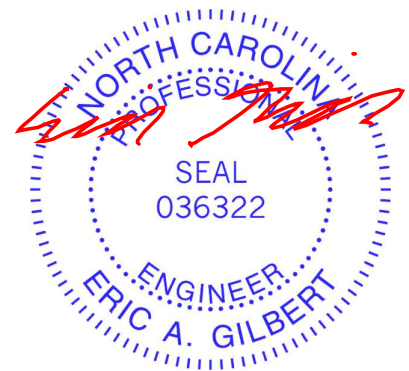
LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.08	Vert(LL)	-0.00	1	n/r	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.03	Vert(CT)	-0.00	1	n/r		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.17	Horz(CT)	0.01	22	n/a		
BCDL 10.0	Code	IRC2015/TPI2014	Matrix-S					Weight: 319 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS 2x4 SP No.2	WEBS T-Brace: 2x4 SPF No.2 - 11-31, 10-32, 13-30, 14-29
	Fasten (2X) T and I braces to narrow edge of web with 10d (0.131"x3") nails, 6in o.c., with 3in minimum end distance.
	Brace must cover 90% of web length.

**REACTIONS.** All bearings 34-6-0.  
 (lb) - Max Horz 2=360(LC 9)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 33, 34, 35, 36, 37, 38, 28, 27, 26, 25, 24, 22 except 32=-103(LC 12), 29=-108(LC 13), 23=-113(LC 13)  
 Max Grav All reactions 250 lb or less at joint(s) 2, 31, 32, 33, 34, 35, 36, 37, 38, 30, 29, 28, 27, 26, 25, 24, 23, 22

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-402/260, 3-4=-319/228, 10-11=-233/259, 20-21=-251/154, 21-22=-340/228  
 BOT CHORD 2-38=-199/304, 37-38=-199/304, 36-37=-199/304, 35-36=-199/304, 34-35=-199/304, 33-34=-199/304, 32-33=-199/304, 31-32=-197/303, 30-31=-197/303, 29-30=-197/303, 28-29=-199/304, 27-28=-199/304, 26-27=-199/304, 25-26=-199/304, 24-25=-199/304, 23-24=-199/304, 22-23=-199/304

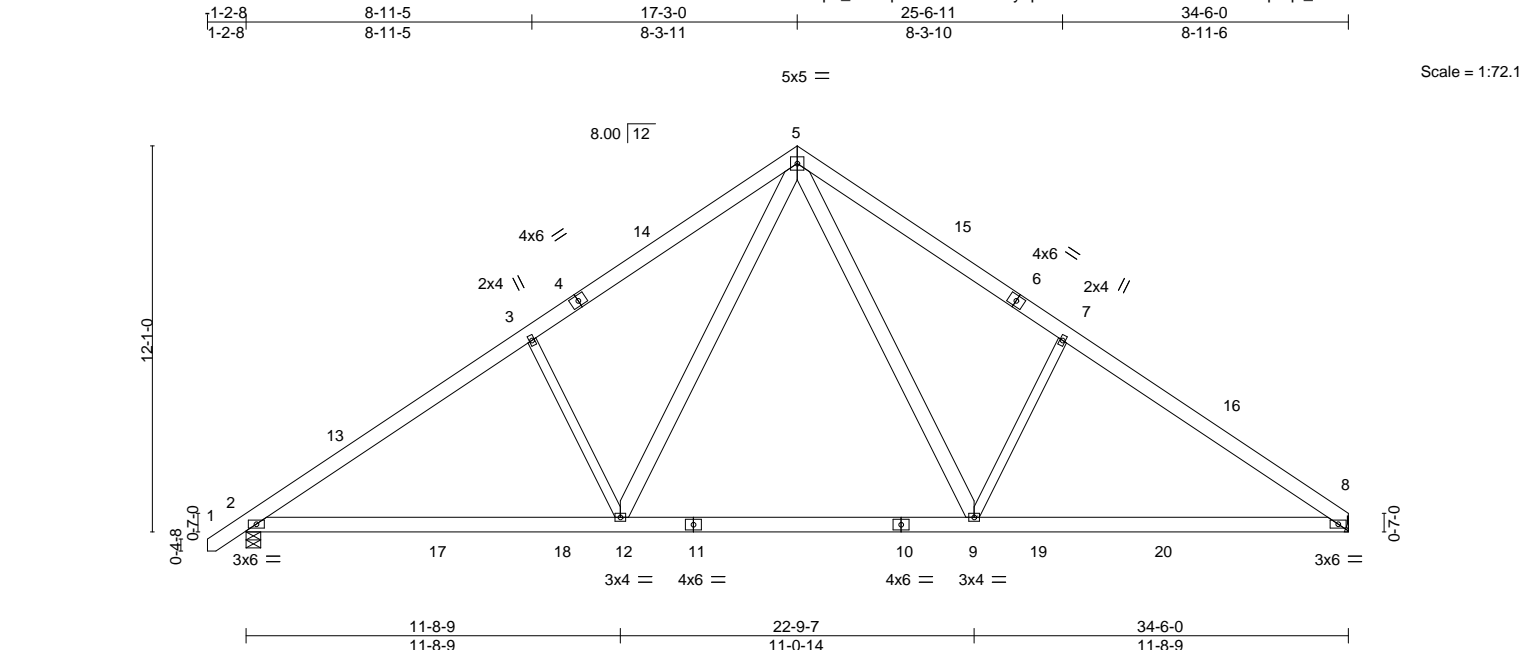
- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TC DL=6.0psf; BC DL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; 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 requires continuous bottom chord bearing.
  - 6) Gable studs spaced at 2-0-0 oc.
  - 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 8) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 33, 34, 35, 36, 37, 38, 28, 27, 26, 25, 24, 22 except (jt=lb) 32=103, 29=108, 23=113.
  - 10) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.



June 28, 2022

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**  
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

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



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.36	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.63	Vert(LL) -0.16 9-12 >999 360		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.44	Vert(CT) -0.28 8-9 >999 240		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.05 8 n/a n/a		
	Code IRC2015/TPI2014		Wind(LL) 0.05 2-12 >999 240	Weight: 258 lb	FT = 20%

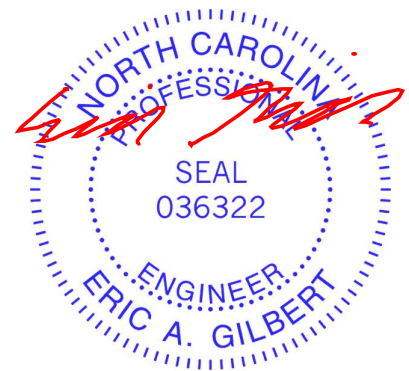
**LUMBER-**  
 TOP CHORD 2x6 SP No.1  
 BOT CHORD 2x6 SP No.1  
 WEBS 2x6 SP No.1 \*Except\*  
 7-9,3-12: 2x4 SP No.2

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 4-8-15 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 2=0-5-8, 8=Mechanical  
 Max Horz 2=288(LC 9)  
 Max Uplift 2=90(LC 12), 8=73(LC 13)  
 Max Grav 2=1670(LC 19), 8=1593(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-2288/405, 3-5=-2144/509, 5-7=-2167/526, 7-8=-2311/420  
 BOT CHORD 2-12=-201/2001, 9-12=0/1300, 8-9=-208/1831  
 WEBS 5-9=-191/1148, 7-9=-600/347, 5-12=-185/1109, 3-12=-578/336

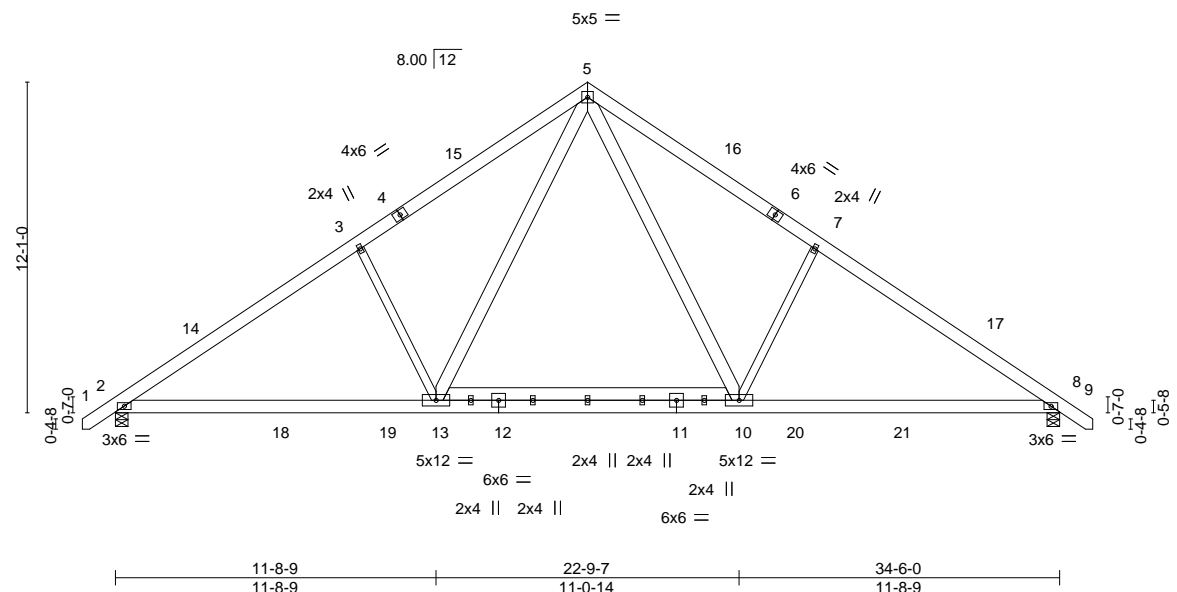
- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCCL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-0-15 to 3-3-14, Interior(1) 3-3-14 to 17-3-0, Exterior(2) 17-3-0 to 21-7-13, Interior(1) 21-7-13 to 34-5-4 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) Refer to girder(s) for truss to truss connections.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 8.



Job	Truss	Truss Type	Qty	Ply	Precision/Lot 13 Liberty Meadows/Harnet	I52793025
J1021-6184	A4	COMMON	6	1		

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ID:Jjp3\_bNirdpeLXA5mDh?y7p3U-GgTPDSoGwmXqouUSdddVLAMB4ZGV\_n8i9jv0wTz1ot3 1-2-8 8-11-5 17-3-0 25-6-11 34-6-0 35-8-8 1-2-8 8-11-6 1-2-8



Scale = 1:84.2

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.33	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.62	Vert(LL) -0.16 10-13 >999 360		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.42	Vert(CT) -0.26 2-13 >999 240		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.05 8 n/a n/a		
	Code IRC2015/TPI2014		Wind(LL) 0.05 2-13 >999 240	Weight: 286 lb	FT = 20%

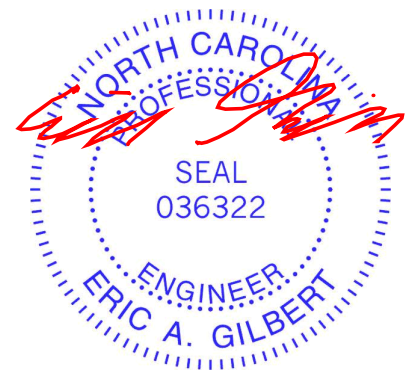
**LUMBER-**  
TOP CHORD 2x6 SP No.1  
BOT CHORD 2x6 SP No.1  
WEBS 2x6 SP No.1 \*Except\*  
7-10,3-13: 2x4 SP No.2

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

**REACTIONS.** (size) 2=0-5-8, 8=0-5-8  
Max Horz 2=-293(LC 10)  
Max Uplift 2=-90(LC 12), 8=-90(LC 13)  
Max Grav 2=1662(LC 19), 8=1662(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-2274/402, 3-5=-2130/506, 5-7=-2130/506, 7-8=-2274/402  
BOT CHORD 2-13=-164/1998, 10-13=0/1296, 8-10=-176/1802  
WEBS 5-10=-184/1111, 7-10=-578/335, 5-13=-184/1111, 3-13=-578/336

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-0-15 to 3-3-14, Interior(1) 3-3-14 to 17-3-0, Exterior(2) 17-3-0 to 21-7-13, Interior(1) 21-7-13 to 35-6-15 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, 8.

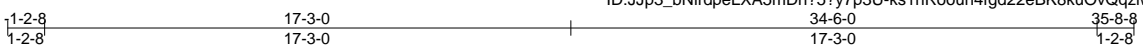


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<p><b>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.</b></p> <p>Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see <b>ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information</b> available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601</p>	<p>818 Soundside Road Edenton, NC 27932</p>
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Job	Truss	Truss Type	Qty	Ply	Precision/Lot 13 Liberty Meadows/Harnet	152793026
J1021-6184	A5-GE	GABLE	1	1	Job Reference (optional)	

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Scale = 1:75.5

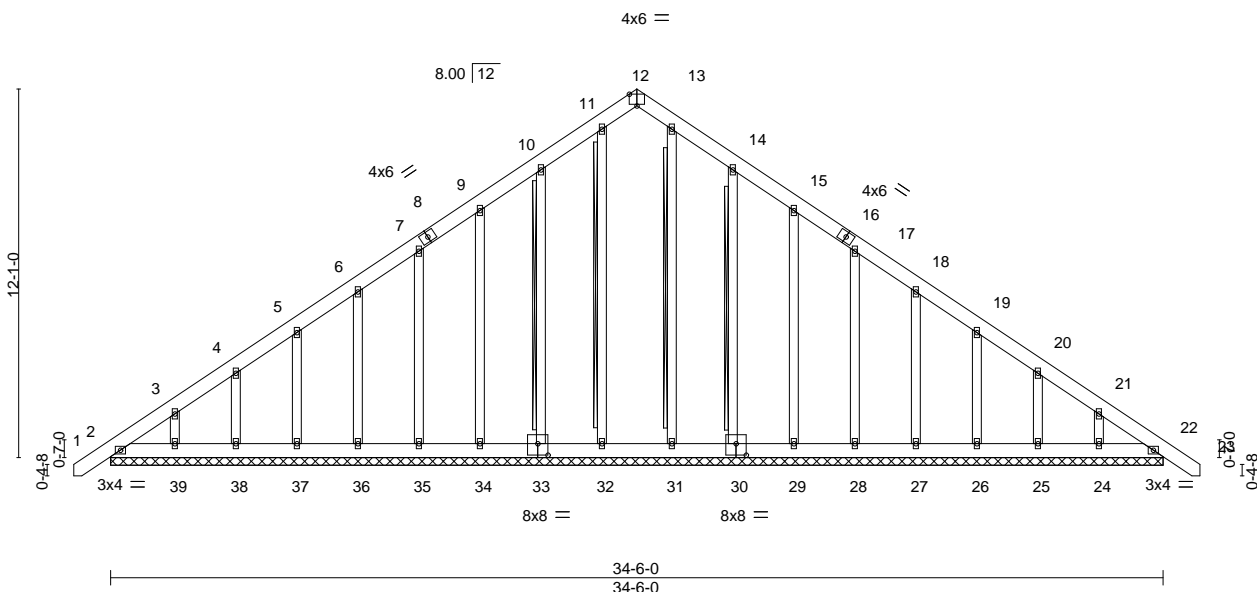


Plate Offsets (X,Y)--	[12:0-3-0,Edge], [16:0-0-0,0-0-0], [30:0-4-0,0-4-8], [33:0-4-0,0-4-8]
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LOADING (psf)	SPACING-	CS.I.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.15	TC 0.08	Vert(LL) -0.00	22	n/r	120	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.03	Vert(CT) -0.00	22	n/r	120		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.17	Horz(CT) 0.01	22	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-S					Weight: 322 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS 2x4 SP No.2	WEBS T-Brace: 2x4 SPF No.2 - 11-32, 10-33, 13-31, 14-30
	Fasten (2X) T and I braces to narrow edge of web with 10d (0.131"x3") nails, 6in o.c., with 3in minimum end distance.
	Brace must cover 90% of web length.

**REACTIONS.** All bearings 34-6-0.  
 (lb) - Max Horz 2=-366(LC 10)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 22, 34, 35, 36, 37, 38, 39, 29, 28, 27, 26, 25, 24 except 33=-103(LC 12), 30=-108(LC 13)  
 Max Grav All reactions 250 lb or less at joint(s) 2, 22, 33, 34, 35, 36, 37, 38, 39, 31, 30, 29, 28, 27, 26, 25, 24 except 32=253(LC 22)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-399/264, 3-4=-316/231, 10-11=-239/266, 13-14=-239/263, 21-22=-327/235  
 BOT CHORD 2-39=-214/323, 38-39=-214/323, 37-38=-214/323, 36-37=-214/323, 35-36=-214/323, 34-35=-214/323, 33-34=-214/323, 32-33=-212/323, 31-32=-212/323, 30-31=-212/323, 29-30=-214/324, 28-29=-214/324, 27-28=-214/324, 26-27=-214/324, 25-26=-214/324, 24-25=-214/324, 22-24=-214/324

- 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 requires continuous bottom chord bearing.
  - 6) Gable studs spaced at 2-0-0 oc.
  - 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 8) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 22, 34, 35, 36, 37, 38, 39, 29, 28, 27, 26, 25, 24 except (jt=lb) 33=103, 30=108.
  - 10) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.



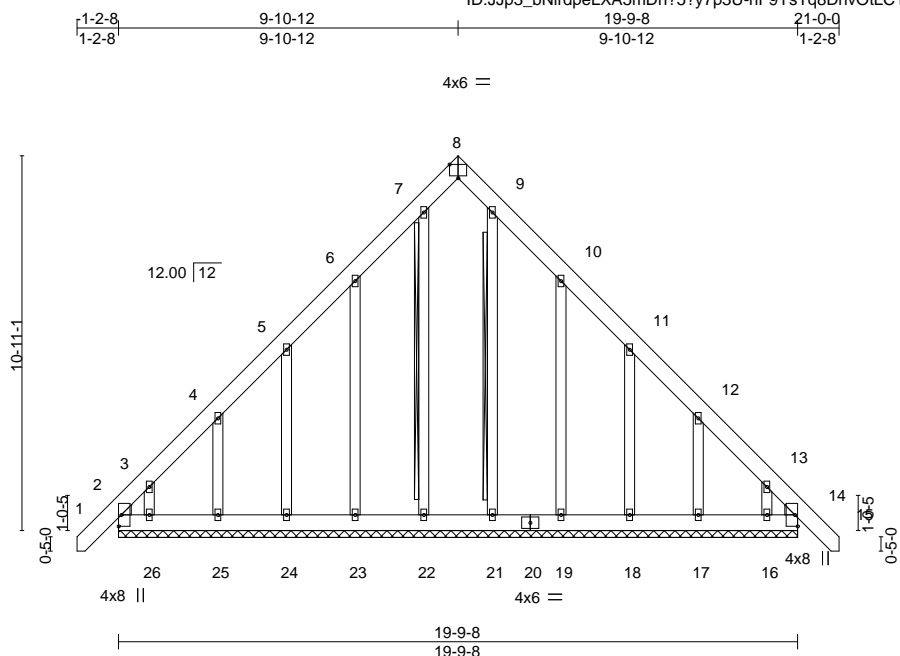
June 28, 2022

Job	Truss	Truss Type	Qty	Ply	Precision/Lot 13 Liberty Meadows/Harnet	I52793027
J1021-6184	B1-GE	GABLE	1	1	Job Reference (optional)	

Comtech, Inc, Fayetteville, NC - 28314,

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Scale = 1:67.2

Plate Offsets (X,Y)-- [8:0-3-0,Edge]	
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0
TCLL 20.0	Plate Grip DOL 1.15
TCDL 10.0	Lumber DOL 1.15
BCLL 0.0 *	Rep Stress Incr YES
BCDL 10.0	Code IRC2015/TPI2014
<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d
TC 0.06	Vert(LL) -0.00 14 n/r 120
BC 0.04	Vert(CT) -0.00 14 n/r 120
WB 0.18	Horz(CT) 0.01 14 n/a n/a
Matrix-S	
<b>PLATES</b>	<b>GRIP</b>
MT20	244/190
Weight: 196 lb	FT = 20%

**LUMBER-**  
TOP CHORD 2x6 SP No.1  
BOT CHORD 2x6 SP No.1  
OTHERS 2x4 SP No.2  
WEDGE  
Left: 2x4 SP No.2 , Right: 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.  
WEBS T-Brace: 2x4 SPF No.2 - 7-22, 9-21  
Fasten (2X) T and I braces to narrow edge of web with 10d (0.131"x3") nails, 6in o.c., with 3in minimum end distance.  
Brace must cover 90% of web length.

**REACTIONS.** All bearings 19-9-8.  
(lb) - Max Horz 2=-329(LC 10)  
Max Uplift All uplift 100 lb or less at joint(s) 22 except 2=-180(LC 10), 23=-159(LC 12), 24=-140(LC 12), 25=-152(LC 12), 26=-242(LC 12), 19=-162(LC 13), 18=-141(LC 13), 14=-125(LC 11), 17=-151(LC 13), 16=-231(LC 13)  
Max Grav All reactions 250 lb or less at joint(s) 22, 23, 24, 25, 26, 21, 19, 18, 17, 16 except 2=422(LC 12), 14=385(LC 13)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-547/353, 3-4=-358/214, 12-13=-322/213, 13-14=-505/360  
BOT CHORD 2-26=-234/351, 25-26=-236/352, 24-25=-237/352, 23-24=-238/353, 22-23=-238/353, 21-22=-238/353, 19-21=-238/353, 18-19=-238/352, 17-18=-237/352, 16-17=-236/351, 14-16=-234/348

- 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 requires continuous bottom chord bearing.
  - 6) Gable studs spaced at 2-0-0 oc.
  - 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 8) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 22 except (jt=lb) 2=180, 23=159, 24=140, 25=152, 26=242, 19=162, 18=141, 14=125, 17=151, 16=231.
  - 10) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.



June 28, 2022

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

Job	Truss	Truss Type	Qty	Ply	Precision/Lot	13 Liberty Meadows/Harnet	I52793028
J1021-6184	B2	COMMON GIRDER	1	2	Job Reference (optional)		

Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Aug 16 2021 MiTek Industries, Inc. Tue Jun 28 08:42:22 2022 Page 1

ID:JJP3\_bNirdpeLXA5mDh?5?y7p3U-9Rjw3prm\_?1FUVnDsShRW0Xo7AggWSSI4LiE3Ez1ot?



5x8 ||

Scale = 1:66.3

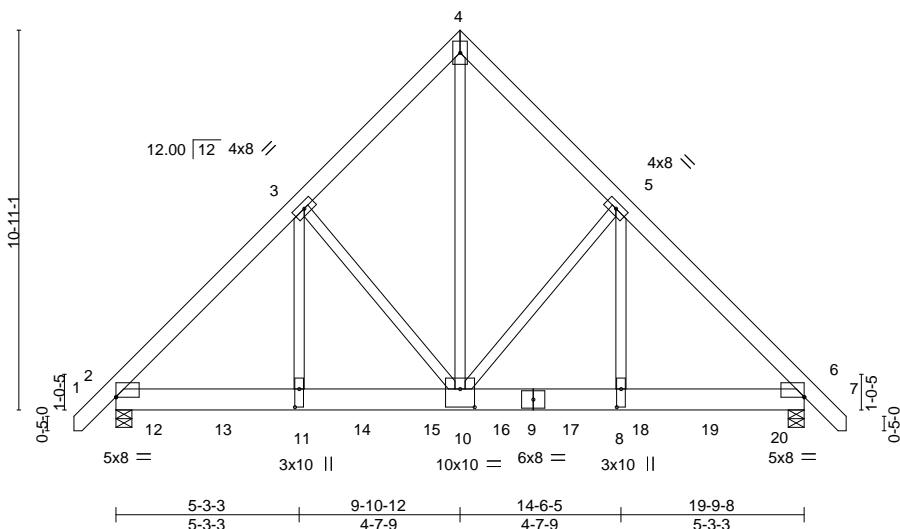


Plate Offsets (X,Y)--	[2:0-0-0,0-0-2], [6:Edge,0-0-2], [8:0-6-4,0-1-8], [10:0-5-0,0-6-4], [11:0-6-4,0-1-8]
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LOADING (psf)	SPACING-	CS.I.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.15	TC 0.65	Vert(LL) -0.08	10-11	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.47	Vert(CT) -0.14	10-11	>999	240		
BCLL 0.0 *	Rep Stress Incr NO	WB 0.91	Horz(CT) 0.03	6	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-S	Wind(LL) 0.05	10-11	>999	240		
							Weight: 371 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 5-7-11 oc purlins.
BOT CHORD 2x8 SP 2400F 2.0E	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.2	

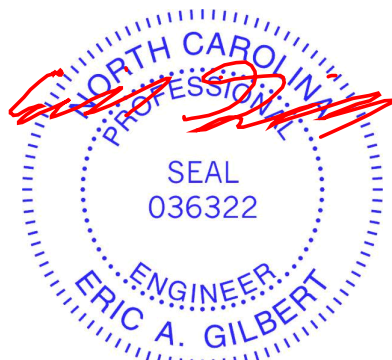
REACTIONS.
(size) 2=0-5-8, 6=0-5-8
Max Horz 2=-263(LC 25)
Max Uplift 2=-456(LC 8), 6=-466(LC 9)
Max Grav 2=8127(LC 2), 6=8332(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-8203/504, 3-4=-5530/448, 4-5=-5530/449, 5-6=-8191/503
BOT CHORD 2-11=-348/5421, 10-11=-348/5432, 8-10=-253/5425, 6-8=-253/5414
WEBS 4-10=-527/7447, 5-10=-2432/303, 5-8=-171/3836, 3-10=-2442/302, 3-11=-171/3855

- NOTES-**
- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.  
Bottom chords connected as follows: 2x8 - 2 rows staggered at 0-6-0 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 Vas=103mph; TCdL=6.0psf; BCdL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); Lumber DOL=1.60 plate grip DOL=1.60
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=456, 6=466.
  - Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1499 lb down and 90 lb up at 1-0-0, 1497 lb down and 93 lb up at 3-0-0, 1497 lb down and 93 lb up at 5-0-0, 1497 lb down and 93 lb up at 7-0-0, 1497 lb down and 93 lb up at 9-0-0, 1497 lb down and 93 lb up at 11-0-0, 1497 lb down and 93 lb up at 13-0-0, 1497 lb down and 93 lb up at 15-0-0, and 1497 lb down and 93 lb up at 17-0-0, and 1501 lb down and 88 lb up at 19-0-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-4=-60, 4-7=-60, 2-6=-20

Continued on page 2



June 28, 2022

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Precision/Lot 13 Liberty Meadows/Harnet	I52793028
J1021-6184	B2	COMMON GIRDER	1	2	Job Reference (optional)	

Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Aug 16 2021 MiTek Industries, Inc. Tue Jun 28 08:42:22 2022 Page 2  
 ID:JJp3\_bNirdpeLXA5mDh?5?y7p3U-9Rjw3prm\_?1FUVnDsShRW0Xo7AggwSSI4LiE3Ez1ot?

**LOAD CASE(S)** Standard  
 Concentrated Loads (lb)

Vert: 11=-1347(B) 12=-1349(B) 13=-1347(B) 14=-1347(B) 15=-1347(B) 16=-1347(B) 17=-1347(B) 18=-1347(B) 19=-1347(B) 20=-1351(B)

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

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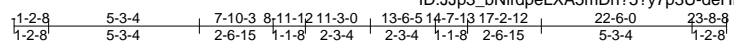


Job	Truss	Truss Type	Qty	Ply	Precision/Lot	13 Liberty Meadows/Harnet	I52793029
J1021-6184	C1-GE	ATTIC	1	1			

Comtech, Inc, Fayetteville, NC - 28314,

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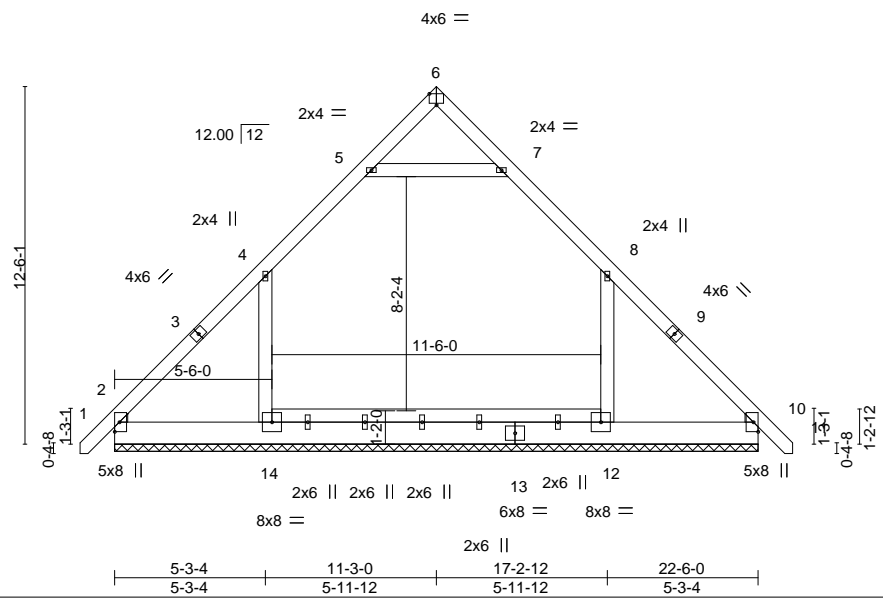


Plate Offsets (X,Y)-- [6:0-3-0,Edge]											
<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>		
TCLL 20.0	Plate Grip DOL	1.15	TC 0.11	Vert(LL)	-0.00	11	n/r	MT20	244/190		
TCDL 10.0	Lumber DOL	1.15	BC 0.26	Vert(CT)	-0.00	11	n/r				
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.15	Horz(CT)	0.00	10	n/a				
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S								
								Weight: 236 lb	FT = 20%		

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x10 SP No.1 *Except*	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
12-14: 2x6 SP No.1	
WEBS 2x6 SP No.1	
WEDGE	
Left: 2x4 SP No.2, Right: 2x4 SP No.2	

<b>REACTIONS.</b>	All bearings 22-6-0.
(lb) - Max Horz	2=295(LC 11)
Max Uplift	All uplift 100 lb or less at joint(s) except 14=-117(LC 12), 12=-116(LC 13)
Max Grav	All reactions 250 lb or less at joint(s) except 2=576(LC 1), 14=1026(LC 20), 12=1023(LC 21), 10=576(LC 1)

<b>FORCES.</b>	(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD	2-4=-647/29, 4-5=-566/133, 7-8=-565/133, 8-10=-644/24
BOT CHORD	2-14=0/388, 12-14=0/388, 10-12=0/388
WEBS	4-14=-524/292, 8-12=-524/293, 5-7=-350/163

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Corner(3) -1-0-14 to 3-3-15, Exterior(2) 3-3-15 to 11-3-0, Corner(3) 11-3-0 to 15-7-13, Exterior(2) 15-7-13 to 23-6-14 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Gable requires continuous bottom chord bearing.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - Ceiling dead load (10.0 psf) on member(s). 4-5, 7-8, 5-7; Wall dead load (5.0psf) on member(s).4-14, 8-12
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 117 lb uplift at joint 14 and 116 lb uplift at joint 12.
  - Attic room checked for L/360 deflection.

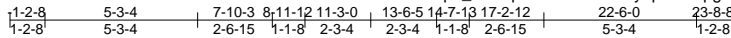


Job	Truss	Truss Type	Qty	Ply	Precision/Lot 13 Liberty Meadows/Harnet	I52793030
J1021-6184	C2	ATTIC	6	1		

Comtech, Inc, Fayetteville, NC - 28314,

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Scale = 1:79.6

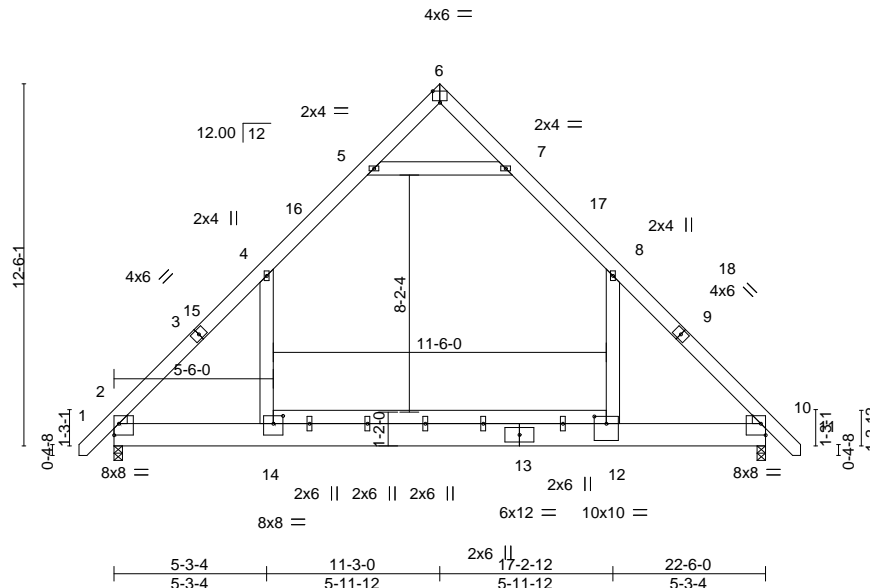


Plate Offsets (X, Y)-- [2:Edge,0-4-12], [6:0-3-0,Edge], [10:Edge,0-4-12], [12:0-5-0,0-3-0], [14:0-4-0,0-3-4]

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.15	TC 0.67	Vert(LL) -0.29	12-14	>911	360	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.82	Vert(CT) -0.51	12-14	>522	240		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.18	Horz(CT) 0.01	10	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-S	Wind(LL) 0.10	12-14	>999	240	Weight: 236 lb	FT = 20%

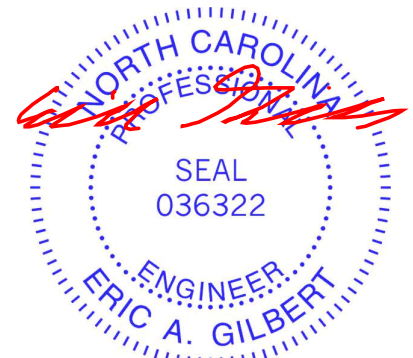
**LUMBER-**  
TOP CHORD 2x6 SP 2400F 2.0E \*Except\*  
1-3,9-11: 2x6 SP No.1  
BOT CHORD 2x10 SP No.1 \*Except\*  
12-14: 2x6 SP No.1  
WEBS 2x6 SP No.1  
WEDGE  
Left: 2x4 SP No.2 , Right: 2x4 SP No.2

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 5-4-10 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 8-4-3 oc bracing.

**REACTIONS.** (size) 2=0-3-8, 10=0-3-8  
Max Horz 2=295(LC 11)  
Max Grav 2=1518(LC 20), 10=1518(LC 21)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-4=-1928/0, 4-5=-1039/146, 5-6=0/385, 6-7=0/386, 7-8=-1038/146, 8-10=-1927/0  
BOT CHORD 2-14=0/1088, 12-14=0/1088, 10-12=0/1088  
WEBS 4-14=0/939, 8-12=0/939, 5-7=-1492/196

- 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) 1-0-14 to 3-3-15, Interior(1) 3-3-15 to 11-3-0, Exterior(2) 11-3-0 to 15-7-13, Interior(1) 15-7-13 to 23-6-14 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).4-14, 8-12
  - 6) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 12-14
  - 7) Attic room checked for L/360 deflection.



June 28, 2022

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**  
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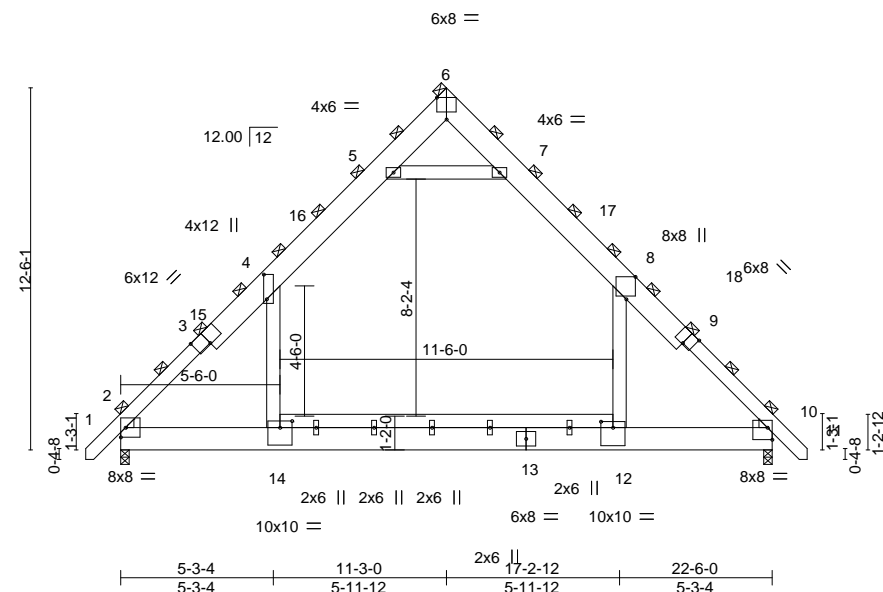
ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate  
818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Precision/Lot 13 Liberty Meadows/Harnet	152793031
J1021-6184	C3	ATTIC	2	2		

Comtech, Inc. Fayetteville, NC - 28314,

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ID:JjP3\_bNirdpeLXA5mDh?5?y7p3U-Z0P2hrffHwPqLzWoYbF87f9JVNIz7zykMJ5ufZz1osy  
 1-2-8 5-3-4 7-10-3 9-5-0 11-3-0 13-1-0 14-7-13 17-2-12 22-6-0 23-8-8  
 1-2-8 5-3-4 2-6-15 1-6-13 1-10-0 1-10-0 1-6-13 2-6-15 5-3-4 1-2-8



Scale = 1:79.6

Plate Offsets (X,Y)--	[3:0-6-0,Edge], [4:0-10-4,0-1-4], [6:0-4-0,Edge], [8:0-9-5,Edge], [9:0-4-0,Edge], [10:Edge,0-5-0], [12:0-5-0,0-2-8], [14:0-5-0,0-2-12]
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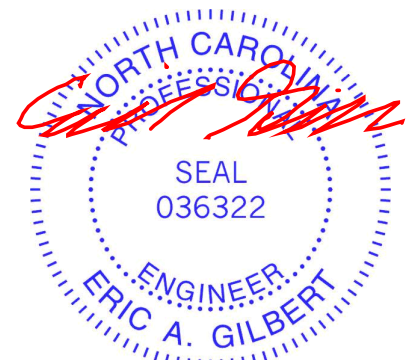
LOADING (psf)	SPACING-	CS.I.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.15	TC 0.64	Vert(LL) -0.22	12-14	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.43	Vert(CT) -0.36	12-14	>738	240		
BCLL 0.0 *	Rep Stress Incr NO	WB 0.29	Horz(CT) 0.02	10	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-S	Wind(LL) 0.09	12-14	>999	240		
							Weight: 541 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x10 SP 2400F 2.0E *Except* 1-3,9-11: 2x6 SP 2400F 2.0E	TOP CHORD 2-0-0 oc purlins (6-0-0 max.) (Switched from sheeted: Spacing > 2-10-0).
BOT CHORD 2x10 SP 2400F 2.0E *Except* 12-14: 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x6 SP No.1	
WEDGE Left: 2x4 SP No.2, Right: 2x4 SP No.2	

REACTIONS.
(size) 2=0-3-8, 10=0-3-8 Max Horz 2=-665(LC 10) Max Grav 2=5765(LC 20), 10=4164(LC 21)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-4=-6578/98, 4-5=-3018/423, 5-6=-185/2015, 6-7=-132/1652, 7-8=-3382/475, 8-10=-6028/41
BOT CHORD 2-14=0/3583, 12-14=0/3613, 10-12=0/3590
WEBS 4-14=0/4300, 8-12=0/3129, 5-7=-5861/824

- NOTES-**
- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x10 - 2 rows staggered at 0-9-0 oc.  
Bottom chords connected as follows: 2x10 - 2 rows staggered at 0-3-0 oc.  
Webs connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
  - All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
  - Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-0-14 to 3-3-15, Interior(1) 3-3-15 to 11-3-0, Exterior(2) 11-3-0 to 15-7-13, Interior(1) 15-7-13 to 23-6-14 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).4-14, 8-12
  - Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 12-14
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 2972 lb down and 426 lb up at 5-6-8 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
  - Attic room checked for L/360 deflection.



June 28, 2022

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

<p><b>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.</b>          Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see <b>ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information</b> available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601</p>	<p><b>ENGINEERING BY</b>  <b>TRENCO</b>          A MITEK Affiliate          818 Soundside Road          Edenton, NC 27932</p>
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Job	Truss	Truss Type	Qty	Ply	Precision/Lot 13 Liberty Meadows/Harnet	I52793031
J1021-6184	C3	ATTIC	2	<b>2</b>	Job Reference (optional)	

Comtech, Inc, Fayetteville, NC - 28314,

8.430 s Aug 16 2021 MiTek Industries, Inc. Tue Jun 28 08:42:25 2022 Page 2  
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**LOAD CASE(S)** Standard

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

Uniform Loads (plf)

Vert: 1-4=-137, 4-5=-183, 5-6=-137, 6-7=-137, 7-8=-183, 8-11=-137, 2-14=-46, 12-14=-92, 10-12=-46, 5-7=-46

Drag: 4-14=-23, 8-12=-23

Concentrated Loads (lb)

Vert: 14=-1687(F)

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

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818 Soundside Road  
 Edenton, NC 27932

Comtech, Inc, Fayetteville, NC - 28314,

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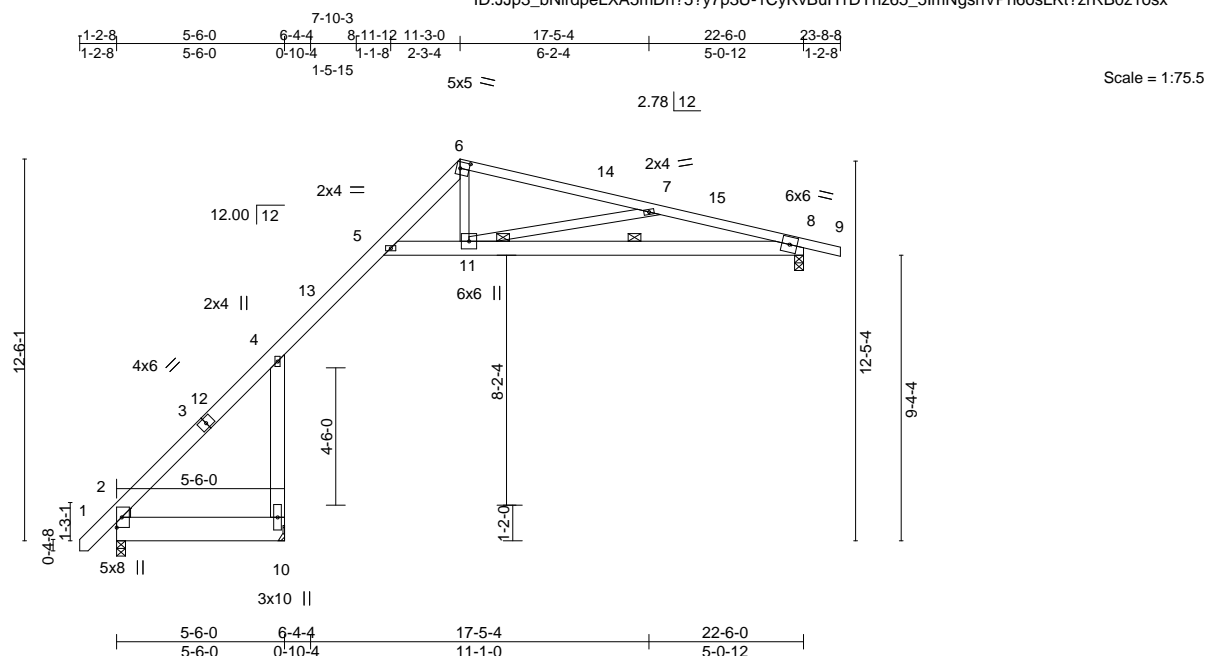


Plate Offsets (X,Y)-- [6:0-3-9,0-2-8]

LOADING (psf)	SPACING-	CS.I.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.15	TC 0.63	Vert(LL) 0.00	2-10	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.14	Vert(CT) -0.00	2-10	>999	240		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.60	Horz(CT) 0.29	8	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-S	Wind(LL) -0.00	2-10	>999	240		
							Weight: 141 lb	FT = 20%

**LUMBER-**  
 TOP CHORD 2x6 SP No.1 \*Except\*  
 6-9: 2x4 SP No.1  
 BOT CHORD 2x10 SP No.1  
 WEBS 2x6 SP No.1 \*Except\*  
 6-11,7-11: 2x4 SP No.2  
 WEDGE  
 Left: 2x4 SP No.2

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 4-11-9 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
 WEBS 1 Row at midpt 8-11  
 JOINTS 1 Brace at Jt(s): 11

**REACTIONS.** (size) 2=0-3-8, 10=Mechanical, 8=0-3-8  
 Max Horz 2=345(LC 12)  
 Max Uplift 2=-86(LC 10), 10=-491(LC 12), 8=-197(LC 9)  
 Max Grav 2=296(LC 12), 10=967(LC 20), 8=548(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-4=-523/603, 4-5=-395/192, 5-6=-662/468, 6-7=-669/489, 7-8=-1518/982  
 WEBS 5-11=-374/606, 8-11=-924/1454, 7-11=-870/556, 4-10=-1157/854

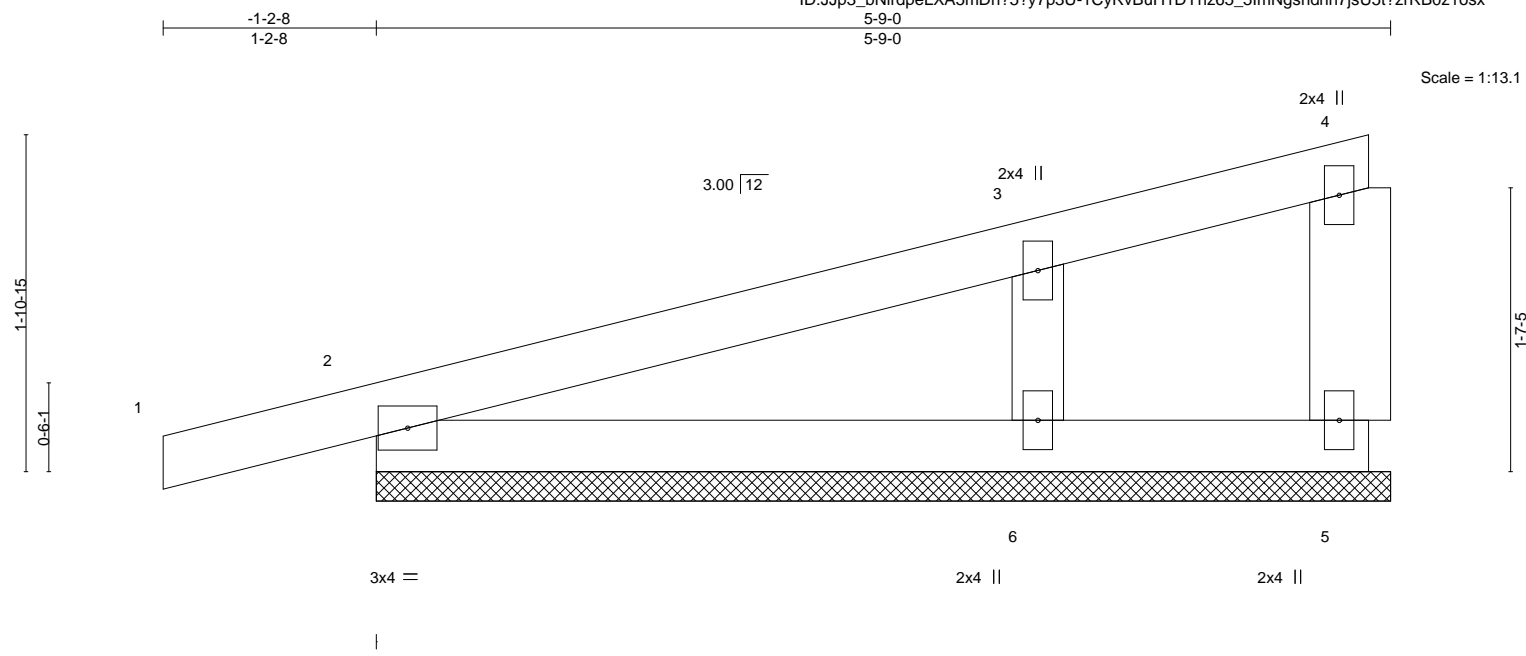
- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-0-14 to 3-3-15, Interior(1) 3-3-15 to 11-3-0, Exterior(2) 11-3-0 to 15-7-13, Interior(1) 15-7-13 to 23-8-8 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) Refer to girder(s) for truss to truss connections.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 86 lb uplift at joint 2, 491 lb uplift at joint 10 and 197 lb uplift at joint 8.
  - 7) Attic room checked for L/360 deflection.



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Job	Truss	Truss Type	Qty	Ply	Precision/Lot 13 Liberty Meadows/Harnet	I52793033
J1021-6184	P1-GE	GABLE	1	1		

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<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL	1.15	TC 0.10	Vert(LL)	-0.00	1	n/r	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.08	Vert(CT)	0.00	1	n/r		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.04	Horz(CT)	0.00		n/a		
BCDL 10.0	Code	IRC2015/TPI2014	Matrix-P					Weight: 23 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.1	TOP CHORD Structural wood sheathing directly applied or 5-9-0 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x6 SP No.1	
OTHERS 2x4 SP No.2	

**REACTIONS.** (size) 5=5-9-0, 2=5-9-0, 6=5-9-0  
 Max Horz 2=80(LC 8)  
 Max Uplift 5=-10(LC 8), 2=-93(LC 8), 6=-93(LC 12)  
 Max Grav 5=20(LC 1), 2=210(LC 1), 6=284(LC 1)

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

- NOTES-**
- 1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) 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
  - 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 10 lb uplift at joint 5, 93 lb uplift at joint 2 and 93 lb uplift at joint 6.



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**  
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

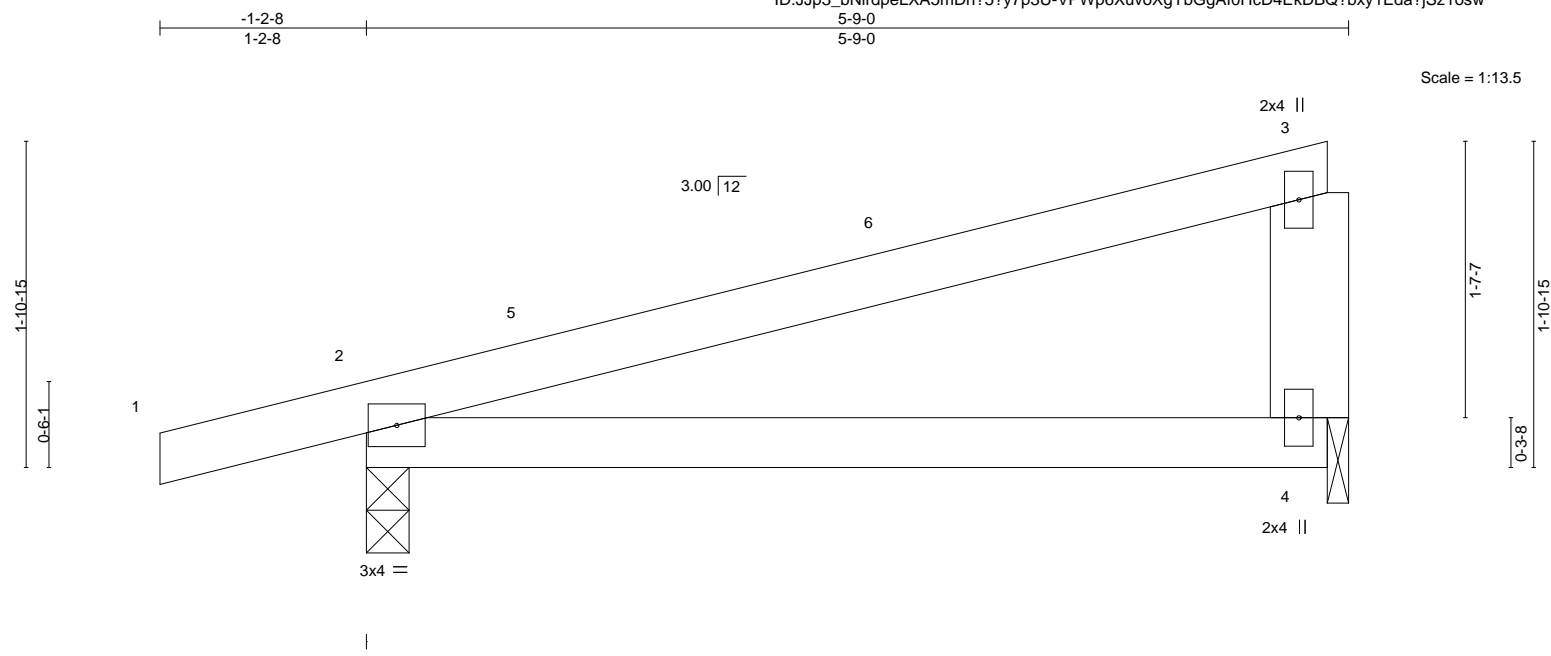


Job	Truss	Truss Type	Qty	Ply	Precision/Lot 13 Liberty Meadows/Harnet	I52793034
J1021-6184	P2	MONOPITCH	6	1		

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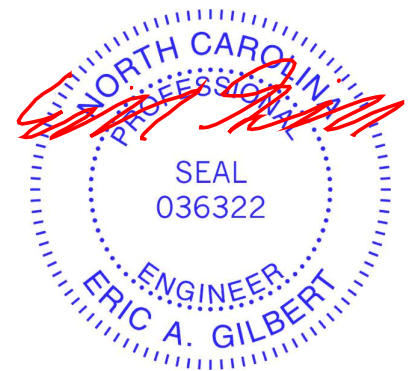
<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL	1.15	TC 0.37	Vert(LL)	-0.04	2-4	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.27	Vert(CT)	-0.09	2-4	>728		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.00	Horz(CT)	0.00		n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-P	Wind(LL)	0.10	2-4	>655	Weight: 22 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.1	TOP CHORD Structural wood sheathing directly applied or 5-9-0 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x6 SP No.1	

**REACTIONS.** (size) 2=0-3-0, 4=0-1-8  
 Max Horz 2=56(LC 8)  
 Max Uplift 2=-130(LC 8), 4=-85(LC 8)  
 Max Grav 2=306(LC 1), 4=206(LC 1)

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

- NOTES-**
- 1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-2-8 to 3-2-5, Interior(1) 3-2-5 to 5-6-4 zone; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 3) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 4) Bearing at joint(s) 4 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - 5) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 4.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 130 lb uplift at joint 2 and 85 lb uplift at joint 4.

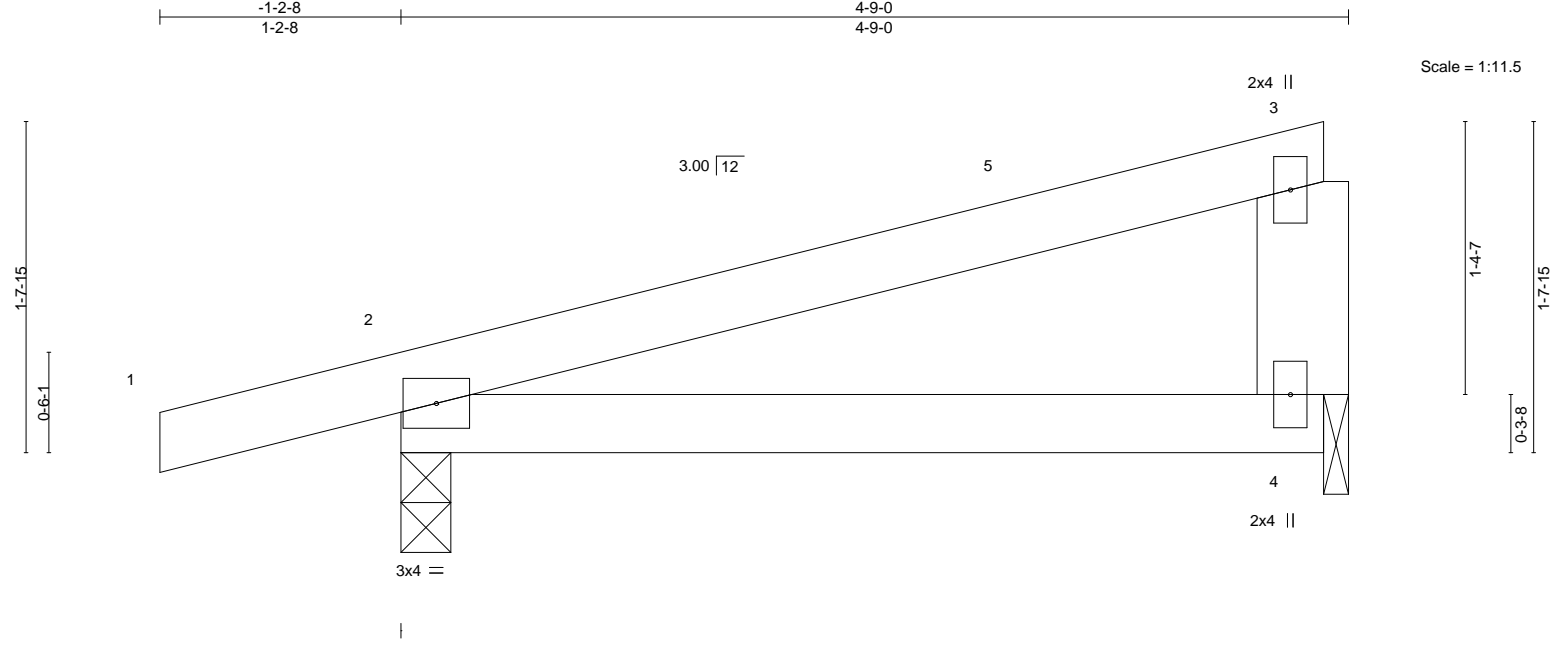


Job	Truss	Truss Type	Qty	Ply	Precision/Lot 13 Liberty Meadows/Harnet	I52793035
J1021-6184	P3	MONOPITCH	10	1		

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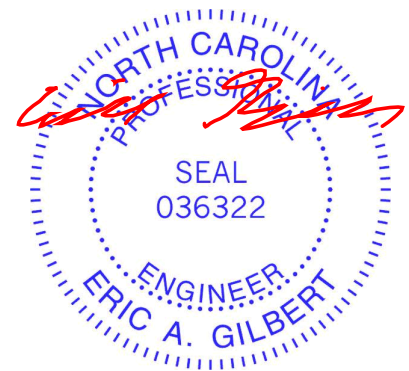
LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.22	Vert(LL) -0.02	2-4	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.17	Vert(CT) -0.04	2-4	>999	240		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.00	Horz(CT) 0.00		n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-P	Wind(LL) 0.04	2-4	>999	240	Weight: 18 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.1	TOP CHORD Structural wood sheathing directly applied or 5-9-0 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x6 SP No.1	

**REACTIONS.** (size) 2=0-3-0, 4=0-1-8  
 Max Horz 2=48(LC 8)  
 Max Uplift 2=-117(LC 8), 4=-67(LC 8)  
 Max Grav 2=268(LC 1), 4=164(LC 1)

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

- NOTES-**
- 1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-2-8 to 3-2-5, Interior(1) 3-2-5 to 4-6-4 zone; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 3) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 4) Bearing at joint(s) 4 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - 5) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 4.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 117 lb uplift at joint 2 and 67 lb uplift at joint 4.

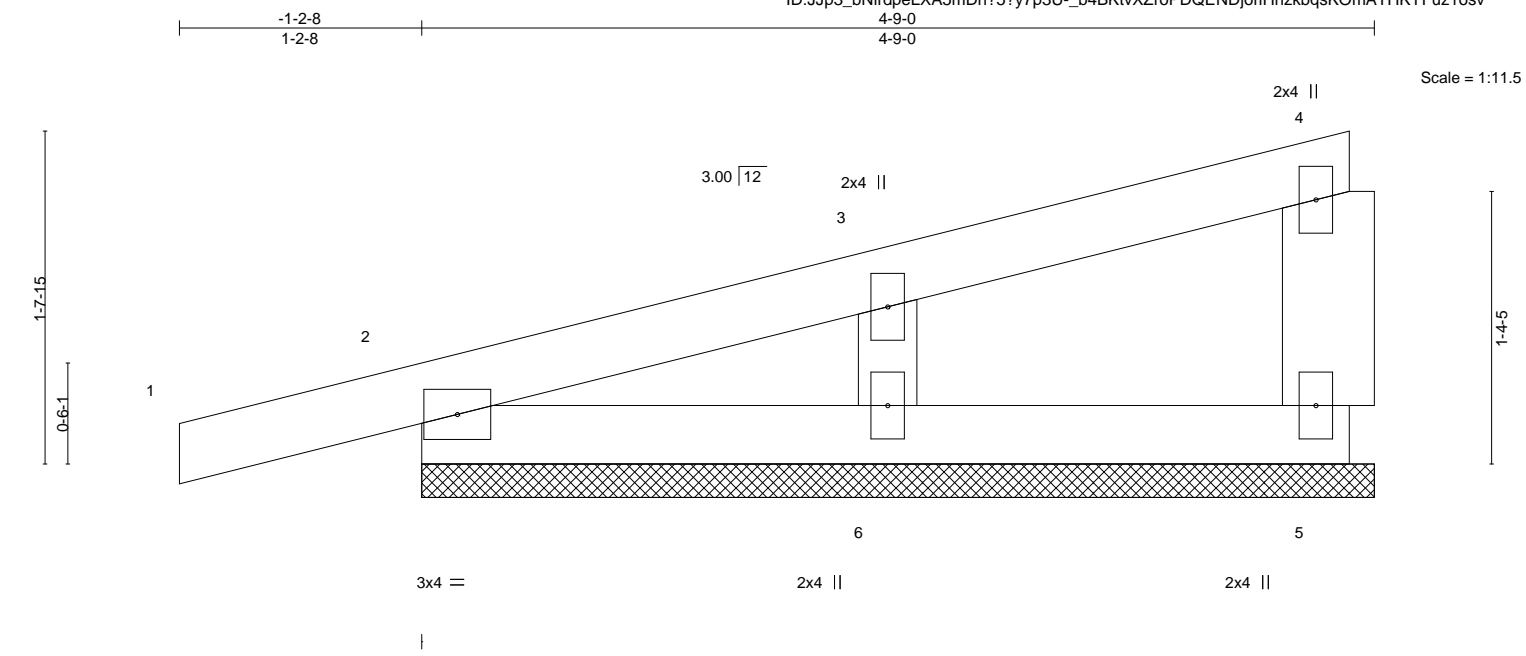


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Job	Truss	Truss Type	Qty	Ply	Precision/Lot 13 Liberty Meadows/Harnet	I52793036
J1021-6184	P4-GE	GABLE	1	1		

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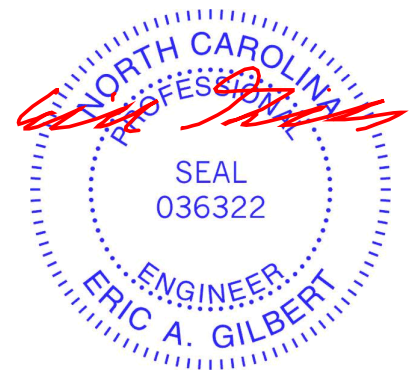
LOADING (psf)	SPACING-	CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.07	Vert(LL) 0.00	0.00	1	n/r	120	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.04	Vert(CT) -0.00	-0.00	1	n/r	120		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.03	Horz(CT) 0.00	0.00		n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-P						Weight: 19 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.1	TOP CHORD Structural wood sheathing directly applied or 5-9-0 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x6 SP No.1	
OTHERS 2x4 SP No.2	

**REACTIONS.** (size) 5=4-9-0, 2=4-9-0, 6=4-9-0  
 Max Horz 2=69(LC 8)  
 Max Uplift 5=-25(LC 8), 2=-85(LC 8), 6=-65(LC 12)  
 Max Grav 5=70(LC 1), 2=167(LC 1), 6=197(LC 1)

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

- NOTES-**
- 1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) 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
  - 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 25 lb uplift at joint 5, 85 lb uplift at joint 2 and 65 lb uplift at joint 6.

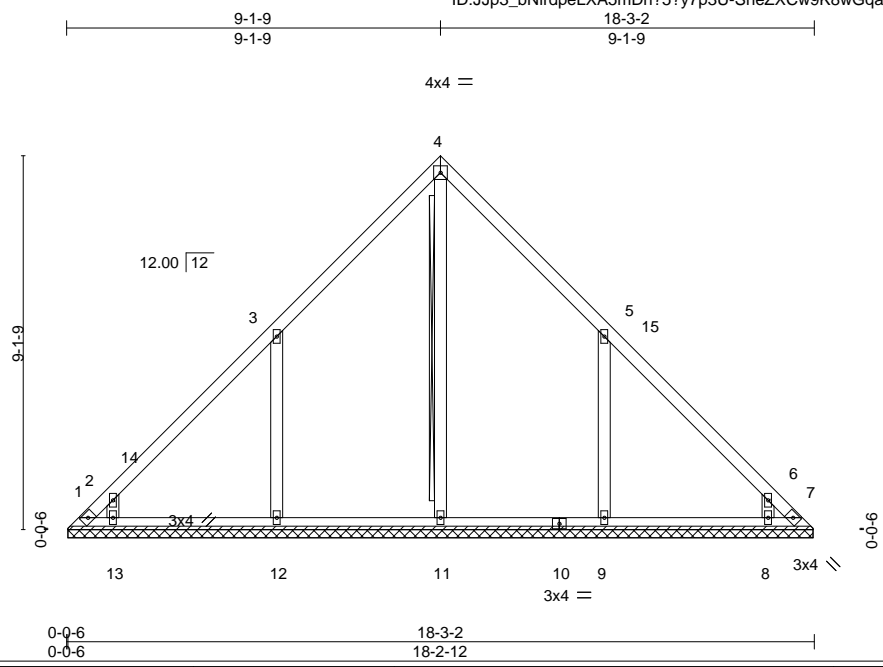


Job	Truss	Truss Type	Qty	Ply	Precision/Lot 13 Liberty Meadows/Harnet	I52793037
J1021-6184	VB1	Valley	1	1		

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<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	2-0-0	TC 0.16	Vert(LL) n/a	-	n/a	999	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.19	Vert(CT) n/a	-	n/a	999		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.16	Horz(CT) 0.00	7	n/a	n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-S					Weight: 92 lb	FT = 20%
	Code IRC2015/TPI2014							

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x4 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS 2x4 SP No.2	WEBS T-Brace: 2x4 SPF No.2 - 4-11
	Fasten (2X) T and I braces to narrow edge of web with 10d (0.131"x3") nails, 6in o.c., with 3in minimum end distance.
	Brace must cover 90% of web length.

**REACTIONS.** All bearings 18-2-6.  
 (lb) - Max Horz 1=210(LC 9)  
 Max Uplift All uplift 100 lb or less at joint(s) except 1=-184(LC 10), 7=-149(LC 11), 12=-184(LC 12), 13=-145(LC 12), 9=-184(LC 13), 8=-145(LC 13)  
 Max Grav All reactions 250 lb or less at joint(s) 1, 7 except 11=429(LC 22), 12=488(LC 19), 13=304(LC 19), 9=488(LC 20), 8=304(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-2=-302/265, 6-7=-302/265  
 WEBS 3-12=-404/308, 2-13=-348/302, 5-9=-404/308, 6-8=-348/302

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCCL=6.0psf; BCCL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-4-4 to 4-9-0, Interior(1) 4-9-0 to 9-1-9, Exterior(2) 9-1-9 to 13-6-6, Interior(1) 13-6-6 to 17-10-14 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) All plates are 2x4 MT20 unless otherwise indicated.
  - 4) Gable requires continuous bottom chord bearing.
  - 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, with BCDL = 10.0psf.
  - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 184 lb uplift at joint 1, 149 lb uplift at joint 7, 184 lb uplift at joint 12, 145 lb uplift at joint 13, 184 lb uplift at joint 9 and 145 lb uplift at joint 8.
  - 8) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.

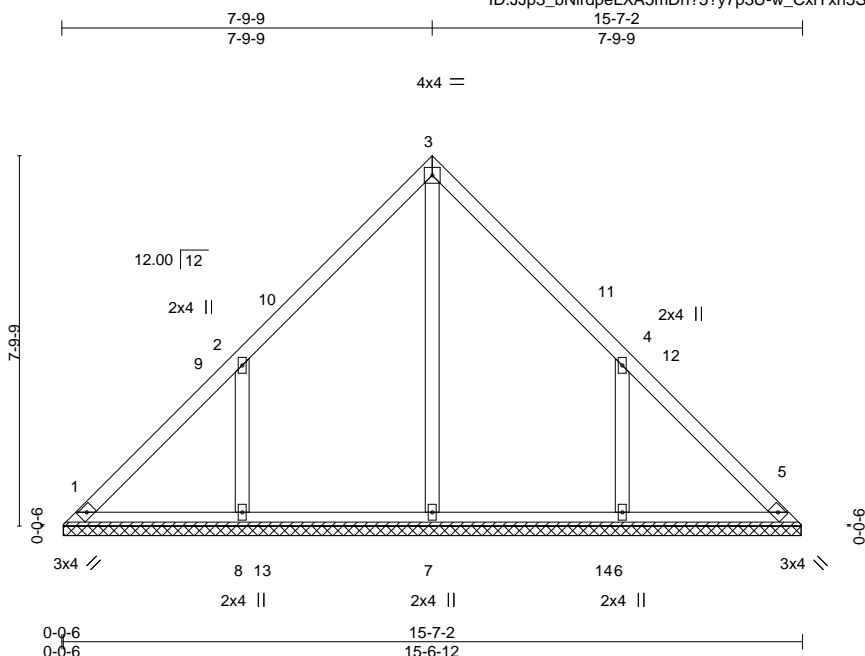


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Job	Truss	Truss Type	Qty	Ply	Precision/Lot 13 Liberty Meadows/Harnet	I52793038
J1021-6184	VB2	Valley	1	1	Job Reference (optional)	

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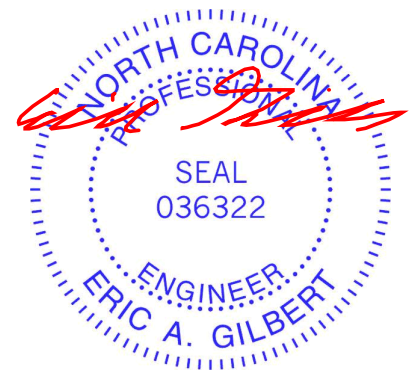
<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	2-0-0	TC 0.16	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.18	Vert(LL) n/a - n/a 999		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.13	Vert(CT) n/a - n/a 999		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.00 5 n/a n/a		
	Code IRC2015/TPI2014			Weight: 75 lb	FT = 20%

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

**REACTIONS.** All bearings 15-6-6.  
 (lb) - Max Horz 1=178(LC 8)  
 Max Uplift All uplift 100 lb or less at joint(s) 1 except 8=-186(LC 12), 6=-186(LC 13)  
 Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 7=416(LC 22), 8=472(LC 19), 6=472(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 WEBS 2-8=-403/309, 4-6=-403/309

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCCL=6.0psf; BCCL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-4-4 to 4-9-0, Interior(1) 4-9-0 to 7-9-9, Exterior(2) 7-9-9 to 12-2-6, Interior(1) 12-2-6 to 15-2-14 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Gable requires continuous bottom chord bearing.
  - 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 5) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCCL = 10.0psf.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1 except (it=lb) 8=186, 6=186.

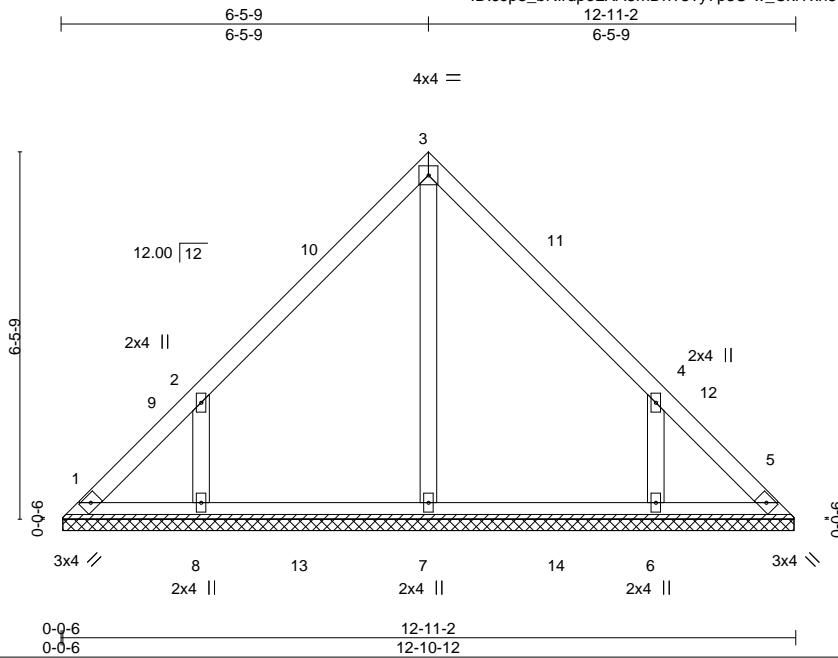


June 28, 2022

Job	Truss	Truss Type	Qty	Ply	Precision/Lot 13 Liberty Meadows/Harnet	I52793039
J1021-6184	VB3	Valley	1	1	Job Reference (optional)	

Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Aug 16 2021 MiTek Industries, Inc. Tue Jun 28 08:42:30 2022 Page 1  
 ID:JJp3\_bNirdpeLXA5mDh?5?y7p3U-w\_CxIYxn5S27SkOIK8rJqisiI7OTdoHKTwbpfKzn1ost



Scale = 1:40.5

<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	2-0-0	TC 0.14	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.15	Vert(LL) n/a - n/a 999		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.09	Vert(CT) n/a - n/a 999		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.00 5 n/a n/a	Weight: 59 lb	FT = 20%
	Code IRC2015/TPI2014				

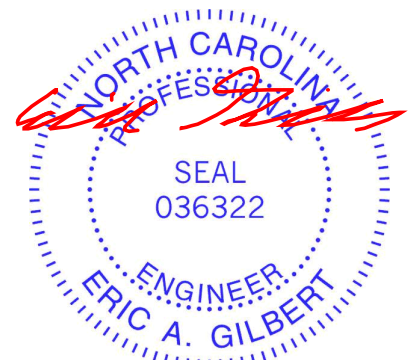
**LUMBER-**  
 TOP CHORD 2x4 SP No.1  
 BOT CHORD 2x4 SP No.1  
 OTHERS 2x4 SP No.2

**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.** All bearings 12-10-6.  
 (lb) - Max Horz 1=147(LC 8)  
 Max Uplift All uplift 100 lb or less at joint(s) 1, 5 except 8=162(LC 12), 6=162(LC 13)  
 Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 7=382(LC 19), 8=371(LC 19), 6=371(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 WEBS 2-8=-357/290, 4-6=-357/290

- 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) 0-4-4 to 4-9-0, Interior(1) 4-9-0 to 6-5-9, Exterior(2) 6-5-9 to 10-10-6, Interior(1) 10-10-6 to 12-6-14 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Gable requires continuous bottom chord bearing.
  - 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 5) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 5 except (jt=lb) 8=162, 6=162.



June 28, 2022

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**  
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

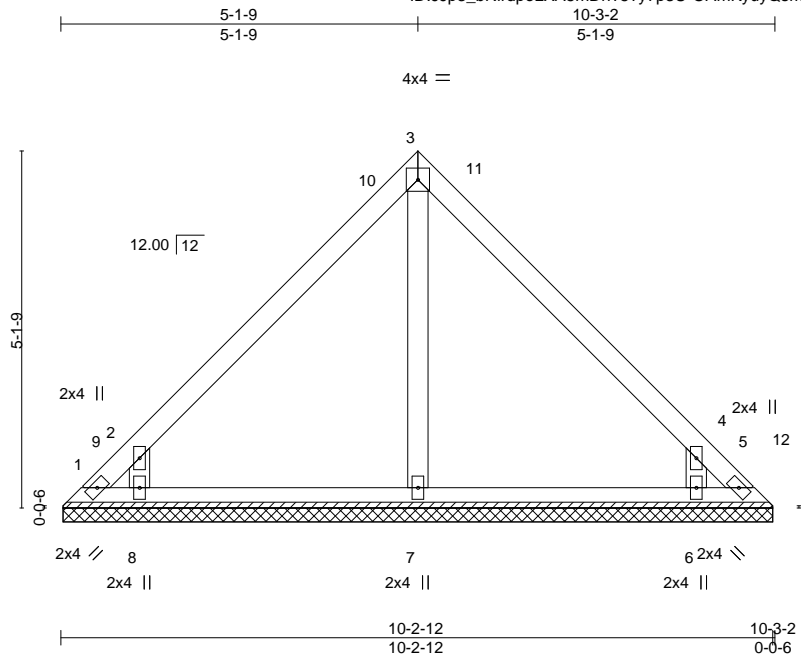


818 Soundside Road  
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Precision/Lot 13 Liberty Meadows/Harnet	I52793040
J1021-6184	VB4	Valley	1	1		

Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Aug 16 2021 MiTek Industries, Inc. Tue Jun 28 08:42:31 2022 Page 1  
 ID:JjP3\_bNirdpeLXA5mDh?5y7p3U-OAmKyuyQsmA\_4uzyrMYNwPTUoqnXkxc9FYCsDz1oss



Scale = 1:33.1

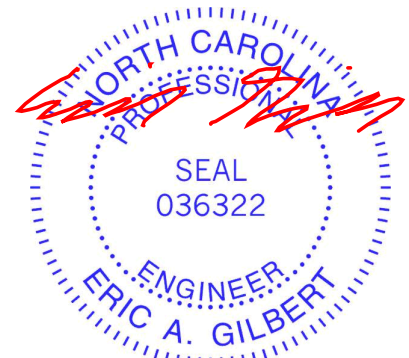
<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL	1.15	TC 0.16	Vert(LL)	n/a	-	n/a	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.09	Vert(CT)	n/a	-	n/a		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.07	Horz(CT)	0.00	5	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S					Weight: 44 lb	FT = 20%

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

**REACTIONS.** All bearings 10-2-6.  
 (lb) - Max Horz 1=-115(LC 8)  
 Max Uplift All uplift 100 lb or less at joint(s) except 1=-152(LC 10), 5=-132(LC 11), 8=-190(LC 12), 6=-190(LC 13)  
 Max Grav All reactions 250 lb or less at joint(s) 1, 5, 7 except 8=393(LC 19), 6=393(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 WEBS 2-8=-432/374, 4-6=-432/374

- 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) 0-4-4 to 4-9-0, Interior(1) 4-9-0 to 5-1-9, Exterior(2) 5-1-9 to 9-6-6, Interior(1) 9-6-6 to 9-10-14 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Gable requires continuous bottom chord bearing.
  - 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 152 lb uplift at joint 1, 132 lb uplift at joint 5, 190 lb uplift at joint 8 and 190 lb uplift at joint 6.



June 28, 2022

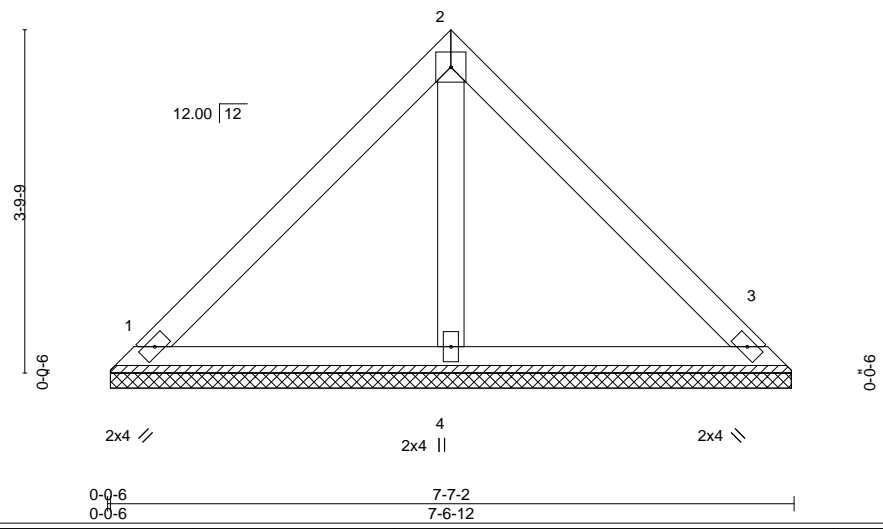
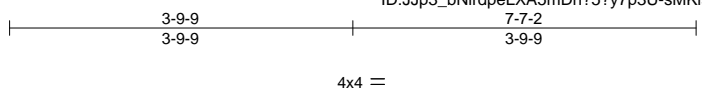
**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**  
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



Job	Truss	Truss Type	Qty	Ply	Precision/Lot	13 Liberty Meadows/Harnet	I52793041
J1021-6184	VB5	Valley	1	1	Job Reference (optional)		

Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Aug 16 2021 MiTek Industries, Inc. Tue Jun 28 08:42:32 2022 Page 1  
 ID:JJp3\_bNirdpeLXA5mDh?5?y7p3U-sMKi9Ey2d3lqh1Y8SZtnw7xdCA?GCImNvmOfz1osr



<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL	1.15	TC 0.20	Vert(LL)	n/a	-	n/a	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.09	Vert(CT)	n/a	-	n/a		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.03	Horz(CT)	0.00	3	n/a	Weight: 30 lb	FT = 20%
BCDL 10.0	Code IRC2015/TPI2014		Matrix-P						

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

**REACTIONS.** (size) 1=7-6-6, 3=7-6-6, 4=7-6-6  
 Max Horz 1=-83(LC 8)  
 Max Uplift 1=-30(LC 13), 3=-30(LC 13)  
 Max Grav 1=168(LC 1), 3=168(LC 1), 4=216(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; TC DL=6.0psf; BC DL=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) Gable requires continuous bottom chord bearing.
  - 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 5) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 30 lb uplift at joint 1 and 30 lb uplift at joint 3.



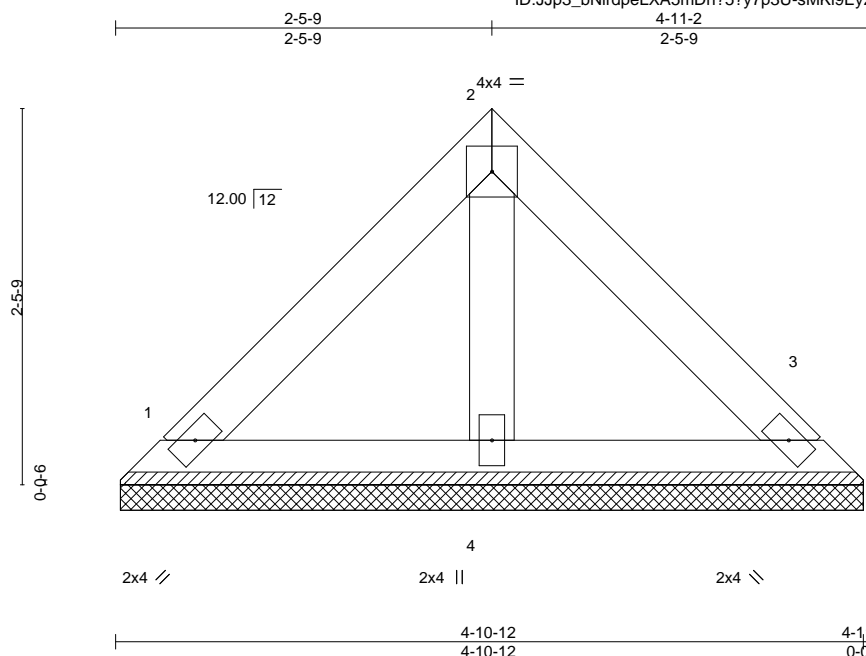
**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**  
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



Job	Truss	Truss Type	Qty	Ply	Precision/Lot	13 Liberty Meadows/Harnet	I52793042
J1021-6184	VB6	Valley	1	1	Job Reference (optional)		

Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Aug 16 2021 MiTek Industries, Inc. Tue Jun 28 08:42:32 2022 Page 1  
 ID:JjP3\_bNirdpeLXA5mDh?5?y7p3U-sMKi9Ey2d3lqh1Y8SZtnw7xfGCBsGC1mNvImOfz1osr



Scale = 1:15.1

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.07	Vert(LL)	n/a	-	n/a	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.03	Vert(CT)	n/a	-	n/a		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.01	Horz(CT)	0.00	3	n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-P					Weight: 19 lb	FT = 20%
	Code IRC2015/TPI2014							

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

**REACTIONS.** (size) 1=4-10-6, 3=4-10-6, 4=4-10-6  
 Max Horz 1=51(LC 8)  
 Max Uplift 1=18(LC 13), 3=18(LC 13)  
 Max Grav 1=103(LC 1), 3=103(LC 1), 4=132(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; BCCL=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) Gable requires continuous bottom chord bearing.
  - 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 5) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 18 lb uplift at joint 1 and 18 lb uplift at joint 3.



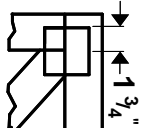
June 28, 2022

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**  
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

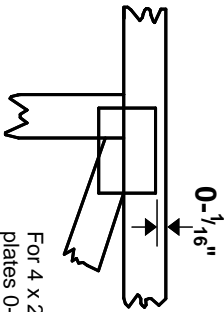


# Symbols

## PLATE LOCATION AND ORIENTATION



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



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



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

\* Plate location details available in **MITek 20/20 software or upon request.**

## PLATE SIZE

4 X 4

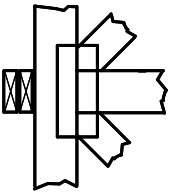
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## LATERAL BRACING LOCATION



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

## BEARING



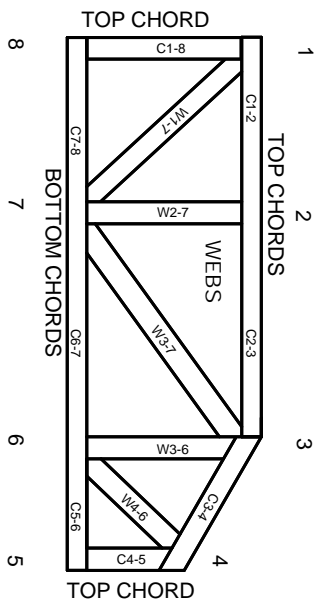
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

### Industry Standards:

ANSI/TP1: National Design Specification for Metal Plate Connected Wood Truss Construction.  
DSB-89: Design Standard for Bracing, Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

# Numbering System

6-4-8  
dimensions shown in ft-in-sixteenths  
(Drawings not to scale)



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

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

## PRODUCT CODE APPROVALS

ICC-ES Reports:

ESR-1311, ESR-1352, ESR1988  
ER-3907, ESR-2362, ESR-1397, ESR-3282

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

Lumber design values are in accordance with ANSI/TP1 section 6.3 These truss designs rely on lumber values established by others.

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MITek Engineering Reference Sheet: Mill-7473 rev. 5/19/2020



# General Safety Notes

## Failure to Follow Could Cause Property Damage or Personal Injury

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



Trenco  
818 Soundside Rd  
Edenton, NC 27932

Re: J1021-6185  
Precision/Lot 13 Liberty Meadows/Harn

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: I52793650 thru I52793661

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

North Carolina COA: C-0844



June 28, 2022

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Gilbert, Eric

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

Job	Truss	Truss Type	Qty	Ply	Precision/Lot 13 Liberty Meadows/Ham	152793650
J1021-6185	ET1	GABLE	1	1	Job Reference (optional)	

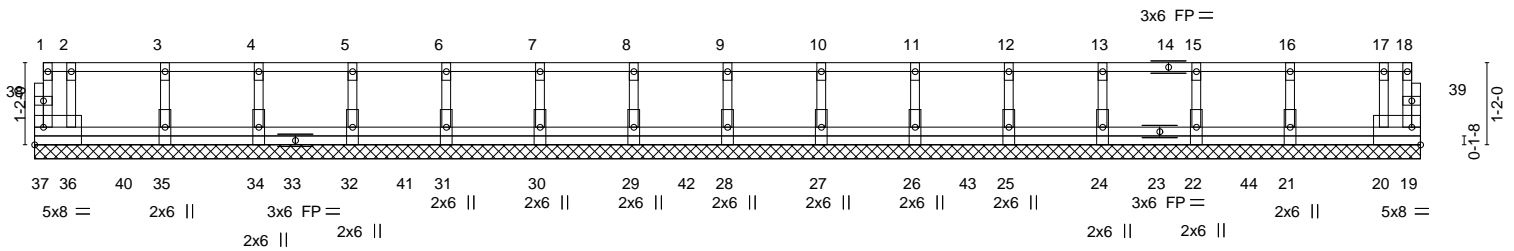
Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Aug 16 2021 MiTek Industries, Inc. Tue Jun 28 09:16:46 2022 Page 1  
ID:Jjp3\_bNirdpeLXA5mDh?5?y7p3U-BD00GxJZtb8gy8NHwhSTq10fMBDX9C5iTrSUcz1oMI

0-1/8

0-1/8

Scale = 1:32.8



0-6-4	1-10-4	3-2-4	4-6-4	5-10-4	7-2-4	8-6-4	9-10-4	11-2-4	12-6-4	13-10-4	15-2-4	16-6-4	17-10-4	19-2-4	19-8-8
0-6-4	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	0-6-4

Plate Offsets (X,Y)--		[20:Edge,0-3-0], [37:Edge,0-3-0]							
<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 40.0	Plate Grip DOL	1.00	TC 0.07	Vert(LL)	n/a	-	n/a	MT20	244/190
TCDL 10.0	Lumber DOL	1.00	BC 0.03	Vert(CT)	n/a	-	n/a		
BCLL 0.0	Rep Stress Incr	NO	WB 0.03	Horz(CT)	-0.00	19	n/a		
BCDL 5.0	Code	IRC2015/TPI2014	Matrix-R						
								Weight: 109 lb	FT = 20%F, 11%E

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.1 (flat)	TOP CHORD Structural wood sheathing directly applied or 10-0-0 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)	
OTHERS 2x4 SP No.3 (flat)	

**REACTIONS.** All bearings 19-8-8.  
(lb) - Max Uplift All uplift 100 lb or less at joint(s) 37  
Max Grav All reactions 250 lb or less at joint(s) 28, 29, 30, 31, 32, 34, 35, 36, 27, 26, 25, 24, 22, 21, 20, 19

**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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 37.
  - 7) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 8) 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.

**LOAD CASE(S)** Standard

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

Uniform Loads (plf)  
Vert: 19-37=-10, 1-18=-100

Concentrated Loads (lb)  
Vert: 30=-74 34=-74 27=-74 24=-74 19=-78 40=-74 41=-74 42=-74 43=-74 44=-74



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**  
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



Job	Truss	Truss Type	Qty	Ply	Precision/Lot 13 Liberty Meadows/Harn	I52793651
J1021-6185	ET2	GABLE	1	1	Job Reference (optional)	

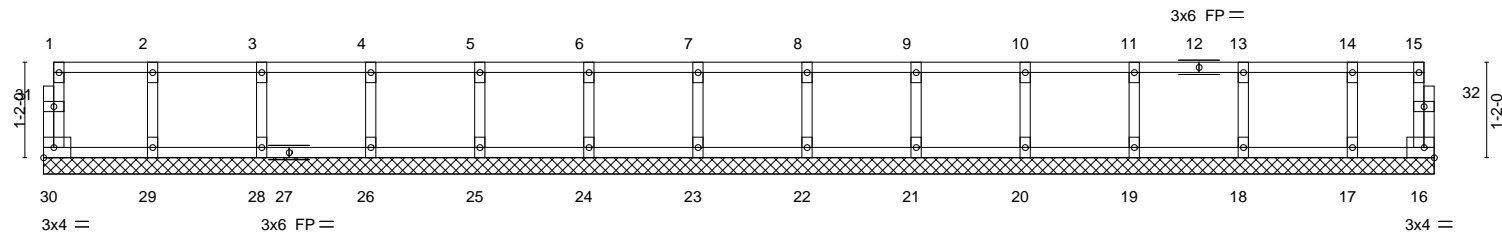
Comtech, Inc. Fayetteville, NC - 28314,

8.430 s Aug 16 2021 MiTek Industries, Inc. Tue Jun 28 09:16:47 2022 Page 1  
 ID:Jjp3\_bNirdpeLXA5mDh?5?y7p3U-fQaOUHKBevGXalxTTOziNEZrFaZ0GcSEw7b012z1oMk

0-1/8

0-1/8

Scale = 1:28.2



1-4-0	2-8-0	4-0-0	5-4-0	6-8-0	8-0-0	9-4-0	10-8-0	12-0-0	13-4-0	14-8-0	16-0-0	17-0-0
1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-0-0

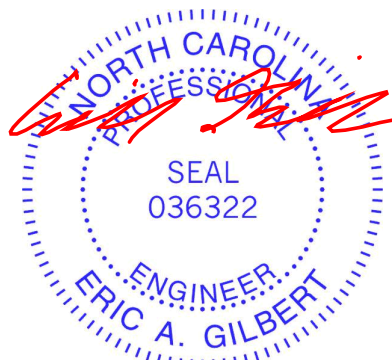
<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in	(loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 40.0	Plate Grip DOL	1.00	TC 0.06	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL 10.0	Lumber DOL	1.00	BC 0.01	Vert(CT)	n/a	-	n/a	999		
BCLL 0.0	Rep Stress Incr	YES	WB 0.03	Horz(CT)	0.00	16	n/a	n/a		
BCDL 5.0	Code IRC2015/TPI2014		Matrix-R						Weight: 71 lb	FT = 20%F, 11%E

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

**REACTIONS.** All bearings 17-0-0.  
 (lb) - Max Grav All reactions 250 lb or less at joint(s) 30, 16, 29, 28, 26, 25, 24, 23, 22, 21, 20, 19, 18, 17

**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) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 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.



June 28, 2022

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818 Soundside Road  
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Precision/Lot 13 Liberty Meadows/Harn	I52793652
J1021-6185	ET3	GABLE	1	1	Job Reference (optional)	

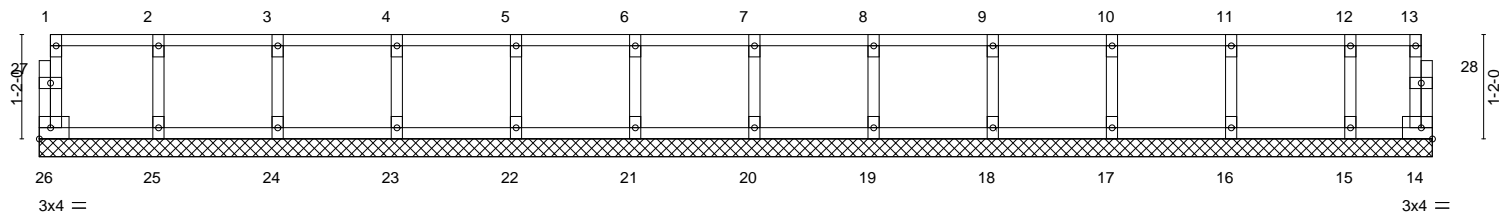
Comtech, Inc, Fayetteville, NC - 28314,

8.430 s Aug 16 2021 MiTek Industries, Inc. Tue Jun 28 09:16:48 2022 Page 1  
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0-1/8

0-1/8

Scale = 1:25.8



1-4-0	2-8-0	4-0-0	5-4-0	6-8-0	8-0-0	9-4-0	10-8-0	12-0-0	13-4-0	14-8-0	15-7-0
1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	0-11-0

<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in	(loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 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	14	n/a	n/a		
BCDL 5.0	Code IRC2015/TPI2014		Matrix-R						Weight: 66 lb	FT = 20%F, 11%E

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

**REACTIONS.** All bearings 15-7-0.  
 (lb) - Max Grav All reactions 250 lb or less at joint(s) 26, 14, 25, 24, 23, 22, 21, 20, 19, 18, 17, 16, 15

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

- NOTES-**
- All plates are 1.5x3 MT20 unless otherwise indicated.
  - Plates checked for a plus or minus 1 degree rotation about its center.
  - Gable requires continuous bottom chord bearing.
  - Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
  - Gable studs spaced at 1-4-0 oc.
  - This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 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.



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**  
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Job	Truss	Truss Type	Qty	Ply	Precision/Lot 13 Liberty Meadows/Ham	152793653
J1021-6185	F1	GABLE	1	1	Job Reference (optional)	

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Aug 16 2021 MiTek Industries, Inc. Tue Jun 28 09:16:50 2022 Page 1  
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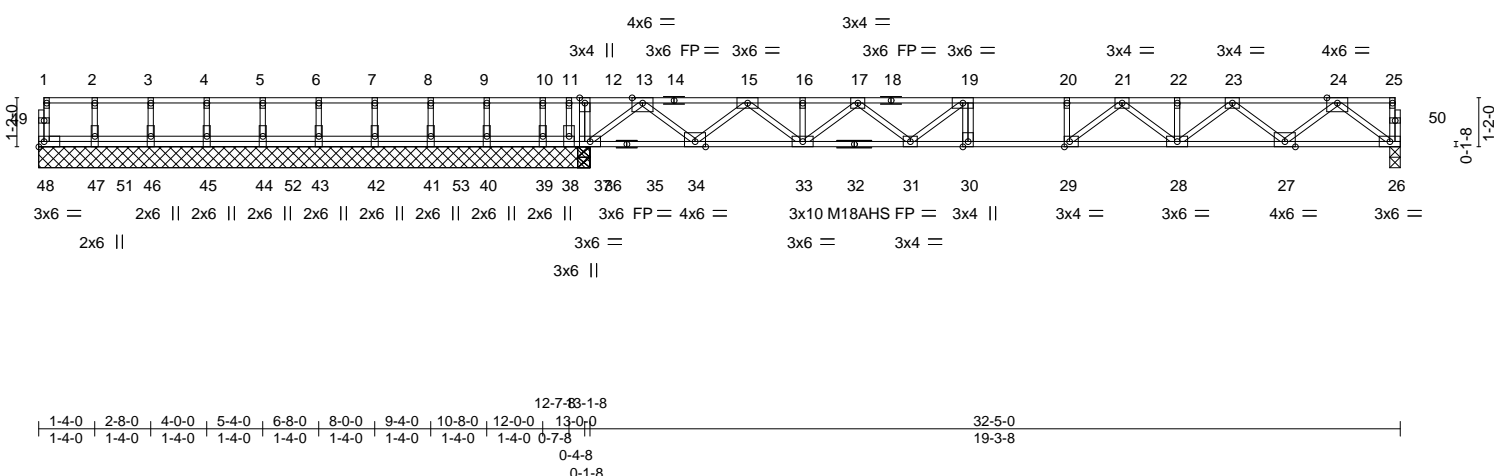


Plate Offsets (X,Y)--	[29:0-1-8,Edge]				
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 40.0	Plate Grip DOL 1.00	TC 0.42	Vert(LL) -0.34 30 >672 480	MT20	244/190
TCDL 10.0	Lumber DOL 1.00	BC 0.59	Vert(CT) -0.47 30 >491 360	M18AHS	186/179
BCLL 0.0	Rep Stress Incr YES	WB 0.57	Horz(CT) 0.07 26 n/a n/a		
BCDL 5.0	Code IRC2015/TPI2014	Matrix-S		Weight: 171 lb	FT = 20%F, 11%E

<b>LUMBER-</b>	<b>BRACING-</b>
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, Except: 6-0-0 oc bracing: 36-38.
WEBS 2x4 SP No.3(flat)	
OTHERS 2x4 SP No.3(flat)	

**REACTIONS.** All bearings 13-1-8 except (jt=length) 26=0-3-0.  
 (lb) - Max Uplift All uplift 100 lb or less at joint(s) except 38=970(LC 4)  
 Max Grav All reactions 250 lb or less at joint(s) 48, 47, 46, 45, 44, 43, 42, 41, 40 except 36=1962(LC 1), 36=1962(LC 1), 36=1962(LC 1), 26=1041(LC 1), 39=328(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 13-15=-2023/0, 15-16=-3667/0, 16-17=-3667/0, 17-19=-4518/0, 19-20=-4724/0, 20-21=-4724/0, 21-22=-3782/0, 22-23=-3782/0, 23-24=-2239/0  
 BOT CHORD 34-36=0/1108, 33-34=0/2981, 31-33=0/4262, 30-31=0/4724, 29-30=0/4724, 28-29=0/4296, 27-28=0/3124, 26-27=0/1314  
 WEBS 12-36=-636/0, 13-36=-1387/0, 13-34=0/1192, 15-34=-1246/0, 15-33=0/876, 24-26=-1646/0, 24-27=0/1204, 23-27=-1152/0, 23-28=0/841, 21-28=-655/0, 21-29=0/547, 11-38=0/455, 17-33=-760/0, 17-31=0/333, 19-31=-259/0, 20-29=-263/0

- 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 1.5x3 MT20 unless otherwise indicated.
  - 4) Plates checked for a plus or minus 1 degree rotation about its center.
  - 5) Gable studs spaced at 1-4-0 oc.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 970 lb uplift at joint 38.
  - 7) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 8) 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.
  - 9) 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: 26-48=10, 1-25=100  
 Concentrated Loads (lb)  
 Vert: 45=-95 42=-95 39=-95 51=-95 52=-95 53=-95



Job	Truss	Truss Type	Qty	Ply	Precision/Lot 13 Liberty Meadows/Harn	IS2793654
J1021-6185	F2	Floor	1	1	Job Reference (optional)	

Comtech, Inc, Fayetteville, NC - 28314,

8.430 s Aug 16 2021 MiTek Industries, Inc. Tue Jun 28 09:16:52 2022 Page 1  
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0-1-8

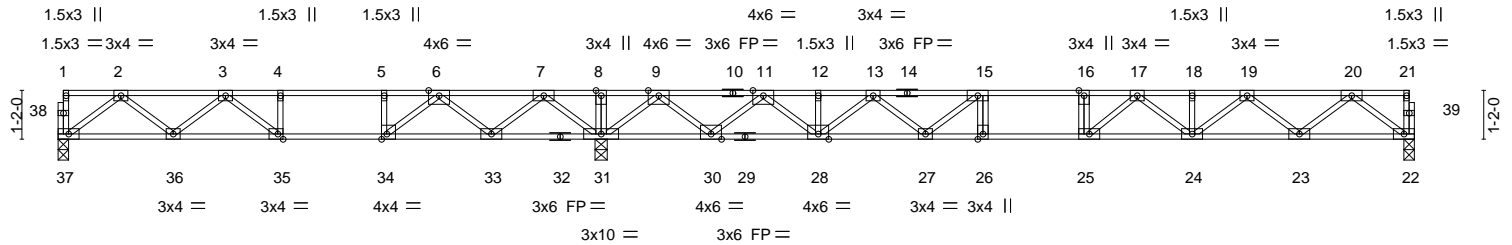


Plate Offsets (X,Y)--	[34:0-1-8,Edge], [35:0-1-8,Edge]
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LOADING (psf)	SPACING-	CSL.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 40.0	Plate Grip DOL 1.00	TC 0.74	Vert(LL) -0.28	25	>824	480	MT20	244/190
TCDL 10.0	Lumber DOL 1.00	BC 0.73	Vert(CT) -0.38	25	>604	360		
BCLL 0.0	Rep Stress Incr YES	WB 0.69	Horz(CT) 0.05	22	n/a	n/a		
BCDL 5.0	Code IRC2015/TPI2014	Matrix-S					Weight: 163 lb	FT = 20%F, 11%E

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.1(flat) *Except* 1-10: 2x4 SP 2400F 2.0E(flat)	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.1(flat) *Except* 22-29: 2x4 SP 2400F 2.0E(flat)	BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 2x4 SP No.3(flat)	

**REACTIONS.** (size) 37=0-3-0, 31=0-3-8, 22=0-3-0  
Max Grav 37=608(LC 3), 31=2131(LC 1), 22=934(LC 4)

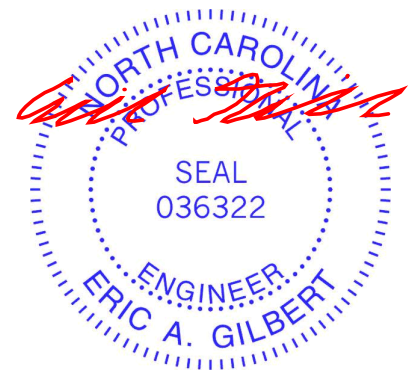
**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

TOP CHORD 2-3=-1162/48, 3-4=-1560/543, 4-5=-1560/543, 5-6=-1560/543, 6-7=-456/1438, 7-8=0/2740, 8-9=0/2740, 9-11=-325/363, 11-12=-2211/0, 12-13=-2211/0, 13-15=-3332/0, 15-16=-3800/0, 16-17=-3800/0, 17-18=-3259/0, 18-19=-3259/0, 19-20=-1967/0

BOT CHORD 36-37=-9746, 35-36=-178/1515, 34-35=-543/1560, 33-34=-1066/1064, 31-33=-1777/0, 30-31=-1239/0, 28-30=-50/1381, 27-28=0/2915, 26-27=0/3800, 25-26=0/3800, 24-25=0/3625, 23-24=0/2733, 22-23=0/1171

WEBS 2-37=-933/12, 2-36=-50/541, 3-36=-459/170, 7-31=-1407/0, 7-33=0/953, 6-33=-1014/0, 6-34=0/1132, 5-34=-523/0, 3-35=-484/57, 9-31=-1884/0, 9-30=0/1447, 11-30=-1420/0, 11-28=0/1108, 13-28=-933/0, 13-27=0/647, 15-27=-867/0, 20-22=-1466/0, 20-23=0/1036, 19-23=-997/0, 19-24=0/672, 17-24=-467/0, 17-25=-186/499

- NOTES-**
- 1) Unbalanced floor live loads have been considered for this design.
  - 2) All plates are 3x6 MT20 unless otherwise indicated.
  - 3) Plates checked for a plus or minus 1 degree rotation about its center.
  - 4) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 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.

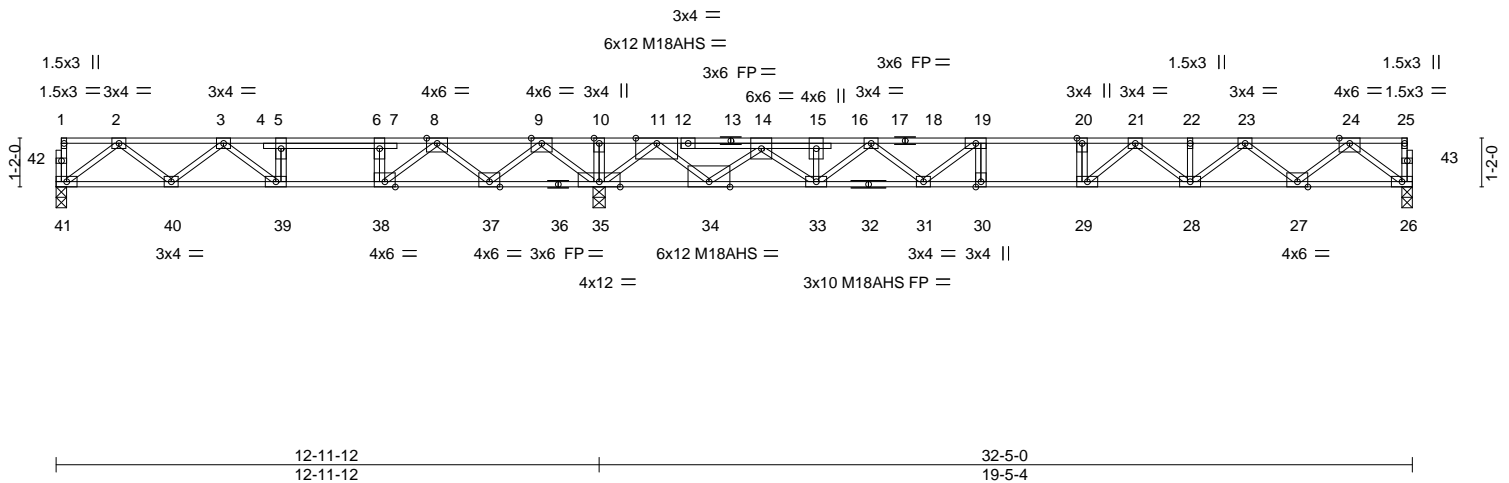


Job	Truss	Truss Type	Qty	Ply	Precision/Lot	13 Liberty Meadows/Ham	IS2793655
J1021-6185	F3	Floor	1	1	Job Reference (optional)		

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8.430 s Aug 16 2021 MiTek Industries, Inc. Tue Jun 28 09:16:53 2022 Page 1  
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0-1-8



<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in	(loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 40.0	Plate Grip DOL	1.00	TC 0.85	Vert(LL)	-0.32	30	>718	480	MT20	244/190
TCDL 10.0	Lumber DOL	1.00	BC 0.67	Vert(CT)	-0.43	30	>537	360	M18AHS	186/179
BCLL 0.0	Rep Stress Incr	NO	WB 0.75	Horz(CT)	0.04	26	n/a	n/a		
BCDL 5.0	Code IRC2015/TPI2014		Matrix-S						Weight: 175 lb	FT = 20%F, 11%E

<b>LUMBER-</b>	<b>BRACING-</b>
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 6-0-0 oc bracing.
WEBS 2x4 SP No.3(flat) *Except* 11-34: 2x4 SP No.2(flat)	

**REACTIONS.** (size) 41=0-3-0, 35=0-3-8, 26=0-3-0  
Max Uplift 41=-127(LC 4)  
Max Grav 41=473(LC 3), 35=3044(LC 1), 26=1014(LC 4)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-834/380, 3-5=-750/1451, 5-6=-750/1424, 6-8=-780/1424, 8-9=0/2767, 9-10=0/4340,  
10-11=0/4340, 11-14=-587/0, 14-15=-3361/0, 15-17=-3361/0, 17-19=-4214/0,  
19-20=-4491/0, 20-21=-4491/0, 21-22=-3651/0, 22-23=-3651/0, 23-24=-2171/0  
BOT CHORD 40-41=-197/565, 39-40=-648/1034, 38-39=-1424/750, 37-38=-2245/0, 35-37=-3259/0,  
34-35=-1864/0, 33-34=0/2709, 31-33=0/3905, 30-31=0/4491, 29-30=0/4491,  
28-29=0/4127, 27-28=0/3025, 26-27=0/1278  
WEBS 2-41=-705/249, 2-40=-238/350, 3-40=-260/348, 9-35=-1626/0, 9-37=0/1158,  
8-37=-1207/0, 8-38=0/1565, 6-38=-794/0, 3-39=-1009/0, 11-35=-3106/0, 11-34=0/2639,  
14-34=-2722/0, 14-33=0/878, 17-33=-736/0, 17-31=0/486, 19-31=-576/52, 5-39=0/516,  
20-29=-327/0, 24-26=-1601/0, 24-27=0/1162, 23-27=-1112/0, 23-28=0/799,  
21-28=-608/0, 21-29=0/742

- 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 3x6 MT20 unless otherwise indicated.
  - 4) Plates checked for a plus or minus 1 degree rotation about its center.
  - 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 127 lb uplift at joint 41.
  - 6) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 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.
  - 9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 930 lb down at 16-10-4 on top chord. The design/selection of such connection device(s) is the responsibility of others.
  - 10) 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



June 28, 2022

Continued on page 2

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**  
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Precision/Lot 13 Liberty Meadows/Harn	I52793655
J1021-6185	F3	Floor	1	1	Job Reference (optional)	

Comtech, Inc, Fayetteville, NC - 28314,

8.430 s Aug 16 2021 MiTek Industries, Inc. Tue Jun 28 09:16:54 2022 Page 2  
 ID:Jjp3\_bNirdpeLXA5mDh?5?y7p3U-ymV1yhPa\_29YwN\_pOMcL9jLr9PoGPc1GXintm8z1oMd

**LOAD CASE(S)** Standard  
 Uniform Loads (plf)  
 Vert: 26-41=-10, 1-25=-100  
 Concentrated Loads (lb)  
 Vert: 14=-850(B)

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818 Soundside Road  
 Edenton, NC 27932



Job	Truss	Truss Type	Qty	Ply	Precision/Lot 13 Liberty Meadows/Harn	I52793656
J1021-6185	F4	Floor	6	1	Job Reference (optional)	

Comtech, Inc, Fayetteville, NC - 28314,

8.430 s Aug 16 2021 MiTek Industries, Inc. Tue Jun 28 09:16:55 2022 Page 1  
 ID:JJp3\_bNirdpeLXA5mDh?5?y7p3U-Qy3P90QCIMHPXXZ?x47aiwu7lp6w88JQmMXRJaz1oMc

0-1-8



0-1-8  
 Scale = 1:25.5

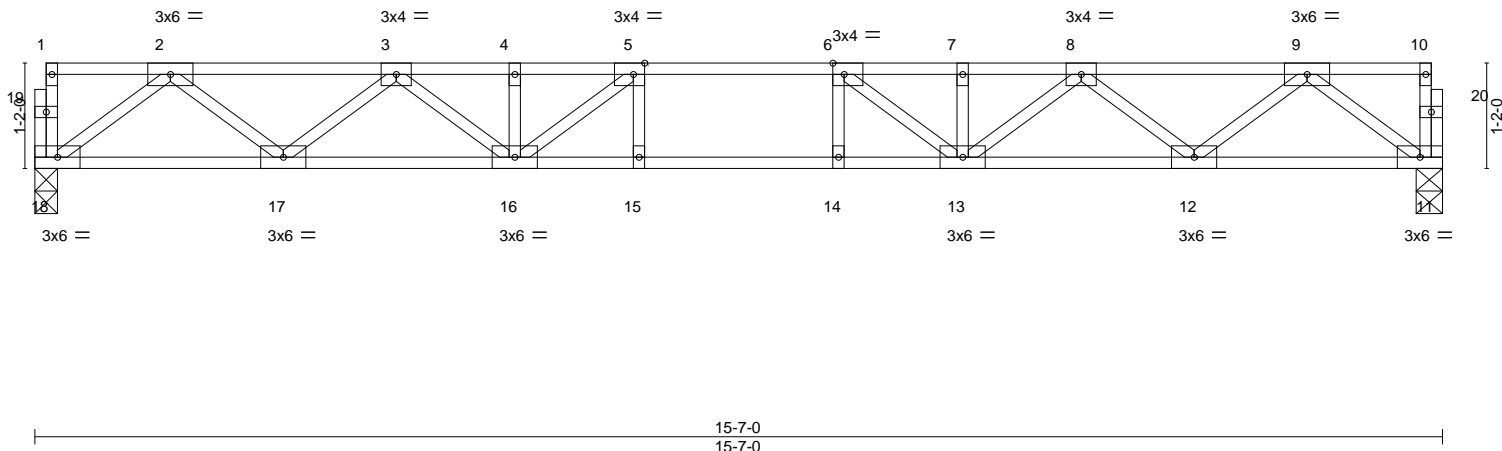


Plate Offsets (X,Y)-- [5:0-1-8,Edge], [6:0-1-8,Edge]

LOADING (psf)	SPACING-	CSL.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 40.0	2-0-0	TC 0.41	Vert(LL)	-0.17 14-15	>999	480	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.00	BC 0.71	Vert(CT)	-0.23 14-15	>799	360		
BCLL 0.0	Lumber DOL 1.00	WB 0.42	Horz(CT)	0.05 11	n/a	n/a		
BCDL 5.0	Rep Stress Incr YES	Matrix-S					Weight: 79 lb	FT = 20%F, 11%E
	Code IRC2015/TPI2014							

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

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

**REACTIONS.** (size) 18=0-3-0, 11=0-3-8  
 Max Grav 18=837(LC 1), 11=837(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1726/0, 3-4=-2770/0, 4-5=-2770/0, 5-6=-3060/0, 6-7=-2770/0, 7-8=-2770/0, 8-9=-1726/0  
 BOT CHORD 17-18=0/1045, 16-17=0/2371, 15-16=0/3060, 14-15=0/3060, 13-14=0/3060, 12-13=0/2371, 11-12=0/1045  
 WEBS 2-18=-1308/0, 2-17=0/886, 3-17=-840/0, 3-16=0/510, 9-11=-1308/0, 9-12=0/886, 8-12=-840/0, 8-13=0/510, 6-13=-645/6, 5-16=-645/6

- NOTES-**
- Unbalanced floor live loads have been considered for this design.
  - All plates are 1.5x3 MT20 unless otherwise indicated.
  - Plates checked for a plus or minus 1 degree rotation about its center.
  - This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 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.



June 28, 2022

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818 Soundside Road  
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Precision/Lot 13 Liberty Meadows/Harn	152793657
J1021-6185	F5	Floor	10	1	Job Reference (optional)	

Comtech, Inc, Fayetteville, NC - 28314,

8.430 s Aug 16 2021 MiTek Industries, Inc. Tue Jun 28 09:16:55 2022 Page 1  
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0-1-8



0-1-8  
Scale = 1:28.7

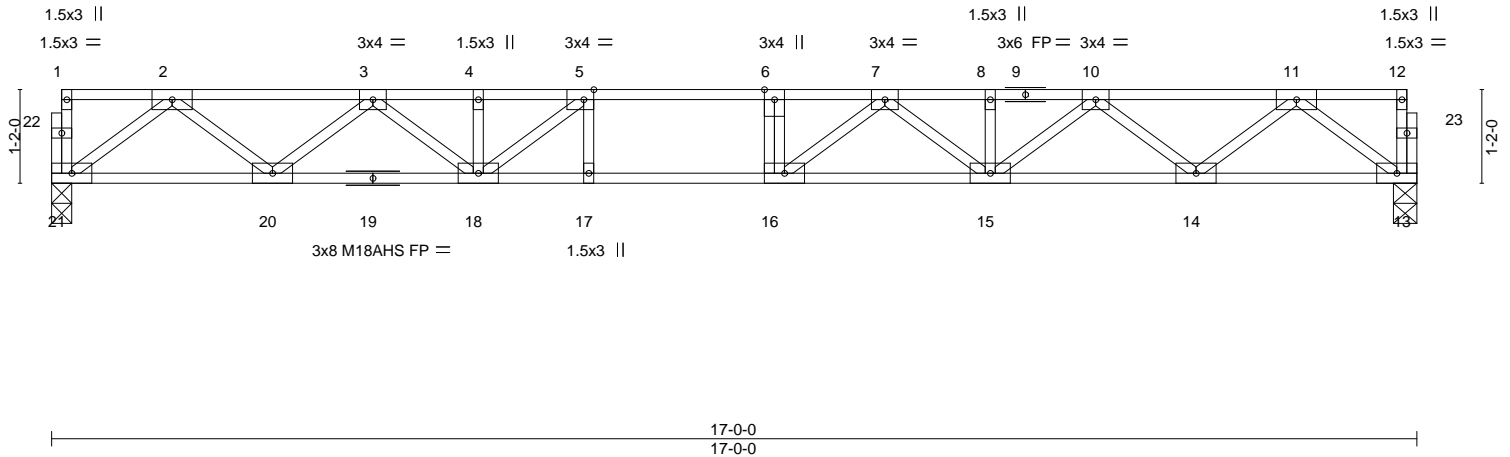


Plate Offsets (X,Y)-- [5:0-1-8,Edge]

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 40.0	2-0-0	TC 0.70	Vert(LL)	-0.27	15-16	>748	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.00	BC 0.95	Vert(CT)	-0.37	15-16	>543	M18AHS	186/179
BCLL 0.0	Lumber DOL 1.00	WB 0.48	Horz(CT)	0.06	13	n/a		
BCDL 5.0	Rep Stress Incr YES	Matrix-S						
	Code IRC2015/TPI2014						Weight: 87 lb	FT = 20%F, 11%E

**LUMBER-**

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

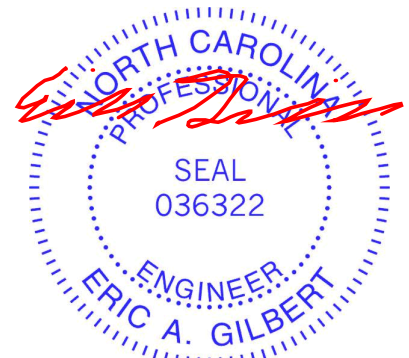
**BRACING-**

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 2-2-0 oc bracing: 16-17,15-16.

**REACTIONS.** (size) 21=0-3-0, 13=0-3-8  
Max Grav 21=915(LC 1), 13=915(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-1923/0, 3-4=-3138/0, 4-5=-3138/0, 5-6=-3635/0, 6-7=-3635/0, 7-8=-3168/0, 8-10=-3168/0, 10-11=-1918/0  
BOT CHORD 20-21=0/1147, 18-20=0/2659, 17-18=0/3635, 16-17=0/3635, 15-16=0/3508, 14-15=0/2663, 13-14=0/1146  
WEBS 2-21=-1436/0, 2-20=0/1010, 3-20=-958/0, 3-18=0/611, 5-18=-890/0, 11-13=-1435/0, 11-14=0/1006, 10-14=-970/0, 10-15=0/645, 7-15=-434/0, 7-16=-149/525

- NOTES-**
- 1) Unbalanced floor live loads have been considered for this design.
  - 2) All plates are MT20 unless otherwise indicated.
  - 3) All plates are 3x6 MT20 unless otherwise indicated.
  - 4) Plates checked for a plus or minus 1 degree rotation about its center.
  - 5) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 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.



June 28,2022

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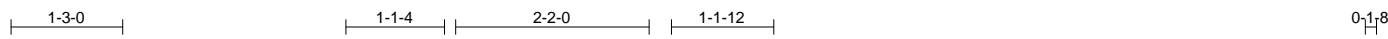


Job	Truss	Truss Type	Qty	Ply	Precision/Lot	13 Liberty Meadows/Harn	I52793658
J1021-6185	F6	Floor	2	1	Job Reference (optional)		

Comtech, Inc, Fayetteville, NC - 28314,

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Scale = 1:25.8

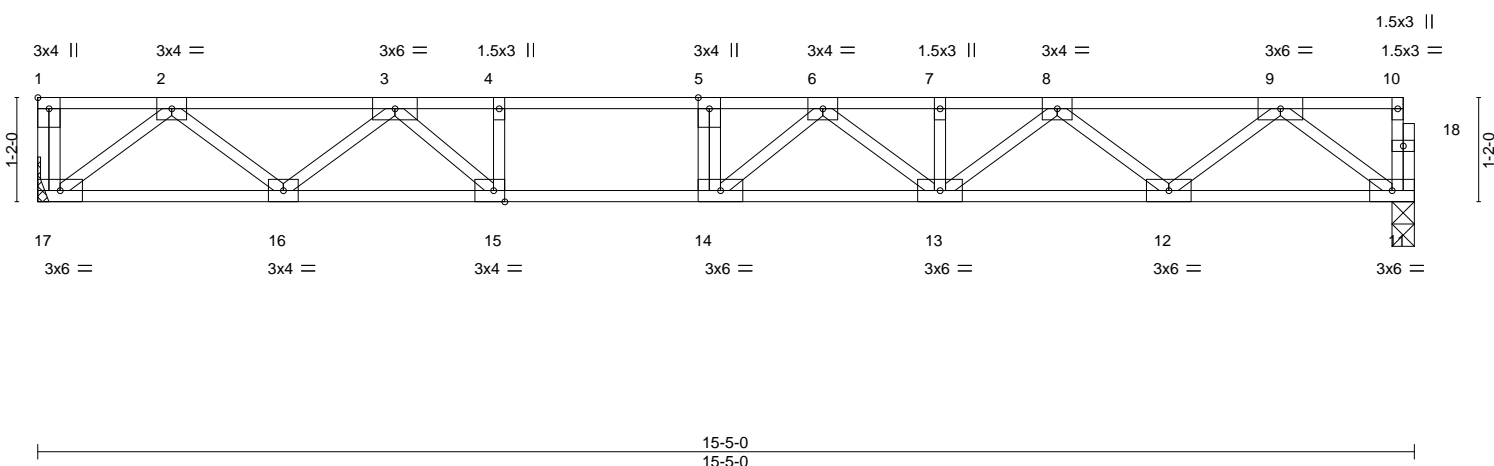


Plate Offsets (X,Y)-- [1:Edge,0-1-8], [15:0-1-8,Edge]

<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL 40.0	2-0-0	TC 0.97	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.00	BC 0.97	Vert(LL) -0.26 13-14 >691 480		
BCLL 0.0	Lumber DOL 1.00	WB 0.43	Vert(CT) -0.36 13-14 >509 360		
BCDL 5.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.05 11 n/a n/a		
	Code IRC2015/TPI2014			Weight: 79 lb	FT = 20%F, 11%E

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

**REACTIONS.** (size) 17=Mechanical, 11=0-3-0  
Max Grav 17=834(LC 1), 11=828(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1678/0, 3-4=-2890/0, 4-5=-2890/0, 5-6=-2890/0, 6-7=-2743/0, 7-8=-2743/0, 8-9=-1698/0  
 BOT CHORD 16-17=0/1032, 15-16=0/2343, 14-15=0/2890, 13-14=0/2965, 12-13=0/2345, 11-12=0/1030  
 WEBS 9-11=-1290/0, 9-12=0/869, 8-12=-842/0, 8-13=0/508, 6-13=-295/0, 6-14=-298/319, 4-15=-437/0, 2-17=-1295/0, 2-16=0/841, 3-16=-866/0, 3-15=0/903

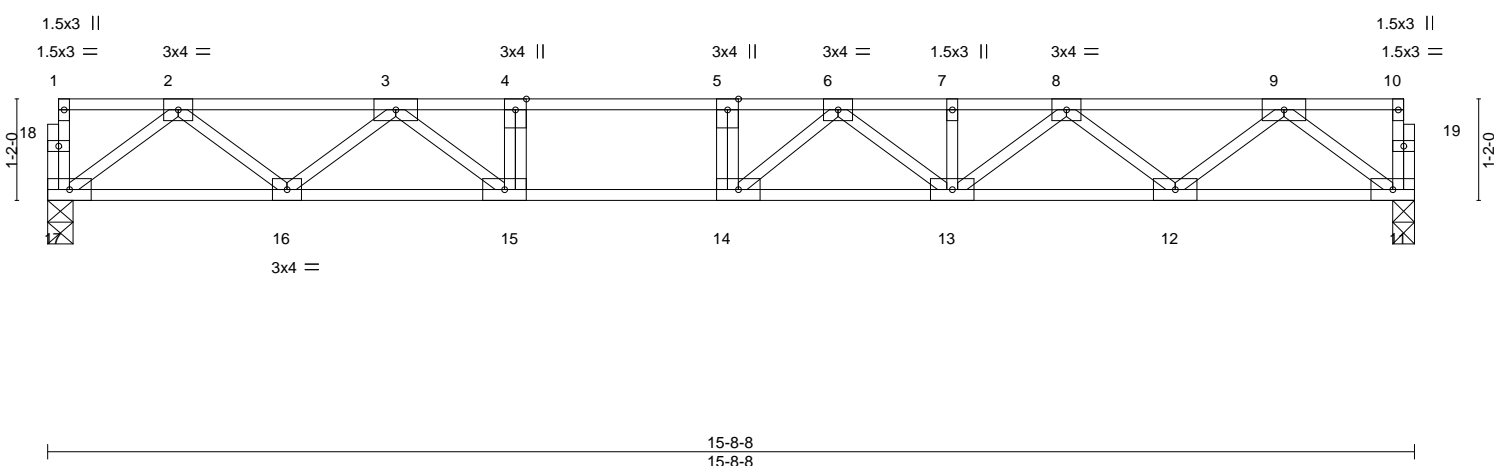
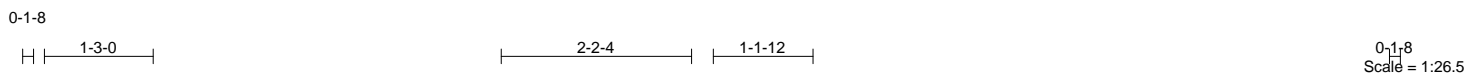
- NOTES-**
- 1) Unbalanced floor live loads have been considered for this design.
  - 2) Plates checked for a plus or minus 1 degree rotation about its center.
  - 3) Refer to girder(s) for truss to truss connections.
  - 4) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 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.



Job	Truss	Truss Type	Qty	Ply	Precision/Lot	13 Liberty Meadows/Ham	I52793659
J1021-6185	F7	Floor	4	1	Job Reference (optional)		

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8.430 s Aug 16 2021 MiTek Industries, Inc. Tue Jun 28 09:16:57 2022 Page 1  
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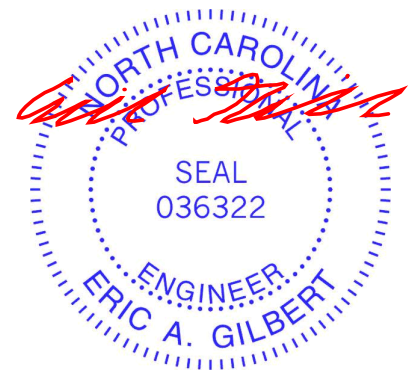
<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 40.0	Plate Grip DOL	1.00	TC 0.61	Vert(LL)	-0.25 13-14	>742	480	MT20	244/190
TCDL 10.0	Lumber DOL	1.00	BC 0.92	Vert(CT)	-0.34 13-14	>548	360		
BCLL 0.0	Rep Stress Incr	YES	WB 0.46	Horz(CT)	0.05 11	n/a	n/a		
BCDL 5.0	Code IRC2015/TPI2014		Matrix-S					Weight: 81 lb	FT = 20%F, 11%E

<b>LUMBER-</b>	<b>BRACING-</b>
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 No.1(flat)	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 2-2-0 oc bracing: 13-14.
WEBS 2x4 SP No.3(flat)	

**REACTIONS.** (size) 17=0-3-8, 11=0-3-0  
 Max Grav 17=844(LC 1), 11=844(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1719/0, 3-4=-3017/0, 4-5=-3017/0, 5-6=-3017/0, 6-7=-2821/0, 7-8=-2821/0, 8-9=-1738/0  
 BOT CHORD 16-17=0/1054, 15-16=0/2391, 14-15=0/3017, 13-14=0/3067, 12-13=0/2402, 11-12=0/1051  
 WEBS 9-11=-1316/0, 9-12=0/894, 8-12=-865/0, 8-13=0/535, 6-13=-313/0, 6-14=-289/360, 4-15=-434/0, 2-17=-1320/0,  
 2-16=0/866, 3-16=-874/0, 3-15=0/956

- NOTES-**
- 1) Unbalanced floor live loads have been considered for this design.
  - 2) All plates are 3x6 MT20 unless otherwise indicated.
  - 3) Plates checked for a plus or minus 1 degree rotation about its center.
  - 4) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 5) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.



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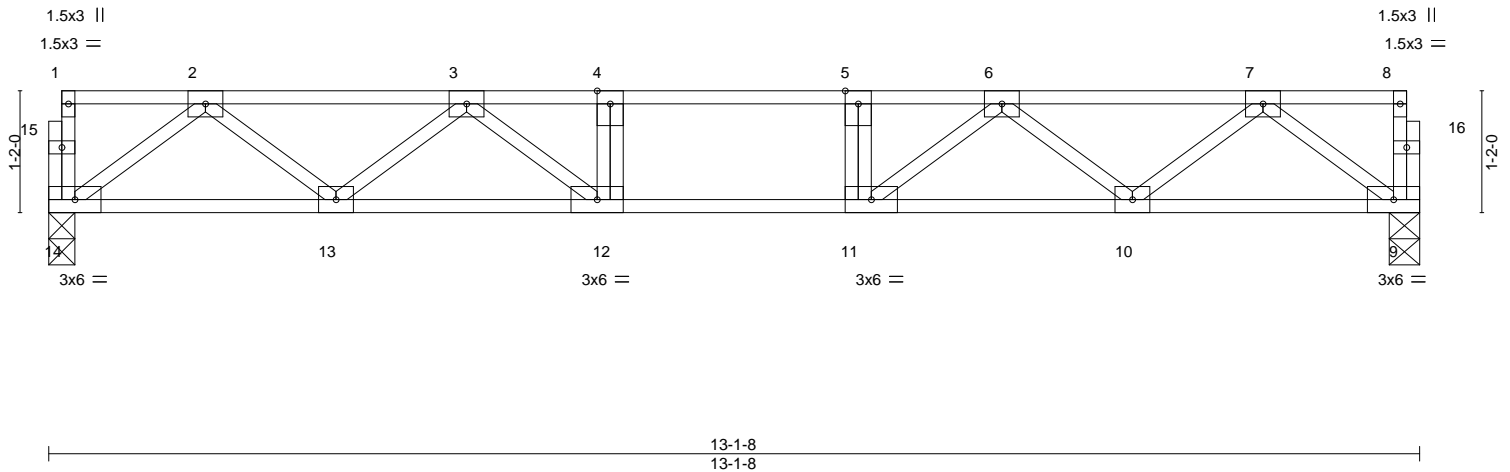
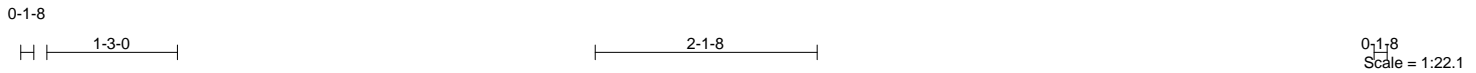


818 Soundside Road  
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Job	Truss	Truss Type	Qty	Ply	Precision/Lot 13 Liberty Meadows/Ham	I52793660
J1021-6185	F8	FLOOR	7	1		

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<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 40.0	Plate Grip DOL	1.00	TC 0.41	Vert(LL)	-0.11 12-13	>999	480	MT20	244/190
TCDL 10.0	Lumber DOL	1.00	BC 0.49	Vert(CT)	-0.14 12-13	>999	360		
BCLL 0.0	Rep Stress Incr	YES	WB 0.32	Horz(CT)	0.03 9	n/a	n/a		
BCDL 5.0	Code	IRC2015/TPI2014	Matrix-S					Weight: 68 lb	FT = 20%F, 11%E

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.1(flat)	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.1(flat)	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3(flat)	
<b>REACTIONS.</b> (size) 14=0-3-0, 9=0-3-8 Max Grav 14=702(LC 1), 9=702(LC 1)	

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1385/0, 3-4=-2140/0, 4-5=-2140/0, 5-6=-2140/0, 6-7=-1385/0  
 BOT CHORD 13-14=0/869, 12-13=0/1865, 11-12=0/2140, 10-11=0/1865, 9-10=0/869  
 WEBS 2-14=-1088/0, 2-13=0/671, 3-13=-626/0, 3-12=0/555, 4-12=-257/0, 5-11=-257/0, 7-9=-1088/0, 7-10=0/671, 6-10=-626/0, 6-11=0/555

- NOTES-**
- Unbalanced floor live loads have been considered for this design.
  - All plates are 3x4 MT20 unless otherwise indicated.
  - Plates checked for a plus or minus 1 degree rotation about its center.
  - This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 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	Truss	Truss Type	Qty	Ply	Precision/Lot	13 Liberty Meadows/Harn	I52793661
J1021-6185	F9-GR	FLOOR GIRDER	1	1			

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8.430 s Aug 16 2021 MiTek Industries, Inc. Tue Jun 28 09:16:58 2022 Page 1  
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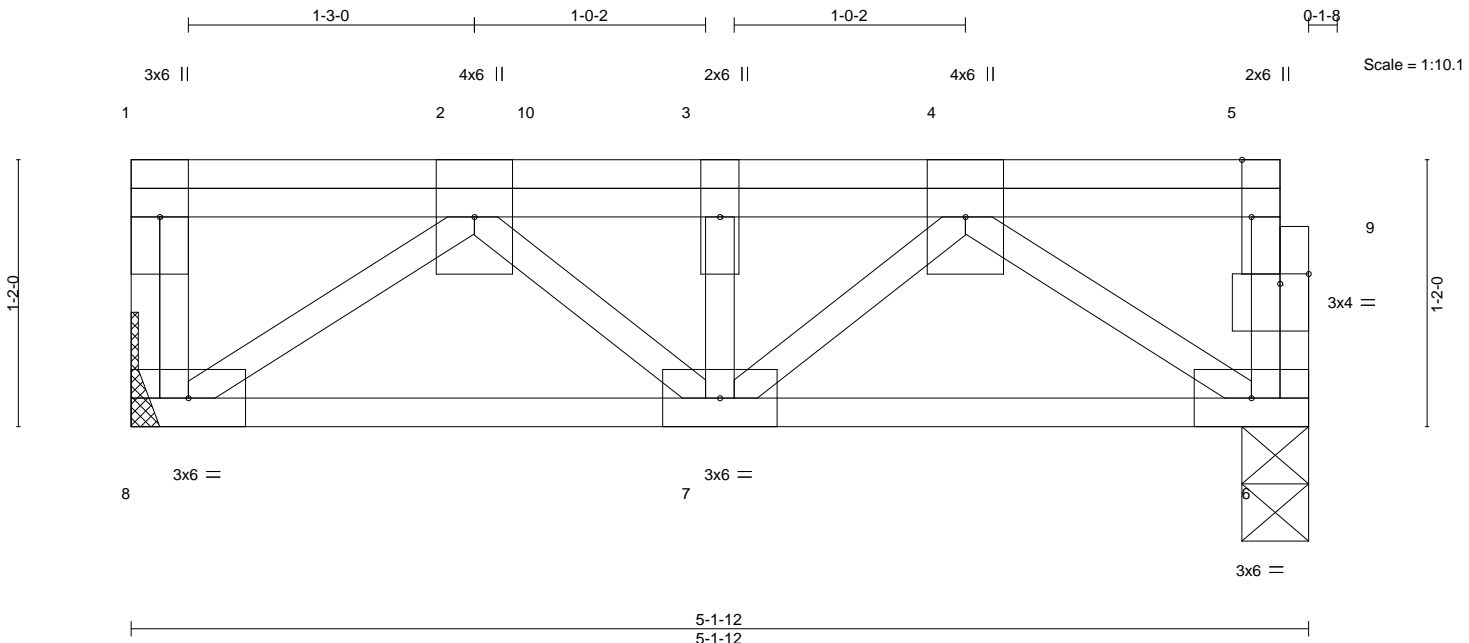


Plate Offsets (X,Y)-- [5:0-3-0,Edge], [9:0-1-8,0-0-8]

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP	
TCLL 40.0	Plate Grip DOL	1.00	TC 0.24	Vert(LL)	-0.01	7	>999	480	MT20	244/190
TCDL 10.0	Lumber DOL	1.00	BC 0.30	Vert(CT)	-0.02	7	>999	360		
BCLL 0.0	Rep Stress Incr	NO	WB 0.38	Horz(CT)	0.01	6	n/a	n/a		
BCDL 5.0	Code IRC2015/TPI2014		Matrix-P							
								Weight: 37 lb	FT = 20%F, 11%E	

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.1 (flat)	TOP CHORD Structural wood sheathing directly applied or 5-1-12 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, 6=0-3-8  
 Max Grav 8=950(LC 1), 6=1050(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1537/0, 3-4=-1537/0  
 BOT CHORD 7-8=0/1252, 6-7=0/1327  
 WEBS 2-8=-1538/0, 4-6=-1622/0, 4-7=0/284, 3-7=-428/0, 2-7=0/385

- NOTES-**
- Plates checked for a plus or minus 1 degree rotation about its center.
  - Refer to girder(s) for truss to truss connections.
  - This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
  - CAUTION, Do not erect truss backwards.
  - Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 734 lb down at 1-10-4, and 734 lb down at 3-10-4 on top chord. The design/selection of such connection device(s) is the responsibility of others.
  - In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard

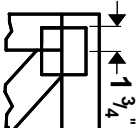
- Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00  
 Uniform Loads (plf)  
 Vert: 6-8=-10, 1-5=-100  
 Concentrated Loads (lb)  
 Vert: 4=-734(F) 10=-734(F)



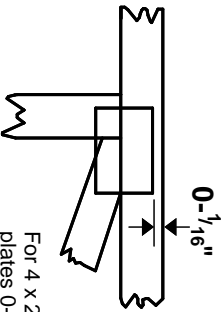
June 28, 2022

# Symbols

## PLATE LOCATION AND ORIENTATION



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



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



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

\* Plate location details available in **MITek 20/20 software or upon request.**

## PLATE SIZE

**4 X 4**

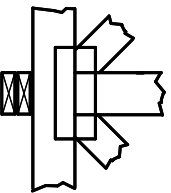
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## LATERAL BRACING LOCATION



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

## BEARING



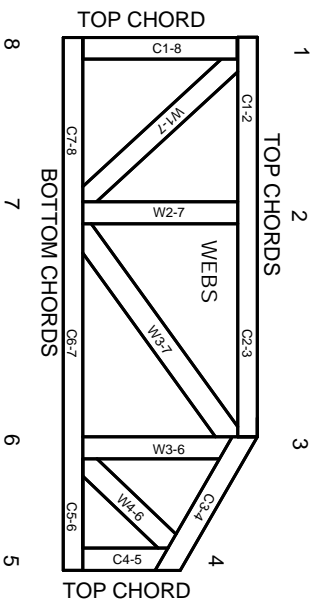
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

### Industry Standards:

ANSI/TP1: National Design Specification for Metal Plate Connected Wood Truss Construction.  
DSB-89: Design Standard for Bracing, Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

# Numbering System

6-4-8  
dimensions shown in ft-in-sixteenths  
(Drawings not to scale)



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

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

## PRODUCT CODE APPROVALS

ICC-ES Reports:

ESR-1311, ESR-1352, ESR1988  
ER-3907, ESR-2362, ESR-1397, ESR-3282

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

Lumber design values are in accordance with ANSI/TP1 section 6.3 These truss designs rely on lumber values established by others.

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MITek Engineering Reference Sheet: Mill-7473 rev. 5/19/2020



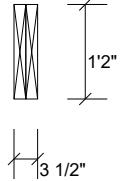
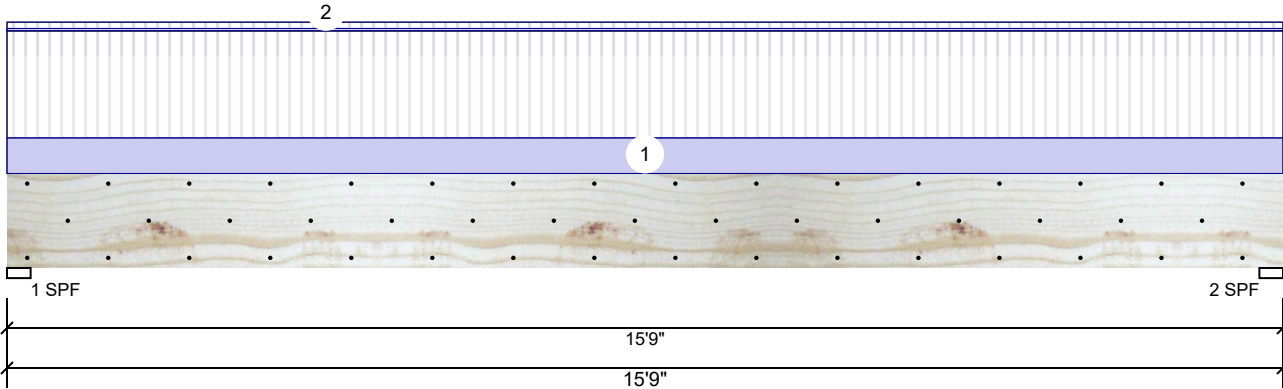
# General Safety Notes

## Failure to Follow Could Cause Property Damage or Personal Injury

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

**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 2012
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	3019	1103	0	0	0
2	Vertical	3019	1103	0	0	0

**Bearings**

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	79%	1103 / 3019	4122	L	D+L
2 - SPF	3.500"	Vert	79%	1103 / 3019	4122	L	D+L

**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	15300 ft-lb	7'10 1/2"	26999 ft-lb	0.567 (57%)	D+L	L
Unbraced	15300 ft-lb	7'10 1/2"	15309 ft-lb	0.999 (100%)	D+L	L
Shear	3938 lb	1'5 1/2"	10453 lb	0.377 (38%)	D+L	L
LL Defl inch	0.321 (L/572)	7'10 9/16"	0.382 (L/480)	0.840 (84%)	L	L
TL Defl inch	0.438 (L/419)	7'10 9/16"	0.510 (L/360)	0.860 (86%)	D+L	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 6'6 7/8" o.c.
- 7 Bottom must be laterally braced at end bearings.
- 8 Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Far Face	114 PLF	343 PLF	0 PLF	0 PLF	0 PLF	F4
2	Tie-In Far	0-0-0 to 15-9-0	0-6-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	0 PSF	FLOOR LOADING
2	Tie-In Near	0-0-0 to 15-9-0	0-6-2	Near Face	15 PSF	40 PSF	0 PSF	0 PSF	0 PSF	FLOOR LOADING
	Self Weight				11 PLF					

**Notes**

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

**Lumber**

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

**Handling & Installation**

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

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 11/3/2024

**Manufacturer Info**

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

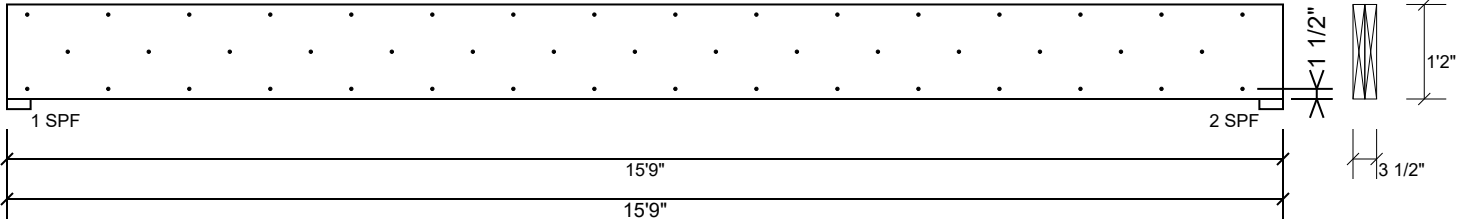
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1001 S. Reilly Road, Suite #639  
Fayetteville, NC  
USA  
28314  
910-864-TRUS





**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	93.1 %
Load	228.5 PLF
Yield Limit per Foot	245.6 PLF
Yield Limit per Fastener	81.9 lb.
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 11/3/2024

**Manufacturer Info**

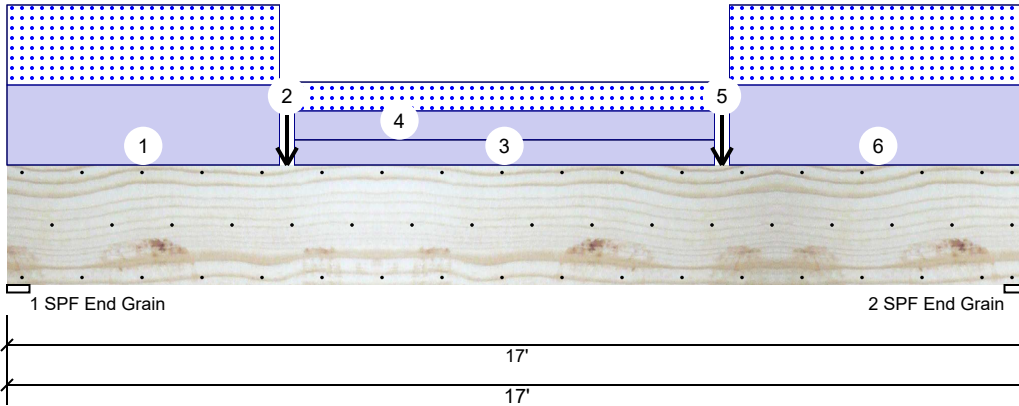
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910-864-TRUS



**GDH 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 2012
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	6439	5849	0	0
2	Vertical	0	6288	5720	0	0

**Bearings**

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	4.500"	Vert	93%	6439 / 5849	12288	L	D+S
2 - SPF End Grain	4.500"	Vert	91%	6288 / 5720	12007	L	D+S

**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	49112 ft-lb	9' 5/16"	84163 ft-lb	0.584 (58%)	D+S	L
Unbraced	49112 ft-lb	9' 5/16"	49247 ft-lb	0.997 (100%)	D+S	L
Shear	10476 lb	2' 4 1/2"	20608 lb	0.508 (51%)	D+S	L
LL Defl inch	0.178 (L/1107)	8' 6 1/2"	0.410 (L/480)	0.433 (43%)	S	L
TL Defl inch	0.379 (L/519)	8' 6 7/16"	0.547 (L/360)	0.693 (69%)	D+S	L

**Design Notes**

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

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Part. Uniform	0-0-0 to 4-6-8		Top	380 PLF	0 PLF	380 PLF	0 PLF	0 PLF	C2
2	Point	4-8-0		Top	3500 lb	0 lb	3500 lb	0 lb	0 lb	C3
	Bearing Length	0-3-8								
3	Part. Uniform	4-9-8 to 11-9-8		Top	120 PLF	0 PLF	0 PLF	0 PLF	0 PLF	WALL

Continued on page 2...

**Notes**

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

**Lumber**

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

**Handling & Installation**

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

6. For flat roofs provide proper drainage to prevent ponding

**Manufacturer Info**

Metsä Wood  
301 Merritt 7 Building, 2nd Floor  
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www.metsawood.com/us

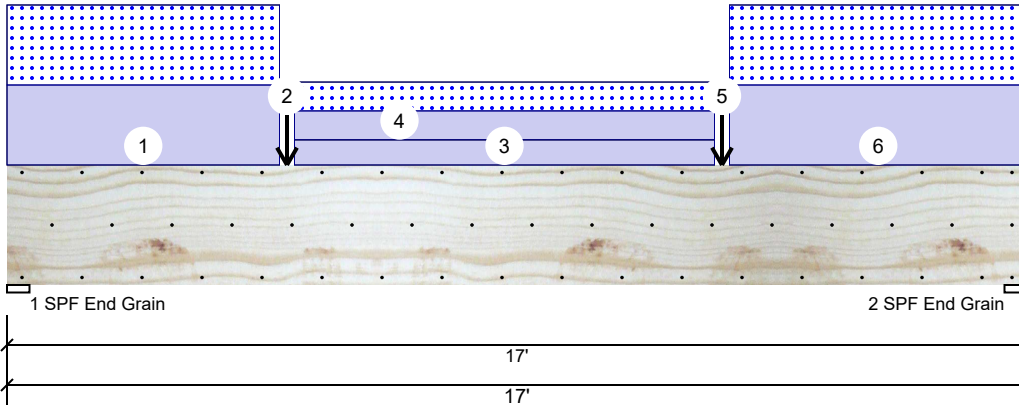
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This design is valid until 11/3/2024

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

Level: Level



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
4	Part. Uniform	4-9-8 to 11-9-8		Top	137 PLF	0 PLF	137 PLF	0 PLF	0 PLF	C4
5	Point	11-11-0		Top	3500 lb	0 lb	3500 lb	0 lb	0 lb	C3
	Bearing Length	0-3-8								
6	Part. Uniform	12-0-8 to 17-0-0		Top	380 PLF	0 PLF	380 PLF	0 PLF	0 PLF	C2
	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 11/3/2024

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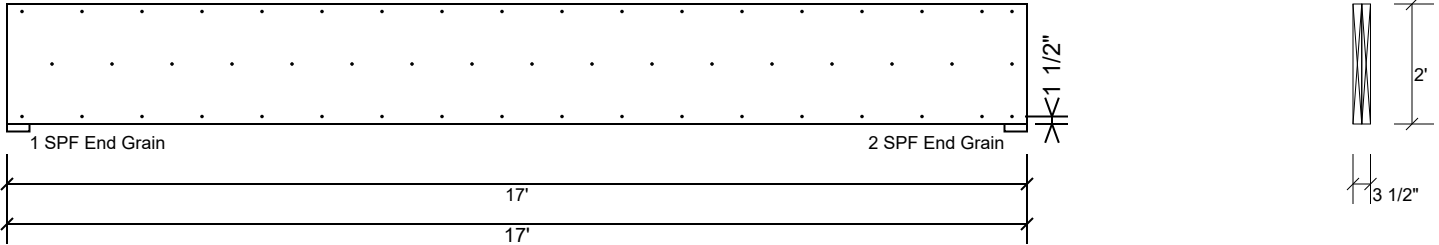
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**GDH Kerto-S LVL 1.750" X 24.000" 2-Ply - PASSED**

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

**Notes**

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

**Lumber**

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

chemicals

**Handling & Installation**

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

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 11/3/2024

**Manufacturer Info**

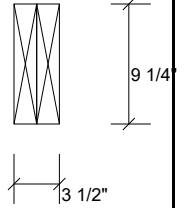
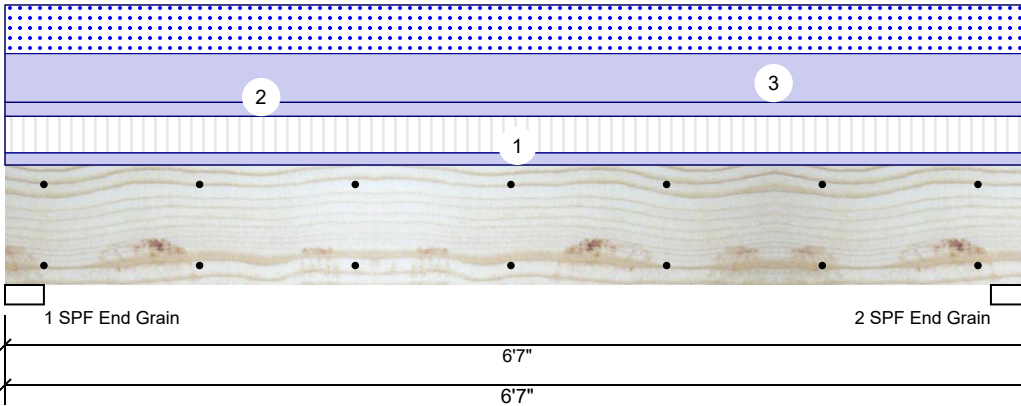
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**BM2 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED**

Level: Level



**Member Information**

Type:	Girder	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC 2012
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	1030	2130	1369	0	0
2	Vertical	1030	2130	1369	0	0

**Bearings**

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.000"	Vert	45%	2130 / 1800	3930	L	D+0.75(L+S)
2 - SPF End Grain	3.000"	Vert	45%	2130 / 1800	3930	L	D+0.75(L+S)

**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	5752 ft-lb	3' 3/2"	14423 ft-lb	0.399 (40%)	D+0.75(L+S)	L
Unbraced	5752 ft-lb	3' 3/2"	10370 ft-lb	0.555 (55%)	D+0.75(L+S)	L
Shear	2717 lb	5'6 3/4"	7943 lb	0.342 (34%)	D+0.75(L+S)	L
LL Defl inch	0.049 (L/1522)	3' 3/2"	0.155 (L/480)	0.315 (32%)	0.75(L+S)	L
TL Defl inch	0.107 (L/697)	3' 3/2"	0.207 (L/360)	0.517 (52%)	D+0.75(L+S)	L

**Design Notes**

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

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Top	104 PLF	313 PLF	0 PLF	0 PLF	0 PLF	F4
2	Uniform			Top	120 PLF	0 PLF	0 PLF	0 PLF	0 PLF	WALL
3	Uniform			Top	416 PLF	0 PLF	416 PLF	0 PLF	0 PLF	A4
	Self Weight				7 PLF					

**Notes**

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

**Lumber**

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

chemicals

**Handling & Installation**

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

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 11/3/2024

**Manufacturer Info**

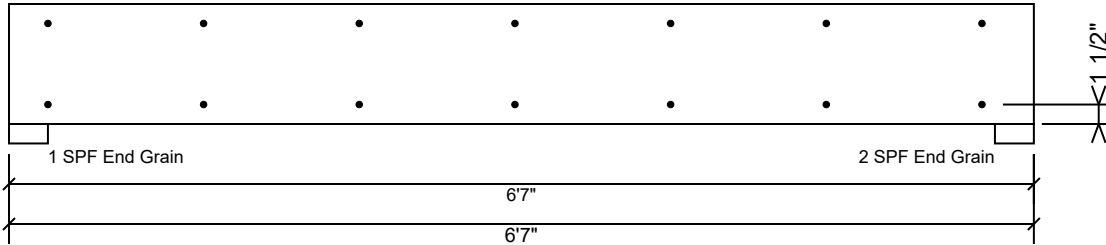
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**BM2 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED**

Level: Level



**Multi-Ply Analysis**

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

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

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**Manufacturer Info**

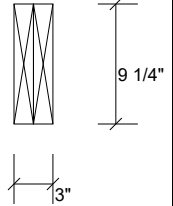
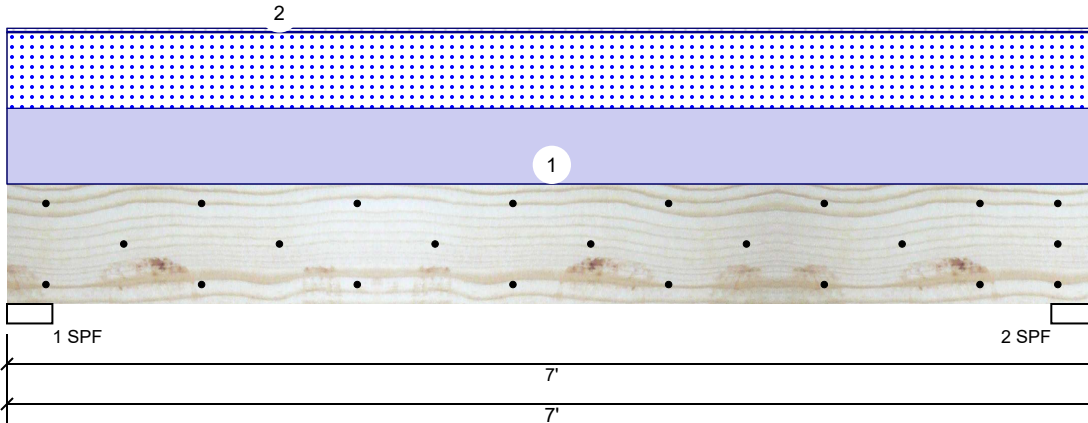
Metsä Wood  
301 Merritt 7 Building, 2nd Floor  
Norwalk, CT 06851  
(800) 622-5850  
www.metsawood.com/us

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



**FB1 SP #2 2.000" X 10.000" 2-Ply - PASSED**

Level: Level



**Member Information**

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

Application:	Floor
Design Method:	ASD
Building Code:	IBC 2012
Load Sharing:	No
Deck:	Not Checked

**Reactions UNPATTERNED Ib (Uplift)**

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	70	873	847	0	0
2	Vertical	70	873	847	0	0

**Bearings**

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	39%	873 / 847	1720	L	D+S
2 - SPF	3.500"	Vert	39%	873 / 847	1720	L	D+S

**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2629 ft-lb	3'6"	3280 ft-lb	0.802 (80%)	D+S	L
Unbraced	2629 ft-lb	3'6"	3018 ft-lb	0.871 (87%)	D+S	L
Shear	1577 lb	1' 3/4"	3723 lb	0.424 (42%)	D+S	L
LL Defl inch	0.036 (L/2181)	3'6"	0.164 (L/480)	0.220 (22%)	S	L
TL Defl inch	0.073 (L/1074)	3'6"	0.218 (L/360)	0.335 (34%)	D+S	L

**Design Notes**

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Fasten all plies using 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 end bearings.
- 7 Bottom must be laterally braced at end bearings.
- 8 Lateral slenderness ratio based on single ply width.

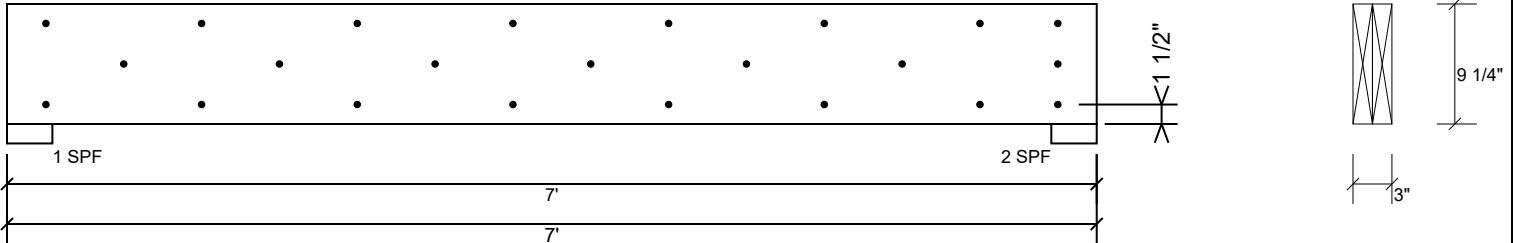
ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Far Face	242 PLF	0 PLF	242 PLF	0 PLF	0 PLF	C4
2	Tie-In Far	0-0-0 to 7-0-0	0-0-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	0 PSF	FLOOR LOADING
2	Tie-In Near	0-0-0 to 7-0-0	0-6-0	Near Face	15 PSF	40 PSF	0 PSF	0 PSF	0 PSF	FLOOR LOADING

<b>Manufacturer Info</b>	Comtech, Inc. 1001 S. Reilly Road, Suite #639 Fayetteville, NC USA 28314 910-864-TRUS

This design is valid until 11/3/2024

**FB1 SP #2 2.000" X 10.000" 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	69.2 %
Load	242.0 PLF
Yield Limit per Foot	349.5 PLF
Yield Limit per Fastener	116.5 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	D+S
Duration Factor	1.15

<b>Manufacturer Info</b>	Comtech, Inc. 1001 S. Reilly Road, Suite #639 Fayetteville, NC USA 28314 910-864-TRUS
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