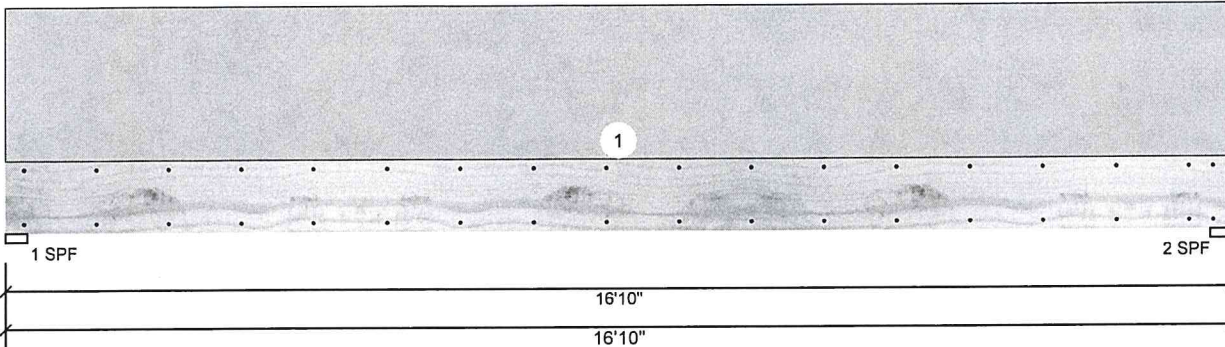




GDH Kerto-S LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Level



Member Information

Reactions UNPATTERNED lb (Uplift)

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

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

Brg	Live	Dead	Snow	Wind	Const
1	0	2182	0	0	0
2	0	2182	0	0	0

Bearings

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	42%	2182 / 0	2182	Uniform D
2 - SPF	3.500"	42%	2182 / 0	2182	Uniform D

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	8689 ft-lb	8'5"	17919 ft-lb	0.485 (48%)	D	Uniform
Unbraced	8689 ft-lb	8'5"	8700 ft-lb	0.999 (100%)	D	Uniform
Shear	1866 lb	15'7 3/8"	7980 lb	0.234 (23%)	D	Uniform
LL Defl inch	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
TL Defl inch	0.453 (L/433)	8'5 1/16"	0.546 (L/360)	0.830 (83%)	D	Uniform

Design Notes

- 1 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 2 Refer to last page of calculations for fasteners required for specified loads.
- 3 Girders are designed to be supported on the bottom edge only.
- 4 Top loads must be supported equally by all plies.
- 5 Top must be laterally braced at a maximum of 10'9" o.c.
- 6 Bottom braced at bearings.
- 7 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	250 PLF	0 PLF	0 PLF	0 PLF	0 PLF	
	Self Weight				9 PLF					

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

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

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

6. For flat roofs provide proper drainage to prevent ponding

**Manufacturer Info**  
 Metsä Wood  
 3071 Commerce Dr, Suite E  
 Fort Gratiot, MI 48059  
 (800) 622-5850  
 www.metsawood.com/us  
 ICC-ES: ESR-3633

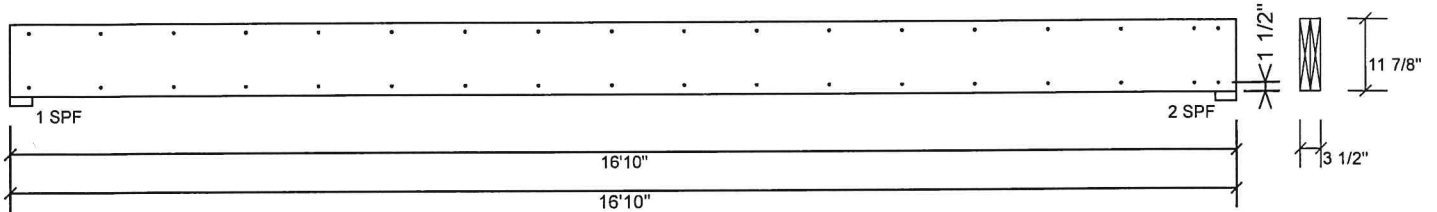
Comtech, Inc.  
 1001 S. Reilly Road, Suite #639  
 Fayetteville, NC  
 USA  
 28314  
 910-864-TRUS





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

Level: Level



**Multi-Ply Analysis**

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

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

**Notes**

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

**Lumber**

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

chemicals

**Handling & Installation**

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

6. For flat roofs provide proper drainage to prevent ponding

**Manufacturer Info**

Metsä Wood  
3071 Commerce Dr, Suite E  
Fort Gratiot, MI 48059  
(800) 622-5850  
www.metsawood.com/us  
ICC-ES: ESR-3633

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



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

Re: J0420-1598  
Wellco/13 Hidden Lakes/Harnett

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

Pages or sheets covered by this seal: E14287438 thru E14287456

My license renewal date for the state of North Carolina is December 31, 2020.

North Carolina COA: C-0844



April 13, 2020

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 J0420-1598	Truss A1	Truss Type FINK	Qty 3	Ply 1	Wellco/13 Hidden Lakes/Harnett	E14287438
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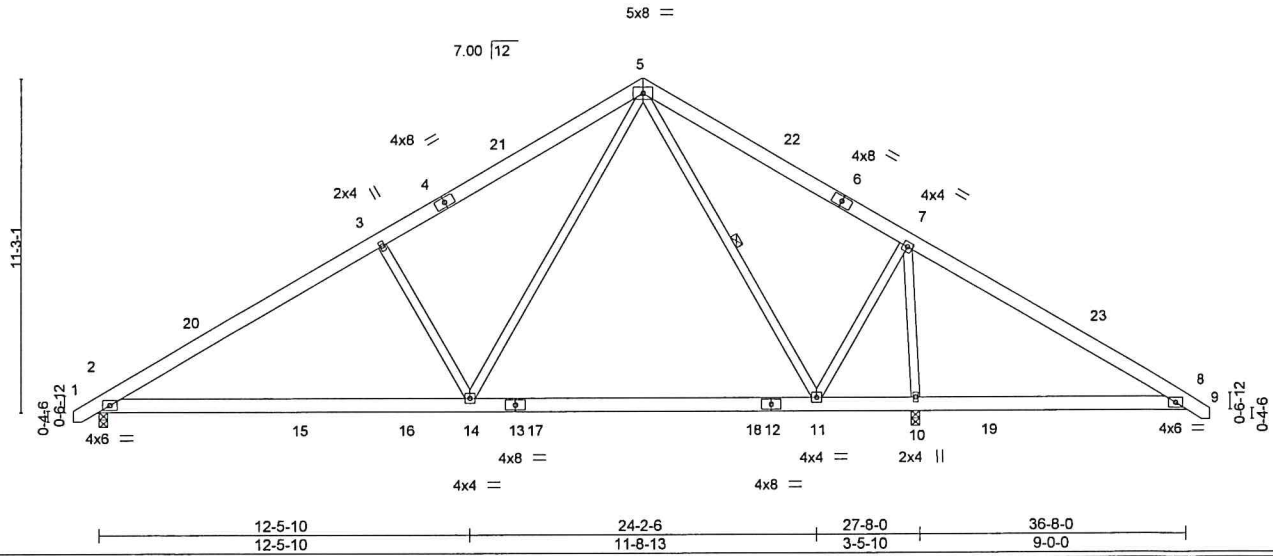
Comtech, Inc, Fayetteville, NC - 28314,

8.330 s Mar 23 2020 MiTek Industries, Inc. Mon Apr 13 07:32:14 2020 Page 1

ID:l2dlSWmc?rskCp8e01L4?Rzx8kL-4nTV\_5BVhfw9EWh13qMWcPWL0Lj6gzRKXuxXzRC6l

0-10-8 9-6-6 18-4-0 27-1-10 36-8-0 37-6-8  
0-10-8 9-6-6 8-9-10 8-9-10 9-6-6 0-10-8

Scale = 1:74.7



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.49	Vert(LL)	-0.24 11-14	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.64	Vert(CT)	-0.32 11-14	>999	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.99	Horz(CT)	0.02 10	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S	Wind(LL)	0.05 2-14	>999	240	Weight: 251 lb	FT = 20%

**LUMBER-**

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

**BRACING-**

TOP CHORD Structural wood sheathing directly applied or 5-7-11 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.  
WEBS 1 Row at midpt 5-11

**REACTIONS.**

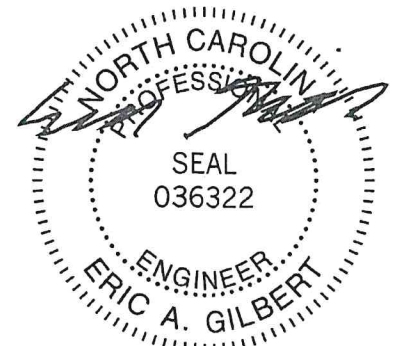
(size) 2=0-3-8, 10=0-3-8  
Max Horz 2=-267(LC 10)  
Max Uplift 2=-91(LC 12), 10=-125(LC 13)  
Max Grav 2=1206(LC 19), 10=2136(LC 2)

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

TOP CHORD 2-3=-1654/175, 3-5=-1459/239, 5-7=-382/249, 7-8=-530/819  
BOT CHORD 2-14=-149/1530, 11-14=0/647, 10-11=-486/531, 8-10=-572/562  
WEBS 3-14=-622/341, 5-14=-172/1262, 5-11=-847/388, 7-11=-142/1221, 7-10=-1998/595

**NOTES-**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-8-13 to 3-8-0, Interior(1) 3-8-0 to 18-4-0, Exterior(2) 18-4-0 to 22-8-13, interior(1) 22-8-13 to 37-4-13 zone; cantilever right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 91 lb uplift at joint 2 and 125 lb uplift at joint 10.



April 13, 2020

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 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 ANSIT/PII Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



818 Soundside Road  
Edenton, NC 27932



Job	Truss	Truss Type	Qty	Ply	Wellco/13 Hidden Lakes/Harnett	E14287439
J0420-1598	A2	ROOF SPECIAL	2	1	Job Reference (optional)	

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Mar 23 2020 MiTek Industries, Inc. Mon Apr 13 07:32:15 2020 Page 1  
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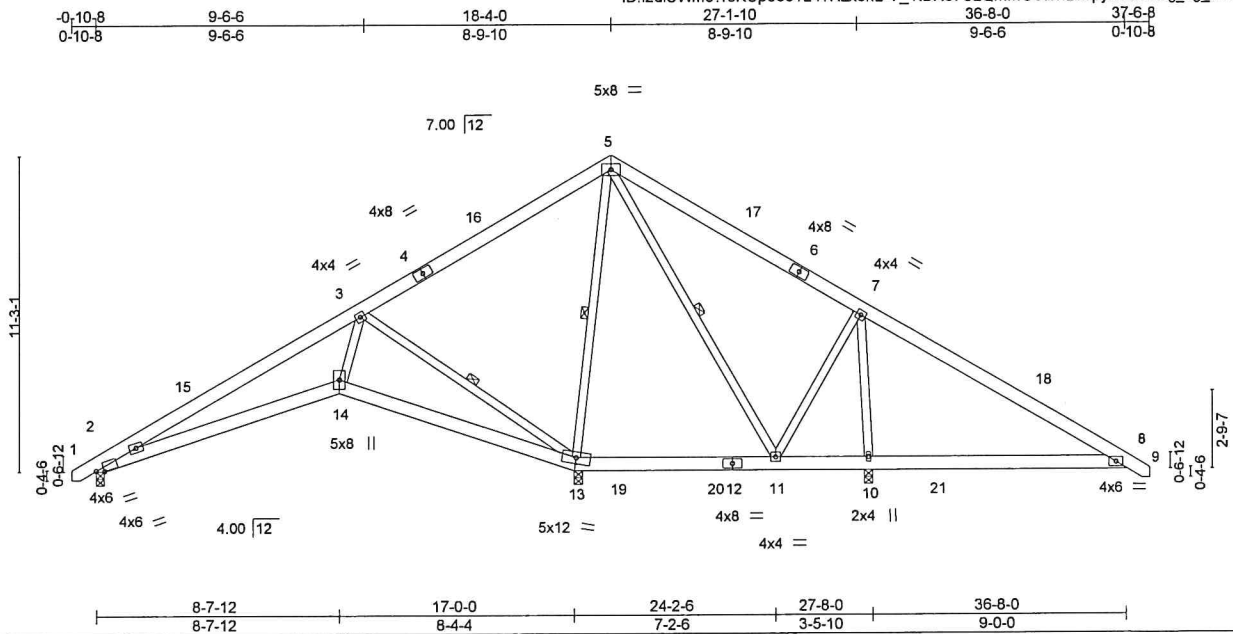


Plate Offsets (X,Y)--	[2:0-3-6,0-1-3]
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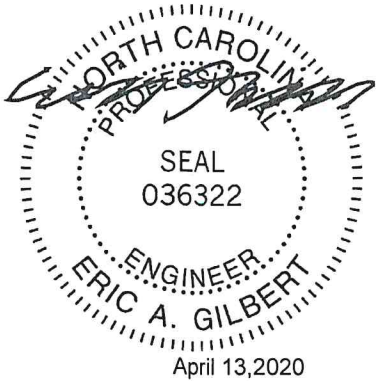
LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.49	Vert(LL)	-0.05 11-13	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.23	Vert(CT)	-0.11 2-14	>999	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.54	Horz(CT)	0.03 13	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S	Wind(LL)	0.03 2-14	>999	240	Weight: 259 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing, Except:
WEBS 2x4 SP No.2	WEBS 10-0-0 oc bracing: 2-14.
	WEBS 1 Row at midpt 5-11, 3-13, 5-13

REACTIONS. (size) 2=0-3-8, 13=0-3-8, 10=0-3-8  
 Max Horz 2=-267(LC 10)  
 Max Uplift 2=-46(LC 13), 13=-175(LC 12), 10=-226(LC 13)  
 Max Grav 2=437(LC 23), 13=1809(LC 19), 10=1242(LC 24)

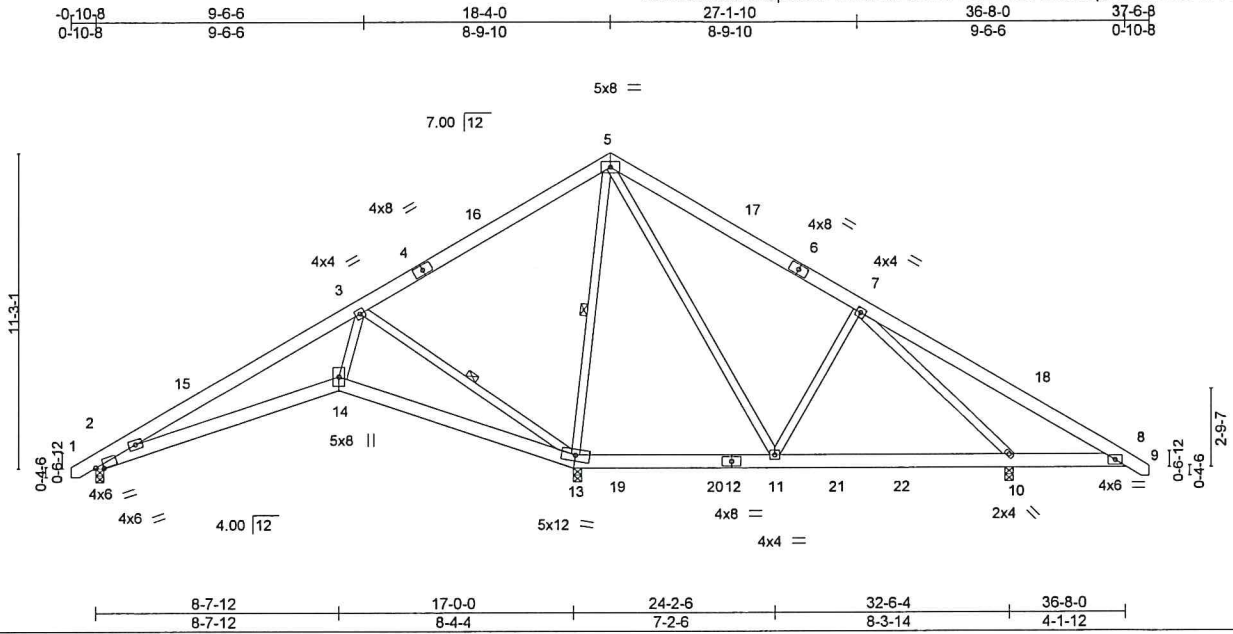
FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-513/60, 3-5=-122/807, 5-7=-177/654, 7-8=-532/824  
 BOT CHORD 2-14=-132/436, 13-14=-138/320, 11-13=-572/330, 10-11=-539/535, 8-10=-577/563  
 WEBS 5-11=-249/317, 7-11=-111/308, 3-14=0/437, 3-13=-971/268, 7-10=-1015/558, 5-13=-1063/136

- NOTES-
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCdL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-8-13 to 3-8-0, Interior(1) 3-8-0 to 18-4-0, Exterior(2) 18-4-0 to 22-8-13, Interior(1) 22-8-13 to 37-4-13 zone; cantilever right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 46 lb uplift at joint 2, 175 lb uplift at joint 13 and 226 lb uplift at joint 10.



Job	Truss	Truss Type	Qty	Ply	Wellco/13 Hidden Lakes/Harnett	E14287440
J0420-1598	A3	ROOF SPECIAL	6	1	Job Reference (optional)	

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Mar 23 2020 MiTek Industries, Inc. Mon Apr 13 07:32:16 2020 Page 1  
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Scale = 1:79.0

Plate Offsets (X,Y)-- [2:0-3-6,0-1-3]

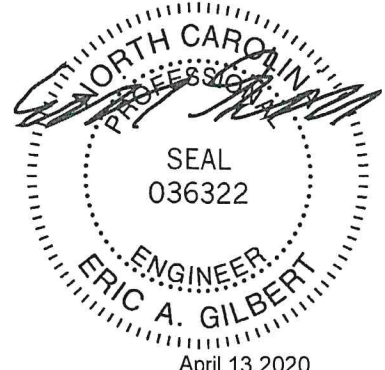
LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.42	Vert(LL)	-0.05 2-14	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.24	Vert(CT)	-0.11 2-14	>999	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.87	Horz(CT)	0.03 13	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S	Wind(LL)	0.03 2-14	>999	240		
								Weight: 263 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 2x4 SP No.2	WEBS 1 Row at midpt 3-13, 5-13

REACTIONS. (size) 2=0-3-8, 13=0-3-8, 10=0-3-8  
 Max Horz 2=-267(LC 10)  
 Max Uplift 2=-49(LC 13), 13=163(LC 12), 10=-155(LC 13)  
 Max Grav 2=431(LC 23), 13=2086(LC 19), 10=865(LC 24)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-487/50, 3-5=-127/794, 5-7=-304/298, 7-8=-377/600  
 BOT CHORD 2-14=-124/461, 13-14=-130/342, 11-13=-520/257, 10-11=-141/255, 8-10=-408/433  
 WEBS 5-11=-113/717, 7-11=-481/247, 3-14=0/471, 3-13=-982/253, 5-13=-1358/192, 7-10=-852/453

- NOTES-
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -0-8-13 to 3-8-0, Interior(1) 3-8-0 to 18-4-0, Exterior(2) 18-4-0 to 22-8-13, Interior(1) 22-8-13 to 37-4-13 zone; cantilever right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 49 lb uplift at joint 2, 163 lb uplift at joint 13 and 155 lb uplift at joint 10.











Job	Truss	Truss Type	Qty	Ply	Wellco/13 Hidden Lakes/Harnett	E14287442
J0420-1598	A5GDR	ROOF SPECIAL	1	2	Job Reference (optional)	

Comtech, Inc, Fayetteville, NC - 28314,

8.330 s Mar 23 2020 MiTek Industries, Inc. Mon Apr 13 07:32:19 2020 Page 2  
 ID:l2dlSWmc?rsKCp8e01L4?Rzx8kL-QIH01pBeWCxCF?OfqdQXDf6Qdp4sOVXibcFfckzRC6g

**LOAD CASE(S)** Standard

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

Uniform Loads (plf)

Vert: 1-5=-60, 5-8=-60, 2-13=-20, 12-13=-20, 8-12=-20

Concentrated Loads (lb)

Vert: 9=-527(F) 16=-527(F) 17=-527(F) 18=-527(F) 19=-527(F)

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**

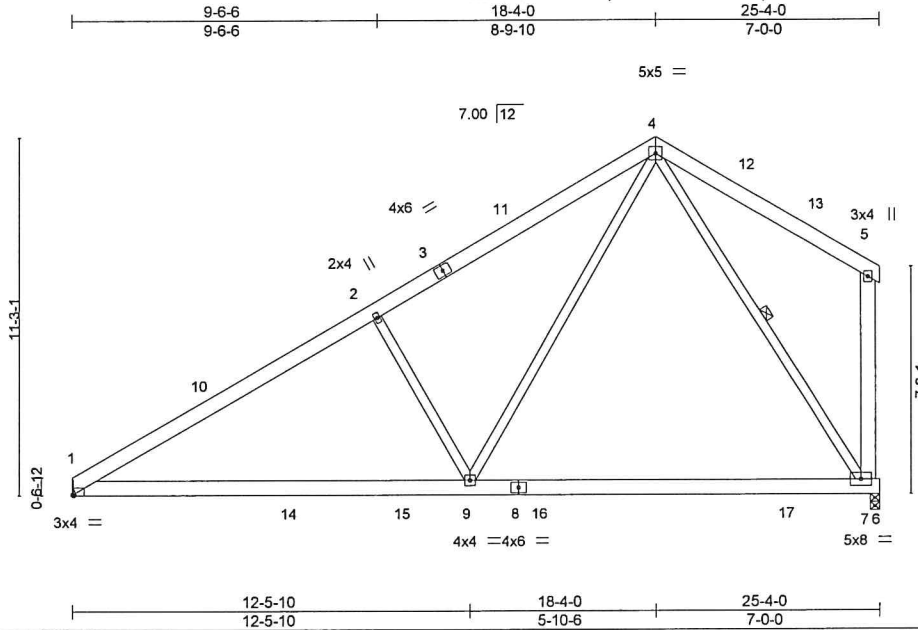
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall 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, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



818 Soundside Road  
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Wellco/13 Hidden Lakes/Harnett	E14287443
J0420-1598	A6	COMMON	6	1		

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Mar 23 2020 MiTek Industries, Inc. Mon Apr 13 07:32:20 2020 Page 1  
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Scale = 1:69.7

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

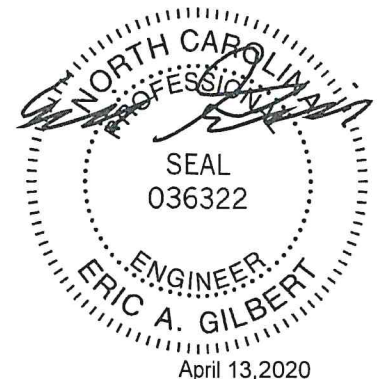
LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.45	Vert(LL)	-0.36	7-9	>837	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.72	Vert(CT)	-0.47	7-9	>635		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.68	Horz(CT)	0.02	7	n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Wind(LL)	0.05	1-9	>999		
	Code IRC2015/TPI2014						Weight: 189 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 5-6-10 oc purlins, except end verticals.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 9-7-14 oc bracing.
WEBS 2x4 SP No.2 *Except* 5-7: 2x6 SP No.1	WEBS 1 Row at midpt 4-7

REACTIONS. (size) 7=0-3-8, 1=Mechanical  
 Max Horz 1=271(LC 12)  
 Max Uplift 7=81(LC 12), 1=49(LC 12)  
 Max Grav 7=1260(LC 19), 1=1154(LC 19)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-2=-1672/247, 2-4=-1475/311, 5-7=-261/139  
 BOT CHORD 1-9=-343/1496, 7-9=-104/580  
 WEBS 2-9=-633/345, 4-9=-156/1320, 4-7=-967/201

- NOTES-
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-0-12 to 4-5-9, Interior(1) 4-5-9 to 18-4-0, Exterior(2) 18-4-0 to 22-8-13, Interior(1) 22-8-13 to 24-11-12 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - Refer to girder(s) for truss to truss connections.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 81 lb uplift at joint 7 and 49 lb uplift at joint 1.



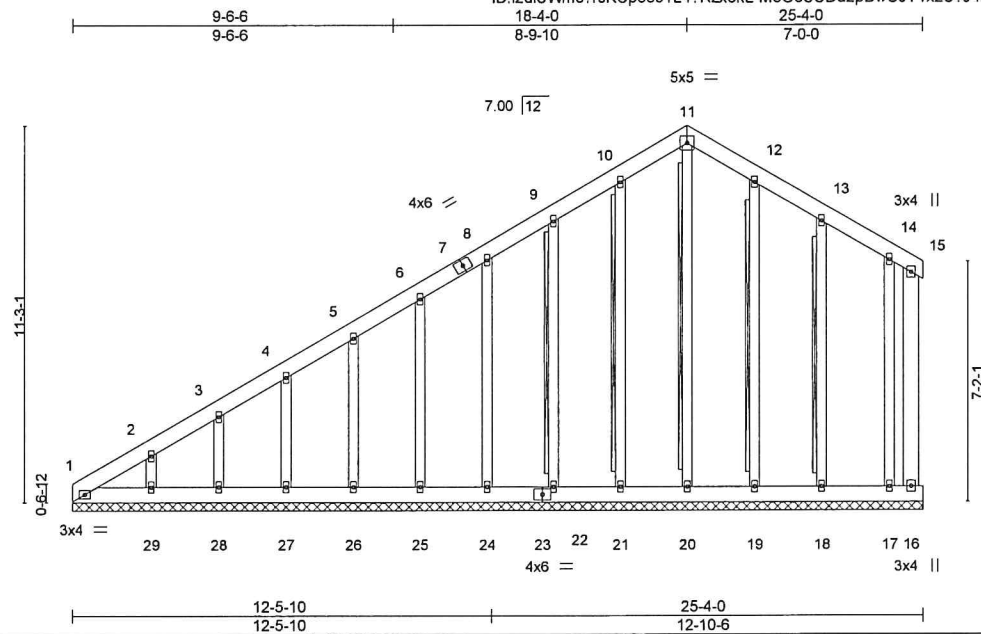
**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MI-1473 rev. 10/03/2015 BEFORE USE.**  
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before 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 ANSITPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

ENGINEERING BY  
**TRENCO**  
 A MiTek Affiliate  
 818 Soundside Road  
 Edenton, NC 27832



Job	Truss	Truss Type	Qty	Ply	Wellco/13 Hidden Lakes/Harnett	E14287444
J0420-1598	A6GE	GABLE	1	1	Job Reference (optional)	

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Mar 23 2020 MiTek Industries, Inc. Mon Apr 13 07:32:21 2020 Page 1  
 ID:l2dlSWmc?rsKCp8e01L4?Rzx8kL-M80BSUDu2pBwUJY1x2S?J4BqdduksU1\_2wkmhdzRC6e



Scale = 1:66.1

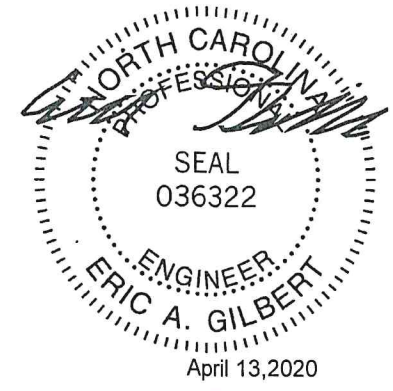
<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	2-0-0	TC 0.04	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.01	Vert(LL) n/a - n/a 999		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.12	Vert(CT) n/a - n/a 999		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.00 16 n/a n/a		
	Code IRC2015/TPI2014			Weight: 256 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x6 SP No.1	WEBS T-Brace: 2x4 SPF No.2 - 11-20, 10-21, 9-22, 12-19, 13-18
OTHERS 2x4 SP No.2	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 25-4-0.  
 (lb) - Max Horz 1=401(LC 12)  
 Max Uplift All uplift 100 lb or less at joint(s) 16, 1, 21, 22, 24, 25, 26, 27, 28, 19, 18, 17 except 29=-108(LC 12)  
 Max Grav All reactions 250 lb or less at joint(s) 16, 1, 20, 21, 22, 24, 25, 26, 27, 28, 29, 19, 18, 17

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-2=-439/281, 2-3=-358/236, 3-4=-297/216

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) 0-0-0 to 4-4-0, Exterior(2) 4-4-0 to 18-4-0, Corner(3) 18-4-0 to 22-8-13, Exterior(2) 22-8-13 to 24-11-12 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - Gable requires continuous bottom chord bearing.
  - Gable studs spaced at 2-0-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 16, 1, 21, 22, 24, 25, 26, 27, 28, 19, 18, 17 except (jt=lb) 29=108.
  - Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.

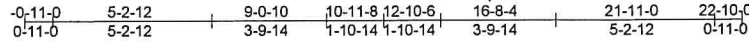


Job	Truss	Truss Type	Qty	Ply	Wellco/13 Hidden Lakes/Harnett	E14287445
J0420-1598	B1	ATTIC	2	1	Job Reference (optional)	

Comtech, Inc, Fayetteville, NC - 28314,

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ID:I2dlSWmc?rsKCp8e01L4?Rzx8kL-JWWvtAF8aQRekciQ3SUTOVH2jRRpKMIHWEDtVzRC6c



6x8 =

Scale = 1:73.4

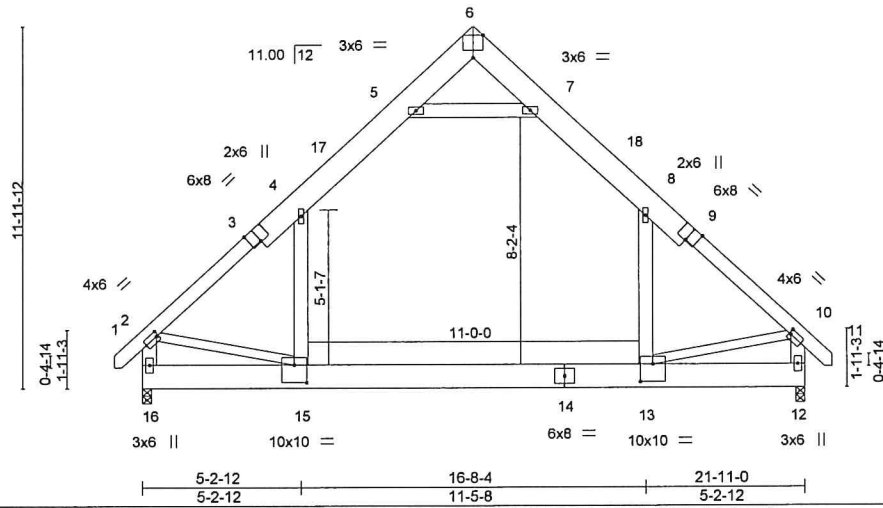


Plate Offsets (X,Y)-- [2:0-0-12,0-2-0], [3:0-4-0,Edge], [6:0-4-0,Edge], [9:0-4-0,Edge], [10:0-0-12,0-2-0], [13:0-5-0,0-7-0], [15:0-5-0,0-7-0]

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.51	Vert(LL)	-0.14	13-15	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.61	Vert(CT)	-0.24	13-15	>999		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.20	Horz(CT)	0.01	12	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S	Wind(LL)	0.04	15	>999		
								Weight: 247 lb	FT = 20%

**LUMBER-**

TOP CHORD 2x10 SP No.1 \*Except\*  
1-3,9-11: 2x6 SP No.1  
BOT CHORD 2x10 SP No.1  
WEBS 2x6 SP No.1 \*Except\*  
2-15,10-13: 2x4 SP No.2

**BRACING-**

TOP CHORD Structural wood sheathing directly applied or 5-3-6 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.**

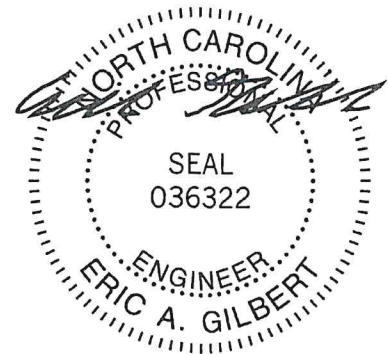
(size) 16=0-3-8, 12=0-3-8  
Max Horz 16=-304(LC 10)  
Max Grav 16=1457(LC 20), 12=1457(LC 21)

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

TOP CHORD 2-4=-1659/0, 4-5=-1066/149, 5-6=-17/484, 6-7=-17/484, 7-8=-1066/149, 8-10=-1658/0,  
2-16=-1563/34, 10-12=-1564/34  
BOT CHORD 15-16=-284/516, 13-15=0/1110, 12-13=-62/308  
WEBS 5-7=-1626/216, 4-15=0/750, 8-13=0/750, 2-15=0/919, 10-13=0/925

**NOTES-**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -0-9-1 to 3-7-11, Interior(1) 3-7-11 to 11-0-0, Exterior(2) 11-0-0 to 15-4-13, Interior(1) 15-4-13 to 22-9-1 zone; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 5) Ceiling dead load (10.0 psf) on member(s). 4-5, 7-8, 5-7; Wall dead load (5.0psf) on member(s). 4-15, 8-13
- 6) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 13-15
- 7) Attic room checked for L/360 deflection.



April 13, 2020

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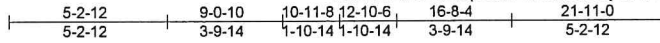


Job J0420-1598	Truss B2	Truss Type ATTIC	Qty 10	Ply 1	Wellco/13 Hidden Lakes/Harnett	E14287446
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ID:12dlSWmc?rsKCp8e01L4?Rzx8kL-nj4H4WFnLkZVLmHcdA?iwjpDDqmqz3pBRluyQLxzRC6b



6x8 =

Scale = 1:73.4

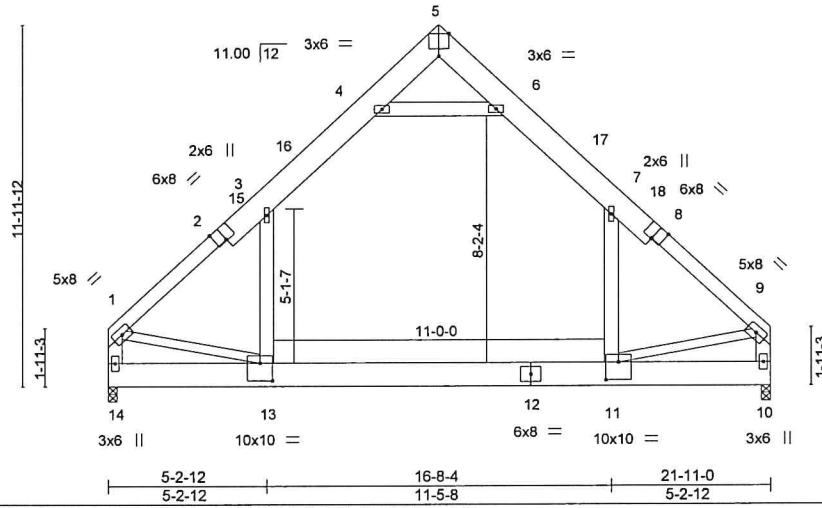


Plate Offsets (X,Y)-- [2:0-4-0,Edge], [5:0-4-0,Edge], [8:0-4-0,Edge], [11:0-5-0,0-7-0], [13:0-5-0,0-7-0]

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.53	Vert(LL)	-0.15 11-13	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.62	Vert(CT)	-0.25 11-13	>999	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.22	Horz(CT)	0.01 10	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S	Wind(LL)	0.04 11-13	>999	240		
								Weight: 242 lb	FT = 20%

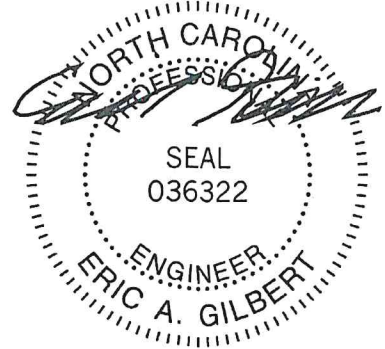
**LUMBER-**  
 TOP CHORD 2x10 SP No.1 \*Except\*  
 1-2,8-9: 2x6 SP No.1  
 BOT CHORD 2x10 SP No.1  
 WEBS 2x6 SP No.1 \*Except\*  
 1-13,9-11: 2x4 SP No.2

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 5-2-13 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 14=0-3-8, 10=0-3-8  
 Max Horz 14=231(LC 9)  
 Max Grav 14=1406(LC 21), 10=1406(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-3=-1651/0, 3-4=-1070/149, 4-5=-25/508, 5-6=-25/508, 6-7=-1070/149, 7-9=-1650/0,  
 1-14=-1523/0, 9-10=-1523/0  
 BOT CHORD 13-14=-248/390, 11-13=0/1098  
 WEBS 4-6=-1669/227, 3-13=0/726, 7-11=0/987, 9-11=0/991

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-3-4 to 4-8-1, Interior(1) 4-8-1 to 11-0-0, Exterior(2) 11-0-0 to 15-4-13, Interior(1) 15-4-13 to 21-8-12 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). 3-4, 6-7, 4-6; Wall dead load (5.0psf) on member(s).3-13, 7-11
  - 6) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 11-13
  - 7) Attic room checked for L/360 deflection.



April 13, 2020

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



Job	Truss	Truss Type	Qty	Ply	Wellco/13 Hidden Lakes/Harnett	E14287447
J0420-1598	C1GE	GABLE	1	1	Job Reference (optional)	

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Mar 23 2020 MiTek Industries, Inc. Mon Apr 13 07:32:25 2020 Page 1  
 ID:l2dISWmc?rsKCp8e01L4?Rzx8kL-FveflsGP62hMzvroATWxTwMSFECQoDfazYl\_qOzRC6a



5x12 || Scale = 1:43.4

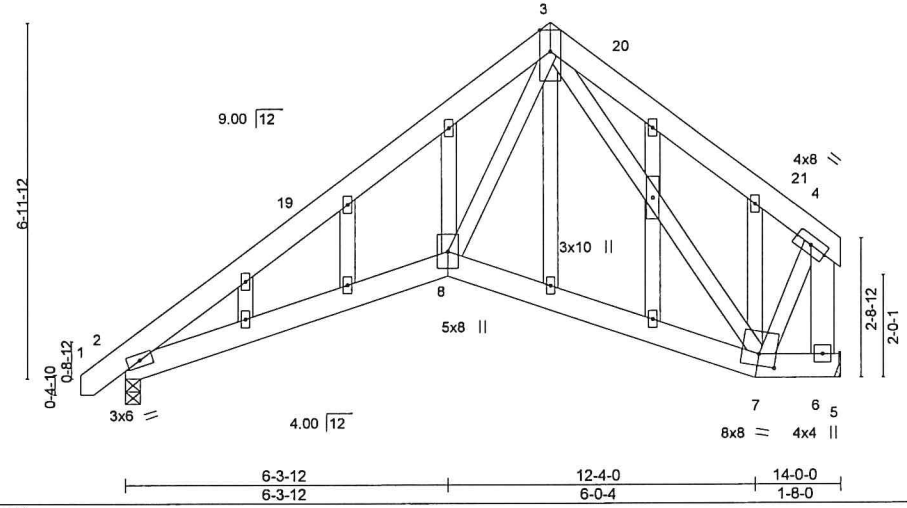


Plate Offsets (X,Y)-- [7:0-4-0,0-2-12]

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	I/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.32	Vert(LL)	-0.02	2-8	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.22	Vert(CT)	-0.05	2-8	>999		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.40	Horz(CT)	0.02	6	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S	Wind(LL)	0.04	2-8	>999		
								Weight: 130 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.2 *Except*	
4-6: 2x6 SP No.1	
OTHERS 2x4 SP No.2	

**REACTIONS.** (size) 2=0-3-8, 6=Mechanical  
 Max Horz 2=211(LC 12)  
 Max Uplift 2=-121(LC 12), 6=-100(LC 12)  
 Max Grav 2=595(LC 1), 6=545(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-895/163, 3-4=-294/137, 4-6=-525/120  
 BOT CHORD 2-8=-149/686, 7-8=-119/431  
 WEBS 3-8=-44/555, 4-7=-23/334, 3-7=-421/154

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-9-0 to 3-7-13, Interior(1) 3-7-13 to 8-4-0, Exterior(2) 8-4-0 to 12-8-13, Interior(1) 12-8-13 to 13-7-12 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - 4) All plates are 2x4 MT20 unless otherwise indicated.
  - 5) Gable studs spaced at 2-0-0 oc.
  - 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 7) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 8) Refer to girder(s) for truss to truss connections.
  - 9) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=121, 6=100.



April 13, 2020

<p><b>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 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 ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.</p>	<p>ENGINEERING BY  <b>TRENCO</b>          A MiTek Alliance</p> <p>818 Soundside Road          Edenton, NC 27932</p>
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Job	Truss	Truss Type	Qty	Ply	Wellco/13 Hidden Lakes/Harnett	E14287448
J0420-1598	C2	SCISSORS	5	1	Job Reference (optional)	

Comtech, Inc, Fayetteville, NC - 28314,

8.330 s Mar 23 2020 MiTek Industries, Inc. Mon Apr 13 07:32:26 2020 Page 1  
 ID:12dISWmc?rsKCp8e01L4?Rzx8kL-j5C1VCH11LpDb4Q?kb2A78vbdeY?Xg6kCCRXMqzRC6Z



5x8 ||

Scale = 1:43.1

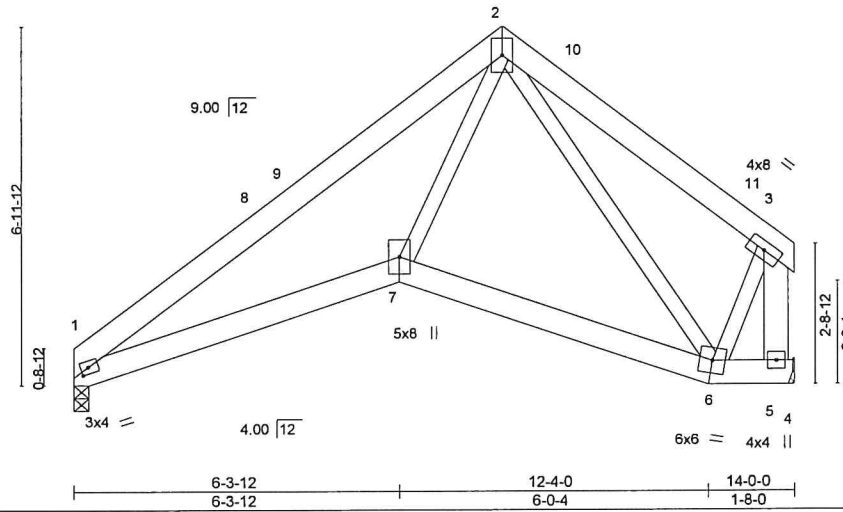


Plate Offsets (X,Y)-- [1:0-1-12,0-1-8]

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	I/defl	L/d	PLATES	GRIP	
TCLL 20.0	Plate Grip DOL	1.15	TC 0.34	Vert(LL)	-0.02	1-7	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.20	Vert(CT)	-0.04	1-7	>999	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.39	Horz(CT)	0.02	5	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S	Wind(LL)	0.02	1-7	>999	240		
									Weight: 103 lb	FT = 20%

**LUMBER-**

TOP CHORD 2x6 SP No.1  
 BOT CHORD 2x6 SP No.1  
 WEBS 2x4 SP No.2 \*Except\*  
 3-5: 2x6 SP No.1

**BRACING-**

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

**REACTIONS.**

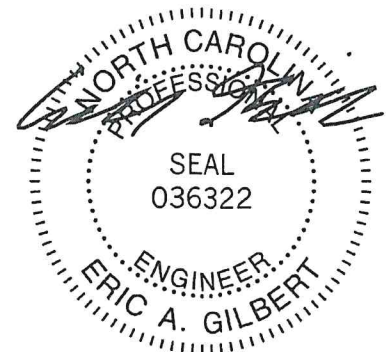
(size) 1=0-3-8, 5=Mechanical  
 Max Horz 1=153(LC 9)  
 Max Uplift 1=-22(LC 12), 5=-26(LC 12)  
 Max Grav 1=540(LC 1), 5=547(LC 1)

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

TOP CHORD 1-2=-890/152, 2-3=-293/137, 3-5=-528/121  
 BOT CHORD 1-7=-86/664, 6-7=-83/422  
 WEBS 2-7=0/555, 3-6=0/327, 2-6=-408/95

**NOTES-**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TC DL=6.0psf; BC DL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-1-12 to 4-6-9, Interior(1) 4-6-9 to 8-4-0, Exterior(2) 8-4-0 to 12-8-13, Interior(1) 12-8-13 to 13-7-12 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.
- Refer to girder(s) for truss to truss connections.
- Bearing at joint(s) 1 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 5.



April 13, 2020

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MI-7473 rev. 10/03/2015 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, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



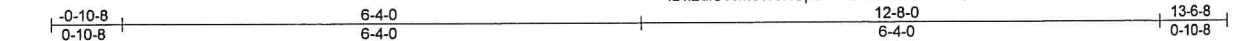
818 Soundside Road  
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Wellco/13 Hidden Lakes/Harnett	E14287449
J0420-1598	D1	COMMON	1	1	Job Reference (optional)	

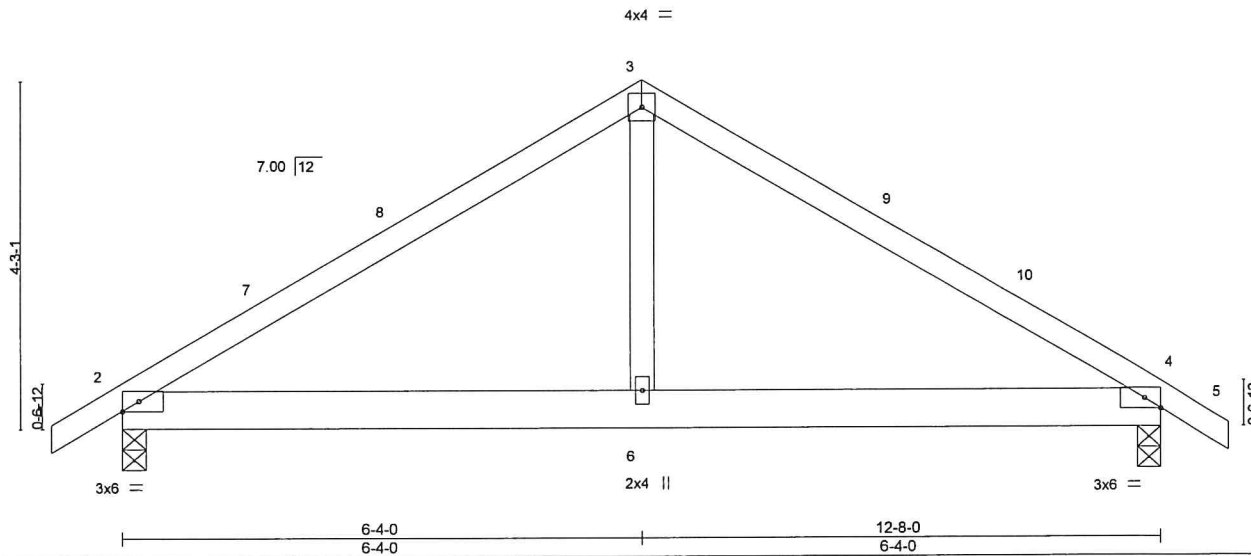
Comtech, Inc, Fayetteville, NC - 28314,

8.330 s Mar 23 2020 MiTek Industries, Inc. Mon Apr 13 07:32:27 2020 Page 1

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Scale = 1:27.0



<b>LOADING (psf)</b>	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
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 0.18	Vert(LL) -0.01 2-6 >999 360		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.07	Vert(CT) -0.03 2-6 >999 240		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.01 4 n/a n/a		
	Code IRC2015/TPI2014		Wind(LL) 0.01 2-6 >999 240	Weight: 60 lb	FT = 20%

**LUMBER-**

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

**BRACING-**

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

**REACTIONS.**

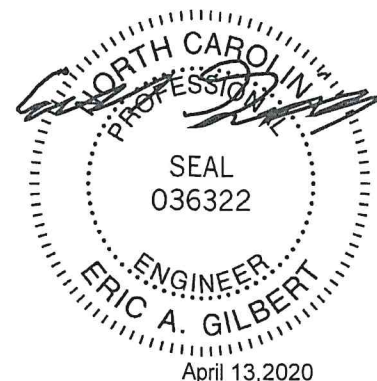
(size) 2=0-3-8, 4=0-3-8  
 Max Horz 2=-101(LC 10)  
 Max Uplift 2=-42(LC 12), 4=-42(LC 13)  
 Max Grav 2=556(LC 1), 4=556(LC 1)

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

TOP CHORD 2-3=-639/164, 3-4=-639/165  
 BOT CHORD 2-6=-16/455, 4-6=-16/455  
 WEBS 3-6=0/317

**NOTES-**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCCL=6.0psf; BCCL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -0-10-8 to 3-6-5, Interior(1) 3-6-5 to 6-4-0, Exterior(2) 6-4-0 to 10-8-13, Interior(1) 10-8-13 to 13-6-8 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 4.



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MI-7473 rev. 10/03/2015 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 ANSITPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

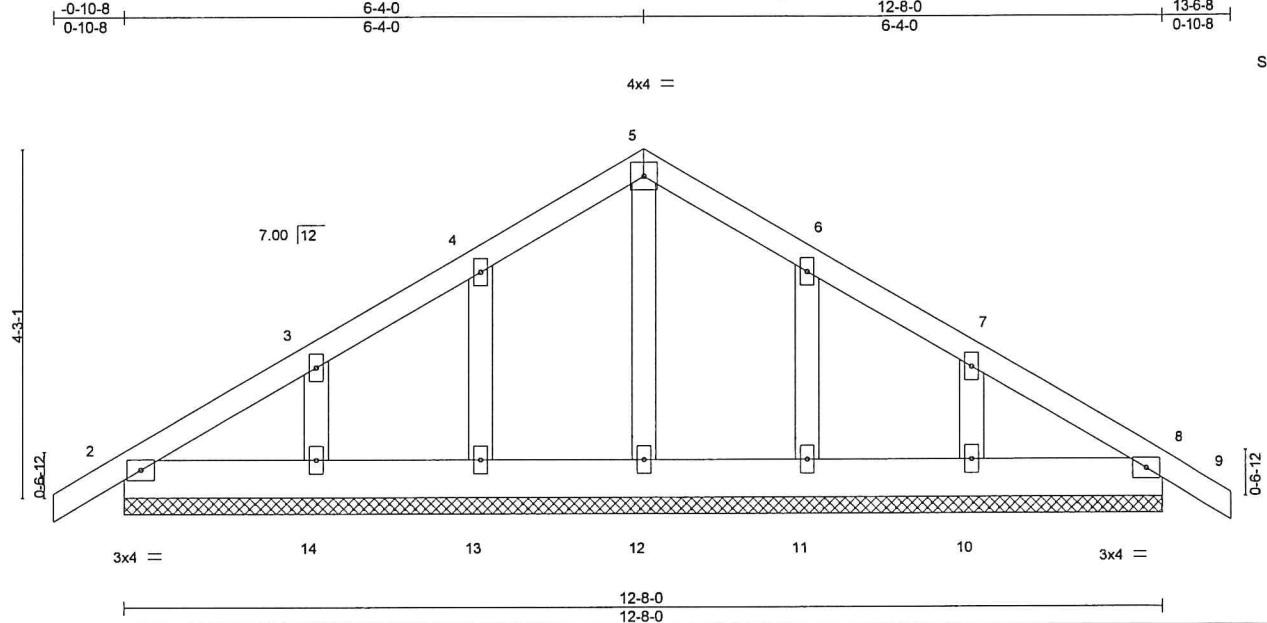


818 Soundside Road  
 Edenton, NC 27932



Job	Truss	Truss Type	Qty	Ply	Wellco/13 Hidden Lakes/Harnett	E14287450
J0420-1598	D1GE	GABLE	1	1	Job Reference (optional)	

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Mar 23 2020 MiTek Industries, Inc. Mon Apr 13 07:32:28 2020 Page 1  
 ID:I2dISWmc?rsKCp8e01L4?Rzx8kL-fUJowulHOz3wqOaNs04e5Z\_0qSHL?gH0VWweRjzRC6X



<b>LOADING (psf)</b>	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	2-0-0	TC 0.04	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.02	Vert(LL) -0.00 8 n/r 120		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.02	Vert(CT) -0.00 8 n/r 120		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.00 8 n/a n/a		
	Code IRC2015/TPI2014			Weight: 71 lb	FT = 20%

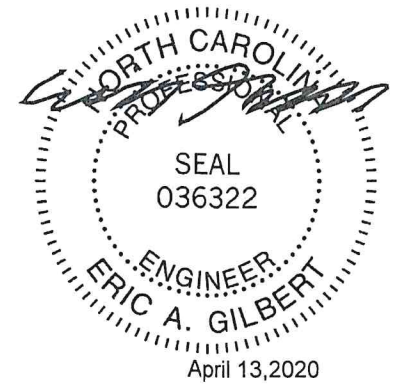
**LUMBER-**  
 TOP CHORD 2x4 SP No.1  
 BOT CHORD 2x6 SP No.1  
 OTHERS 2x4 SP No.2

**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 12-8-0.  
 (lb) - Max Horz 2=-126(LC 10)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 8, 13, 14, 11, 10  
 Max Grav All reactions 250 lb or less at joint(s) 2, 8, 12, 13, 14, 11, 10

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

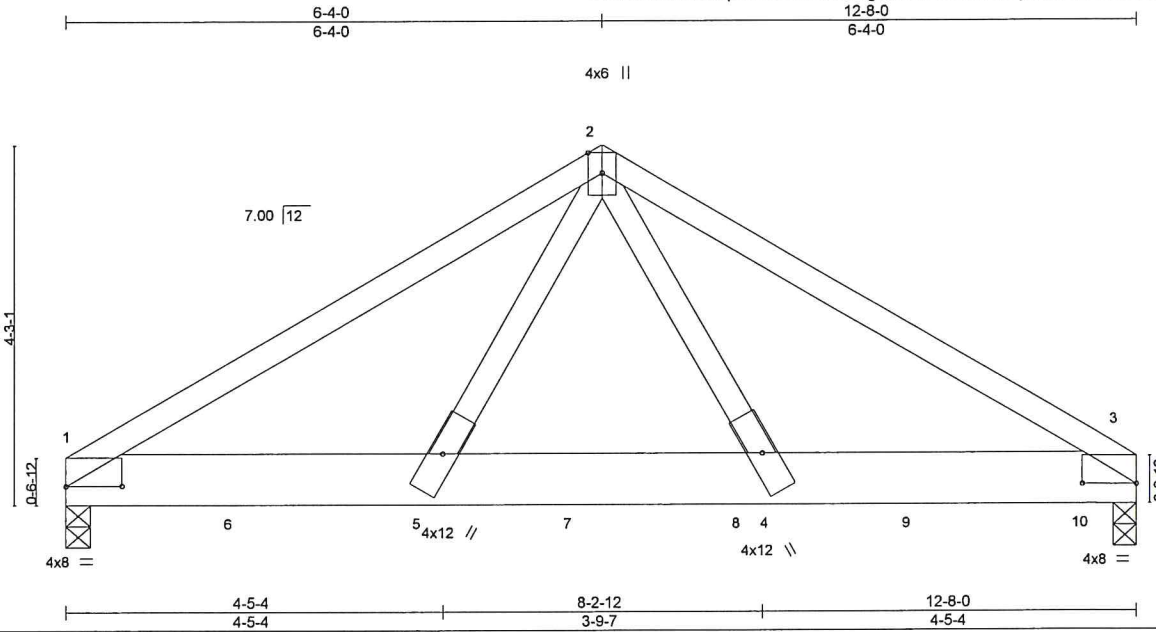
- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) -0-10-8 to 3-6-5, Exterior(2) 3-6-5 to 6-4-0, Corner(3) 6-4-0 to 10-8-13, Exterior(2) 10-8-13 to 13-6-8 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - Gable requires continuous bottom chord bearing.
  - Gable studs spaced at 2-0-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 8, 13, 14, 11, 10.



Job	Truss	Truss Type	Qty	Ply	Wellco/13 Hidden Lakes/Harnett	E14287451
J0420-1598	D2GDR	COMMON	1	2	Job Reference (optional)	

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 ID:l2dlSWmc?rskCp8e01L4?Rzx8kL-7gtA7Djv9GBnSY9aPjblmX4zrWRk2aAuAgBz9zRC6W



Scale = 1:26.2

Plate Offsets (X,Y)--	[1:0-8-0,0-0-1], [3:0-8-0,0-0-1]
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LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.15	TC 0.46	Vert(LL) -0.04	4-5	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.47	Vert(CT) -0.08	4-5	>999	240		
BCLL 0.0 *	Rep Stress Incr NO	WB 0.34	Horz(CT) 0.02	3	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-S	Wind(LL) 0.03	4-5	>999	240		
							Weight: 146 lb	FT = 20%

**LUMBER-**

TOP CHORD 2x4 SP No.1  
 BOT CHORD 2x8 SP No.1  
 WEBS 2x4 SP No.2

**BRACING-**

TOP CHORD Structural wood sheathing directly applied or 5-6-15 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.**

(size) 1=0-3-8, 3=0-3-8  
 Max Horz 1=91(LC 24)  
 Max Uplift 1=-188(LC 8), 3=-230(LC 9)  
 Max Grav 1=3191(LC 2), 3=3973(LC 2)

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

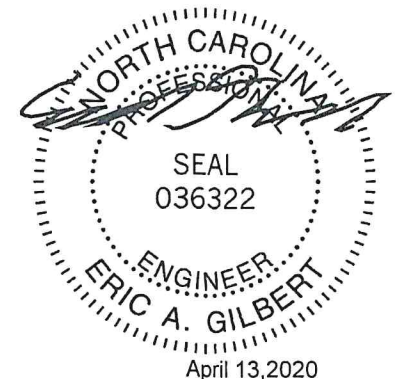
TOP CHORD 1-2=-4913/287, 2-3=-4974/290  
 BOT CHORD 1-5=-202/4125, 4-5=-148/2857, 3-4=-194/4178  
 WEBS 2-5=-113/2662, 2-4=-119/2772

**NOTES-**

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
 Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.  
 Bottom chords connected as follows: 2x8 - 2 rows staggered at 0-4-0 oc.  
 Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCCL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); Lumber DOL=1.60 plate grip DOL=1.60
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 1=188, 3=230.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1049 lb down and 69 lb up at 2-0-12, 1049 lb down and 69 lb up at 4-0-12, 1049 lb down and 69 lb up at 6-0-12, 1049 lb down and 69 lb up at 8-0-12, and 1049 lb down and 69 lb up at 10-0-12, and 1054 lb down and 64 lb up at 12-0-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

**LOAD CASE(S)** Standard

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



Continued on page 2

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

Job	Truss	Truss Type	Qty	Ply	Wellco/13 Hidden Lakes/Harnett	E14287451
J0420-1598	D2GDR	COMMON	1	2	Job Reference (optional)	

Comtech, Inc, Fayetteville, NC - 28314,

8.330 s Mar 23 2020 MiTek Industries, Inc. Mon Apr 13 07:32:29 2020 Page 2  
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LOAD CASE(S) Standard

Concentrated Loads (lb)

Vert: 5=-977(F) 6=-977(F) 7=-977(F) 8=-977(F) 9=-977(F) 10=-982(F)

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**

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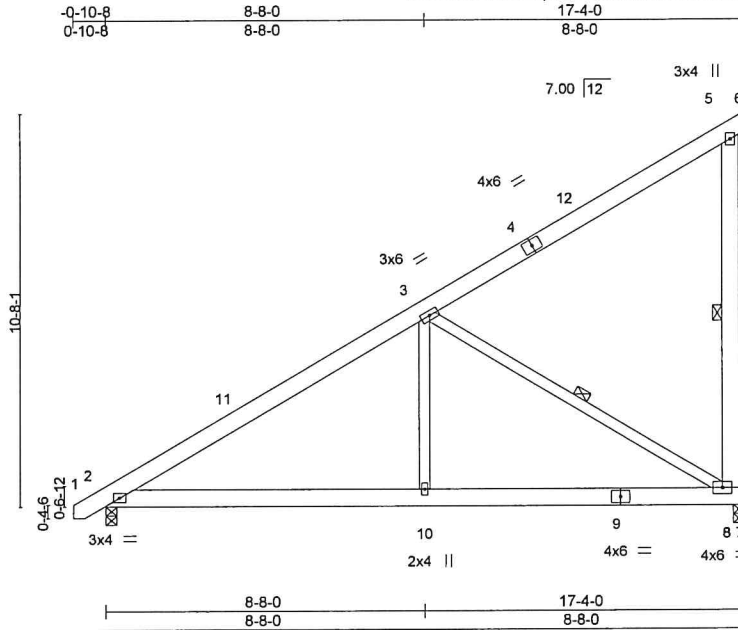
818 Soundside Road  
 Edenton, NC 27932



Job	Truss	Truss Type	Qty	Ply	Wellco/13 Hidden Lakes/Harnett	E14287452
J0420-1598	M1	MONOPITCH	4	1	Job Reference (optional)	

Comtech, Inc, Fayetteville, NC - 28314,

8.330 s Mar 23 2020 MiTek Industries, Inc. Mon Apr 13 07:32:30 2020 Page 1  
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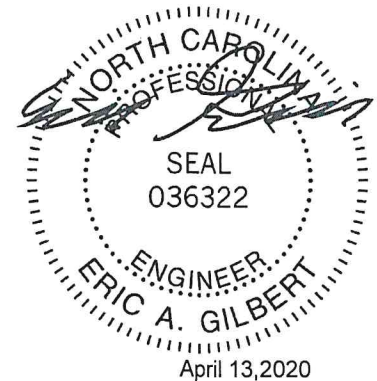
<b>LOADING (psf)</b>	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	2-0-0	TC 0.32	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.25	Vert(LL) -0.03 2-10 >999 360		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.36	Vert(CT) -0.07 2-10 >999 240		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.01 8 n/a n/a		
	Code IRC2015/TPI2014		Wind(LL) 0.03 2-10 >999 240	Weight: 133 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.2 *Except* 5-8: 2x6 SP No.1	WEBS 1 Row at midpt 5-8, 3-8

**REACTIONS.** (size) 8=0-3-8, 2=0-3-8  
 Max Horz 2=340(LC 12)  
 Max Uplift 8=-172(LC 12)  
 Max Grav 8=740(LC 19), 2=727(LC 1)

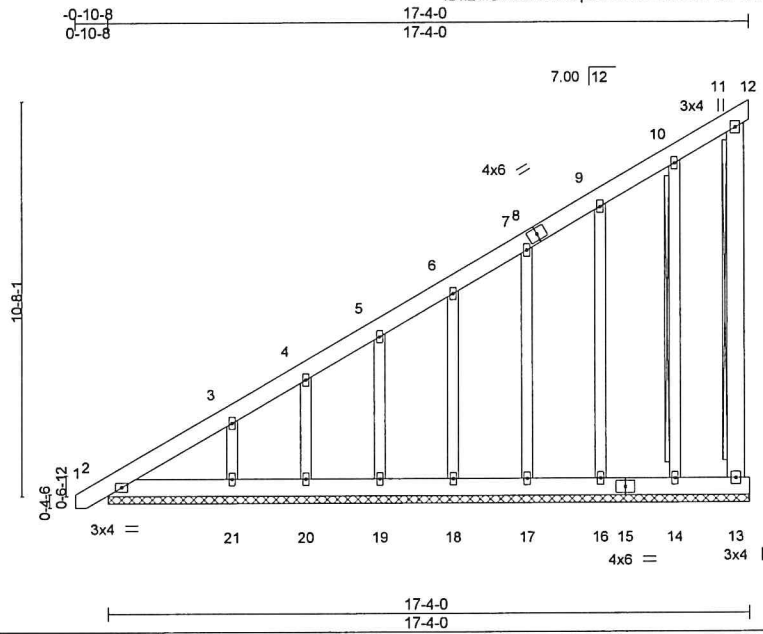
**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-893/0  
 BOT CHORD 2-10=-229/760, 8-10=-229/760  
 WEBS 3-10=0/396, 3-8=-871/261

- NOTES-**
- 1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -0-8-13 to 3-8-0, Interior(1) 3-8-0 to 17-4-0 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 3) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 8=172.



Job	Truss	Truss Type	Qty	Ply	Wellco/13 Hidden Lakes/Harnett	E14287453
J0420-1598	M1GE	GABLE	1	1	Job Reference (optional)	

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Mar 23 2020 MiTek Industries, Inc. Mon Apr 13 07:32:31 2020 Page 1  
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Scale = 1:59.9

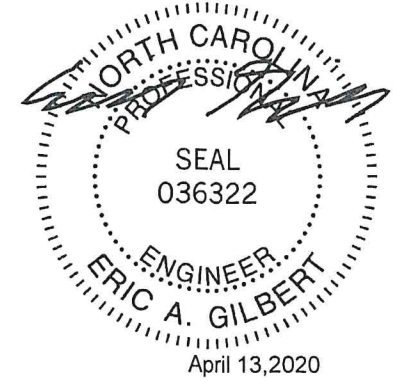
LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.06	Vert(LL)	-0.00	1	n/r	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.03	Vert(CT)	0.00	1	n/r		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.15	Horz(CT)	-0.01	12	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S					Weight: 166 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x6 SP No.1	WEBS T-Brace: 2x4 SPF No.2 - 11-13, 10-14
OTHERS 2x4 SP No.2	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 17-4-0.  
 (lb) - Max Horz 2=491(LC 12)  
 Max Uplift All uplift 100 lb or less at joint(s) 12, 13, 14, 16, 17, 18, 19, 20 except 21=133(LC 12)  
 Max Grav All reactions 250 lb or less at joint(s) 12, 13, 2, 14, 16, 17, 18, 19, 20 except 21=285(LC 19)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-512/415, 3-4=-410/321, 4-5=-354/283, 5-6=-290/232

- NOTES-**
- 1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) -0-8-13 to 3-8-0, Exterior(2) 3-8-0 to 17-4-0 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - 3) All plates are 2x4 MT20 unless otherwise indicated.
  - 4) Gable requires continuous bottom chord bearing.
  - 5) Gable studs spaced at 2-0-0 oc.
  - 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 7) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 8) Bearing at joint(s) 12 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 12, 13, 14, 16, 17, 18, 19, 20 except (jt=lb) 21=133.
  - 10) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.

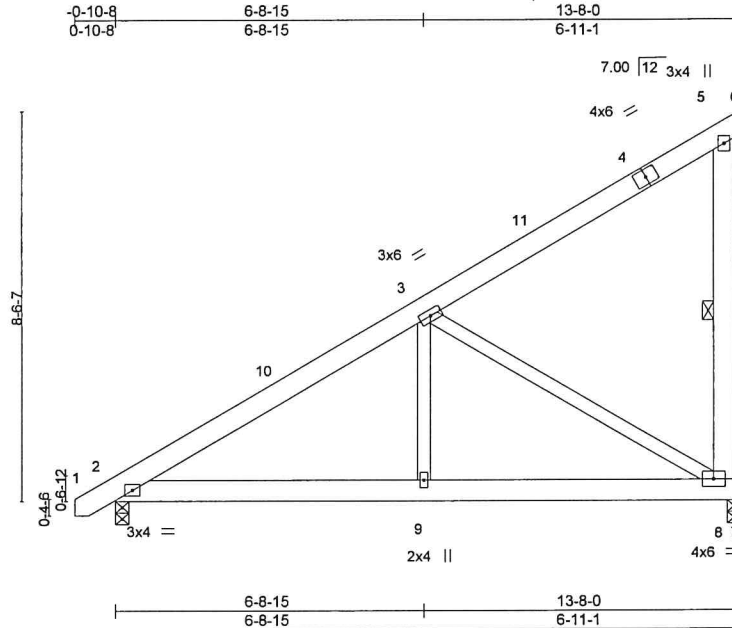


Job	Truss	Truss Type	Qty	Ply	Wellco/13 Hidden Lakes/Harnett	E14287454
J0420-1598	M2	MONOPITCH	7	1	Job Reference (optional)	

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ID:I2dlSWmc?rsKCp8e01L4?Rzx8kL-YFZJmFMoSBaMJ?u95r9aFP9gY3c4xKGca7vraUzRC6T



Scale: 1/4"=1'

<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 0.19	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.16	Vert(LL) -0.01 2-9 >999 360		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.66	Vert(CT) -0.03 2-9 >999 240		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.01 8 n/a n/a		
	Code IRC2015/TPI2014		Wind(LL) 0.01 2-9 >999 240	Weight: 105 lb	FT = 20%

**LUMBER-**

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

**BRACING-**

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
 WEBS 1 Row at midpt 5-8

**REACTIONS.**

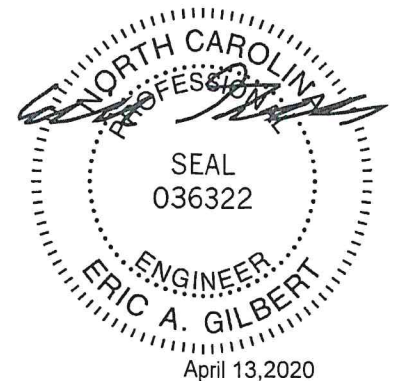
(size) 8=0-3-8, 2=0-3-8  
 Max Horz 2=270(LC 12)  
 Max Uplift 8=-136(LC 12)  
 Max Grav 8=585(LC 19), 2=581(LC 1)

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

TOP CHORD 2-3=-694/0  
 BOT CHORD 2-9=-198/599, 8-9=-198/599  
 WEBS 3-9=0/306, 3-8=-683/224

**NOTES-**

- 1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -0-8-13 to 3-8-0, Interior(1) 3-8-0 to 13-8-0 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 8=136.



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 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, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



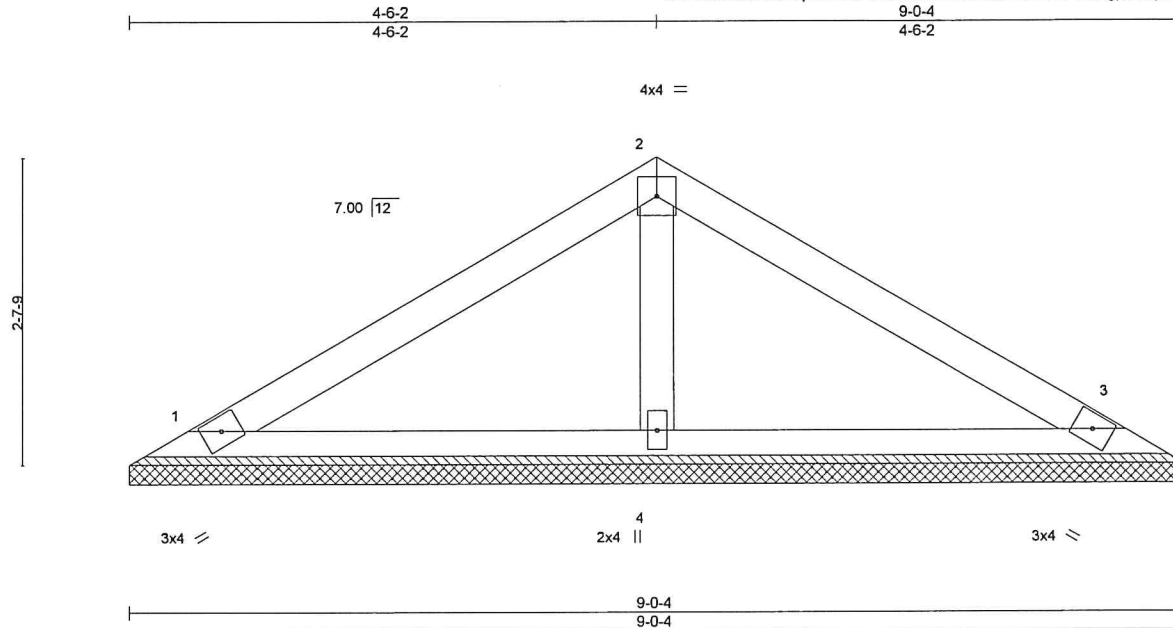
818 Soundside Road  
 Edenton, NC 27932



Job	Truss	Truss Type	Qty	Ply	Wellco/13 Hidden Lakes/Harnett	E14287455
J0420-1598	VD1	VALLEY	1	1	Job Reference (optional)	

Comtech, Inc, Fayetteville, NC - 28314,

8.330 s Mar 23 2020 MITek Industries, Inc. Mon Apr 13 07:32:33 2020 Page 1  
ID:l2dlSWmc?rsKCp8e01L4?Rzx8kL-OR7hzbMQDVI0x9TLLeZgpochrjTzygxPipneP6wzRC6S



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 0.16	Vert(LL)	n/a	-	n/a	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.12	Vert(CT)	n/a	-	n/a		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.03	Horz(CT)	0.00	3	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S					Weight: 30 lb	FT = 20%

**LUMBER-**

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

**BRACING-**

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

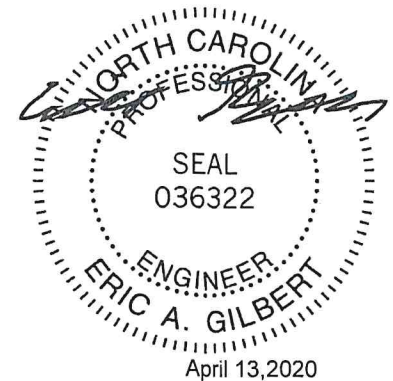
**REACTIONS.**

(size) 1=9-0-4, 3=9-0-4, 4=9-0-4  
Max Horz 1=-56(LC 8)  
Max Uplift 1=-20(LC 12), 3=-25(LC 13)  
Max Grav 1=151(LC 1), 3=151(LC 1), 4=333(LC 1)

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

**NOTES-**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 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 100 lb uplift at joint(s) 1, 3.



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**

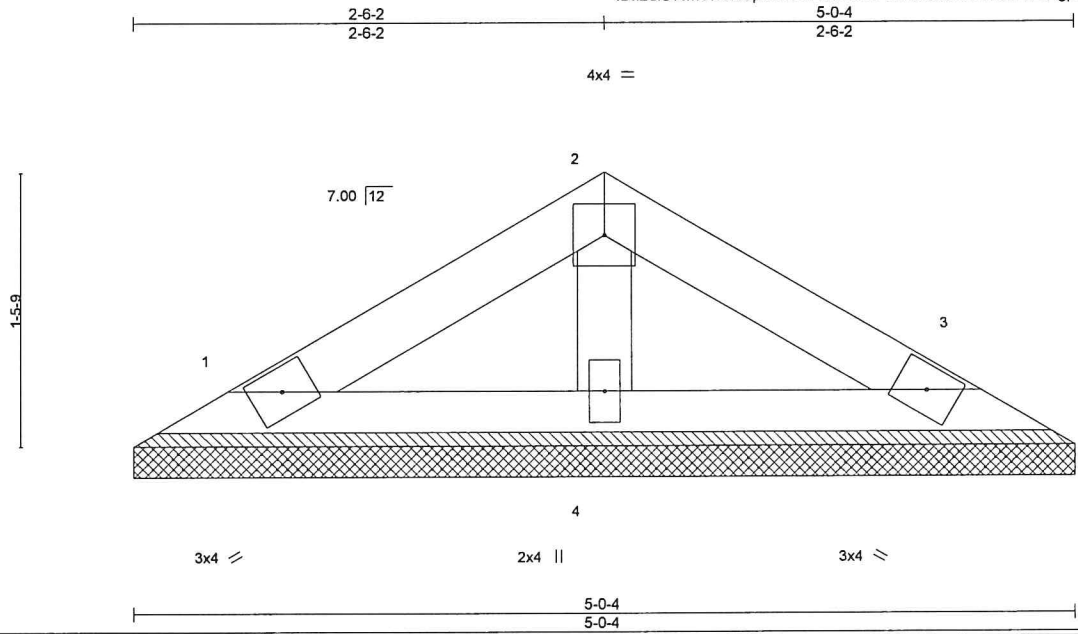
Design valid for use only with MITek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall 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, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Wellco/13 Hidden Lakes/Harnett	E14287456
J0420-1598	VD2	VALLEY	1	1	Job Reference (optional)	

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Mar 23 2020 MiTek Industries, Inc. Mon Apr 13 07:32:33 2020 Page 1  
 ID:l2dlSWmc?rsKCp8e01L4?Rzx8kL-OR7hzbMQDVdX9TLLeZgpochtST\_IgxpneP6wzRC6S



Scale = 1:11.8

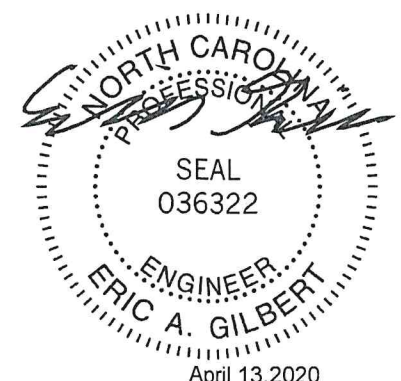
LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.05	Vert(LL)	n/a	-	n/a	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.03	Vert(CT)	n/a	-	n/a		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.01	Horz(CT)	0.00	3	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-P					Weight: 16 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.1	TOP CHORD Structural wood sheathing directly applied or 5-0-4 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=5-0-4, 3=5-0-4, 4=5-0-4  
 Max Horz 1=-28(LC 8)  
 Max Uplift 1=-13(LC 12), 3=-16(LC 13)  
 Max Grav 1=83(LC 1), 3=83(LC 1), 4=150(LC 1)

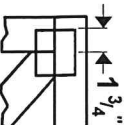
**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

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

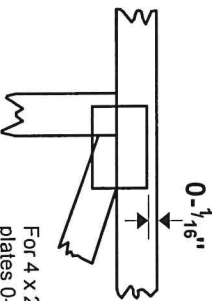


# Symbols

## 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-<sup>1</sup>/<sub>16</sub>" 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**

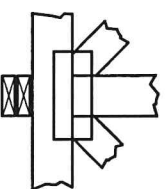
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## 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



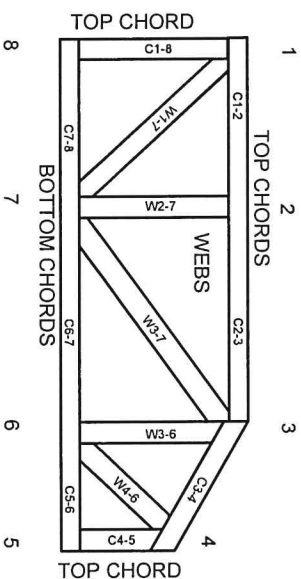
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

## Industry Standards:

- ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
- DSB-89: Design Standard for Bracing.
- BCSI: 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/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/TPI 1 section 6.3 These truss designs rely on lumber values established by others.

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# General Safety Notes

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

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI 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/TPI 1 Quality Criteria.







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

Warning: Trusses shall be installed in accordance with the manufacturer's instructions. Trusses shall be installed in accordance with the manufacturer's instructions. Trusses shall be installed in accordance with the manufacturer's instructions.

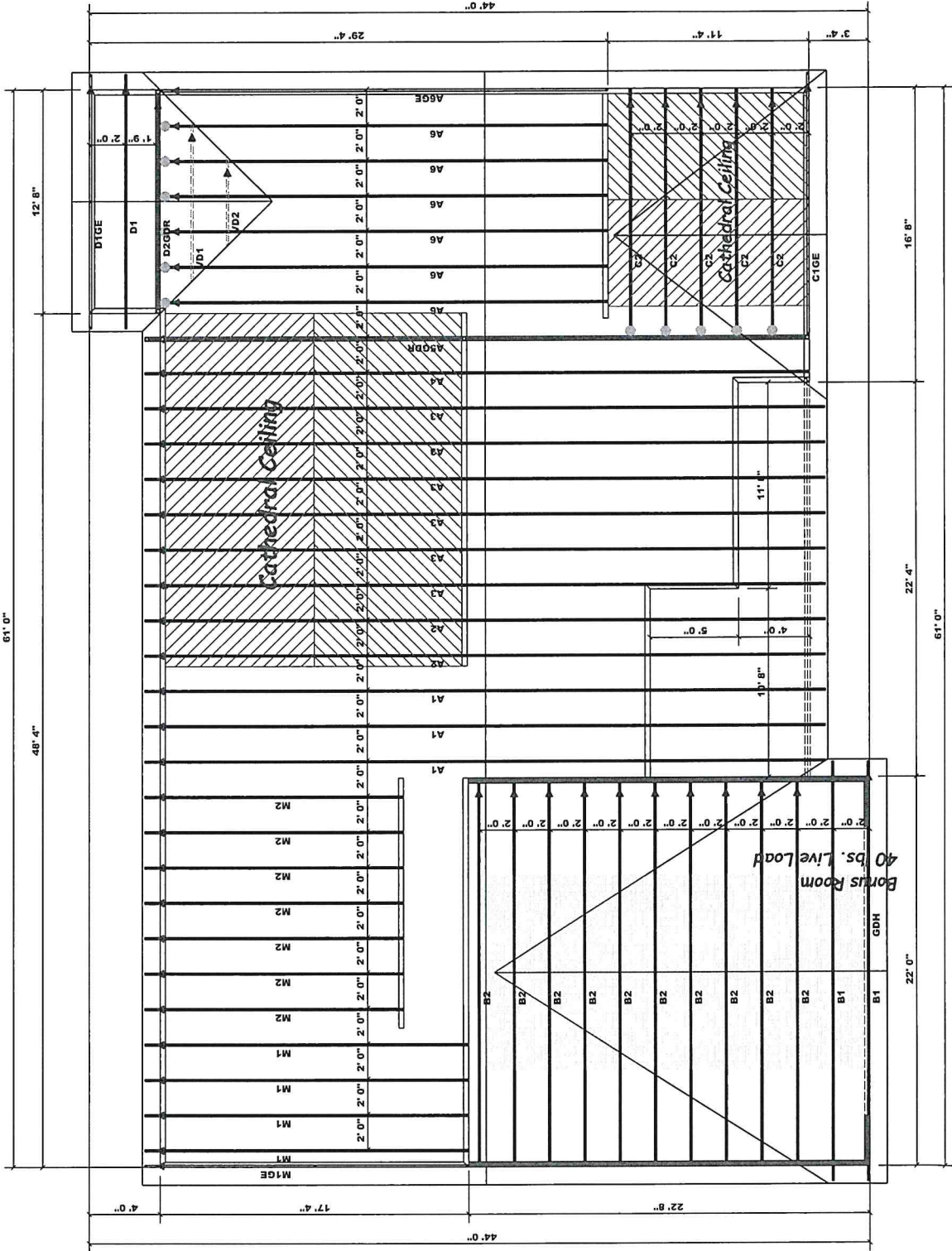
Signature: *Curtis Quick*  
Curtis Quick

LOAD CHART FOR JACK STUDS

NUMBER OF JACKS	MAXIMUM LOAD (KIP)
1	3400
2	6800
3	10200
4	13600
5	17000
6	20400
7	23800
8	27200
9	30600

CITY / CO.	Harnett Co. / Harnett
ADDRESS	Lot 1 Hidden Lakes
MODEL	Model
DATE REV.	01/09/20
DRAWN BY	Curtis Quick
SALES REP.	Lenny Norris

BUILDER	Welco Contractors
JOB NAME	Lot 1 Hidden Lakes
PLAN	The Lindsay
SEAL DATE	
QUOTE #	J0120-0160
JOB #	



**Hatch Legend**  
Garage Walls Dropped 1'

**HANGER LEGEND**  
● = USP HUS26 / Single 2x Hanger

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

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

**Beam Legend**

PlotID	Length	Product	Piles	Net Qty
GDH	22'-0"	1-3/4"x 11-7/8" LVL Kerto-S	2	2

These trusses are designed as load resisting members and are not to be used as a structural member in any other capacity. The building owner is responsible for the design and construction of the building. The building owner is responsible for the design and construction of the building. The building owner is responsible for the design and construction of the building.

