

Trenco  
818 Soundside Rd  
Edenton, NC 27932

Re: P24040737  
JOAN WALL

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Lingleaf Truss Company.

Pages or sheets covered by this seal: I65520948 thru I65520955

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

North Carolina COA: C-0844



May 14, 2024

Gilbert, Eric

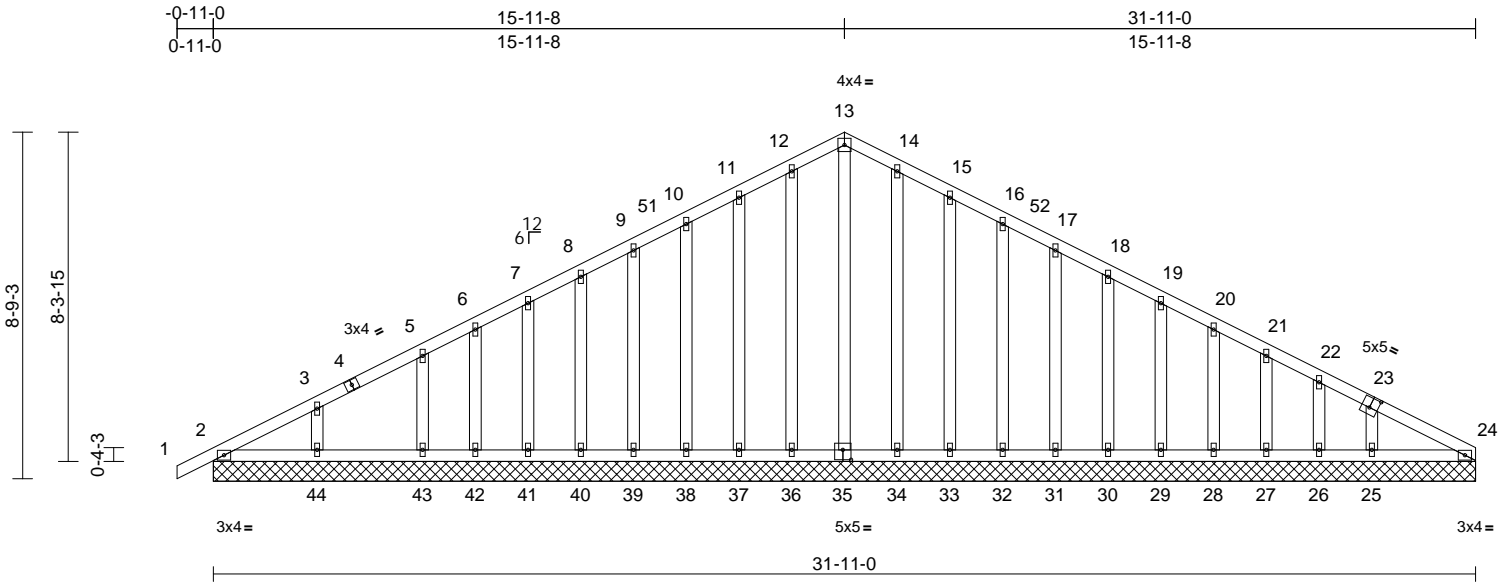
**IMPORTANT NOTE:** The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes),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

Job P24040737	Truss T02GE	Truss Type Common Supported Gable	Qty 1	Ply 1	JOAN WALL Job Reference (optional)	165520948
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Longleaf Truss Company, West End, NC - 27376,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Mon May 13 07:23:33  
ID:mZJoufKGBJ4l\_lvecUYs8IzPTRu-RfC?PsB70Hq3NSgPqnL8w3uITXbGKwRcDoi7J4zJC?F

Page: 1



Scale = 1:58.3  
Plate Offsets (X, Y): [23:0-2-8,0-3-0], [35:0-2-8,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.06	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.00	24	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 234 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.1  
BOT CHORD 2x4 SP No.1  
OTHERS 2x4 SP No.3

**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=31-11-0, 24=31-11-0,  
25=31-11-0, 26=31-11-0,  
27=31-11-0, 28=31-11-0,  
29=31-11-0, 30=31-11-0,  
31=31-11-0, 32=31-11-0,  
33=31-11-0, 34=31-11-0,  
35=31-11-0, 36=31-11-0,  
37=31-11-0, 38=31-11-0,  
39=31-11-0, 40=31-11-0,  
41=31-11-0, 42=31-11-0,  
43=31-11-0, 44=31-11-0,  
45=31-11-0, 48=31-11-0  
Max Horiz 2=202 (LC 11), 45=202 (LC 11)  
Max Uplift 2=-16 (LC 8), 25=-44 (LC 12),  
26=-12 (LC 12), 27=-23 (LC 12),  
28=-21 (LC 12), 29=-21 (LC 12),  
30=-21 (LC 12), 31=-21 (LC 12),  
32=-21 (LC 12), 33=-28 (LC 12),  
34=-3 (LC 12), 36=-3 (LC 12),  
37=-27 (LC 12), 38=-21 (LC 12),  
39=-21 (LC 12), 40=-21 (LC 12),  
41=-21 (LC 12), 42=-17 (LC 12),  
43=-35 (LC 12), 44=-39 (LC 12),  
45=-16 (LC 8)

Max Grav 2=157 (LC 25), 24=92 (LC 2),  
25=219 (LC 25), 26=66 (LC 25),  
27=120 (LC 25), 28=108 (LC 25),  
29=110 (LC 25), 30=110 (LC 25),  
31=110 (LC 25), 32=127 (LC 18),  
33=135 (LC 18), 34=137 (LC 18),  
35=120 (LC 12), 36=135 (LC 17),  
37=136 (LC 17), 38=127 (LC 17),  
39=110 (LC 24), 40=109 (LC 24),  
41=113 (LC 24), 42=88 (LC 24),  
43=174 (LC 24), 44=242 (LC 24),  
45=157 (LC 25), 48=92 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/25, 2-3=-146/153, 3-5=-138/130,  
5-6=-120/107, 6-7=-111/101, 7-8=-103/91,  
8-9=-94/82, 9-10=-86/105, 10-11=-78/129,  
11-12=-70/155, 12-13=-62/171,  
13-14=-56/171, 14-15=-49/154,  
15-16=-41/129, 16-17=-34/105,  
17-18=-29/81, 18-19=-33/57, 19-20=-39/34,  
20-21=-45/29, 21-22=-50/40, 22-24=-79/70  
BOT CHORD 2-44=-60/89, 43-44=-60/89, 42-43=-60/89,  
41-42=-60/89, 40-41=-60/89, 39-40=-60/89,  
38-39=-60/89, 37-38=-60/89, 36-37=-60/89,  
34-36=-60/90, 33-34=-60/90, 32-33=-60/90,  
31-32=-60/90, 30-31=-60/90, 29-30=-60/90,  
28-29=-60/90, 27-28=-60/90, 26-27=-60/90,  
25-26=-60/90, 24-25=-60/89  
WEBS 13-35=-104/12, 12-36=-109/19,  
11-37=-109/43, 10-38=-101/37, 9-39=-83/37,  
8-40=-83/37, 7-41=-85/38, 6-42=-67/29,  
5-43=-134/62, 3-44=-174/71, 14-34=-109/19,  
15-33=-109/43, 16-32=-101/37,  
17-31=-83/37, 18-30=-83/37, 19-29=-83/37,  
20-28=-83/37, 21-27=-87/38, 22-26=-61/31,  
23-25=-143/56

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=12ft; B=45ft; L=32ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed ; end vertical left and right exposed; 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) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 5) Unbalanced snow loads have been considered for this design.
- 6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- 7) All plates are 1.5x4 MT20 unless otherwise indicated.



May 14, 2024

Continued on page 2

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

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

Job P24040737	Truss T02GE	Truss Type Common Supported Gable	Qty 1	Ply 1	JOAN WALL Job Reference (optional)	I65520948
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Longleaf Truss Company, West End, NC - 27376,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Mon May 13 07:23:33  
ID:mZJoufkGBJ4l\_lvecUYs8lzPTRu-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 2

- 8) Gable requires continuous bottom chord bearing.
- 9) Gable studs spaced at 1-4-0 oc.
- 10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 11) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 12) All bearings are assumed to be SP No.1 .
- 13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 16 lb uplift at joint 2, 3 lb uplift at joint 36, 27 lb uplift at joint 37, 21 lb uplift at joint 38, 21 lb uplift at joint 39, 21 lb uplift at joint 40, 21 lb uplift at joint 41, 17 lb uplift at joint 42, 35 lb uplift at joint 43, 39 lb uplift at joint 44, 3 lb uplift at joint 34, 28 lb uplift at joint 33, 21 lb uplift at joint 32, 21 lb uplift at joint 31, 21 lb uplift at joint 30, 21 lb uplift at joint 29, 21 lb uplift at joint 28, 23 lb uplift at joint 27, 12 lb uplift at joint 26, 44 lb uplift at joint 25 and 16 lb uplift at joint 2.
- 14) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard

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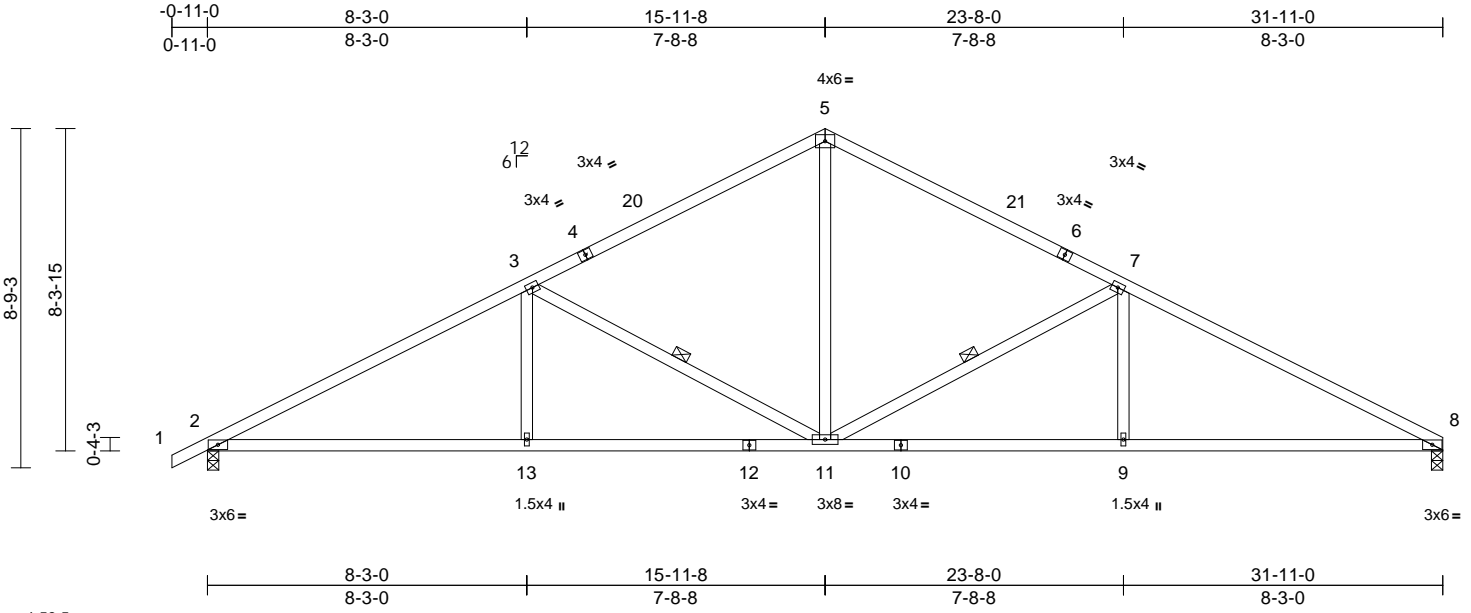
818 Soundside Road  
Edenton, NC 27932

Job P24040737	Truss T03	Truss Type Common	Qty 10	Ply 1	JOAN WALL Job Reference (optional)	165520949
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Longleaf Truss Company, West End, NC - 27376,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Mon May 13 07:23:33  
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Page: 1



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.69	Vert(LL)	-0.13	9-19	>999	240	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.67	Vert(CT)	-0.30	9-19	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.37	Horz(CT)	0.08	8	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 151 lb	FT = 20%

LUMBER	
TOP CHORD	2x4 SP No.1
BOT CHORD	2x4 SP No.1
WEBS	2x4 SP No.3
BRACING	
TOP CHORD	Structural wood sheathing directly applied or 3-1-2 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 7-11, 3-11
REACTIONS	
(size)	2=0-3-8, 8=0-3-8
Max Horiz	2=202 (LC 11)
Max Uplift	2=-161 (LC 12), 8=-126 (LC 12)
Max Grav	2=1332 (LC 2), 8=1276 (LC 2)
FORCES	
(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/25, 2-3=-2319/256, 3-5=-1566/240, 5-7=-1566/240, 7-8=-2323/260
BOT CHORD	2-13=-144/1997, 11-13=-144/1997, 9-11=-148/2001, 8-9=-148/2001
WEBS	5-11=-63/894, 7-11=-834/170, 7-9=0/345, 3-11=-829/166, 3-13=0/344

- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
  - 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 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
  - All bearings are assumed to be SP No.1 .
  - TBE4 Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 8. This connection is for uplift only and does not consider lateral forces.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- LOAD CASE(S)** Standard

- NOTES**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=12ft; B=45ft; L=32ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - Unbalanced snow loads have been considered for this design.



May 14, 2024

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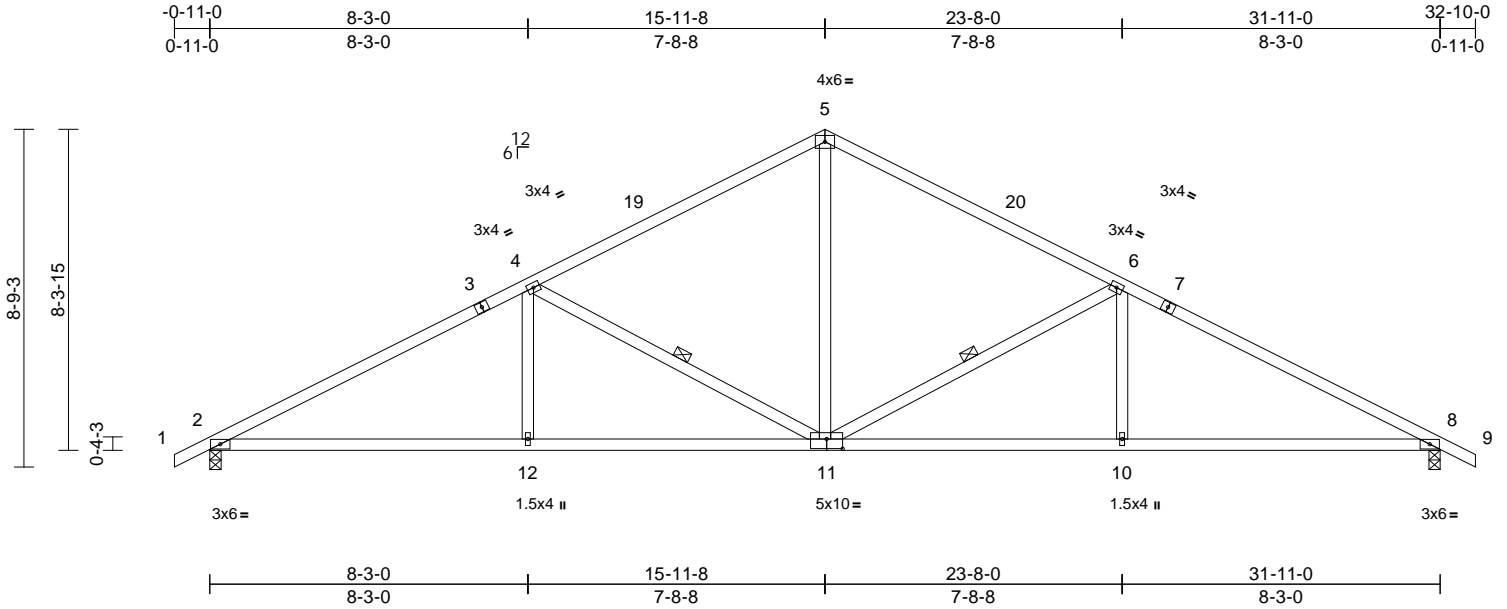
818 Soundside Road  
Edenton, NC 27932

Job P24040737	Truss T02	Truss Type Common	Qty 13	Ply 1	JOAN WALL Job Reference (optional)	I65520950
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Longleaf Truss Company, West End, NC - 27376,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Mon May 13 07:23:33  
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Page: 1



Scale = 1:59.8

Plate Offsets (X, Y): [11:0-5-0,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.69	Vert(LL)	-0.12	12-18	>999	240	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.65	Vert(CT)	-0.29	10-15	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.37	Horz(CT)	0.08	8	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 152 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.1  
BOT CHORD 2x4 SP No.1  
WEBS 2x4 SP No.3

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 3-1-12 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
WEBS 1 Row at midpt 4-11, 6-11

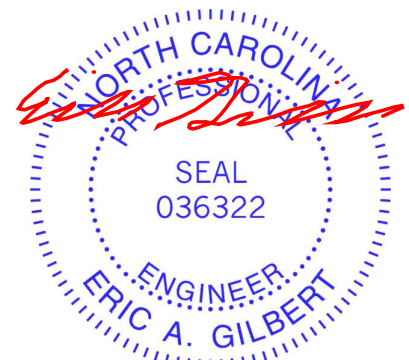
**REACTIONS**  
(size) 2=0-3-8, 8=0-3-8  
Max Horiz 2=-206 (LC 10)  
Max Uplift 2=-160 (LC 12), 8=-160 (LC 12)  
Max Grav 2=1332 (LC 2), 8=1332 (LC 2)

**FORCES**  
(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/25, 2-4=-2317/255, 4-5=-1562/239, 5-6=-1567/239, 6-8=-2317/255, 8-9=0/25  
BOT CHORD 2-12=-121/1995, 10-12=-121/1995, 8-10=-121/1995  
WEBS 5-11=-61/892, 4-12=0/345, 4-11=-830/166, 6-10=0/343, 6-11=-827/166

- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- 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 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.1 .
- TBE4 Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 8 and 2. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard

- NOTES**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=150mph (3-second gust)  
Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=12ft; B=45ft; L=32ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - Unbalanced snow loads have been considered for this design.



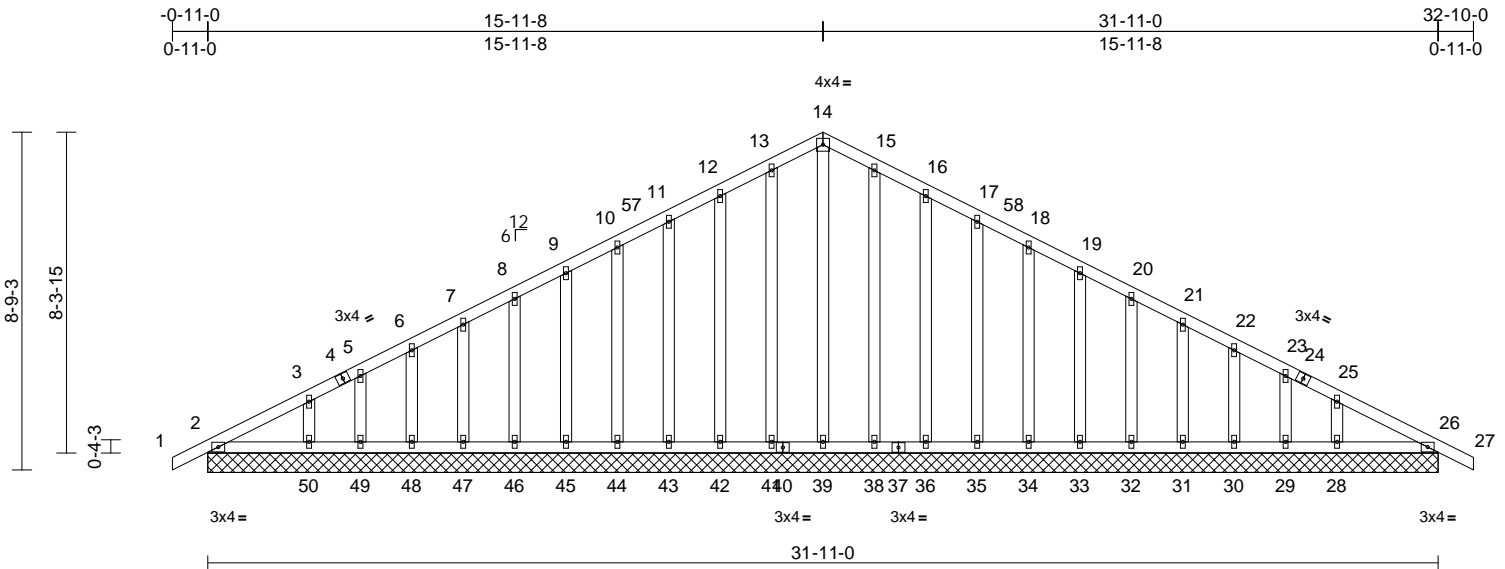
May 14, 2024

Job P24040737	Truss T03GE	Truss Type Common Supported Gable	Qty 1	Ply 1	JOAN WALL Job Reference (optional)	165520951
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Longleaf Truss Company, West End, NC - 27376,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Mon May 13 07:23:33  
ID:mZJoufkGBJ4l\_vlecUYs8IzPTRu-RfC?PsB70Hq3NSgPqnL8w3uITXbGKwRcDoi7J4zJC?F

Page: 1



Scale = 1:59.8

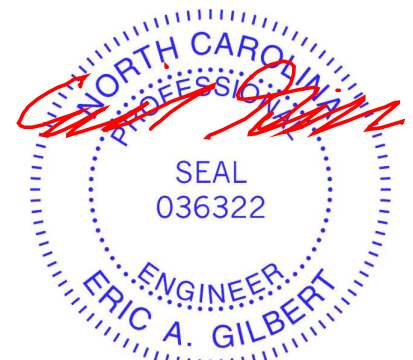
Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.04	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.14	Horz(CT)	0.00	54	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 238 lb	FT = 20%

LUMBER		Max Grav	2=161 (LC 25), 26=159 (LC 2), 28=201 (LC 25), 29=74 (LC 25), 30=118 (LC 25), 31=108 (LC 25), 32=110 (LC 25), 33=110 (LC 25), 34=110 (LC 25), 35=127 (LC 18), 36=135 (LC 18), 38=136 (LC 18), 39=127 (LC 12), 41=136 (LC 17), 42=135 (LC 17), 43=127 (LC 17), 44=110 (LC 24), 45=110 (LC 24), 46=110 (LC 24), 47=108 (LC 24), 48=118 (LC 24), 49=73 (LC 2), 50=203 (LC 24), 51=161 (LC 25), 54=159 (LC 2)	WEBS	13-41=109/18, 12-42=109/44, 11-43=101/37, 10-44=83/37, 9-45=83/37, 7-47=83/37, 6-48=87/38, 5-49=64/34, 3-50=136/49, 15-38=109/18, 16-36=109/44, 17-35=101/37, 18-34=83/37, 19-33=83/37, 21-31=83/37, 22-30=87/38, 23-29=65/34, 25-28=135/49, 14-39=111/13, 8-46=83/37, 20-32=83/37
TOP CHORD	2x4 SP No.1				
BOT CHORD	2x4 SP No.1				
OTHERS	2x4 SP No.3				

BRACING		FORCES	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins.	TOP CHORD	1-2=0/25, 2-3=-148/154, 3-5=-139/129, 5-6=-128/125, 6-7=-121/114, 7-8=-112/104, 8-9=-104/94, 9-10=-96/91, 10-11=-87/115, 11-12=-79/138, 12-13=-71/164, 13-14=-63/180, 14-15=-57/180, 15-16=-50/164, 16-17=-42/138, 17-18=-35/115, 18-19=-29/91, 19-20=-30/67, 20-21=-36/43, 21-22=-43/27, 22-23=-48/38, 23-25=-60/42, 25-26=-68/68, 26-27=0/25
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.	BOT CHORD	2-50=62/103, 49-50=62/103, 48-49=62/103, 47-48=62/103, 46-47=62/103, 45-46=62/103, 44-45=62/103, 43-44=62/103, 42-43=62/103, 41-42=62/103, 39-41=62/103, 38-39=62/103, 36-38=62/103, 35-36=62/103, 34-35=62/103, 33-34=62/103, 32-33=62/103, 31-32=62/103, 30-31=62/103, 29-30=62/103, 28-29=62/103, 26-28=62/103

REACTIONS	(size)	2=31-11-0, 26=31-11-0, 28=31-11-0, 29=31-11-0, 30=31-11-0, 31=31-11-0, 32=31-11-0, 33=31-11-0, 34=31-11-0, 35=31-11-0, 36=31-11-0, 38=31-11-0, 39=31-11-0, 41=31-11-0, 42=31-11-0, 43=31-11-0, 44=31-11-0, 45=31-11-0, 46=31-11-0, 47=31-11-0, 48=31-11-0, 49=31-11-0, 50=31-11-0, 51=31-11-0, 54=31-11-0
Max Horiz	2=-206 (LC 10), 51=-206 (LC 10)	
Max Uplift	2=-19 (LC 12), 26=-19 (LC 12), 28=-28 (LC 12), 29=-19 (LC 12), 30=-21 (LC 12), 31=-21 (LC 12), 32=-21 (LC 12), 33=-21 (LC 12), 34=-21 (LC 12), 35=-21 (LC 12), 36=-28 (LC 12), 38=-2 (LC 12), 41=-2 (LC 12), 42=-28 (LC 12), 43=-21 (LC 12), 44=-21 (LC 12), 45=-21 (LC 12), 46=-21 (LC 12), 47=-21 (LC 12), 48=-21 (LC 12), 49=-19 (LC 12), 50=-28 (LC 12), 51=-19 (LC 12), 54=-19 (LC 12)	

- NOTES**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=12ft; B=45ft; L=32ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed ; end vertical left and right exposed; 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.



Job P24040737	Truss T03GE	Truss Type Common Supported Gable	Qty 1	Ply 1	JOAN WALL Job Reference (optional)	I65520951
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Longleaf Truss Company, West End, NC - 27376,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Mon May 13 07:23:33  
ID:mZJoufkGBJ4l\_lvecUYs8lzPTRu-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 2

- 4) TCLK: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 5) Unbalanced snow loads have been considered for this design.
- 6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- 7) All plates are 1.5x4 MT20 unless otherwise indicated.
- 8) Gable requires continuous bottom chord bearing.
- 9) Gable studs spaced at 1-4-0 oc.
- 10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 11) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 12) All bearings are assumed to be SP No.1 .
- 13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 19 lb uplift at joint 2, 19 lb uplift at joint 26, 2 lb uplift at joint 41, 28 lb uplift at joint 42, 21 lb uplift at joint 43, 21 lb uplift at joint 44, 21 lb uplift at joint 45, 21 lb uplift at joint 47, 21 lb uplift at joint 48, 19 lb uplift at joint 49, 28 lb uplift at joint 50, 2 lb uplift at joint 38, 28 lb uplift at joint 36, 21 lb uplift at joint 35, 21 lb uplift at joint 34, 21 lb uplift at joint 33, 21 lb uplift at joint 31, 21 lb uplift at joint 30, 19 lb uplift at joint 29, 28 lb uplift at joint 28, 21 lb uplift at joint 46, 21 lb uplift at joint 32, 19 lb uplift at joint 2 and 19 lb uplift at joint 26.
- 14) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard

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

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



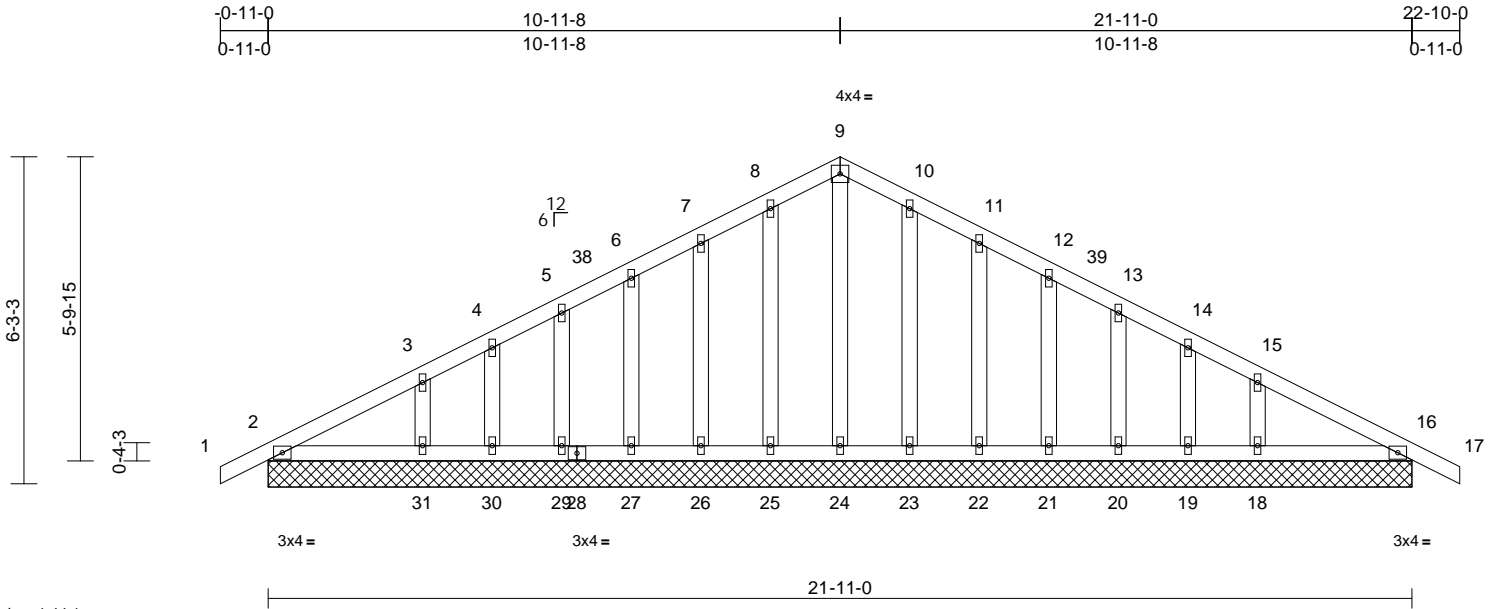
818 Soundside Road  
Edenton, NC 27932

Job P24040737	Truss T05GE	Truss Type Common	Qty 1	Ply 1	JOAN WALL Job Reference (optional)	165520952
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Longleaf Truss Company, West End, NC - 27376,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Mon May 13 07:23:34  
ID: ElsA5?kuyccCccSUq9C45gVzPTRtRfC?PsB70Hq3NSgPqnL8w3uTXbGKwRcDoi7J4zJC7f

Page: 1



Scale = 1:44.1

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.05	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	35	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 133 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.1  
BOT CHORD 2x4 SP No.1  
OTHERS 2x4 SP No.3

**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=21-11-0, 16=21-11-0,  
18=21-11-0, 19=21-11-0,  
20=21-11-0, 21=21-11-0,  
22=21-11-0, 23=21-11-0,  
24=21-11-0, 25=21-11-0,  
26=21-11-0, 27=21-11-0,  
29=21-11-0, 30=21-11-0,  
31=21-11-0, 32=21-11-0,  
35=21-11-0

Max Horiz 2=136 (LC 11), 32=136 (LC 11)  
Max Uplift 2=35 (LC 12), 16=35 (LC 12),  
18=34 (LC 12), 19=17 (LC 12),  
20=22 (LC 12), 21=21 (LC 12),  
22=25 (LC 12), 23=11 (LC 12),  
25=11 (LC 12), 26=25 (LC 12),  
27=21 (LC 12), 29=22 (LC 12),  
30=17 (LC 12), 31=34 (LC 12),  
32=35 (LC 12), 35=35 (LC 12)  
Max Grav 2=169 (LC 2), 16=169 (LC 2),  
18=228 (LC 25), 19=57 (LC 2),  
20=119 (LC 25), 21=126 (LC 18),  
22=135 (LC 18), 23=137 (LC 18),  
24=96 (LC 24), 25=137 (LC 17),  
26=135 (LC 17), 27=126 (LC 17),  
29=119 (LC 24), 30=57 (LC 2),  
31=229 (LC 24), 32=169 (LC 2),  
35=169 (LC 2)

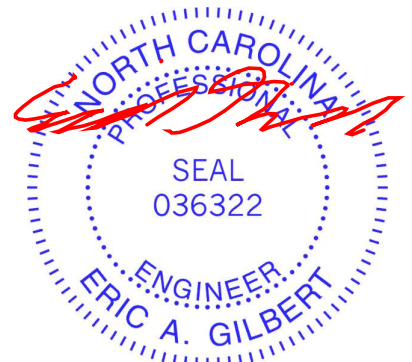
**FORCES** (lb) - Maximum Compression/Maximum Tension

**TOP CHORD** 1-2=0/25, 2-3=-98/100, 3-4=-89/71,  
4-5=-76/70, 5-6=-70/60, 6-7=-63/81,  
7-8=-57/106, 8-9=-51/126, 9-10=-45/126,  
10-11=-38/106, 11-12=-35/81, 12-13=-31/57,  
13-14=-32/33, 14-15=-46/14, 15-16=-50/46,  
16-17=0/25  
**BOT CHORD** 2-31=37/75, 30-31=37/75, 29-30=37/75,  
27-29=37/75, 26-27=37/75, 25-26=37/75,  
24-25=37/75, 23-24=37/75, 22-23=37/75,  
21-22=37/75, 20-21=37/75, 19-20=37/75,  
18-19=37/75, 16-18=37/75  
**WEBS** 9-24=73/1, 8-25=-111/27, 7-26=-108/41,  
6-27=-101/37, 5-29=-86/38, 4-30=-54/31,  
3-31=-152/57, 10-23=-111/27, 11-22=-108/41,  
12-21=-101/37, 13-20=-86/38, 14-19=-54/31,  
15-18=-151/57

- NOTES**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=12ft; B=45ft; L=24ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed; end vertical left and right exposed; 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.
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL); Lum DOL=1.15 Plate DOL=1.15; Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
  - All plates are 1.5x4 MT20 unless otherwise indicated.

- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 1-4-0 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 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.1.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 35 lb uplift at joint 2, 35 lb uplift at joint 16, 11 lb uplift at joint 25, 25 lb uplift at joint 26, 21 lb uplift at joint 27, 22 lb uplift at joint 29, 17 lb uplift at joint 30, 34 lb uplift at joint 31, 11 lb uplift at joint 23, 25 lb uplift at joint 22, 21 lb uplift at joint 21, 22 lb uplift at joint 20, 17 lb uplift at joint 19, 34 lb uplift at joint 18, 35 lb uplift at joint 2 and 35 lb uplift at joint 16.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



May 14, 2024

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

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



818 Soundside Road  
Edenton, NC 27932

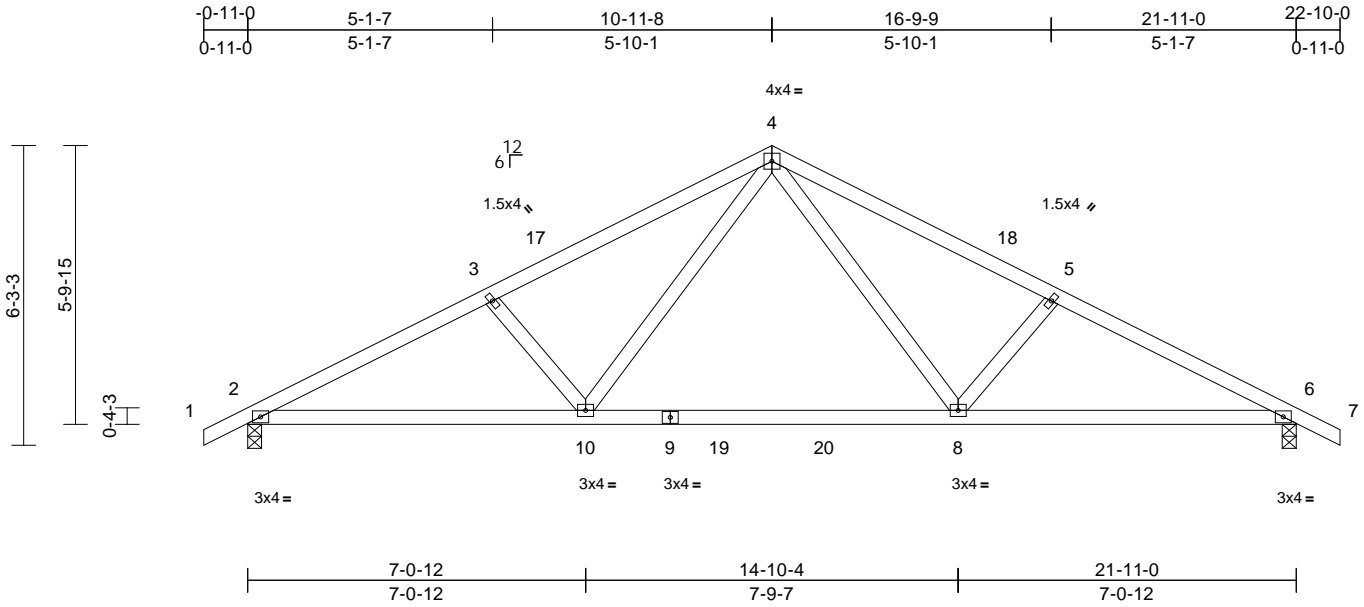


Job P24040737	Truss T06	Truss Type Common	Qty 7	Ply 1	JOAN WALL Job Reference (optional)	165520953
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Longleaf Truss Company, West End, NC - 27376,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Mon May 13 07:23:34  
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Page: 1



Scale = 1:48.2

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.44	Vert(LL)	-0.12	8-10	>999	240	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.52	Vert(CT)	-0.21	8-10	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.27	Horz(CT)	0.04	6	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 101 lb	FT = 20%

**LUMBER**  
 TOP CHORD 2x4 SP No.1  
 BOT CHORD 2x4 SP No.1  
 WEBS 2x4 SP No.3

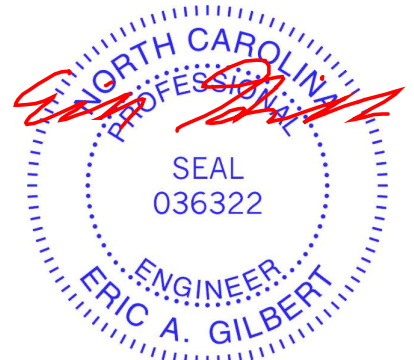
**BRACING**  
 TOP CHORD Structural wood sheathing directly applied or 4-7-13 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 2=0-3-8, 6=0-3-8  
 Max Horiz 2=-136 (LC 10)  
 Max Uplift 2=-120 (LC 12), 6=-120 (LC 12)  
 Max Grav 2=1036 (LC 24), 6=1036 (LC 25)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-2=0/25, 2-3=-1732/188, 3-4=-1568/190, 4-5=-1568/190, 5-6=-1732/188, 6-7=0/25  
 BOT CHORD 2-10=-94/1621, 8-10=0/999, 6-8=-94/1520  
 WEBS 4-10=-27/697, 3-10=-354/144, 4-8=-27/697, 5-8=-354/144

- 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 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - All bearings are assumed to be SP No.1 .
  - TBE4 Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 6. This connection is for uplift only and does not consider lateral forces.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- LOAD CASE(S)** Standard

- NOTES**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=12ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.



May 14, 2024

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

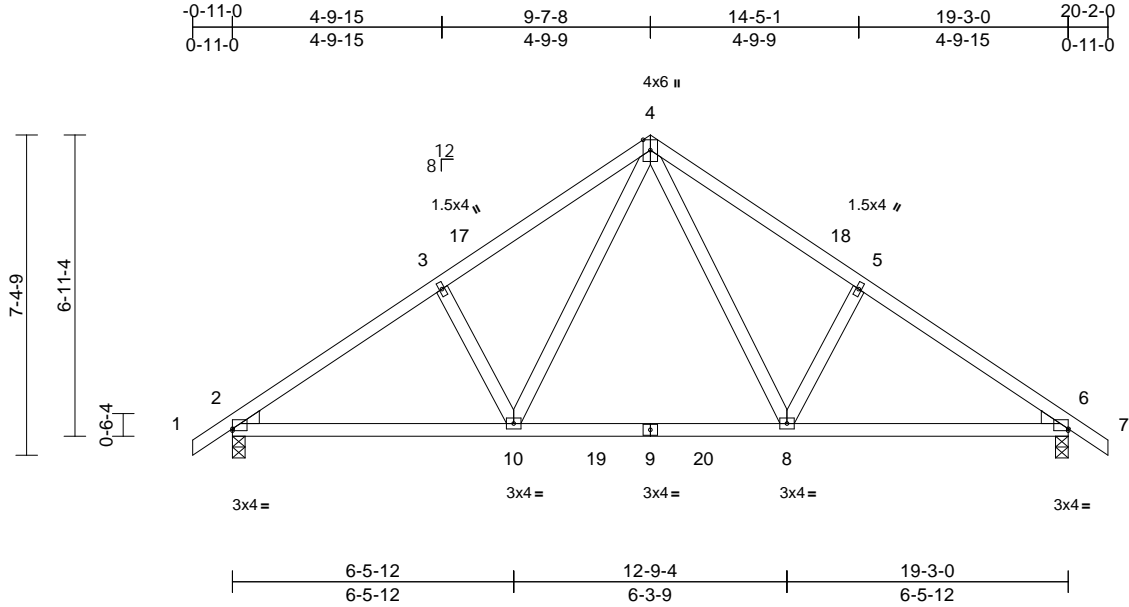
ENGINEERING BY  
**TRENCO**  
 A MiTek Affiliate  
 818 Soundside Road  
 Edenton, NC 27932

Job P24040737	Truss T04	Truss Type Common	Qty 3	Ply 1	JOAN WALL Job Reference (optional)	I65520954
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Longleaf Truss Company, West End, NC - 27376,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Mon May 13 07:23:33  
ID:m:ZJoufKGBJ4I\_lvecUYs8IzPTRu-RfC?PsB70Hq3NSgPqnL8w3uITXbGKwRCDoi7J4zJC?f

Page: 1



Scale = 1:53.1

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.30	Vert(LL)	-0.06	8-10	>999	240	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.34	Vert(CT)	-0.10	8-10	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.20	Horz(CT)	0.02	6	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 100 lb	FT = 20%

**LUMBER**

- TOP CHORD 2x4 SP No.1
- BOT CHORD 2x4 SP No.1
- WEBS 2x4 SP No.3
- WEDGE Left: 2x4 SP No.3  
Right: 2x4 SP No.3

**BRACING**

- TOP CHORD Structural wood sheathing directly applied or 5-8-10 oc purlins.
- BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS**

- (size) 2=0-3-8, 6=0-3-8
- Max Horiz 2=-176 (LC 10)
- Max Uplift 2=-110 (LC 12), 6=-110 (LC 12)
- Max Grav 2=922 (LC 24), 6=922 (LC 25)

**FORCES**

- (lb) - Maximum Compression/Maximum Tension
- TOP CHORD 1-2=0/31, 2-3=-1184/138, 3-4=-1089/187, 4-5=-1090/187, 5-6=-1184/138, 6-7=0/31
- BOT CHORD 2-10=-73/1049, 8-10=0/685, 6-8=-40/933
- WEBS 4-10=-56/551, 3-10=-281/143, 4-8=-56/551, 5-8=-281/143

**NOTES**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=150mph (3-second gust)  
Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=12ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.

- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- 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 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- All bearings are assumed to be SP No.1 .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 110 lb uplift at joint 6.
- TBE4 Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



May 14, 2024

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

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



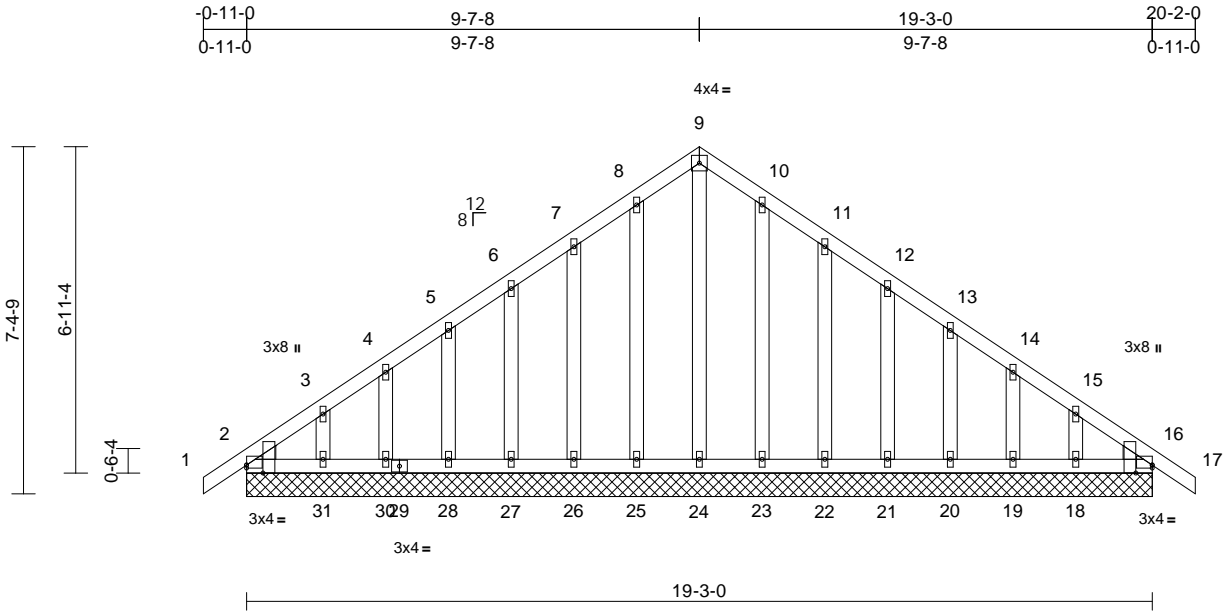
818 Soundside Road  
Edenton, NC 27932

Job P24040737	Truss T01GE	Truss Type Common Supported Gable	Qty 1	Ply 1	JOAN WALL Job Reference (optional)	165520955
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Longleaf Truss Company, West End, NC - 27376,

Run: 8.73 E Jan 17 2024 Print: 8.730 E Jan 17 2024 MiTek Industries, Inc. Mon May 13 16:42:25  
ID:El5A5?kuyccCcc5UqC45gVzPTRt-b3Sq2LKub08RPR6YNNQo6tLUQ2BwOenXRID9OXzGs8y

Page: 1



Scale = 1:49

Plate Offsets (X, Y): [2:Edge,0-0-12], [2:0-2-1,Edge], [16:Edge,0-0-12], [16:0-2-1,Edge]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	Horz(CT)	0.00	16	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-S							
BCDL	10.0										
										Weight: 136 lb	FT = 20%

**LUMBER**

TOP CHORD 2x4 SP No.1  
BOT CHORD 2x4 SP No.1  
OTHERS 2x4 SP No.3  
WEDGE Left: 2x4 SP No.3  
Right: 2x4 SP No.3

**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**

(lb/size) 2=118/19-3-0, 16=118/19-3-0, 18=99/19-3-0, 19=93/19-3-0, 20=95/19-3-0, 21=94/19-3-0, 22=95/19-3-0, 23=96/19-3-0, 24=77/19-3-0, 25=96/19-3-0, 26=95/19-3-0, 27=94/19-3-0, 28=95/19-3-0, 30=93/19-3-0, 31=99/19-3-0  
Max Horiz 2=-176 (LC 10)  
Max Uplift 2=-21 (LC 8), 16=-5 (LC 9), 18=-28 (LC 12), 19=-33 (LC 12), 20=-29 (LC 12), 21=-29 (LC 12), 22=-36 (LC 12), 23=-14 (LC 12), 25=-14 (LC 12), 26=-36 (LC 12), 27=-29 (LC 12), 28=-29 (LC 12), 30=-33 (LC 12), 31=-28 (LC 12)  
Max Grav 2=152 (LC 25), 16=137 (LC 2), 18=126 (LC 25), 19=111 (LC 25), 20=114 (LC 25), 21=117 (LC 18), 22=142 (LC 18), 23=143 (LC 18), 24=123 (LC 12), 25=143 (LC 17), 26=142 (LC 17), 27=117 (LC 17), 28=114 (LC 24), 30=111 (LC 24), 31=131 (LC 24)

**FORCES**

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/23, 2-3=-138/136, 3-4=-115/109, 4-5=-103/94, 5-6=-91/79, 6-7=-81/74, 7-8=-72/111, 8-9=-62/137, 9-10=-53/137, 10-11=-45/111, 11-12=-44/74, 12-13=-43/40, 13-14=-52/33, 14-15=-62/47, 15-16=-84/71, 16-17=0/23  
BOT CHORD 2-31=61/102, 30-31=61/102, 29-30=61/102, 28-29=61/102, 27-28=61/102, 26-27=61/102, 25-26=61/102, 24-25=61/102, 23-24=61/102, 22-23=61/102, 21-22=61/102, 20-21=61/102, 19-20=61/102, 18-19=61/102, 16-18=61/102  
WEBS 9-24=107/13, 8-25=-116/30, 7-26=-115/52, 6-27=90/45, 5-28=-87/45, 4-30=-86/46, 3-31=-100/52, 10-23=-116/30, 11-22=-115/52, 12-21=-90/45, 13-20=-87/45, 14-19=-86/46, 15-18=-96/52

**NOTES**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=12ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed; end vertical left and right exposed; 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.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.

- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- All plates are 1.5x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 1-4-0 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 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.1 crushing capacity of 565 psi.
- One RT4 MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 16, 25, 26, 27, 28, 30, 31, 23, 22, 21, 20, 19, and 18. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



May 14, 2024

Continued on page 2

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

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



818 Soundside Road  
Edenton, NC 27932

Job P24040737	Truss T01GE	Truss Type Common Supported Gable	Qty 1	Ply 1	JOAN WALL Job Reference (optional)	I65520955
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Longleaf Truss Company, West End, NC - 27376,

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ID:ElsA5?kuyCccSUq9C45gVzPTRt-b3Sq2LKub08RPR6YNNqo6tLUQ2BwOenxRID9OXzGs8y

Page: 2

**LOAD CASE(S)** Standard

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

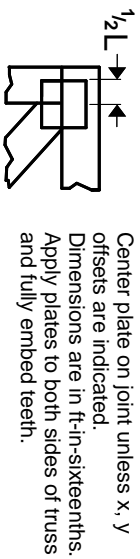
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TP1 Quality Criteria and DSB-22** available from Truss Plate Institute ([www.tpinst.org](http://www.tpinst.org)) and **BCSI Building Component Safety Information** available from the Structural Building Component Association ([www.sbcomponents.com](http://www.sbcomponents.com))



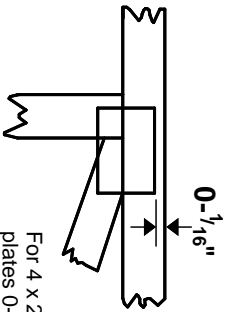
818 Soundside Road  
Edenton, NC 27932

# Symbols

## PLATE LOCATION AND ORIENTATION



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



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



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

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

## PLATE SIZE

4 X 4

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

## LATERAL BRACING LOCATION



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

## BEARING

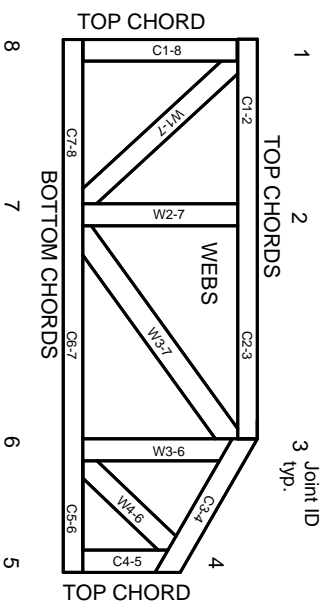


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

## Industry Standards:

ANSI/TP1: National Design Specification for Metal Plate Connected Wood Truss Construction.  
DSB-22: Design Standard for Bracing.  
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses.

# Numbering System



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

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

# Product Code Approvals

ICC-ES Reports:

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

# Design General Notes

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

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

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# General Safety Notes

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

1. Additional stability/bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative 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 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.

**MITek**

ENGINEERING BY  
**TRENGO**  
A MITek Affiliate

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