

Products				
PlotID	Length	Product	Plies	Net Qty
DB13	13' 0"	1-3/4X11-7/8 LP-LVL 2900Fb-2.0E	2	2
FB4	4' 0"	1-3/4X14 LP-LVL 2900Fb-2.0E	2	2

Connector Summary		
Qty	Manuf	Product
2	Simpson	LUS410

Truss Connector Total List		
Manuf	Product	Qty
Simpson	LUS410	2

EXTERIOR DIMENSIONS ARE TO FACE OF SHEATHING.  
SHEATHING IS FLUSH TO FACE OF FOUNDATION.

**THIS IS A TRUSS PLACEMENT DIAGRAM ONLY**

These trusses are designed as individual building components to be incorporated into the building design at the specification of the building designer. See individual design sheets for each truss design identified on the placement drawing. The building designer is responsible for temporary and permanent bracing of the roof and floor system and for the overall structure. The design of the truss support structure including headers, beams, walls, and columns is the responsibility of the building designer. For general guidance regarding bracing, consult "Bracing of Wood Trusses" available from the Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53179.

**SHOP DRAWING APPROVAL**

THIS LAYOUT IS THE SOLE SOURCE FOR FABRICATION OF TRUSSES AND VOIDS ALL PREVIOUS ARCHITECTURAL OR OTHER TRUSS LAYOUTS. REVIEW AND APPROVAL OF THIS LAYOUT MUST BE RECEIVED BEFORE ANY TRUSSES WILL BE BUILT. VERIFY ALL CONDITIONS TO INSURE AGAINST CHANGES THAT WILL RESULT IN EXTRA CHARGES TO YOU.

Job #: GHBTB

Customer: GARMAN HOMES

Site Address:

City, ST, ZIP:

Plan: FLOOR GAR. RIGHT

Date: 11/14/2022

Sales Rep: RW

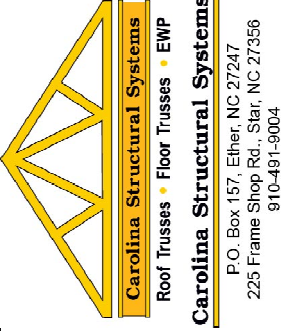
Designer: JSP

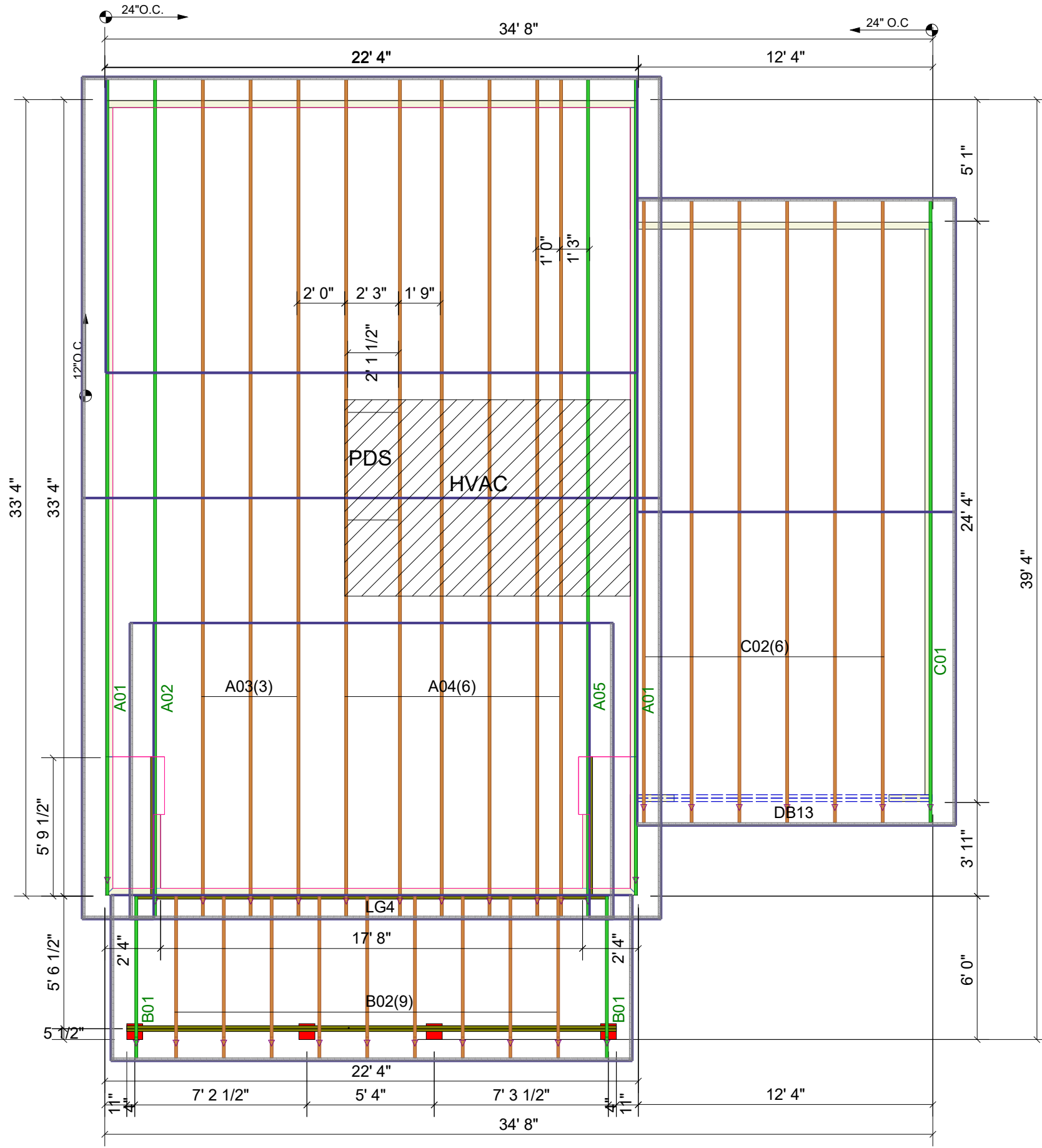
**ROOF DATA**

Roof Area: 1562.7 SF



DATE:





Truss Connector Total List		
Manuf	Product	Qty
	H2.5A	36

EXTERIOR DIMENSIONS ARE TO FACE OF SHEATHING.  
SHEATHING IS FLUSH TO FACE OF FOUNDATION.

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**SHOP DRAWING APPROVAL**

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APPROVED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

REVIEWED BY: \_\_\_\_\_

QUALITY AUDITED BY: \_\_\_\_\_

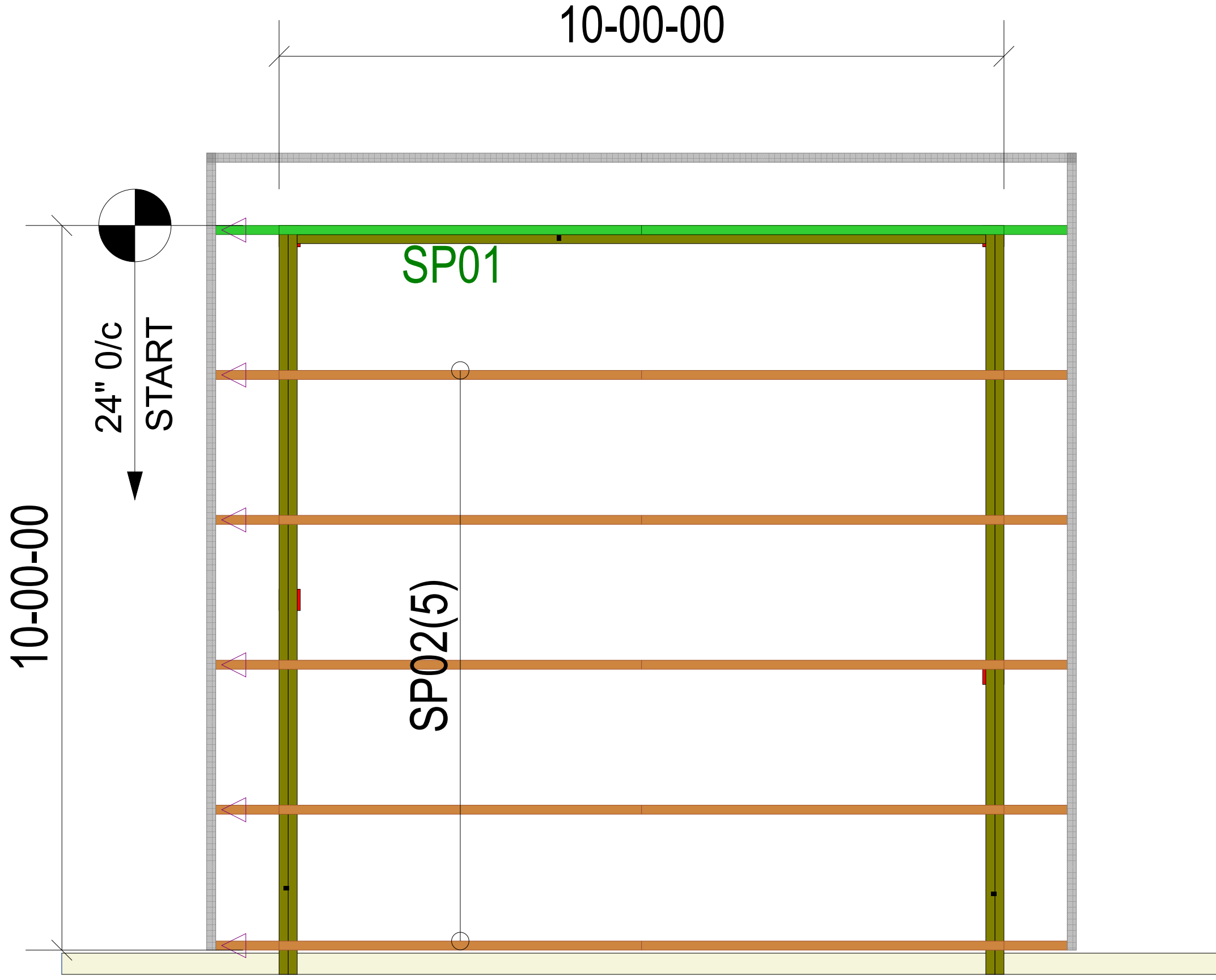
IBC 1962  
IBC 2006  
ANSI/TPI 1-2002  
ANSI/TPI 1-2014

CAROLINA STRUCTURAL SYSTEMS, LLC  
SINCE 1962  
910-491-9004

**Carolina Structural Systems**  
Roof Trusses • Floor Trusses • EWP  
**Carolina Structural Systems**  
P.O. Box 157, Elmer, NC 27247  
225 Frame Shop Rd., Star, NC 27356  
910-491-9004

Job #:	GHBTBR
Customer:	GARMAN HOMES
Site Address:	
City, ST, ZIP:	
Plan:	ROOF GARAGE RIGHT
Date:	9/29/2022
Sales Rep:	RW
Designer:	JSP
<b>ROOF DATA</b>	
Roof Area: 1562.7 SF	

# OPTIONAL SERENITY SCREENED PORCH



**THIS IS A TRUSS PLACEMENT DIAGRAM ONLY**

These trusses are designed as individual building components to be incorporated into the building design at the specification of the building designer. See individual design sheets for each truss design identified on the placement drawing. The building designer is responsible for temporary and permanent bracing of the roof and floor system and for the overall structure. The design of the truss support structure including headers, beams, walls, and columns is the responsibility of the building designer. For general guidance regarding bracing, consult "Bracing of Wood Trusses" available from the Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53179.

**SHOP DRAWING APPROVAL**

THIS LAYOUT IS THE SOLE SOURCE FOR FABRICATION OF TRUSSES AND VOIDS ALL PREVIOUS ARCHITECTURAL OR OTHER TRUSS LAYOUTS. REVIEW AND APPROVAL OF THIS LAYOUT MUST BE RECEIVED BEFORE ANY TRUSSES WILL BE BUILT. VERIFY ALL CONDITIONS TO INSURE AGAINST CHANGES THAT WILL RESULT IN EXTRA CHARGES TO YOU.

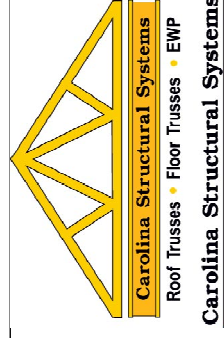
REVIEWED BY:

APPROVED BY:

DATE:



Job #:	SER SCRPN PCH	Plan:	SERENITY SCREEN PORCH
Customer:	GARMAN HOMES	Date:	9/14/2022
Site Address:		Sales Rep:	RW
City, ST, ZIP:		Designer:	JSP
		<b>ROOF DATA</b>	
		Roof Area: 139.14 SF	



P.O. Box 157, Ether, NC 27247  
225 Frame Shop Rd., Star, NC 27356  
910-491-9004

Trenco  
818 Soundside Rd  
Edenton, NC 27932

Re: GHBUTB  
Garman Homes - Buttercup B Floor

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Carolina Structural Systems, LLC.

Pages or sheets covered by this seal: I55250440 thru I55250446

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

North Carolina COA: C-0844



November 14, 2022

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Strzyzewski, Marvin

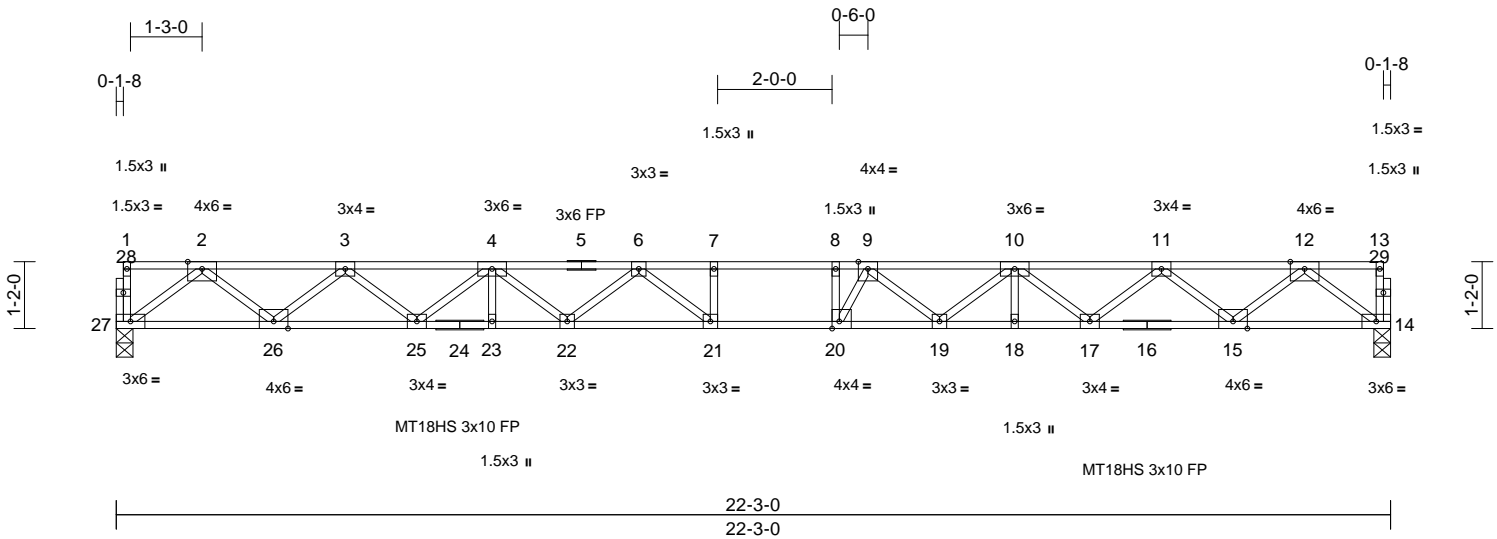
**IMPORTANT NOTE:** The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), 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 GHBUTB	Truss F201	Truss Type Floor	Qty 24	Ply 1	Garman Homes - Buttercup B Floor Job Reference (optional)	155250440
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Carolina Structural Systems, LLC, Ether, NC - 27247,

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Page: 1



Scale = 1:40.2

Plate Offsets (X, Y): [20:0-1-8,Edge]

Loading	(psf)	Spacing	1-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.27	Vert(LL)	-0.32	21	>837	360	MT18HS	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.61	Vert(CT)	-0.43	21	>609	240	MT20	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.35	Horz(CT)	0.07	14	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S								Weight: 112 lb FT = 20%F, 11%E

**LUMBER**

TOP CHORD 2x4 SP DSS(flat)  
 BOT CHORD 2x4 SP No.1(flat) \*Except\* 16-14:2x4 SP No.2(flat)  
 WEBS 2x4 SP No.3(flat)  
 OTHERS 2x4 SP No.3(flat)

- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Required 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

**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.

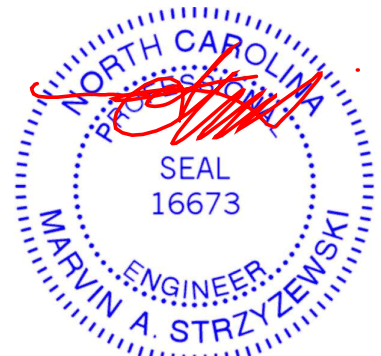
**LOAD CASE(S)** Standard

**REACTIONS** (size) 14=0-3-8, 27=0-3-8  
 Max Grav 14=602 (LC 1), 27=602 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-27=-20/0, 13-14=-20/0, 1-2=-1/0, 2-3=-1324/0, 3-4=-2262/0, 4-6=-2890/0, 6-7=-3162/0, 7-8=-3162/0, 8-9=-3162/0, 9-10=-2885/0, 10-11=-2262/0, 11-12=-1324/0, 12-13=-1/0  
 BOT CHORD 26-27=0/761, 25-26=0/1870, 23-25=0/2657, 22-23=0/2657, 21-22=0/3090, 20-21=0/3162, 19-20=0/3096, 18-19=0/2659, 17-18=0/2659, 15-17=0/1870, 14-15=0/761  
 WEBS 12-14=-953/0, 2-27=-953/0, 12-15=0/733, 2-26=0/733, 11-15=-711/0, 3-26=-711/0, 11-17=0/510, 3-25=0/510, 10-17=-507/0, 10-18=-9/17, 4-25=-504/0, 4-23=-14/13, 10-19=0/288, 4-22=0/298, 9-19=-327/0, 6-22=-273/0, 6-21=-140/341, 7-21=-158/42, 8-20=-289/96, 9-20=-156/415

**NOTES**

- Unbalanced floor live loads have been considered for this design.
- All plates are MT20 plates unless otherwise indicated.
- All plates are 1.5x3 MT20 unless otherwise indicated.



November 14, 2022

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

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



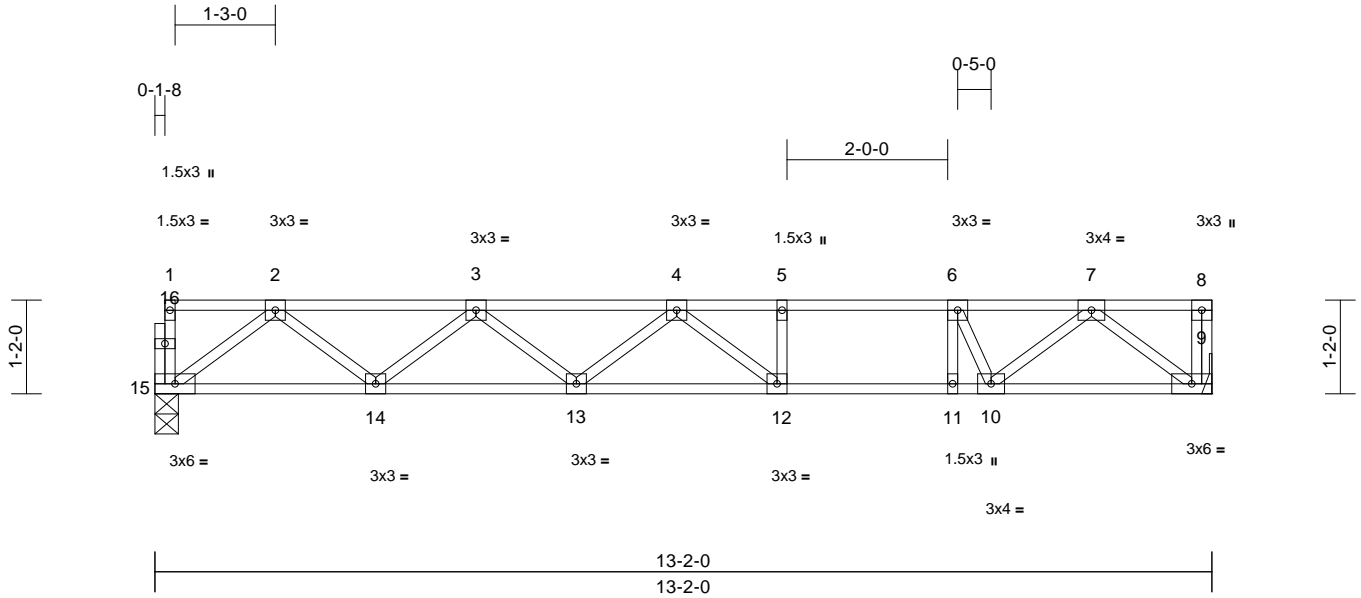
818 Soundside Road  
 Edenton, NC 27932

Job GHBUTB	Truss F202	Truss Type Floor	Qty 2	Ply 1	Garman Homes - Buttercup B Floor Job Reference (optional)	155250441
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Carolina Structural Systems, LLC, Ether, NC - 27247,

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Page: 1



Scale = 1:28.7

Loading	(psf)	Spacing	1-7-3	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.81	Vert(LL)	-0.19	12-13	>833	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.97	Vert(CT)	-0.25	12-13	>610	240		
BCLL	0.0	Rep Stress Incr	YES	WB	0.33	Horz(CT)	0.02	9	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 67 lb	FT = 20%F, 11%E

**LUMBER**

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

**BRACING**

- TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
- BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:  
2-2-0 oc bracing: 11-12.

**REACTIONS**

(size) 9= Mechanical, 15=0-3-8  
Max Grav 9=568 (LC 1), 15=563 (LC 1)

**FORCES**

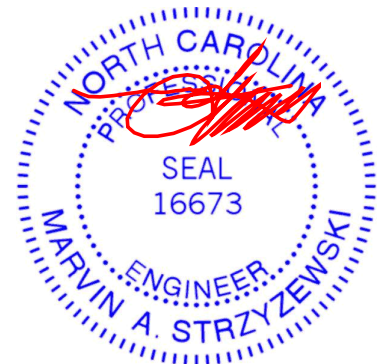
(lb) - Maximum Compression/Maximum Tension

- TOP CHORD 1-15=-29/0, 8-9=-62/0, 1-2=-2/0, 2-3=-1109/0,  
3-4=-1687/0, 4-5=-1527/0, 5-6=-1527/0,  
6-7=-1190/0, 7-8=0/0
- BOT CHORD 14-15=0/690, 13-14=0/1519, 12-13=0/1761,  
11-12=0/1527, 10-11=0/1527, 9-10=0/650
- WEBS 7-9=-816/0, 2-15=-864/0, 2-14=0/546,  
3-14=-534/0, 3-13=0/218, 4-13=-119/0,  
4-12=-365/57, 5-12=-56/70, 6-11=0/468,  
7-10=0/703, 6-10=-835/0

**NOTES**

- Unbalanced floor live loads have been considered for this design.
- All plates are 3x3 MT20 unless otherwise indicated.
- Refer to girder(s) for truss to truss connections.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
- CAUTION, Do not erect truss backwards.

**LOAD CASE(S)** Standard



November 14, 2022

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818 Soundside Road  
Edenton, NC 27932

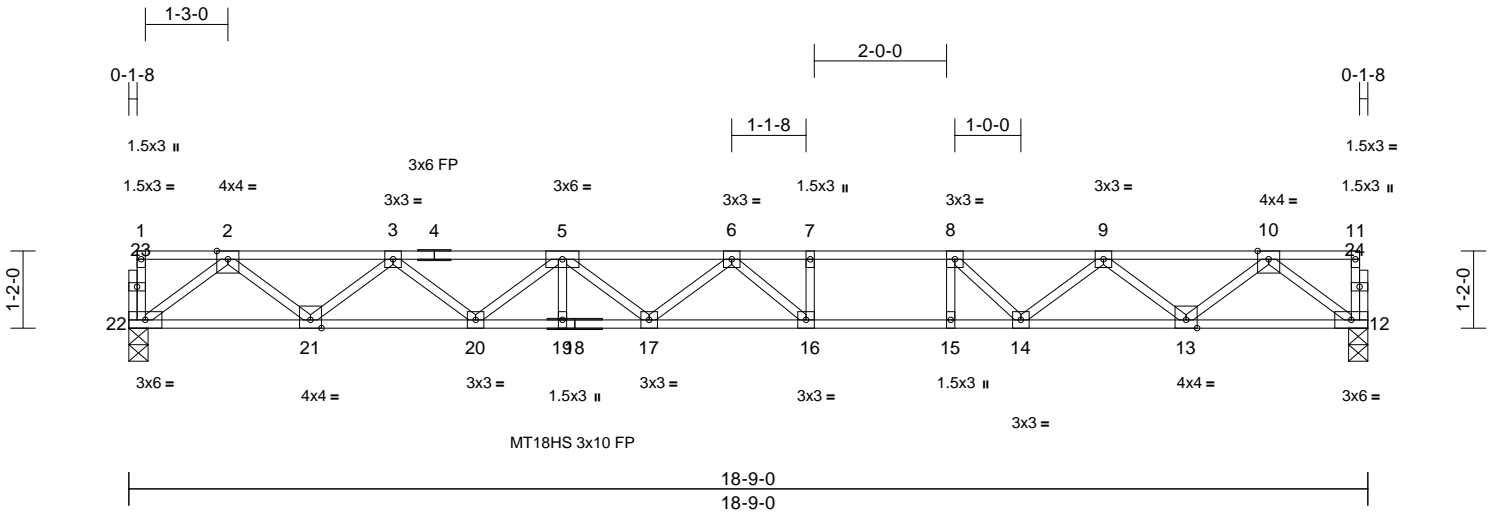


Job GHBUTB	Truss F203	Truss Type Floor	Qty 3	Ply 1	Garman Homes - Buttercup B Floor Job Reference (optional)	155250442
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Carolina Structural Systems, LLC, Ether, NC - 27247,

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Page: 1



Scale = 1:34.9

Loading	(psf)	Spacing	1-7-3	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.83	Vert(LL)	-0.34	16-17	>657	360	MT18HS	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.94	Vert(CT)	-0.47	16-17	>476	240	MT20	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.44	Horz(CT)	0.06	12	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S								
											Weight: 94 lb	FT = 20%F, 11%E

**LUMBER**  
TOP CHORD 2x4 SP No.2(flat) \*Except\* 4-11:2x4 SP No.1 (flat)  
BOT CHORD 2x4 SP No.2(flat) \*Except\* 18-12:2x4 SP DSS(flat)  
WEBS 2x4 SP No.3(flat)  
OTHERS 2x4 SP No.3(flat) \*Except\* 12-24:2x4 SP No.2(flat)

5) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

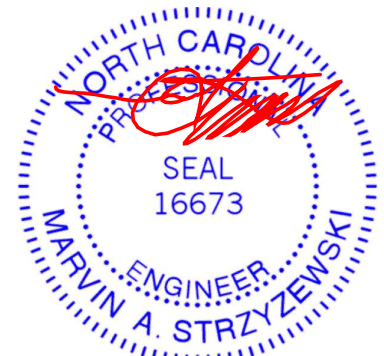
**LOAD CASE(S)** Standard

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:  
2-2-0 oc bracing: 19-20,17-19.

**REACTIONS** (size) 12=0-3-8, 22=0-3-8  
Max Grav 12=808 (LC 1), 22=808 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-22=-31/0, 11-12=-30/1, 1-2=-2/0, 2-3=-1731/0, 3-5=-2862/0, 5-6=-3508/0, 6-7=-3408/0, 7-8=-3408/0, 8-9=-2879/0, 9-10=-1728/0, 10-11=-2/0  
BOT CHORD 21-22=0/1015, 20-21=0/2421, 19-20=0/3296, 17-19=0/3296, 16-17=0/3603, 15-16=0/3408, 14-15=0/3408, 13-14=0/2393, 12-13=0/1024  
WEBS 10-12=-1283/0, 2-22=-1271/0, 10-13=0/917, 2-21=0/932, 9-13=-865/0, 3-21=-899/0, 9-14=0/658, 3-20=0/574, 5-20=-553/0, 7-16=-107/110, 8-15=-2/314, 8-14=-843/0, 5-19=-40/8, 5-17=0/271, 6-17=-228/8, 6-16=-443/205

**NOTES**  
1) Unbalanced floor live loads have been considered for this design.  
2) All plates are MT20 plates unless otherwise indicated.  
3) All plates are 3x3 MT20 unless otherwise indicated.  
4) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



November 14, 2022

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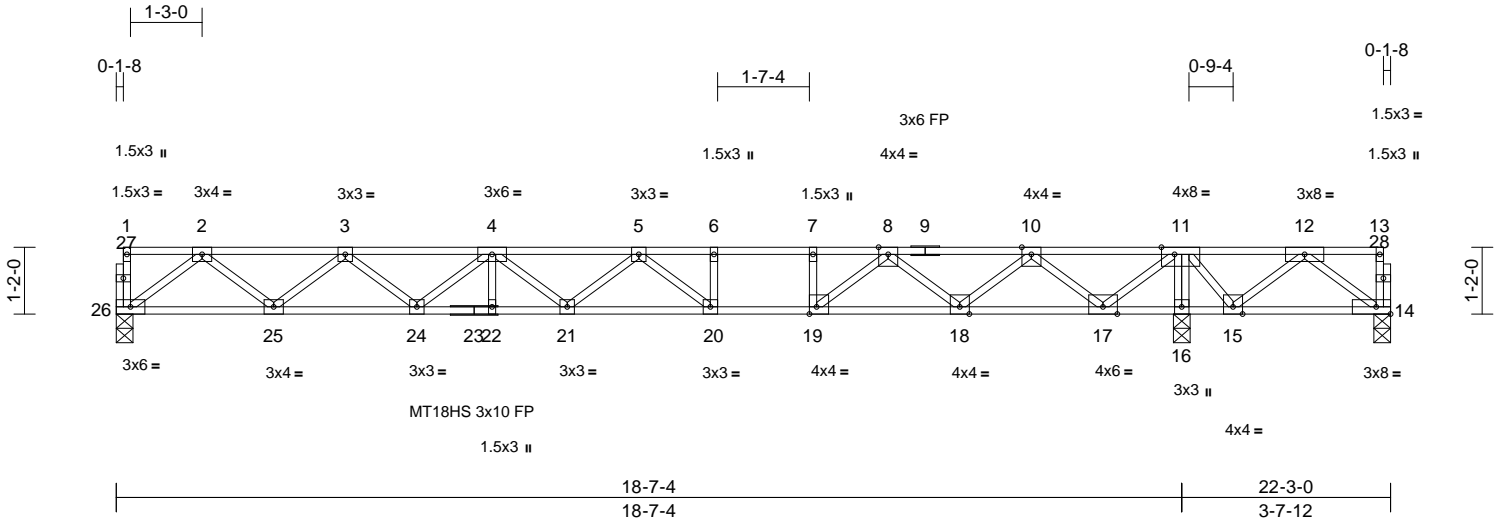
818 Soundside Road  
Edenton, NC 27932

Job GHBUTB	Truss F204	Truss Type Floor	Qty 1	Ply 1	Garman Homes - Buttercup B Floor Job Reference (optional)	155250443
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Carolina Structural Systems, LLC, Ether, NC - 27247,

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Page: 1



Scale = 1:40.2

Plate Offsets (X, Y): [11:0-2-12,Edge], [19:0-1-8,Edge]

Loading	(psf)	Spacing	1-7-3	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	1.00	Vert(LL)	-0.28	20-21	>791	360	MT18HS	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.73	Vert(CT)	-0.39	20-21	>574	240	MT20	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.65	Horz(CT)	0.03	16	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S								
											Weight: 114 lb	FT = 20%F, 11%E

**LUMBER**

- TOP CHORD 2x4 SP No.2(flat)
- BOT CHORD 2x4 SP No.2(flat) \*Except\* 23-14:2x4 SP DSS(flat)
- WEBS 2x4 SP No.3(flat)
- OTHERS 2x4 SP No.2(flat)

**BRACING**

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

- REACTIONS** (size) 14=0-3-8, 16=0-3-8, 26=0-3-8  
 Max Uplift 14=628 (LC 3)  
 Max Grav 14=37 (LC 4), 16=1768 (LC 1), 26=680 (LC 3)

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

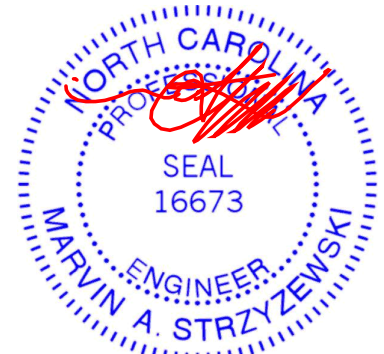
- TOP CHORD 1-26=-31/0, 13-14=-35/0, 1-2=-2/0, 2-3=-1410/0, 3-4=-2234/0, 4-5=-2575/0, 5-6=-2050/0, 6-7=-2050/0, 7-8=-2050/0, 8-10=-541/0, 10-11=0/1116, 11-12=0/1640, 12-13=-2/0
- BOT CHORD 25-26=0/846, 24-25=0/1948, 22-24=0/2501, 21-22=0/2501, 20-21=0/2500, 19-20=0/2050, 18-19=0/1291, 17-18=-232/0, 16-17=-2197/0, 15-16=-2217/0, 14-15=-852/0
- WEBS 11-16=-1739/0, 2-26=-1059/0, 11-17=0/1370, 2-25=0/734, 10-17=-1256/0, 3-25=-700/0, 10-18=0/895, 3-24=0/372, 8-18=-981/0, 4-24=-341/0, 4-22=-48/0, 8-19=0/1012, 7-19=-388/0, 4-21=0/130, 5-21=-57/158, 12-14=0/1069, 5-20=-659/0, 6-20=-15/196, 12-15=-1109/0, 11-15=0/945

**NOTES**

- Unbalanced floor live loads have been considered for this design.
- All plates are MT20 plates unless otherwise indicated.

- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 628 lb uplift at joint 14.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
- CAUTION, Do not erect truss backwards.

**LOAD CASE(S)** Standard



November 14, 2022

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

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



818 Soundside Road  
Edenton, NC 27932

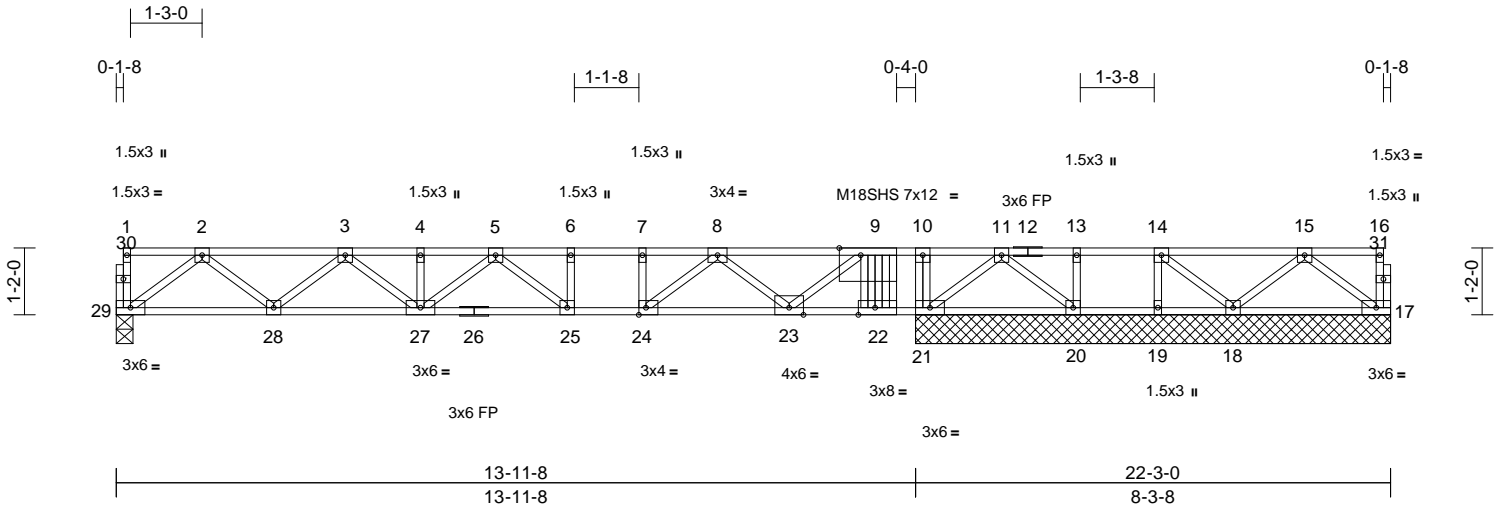


Job GHBUTB	Truss F205	Truss Type Floor Girder	Qty 1	Ply 1	Garman Homes - Buttercup B Floor Job Reference (optional)	155250444
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Carolina Structural Systems, LLC, Ether, NC - 27247,

Run: 8.43 S Jan 6 2022 Print: 8.430 S Jan 6 2022 MiTek Industries, Inc. Mon Nov 14 09:20:11  
ID:SnXI\_A\_0k?Q\_6xiw3EPPX5ycCzp-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:40.2

Plate Offsets (X, Y): [9:0-4-8,Edge], [22:0-3-8,Edge], [24:0-1-8,Edge]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.62	Vert(LL)	-0.17	25-27	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.81	Vert(CT)	-0.23	25-27	>726	240	M18SHS	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.67	Horz(CT)	0.02	21	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S								
											Weight: 119 lb	FT = 20%F, 11%E

**LUMBER**  
TOP CHORD 2x4 SP DSS(flat) \*Except\* 12-16:2x4 SP No.2(flat)  
BOT CHORD 2x4 SP No.2(flat) \*Except\* 26-17:2x4 SP No.1(flat)  
WEBS 2x4 SP No.3(flat)  
OTHERS 2x4 SP No.2(flat)

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

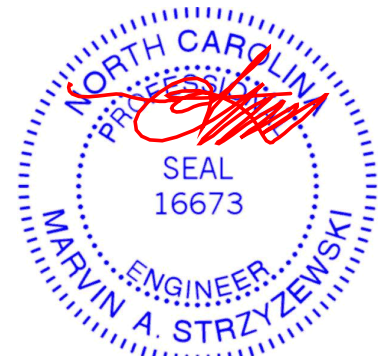
**REACTIONS** (size) 17=8-3-8, 18=8-3-8, 19=8-3-8, 20=8-3-8, 21=8-3-8, 29=0-3-8  
Max Uplift 20=248 (LC 1)  
Max Grav 17=123 (LC 4), 18=182 (LC 4), 19=267 (LC 1), 20=106 (LC 4), 21=1413 (LC 1), 29=679 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-29=-35/0, 16-17=-31/0, 1-2=-2/0, 2-3=-1325/0, 3-4=-2000/0, 4-5=-2000/0, 5-6=-1764/0, 6-7=-1764/0, 7-8=-1764/0, 8-9=-444/0, 9-10=0/741, 10-11=0/741, 11-13=0/60, 13-14=0/60, 14-15=0/72, 15-16=-2/0  
BOT CHORD 28-29=0/835, 27-28=0/1791, 25-27=0/2050, 24-25=0/1764, 23-24=0/1242, 22-23=-714/0, 21-22=-741/0, 20-21=-455/0, 19-20=-60/0, 18-19=-60/0, 17-18=0/109  
WEBS 10-21=-685/0, 2-29=-1045/0, 2-28=0/638, 3-28=-607/0, 3-27=0/267, 15-17=-134/0, 11-21=-358/0, 15-18=-234/0, 11-20=0/505, 14-18=-22/0, 13-20=-159/0, 14-19=-206/0, 4-27=-66/0, 5-27=-64/8, 5-25=-466/0, 6-25=0/175, 9-22=-535/0, 9-23=0/1407, 8-23=-1039/0, 8-24=0/778, 7-24=-339/0

**NOTES**

- Unbalanced floor live loads have been considered for this design.
- All plates are MT20 plates unless otherwise indicated.
- All plates are 3x3 MT20 unless otherwise indicated.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 248 lb uplift at joint 20.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
- CAUTION, Do not erect truss backwards.

**LOAD CASE(S)** Standard



November 14, 2022

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

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



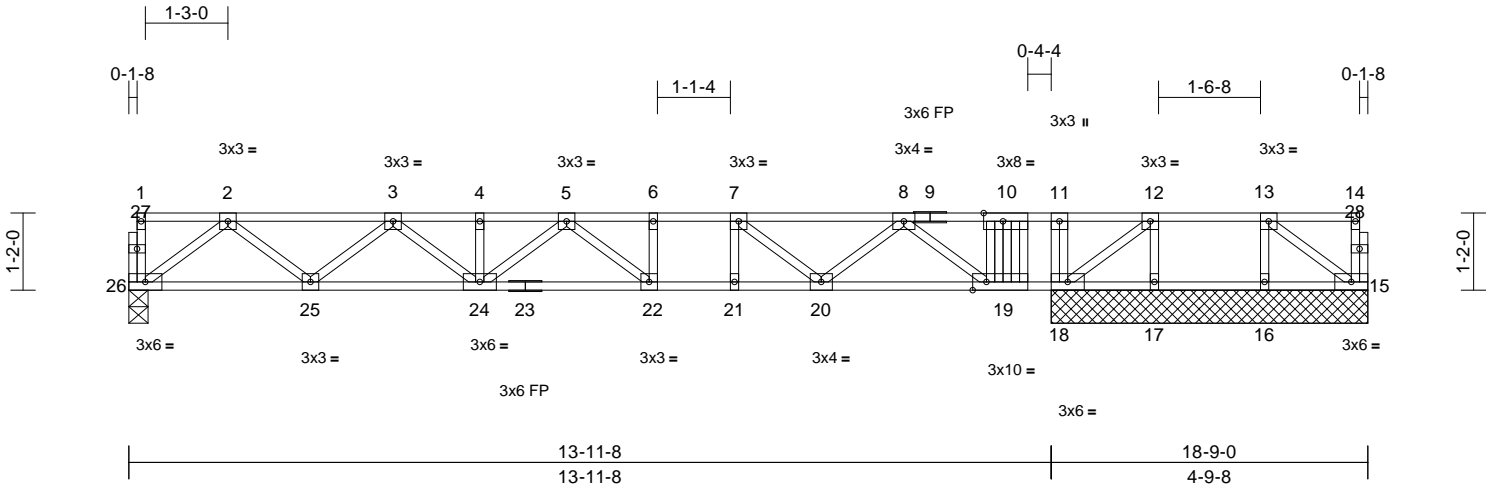
818 Soundside Road  
Edenton, NC 27932

Job GHBUTB	Truss F206	Truss Type Floor Girder	Qty 1	Ply 1	Garman Homes - Buttercup B Floor Job Reference (optional)	I55250445
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Carolina Structural Systems, LLC, Ether, NC - 27247,

Run: 8.43 S Jan 6 2022 Print: 8.430 S Jan 6 2022 MiTek Industries, Inc. Mon Nov 14 09:20:11  
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Page: 1



Scale = 1:34.9

Plate Offsets (X, Y): [10:0-3-8,Edge], [19:0-2-8,Edge]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.66	Vert(LL)	-0.18	22-24	>947	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.98	Vert(CT)	-0.25	22-24	>676	240		
BCLL	0.0	Rep Stress Incr	YES	WB	0.24	Horz(CT)	0.03	18	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 102 lb	FT = 20%F, 11%E

**LUMBER**  
TOP CHORD 2x4 SP No.2(flat) \*Except\* 9-14:2x4 SP DSS (flat)  
BOT CHORD 2x4 SP No.2(flat)  
WEBS 2x4 SP No.2(flat)  
OTHERS 2x4 SP No.2(flat)

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.

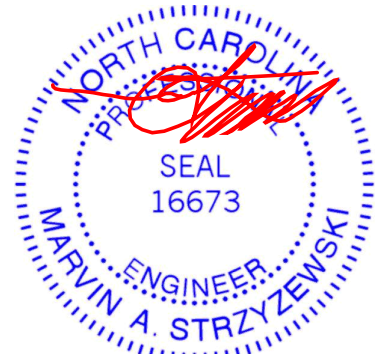
**REACTIONS** (size) 15=4-9-8, 16=4-9-8, 17=4-9-8, 18=4-9-8, 26=0-3-8  
Max Uplift 15=-132 (LC 1), 17=-718 (LC 1)  
Max Grav 15=-66 (LC 4), 16=446 (LC 1), 17=-409 (LC 4), 18=1762 (LC 1), 26=665 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-26=-34/0, 14-15=-46/0, 1-2=-2/0, 2-3=-1289/0, 3-4=-1930/0, 4-5=-1930/0, 5-6=-1666/0, 6-7=-1666/0, 7-8=-1022/0, 8-10=0/894, 10-11=0/923, 11-12=0/923, 12-13=0/235, 13-14=-3/0  
BOT CHORD 25-26=0/816, 24-25=0/1740, 22-24=0/1959, 21-22=0/1666, 20-21=0/1666, 19-20=0/381, 18-19=-923/0, 17-18=-235/0, 16-17=-235/0, 15-16=-235/0  
WEBS 11-18=-839/0, 2-26=-1021/0, 2-25=0/616, 3-25=-586/0, 3-24=0/244, 13-15=0/293, 12-18=-850/0, 12-17=0/575, 13-16=-393/0, 4-24=-66/0, 5-24=-36/29, 5-22=-468/0, 6-22=0/130, 10-19=0/576, 8-19=-1549/0, 8-20=0/833, 7-20=-823/0, 7-21=0/225

**NOTES**  
1) Unbalanced floor live loads have been considered for this design.  
2) All plates are 1.5x3 MT20 unless otherwise indicated.

- 3) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 132 lb uplift at joint 15 and 718 lb uplift at joint 17.
- 4) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 5) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
- 6) CAUTION, Do not erect truss backwards.

**LOAD CASE(S)** Standard



November 14, 2022

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

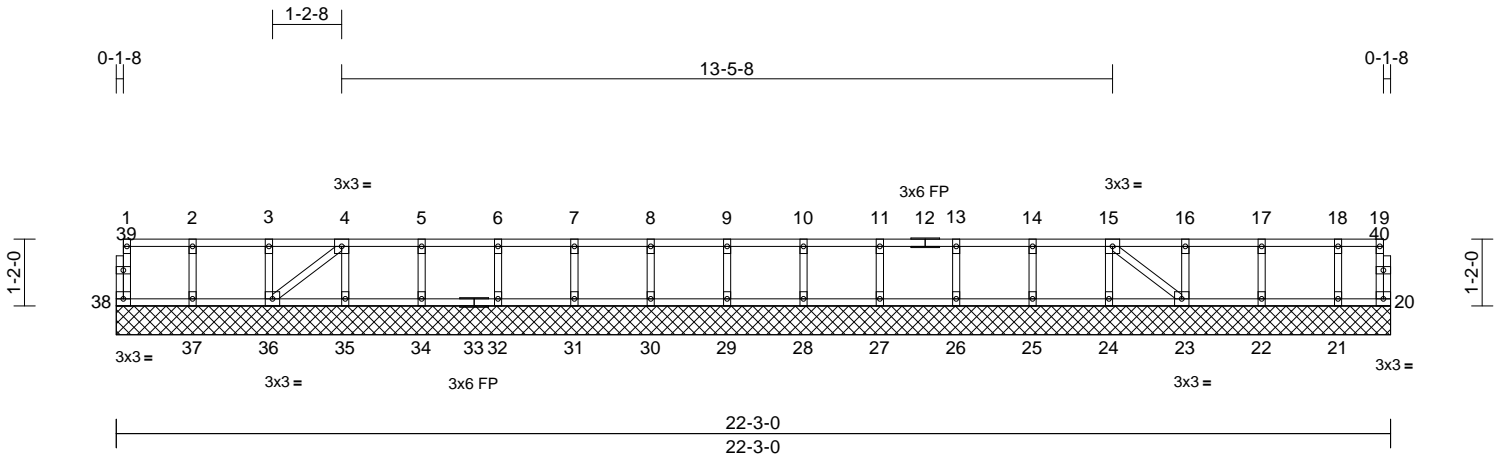


Job GHBUTB	Truss K201	Truss Type Floor Supported Gable	Qty 2	Ply 1	Garman Homes - Buttercup B Floor Job Reference (optional)	155250446
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Carolina Structural Systems, LLC, Ether, NC - 27247,

Run: 8.43 S Jan 6 2022 Print: 8.430 S Jan 6 2022 MiTek Industries, Inc. Mon Nov 14 09:20:12  
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Page: 1



Scale = 1:40.2

Loading	(psf)	Spacing	1-7-3	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.01	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	NO	WB	0.03	Horiz(TL)	0.00	20	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 97 lb	FT = 20%F, 11%E

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

**WEBS**  
2-37=-110/0, 3-36=-106/0, 4-35=-104/0,  
5-34=-107/0, 6-32=-107/0, 7-31=-107/0,  
8-30=-107/0, 9-29=-107/0, 10-28=-107/0,  
11-27=-107/0, 13-26=-107/0, 14-25=-107/0,  
15-24=-103/0, 16-23=-106/0, 17-22=-110/0,  
18-21=-92/0, 4-36=-4/0, 15-23=-6/0

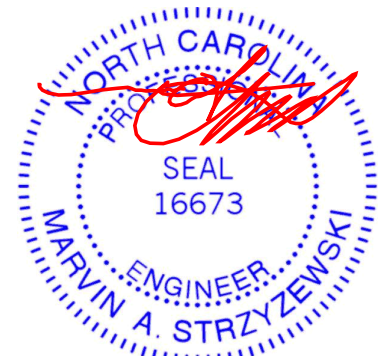
**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**NOTES**  
1) All plates are 1.5x3 MT20 unless otherwise indicated.  
2) Gable requires continuous bottom chord bearing.  
3) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).  
4) Gable studs spaced at 1-4-0 oc.  
5) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.  
6) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

**REACTIONS** (size)  
20=22-3-0, 21=22-3-0, 22=22-3-0,  
23=22-3-0, 24=22-3-0, 25=22-3-0,  
26=22-3-0, 27=22-3-0, 28=22-3-0,  
29=22-3-0, 30=22-3-0, 31=22-3-0,  
32=22-3-0, 34=22-3-0, 35=22-3-0,  
36=22-3-0, 37=22-3-0, 38=22-3-0  
Max Grav 20=19 (LC 1), 21=102 (LC 1),  
22=121 (LC 1), 23=120 (LC 1),  
24=114 (LC 1), 25=117 (LC 1),  
26=117 (LC 1), 27=117 (LC 1),  
28=117 (LC 1), 29=117 (LC 1),  
30=117 (LC 1), 31=117 (LC 1),  
32=117 (LC 1), 34=117 (LC 1),  
35=115 (LC 1), 36=119 (LC 1),  
37=122 (LC 1), 38=39 (LC 1)

**LOAD CASE(S)** Standard

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-38=-35/0, 19-20=-17/0, 1-2=-2/0, 2-3=-2/0,  
3-4=-2/0, 4-5=-5/0, 5-6=-5/0, 6-7=-5/0,  
7-8=-5/0, 8-9=-5/0, 9-10=-5/0, 10-11=-5/0,  
11-13=-5/0, 13-14=-5/0, 14-15=-5/0,  
15-16=-1/0, 16-17=-1/0, 17-18=-1/0,  
18-19=-1/0  
BOT CHORD 37-38=0/2, 36-37=0/5, 34-35=0/5,  
32-34=0/5, 31-32=0/5, 30-31=0/5, 29-30=0/5,  
28-29=0/5, 27-28=0/5, 26-27=0/5, 25-26=0/5,  
24-25=0/5, 23-24=0/5, 22-23=0/1, 21-22=0/1,  
20-21=0/1



November 14, 2022

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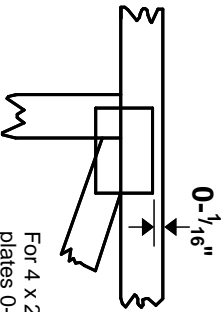
818 Soundside Road  
Edenton, NC 27932

# 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 20/20 software** or upon request.

## PLATE SIZE

**4 X 4**

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

## LATERAL BRACING LOCATION



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

## BEARING



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

### Industry Standards:

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

# Numbering System

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



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

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

## PRODUCT CODE APPROVALS

ICC-ES Reports:

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

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

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

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



# General Safety Notes

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

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

Trenco  
818 Soundside Rd  
Edenton, NC 27932

Re: GHBUTB  
Garman Homes - Buttercup B Roof

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Carolina Structural Systems, LLC.

Pages or sheets covered by this seal: I54473192 thru I54473200

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

North Carolina COA: C-0844



September 29, 2022

Gilbert, Eric

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

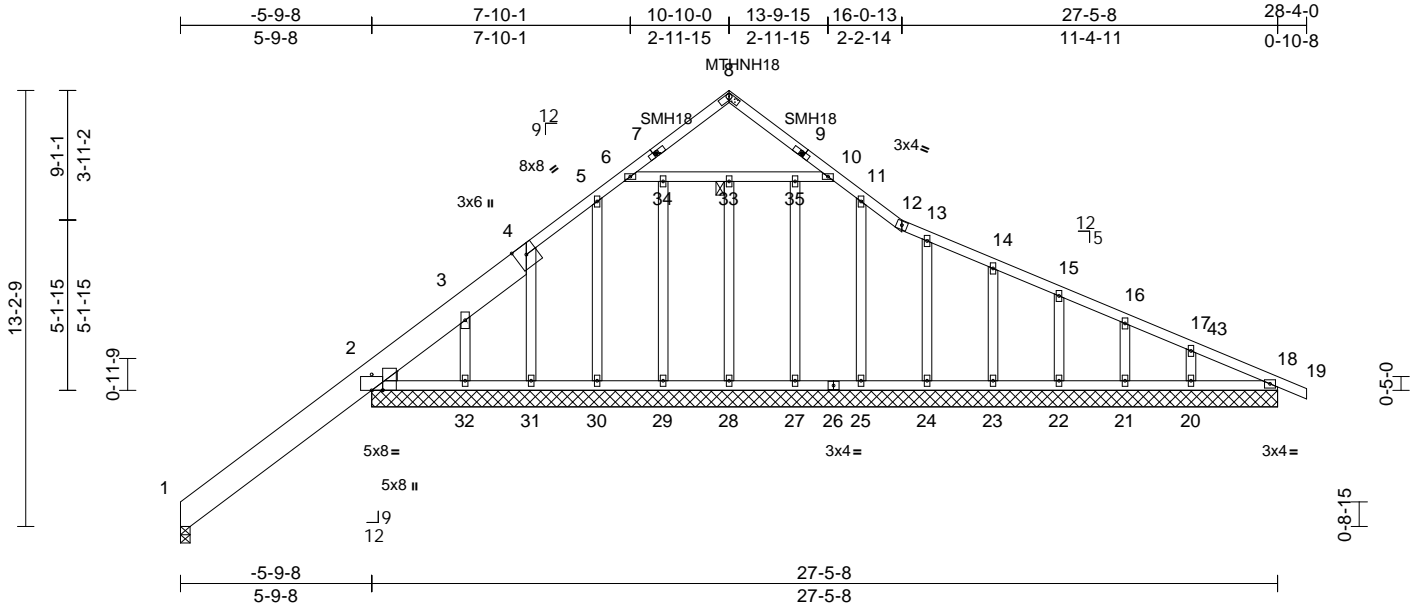


Job GHBUTB	Truss A01	Truss Type Roof Special Supported Gable	Qty 2	Ply 1	Garman Homes - Buttercup B Roof Job Reference (optional)	I54473192
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Carolina Structural Systems, LLC, Ether, NC - 27247,

Run: 8.43 S Jan 6 2022 Print: 8.430 S Jan 6 2022 MiTek Industries, Inc. Thu Sep 29 14:02:37  
ID:M3g94BzSPA3Zatey9h6cBozEop8-RfC?PsB70Hq3NSgPqnL8w3uTXbGKWrCdoi7J4zJC?F

Page: 1



Scale = 1:69.8

Plate Offsets (X, Y): [2:0-5-12,Edge], [7:0-1-0,0-1-0], [7:0-1-0,0-1-0], [8:0-1-5,0-1-12], [8:0-1-5,0-1-12], [9:0-1-0,0-1-0], [9:0-1-0,0-1-0]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.23	Vert(LL)	0.00	20-42	>999	240
TCDL	10.0	Lumber DOL	1.15	BC	0.09	Vert(CT)	0.00	20-42	>999	180
BCLL	0.0*	Rep Stress Incr	YES	WB	0.25	Horz(CT)	0.01	40	n/a	n/a
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS						
										Weight: 218 lb FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.2 \*Except\* 1-4:2x10 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3  
OTHERS 2x4 SP No.3  
WEDGE Left: 2x4 SP No.2

**BRACING**  
TOP CHORD Structural wood sheathing directly applied.  
BOT CHORD Rigid ceiling directly applied.  
JOINTS 1 Brace at Jt(s): 33

**REACTIONS** (size)  
1=0-3-8, 2=27-5-8, 18=27-5-8,  
20=27-5-8, 21=27-5-8, 22=27-5-8,  
23=27-5-8, 24=27-5-8, 25=27-5-8,  
27=27-5-8, 28=27-5-8, 29=27-5-8,  
30=27-5-8, 31=27-5-8, 32=27-5-8,  
36=27-5-8, 40=27-5-8  
Max Horiz 2=-200 (LC 10), 36=-200 (LC 10)  
Max Uplift 1=-34 (LC 12), 18=-20 (LC 12),  
20=-17 (LC 12), 21=-16 (LC 12),  
22=-17 (LC 12), 23=-12 (LC 12),  
24=-41 (LC 12), 28=-21 (LC 1),  
31=-42 (LC 12), 32=-42 (LC 12),  
40=-20 (LC 12)  
Max Grav 1=197 (LC 17), 2=699 (LC 1),  
18=252 (LC 1), 20=194 (LC 22),  
21=151 (LC 1), 22=162 (LC 1),  
23=168 (LC 22), 24=169 (LC 1),  
25=230 (LC 22), 27=118 (LC 22),  
28=60 (LC 3), 29=123 (LC 17),  
30=213 (LC 21), 31=128 (LC 1),  
32=93 (LC 17), 36=699 (LC 1),  
40=252 (LC 1)

**TOP CHORD** 1-2=-101/171, 2-3=-376/38, 3-5=-319/163,  
5-6=-296/167, 6-8=-203/46, 8-10=-203/46,  
10-11=-297/167, 11-12=-243/154,  
12-13=-262/142, 13-14=-259/102,  
14-15=-259/72, 15-16=-258/38,  
16-17=-260/8, 17-18=-258/0, 18-19=0/20

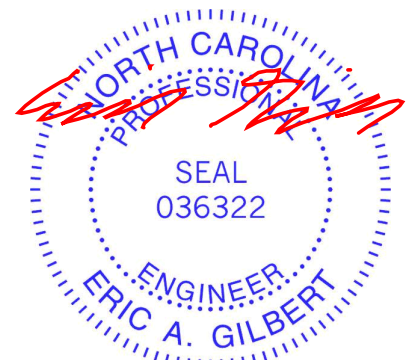
**BOT CHORD** 2-32=-51/233, 31-32=0/230, 30-31=0/228,  
29-30=0/228, 28-29=0/228, 27-28=0/228,  
25-27=0/228, 24-25=0/228, 23-24=0/228,  
22-23=0/228, 21-22=0/228, 20-21=0/228,  
18-20=0/228

**WEBS** 6-34=-185/181, 33-34=-185/181,  
33-35=-185/181, 10-35=-185/181,  
28-33=-6/61, 29-34=-83/10, 5-30=-174/30,  
4-31=-104/82, 3-32=-69/74, 27-35=-78/7,  
11-25=-190/18, 13-24=-129/94,  
14-23=-128/56, 15-22=-121/64,  
16-21=-115/59, 17-20=-138/89

- 6) Attach MiTek MTHNH18 (Half and Half Plate) on each face of truss with USP NA11 nails (0.131" x 1.5") in pre-punched holes provided. All nail holes must be filled (6 Nails per side 12 nails total).
- 7) See HINGE PLATE DETAILS for plate placement.
- 8) Provisions must be made to prevent lateral movement of hinged member(s) during transportation.
- 9) Gable studs spaced at 2-0-0 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) 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.

- NOTES**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCCL=6.0psf; BCDL=6.0psf; h=29ft; B=45ft; L=27ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner (3) -5-4-4 to -2-4-4, Exterior (2) -2-4-4 to 11-1-8, Corner (3) 11-1-8 to 14-4-6, Exterior (2) 14-4-6 to 28-7-8 zone; cantilever left and right exposed; 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) 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 MT20 plates unless otherwise indicated.
  - 5) All plates are 2x4 MT20 unless otherwise indicated.

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



September 29, 2022

Continued on page 2

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

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

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



Job	Truss	Truss Type	Qty	Ply	Garman Homes - Buttercup B Roof
GHBUTB	A01	Roof Special Supported Gable	2	1	I54473192 Job Reference (optional)

Carolina Structural Systems, LLC, Ether, NC - 27247,

Run: 8.43 S Jan 6 2022 Print: 8.430 S Jan 6 2022 MiTek Industries, Inc. Thu Sep 29 14:02:37  
ID:M3g94BzSPA3Zatey9h6cBozEop8-RfC?PsB70Hq3NSgPqnl8w3uITXbGKWrCDoi7J4zJC?f

Page: 2

- 13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 20 lb uplift at joint 18, 21 lb uplift at joint 28, 42 lb uplift at joint 31, 42 lb uplift at joint 32, 41 lb uplift at joint 24, 12 lb uplift at joint 23, 17 lb uplift at joint 22, 16 lb uplift at joint 21, 17 lb uplift at joint 20, 34 lb uplift at joint 1 and 20 lb uplift at joint 18.
- 14) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 15) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

**LOAD CASE(S)** Standard

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

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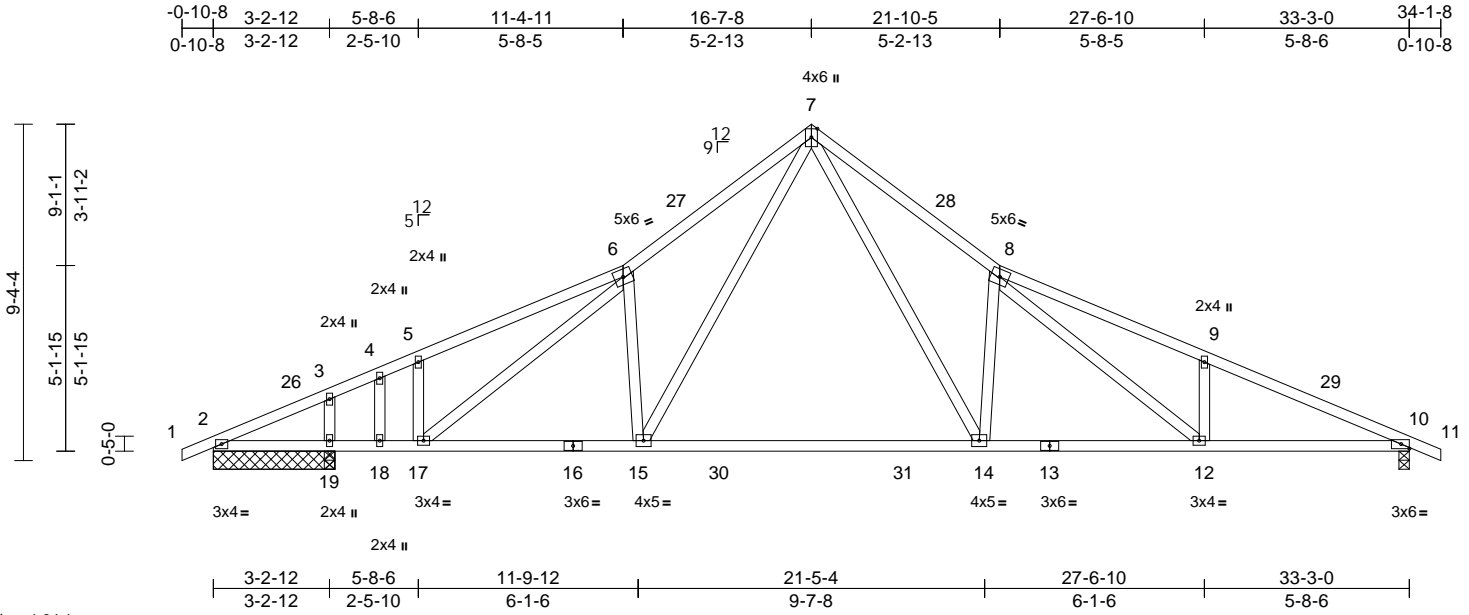
818 Soundside Road  
Edenton, NC 27932

Job GHBUTB	Truss A02	Truss Type Roof Special Structural Gable	Qty 1	Ply 1	Garman Homes - Buttercup B Roof Job Reference (optional)	I54473193
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Carolina Structural Systems, LLC, Ether, NC - 27247,

Run: 8.43 S Jan 6 2022 Print: 8.430 S Jan 6 2022 MiTek Industries, Inc. Thu Sep 29 14:02:40  
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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	1.00	TC	0.72	Vert(LL)	-0.35	14-15	>999	240	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.81	Vert(CT)	-0.65	14-15	>554	180	
BCLL	0.0*	Rep Stress Incr	NO	WB	0.60	Horz(CT)	0.08	10	n/a	n/a	
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS							Weight: 185 lb FT = 20%

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

**BRACING**  
TOP CHORD Structural wood sheathing directly applied.  
BOT CHORD Rigid ceiling directly applied.

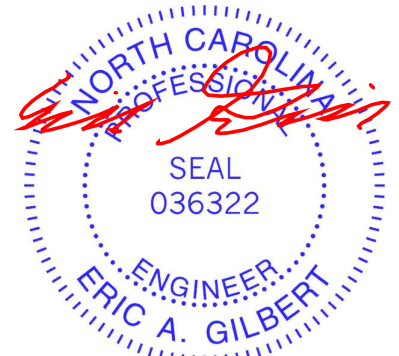
**REACTIONS** (size) 2=3-4-8, 10=0-3-8, 19=3-4-8, 20=3-4-8  
Max Horiz 2=137 (LC 11), 20=137 (LC 11)  
Max Uplift 2=-48 (LC 12), 10=-77 (LC 12), 19=-36 (LC 12), 20=-48 (LC 12)  
Max Grav 2=828 (LC 1), 10=1323 (LC 1), 19=615 (LC 1), 20=828 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/20, 2-3=-1933/65, 3-4=-2001/93, 4-5=-1950/91, 5-6=-1962/154, 6-7=-2275/228, 7-8=-2393/235, 8-9=-2694/197, 9-10=-2687/127, 10-11=0/20  
BOT CHORD 2-19=-19/1772, 18-19=-19/1772, 17-18=-19/1772, 15-17=0/1856, 14-15=0/1160, 12-14=0/1943, 10-12=-57/2425  
WEBS 8-12=-83/649, 9-12=-335/112, 3-19=-343/64, 7-14=-103/1498, 7-15=-91/1295, 8-14=-1100/195, 6-15=-879/183, 5-17=-158/97, 4-18=-23/69, 6-17=-250/40

**NOTES**  
1) Unbalanced roof live loads have been considered for this design.

- Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TC DL=6.0psf; BC DL=6.0psf; h=29ft; B=45ft; L=33ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) -0-10-8 to 2-5-6, Interior (1) 2-5-6 to 16-7-8, Exterior (2) 16-7-8 to 19-11-6, Interior (1) 19-11-6 to 34-1-8 zone; cantilever left and right exposed; 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
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 48 lb uplift at joint 2, 77 lb uplift at joint 10, 36 lb uplift at joint 19 and 48 lb uplift at joint 2.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

**LOAD CASE(S)** Standard



September 29, 2022

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

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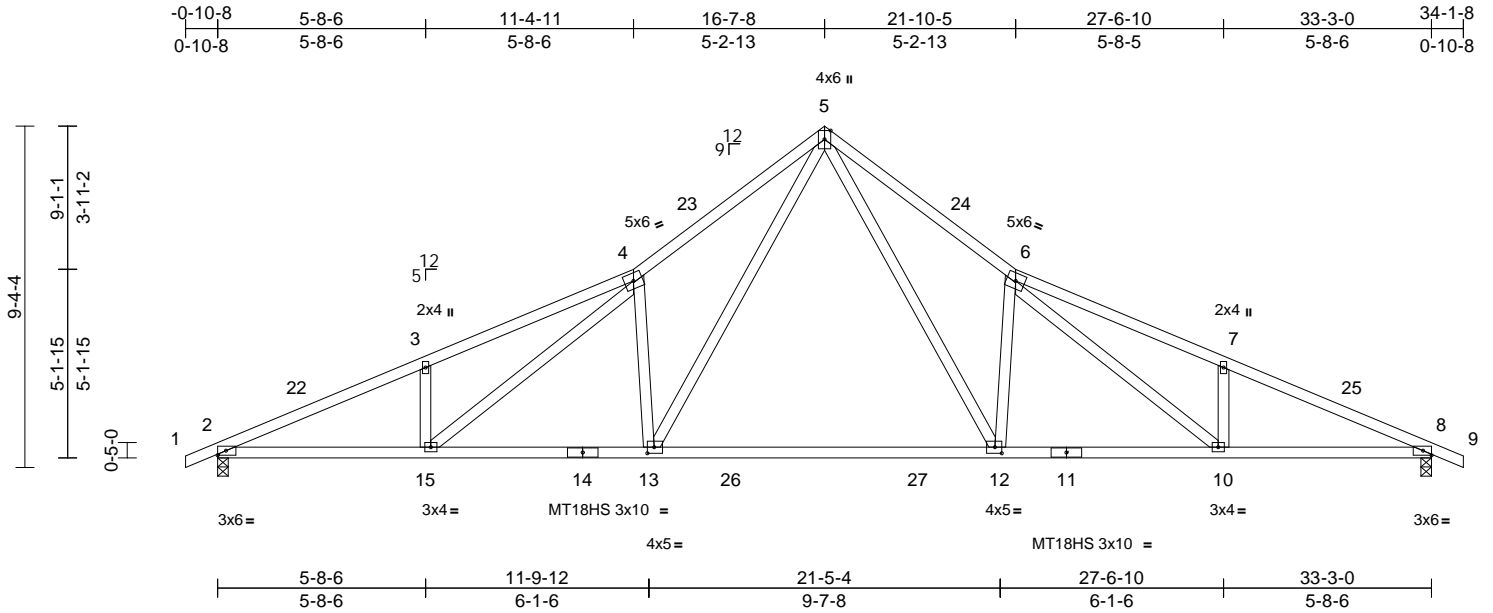
818 Soundside Road  
Edenton, NC 27932

Job GHBUTB	Truss A03	Truss Type Roof Special	Qty 3	Ply 1	Garman Homes - Buttercup B Roof Job Reference (optional)	I54473194
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Carolina Structural Systems, LLC, Ether, NC - 27247,

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Page: 1



Scale = 1:63.1

Plate Offsets (X, Y): [12:0-2-4,0-2-0], [13:0-2-4,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.55	Vert(LL)	-0.42	12-13	>943	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	1.00	Vert(CT)	-0.78	12-13	>511	180	MT18HS	244/190
BCLL	0.0*	Rep Stress Incr	YES	WB	0.62	Horz(CT)	0.10	8	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS								Weight: 180 lb FT = 20%

**LUMBER**

TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3

**BRACING**

TOP CHORD Structural wood sheathing directly applied.  
BOT CHORD Rigid ceiling directly applied.

**REACTIONS**

(lb/size) 2=1382/0-3-8, 8=1382/0-3-8  
Max Horiz 2=137 (LC 11)  
Max Uplift 2=-80 (LC 12), 8=-80 (LC 12)

**FORCES**

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

TOP CHORD 2-22=-2833/121, 3-22=-2772/136,  
3-4=-2839/205, 4-23=-2564/221,  
5-23=-2474/245, 5-24=-2474/245,  
6-24=-2564/221, 6-7=-2839/205,  
7-25=-2772/136, 8-25=-2833/121

BOT CHORD 2-15=-65/2559, 14-15=-2/2110,  
13-14=-2/2110, 13-26=0/1271, 26-27=0/1271,  
12-27=0/1271, 11-12=-2/2084,  
10-11=-2/2084, 8-10=-65/2559

**WEBS**

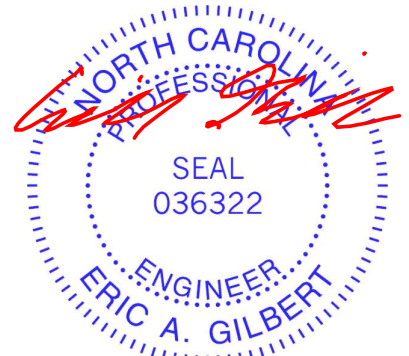
6-10=-83/642, 5-12=-106/1547,  
6-12=-1140/197, 7-10=-334/112,  
3-15=-334/112, 4-15=-83/642,  
5-13=-106/1547, 4-13=-1140/197

**NOTES**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=29ft; B=45ft; L=33ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) -0-10-8 to 2-5-6, Interior (1) 2-5-6 to 16-7-8, Exterior (2) 16-7-8 to 19-11-6, Interior (1) 19-11-6 to 34-1-8 zone; cantilever left and right exposed; 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) All plates are MT20 plates unless otherwise indicated.
- 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 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.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 80 lb uplift at joint 2 and 80 lb uplift at joint 8.
- 7) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 8) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

**LOAD CASE(S)** Standard



September 29, 2022

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

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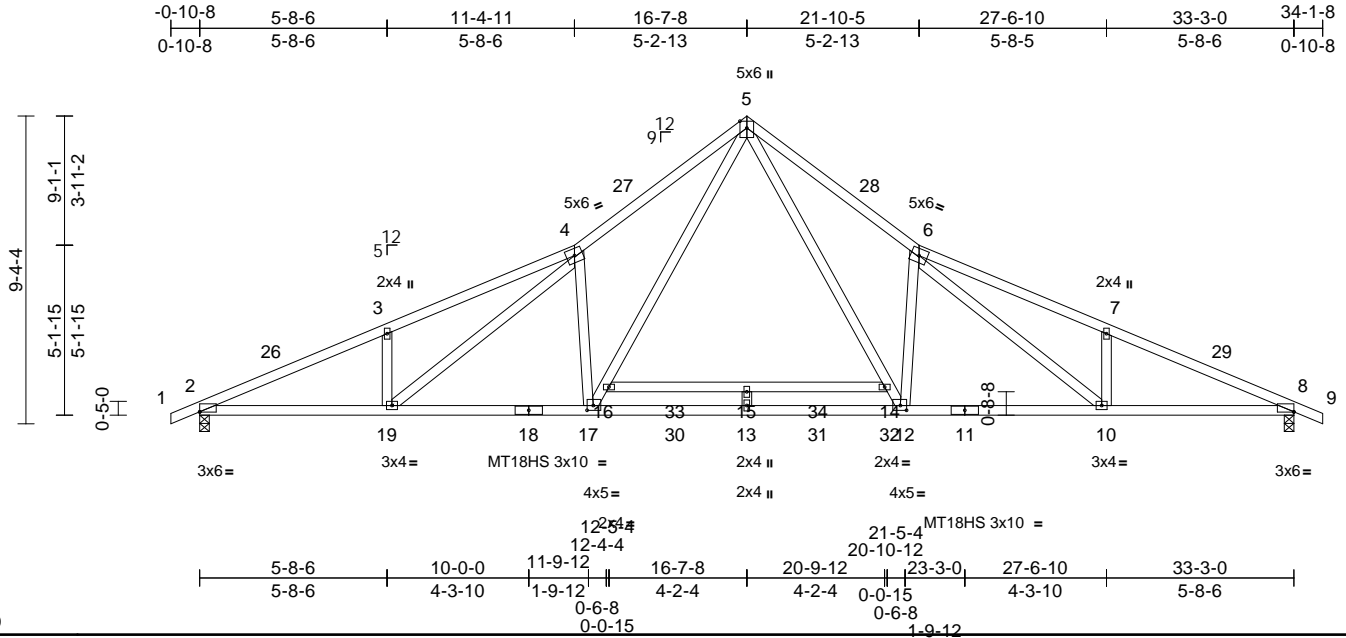
Job GHBUTB	Truss A04	Truss Type Roof Special	Qty 6	Ply 1	Garman Homes - Buttercup B Roof Job Reference (optional)	I54473195
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Carolina Structural Systems, LLC, Ether, NC - 27247,

Run: 8.43 E Jan 6 2022 Print: 8.430 E Jan 6 2022 MiTek Industries, Inc. Thu Sep 29 14:27:44

Page: 1

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Scale = 1:70

Plate Offsets (X, Y): [2:Edge,0-0-2], [8:Edge,0-0-2], [12:0-2-4,0-1-12], [17:0-2-4,0-1-12]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.70	Vert(LL)	-0.45	15	>889	240	MT20 244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.97	Vert(CT)	-0.89	15	>449	180	MT18HS 244/190
BCLL	0.0*	Rep Stress Incr	NO	WB	0.81	Horz(CT)	0.10	8	n/a	n/a	
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS							Weight: 193 lb FT = 20%

**LUMBER**

TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x4 SP No.2 \*Except\* 18-11:2x4 SP No.1  
 WEBS 2x4 SP No.3

**BRACING**

TOP CHORD Structural wood sheathing directly applied.  
 BOT CHORD Rigid ceiling directly applied.

**REACTIONS**

(lb/size) 2=1470/0-3-8, 8=1470/0-3-8  
 Max Horiz 2=-137 (LC 10)  
 Max Uplift 2=-28 (LC 12), 8=-28 (LC 12)

**FORCES**

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

TOP CHORD 2-26=-3042/0, 3-26=-2979/11, 3-4=-3046/81, 4-27=-2921/67, 5-27=-2847/91, 5-28=-2847/91, 6-28=-2921/67, 6-7=-3046/81, 7-29=-2979/11, 8-29=-3042/0

BOT CHORD 2-19=0/2813, 18-19=0/2448, 17-18=0/2448, 17-30=0/1388, 13-30=0/1388, 13-31=0/1388, 31-32=0/1388, 12-32=0/1388, 11-12=0/2380, 10-11=0/2380, 8-10=0/2750

**WEBS**

6-10=-98/618, 16-17=-47/1768, 5-16=-2/1819, 5-14=-2/1819, 12-14=-47/1767, 7-10=-331/114, 6-12=-1198/163, 3-19=-331/114, 4-19=-98/618, 4-17=-1198/163

**NOTES**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCCL=6.0psf; BCDL=6.0psf; h=29ft; B=45ft; L=33ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) -0-10-8 to 2-5-6, Interior (1) 2-5-6 to 16-7-8, Exterior (2) 16-7-8 to 19-11-6, Interior (1) 19-11-6 to 34-1-8 zone; cantilever left and right exposed; 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) All plates are MT20 plates unless otherwise indicated.
- 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 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.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 28 lb uplift at joint 2 and 28 lb uplift at joint 8.
- 7) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 8) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

**LOAD CASE(S)** Standard



September 29, 2022

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

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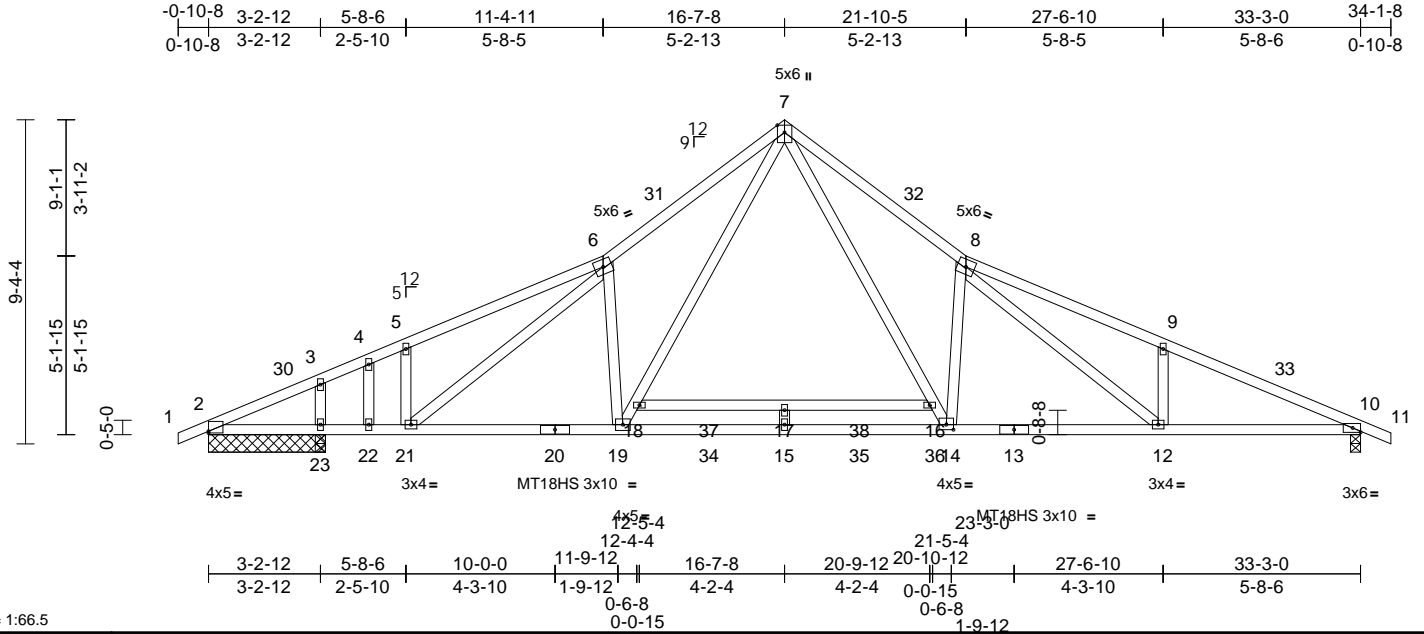
818 Soundside Road  
 Edenton, NC 27932

Job GHBUTB	Truss A05	Truss Type Roof Special Structural Gable	Qty 1	Ply 1	Garman Homes - Buttercup B Roof Job Reference (optional)	I54473196
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Carolina Structural Systems, LLC, Ether, NC - 27247,

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Page: 1



Scale = 1:66.5

Plate Offsets (X, Y): [2:Edge,0-0-10], [14:0-2-8,0-1-12]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.76	Vert(LL)	-0.41	15	>874	240	MT20 244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.95	Vert(CT)	-0.81	14-15	>444	180	MT18HS 244/190
BCLL	0.0*	Rep Stress Incr	NO	WB	0.75	Horz(CT)	0.08	10	n/a	n/a	
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS							Weight: 198 lb FT = 20%

**LUMBER**

- TOP CHORD 2x4 SP No.2
- BOT CHORD 2x4 SP No.1 \*Except\* 18-16:2x4 SP No.2
- WEBS 2x4 SP No.3
- OTHERS 2x4 SP No.3

**BRACING**

- TOP CHORD Structural wood sheathing directly applied.
- BOT CHORD Rigid ceiling directly applied.

**REACTIONS**

- All bearings 3-4-8. except 10=0-3-8
- (lb) - Max Horiz 2=-137 (LC 10), 24=-137 (LC 10)
- Max Uplift All uplift 100 (lb) or less at joint(s) 2, 10, 23, 24
- Max Grav All reactions 250 (lb) or less at joint (s) except 2=878 (LC 1), 10=1406 (LC 1), 23=672 (LC 17), 24=878 (LC 1)

**FORCES**

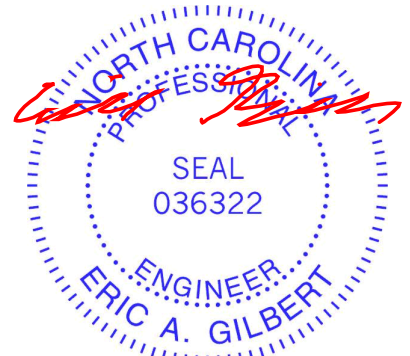
- (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
- TOP CHORD 2-30=-2081/0, 3-30=-2024/0, 3-4=-2157/0, 4-5=-2103/0, 5-6=-2110/65, 6-31=-2611/62, 7-31=-2533/86, 7-32=-2663/88, 8-32=-2738/64, 8-9=-2891/78, 9-33=-2824/8, 10-33=-2885/0
- BOT CHORD 2-23=0/1954, 22-23=0/1954, 21-22=0/1954, 20-21=0/2167, 19-20=0/2167, 19-34=0/1278, 15-34=0/1278, 15-35=0/1278, 35-36=0/1278, 14-36=0/1278, 13-14=0/2229, 12-13=0/2229, 10-12=0/2607
- WEBS 8-12=-98/623, 9-12=-333/114, 3-23=-366/51, 7-16=-1/1767, 14-16=-47/1711, 18-19=-43/1488, 7-18=0/1542, 8-14=-1155/162, 6-19=-919/160, 6-21=-362/0

**NOTES**

- 1) Unbalanced roof live loads have been considered for this design.

- 2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TC DL=6.0psf; BC DL=6.0psf; h=29ft; B=45ft; L=33ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) -0-10-8 to 2-5-6, Interior (1) 2-5-6 to 16-7-8, Exterior (2) 16-7-8 to 19-11-6, Interior (1) 19-11-6 to 34-1-8 zone; cantilever left and right exposed; 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) 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 MT20 plates unless otherwise indicated.
- 5) All plates are 2x4 MT20 unless otherwise indicated.
- 6) Gable studs spaced at 2-0-0 oc.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) \* This truss has been designed for a live load of 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.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 10, 23, 2.
- 10) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 11) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

**LOAD CASE(S)** Standard



September 29, 2022

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

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



818 Soundside Road  
Edenton, NC 27932

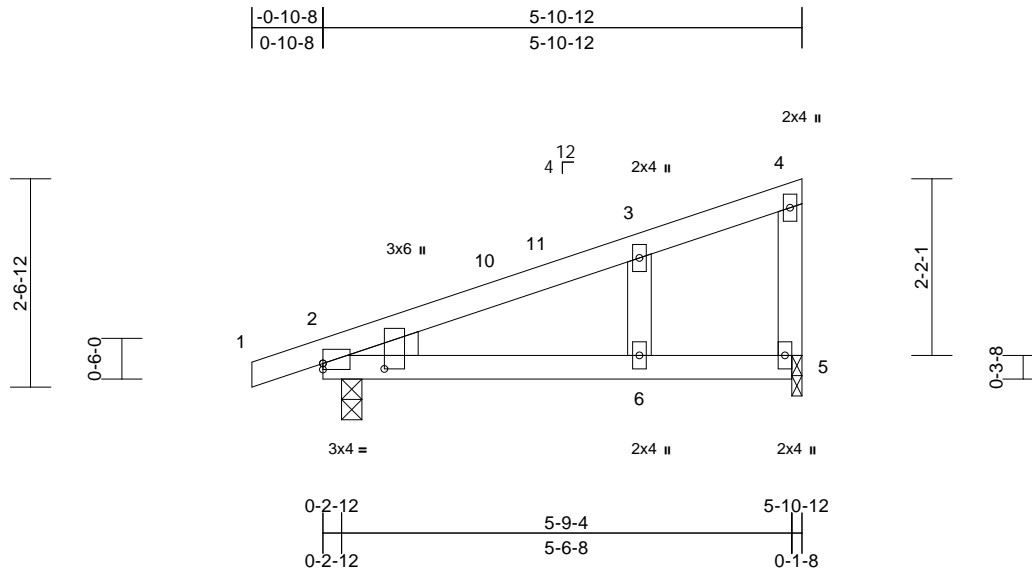


Job GHBUTB	Truss B01	Truss Type Monopitch Supported Gable	Qty 2	Ply 1	Garman Homes - Buttercup B Roof Job Reference (optional)	154473197
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Carolina Structural Systems, LLC, Ether, NC - 27247,

Run: 8.43 S Jan 6 2022 Print: 8.430 S Jan 6 2022 MiTek Industries, Inc. Thu Sep 29 14:02:42  
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Page: 1



Scale = 1:28.4  
Plate Offsets (X, Y): [2:Edge,0-0-14], [2:0-0-13,0-9-1]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.41	Vert(LL)	0.08	6-9	>905	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.43	Vert(CT)	-0.12	6-9	>572	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.01	2	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS							Weight: 25 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3  
OTHERS 2x4 SP No.3  
WEDGE Left: 2x4 SP No.2

**BRACING**  
TOP CHORD Structural wood sheathing directly applied, except end verticals.  
BOT CHORD Rigid ceiling directly applied.

**REACTIONS** (size) 2=0-3-0, 5=0-1-8  
Max Horiz 2=68 (LC 11)  
Max Uplift 2=-34 (LC 12), 5=-10 (LC 12)  
Max Grav 2=286 (LC 1), 5=226 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/17, 2-3=-135/59, 3-4=-62/63, 4-5=-125/107  
BOT CHORD 2-6=-107/130, 5-6=-33/43  
WEBS 3-6=-52/97

**NOTES**  
1) Wind: ASCE 7-10; Vult=120mph (3-second gust)  
Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=29ft;  
B=45ft; L=24ft; eave=2ft; Cat. II; Exp B; Enclosed;  
MWFRS (directional) and C-C Corner (3) 0-10-8 to 2-1-8, Exterior (2) 2-1-8 to 5-9-0 zone; cantilever left and right exposed; 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

2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.  
3) Gable studs spaced at 2-0-0 oc.  
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- \* 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.
- Bearing at joint(s) 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate at joint(s) 5.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 34 lb uplift at joint 2 and 10 lb uplift at joint 5.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

**LOAD CASE(S)** Standard



September 29, 2022

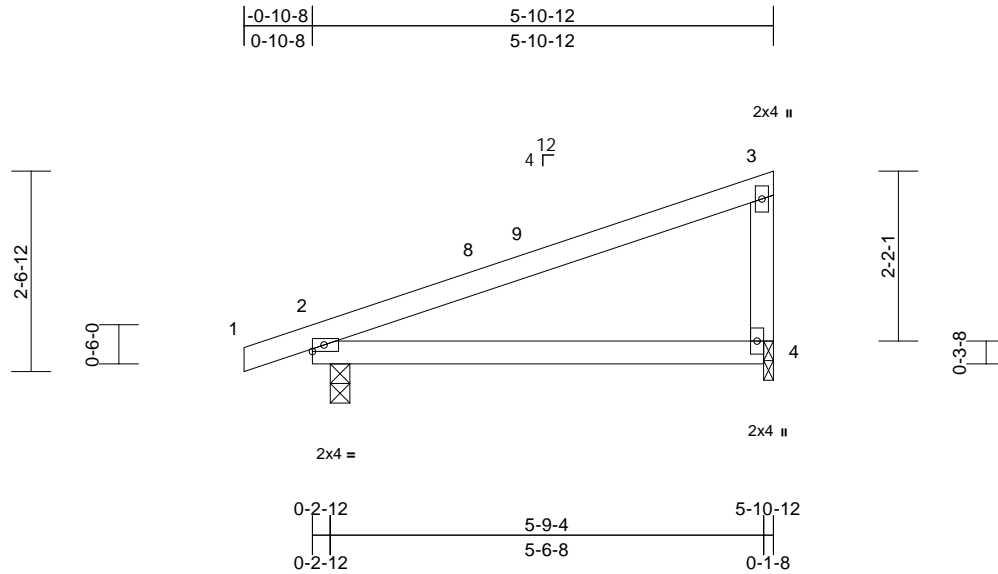


Job GHBUTB	Truss B02	Truss Type Monopitch	Qty 9	Ply 1	Garman Homes - Buttercup B Roof Job Reference (optional)	154473198
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Carolina Structural Systems, LLC, Ether, NC - 27247,

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Page: 1



Scale = 1:29.5

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.47	Vert(LL)	-0.04	4-7	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.34	Vert(CT)	-0.10	4-7	>672	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.01	2	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS							Weight: 22 lb	FT = 20%

**LUMBER**

TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3

**BRACING**

TOP CHORD Structural wood sheathing directly applied, except end verticals.  
BOT CHORD Rigid ceiling directly applied.

**REACTIONS**

(size) 2=0-3-0, 4=0-1-8  
Max Horiz 2=68 (LC 11)  
Max Uplift 2=-34 (LC 12), 4=-10 (LC 12)  
Max Grav 2=286 (LC 1), 4=226 (LC 1)

**FORCES**

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/17, 2-3=-95/57, 3-4=-157/98  
BOT CHORD 2-4=-114/85

**NOTES**

- 1) Wind: ASCE 7-10; Vult=120mph (3-second gust)  
Vasd=95mph; TCCL=6.0psf; BCCL=6.0psf; h=29ft;  
B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed;  
MWFRS (directional) and C-C Exterior (2) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 5-9-0 zone; cantilever left and right exposed; 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
- 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 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.
- 4) Bearing at joint(s) 4 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 5) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 2, 4.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 34 lb uplift at joint 2 and 10 lb uplift at joint 4.

- 7) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 8) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

**LOAD CASE(S)** Standard



September 29, 2022

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

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



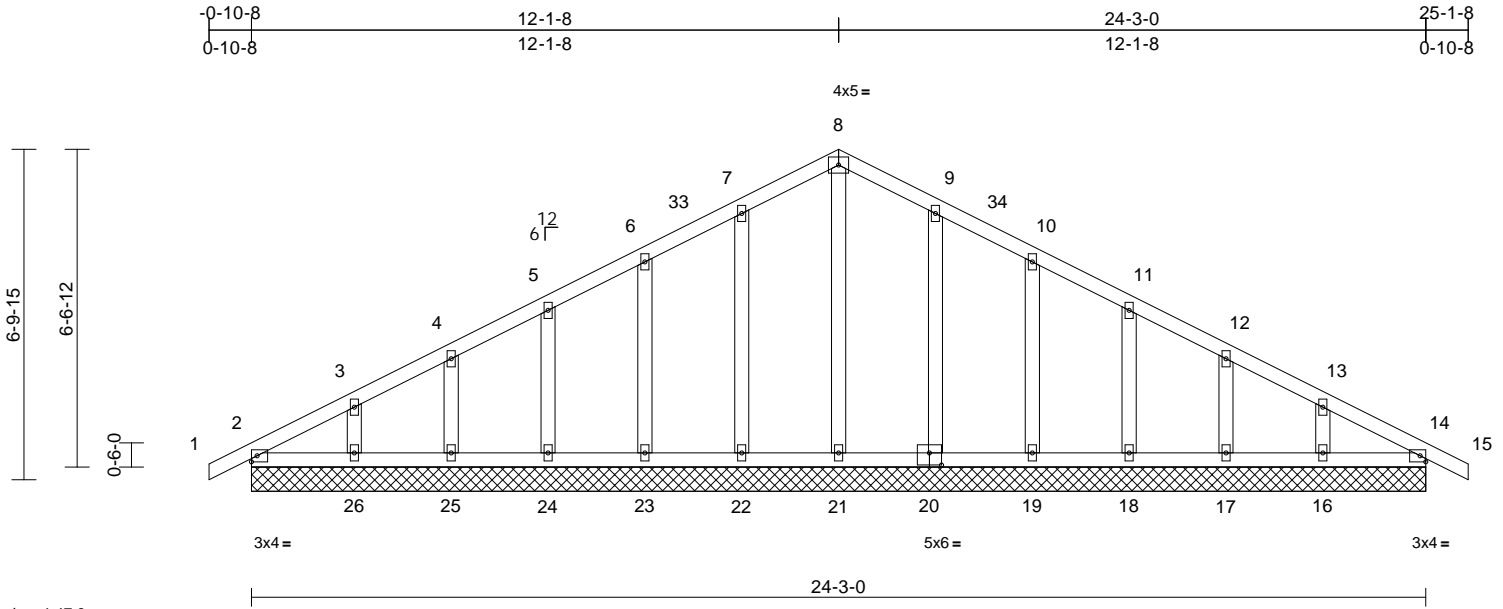
818 Soundside Road  
Edenton, NC 27932

Job GHBUTB	Truss C01	Truss Type Common Supported Gable	Qty 1	Ply 1	Garman Homes - Buttercup B Roof Job Reference (optional)	I54473199
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Carolina Structural Systems, LLC, Ether, NC - 27247,

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Page: 1



Scale = 1:47.6

Plate Offsets (X, Y): [20:0-3-0,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.18	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.14	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.20	Horz(CT)	-0.01	16	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS							Weight: 133 lb	FT = 20%

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

**BRACING**  
TOP CHORD Structural wood sheathing directly applied.  
BOT CHORD Rigid ceiling directly applied.

**REACTIONS** (size)  
2=24-3-0, 14=24-3-0, 16=24-3-0,  
17=24-3-0, 18=24-3-0, 19=24-3-0,  
20=24-3-0, 21=24-3-0, 22=24-3-0,  
23=24-3-0, 24=24-3-0, 25=24-3-0,  
26=24-3-0, 27=24-3-0  
Max Horiz 2=96 (LC 11), 27=96 (LC 11)  
Max Uplift 2=-39 (LC 22), 16=-31 (LC 12),  
17=-14 (LC 12), 18=-22 (LC 12),  
19=-20 (LC 12), 20=-17 (LC 12),  
22=-17 (LC 12), 23=-22 (LC 12),  
24=-20 (LC 12), 25=-19 (LC 12),  
26=-24 (LC 12), 27=-39 (LC 22)  
Max Grav 2=96 (LC 21), 16=291 (LC 1),  
17=85 (LC 18), 18=180 (LC 1),  
19=154 (LC 1), 20=172 (LC 22),  
21=295 (LC 1), 22=172 (LC 1),  
23=157 (LC 21), 24=163 (LC 1),  
25=154 (LC 21), 26=193 (LC 1),  
27=96 (LC 21)

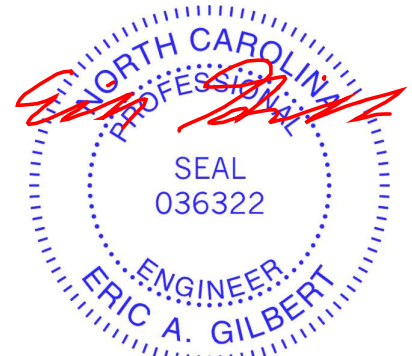
**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/23, 2-3=-149/215, 3-4=-105/203,  
4-5=-66/200, 5-6=-25/197, 6-7=0/199,  
7-8=-3/194, 8-9=-3/195, 9-10=0/197,  
10-11=0/195, 11-12=-30/199, 12-13=-62/183,  
13-14=-126/209, 14-15=0/23

**BOT CHORD** 2-26=-154/167, 25-26=-154/167,  
24-25=-154/167, 23-24=-154/167,  
22-23=-154/167, 21-22=-154/167,  
19-21=-154/167, 18-19=-151/165,  
17-18=-151/165, 16-17=-151/165,  
14-16=-151/165  
**WEBS** 8-21=-258/0, 7-22=-131/116, 6-23=-118/73,  
5-24=-122/67, 4-25=-118/65, 3-26=-134/96,  
9-20=-131/112, 10-19=-116/74,  
11-18=-129/71, 12-17=-84/67,  
13-16=-180/121

- NOTES**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCCL=6.0psf; BCDL=6.0psf; h=29ft; B=45ft; L=24ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner (3) -0-10-8 to 2-1-8, Exterior (2) 2-1-8 to 12-1-8, Corner (3) 12-1-8 to 15-1-8, Exterior (2) 15-1-8 to 25-1-8 zone; cantilever left and right exposed; 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) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - 4) All plates are 2x4 MT20 unless otherwise indicated.
  - 5) Gable requires continuous bottom chord bearing.
  - 6) Gable studs spaced at 2-0-0 oc.
  - 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 8) \* This truss has been designed for a live load of 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.

- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 39 lb uplift at joint 2, 17 lb uplift at joint 22, 22 lb uplift at joint 23, 20 lb uplift at joint 24, 19 lb uplift at joint 25, 24 lb uplift at joint 26, 17 lb uplift at joint 20, 20 lb uplift at joint 19, 22 lb uplift at joint 18, 14 lb uplift at joint 17, 31 lb uplift at joint 16 and 39 lb uplift at joint 2.
- 10) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 11) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

**LOAD CASE(S)** Standard



September 29, 2022

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see

**ANSI/TPI Quality Criteria, DSB-89 and BCSI Building Component**

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

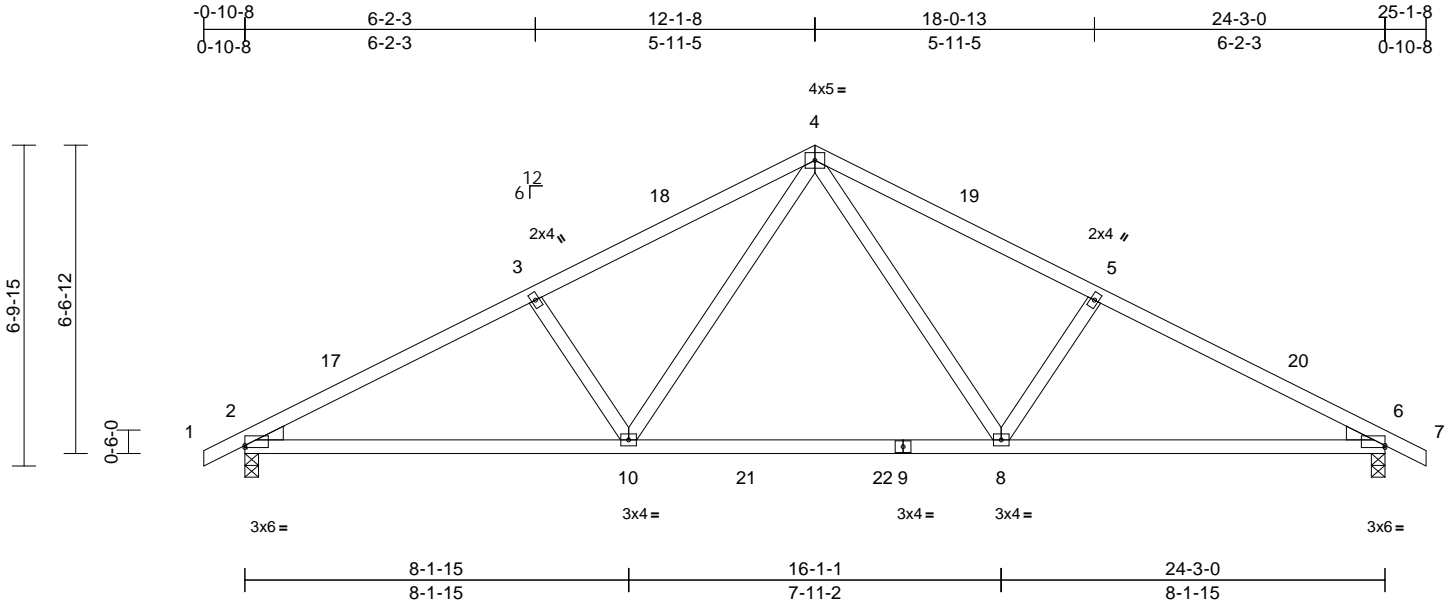
818 Soundside Road  
Edenton, NC 27932

Job GHBUTB	Truss C02	Truss Type Common	Qty 6	Ply 1	Garman Homes - Buttercup B Roof Job Reference (optional)	154473200
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Carolina Structural Systems, LLC, Ether, NC - 27247,

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Page: 1



Scale = 1:49  
Plate Offsets (X, Y): [2:Edge,0-0-9], [6:Edge,0-0-9]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.36	Vert(LL)	-0.17	8-10	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.62	Vert(CT)	-0.27	8-10	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.22	Horz(CT)	0.04	6	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS							Weight: 113 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3  
WEDGE Left: 2x4 SP No.3  
Right: 2x4 SP No.3

**BRACING**  
TOP CHORD Structural wood sheathing directly applied.  
BOT CHORD Rigid ceiling directly applied.

**REACTIONS** (size) 2=0-3-8, 6=0-3-8  
Max Horiz 2=-96 (LC 10)  
Max Uplift 2=-65 (LC 12), 6=-65 (LC 12)  
Max Grav 2=1023 (LC 1), 6=1023 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/23, 2-3=-1648/119, 3-4=-1457/139,  
4-5=-1457/139, 5-6=-1648/119, 6-7=0/23  
BOT CHORD 2-10=-52/1406, 8-10=0/948, 6-8=-58/1406  
WEBS 4-8=-7/560, 5-8=-350/121, 4-10=-7/560,  
3-10=-350/121

- NOTES**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=120mph (3-second gust)  
Vasd=95mph; TC DL=6.0psf; BCDL=6.0psf; h=29ft;  
B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed;  
MWFRS (directional) and C-C Exterior (2) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 12-1-8, Exterior (2) 12-1-8 to 15-1-8, Interior (1) 15-1-8 to 25-1-8 zone; cantilever left and right exposed; 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 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.
  - 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 65 lb uplift at joint 2 and 65 lb uplift at joint 6.
  - 6) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 7) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- LOAD CASE(S)** Standard



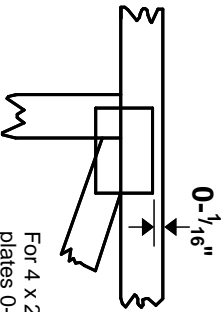
September 29, 2022

# Symbols

## PLATE LOCATION AND ORIENTATION



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



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



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

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

## PLATE SIZE

**4 X 4**

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

## LATERAL BRACING LOCATION



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

## BEARING



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

### Industry Standards:

ANSI/TPI 1: National Design Specification for Metal Plate Connected Wood Truss Construction.  
DSB-89: Design Standard for Bracing, Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

# Numbering System

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



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

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

## PRODUCT CODE APPROVALS

ICC-ES Reports:

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

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

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

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



# General Safety Notes

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

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/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. Rewriting pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TPI 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.

Trenco  
818 Soundside Rd  
Edenton, NC 27932

Re: SER\_SCRN\_PCH  
Optional Serenity Screen Porch

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Carolina Structural Systems, LLC.

Pages or sheets covered by this seal: I54217105 thru I54217106

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

North Carolina COA: C-0844



September 15, 2022

Gilbert, Eric

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

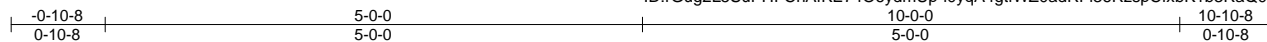


Job	Truss	Truss Type	Qty	Ply	Optional Serenity Screen Porch	154217105
SER_SCRN_PCH	SP01	GABLE	1	1		
Job Reference (optional)						

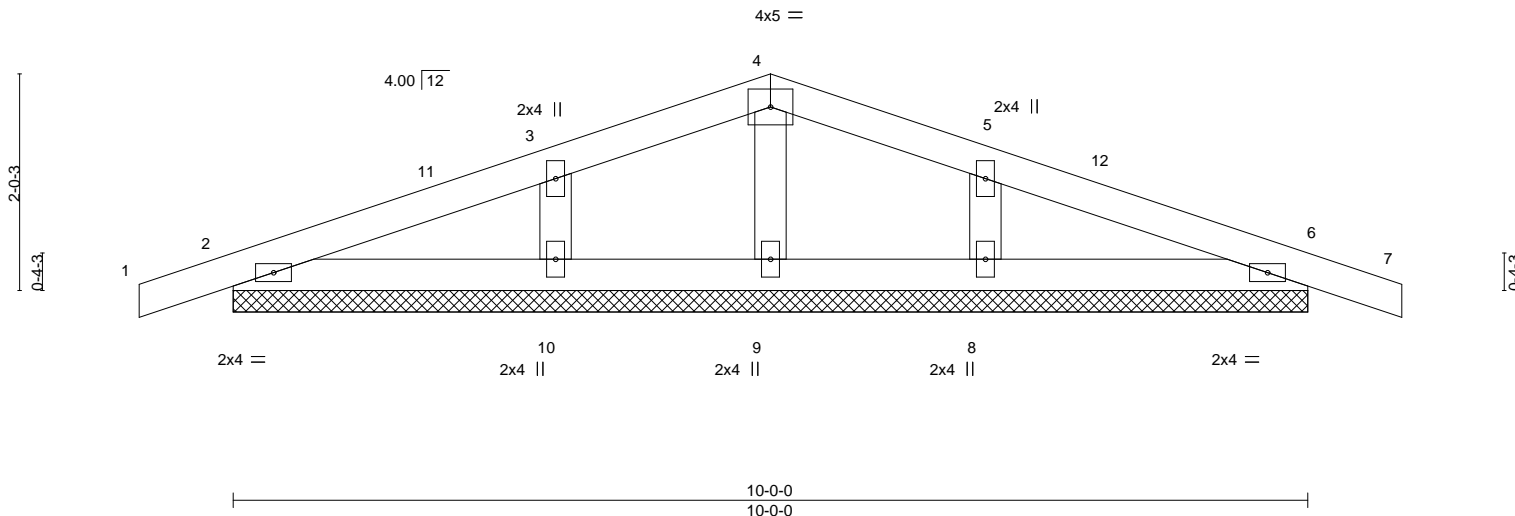
Carolina Structural Systems, LLC, Ether, NC - 27247,

8.430 s Aug 16 2021 MiTek Industries, Inc. Thu Sep 15 08:45:27 2022 Page 1

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Scale = 1:21.4



LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.10	Vert(LL) 0.00	7	n/r	120	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.00	BC 0.06	Vert(CT) 0.00	7	n/r	120		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.06	Horz(CT) 0.00	6	n/a	n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-S					Weight: 38 lb	FT = 20%
	Code IRC2018/TPI2014							

**LUMBER-**

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

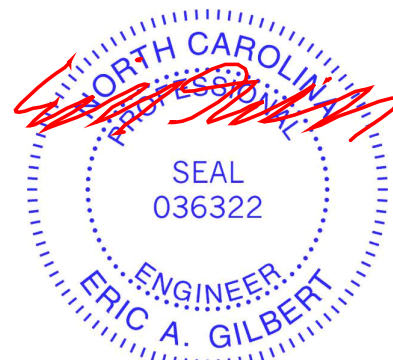
**REACTIONS.**

All bearings 10-0-0.  
 (lb) - Max Horz 2--19(LC 10)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 6, 10, 8  
 Max Grav All reactions 250 lb or less at joint(s) 2, 6, 9, 10, 8

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

**NOTES-**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=125mph (3-second gust) Vasd=99mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner(3E) -0-10-8 to 2-1-8, Exterior(2N) 2-1-8 to 5-0-0, Corner(3R) 5-0-0 to 8-0-0, Exterior(2N) 8-0-0 to 10-10-8 zone; cantilever left and right exposed; end vertical left and right exposed; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) 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 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 6, 10, 8.
- 9) 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.



September 15, 2022

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see

**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



818 Soundside Road  
 Edenton, NC 27932

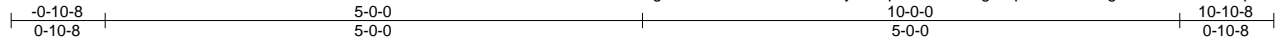


Job	Truss	Truss Type	Qty	Ply	Optional Serenity Screen Porch	I54217106
SER_SCRN_PCH	SP02	COMMON	5	1		
Job Reference (optional)						

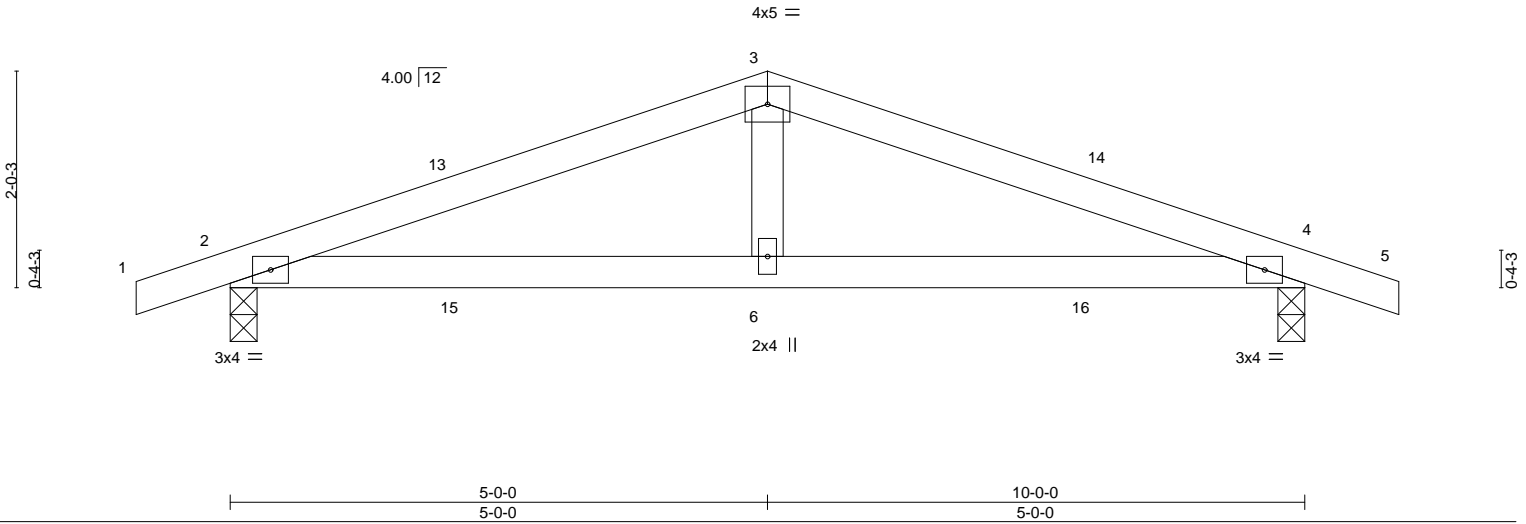
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8.430 s Aug 16 2021 MiTek Industries, Inc. Thu Sep 15 08:45:28 2022 Page 1

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Scale = 1:21.4



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.35	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.00	BC 0.35	Vert(LL) 0.06 6-12 >999 240		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.09	Vert(CT) -0.05 6-12 >999 180		
BCDL 10.0	Rep Stress Incr YES	Matrix-MS	Horz(CT) -0.01 4 n/a n/a		
	Code IRC2018/TPI2014			Weight: 36 lb	FT = 20%

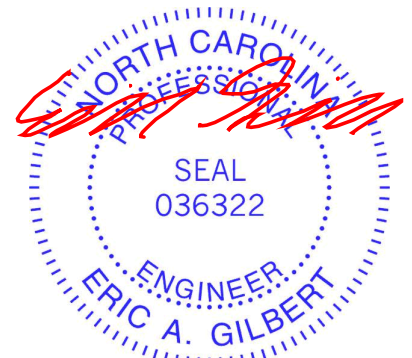
**LUMBER-**  
 TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x4 SP No.2  
 WEBS 2x4 SP No.3

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 6-4-7 oc bracing.

**REACTIONS.** (size) 2=0-3-0, 4=0-3-0  
 Max Horz 2=-19(LC 10)  
 Max Uplift 2=-130(LC 12), 4=-130(LC 12)  
 Max Grav 2=453(LC 1), 4=453(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-721/898, 3-4=-721/893  
 BOT CHORD 2-6=-781/657, 4-6=-781/657  
 WEBS 3-6=-334/224

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=125mph (3-second gust) Vasd=99mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 5-0-0, Exterior(2R) 5-0-0 to 8-0-0, Interior(1) 8-0-0 to 10-10-8 zone; cantilever left and right exposed; end vertical left and right exposed; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=130, 4=130.
  - 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.



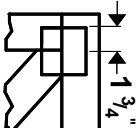
September 15, 2022

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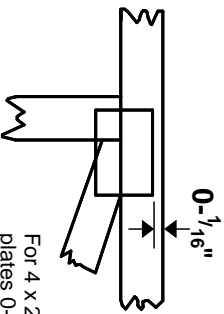
ENGINEERING BY  
**TRENCO**  
 A MiTek Affiliate  
 818 Soundside Road  
 Edenton, NC 27932

# Symbols

## PLATE LOCATION AND ORIENTATION



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



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



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

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

## PLATE SIZE

**4 X 4**

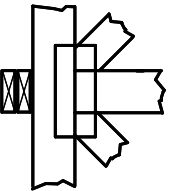
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## LATERAL BRACING LOCATION



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

## BEARING



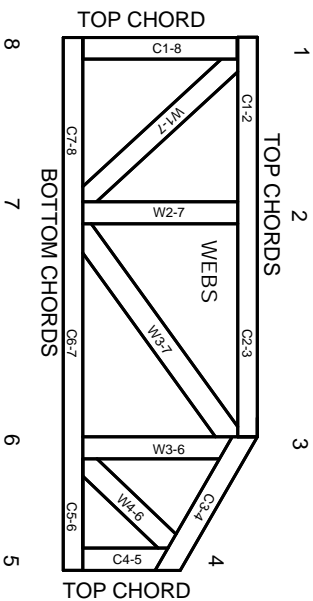
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

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# Numbering System

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



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