

Trenco  
818 Soundside Rd  
Edenton, NC 27932

Re: Q2200858  
Garman Homes - Wisteria A & B

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: I54245348 thru I54245362

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

North Carolina COA: C-0844



September 16, 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.

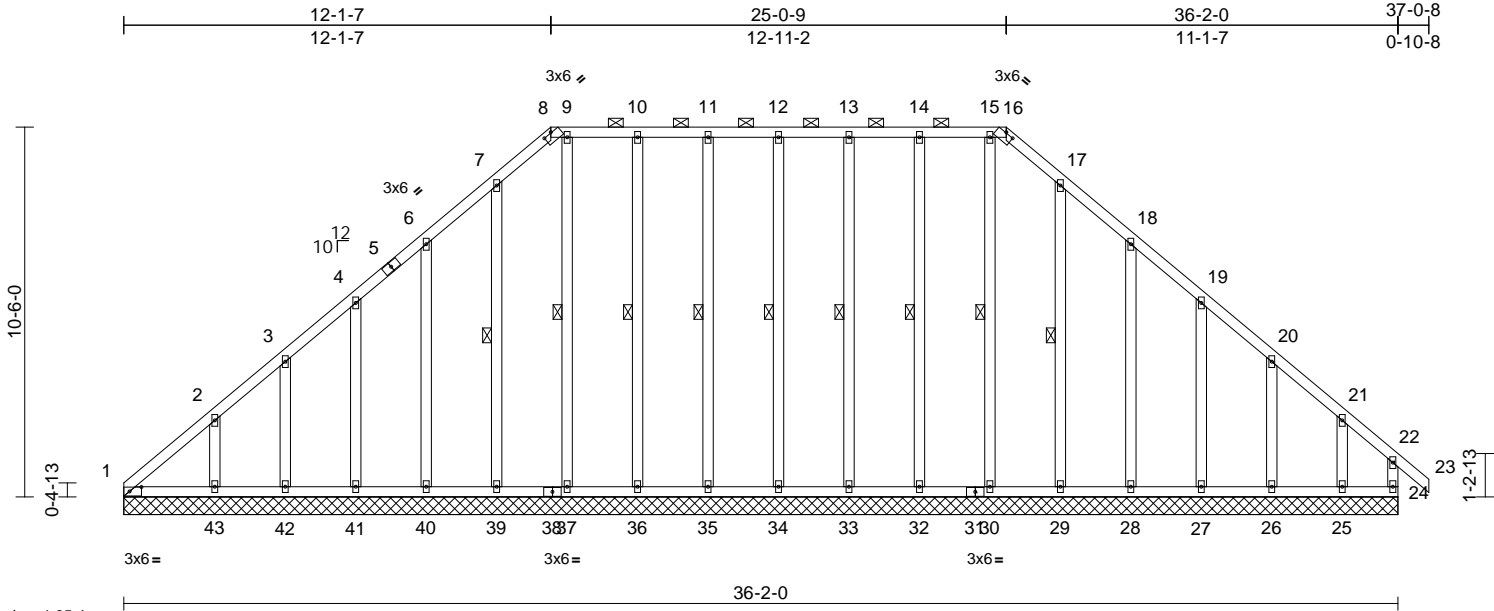
Job Q2200858	Truss A01	Truss Type Piggyback Base Supported Gable	Qty 1	Ply 1	Garman Homes - Wisteria A & B Job Reference (optional)	I54245348
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Carolina Structural Systems, LLC, Ether, NC - 27247,

Run: 8.43 S Jan 6 2022 Print: 8.430 S Jan 6 2022 MiTek Industries, Inc. Fri Sep 16 09:58:13

Page: 1

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Scale = 1:65.4

Plate Offsets (X, Y): [1:0-4-1,0-1-8], [8:0-3-0,0-0-4], [16:0-3-0,0-0-4]

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	0.10	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.10	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.14	Horz(CT)	0.01	24	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS							Weight: 304 lb	FT = 20%

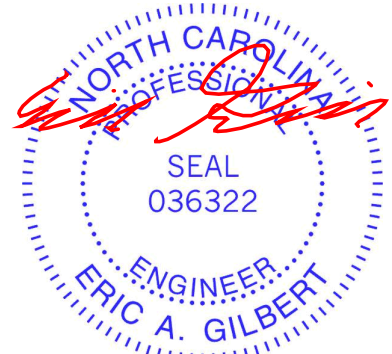
**LUMBER**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.2  
OTHERS 2x4 SP No.3

**BRACING**  
TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 8-16.  
BOT CHORD Rigid ceiling directly applied.  
WEBS 1 Row at midpt 12-34, 11-35, 10-36, 9-37, 7-39, 13-33, 14-32, 15-30, 17-29

**REACTIONS (size)**  
1=36-2-0, 24=36-2-0, 25=36-2-0, 26=36-2-0, 27=36-2-0, 28=36-2-0, 29=36-2-0, 30=36-2-0, 32=36-2-0, 33=36-2-0, 34=36-2-0, 35=36-2-0, 36=36-2-0, 37=36-2-0, 39=36-2-0, 40=36-2-0, 41=36-2-0, 42=36-2-0, 43=36-2-0, 44=36-2-0  
Max Horiz 1=213 (LC 11), 44=213 (LC 11)  
Max Uplift 1=-69 (LC 10), 25=-100 (LC 12), 26=-25 (LC 12), 27=-36 (LC 12), 28=-45 (LC 12), 32=-10 (LC 12), 33=-1 (LC 12), 34=-1 (LC 12), 35=-1 (LC 12), 36=-10 (LC 12), 40=-45 (LC 12), 41=-35 (LC 12), 42=-31 (LC 12), 43=-51 (LC 12), 44=-69 (LC 10)

**FORCES (lb) - Maximum Compression/Maximum Tension**  
TOP CHORD 1-2=-195/201, 2-3=-179/163, 3-4=-161/143, 4-6=-142/135, 6-7=-187/209, 7-8=-220/247, 8-9=-185/218, 9-10=-185/218, 10-11=-185/218, 11-12=-185/218, 12-13=-185/218, 13-14=-185/218, 14-15=-185/218, 15-16=-185/218, 16-17=-220/247, 17-18=-187/209, 18-19=-124/135, 19-20=-69/69, 20-21=-55/43, 21-22=-102/114, 22-23=0/39, 22-24=-125/58  
BOT CHORD 1-43=-94/117, 42-43=-94/117, 41-42=-94/117, 40-41=-94/117, 39-40=-94/117, 37-39=-94/117, 36-37=-94/117, 35-36=-94/117, 34-35=-94/117, 33-34=-94/117, 32-33=-94/117, 30-32=-94/117, 29-30=-94/117, 28-29=-94/117, 27-28=-94/117, 26-27=-94/117, 25-26=-94/117, 24-25=-94/117  
WEBS 12-34=-120/43, 11-35=-120/44, 10-36=-124/54, 9-37=-128/54, 7-39=-133/39, 6-40=-138/94, 4-41=-131/80, 3-42=-119/78, 2-43=-160/96, 13-33=-120/44, 14-32=-125/54, 15-30=-116/54, 17-29=-118/39, 18-28=-139/94, 19-27=-127/80, 20-26=-131/79, 21-25=-150/113

- 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=25ft; B=45ft; L=36ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner (3) 0-0-0 to 3-7-6, Exterior (2) 3-7-6 to 12-1-7, Corner (3) 12-1-7 to 15-8-13, Exterior (2) 15-8-13 to 25-0-9, Corner (3) 25-0-9 to 28-7-0, Exterior (2) 28-7-0 to 37-0-8 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) Provide adequate drainage to prevent water ponding.
  - 5) All plates are 2x4 MT20 unless otherwise indicated.
  - 6) Gable requires continuous bottom chord bearing.
  - 7) Gable studs spaced at 2-0-0 oc.



September 16, 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



818 Soundside Road  
Edenton, NC 27932

Job Q2200858	Truss A01	Truss Type Piggyback Base Supported Gable	Qty 1	Ply 1	Garman Homes - Wisteria A & B Job Reference (optional)	I54245348
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Carolina Structural Systems, LLC, Ether, NC - 27247,

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Page: 2

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- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) \* 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.
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 69 lb uplift at joint 1, 1 lb uplift at joint 34, 1 lb uplift at joint 35, 10 lb uplift at joint 36, 45 lb uplift at joint 40, 35 lb uplift at joint 41, 31 lb uplift at joint 42, 51 lb uplift at joint 43, 1 lb uplift at joint 33, 10 lb uplift at joint 32, 45 lb uplift at joint 28, 36 lb uplift at joint 27, 25 lb uplift at joint 26, 100 lb uplift at joint 25 and 69 lb uplift at joint 1.
- 11) 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.
- 12) 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.
- 13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard

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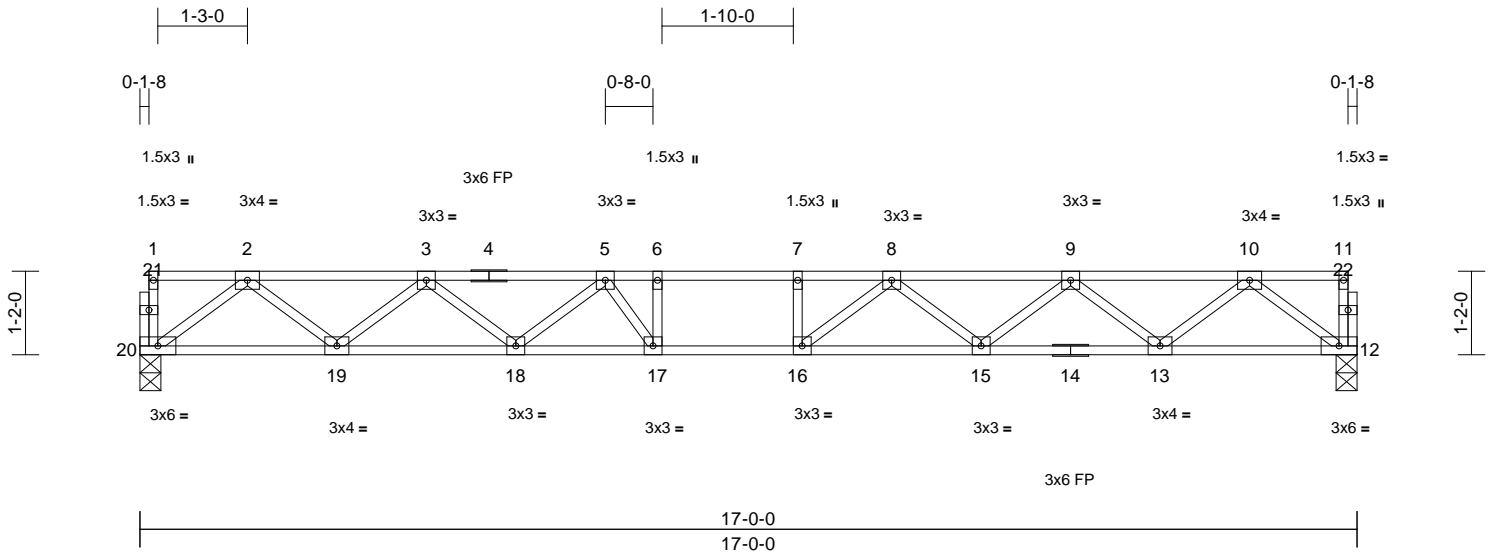
818 Soundside Road  
Edenton, NC 27932

Job Q2200858	Truss F201	Truss Type Floor	Qty 5	Ply 1	Garman Homes - Wisteria A & B Job Reference (optional)	I54245349
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Carolina Structural Systems, LLC, Ether, NC - 27247,

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Page: 1



Scale = 1:32.2

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	0.55	Vert(LL)	-0.22	16	>925	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.89	Vert(CT)	-0.30	16	>672	240		
BCLL	0.0	Rep Stress Incr	YES	WB	0.39	Horz(CT)	0.06	12	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 85 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)

**BRACING**

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

**REACTIONS** (size) 12=0-3-8, 20=0-3-8  
 Max Grav 12=732 (LC 1), 20=732 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-20=-31/0, 11-12=-31/0, 1-2=-2/0,  
 2-3=-1540/0, 3-5=-2479/0, 5-6=-2924/0,  
 6-7=-2924/0, 7-8=-2924/0, 8-9=-2486/0,  
 9-10=-1539/0, 10-11=-2/0  
 BOT CHORD 19-20=0/913, 18-19=0/2138, 17-18=0/2808,  
 16-17=0/2924, 15-16=0/2802, 13-15=0/2139,  
 12-13=0/913  
 WEBS 10-12=-1143/0, 2-20=-1143/0, 10-13=0/815,  
 2-19=0/816, 9-13=-782/0, 3-19=-778/0,  
 9-15=0/451, 3-18=0/443, 8-15=-411/0,  
 5-18=-429/0, 8-16=-102/422, 7-16=-194/12,  
 6-17=-298/42, 5-17=-102/476

**NOTES**

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All plates are 3x3 MT20 unless otherwise indicated.
- 3) 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.
- 4) 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



September 16, 2022

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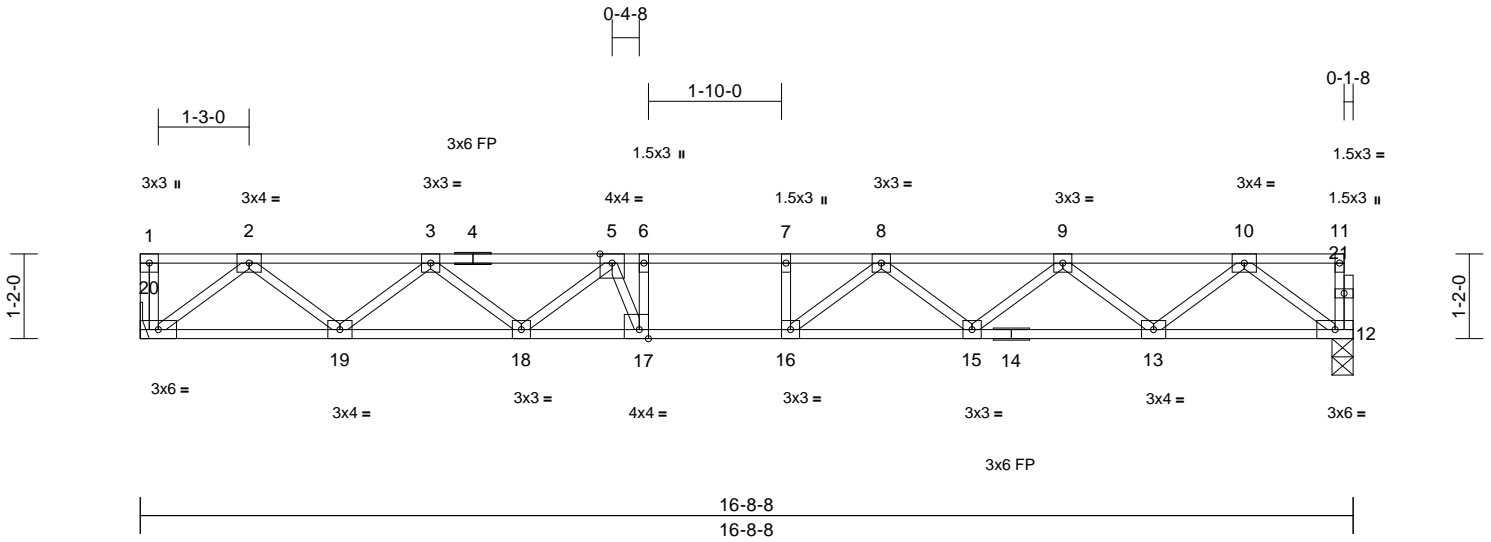
818 Soundside Road  
 Edenton, NC 27932

Job Q2200858	Truss F202	Truss Type Floor	Qty 3	Ply 1	Garman Homes - Wisteria A & B Job Reference (optional)	I54245350
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Carolina Structural Systems, LLC, Ether, NC - 27247,

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Page: 1



Scale = 1:31.7

Plate Offsets (X, Y): [17:0-1-8,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	0.69	Vert(LL)	-0.21	15-16	>953	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.87	Vert(CT)	-0.29	15-16	>691	240		
BCLL	0.0	Rep Stress Incr	YES	WB	0.38	Horz(CT)	0.05	12	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 84 lb	FT = 20%F, 11%E

**LUMBER** **LOAD CASE(S)** Standard  
 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)

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

**REACTIONS** (size) 12=0-3-8, 20= Mechanical  
 Max Grav 12=719 (LC 1), 20=724 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-20=-34/0, 11-12=-31/0, 1-2=0/0, 2-3=-1508/0, 3-5=-2416/0, 5-6=-2820/0, 6-7=-2820/0, 7-8=-2820/0, 8-9=-2424/0, 9-10=-1506/0, 10-11=-2/0  
 BOT CHORD 19-20=0/898, 18-19=0/2089, 17-18=0/2739, 16-17=0/2820, 15-16=0/2723, 13-15=0/2092, 12-13=0/896  
 WEBS 10-12=-1122/0, 2-20=-1126/0, 10-13=0/794, 2-19=0/795, 9-13=-763/0, 3-19=-756/0, 9-15=0/433, 3-18=0/425, 8-15=-389/0, 5-18=-436/0, 8-16=-116/391, 7-16=-181/19, 6-17=-401/95, 5-17=-148/542

- NOTES**
- 1) Unbalanced floor live loads have been considered for this design.
  - 2) Refer to girder(s) for truss to truss connections.
  - 3) 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.
  - 4) 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.
  - 5) CAUTION, Do not erect truss backwards.



September 16, 2022

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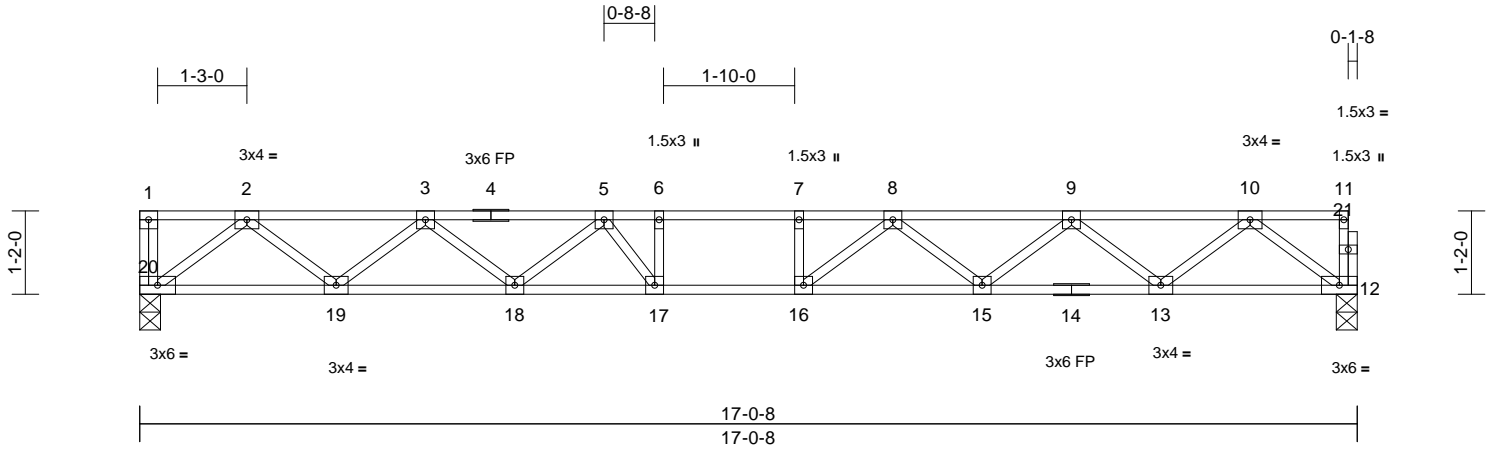
818 Soundside Road  
 Edenton, NC 27932

Job Q2200858	Truss F203	Truss Type Floor	Qty 7	Ply 1	Garman Homes - Wisteria A & B Job Reference (optional)	I54245351
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Carolina Structural Systems, LLC, Ether, NC - 27247,

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Page: 1



Scale = 1:32.2

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	0.55	Vert(LL)	-0.22	16	>922	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.89	Vert(CT)	-0.30	16	>669	240		
BCLL	0.0	Rep Stress Incr	YES	WB	0.39	Horz(CT)	0.06	12	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 85 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)

**BRACING**

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

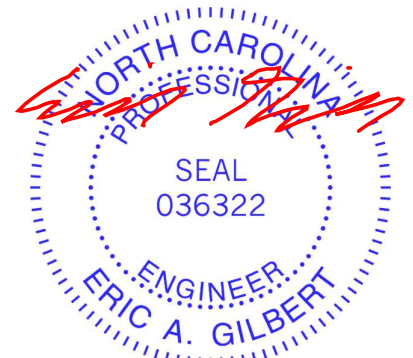
**REACTIONS** (size) 12=0-3-8, 20=0-3-8  
 Max Grav 12=733 (LC 1), 20=738 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-20=-34/0, 11-12=-31/0, 1-2=0/0,  
 2-3=-1545/0, 3-5=-2488/0, 5-6=-2939/0,  
 6-7=-2939/0, 7-8=-2939/0, 8-9=-2495/0,  
 9-10=-1543/0, 10-11=-2/0  
 BOT CHORD 19-20=0/916, 18-19=0/2145, 17-18=0/2819,  
 16-17=0/2939, 15-16=0/2813, 13-15=0/2146,  
 12-13=0/915  
 WEBS 10-12=-1146/0, 2-20=-1150/0, 10-13=0/817,  
 2-19=0/819, 9-13=-785/0, 3-19=-781/0,  
 9-15=0/453, 3-18=0/446, 8-15=-414/0,  
 5-18=-430/0, 8-16=-100/427, 7-16=-196/11,  
 6-17=-289/37, 5-17=-99/473

**NOTES**

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All plates are 3x3 MT20 unless otherwise indicated.
- 3) 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.
- 4) 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.
- 5) CAUTION, Do not erect truss backwards.

**LOAD CASE(S)** Standard



September 16, 2022

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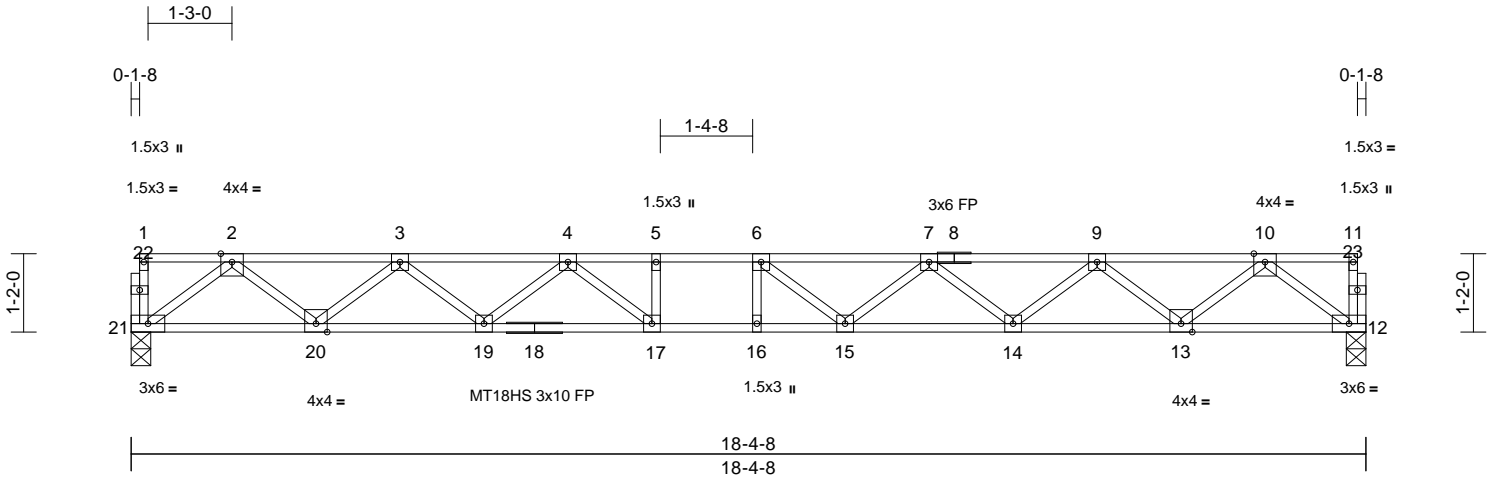


Job Q2200858	Truss F204	Truss Type Floor	Qty 7	Ply 1	Garman Homes - Wisteria A & B Job Reference (optional)	I54245352
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Carolina Structural Systems, LLC, Ether, NC - 27247,

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Page: 1



Scale = 1:34.3

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	0.60	Vert(LL)	-0.29	15-16	>755	480	MT18HS 244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.87	Vert(CT)	-0.39	15-16	>551	240	MT20 244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.43	Horz(CT)	0.06	12	n/a	n/a	
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 92 lb FT = 20%F, 11%E

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

**LOAD CASE(S)** Standard

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 5-10-1 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 12=0-3-8, 21=0-3-8  
Max Grav 12=792 (LC 1), 21=792 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-21=-32/0, 11-12=-30/0, 1-2=-2/0, 2-3=-1693/0, 3-4=-2772/0, 4-5=-3429/0, 5-6=-3429/0, 6-7=-3339/0, 7-9=-2784/0, 9-10=-1689/0, 10-11=-2/0  
BOT CHORD 20-21=0/993, 19-20=0/2361, 17-19=0/3177, 16-17=0/3429, 15-16=0/3429, 14-15=0/3194, 13-14=0/2357, 12-13=0/994  
WEBS 10-12=-1245/0, 2-21=-1243/0, 10-13=0/905, 2-20=0/911, 9-13=-868/0, 3-20=-870/0, 9-14=0/557, 3-19=0/534, 7-14=-533/0, 4-19=-528/0, 7-15=0/317, 4-17=-30/538, 6-15=-360/146, 5-17=-192/0, 6-16=-161/87

- 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.
  - 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.



September 16, 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



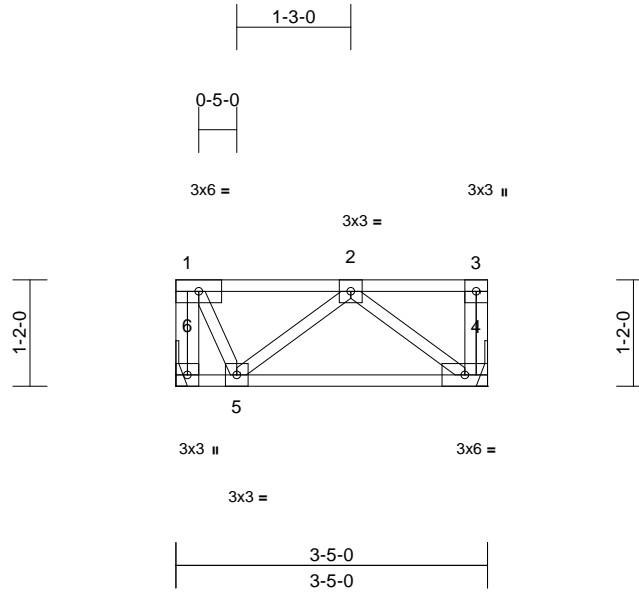
818 Soundside Road  
Edenton, NC 27932

Job Q2200858	Truss F205	Truss Type Floor	Qty 2	Ply 1	Garman Homes - Wisteria A & B Job Reference (optional)	154245353
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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. Fri Sep 16 09:58:16  
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Scale = 1:25.3

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	0.15	Vert(LL)	0.00	4-5	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.07	Vert(CT)	0.00	4-5	>999	240		
BCLL	0.0	Rep Stress Incr	NO	WB	0.05	Horz(CT)	0.00	4	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-P							Weight: 22 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)

**BRACING**

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

**REACTIONS** (size) 4= Mechanical, 6= Mechanical  
Max Grav 4=139 (LC 1), 6=139 (LC 1)

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

TOP CHORD 1-6=-146/0, 3-4=-37/0, 1-2=-46/0, 2-3=0/0  
BOT CHORD 5-6=0/0, 4-5=0/124  
WEBS 2-4=-156/0, 2-5=-102/0, 1-5=0/100

**NOTES**

- 1) Refer to girder(s) for truss to truss connections.
- 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.
- 3) 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



September 16, 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

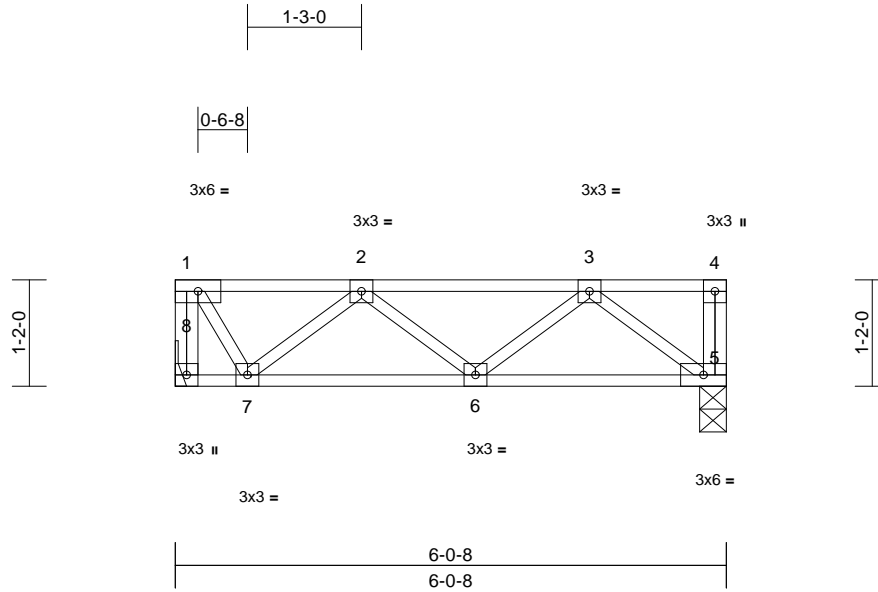


Job Q2200858	Truss F206	Truss Type Floor	Qty 2	Ply 1	Garman Homes - Wisteria A & B Job Reference (optional)	I54245354
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Carolina Structural Systems, LLC, Ether, NC - 27247,

Run: 8.43 S Jan 6 2022 Print: 8.430 S Jan 6 2022 MiTek Industries, Inc. Fri Sep 16 09:58:16  
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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	0.21	Vert(LL)	0.00	6	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.11	Vert(CT)	-0.01	5-6	>999	240		
BCLL	0.0	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.00	5	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-P							Weight: 34 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)

**BRACING**

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

**REACTIONS** (size) 5=0-3-8, 8= Mechanical  
Max Grav 5=255 (LC 1), 8=255 (LC 1)

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

TOP CHORD 1-8=-255/0, 4-5=-32/0, 1-2=-128/0,  
2-3=-330/0, 3-4=0/0

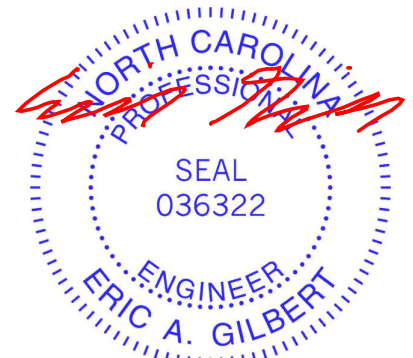
BOT CHORD 7-8=0/0, 6-7=0/349, 5-6=0/283

WEBS 3-5=-355/0, 3-6=0/61, 2-6=-25/0, 2-7=-289/0,  
1-7=0/237

**NOTES**

- 1) Refer to girder(s) for truss to truss connections.
- 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.
- 3) 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



September 16, 2022

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

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

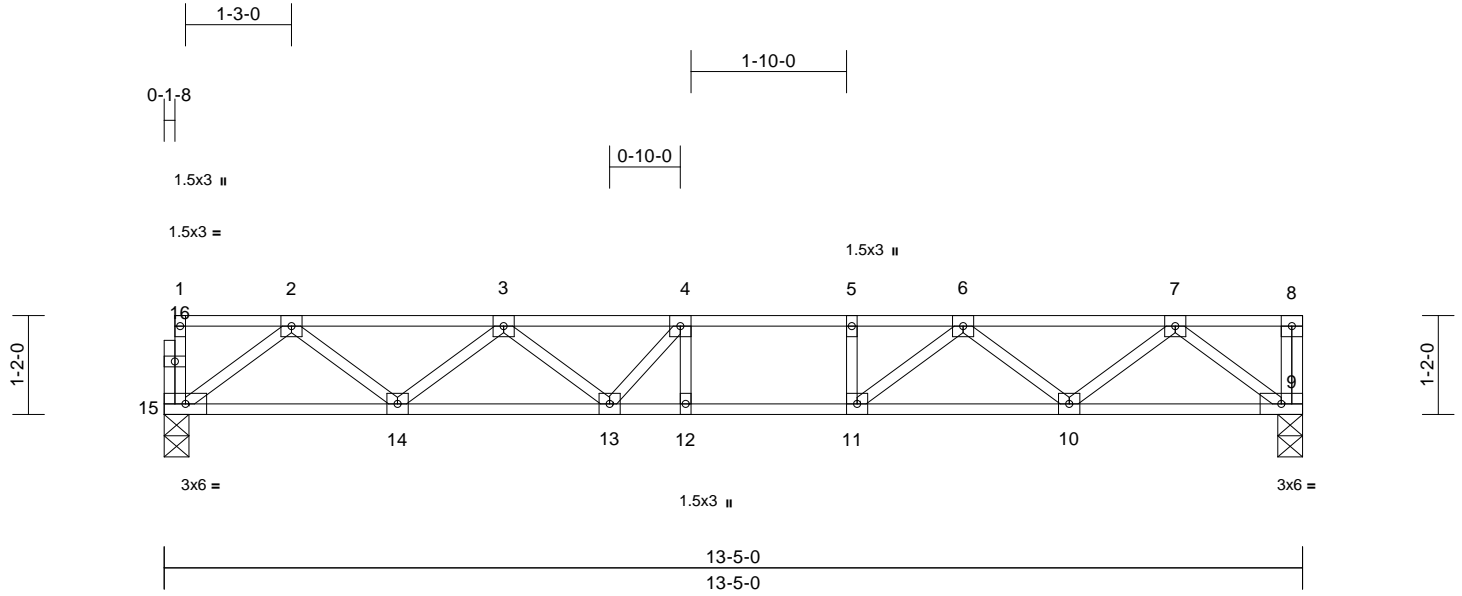
818 Soundside Road  
Edenton, NC 27932

Job Q2200858	Truss F207	Truss Type Floor	Qty 8	Ply 1	Garman Homes - Wisteria A & B Job Reference (optional)	154245355
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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. Fri Sep 16 09:58:16  
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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	0.42	Vert(LL)	-0.10	12-13	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.77	Vert(CT)	-0.14	12-13	>999	240		
BCLL	0.0	Rep Stress Incr	YES	WB	0.27	Horz(CT)	0.03	9	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 68 lb	FT = 20%F, 11%E

**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)

**BRACING**

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

**REACTIONS** (size) 9=0-3-8, 15=0-3-8

Max Grav 9=579 (LC 1), 15=574 (LC 1)

**FORCES**

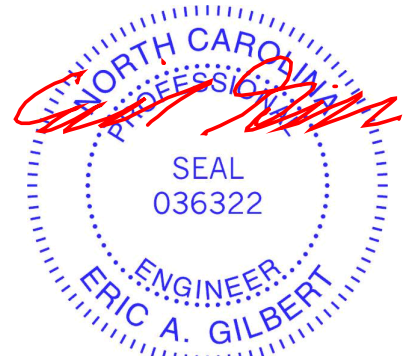
(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-15=-31/0, 8-9=-31/0, 1-2=-2/0, 2-3=-1143/0,  
 3-4=-1716/0, 4-5=-1793/0, 5-6=-1793/0,  
 6-7=-1135/0, 7-8=0/0  
 BOT CHORD 14-15=0/707, 13-14=0/1553, 12-13=0/1793,  
 11-12=0/1793, 10-11=0/1543, 9-10=0/711  
 WEBS 7-9=-891/0, 2-15=-885/0, 7-10=0/552,  
 2-14=0/567, 6-10=-532/0, 3-14=-534/0,  
 6-11=0/461, 3-13=0/292, 5-11=-192/0,  
 4-12=-125/73, 4-13=-282/52

**NOTES**

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All plates are 3x3 MT20 unless otherwise indicated.
- 3) 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.
- 4) 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.
- 5) CAUTION, Do not erect truss backwards.

**LOAD CASE(S)** Standard



September 16, 2022

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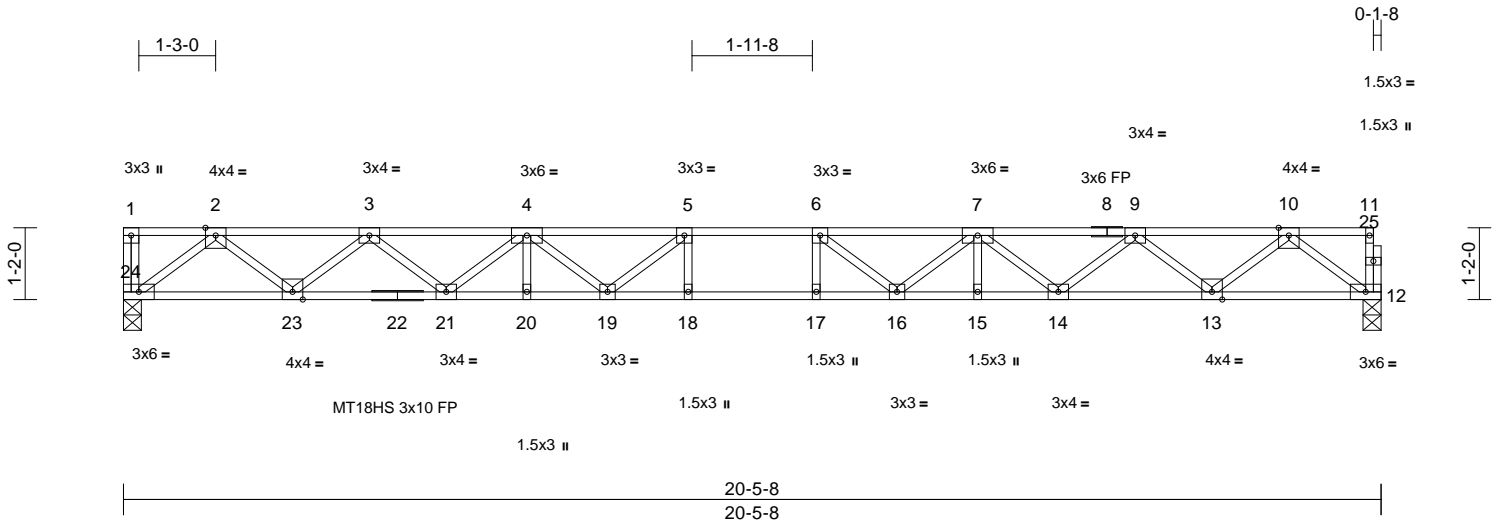
818 Soundside Road  
 Edenton, NC 27932

Job Q2200858	Truss F208	Truss Type Floor	Qty 11	Ply 1	Garman Homes - Wisteria A & B Job Reference (optional)	I54245356
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Carolina Structural Systems, LLC, Ether, NC - 27247,

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Page: 1



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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	0.70	Vert(LL)	-0.41	17-18	>588	480	MT18HS	244/190
TCDL	10.0	Lumber DOL	1.00	BC	1.00	Vert(CT)	-0.57	17-18	>427	240	MT20	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.50	Horz(CT)	0.09	12	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S								
											Weight: 104 lb	FT = 20%F, 11%E

**LUMBER**

TOP CHORD 2x4 SP No.2(flat)  
 BOT CHORD 2x4 SP No.2(flat) \*Except\* 22-12:2x4 SP No.1(flat)  
 WEBS 2x4 SP No.3(flat)  
 OTHERS 2x4 SP No.3(flat)

- 4) 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.
- 5) CAUTION, Do not erect truss backwards.

**LOAD CASE(S)** Standard

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 5-0-13 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:  
 2-2-0 oc bracing: 18-19,16-17  
 1-4-12 oc bracing: 17-18.

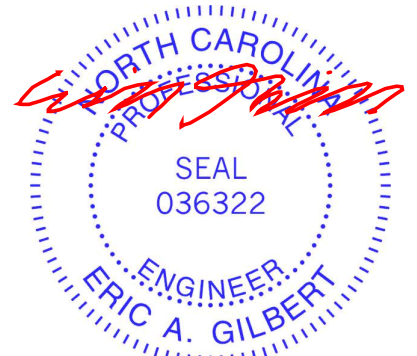
**REACTIONS** (size) 12=0-3-8, 24=0-3-8  
 Max Grav 12=884 (LC 1), 24=889 (LC 1)

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

TOP CHORD 1-24=-34/0, 11-12=-31/0, 1-2=0/0,  
 2-3=-1921/0, 3-4=-3230/0, 4-5=-4030/0,  
 5-6=-4280/0, 6-7=-4030/0, 7-9=-3230/0,  
 9-10=-1920/0, 10-11=-2/0  
 BOT CHORD 23-24=0/1115, 21-23=0/2698, 20-21=0/3769,  
 19-20=0/3769, 18-19=0/4280, 17-18=0/4280,  
 16-17=0/4280, 15-16=0/3769, 14-15=0/3769,  
 13-14=0/2698, 12-13=0/1114  
 WEBS 10-12=-1395/0, 2-24=-1398/0, 10-13=0/1049,  
 2-23=0/1049, 9-13=-1013/0, 3-23=-1012/0,  
 9-14=0/692, 3-21=0/692, 7-14=-689/0,  
 7-15=-20/39, 4-21=-689/0, 4-20=-20/39,  
 7-16=0/422, 4-19=0/422, 6-16=-590/71,  
 5-19=-590/71, 5-18=-164/193, 6-17=-164/193

**NOTES**

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All plates are MT20 plates unless otherwise indicated.
- 3) 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.



September 16, 2022

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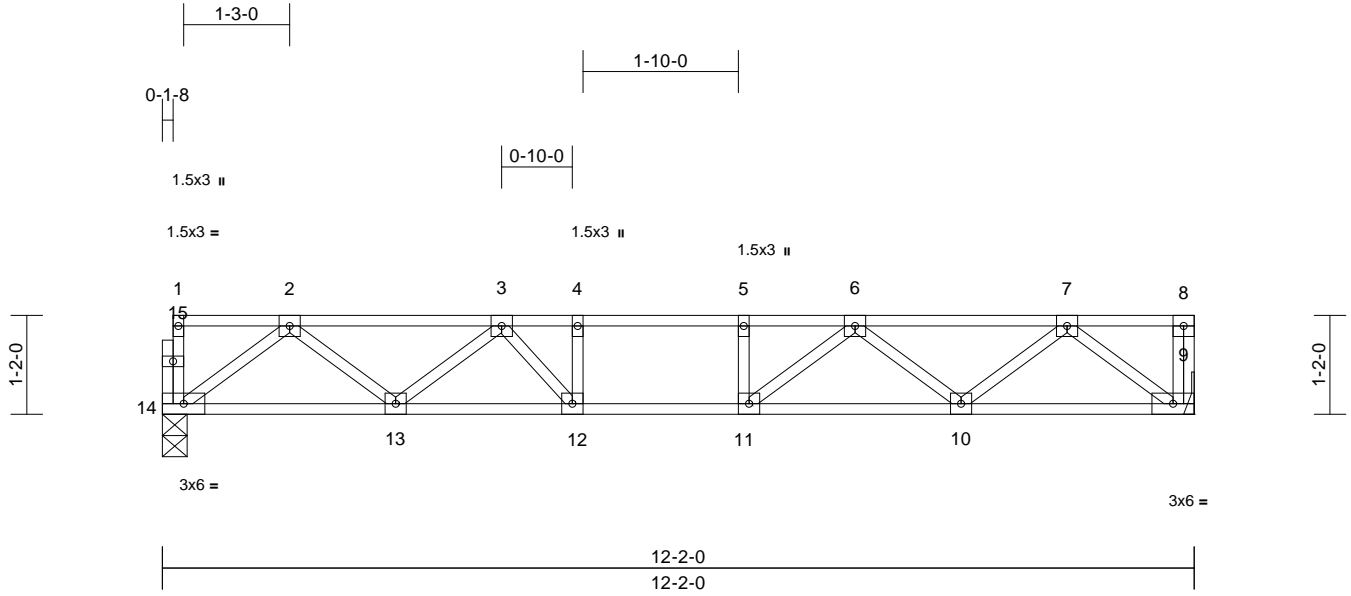
818 Soundside Road  
 Edenton, NC 27932

Job Q2200858	Truss F209	Truss Type Floor	Qty 2	Ply 1	Garman Homes - Wisteria A & B Job Reference (optional)	154245357
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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. Fri Sep 16 09:58:16  
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Page: 1



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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	0.37	Vert(LL)	-0.07	10-11	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.49	Vert(CT)	-0.10	10-11	>999	240		
BCLL	0.0	Rep Stress Incr	YES	WB	0.23	Horz(CT)	0.02	9	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 62 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)

**BRACING**

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

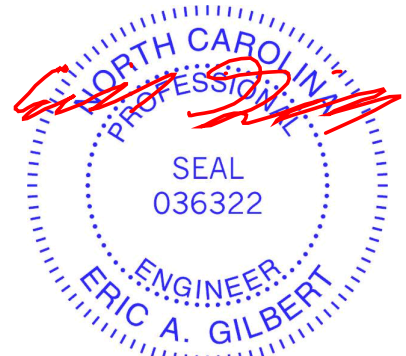
**REACTIONS** (size) 9= Mechanical, 14=0-3-8  
 Max Grav 9=524 (LC 1), 14=519 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-14=-28/0, 8-9=-32/0, 1-2=-2/0, 2-3=-999/0,  
 3-4=-1469/0, 4-5=-1469/0, 5-6=-1469/0,  
 6-7=-1004/0, 7-8=0/0  
 BOT CHORD 13-14=0/638, 12-13=0/1340, 11-12=0/1469,  
 10-11=0/1336, 9-10=0/640  
 WEBS 7-9=-803/0, 2-14=-799/0, 7-10=0/475,  
 2-13=0/470, 6-10=-432/0, 3-13=-444/0,  
 6-11=0/331, 5-11=-158/0, 4-12=-213/0,  
 3-12=0/363

**NOTES**

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All plates are 3x3 MT20 unless otherwise indicated.
- 3) Refer to girder(s) for truss to truss connections.
- 4) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 5) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 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



September 16, 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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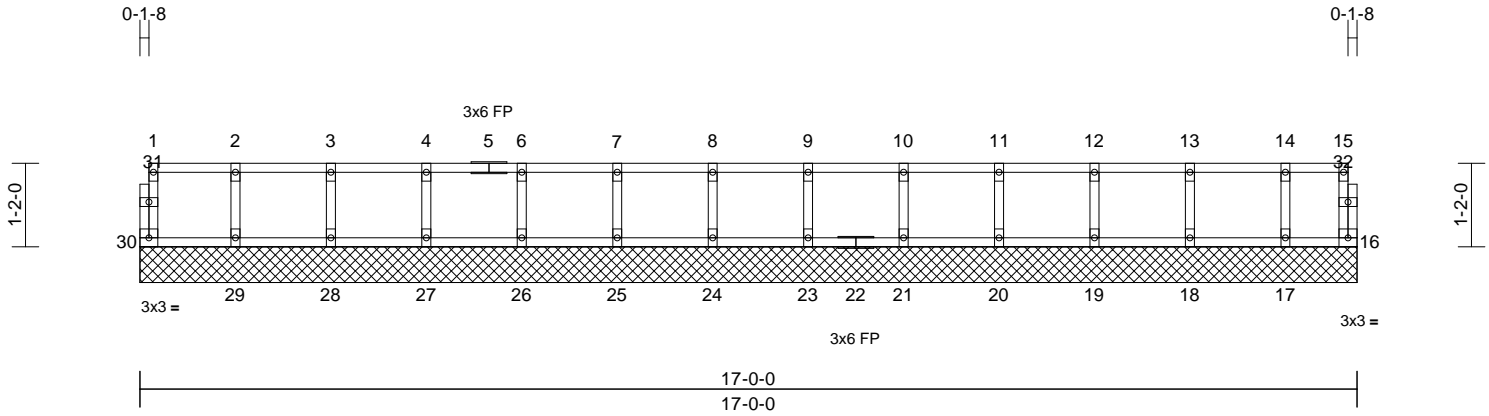
818 Soundside Road  
 Edenton, NC 27932

Job Q2200858	Truss K201	Truss Type Floor Supported Gable	Qty 1	Ply 1	Garman Homes - Wisteria A & B Job Reference (optional)	I54245358
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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. Fri Sep 16 09:58:17  
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Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.08	Vert(LL)	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	YES	WB	0.03	Horiz(TL)	0.00	16	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-R							Weight: 71 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)

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

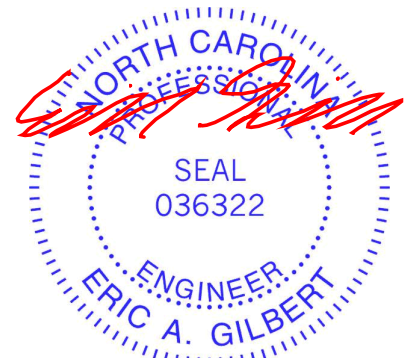
**REACTIONS** (size) 16=17-0-0, 17=17-0-0, 18=17-0-0, 19=17-0-0, 20=17-0-0, 21=17-0-0, 23=17-0-0, 24=17-0-0, 25=17-0-0, 26=17-0-0, 27=17-0-0, 28=17-0-0, 29=17-0-0, 30=17-0-0  
Max Grav 16=37 (LC 1), 17=122 (LC 1), 18=152 (LC 1), 19=145 (LC 1), 20=147 (LC 1), 21=147 (LC 1), 23=147 (LC 1), 24=147 (LC 1), 25=147 (LC 1), 26=147 (LC 1), 27=147 (LC 1), 28=147 (LC 1), 29=147 (LC 1), 30=53 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-30=-49/0, 15-16=-31/0, 1-2=-7/0, 2-3=-7/0, 3-4=-7/0, 4-6=-7/0, 6-7=-7/0, 7-8=-7/0, 8-9=-7/0, 9-10=-7/0, 10-11=-7/0, 11-12=-7/0, 12-13=-7/0, 13-14=-7/0, 14-15=-7/0  
BOT CHORD 29-30=0/7, 28-29=0/7, 27-28=0/7, 26-27=0/7, 25-26=0/7, 24-25=0/7, 23-24=0/7, 21-23=0/7, 20-21=0/7, 19-20=0/7, 18-19=0/7, 17-18=0/7, 16-17=0/7  
WEBS 2-29=-132/0, 3-28=-134/0, 4-27=-133/0, 6-26=-133/0, 7-25=-133/0, 8-24=-133/0, 9-23=-133/0, 10-21=-133/0, 11-20=-134/0, 12-19=-132/0, 13-18=-138/0, 14-17=-114/0

**NOTES**  
1) All plates are 1.5x3 MT20 unless otherwise indicated.  
2) Gable requires continuous bottom chord bearing.

- Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- Gable studs spaced at 1-4-0 oc.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 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



September 16, 2022

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

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

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

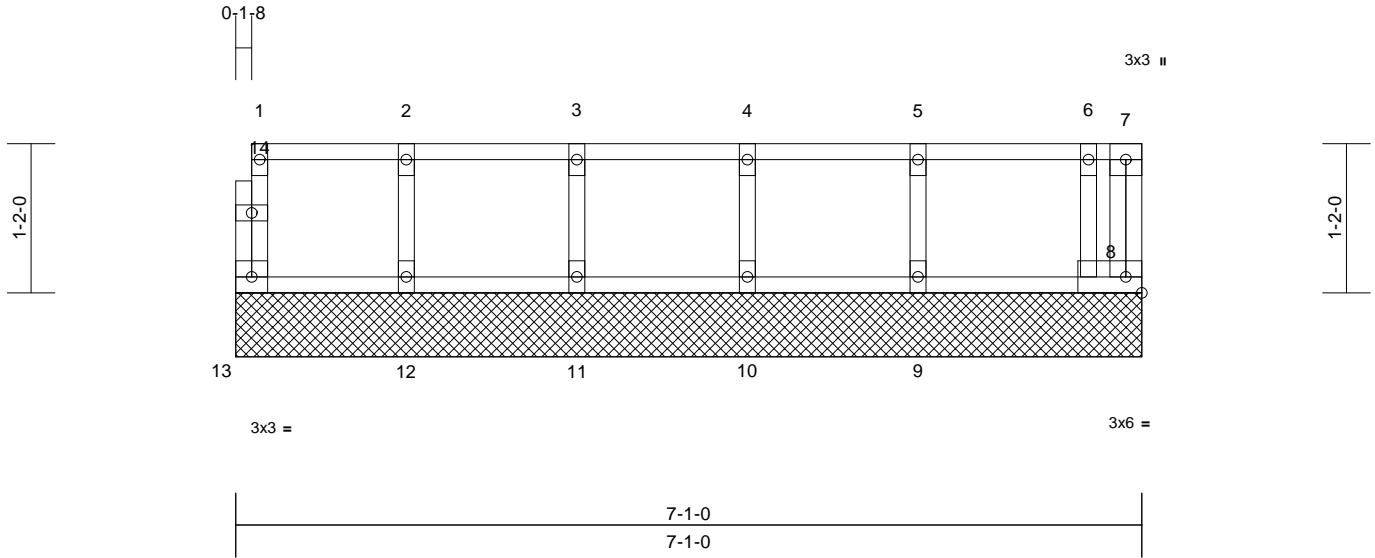
818 Soundside Road  
Edenton, NC 27932

Job Q2200858	Truss K203	Truss Type Floor Supported Gable	Qty 1	Ply 1	Garman Homes - Wisteria A & B Job Reference (optional)	154245359
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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. Fri Sep 16 09:58:17  
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Page: 1



Scale = 1:18

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	0.09	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.03	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	0.00	8	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-R							Weight: 33 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)

**BRACING**

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

**REACTIONS** (size) 8=7-1-0, 9=7-1-0, 10=7-1-0, 11=7-1-0, 12=7-1-0, 13=7-1-0  
Max Grav 8=94 (LC 1), 9=161 (LC 1), 10=142 (LC 1), 11=151 (LC 1), 12=133 (LC 1), 13=64 (LC 1)

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

TOP CHORD 1-13=-55/0, 7-8=0/6, 1-2=-17/0, 2-3=-17/0, 3-4=-17/0, 4-5=-17/0, 5-6=-17/0, 6-7=-1/0  
BOT CHORD 12-13=0/17, 11-12=0/17, 10-11=0/17, 9-10=0/17, 8-9=0/17  
WEBS 2-12=-126/0, 3-11=-136/0, 4-10=-130/0, 5-9=-143/0, 6-8=-96/0

**NOTES**

- All plates are 1.5x3 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- Gable studs spaced at 1-4-0 oc.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 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



September 16, 2022

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818 Soundside Road  
Edenton, NC 27932

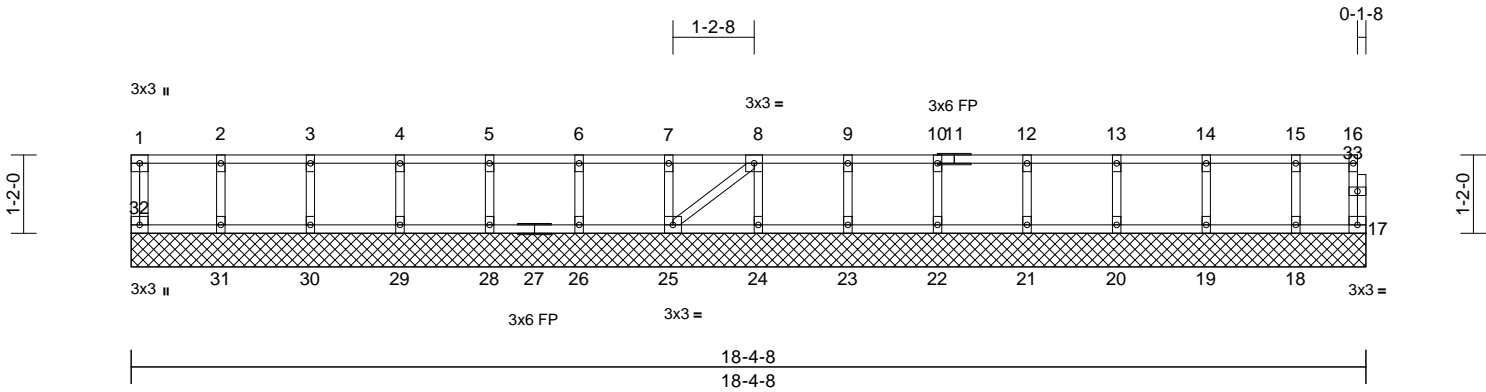


Job Q2200858	Truss K204	Truss Type Floor Supported Gable	Qty 1	Ply 1	Garman Homes - Wisteria A & B Job Reference (optional)	I54245360
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Carolina Structural Systems, LLC, Ether, NC - 27247,

Run: 8.43 S Jan 6 2022 Print: 8.430 S Jan 6 2022 MiTek Industries, Inc. Fri Sep 16 09:58:17  
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Page: 1



Scale = 1:34.3

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.08	Vert(LL)	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	YES	WB	0.03	Horiz(TL)	0.00	17	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 80 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) *Except* 17-33:2x4 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 10-0-0 oc bracing.

**REACTIONS** (size)

17=18-4-8, 18=18-4-8, 19=18-4-8, 20=18-4-8, 21=18-4-8, 22=18-4-8, 23=18-4-8, 24=18-4-8, 25=18-4-8, 26=18-4-8, 28=18-4-8, 29=18-4-8, 30=18-4-8, 31=18-4-8, 32=18-4-8

Max Grav 17=32 (LC 1), 18=134 (LC 1), 19=150 (LC 1), 20=146 (LC 1), 21=147 (LC 1), 22=147 (LC 1), 23=147 (LC 1), 24=145 (LC 1), 25=148 (LC 1), 26=147 (LC 1), 28=147 (LC 1), 29=147 (LC 1), 30=145 (LC 1), 31=156 (LC 1), 32=52 (LC 1)

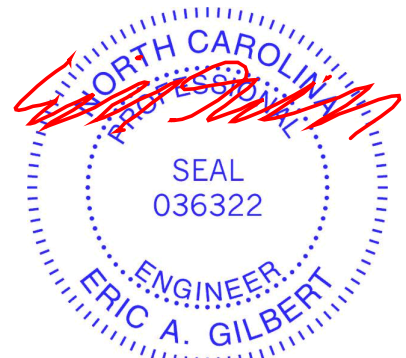
**FORCES** (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-32=-47/0, 16-17=-29/0, 1-2=0/0, 2-3=0/0, 3-4=0/0, 4-5=0/0, 5-6=0/0, 6-7=0/0, 7-8=0/0, 8-9=-2/0, 9-10=-2/0, 10-12=-2/0, 12-13=-2/0, 13-14=-2/0, 14-15=-2/0, 15-16=-2/0

BOT CHORD 31-32=0/0, 30-31=0/0, 29-30=0/0, 28-29=0/0, 26-28=0/0, 25-26=0/0, 24-25=0/2, 23-24=0/2, 22-23=0/2, 21-22=0/2, 20-21=0/2, 19-20=0/2, 18-19=0/2, 17-18=0/2

WEBS 2-31=-142/0, 3-30=-131/0, 4-29=-134/0, 5-28=-133/0, 6-26=-133/0, 7-25=-133/0, 8-24=-132/0, 9-23=-133/0, 10-22=-133/0, 12-21=-134/0, 13-20=-133/0, 14-19=-136/0, 15-18=-121/0, 8-25=-2/0

- 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.
  - 7) CAUTION, Do not erect truss backwards.
- LOAD CASE(S)** Standard



September 16, 2022

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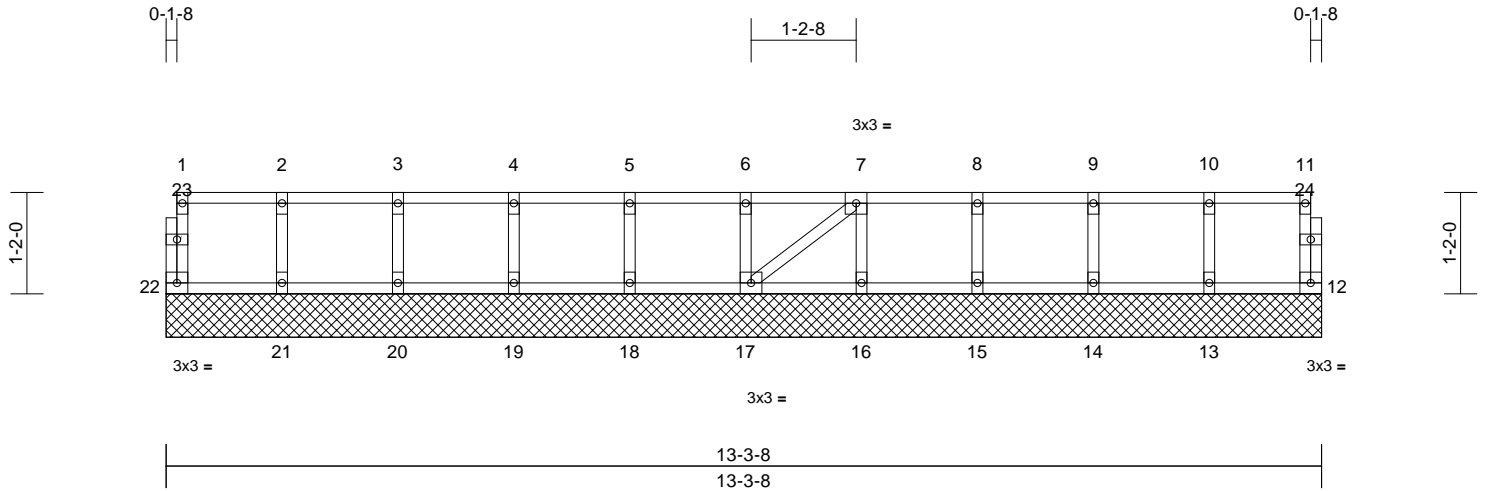
818 Soundside Road  
Edenton, NC 27932

Job Q2200858	Truss K207	Truss Type Floor Supported Gable	Qty 1	Ply 1	Garman Homes - Wisteria A & B Job Reference (optional)	I54245361
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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. Fri Sep 16 09:58:17  
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Page: 1



Scale = 1:26.5

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.08	Vert(LL)	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	YES	WB	0.03	Horiz(TL)	0.00	12	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 59 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)

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

**REACTIONS** (size) 12=13-3-8, 13=13-3-8, 14=13-3-8, 15=13-3-8, 16=13-3-8, 17=13-3-8, 18=13-3-8, 19=13-3-8, 20=13-3-8, 21=13-3-8, 22=13-3-8  
Max Grav 12=46 (LC 1), 13=149 (LC 2), 14=147 (LC 2), 15=147 (LC 1), 16=152 (LC 1), 17=147 (LC 2), 18=147 (LC 2), 19=147 (LC 1), 20=146 (LC 2), 21=152 (LC 1), 22=152 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-22=-148/0, 11-12=-42/0, 1-2=-9/0, 2-3=-9/0, 3-4=-9/0, 4-5=-9/0, 5-6=-9/0, 6-7=-9/0, 7-8=-3/0, 8-9=-3/0, 9-10=-3/0, 10-11=-3/0  
BOT CHORD 21-22=0/9, 20-21=0/9, 19-20=0/9, 18-19=0/9, 17-18=0/9, 16-17=0/3, 15-16=0/3, 14-15=0/3, 13-14=0/3, 12-13=0/3  
WEBS 2-21=-138/0, 3-20=-133/0, 4-19=-134/0, 5-18=-133/0, 6-17=-133/0, 7-16=-138/0, 8-15=-133/0, 9-14=-133/0, 10-13=-135/0, 7-17=0/8

**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.

- 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.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 104 lb down at 0-2-4 on top chord. The design/selection of such connection device(s) is the responsibility of others.
- In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard  
1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (lb/ft)  
Vert: 12-22=-10, 1-11=-100  
Concentrated Loads (lb)  
Vert: 1=-104 (F)



September 16, 2022

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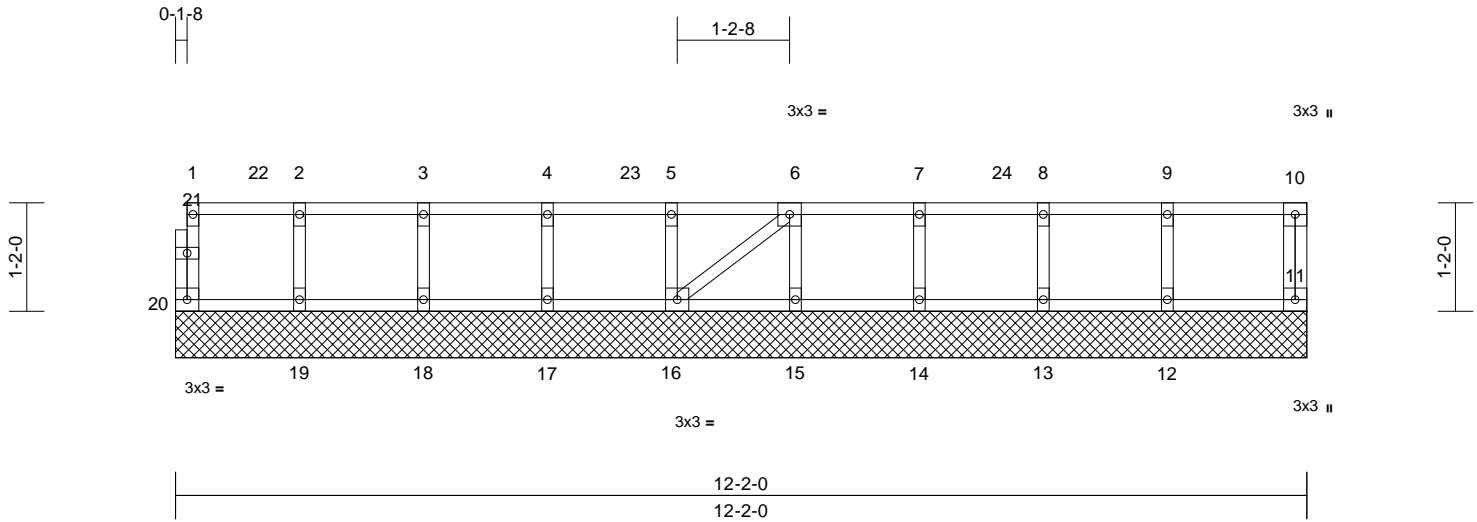
818 Soundside Road  
Edenton, NC 27932

Job Q2200858	Truss K209	Truss Type Floor Supported Gable	Qty 1	Ply 1	Garman Homes - Wisteria A & B Job Reference (optional)	154245362
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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. Fri Sep 16 09:58:17  
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Page: 1



Scale = 1:24.8

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	0.90	TC	0.11	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Plate Metal DOL	0.90	BC	0.02	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Lumber DOL	0.90	WB	0.04	Horiz(TL)	0.00	11	n/a	n/a		
BCDL	5.0	Rep Stress Incr Code	YES IRC2015/TPI2014	Matrix-S								
											Weight: 54 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)

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

**REACTIONS** (size)  
11=12-2-0, 12=12-2-0, 13=12-2-0, 14=12-2-0, 15=12-2-0, 16=12-2-0, 17=12-2-0, 18=12-2-0, 19=12-2-0, 20=12-2-0  
Max Grav 11=61 (LC 5), 12=199 (LC 7), 13=170 (LC 7), 14=161 (LC 5), 15=176 (LC 7), 16=174 (LC 7), 17=159 (LC 5), 18=172 (LC 7), 19=185 (LC 7), 20=60 (LC 7)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-20=-55/0, 10-11=-55/0, 1-2=-3/0, 2-3=-3/0, 3-4=-3/0, 4-5=-3/0, 5-6=-3/0, 6-7=0/0, 7-8=0/0, 8-9=0/0, 9-10=0/0  
BOT CHORD 19-20=0/3, 18-19=0/3, 17-18=0/3, 16-17=0/3, 15-16=0/0, 14-15=0/0, 13-14=0/0, 12-13=0/0, 11-12=0/0  
WEBS 2-19=-171/0, 3-18=-159/0, 4-17=-146/0, 5-16=-163/0, 6-15=-162/0, 7-14=-147/0, 8-13=-157/0, 9-12=-183/0, 6-16=0/4

**NOTES**  
1) Unbalanced floor live loads have been considered for this design.  
2) All plates are 1.5x3 MT20 unless otherwise indicated.  
3) Gable requires continuous bottom chord bearing.  
4) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).  
5) Gable studs spaced at 1-4-0 oc.

- 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.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 81 lb down at 0-10-12, 78 lb down at 2-10-12, 78 lb down at 4-10-12, 78 lb down at 6-10-12, and 78 lb down at 8-10-12, and 78 lb down at 10-10-12 on top chord. The design/selection of such connection device(s) is the responsibility of others.
- In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard  
1) Dead + Roof Live (balanced): Lumber Increase=0.90, Plate Increase=0.90 Plt. metal=0.90  
Uniform Loads (lb/ft)  
Vert: 11-20=-10, 1-10=-20  
Concentrated Loads (lb)  
Vert: 3=-78 (F), 6=-78 (F), 9=-78 (F), 22=-81 (F), 23=-78 (F), 24=-78 (F)



September 16, 2022

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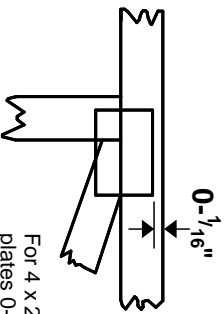
818 Soundside Road  
Edenton, NC 27932

# 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**

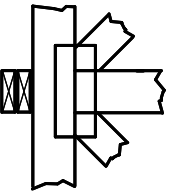
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## 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/TFP 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/TFP 1 section 6.3 These truss designs rely on lumber values established by others.

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