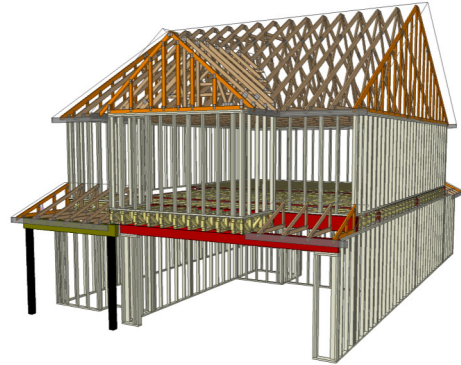




Carter Sanford Component Plant  
298 Harvey Faulk Rd  
Sanford, NC 27332

Phone #:919-775-1450



**Builder: DRB Homes NC LLC**

**Model: Merlot 1 RBFX GRH**

THE PLACEMENT PLAN NOTES:

1. The Placement Plan is a diagram for truss installation. It is not an engineered drawing and has not been reviewed by an engineer. The Owner/Building Designer is responsible for obtaining an engineer's review if one is required by the local jurisdiction.
2. The responsibilities of the Owner, Contractor, Building Designer, Component Designer and Component Manufacturer shall be as set forth in ANSI/TPI 1. Capitalized terms shall be as defined in ANSI/TP 1 unless otherwise indicated.
3. Each Component is designed as an individual component utilizing information provided by others. The Owner/Building Designer is responsible for reviewing all Component Submittal Packages and individual Component Design Drawings for compliance with the Construction Documents and compatibility with the overall Building design.
4. Contractor will not proceed with component installation until the Owner/Building Designer has reviewed the Component Submittal Package. Questions on the suitability of any Component will be resolved by the Building Designer.
5. The Building Designer and Contractor are responsible for all temporary and permanent bracing.
6. The Placement Plan assumes the building is dimensionally correct, structurally sound, and in a suitable condition to support each Component during installation and thereafter, including but not limited to installation of all bearing points. Proper design and construction of all structural components, including foundations, headers, beams, walls and columns are the responsibility of the Owner, Building Designer and Contractor.
7. Do not cut, drill, or modify any Component without first consulting the Component Manufacturer or Building Designer. Damaged Components shall not be installed unless directed by the Building Designer or approved by the Component Manufacturer.
8. Components must be handled and installed following all applicable safety standards and best practices, including but not limited to BCSI, OSHA, TPI and local codes. Failure to properly handle, brace or otherwise install Component can result in serious injury or death.
9. All uplift connectors shown within these documents are recommendations only. Per ANSI/TPI 1, all uplift connectors are the responsibility of the building designer and or contractor.

Approved By: \_\_\_\_\_

Date: \_\_\_\_\_

RE: 24060041  
 DRB - 198 FaNC

Trenco  
 818 Soundside Rd  
 Edenton, NC 27932

**Site Information:**

Customer: Project Name: 24060041  
 Lot/Block: 198 Model:  
 Address: Subdivision: FaNC  
 City: State: NC

**General Truss Engineering Criteria & Design Loads (Individual Truss Design Drawings Show Special Loading Conditions):**

Design Code: IRC2018/TPI2014 Design Program: MiTek 20/20 8.6  
 Wind Code: ASCE 7-16 Wind Speed: 130 mph  
 Roof Load: 40.0 psf Floor Load: N/A psf

This package includes 33 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	I63649337	A01	2/16/2024	21	I63649357	F05	2/16/2024
2	I63649338	A02	2/16/2024	22	I63649358	F06	2/16/2024
3	I63649339	A03	2/16/2024	23	I63649359	F07	2/16/2024
4	I63649340	A04	2/16/2024	24	I63649360	F08	2/16/2024
5	I63649341	A05	2/16/2024	25	I63649361	F09	2/16/2024
6	I63649342	A06	2/16/2024	26	I63649362	F10	2/16/2024
7	I63649343	B01	2/16/2024	27	I63649363	F11	2/16/2024
8	I63649344	B02	2/16/2024	28	I63649364	F12	2/16/2024
9	I63649345	B03	2/16/2024	29	I63649365	FW05	2/16/2024
10	I63649346	C01	2/16/2024	30	I63649366	FW16	2/16/2024
11	I63649347	C02	2/16/2024	31	I63649367	V1	2/16/2024
12	I63649348	D01	2/16/2024	32	I63649368	V2	2/16/2024
13	I63649349	D02	2/16/2024	33	I63649369	V3	2/16/2024
14	I63649350	D03	2/16/2024				
15	I63649351	D04	2/16/2024				
16	I63649352	D05	2/16/2024				
17	I63649353	F01	2/16/2024				
18	I63649354	F02	2/16/2024				
19	I63649355	F03	2/16/2024				
20	I63649356	F04	2/16/2024				

The truss drawing(s) referenced above have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Carter Components (Sanford, NC)).

Truss Design Engineer's Name: Gilbert, Eric

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

North Carolina COA: C-0844

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 TRENCO. Any project specific information included is for TRENCO customers file reference purpose only, and was not taken into account in the preparation of these designs. 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.



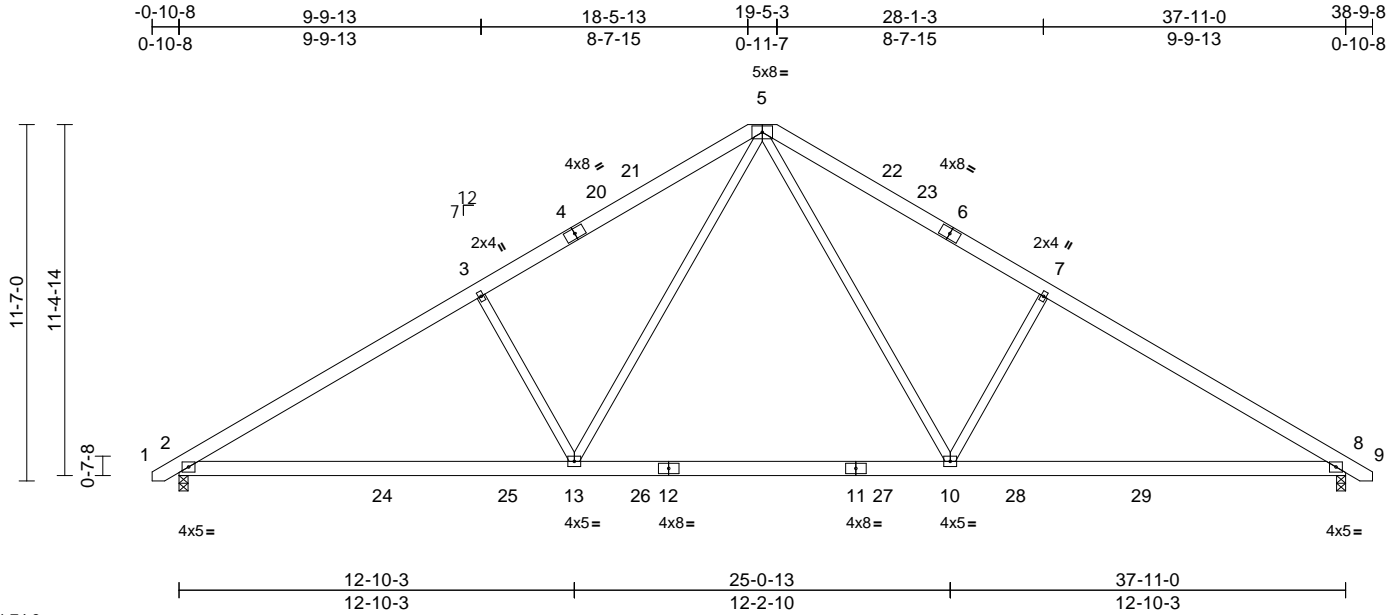
February 16, 2024

Job 24060041	Truss A01	Truss Type Common	Qty 4	Ply 1	DRB - 198 FaNC Job Reference (optional)	163649337
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Carter Components (Sanford, NC), Sanford, NC - 27332,

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Page: 1



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	Vert(LL)	-0.22	13-16	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	Vert(CT)	-0.42	13-16	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	Horz(CT)	0.07	8	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH							
BCDL	10.0									Weight: 251 lb	FT = 20%

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

**BRACING**  
 TOP CHORD Structural wood sheathing directly applied or 3-8-15 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.

**REACTIONS** (size) 2=0-3-8, 8=0-3-8  
 Max Horiz 2=-266 (LC 12)  
 Max Uplift 2=-153 (LC 14), 8=-153 (LC 15)  
 Max Grav 2=1845 (LC 24), 8=1845 (LC 25)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-2=0/20, 2-3=-2746/251, 3-5=-2558/312, 5-7=-2558/312, 7-8=-2746/251, 8-9=0/20  
 BOT CHORD 2-13=-253/2489, 10-13=-18/1622, 8-10=-91/2290  
 WEBS 5-13=-166/1229, 5-10=-167/1230, 3-13=-587/325, 7-10=-587/325

- NOTES**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=130mph (3-second gust)  
 Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;  
 Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-8-1 to 3-1-7, Interior (1) 3-1-7 to 15-2-0, Exterior(2R) 15-2-0 to 22-9-0, Interior (1) 22-9-0 to 34-9-9, Exterior(2E) 34-9-9 to 38-7-1 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) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10

- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 8) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 8. This connection is for uplift only and does not consider lateral forces.
- 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.

**LOAD CASE(S)** Standard



February 16, 2024

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

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



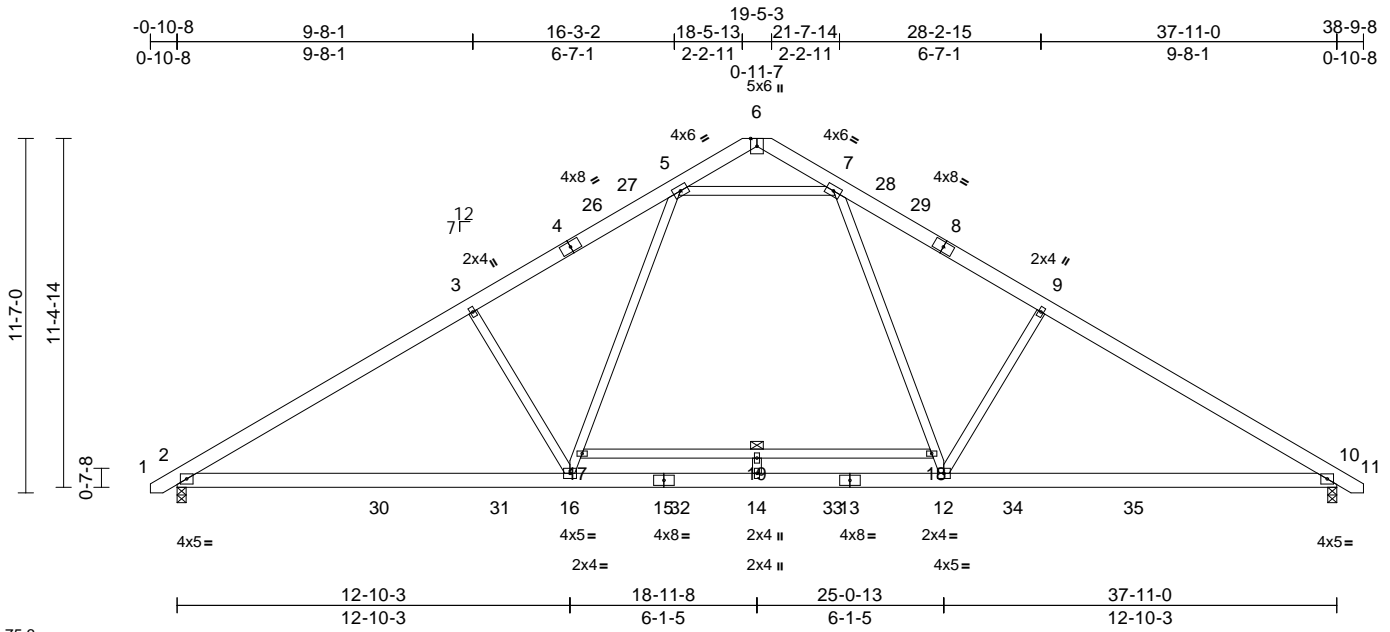
818 Soundside Road  
 Edenton, NC 27932

Job 24060041	Truss A02	Truss Type Common	Qty 3	Ply 1	DRB - 198 FaNC Job Reference (optional)	I63649338
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Carter Components (Sanford, NC), Sanford, NC - 27332,

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Page: 1



Scale = 1:75.3

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.52	Vert(LL)	-0.29	12-25	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.54	Vert(CT)	-0.40	12-25	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.91	Horz(CT)	0.05	10	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 269 lb	FT = 20%

**LUMBER**

TOP CHORD 2x6 SP No.2  
 BOT CHORD 2x6 SP 2400F 2.0E \*Except\* 15-13:2x6 SP No.2  
 WEBS 2x4 SP No.3 \*Except\* 17-18:2x4 SP No.2

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 3-9-1 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
 WEBS 1 Row at midpt 17-18

**REACTIONS**

(size) 2=0-3-8, 10=0-3-8  
 Max Horiz 2=266 (LC 13)  
 Max Uplift 2=-53 (LC 14), 10=-53 (LC 15)  
 Max Grav 2=1884 (LC 24), 10=1884 (LC 25)

**FORCES**

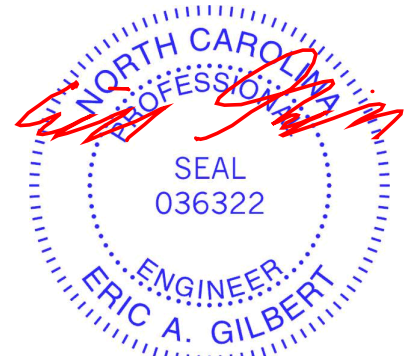
(lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-2=0/20, 2-3=-2822/28, 3-5=-2622/70, 5-6=-228/60, 6-7=-227/60, 7-9=-2622/70, 9-10=-2822/28, 10-11=0/20  
 BOT CHORD 2-16=-93/2551, 14-16=0/1946, 12-14=0/1946, 10-12=0/2352  
 WEBS 16-17=-27/1129, 5-17=-13/1164, 7-18=-14/1164, 12-18=-27/1129, 17-19=-83/0, 18-19=-83/0, 14-19=0/26, 5-7=-1661/136, 3-16=-561/331, 9-12=-561/331

**NOTES**

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

- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-8-1 to 3-1-7, Interior (1) 3-1-7 to 15-2-0, Exterior(2R) 15-2-0 to 22-9-0, Interior (1) 22-9-0 to 34-9-9, Exterior(2E) 34-9-9 to 38-7-1 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
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 200.0lb AC unit load placed on the bottom chord, 18-11-8 from left end, supported at two points, 5-0-0 apart.
- 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.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 10. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



February 16, 2024

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

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



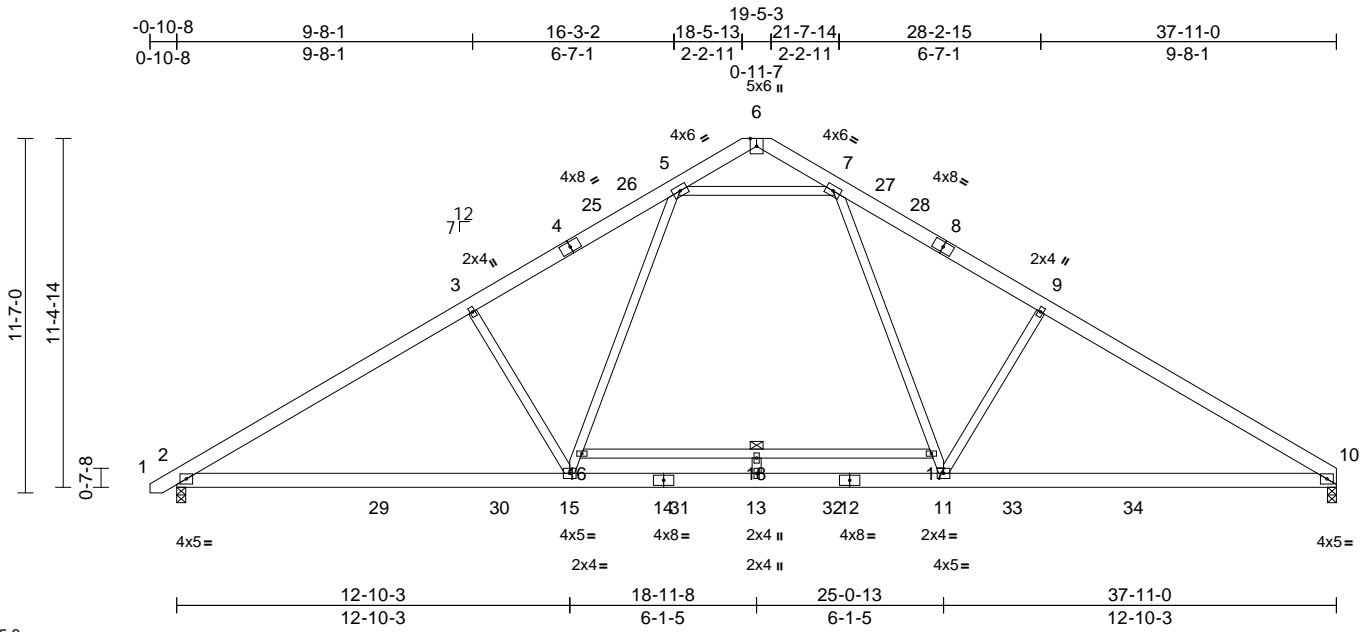
818 Soundside Road  
 Edenton, NC 27932

Job 24060041	Truss A03	Truss Type Common	Qty 1	Ply 1	DRB - 198 FaNC Job Reference (optional)	I63649339
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Carter Components (Sanford, NC), Sanford, NC - 27332,

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Page: 1



Scale = 1:75.3

Plate Offsets (X, Y): [6:0-0-1,Edge], [8:0-0-0,0-0-0], [9:0-0-0,0-0-0]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.52	Vert(LL)	-0.29	11-24	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.54	Vert(CT)	-0.40	11-24	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.91	Horz(CT)	0.05	10	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 267 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x6 SP No.2  
BOT CHORD 2x6 SP 2400F 2.0E \*Except\* 14-12:2x6 SP No.2  
WEBS 2x4 SP No.3 \*Except\* 16-17:2x4 SP No.2

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 3-8-15 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
WEBS 1 Row at midpt 16-17

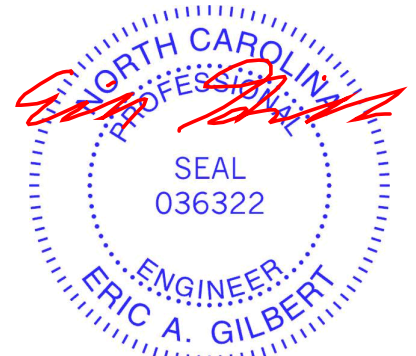
**REACTIONS** (size) 2=0-3-8, 10=0-3-8  
Max Horiz 2=262 (LC 11)  
Max Uplift 2=-53 (LC 14), 10=-40 (LC 15)  
Max Grav 2=1884 (LC 24), 10=1846 (LC 25)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/20, 2-3=-2822/29, 3-5=-2622/71, 5-6=-228/60, 6-7=-227/60, 7-9=-2624/72, 9-10=-2824/29  
BOT CHORD 2-15=-98/2547, 13-15=0/1942, 11-13=0/1942, 10-11=0/2356  
WEBS 3-15=-561/331, 15-16=-27/1129, 5-16=-13/1164, 7-17=-14/1166, 11-17=-27/1131, 9-11=-562/332, 5-7=-1661/136, 16-18=-83/0, 17-18=-83/0, 13-18=0/26

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

- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-8-1 to 3-1-7, Interior (1) 3-1-7 to 15-2-0, Exterior(2R) 15-2-0 to 22-9-0, Interior (1) 22-9-0 to 34-1-8, Exterior(2E) 34-1-8 to 37-11-0 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
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 200.0lb AC unit load placed on the bottom chord, 18-11-8 from left end, supported at two points, 5-0-0 apart.
- 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.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 10. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



February 16, 2024

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

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

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932

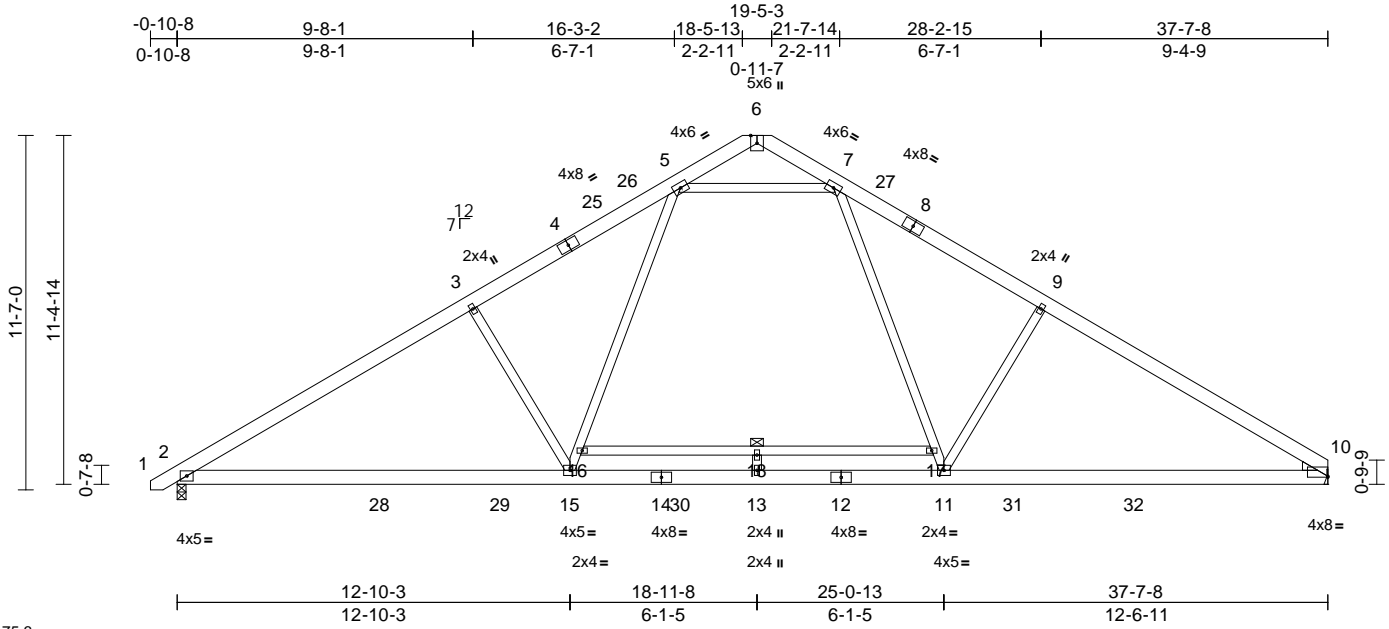


Job 24060041	Truss A04	Truss Type Common	Qty 2	Ply 1	DRB - 198 FaNC Job Reference (optional)	I63649340
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Carter Components (Sanford, NC), Sanford, NC - 27332,

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Page: 1



Scale = 1:75.3  
Plate Offsets (X, Y): [6:0-0-1,Edge], [10:Edge,0-0-5]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.54	Vert(LL)	-0.30	15-21	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.98	Vert(CT)	-0.41	15-21	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.90	Horz(CT)	0.06	10	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 266 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x6 SP No.2  
BOT CHORD 2x6 SP No.2 \*Except\* 2-14:2x6 SP 2400F 2.0E  
WEBS 2x4 SP No.3 \*Except\* 16-17:2x4 SP No.2  
WEDGE Right: 2x4 SP No.3

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 3-9-11 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.  
WEBS 1 Row at midpt 16-17

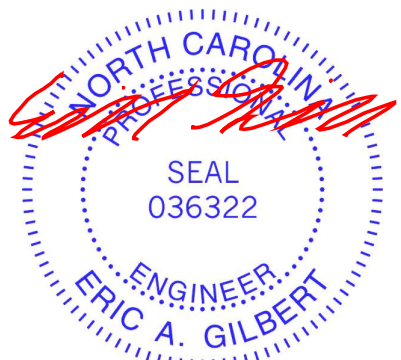
**REACTIONS** (size) 2=0-3-8, 10= Mechanical  
Max Horiz 2=262 (LC 11)  
Max Uplift 2=-54 (LC 14), 10=-36 (LC 15)  
Max Grav 2=1870 (LC 24), 10=1834 (LC 25)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/20, 2-3=-2798/29, 3-5=-2598/71, 5-6=-209/62, 6-7=-228/60, 7-9=-2546/75, 9-10=-2769/33  
BOT CHORD 2-15=-101/2525, 13-15=0/1907, 11-13=0/1907, 10-11=-47/2277  
WEBS 3-15=-569/331, 15-16=-27/1145, 5-16=-13/1180, 7-17=-21/1086, 11-17=-35/1051, 9-11=-521/333, 5-7=-1643/137, 16-18=-79/0, 17-18=-79/0, 13-18=0/29

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

- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-8-1 to 3-1-7, Interior (1) 3-1-7 to 15-2-0, Exterior(2R) 15-2-0 to 22-9-0, Interior (1) 22-9-0 to 33-10-0, Exterior(2E) 33-10-0 to 37-7-8 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
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 200.0lb AC unit load placed on the bottom chord, 18-11-8 from left end, supported at two points, 5-0-0 apart.
- 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.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 36 lb uplift at joint 10.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.

12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.  
**LOAD CASE(S)** Standard



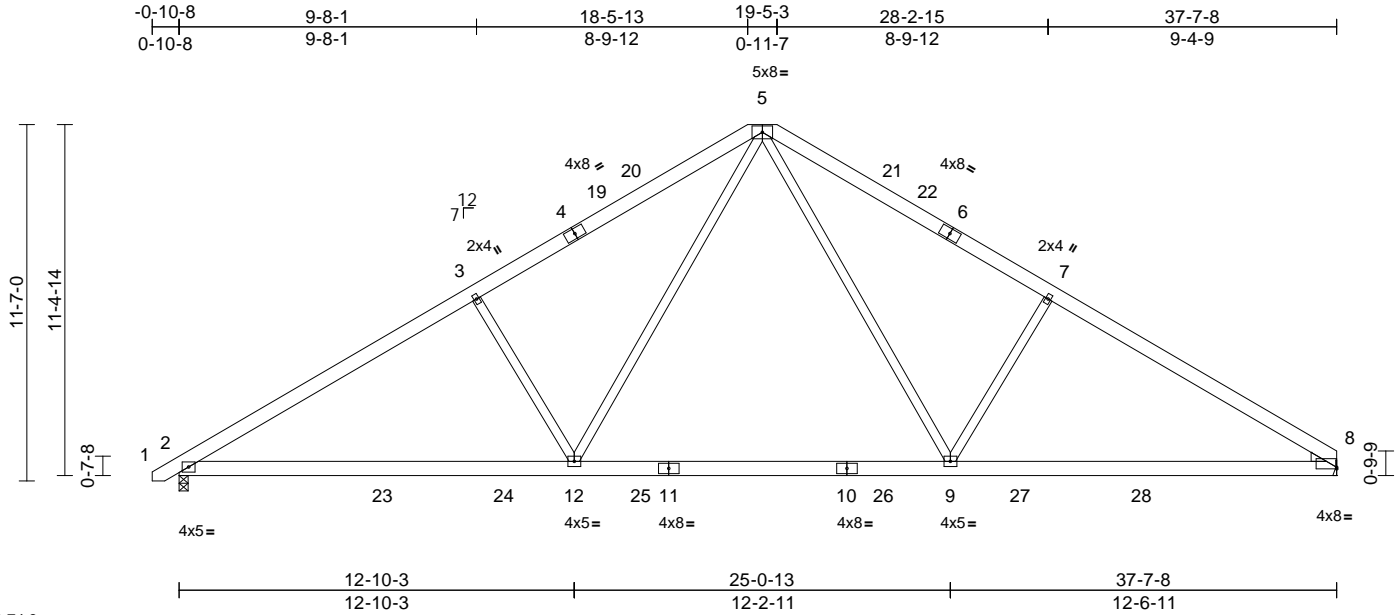
February 16, 2024

Job 24060041	Truss A05	Truss Type Common	Qty 4	Ply 1	DRB - 198 FaNC Job Reference (optional)	I63649341
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Thu Feb 15 09:05:45  
ID:WwVZvr8kEGpQ14gVz3e8czyIS?-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

Page: 1



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.72	Vert(LL)	-0.21	12-15	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.99	Vert(CT)	-0.40	12-15	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.50	Horz(CT)	0.06	8	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 248 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x6 SP No.2  
BOT CHORD 2x6 SP No.2  
WEBS 2x4 SP No.3  
WEDGE Right: 2x4 SP No.3

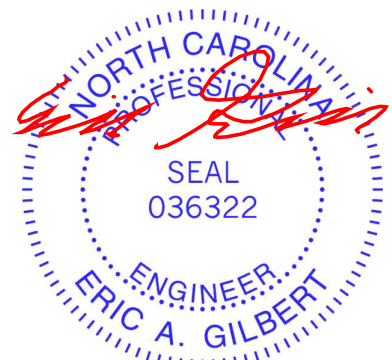
**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 3-7-9 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.

**REACTIONS** (size) 2=0-3-8, 8= Mechanical  
Max Horiz 2=262 (LC 11)  
Max Uplift 2=-153 (LC 14), 8=-137 (LC 15)  
Max Grav 2=1831 (LC 24), 8=1792 (LC 25)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/20, 2-3=-2727/251, 3-5=-2527/307, 5-7=-2479/305, 7-8=-2701/249  
BOT CHORD 2-12=-268/2469, 9-12=-27/1592, 8-9=-122/2222  
WEBS 3-12=-586/325, 5-12=-161/1225, 5-9=-156/1147, 7-9=-556/322

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 137 lb uplift at joint 8.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



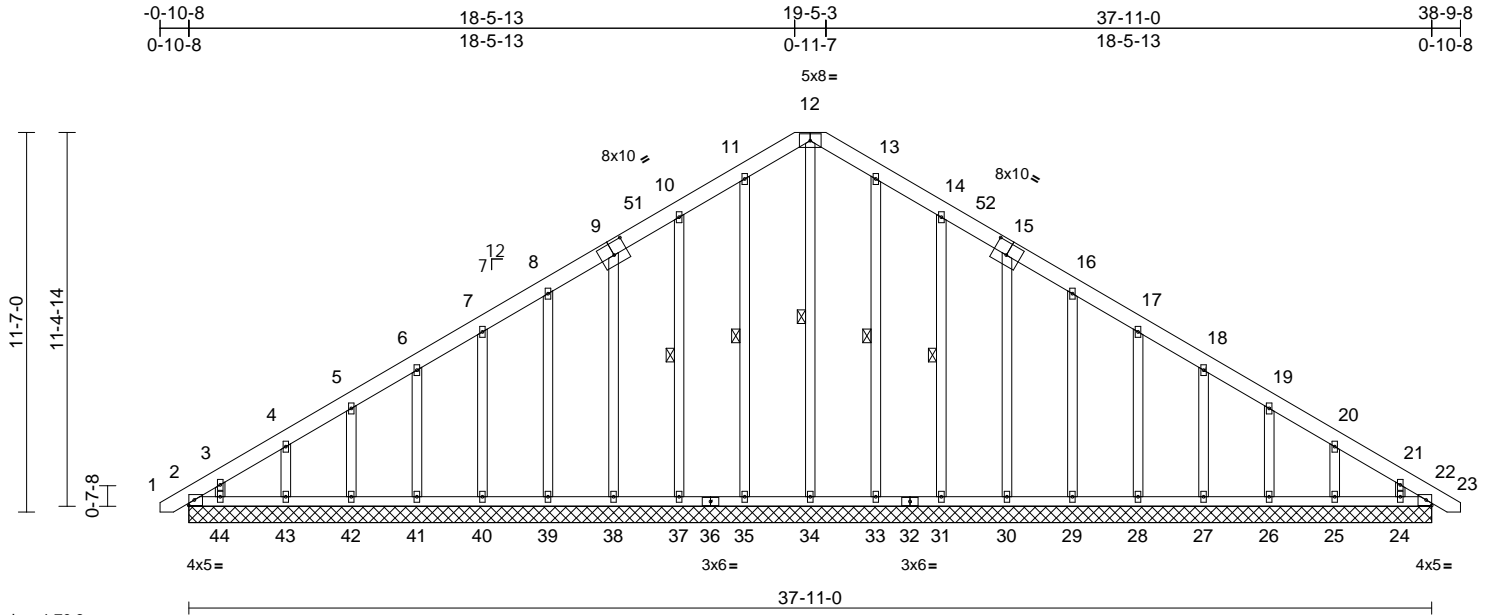
February 16, 2024

Job 24060041	Truss A06	Truss Type Common Supported Gable	Qty 2	Ply 1	DRB - 198 FaNC Job Reference (optional)	163649342
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Thu Feb 15 09:05:45  
ID:m3SKEq9uPIUOdLRqf?zWOzylQJ-RfC?PsB70Hq3NSgPqnL8w3uTXbGKwRCDoi7J4zJC?f

Page: 1



Scale = 1:70.3  
Plate Offsets (X, Y): [9:0-5-0,0-4-8], [15:0-5-0,0-4-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.06	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.15	Horz(CT)	0.01	22	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 317 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x6 SP No.2  
BOT CHORD 2x4 SP No.2  
OTHERS 2x4 SP No.3 \*Except\* 34-12:2x4 SP No.2

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
WEBS 1 Row at midpt 12-34, 11-35, 10-37, 13-33, 14-31

**REACTIONS** (size)  
2=37-11-0, 22=37-11-0,  
24=37-11-0, 25=37-11-0,  
26=37-11-0, 27=37-11-0,  
28=37-11-0, 29=37-11-0,  
30=37-11-0, 31=37-11-0,  
33=37-11-0, 34=37-11-0,  
35=37-11-0, 37=37-11-0,  
38=37-11-0, 39=37-11-0,  
40=37-11-0, 41=37-11-0,  
42=37-11-0, 43=37-11-0,  
44=37-11-0, 45=37-11-0,  
48=37-11-0  
Max Horiz 2=-269 (LC 12), 45=-269 (LC 12)  
Max Uplift 2=-118 (LC 10), 22=-25 (LC 11),  
24=-76 (LC 15), 25=-50 (LC 15),  
26=-51 (LC 15), 27=-50 (LC 15),  
28=-51 (LC 15), 29=-47 (LC 15),  
30=-52 (LC 15), 31=-64 (LC 15),  
33=-12 (LC 15), 35=-24 (LC 14),  
37=-61 (LC 14), 38=-51 (LC 14),  
39=-47 (LC 14), 40=-51 (LC 14),  
41=-50 (LC 14), 42=-51 (LC 14),  
43=-48 (LC 14), 44=-97 (LC 14),  
45=-118 (LC 10), 48=-25 (LC 11)

Max Grav 2=178 (LC 11), 22=113 (LC 27),  
24=138 (LC 25), 25=171 (LC 25),  
26=166 (LC 25), 27=167 (LC 25),  
28=167 (LC 25), 29=162 (LC 25),  
30=169 (LC 22), 31=232 (LC 22),  
33=240 (LC 22), 34=216 (LC 15),  
35=240 (LC 21), 37=232 (LC 21),  
38=169 (LC 21), 39=162 (LC 24),  
40=167 (LC 24), 41=167 (LC 24),  
42=166 (LC 28), 43=170 (LC 24),  
44=161 (LC 24), 45=178 (LC 11),  
48=113 (LC 27)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/20, 2-3=-271/232, 3-4=-232/209,  
4-5=-204/191, 5-6=-185/173, 6-7=-171/168,  
7-8=-157/175, 8-10=-143/231,  
10-11=-150/264, 11-12=-164/276,  
12-13=-164/276, 13-14=-150/248,  
14-16=-119/195, 16-17=-67/104,  
17-18=-58/57, 18-19=-68/42, 19-20=-84/58,  
20-21=-131/77, 21-22=-175/90, 22-23=0/20  
BOT CHORD 2-44=-120/162, 43-44=-76/162,  
42-43=-76/162, 41-42=-76/162,  
40-41=-76/162, 39-40=-76/162,  
38-39=-76/162, 37-38=-76/163,  
35-37=-76/163, 34-35=-76/163,  
33-34=-76/163, 31-33=-76/163,  
30-31=-76/163, 29-30=-75/162,  
28-29=-75/162, 27-28=-75/162,  
26-27=-75/162, 25-26=-75/162,  
24-25=-75/162, 22-24=-75/162

**WEBS** 12-34=-192/57, 11-35=-200/48,  
10-37=-192/85, 9-38=-129/75, 8-39=-122/71,  
7-40=-127/75, 6-41=-127/74, 5-42=-126/74,  
4-43=-130/75, 3-44=-113/93, 13-33=-200/36,  
14-31=-192/88, 15-30=-129/76,  
16-29=-122/71, 17-28=-127/75,  
18-27=-127/74, 19-26=-126/74,  
20-25=-131/76, 21-24=-98/79

**NOTES**  
1) Unbalanced roof live loads have been considered for this design.  
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-8-1 to 2-11-8, Exterior(2N) 2-11-8 to 14-11-8, Corner(3R) 14-11-8 to 22-11-8, Exterior(2N) 22-11-8 to 34-9-9, Corner(3E) 34-9-9 to 38-7-1 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



February 16, 2024

Continued on page 2

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

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



818 Soundside Road  
Edenton, NC 27932



Job 24060041	Truss A06	Truss Type Common Supported Gable	Qty 2	Ply 1	DRB - 198 FaNC Job Reference (optional)	I63649342
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Thu Feb 15 09:05:45  
ID:m3SKEq9uIPtUOdLRqf?zWOzylQJ-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?#

Page: 2

- 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) TCLK: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); ls=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 5) Unbalanced snow loads have been considered for this design.
- 6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 7) All plates are 2x4 MT20 unless otherwise indicated.
- 8) Gable requires continuous bottom chord bearing.
- 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 118 lb uplift at joint 2, 25 lb uplift at joint 22, 24 lb uplift at joint 35, 61 lb uplift at joint 37, 51 lb uplift at joint 38, 47 lb uplift at joint 39, 51 lb uplift at joint 40, 50 lb uplift at joint 41, 51 lb uplift at joint 42, 48 lb uplift at joint 43, 97 lb uplift at joint 44, 12 lb uplift at joint 33, 64 lb uplift at joint 31, 52 lb uplift at joint 30, 47 lb uplift at joint 29, 51 lb uplift at joint 28, 50 lb uplift at joint 27, 51 lb uplift at joint 26, 50 lb uplift at joint 25, 76 lb uplift at joint 24, 118 lb uplift at joint 2 and 25 lb uplift at joint 22.
- 13) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard

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

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



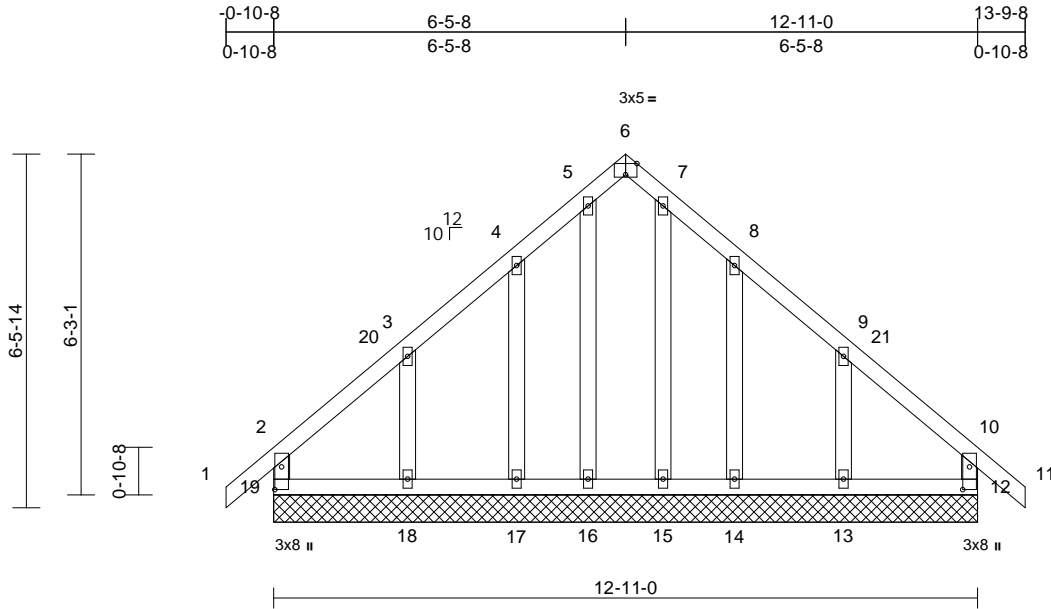
818 Soundside Road  
Edenton, NC 27932

Job 24060041	Truss B01	Truss Type Common Supported Gable	Qty 1	Ply 1	DRB - 198 FaNC Job Reference (optional)	163649343
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Carter Components (Sanford, NC), Sanford, NC - 27332,

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Page: 1



Scale = 1:42.3

Plate Offsets (X, Y): [6:0-2-8,Edge], [12:0-5-0,0-1-8], [19:0-5-0,0-1-8]

Loading	(psf)	Spacing	1-11-4	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.15	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.08	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.07	Horz(CT)	0.00	12	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MR								
BCDL	10.0											
										Weight: 84 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

**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) 12=12-11-0, 13=12-11-0,  
14=12-11-0, 15=12-11-0,  
16=12-11-0, 17=12-11-0,  
18=12-11-0, 19=12-11-0  
Max Horiz 19=161 (LC 12)  
Max Uplift 12=24 (LC 11), 13=121 (LC 15),  
14=69 (LC 15), 17=67 (LC 14),  
18=123 (LC 14), 19=38 (LC 10)  
Max Grav 12=158 (LC 24), 13=217 (LC 22),  
14=213 (LC 22), 15=132 (LC 22),  
16=132 (LC 21), 17=213 (LC 21),  
18=219 (LC 28), 19=169 (LC 25)

**FORCES**

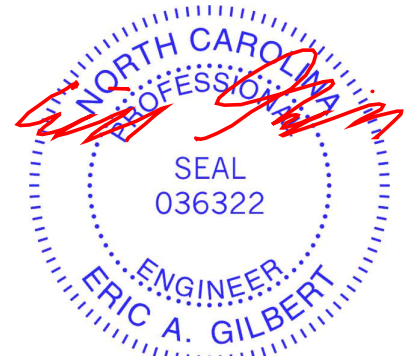
(lb) - Maximum Compression/Maximum Tension

TOP CHORD 2-19=-140/112, 1-2=0/38, 2-3=-109/88,  
3-4=-77/141, 4-5=-116/238, 5-6=-85/163,  
6-7=-85/163, 7-8=-117/238, 8-9=-77/142,  
9-10=-95/72, 10-11=0/38, 10-12=-136/108  
BOT CHORD 18-19=-71/134, 17-18=-71/134,  
16-17=-71/134, 15-16=-71/134,  
14-15=-71/134, 13-14=-71/134,  
12-13=-71/134  
WEBS 5-16=-126/24, 7-15=-125/25, 4-17=-181/137,  
3-18=-172/171, 8-14=-181/135,  
9-13=-172/177

**NOTES**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust)  
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 2-1-8, Exterior(2N) 2-1-8 to 3-5-8, Corner(3R) 3-5-8 to 9-5-8, Exterior(2N) 9-5-8 to 10-9-8, Corner(3E) 10-9-8 to 13-9-8 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.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- All plates are 2x4 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 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.

- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 38 lb uplift at joint 19, 24 lb uplift at joint 12, 67 lb uplift at joint 17, 123 lb uplift at joint 18, 69 lb uplift at joint 14 and 121 lb uplift at joint 13.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- LOAD CASE(S)** Standard



February 16, 2024

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

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



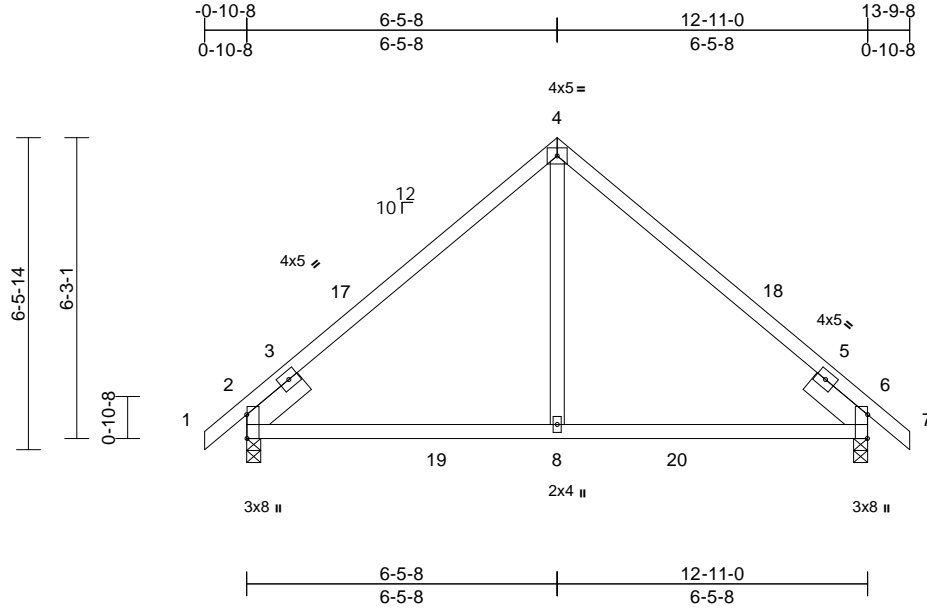
818 Soundside Road  
Edenton, NC 27932

Job 24060041	Truss B02	Truss Type Common	Qty 2	Ply 1	DRB - 198 FaNC Job Reference (optional)	I63649344
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Thu Feb 15 09:05:47  
ID:LoSSV0ajn2Y\_u1Orj9HpxMzyl?x-RfC?PsB70Hq3NSgPqnL8w3uTXbGKwRcDoi7J4zJC?f

Page: 1



Scale = 1:47.9

Plate Offsets (X, Y): [2:0-5-15,Edge], [6:0-5-15,Edge]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.80	Vert(LL)	-0.08	8-15	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.52	Vert(CT)	-0.11	8-15	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.14	Horz(CT)	0.04	2	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 64 lb	FT = 20%

**LUMBER**

TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x4 SP No.2  
 WEBS 2x4 SP No.3  
 SLIDER Left 2x6 SP No.2 -- 1-6-0, Right 2x6 SP No.2 -- 1-6-0

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 4-2-2 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS**

(size) 2=0-3-8, 6=0-3-8  
 Max Horiz 2=143 (LC 13)  
 Max Uplift 2=-52 (LC 14), 6=-52 (LC 15)  
 Max Grav 2=691 (LC 5), 6=691 (LC 6)

**FORCES**

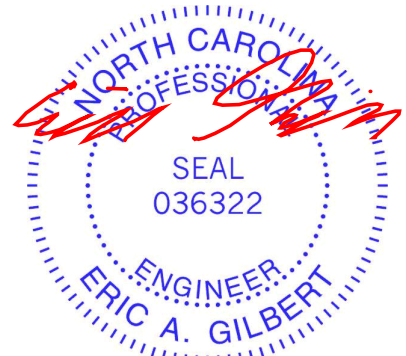
(lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-2=0/34, 2-4=-638/215, 4-6=-638/215, 6-7=0/34  
 BOT CHORD 2-8=-208/438, 6-8=-138/438  
 WEBS 4-8=0/366

**NOTES**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust)  
 Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;  
 Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Exterior(2R) 2-1-8 to 10-9-8, Exterior(2E) 10-9-8 to 13-9-8 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) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10

- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 8) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 6. This connection is for uplift only and does not consider lateral forces.
- 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.

**LOAD CASE(S)** Standard



February 16, 2024

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

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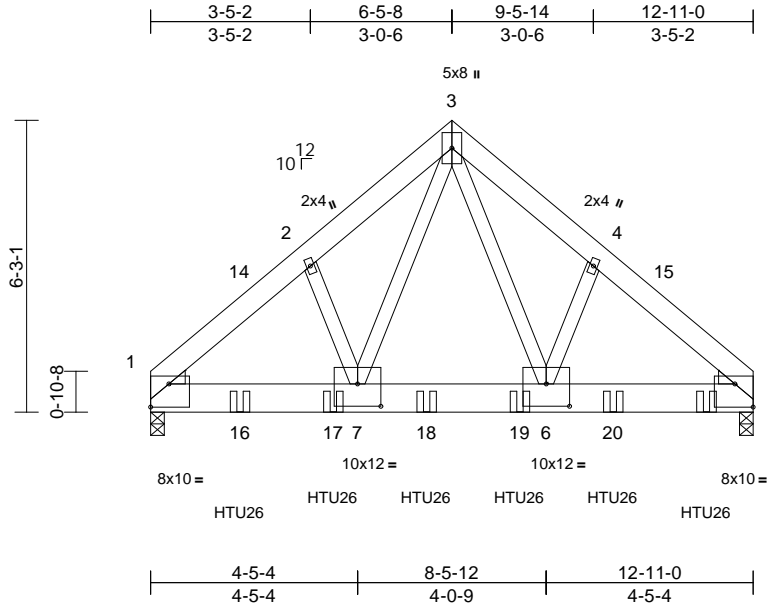
818 Soundside Road  
 Edenton, NC 27932

Job 24060041	Truss B03	Truss Type Common Girder	Qty 1	Ply 2	DRB - 198 FaNC Job Reference (optional)	163649345
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Thu Feb 15 09:05:47  
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Page: 1



Scale = 1:49.4

Plate Offsets (X, Y): [1:Edge,0-5-15], [5:Edge,0-5-15], [6:0-6-0,0-5-12], [7:0-6-0,0-5-12]

Loading	(psf)	Spacing	1-11-4	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.20	Vert(LL)	-0.04	6-7	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.27	Vert(CT)	-0.08	6-7	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.80	Horz(CT)	0.01	5	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 213 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x6 SP No.2  
BOT CHORD 2x8 SP 2400F 2.0E  
WEBS 2x4 SP No.3  
WEDGE Left: 2x4 SP No.3  
Right: 2x4 SP No.3

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

**REACTIONS** (size) 1=0-3-8, 5=0-3-8  
Max Horiz 1=-122 (LC 35)  
Max Uplift 1=-290 (LC 12), 5=-471 (LC 13)  
Max Grav 1=5420 (LC 21), 5=6200 (LC 22)

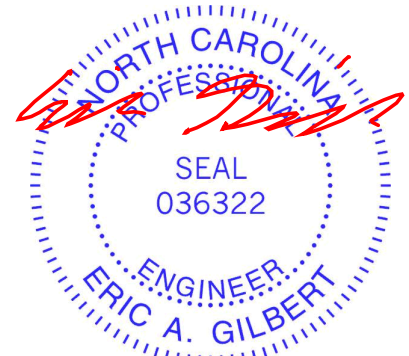
**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-6171/404, 2-3=-6077/454,  
3-4=-6039/525, 4-5=-6127/471  
BOT CHORD 1-7=-316/4743, 6-7=-196/3403,  
5-6=-321/4658  
WEBS 3-6=-409/3909, 4-6=-92/209, 3-7=-247/4003,  
2-7=-84/211

**NOTES**  
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.  
Bottom chords connected as follows: 2x8 - 2 rows staggered at 0-6-0 oc.  
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.  
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- 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.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1 and 5. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Use Simpson Strong-Tie HTU26 (20-10d Girder, 11-10dx1 1/2 Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 1-11-0 from the left end to 11-11-0 to connect truss(es) to back face of bottom chord.
- Fill all nail holes where hanger is in contact with lumber.

Concentrated Loads (lb)  
Vert: 13=-1485 (B), 16=-1587 (B), 17=-1587 (B), 18=-1485 (B), 19=-1485 (B), 20=-1485 (B)

**LOAD CASE(S)** Standard  
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 1-3=-58, 3-5=-58, 8-11=-19



February 16, 2024

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ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932

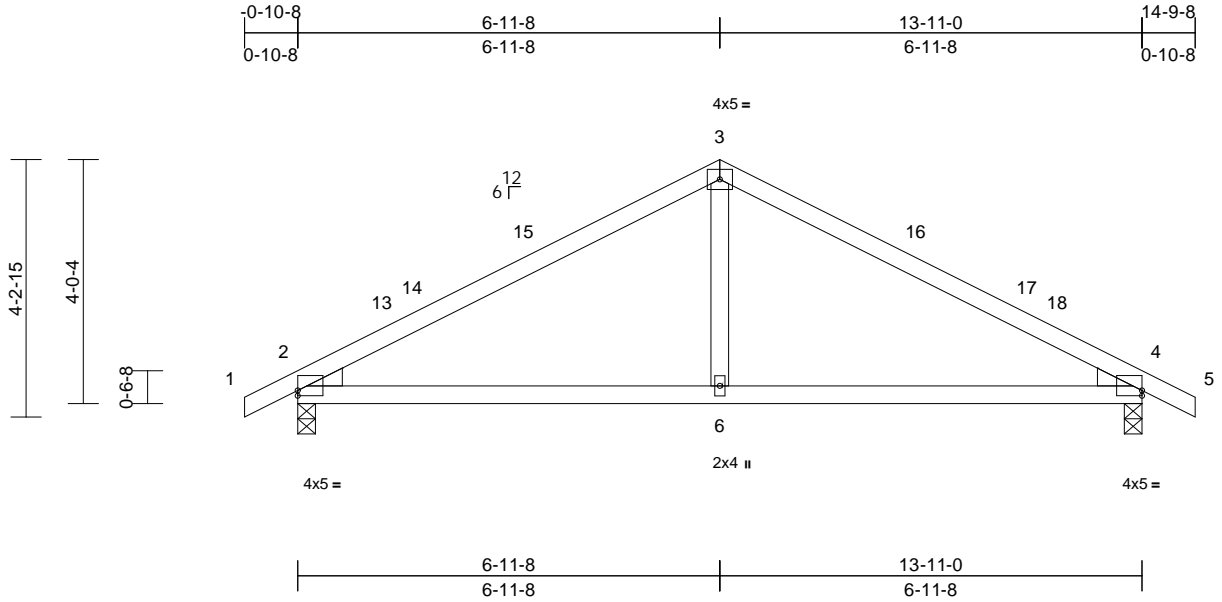


Job 24060041	Truss C01	Truss Type Common	Qty 3	Ply 1	DRB - 198 FaNC Job Reference (optional)	163649346
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Thu Feb 15 09:05:48  
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Page: 1



Scale = 1:38  
Plate Offsets (X, Y): [2:Edge,0-1-1], [4:Edge,0-1-1]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.76	Vert(LL)	-0.09	6-12	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.57	Vert(CT)	-0.14	6-12	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.12	Horz(CT)	0.02	2	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 54 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.1  
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 or 4-2-11 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 2=0-3-8, 4=0-3-8  
Max Horiz 2=62 (LC 14)  
Max Uplift 2=-70 (LC 14), 4=-70 (LC 15)  
Max Grav 2=692 (LC 21), 4=692 (LC 22)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/23, 2-3=-818/236, 3-4=-818/236, 4-5=0/23  
BOT CHORD 2-6=-198/615, 4-6=-190/615  
WEBS 3-6=0/310

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- One RT8A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 4. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard

- NOTES**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 3-11-8, Exterior(2R) 3-11-8 to 9-11-8, Interior (1) 9-11-8 to 11-9-8, Exterior(2E) 11-9-8 to 14-9-8 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



February 16, 2024

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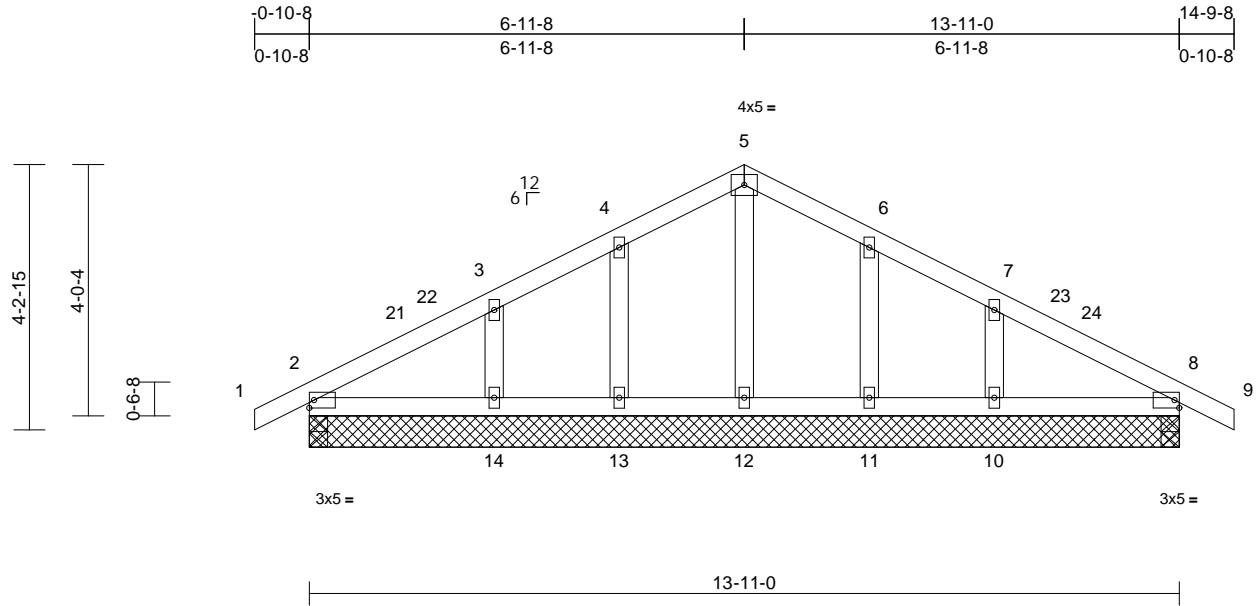
818 Soundside Road  
Edenton, NC 27932

Job 24060041	Truss C02	Truss Type Common Supported Gable	Qty 1	Ply 1	DRB - 198 FaNC Job Reference (optional)	I63649347
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.63 E Aug 30 2023 Print: 8.630 E Aug 30 2023 MiTek Industries, Inc. Fri Feb 16 13:58:35  
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Page: 1



Loading	(psf)	Spacing	1-11-4	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.10	Vert(LL)	0.00	14-17	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	0.00	10-20	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	8	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 64 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 or 6-0-0 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** All bearings 13-11-0.  
(lb) - Max Horiz 2=60 (LC 14), 15=60 (LC 14)  
Max Uplift All uplift 100 (lb) or less at joint(s) 2, 8, 10, 11, 13, 14, 15, 18  
Max Grav All reactions 250 (lb) or less at joint (s) 2, 8, 11, 12, 13, 15, 18 except 10=292 (LC 22), 14=292 (LC 21)

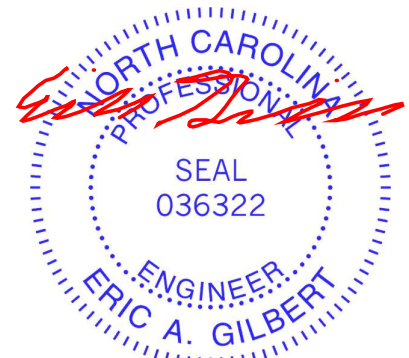
**FORCES** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

**NOTES**  
1) Unbalanced roof live loads have been considered for this design.  
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 2-1-8, Exterior(2N) 2-1-8 to 3-11-8, Corner(3R) 3-11-8 to 9-11-8, Exterior (2N) 9-11-8 to 11-9-8, Corner(3E) 11-9-8 to 14-9-8 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.

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- All plates are 2x4 MT20 unless otherwise indicated.
- 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.
- N/A

12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



February 16, 2024

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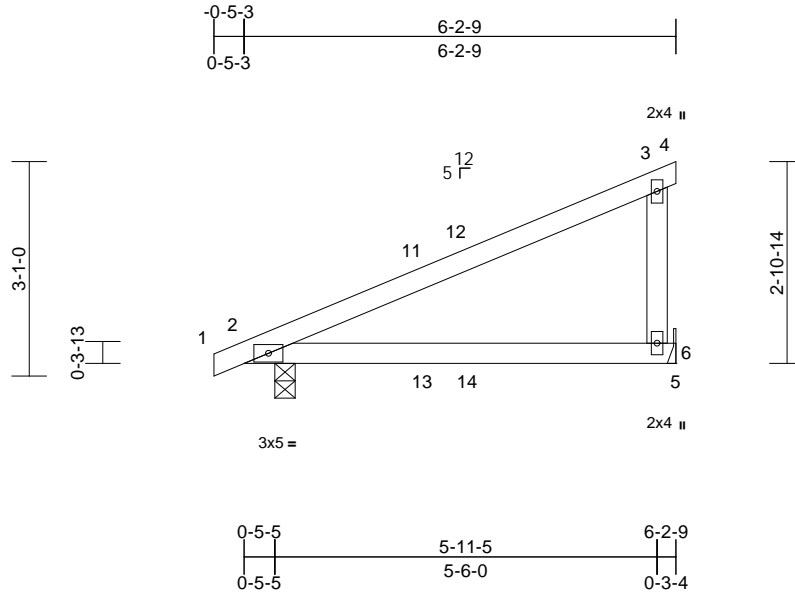
818 Soundside Road  
Edenton, NC 27932

Job 24060041	Truss D01	Truss Type Monopitch	Qty 3	Ply 1	DRB - 198 FaNC Job Reference (optional)	163649348
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Thu Feb 15 09:05:49  
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Page: 1



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.70	Vert(LL)	0.12	6-10	>602	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.46	Vert(CT)	-0.09	6-10	>775	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0											
											Weight: 23 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, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 2=0-3-8, 6= Mechanical  
Max Horiz 2=103 (LC 13)  
Max Uplift 2=-74 (LC 10), 6=-69 (LC 11)  
Max Grav 2=384 (LC 21), 6=326 (LC 21)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/10, 2-3=-110/77, 3-4=-10/0, 3-6=-247/132  
BOT CHORD 2-6=-91/115, 5-6=0/0

- NOTES**
- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust)  
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;  
Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 3-7-12, Exterior(2E) 3-7-12 to 6-7-12 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
  - 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
  - 3) Unbalanced snow loads have been considered for this design.
  - 4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.

- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 6) \* This truss has been designed for a live load of 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.
  - 7) Refer to girder(s) for truss to truss connections.
  - 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 69 lb uplift at joint 6.
  - 9) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
  - 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- LOAD CASE(S)** Standard



February 16, 2024

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

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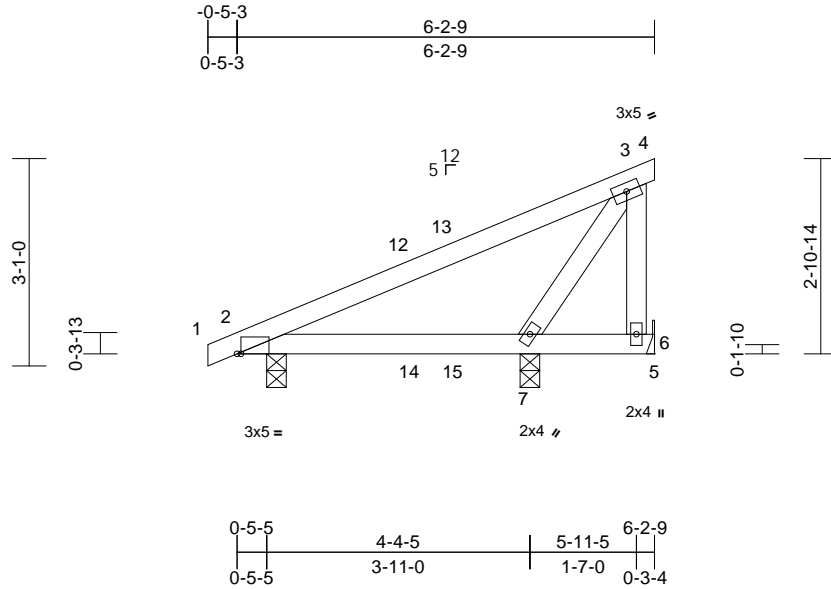
818 Soundside Road  
Edenton, NC 27932

Job 24060041	Truss D02	Truss Type Monopitch	Qty 2	Ply 1	DRB - 198 FaNC Job Reference (optional)	I63649349
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Thu Feb 15 09:05:49  
ID:W\_FFx8hjEi8l6t7jYygbzuvVhh-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrcDoi7J4zJC?f

Page: 1



Scale = 1:34.3

Plate Offsets (X, Y): [2:0-0-11,Edge]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.62	Vert(LL)	0.02	7-11	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.45	Vert(CT)	0.02	8	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.17	Horz(CT)	0.00	6	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0											
											Weight: 27 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, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS**

(size) 2=0-3-8, 6= Mechanical, 7=0-3-8  
Max Horiz 2=103 (LC 13)  
Max Uplift 2=-90 (LC 10), 6=-140 (LC 14), 7=-190 (LC 21)  
Max Grav 2=444 (LC 21), 6=456 (LC 21), 7=135 (LC 14)

**FORCES**

(lb) - Maximum Compression/Maximum Tension

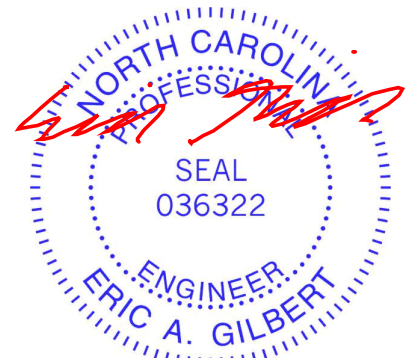
TOP CHORD 1-2=0/10, 2-3=-360/222, 3-4=-10/0, 3-6=-473/333  
BOT CHORD 2-7=-161/225, 6-7=-32/47, 5-6=0/0  
WEBS 3-7=-371/403

**NOTES**

- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust)  
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;  
Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 3-7-12, Exterior(2E) 3-7-12 to 6-7-12 zone; cantilever left and right exposed; end vertical left and right exposed; porch left exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.

- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) \* This truss has been designed for a live load of 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.
- 7) Refer to girder(s) for truss to truss connections.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 140 lb uplift at joint 6.
- 9) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 7. This connection is for uplift only and does not consider lateral forces.
- 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



February 16, 2024

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

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818 Soundside Road  
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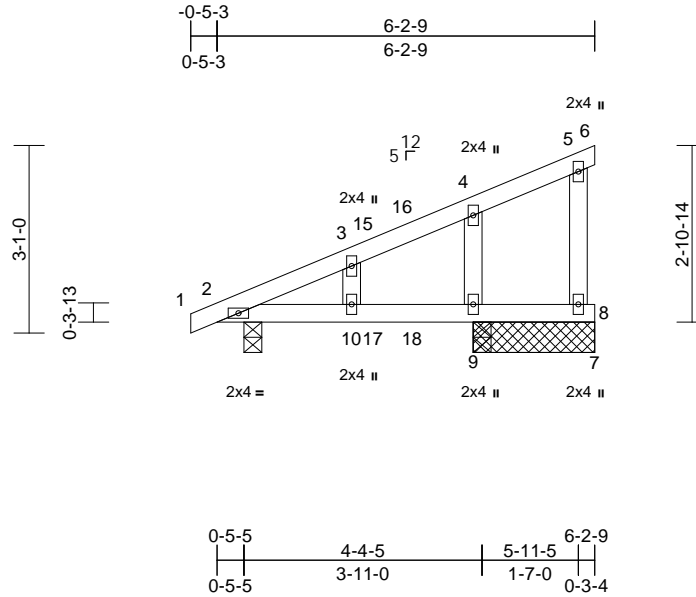


Job 24060041	Truss D03	Truss Type Monopitch Structural Gable	Qty 1	Ply 1	DRB - 198 FaNC Job Reference (optional)	163649350
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Carter Components (Sanford, NC), Sanford, NC - 27332,

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Scale = 1:37.9

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.16	Vert(LL)	0.01	10	>999	240	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.18	Vert(CT)	-0.01	10	>999	180	
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	8	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP							
BCDL	10.0									Weight: 27 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

**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.

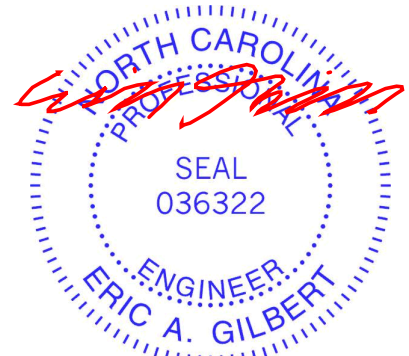
**REACTIONS** (size) 2=0-3-8, 8=2-0-0, 9=0-3-8  
Max Horiz 2=103 (LC 13)  
Max Uplift 2=-45 (LC 10), 8=-2 (LC 15), 9=-75 (LC 14)  
Max Grav 2=257 (LC 21), 8=58 (LC 21), 9=396 (LC 21)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/10, 2-3=-74/88, 3-4=-63/86, 4-5=-54/44, 5-6=-10/0, 5-8=-65/15  
BOT CHORD 2-10=-91/115, 9-10=-32/47, 8-9=-32/47, 7-8=0/0  
WEBS 4-9=-267/208, 3-10=-79/42

- NOTES**
- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 3-7-12, Exterior(2E) 3-7-12 to 6-7-12 zone; cantilever left and right exposed; end vertical left and right exposed; porch left 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) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 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) N/A
- 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



February 16, 2024

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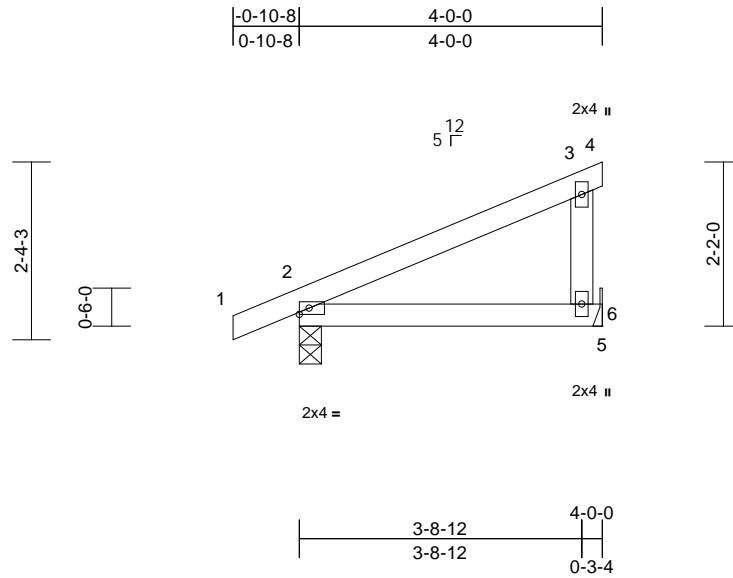
818 Soundside Road  
Edenton, NC 27932

Job 24060041	Truss D04	Truss Type Monopitch	Qty 3	Ply 1	DRB - 198 FaNC Job Reference (optional)	I63649351
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Thu Feb 15 09:05:50  
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Page: 1



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.28	Vert(LL)	-0.01	6-9	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.18	Vert(CT)	-0.02	6-9	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0											
											Weight: 16 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 4-0-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 2=0-3-8, 6= Mechanical  
Max Horiz 2=75 (LC 13)  
Max Uplift 2=-33 (LC 14), 6=-33 (LC 14)  
Max Grav 2=298 (LC 21), 6=231 (LC 21)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/31, 2-3=-103/89, 3-4=-10/0, 3-6=-173/78  
BOT CHORD 2-6=-53/90, 5-6=0/0

- 6) \* 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.
- 7) Refer to girder(s) for truss to truss connections.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 33 lb uplift at joint 6.
- 9) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
- 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- LOAD CASE(S)** Standard

- NOTES**
- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 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) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
  - 3) Unbalanced snow loads have been considered for this design.
  - 4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
  - 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.



February 16, 2024

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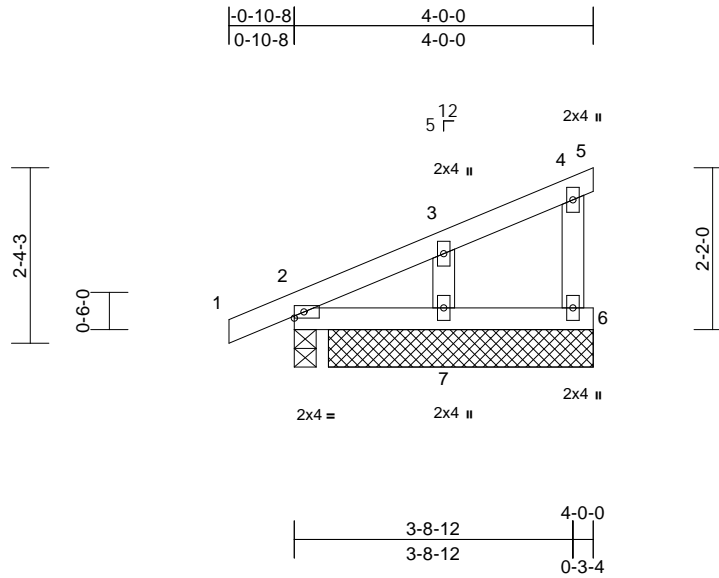
818 Soundside Road  
Edenton, NC 27932

Job 24060041	Truss D05	Truss Type Monopitch Supported Gable	Qty 1	Ply 1	DRB - 198 FaNC Job Reference (optional)	163649352
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Thu Feb 15 09:05:50  
ID:3?Sn4OizGzysUYErnOeH1\_zykIW-RfC?PsB70Hq3NSgPqnL8w3uITxbGkWrCDoi7J4zJC?f

Page: 1



Scale = 1:30.8

Loading	(psf)	Spacing	1-11-4	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	0.00	7-10	>999	240	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	0.00	7-10	>999	180	
TCDL	10.0	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	5	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP							
BCDL	10.0									Weight: 17 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

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

**REACTIONS** (size) 2=0-3-8, 5=3-6-8, 6=3-6-8, 7=3-6-8  
Max Horiz 2=72 (LC 13)  
Max Uplift 2=-20 (LC 10), 5=-22 (LC 21), 6=-24 (LC 14), 7=-41 (LC 14)  
Max Grav 2=186 (LC 21), 5=8 (LC 14), 6=124 (LC 21), 7=220 (LC 21)

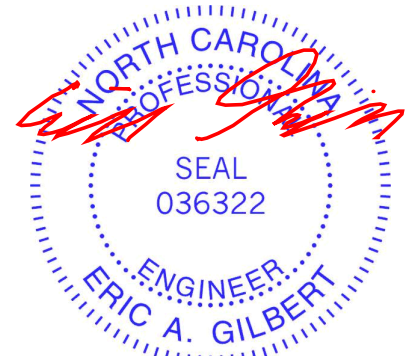
**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/30, 2-3=-100/78, 3-4=-40/48, 4-5=-18/7, 4-6=-112/80  
BOT CHORD 2-7=-36/66, 6-7=-22/39  
WEBS 3-7=-174/172

- NOTES**
- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 2-0-0, Exterior(2N) 2-0-0 to 4-0-0 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) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 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 22 lb uplift at joint 5.
- 10) N/A

- 11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



February 16, 2024

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**TRENCO**  
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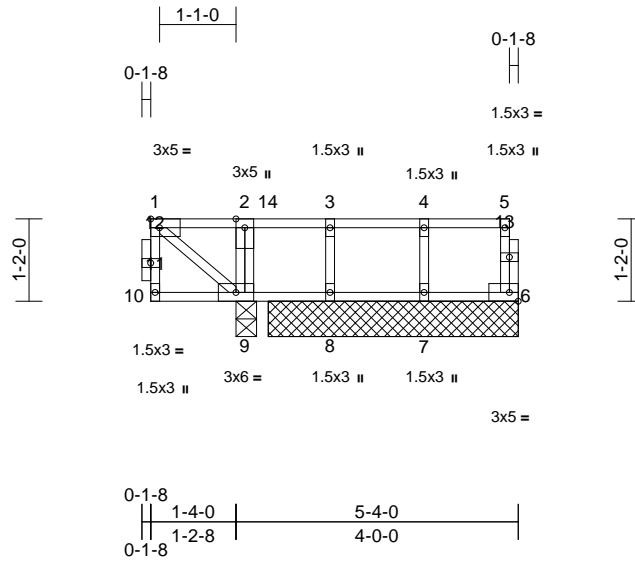
818 Soundside Road  
Edenton, NC 27932

Job 24060041	Truss F01	Truss Type Floor	Qty 1	Ply 1	DRB - 198 FaNC Job Reference (optional)	I63649353
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Thu Feb 15 09:05:51  
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Page: 1



Scale = 1:32.7

Loading	(psf)	Spacing	1-4-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.69	Vert(LL)	0.01	8-9	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.66	Vert(CT)	0.01	8-9	>999	240		
BCLL	0.0	Rep Stress Incr	NO	WB	0.13	Horz(CT)	0.00	6	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-MSH							Weight: 28 lb	FT = 20%F, 11%E

**LUMBER**  
TOP CHORD 2x4 SP 2400F 2.0E(flat)  
BOT CHORD 2x4 SP 2400F 2.0E(flat)  
WEBS 2x4 SP No.3(flat)  
OTHERS 2x4 SP No.3(flat)

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 5-4-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing, Except: 10-0-0 oc bracing: 9-10.

**REACTIONS** (size) 6=3-6-8, 7=3-6-8, 8=3-6-8, 9=0-3-8  
Max Uplift 6=-25 (LC 3), 8=-540 (LC 3)  
Max Grav 6=23 (LC 4), 7=251 (LC 5), 8=-55 (LC 4), 9=887 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-10=-166/0, 5-6=-23/16, 1-2=-1/1, 2-3=-1/1, 3-4=-1/1, 4-5=-1/1  
BOT CHORD 9-10=0/0, 8-9=-1/1, 7-8=-1/1, 6-7=-1/1  
WEBS 2-9=-485/0, 1-9=-1/2, 3-8=-11/273, 4-7=-177/0

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

6) N/A

- 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.
  - 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
- Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (lb/ft)  
Vert: 6-10=-7, 1-5=-67  
Concentrated Loads (lb)  
Vert: 1=300



February 16, 2024

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

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

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932

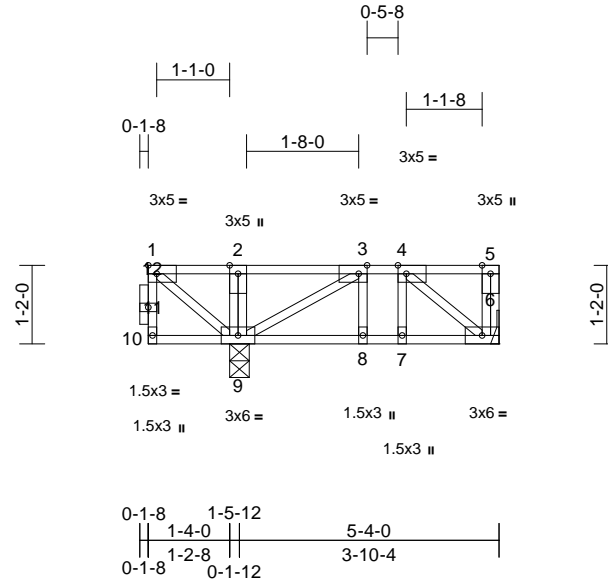


Job 24060041	Truss F02	Truss Type Floor	Qty 1	Ply 1	DRB - 198 FaNC Job Reference (optional)	I63649354
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Thu Feb 15 09:05:52  
ID: ?L11H?LfzoPJ2wjSPfvjUzuVfy-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:34.2

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

Loading	(psf)	Spacing	1-4-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.26	Vert(LL)	0.01	8-9	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.14	Vert(CT)	0.01	8-9	>999	240		
BCLL	0.0	Rep Stress Incr	NO	WB	0.13	Horz(CT)	0.00	6	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-MSH							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)

- 1) Dead + Floor Live (balanced): Lumber Increase=1.00,  
 Plate Increase=1.00  
 Uniform Loads (lb/ft)  
 Vert: 6-10=-7, 1-5=-67  
 Concentrated Loads (lb)  
 Vert: 1=-300

**BRACING**

TOP CHORD Structural wood sheathing directly applied or  
 5-4-0 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 6-0-0 oc  
 bracing, Except:  
 10-0-0 oc bracing: 9-10.

**REACTIONS**

(size) 6= Mechanical, 9=0-3-8  
 Max Uplift 6=-80 (LC 3)  
 Max Grav 6=105 (LC 4), 9=648 (LC 1)

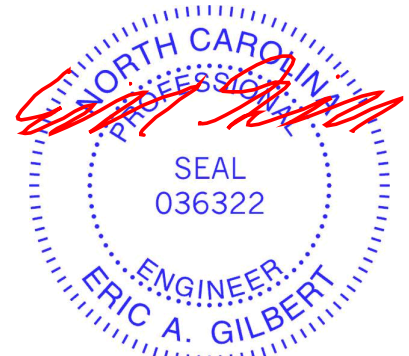
**FORCES**

(lb) - Maximum Compression/Maximum  
 Tension  
 TOP CHORD 1-10=0/4, 5-6=-53/0, 1-2=0/415, 2-3=0/415,  
 3-4=-80/149, 4-5=0/0  
 BOT CHORD 9-10=0/0, 8-9=-149/80, 7-8=-149/80,  
 6-7=-149/80  
 WEBS 2-9=-116/0, 1-9=-537/0, 4-7=-79/24,  
 3-9=-398/0, 3-8=-10/87, 4-6=-102/190

**NOTES**

- Unbalanced floor live loads have been considered for this design.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 80 lb uplift at joint 6.
- 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.
- 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



February 16, 2024

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

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



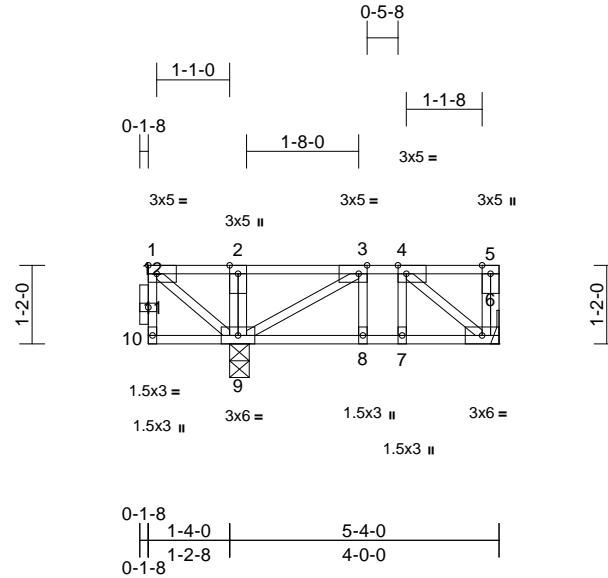
818 Soundside Road  
 Edenton, NC 27932

Job 24060041	Truss F03	Truss Type Floor	Qty 9	Ply 1	DRB - 198 FaNC Job Reference (optional)	163649355
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Thu Feb 15 09:05:52  
ID:lyU6JCeikaQvwcY4fsLLiYzuVfA-RfC?PsB70Hq3NSgPqnL8w3uITXbGKwRCDoi7J4zJC?f

Page: 1



Scale = 1:34.2

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

Loading	(psf)	Spacing	1-4-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.26	Vert(LL)	0.01	8-9	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.14	Vert(CT)	0.01	8-9	>999	240		
BCLL	0.0	Rep Stress Incr	NO	WB	0.13	Horz(CT)	0.00	6	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-MSH							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)

- 1) Dead + Floor Live (balanced): Lumber Increase=1.00,  
Plate Increase=1.00  
Uniform Loads (lb/ft)  
Vert: 6-10=-7, 1-5=-67  
Concentrated Loads (lb)  
Vert: 1=-300

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 5-4-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing, Except:  
10-0-0 oc bracing: 9-10.

**REACTIONS**

(size) 6= Mechanical, 9=0-3-8  
Max Uplift 6=-80 (LC 3)  
Max Grav 6=105 (LC 4), 9=648 (LC 1)

**FORCES**

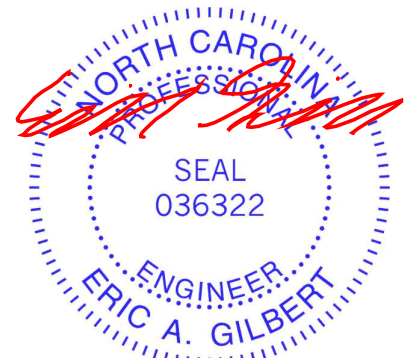
(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-10=0/4, 5-6=-53/0, 1-2=0/415, 2-3=0/415,  
3-4=-80/149, 4-5=0/0  
BOT CHORD 9-10=0/0, 8-9=-149/80, 7-8=-149/80,  
6-7=-149/80  
WEBS 1-9=-537/0, 4-7=-79/24, 3-9=-398/0,  
3-8=-10/87, 4-6=-102/190, 2-9=-116/0

**NOTES**

- Unbalanced floor live loads have been considered for this design.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 80 lb uplift at joint 6.
- 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.
- 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



February 16, 2024

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

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



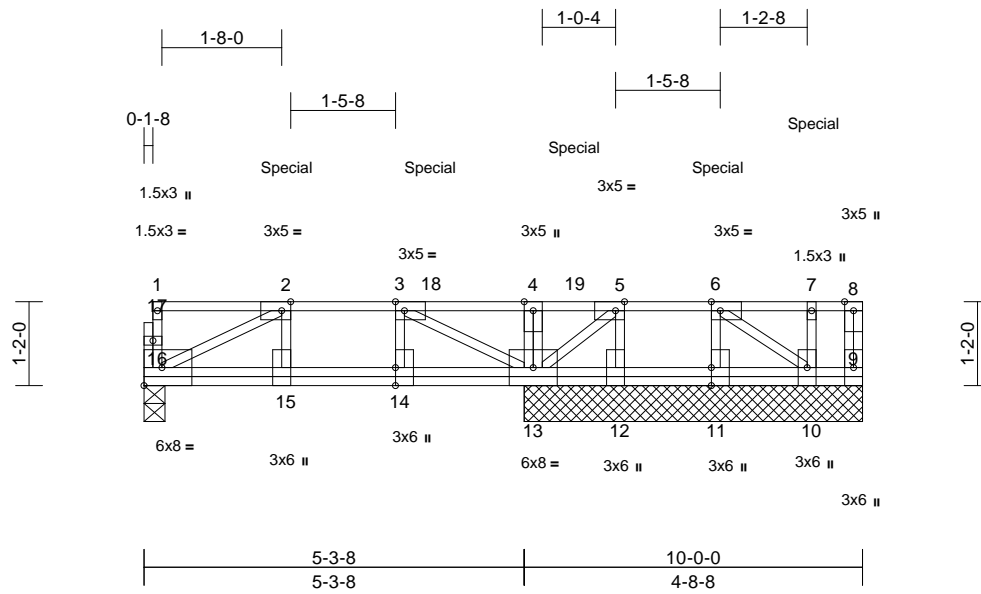
818 Soundside Road  
Edenton, NC 27932

Job 24060041	Truss F04	Truss Type Floor	Qty 1	Ply 1	DRB - 198 FaNC Job Reference (optional)	163649356
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Thu Feb 15 09:05:52  
ID:IVXzSq21Jci5?q9ce?yK4jzuVee-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC7f

Page: 1



Scale = 1:32.1

Plate Offsets (X, Y): [2:0-1-8,Edge], [3:0-1-8,Edge], [5:0-1-8,Edge], [6:0-1-8,Edge], [11:0-3-0,Edge], [14:0-3-0,Edge]

Loading	(psf)	Spacing	1-4-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.65	Vert(LL)	-0.01	15	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.17	Vert(CT)	-0.01	15	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.24	Horz(CT)	0.00	9	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-MSH							Weight: 67 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 6-0-0 oc bracing.

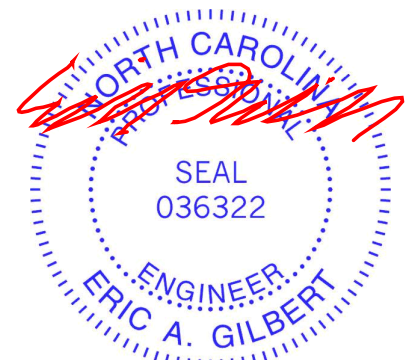
**REACTIONS** (size)  
9=4-8-8, 10=4-8-8, 11=4-8-8,  
12=4-8-8, 13=4-8-8, 16=0-3-8  
Max Uplift 10=60 (LC 8), 11=59 (LC 8),  
13=205 (LC 8), 16=96 (LC 8)  
Max Grav 9=8 (LC 12), 10=347 (LC 29),  
11=337 (LC 30), 12=120 (LC 11),  
13=901 (LC 30), 16=457 (LC 6)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-16=-52/0, 8-9=-7/0, 1-2=0/0, 2-3=-703/176,  
3-4=-27/125, 4-5=-27/125, 5-6=-27/5,  
6-7=0/0, 7-8=0/0  
BOT CHORD 15-16=-176/703, 14-15=-176/703,  
13-14=-176/703, 12-13=-5/27, 11-12=-5/27,  
10-11=-5/27, 9-10=0/0  
WEBS 4-13=-344/75, 3-13=-904/231,  
2-16=-802/201, 2-15=-38/19, 3-14=-3/39,  
5-12=-121/0, 6-11=-320/63, 7-10=-335/67,  
5-13=-155/31, 6-10=-34/7

**NOTES**  
1) Unbalanced floor live loads have been considered for this design.  
2) N/A  
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) N/A
- 6) 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.
- 7) 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.
- 8) CAUTION, Do not erect truss backwards.
- 9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 444 lb down and 147 lb up at 2-0-0, and 444 lb down and 147 lb up at 4-0-0, and 312 lb down and 77 lb up at 6-0-0 on top chord. The design/selection of such connection device(s) is the responsibility of others.
- 10) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard  
1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (lb/ft)  
Vert: 9-16=-7, 1-8=-67  
Concentrated Loads (lb)  
Vert: 2=-106 (F), 6=-102 (F), 7=-105 (F), 18=-106 (F), 19=-102 (F)



February 16, 2024

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**  
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

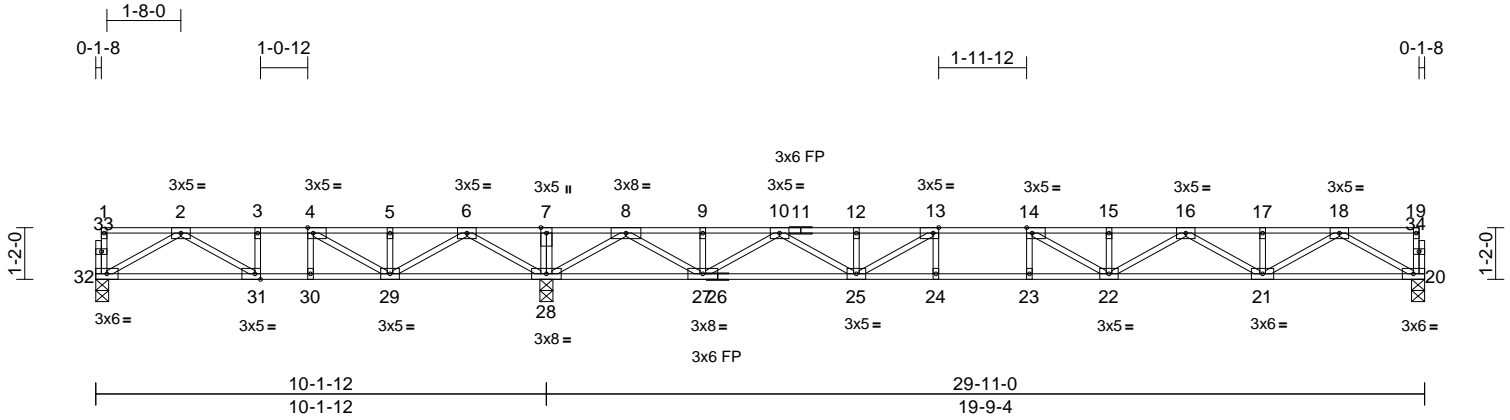
ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate  
818 Soundside Road  
Edenton, NC 27932

Job 24060041	Truss F05	Truss Type Floor	Qty 4	Ply 1	DRB - 198 FaNC Job Reference (optional)	I63649357
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Thu Feb 15 09:05:53  
ID:C9TTGtXBLPCeGk2FMkfAZfzuVcj-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?F

Page: 1



Scale = 1:51.9

Plate Offsets (X, Y): [4:0-1-8,Edge], [13:0-1-8,Edge], [14:0-1-8,Edge], [31:0-1-8,Edge]

Loading	(psf)	Spacing	1-4-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.67	Vert(LL)	-0.26	22-23	>896	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.79	Vert(CT)	-0.36	22-23	>657	240		
BCLL	0.0	Rep Stress Incr	YES	WB	0.58	Horz(CT)	0.03	20	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-MSH							Weight: 151 lb	FT = 20%F, 11%E

**LUMBER**

TOP CHORD 2x4 SP No.2(flat)  
 BOT CHORD 2x4 SP No.2(flat) \*Except\* 26-20:2x4 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 6-0-0 oc bracing.

**REACTIONS** (size) 20=0-3-8, 28=0-3-8, 32=0-3-8  
 Max Uplift 32=85 (LC 4)  
 Max Grav 20=622 (LC 4), 28=1401 (LC 1), 32=284 (LC 3)

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

TOP CHORD 1-32=-45/0, 19-20=-47/0, 1-2=-3/0,  
 2-3=-542/482, 3-4=-542/482, 4-5=-329/940,  
 5-6=-329/940, 6-7=0/1946, 7-8=0/1946,  
 8-9=-562/69, 9-10=-562/69, 10-12=-1958/0,  
 12-13=-1958/0, 13-14=-2482/0,  
 14-15=-2508/0, 15-16=-2508/0,  
 16-17=-1692/0, 17-18=-1692/0, 18-19=-3/0  
 BOT CHORD 31-32=-179/395, 30-31=-482/542,  
 29-30=-482/542, 28-29=-1310/0,  
 27-28=-669/0, 25-27=0/1367, 24-25=0/2482,  
 23-24=0/2482, 22-23=0/2482, 21-22=0/2190,  
 20-21=0/972  
 WEBS 7-28=-135/0, 6-28=-976/0, 2-32=-454/207,  
 6-29=0/721, 2-31=-354/172, 5-29=-114/38,  
 3-31=-72/126, 4-29=-689/0, 4-30=0/129,  
 8-28=-1478/0, 18-20=-1122/0, 8-27=0/1226,  
 18-21=0/841, 9-27=-116/0, 17-21=-114/0,  
 10-27=-961/0, 16-21=-581/0, 10-25=0/711,  
 16-22=0/371, 12-25=-118/65, 15-22=-186/0,  
 13-25=-783/0, 14-22=-253/290,  
 13-24=-5/164, 14-23=-142/27

**NOTES**

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All plates are 1.5x3 MT20 unless otherwise indicated.
- 3) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 32. This connection is for uplift only and does not consider lateral forces.
- 4) 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.
- 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



February 16, 2024

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

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818 Soundside Road  
 Edenton, NC 27932

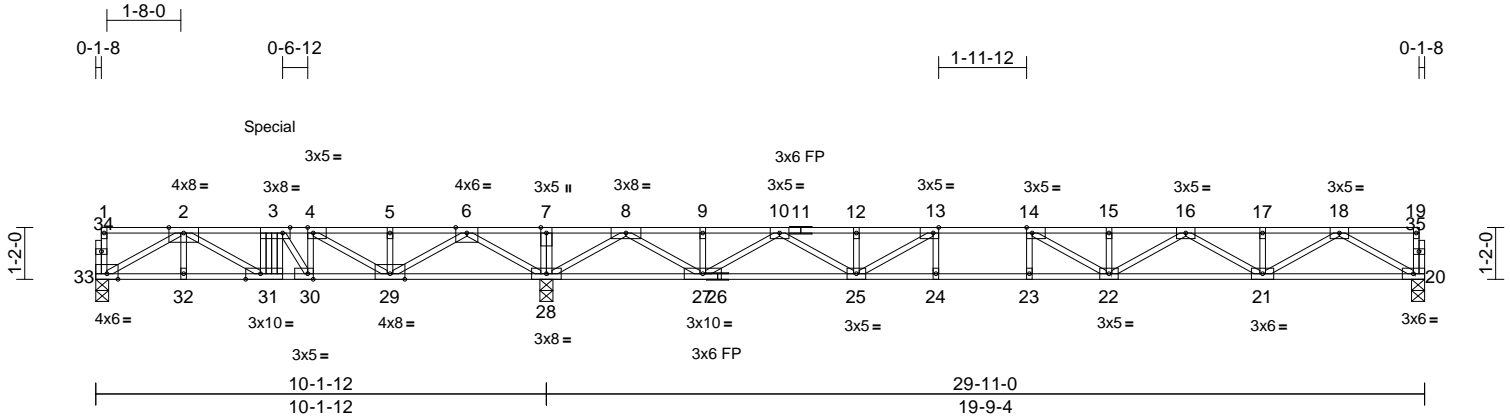


Job 24060041	Truss F06	Truss Type Floor Girder	Qty 1	Ply 1	DRB - 198 FaNC Job Reference (optional)	I63649358
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Thu Feb 15 09:05:54  
ID:sMt\_mg7MvJ2tZQXLWuNHzuVag-RfC?PsB70Hq3NSgPqnL8w3uITXbGKwRCDoi7J4zJC?f

Page: 1



Scale = 1:51.9  
Plate Offsets (X, Y): [3:0-2-0,Edge], [4:0-1-8,Edge], [13:0-1-8,Edge], [14:0-1-8,Edge], [30:0-1-8,Edge], [31:0-4-0,Edge]

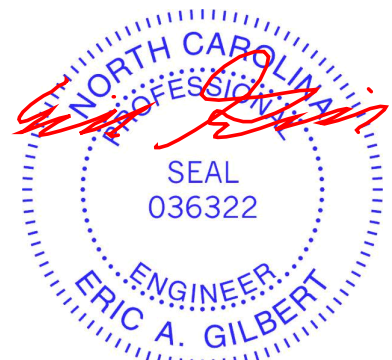
Loading	(psf)	Spacing	1-4-0	CSI	DEFL	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.92	Vert(LL)	-0.27	22-23	>861	360
TCDL	10.0	Lumber DOL	1.00	BC	0.89	Vert(CT)	-0.37	22-23	>639	240
BCLL	0.0	Rep Stress Incr	NO	WB	0.71	Horz(CT)	0.04	20	n/a	n/a
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-MSH						
										Weight: 158 lb FT = 20%F, 11%E

**LUMBER**  
TOP CHORD 2x4 SP No.2(flat)  
BOT CHORD 2x4 SP No.2(flat) \*Except\* 26-20:2x4 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 6-0-0 oc bracing.  
**REACTIONS** (size) 20=0-3-8, 28=0-3-8, 33=0-3-8  
Max Uplift 33=666 (LC 14)  
Max Grav 20=638 (LC 14), 28=1813 (LC 1), 33=756 (LC 3)  
**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-33=-46/0, 19-20=-47/0, 1-2=-3/0, 2-3=-2236/2512, 3-4=-1978/2404, 4-5=-1150/2024, 5-6=-1150/2024, 6-7=0/2503, 7-8=0/2503, 8-9=-798/414, 9-10=-798/414, 10-12=-2146/0, 12-13=-2146/0, 13-14=-2626/0, 14-15=-2606/0, 15-16=-2606/0, 16-17=-1744/0, 17-18=-1744/0, 18-19=-3/0  
BOT CHORD 32-33=-1208/1255, 31-32=-1208/1255, 30-31=-2584/2288, 29-30=-2404/1978, 28-29=-1733/117, 27-28=-1179/45, 25-27=-143/1578, 24-25=0/2626, 23-24=0/2626, 22-23=0/2626, 21-22=0/2267, 20-21=0/999

**WEBS**  
7-28=-143/0, 8-28=-1532/0, 18-20=-1152/0, 8-27=0/1286, 18-21=0/870, 9-27=-116/0, 17-21=-115/0, 10-27=-1017/0, 16-21=-610/0, 10-25=0/761, 16-22=0/397, 12-25=-126/76, 15-22=-198/4, 13-25=-871/0, 14-22=-316/379, 13-24=-21/187, 14-23=-165/43, 6-29=-369/1485, 5-29=-126/0, 4-30=-399/567, 6-28=-1730/323, 2-33=-1436/1386, 2-31=-1485/1117, 3-31=-536/738, 2-32=0/18, 3-30=-720/512, 4-29=-1239/653

**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 666 lb uplift at joint 33.  
4) 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.  
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.  
7) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 876 lb down and 1031 lb up at 3-11-4 on top chord. The design/selection of such connection device(s) is the responsibility of others.  
8) 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: 20-33=-7, 1-19=-67  
Concentrated Loads (lb)



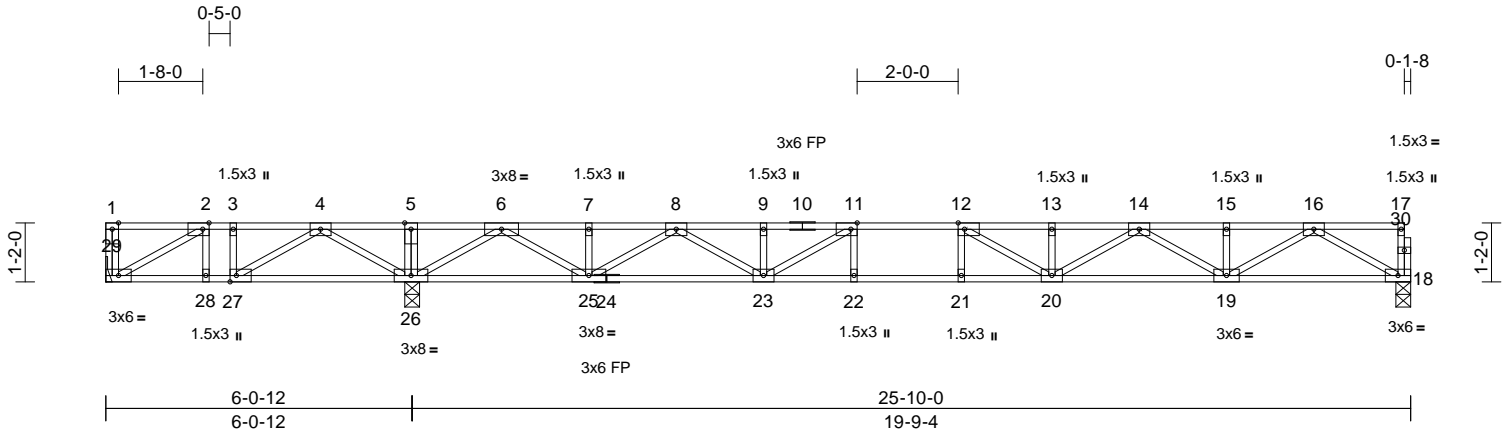
February 16, 2024

Job 24060041	Truss F07	Truss Type Floor	Qty 7	Ply 1	DRB - 198 FaNC Job Reference (optional)	I63649359
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Thu Feb 15 09:05:55  
ID:gdYG21IU6xT4QVRiP6\_OISzuVcR-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?#

Page: 1



Scale = 1:45.6

Plate Offsets (X, Y): [2:0-1-8,Edge], [11:0-1-8,Edge], [12:0-1-8,Edge], [27:0-1-8,Edge]

Loading	(psf)	Spacing	1-4-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.69	Vert(LL)	-0.26	20-21	>914	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.79	Vert(CT)	-0.35	20-21	>667	240		
BCLL	0.0	Rep Stress Incr	YES	WB	0.59	Horz(CT)	0.03	18	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-MSH							Weight: 132 lb	FT = 20%F, 11%E

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

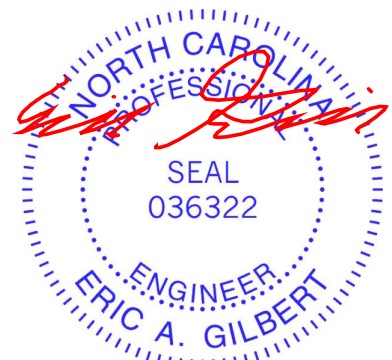
**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

**REACTIONS** (size) 18=0-3-8, 26=0-3-8, 29=Mechanical  
Max Uplift 29=291 (LC 4)  
Max Grav 18=612 (LC 7), 26=1405 (LC 1), 29=109 (LC 3)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-29=-79/0, 17-18=-47/0, 1-2=0/0, 2-3=-77/631, 3-4=-77/631, 4-5=0/2007, 5-6=0/2007, 6-7=-394/0, 7-8=-394/0, 8-9=-1822/0, 9-11=-1822/0, 11-12=-2384/0, 12-13=-2441/0, 13-14=-2441/0, 14-15=-1657/0, 15-16=-1657/0, 16-17=-3/0  
BOT CHORD 28-29=-631/77, 27-28=-631/77, 26-27=-1314/0, 25-26=-722/0, 23-25=0/1216, 22-23=0/2384, 21-22=0/2384, 20-21=0/2384, 19-20=0/2138, 18-19=0/955  
WEBS 5-26=-148/0, 4-26=-985/0, 2-29=-89/724, 4-27=0/857, 2-28=-185/0, 3-27=-273/0, 6-26=-1491/0, 16-18=-1101/0, 6-25=0/1240, 16-19=0/821, 7-25=-116/0, 15-19=-114/0, 8-25=-966/0, 14-19=-561/0, 8-23=0/715, 14-20=0/354, 9-23=-117/64, 13-20=-185/0, 11-23=-773/0, 12-20=-254/275, 11-22=-4/162, 12-21=-139/26

**NOTES**

- Unbalanced floor live loads have been considered for this design.
  - All plates are 3x5 MT20 unless otherwise indicated.
  - Refer to girder(s) for truss to truss connections.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 291 lb uplift at joint 29.
  - 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.
  - 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



February 16, 2024

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**  
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

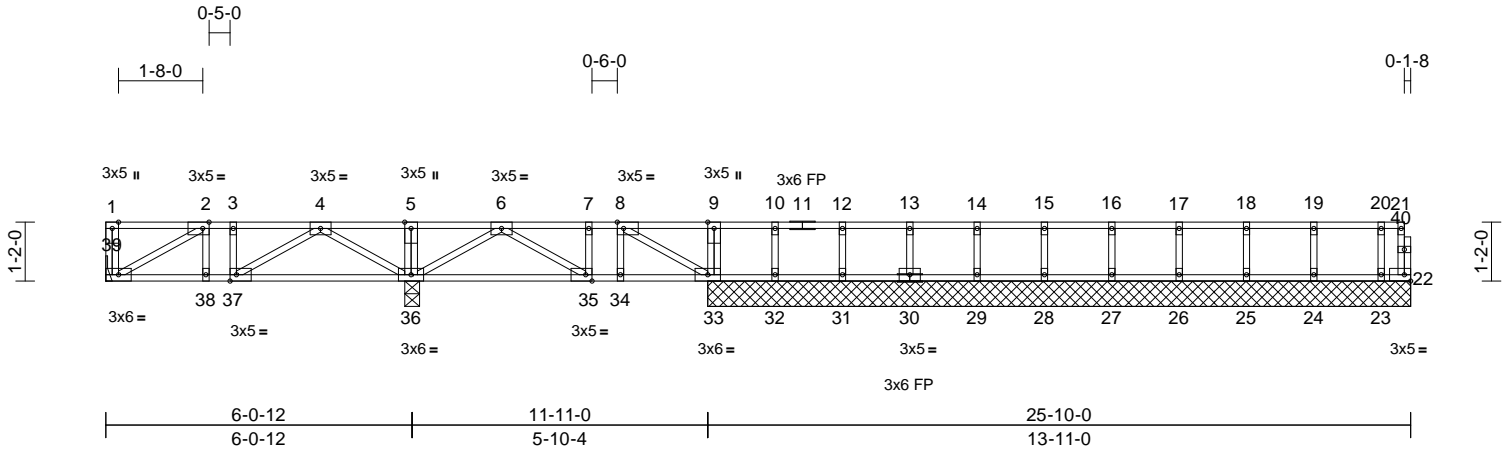


Job 24060041	Truss F08	Truss Type Floor	Qty 1	Ply 1	DRB - 198 FaNC Job Reference (optional)	163649360
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Thu Feb 15 09:05:55  
ID:oOMcLi6I29q06jTAPWQVnzuVbz-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?F

Page: 1



Scale = 1:45.6

Plate Offsets (X, Y): [2:0-1-8,Edge], [8:0-1-8,Edge], [35:0-1-8,Edge], [37:0-1-8,Edge]

Loading	(psf)	Spacing	1-4-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.48	Vert(LL)	-0.01	35-36	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.10	Vert(CT)	-0.01	35-36	>999	240		
BCLL	0.0	Rep Stress Incr	NO	WB	0.16	Horz(CT)	0.00	33	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-MSH							Weight: 123 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 6-0-0 oc bracing, Except:  
10-0-0 oc bracing: 38-39,37-38,34-35,33-34.

**REACTIONS** (size)  
22=13-11-0, 23=13-11-0,  
24=13-11-0, 25=13-11-0,  
26=13-11-0, 27=13-11-0,  
28=13-11-0, 29=13-11-0,  
30=13-11-0, 31=13-11-0,  
32=13-11-0, 33=13-11-0, 36=0-3-8,  
39= Mechanical  
Max Uplift 22=-39 (LC 1)  
Max Grav 22=-10 (LC 3), 23=576 (LC 1),  
24=722 (LC 4), 25=691 (LC 1),  
26=699 (LC 4), 27=697 (LC 1),  
28=698 (LC 4), 29=698 (LC 1),  
30=697 (LC 4), 31=700 (LC 1),  
32=695 (LC 4), 33=478 (LC 4),  
36=527 (LC 1), 39=187 (LC 3)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-39=-51/0, 21-22=0/39, 1-2=0/0, 2-3=-235/0,  
3-4=-235/0, 4-5=0/249, 5-6=0/249,  
6-7=-204/0, 7-8=-204/0, 8-9=0/2, 9-10=0/2,  
10-12=0/2, 12-13=0/2, 13-14=0/2, 14-15=0/2,  
15-16=0/2, 16-17=0/2, 17-18=0/2, 18-19=0/2,  
19-20=0/2, 20-21=0/2

**BOT CHORD** 38-39=0/235, 37-38=0/235, 36-37=-65/156,  
35-36=-53/133, 34-35=0/204, 33-34=0/204,  
32-33=-2/0, 31-32=-2/0, 29-31=-2/0,  
28-29=-2/0, 27-28=-2/0, 26-27=-2/0,  
25-26=-2/0, 24-25=-2/0, 23-24=-2/0,  
22-23=-2/0  
**WEBS** 5-36=-122/0, 9-33=-357/0, 4-36=-380/0,  
2-39=-270/0, 4-37=0/137, 2-38=-4/9,  
3-37=-52/0, 6-36=-370/0, 8-33=-237/0,  
6-35=0/119, 7-35=-58/0, 8-34=0/25,  
10-32=-687/0, 12-31=-691/0, 13-30=-689/0,  
14-29=-689/0, 15-28=-689/0, 16-27=-688/0,  
17-26=-691/0, 18-25=-683/0, 19-24=-713/0,  
20-23=-569/0

**NOTES**

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All plates are 1.5x3 MT20 unless otherwise indicated.
- 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) Refer to girder(s) for truss to truss connections.
- 6) N/A
- 7) 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.
- 8) 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.
- 9) CAUTION, Do not erect truss backwards.

**LOAD CASE(S)** Standard

- 1) Dead + Floor Live (balanced): Lumber Increase=1.00,  
Plate Increase=1.00  
Uniform Loads (lb/ft)  
Vert: 22-39=-7, 1-9=-67, 9-21=-517



February 16, 2024

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

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



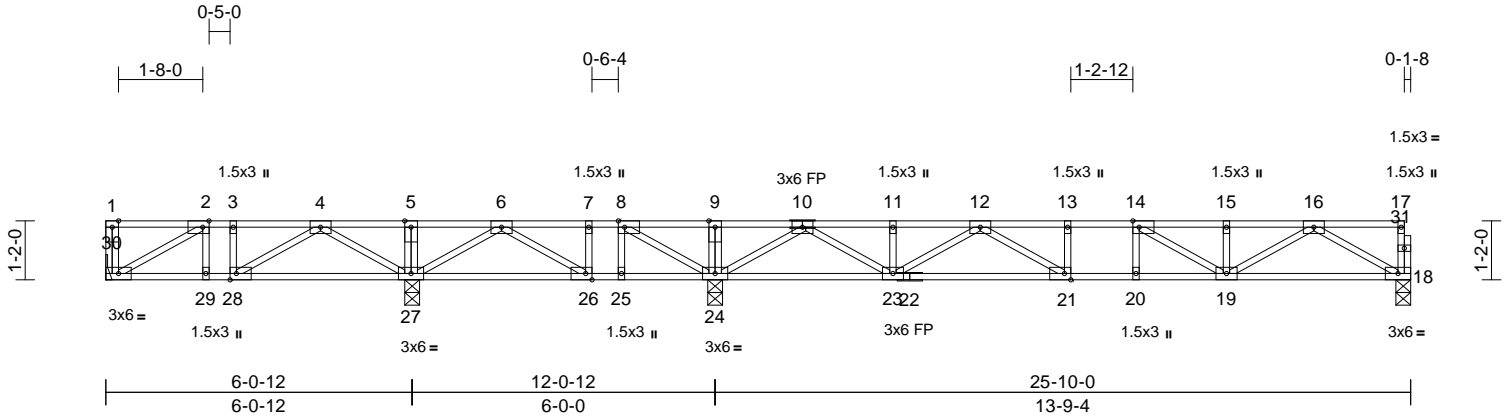
818 Soundside Road  
Edenton, NC 27932

Job 24060041	Truss F09	Truss Type Floor	Qty 2	Ply 1	DRB - 198 FaNC Job Reference (optional)	I63649361
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Thu Feb 15 09:05:56  
ID:vufW4kHS\_8u\_46DzQeFTXWzuVbm-RfC?PsB70Hq3NSgPqnL8w3uITXbGkWrCDoi7J4zJC?f

Page: 1



Scale = 1:45.6

Plate Offsets (X, Y): [2:0-1-8,Edge], [8:0-1-8,Edge], [14:0-1-8,Edge], [21:0-1-8,Edge], [26:0-1-8,Edge], [28:0-1-8,Edge]

Loading	(psf)	Spacing	1-4-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.47	Vert(LL)	-0.06	20-21	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.40	Vert(CT)	-0.08	21-23	>999	240		
BCLL	0.0	Rep Stress Incr	YES	WB	0.36	Horz(CT)	0.01	18	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-MSH							Weight: 135 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 6-0-0 oc bracing.

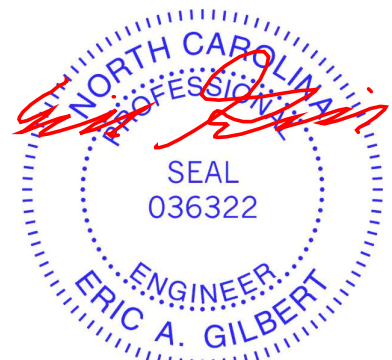
**REACTIONS** (size) 18=0-3-8, 24=0-3-8, 27=0-3-8, 30= Mechanical  
Max Grav 18=427 (LC 13), 24=911 (LC 11), 27=488 (LC 3), 30=175 (LC 14)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-30=-56/0, 17-18=-48/0, 1-2=0/0, 2-3=-211/10, 3-4=-211/10, 4-5=0/325, 5-6=0/325, 6-7=-45/577, 7-8=-45/577, 8-9=0/921, 9-11=-602/921, 11-12=-602/0, 12-13=-1208/0, 13-14=-1208/0, 14-15=-1039/0, 15-16=-1039/0, 16-17=-3/0  
BOT CHORD 29-30=-10/211, 28-29=-10/211, 27-28=-107/112, 26-27=-363/51, 25-26=-577/45, 24-25=-577/45, 23-24=-99/0, 21-23=0/1003, 20-21=0/1208, 19-20=0/1208, 18-19=0/638  
WEBS 5-27=-120/0, 9-24=-113/0, 4-27=-407/0, 2-30=-242/12, 4-28=0/172, 2-29=-32/22, 3-28=-66/0, 6-27=-289/171, 8-24=-611/0, 6-26=-249/27, 7-26=-21/83, 8-25=0/100, 10-24=-983/0, 16-18=-735/0, 10-23=0/764, 16-19=0/468, 11-23=-117/0, 15-19=-139/0, 12-23=-474/0, 14-19=-287/0, 12-21=0/328, 13-21=-111/0, 14-20=-47/41

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

- All plates are 3x5 MT20 unless otherwise indicated.
- Refer to girder(s) for truss to truss connections.
- 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.
- 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



February 16, 2024

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

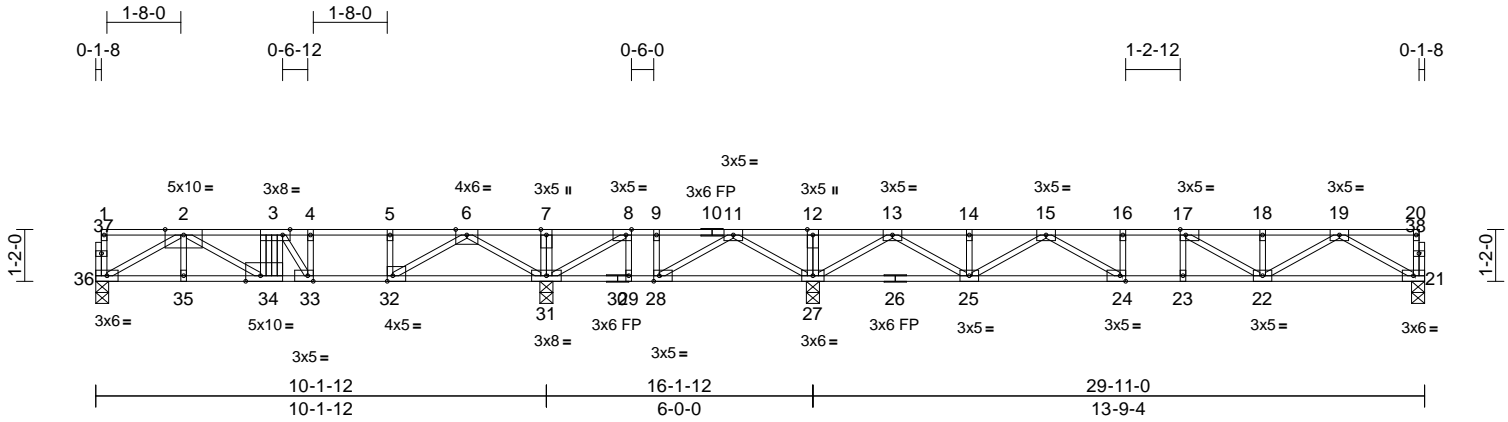


Job 24060041	Truss F10	Truss Type Floor Girder	Qty 1	Ply 1	DRB - 198 FaNC Job Reference (optional)	163649362
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.63 E Aug 30 2023 Print: 8.630 E Aug 30 2023 MiTek Industries, Inc. Fri Feb 16 14:07:24  
ID:?Do1KBjQm38Ex3FGwGtLxzuVZ8-mdXq5gQlddCcNZ3Lcy3?Im19mkp\_vXn5P?YnoqzkjPH

Page: 1



Scale = 1:51.9

Plate Offsets (X, Y): [3:0-2-0,Edge], [8:0-1-8,Edge], [17:0-1-8,Edge], [24:0-1-8,Edge], [28:0-1-8,Edge], [32:0-1-8,Edge], [33:0-1-8,Edge], [34:0-4-0,Edge]

Loading	(psf)	Spacing	1-4-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.79	Vert(LL)	-0.17	33-34	>687	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.94	Vert(CT)	-0.20	33-34	>598	240		
BCLL	0.0	Rep Stress Incr	NO	WB	0.80	Horz(CT)	0.03	21	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-MSH								
											Weight: 158 lb	FT = 20%F, 11%E

**LUMBER**  
TOP CHORD 2x4 SP No.2(flat) \*Except\* 10-1:2x4 SP 2400F 2.0E(flat)  
BOT CHORD 2x4 SP No.2(flat) \*Except\* 36-30:2x4 SP 2400F 2.0E(flat)  
WEBS 2x4 SP No.3(flat)  
OTHERS 2x4 SP No.3(flat)

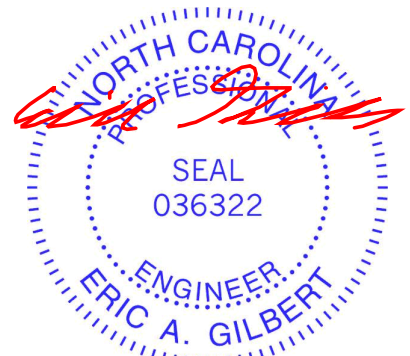
**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

**REACTIONS** All bearings 0-3-8.  
(lb) - Max Grav All reactions 250 (lb) or less at joint (s) except 21=424 (LC 5), 27=1023 (LC 11), 31=861 (LC 3), 36=997 (LC 14)

**FORCES** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-3153/0, 3-4=-2530/0, 4-5=-2530/0, 5-6=-2530/0, 6-7=-302/0, 7-8=-302/0, 8-9=-370/166, 9-10=-370/166, 10-11=-370/166, 11-12=0/987, 12-13=0/987, 13-14=-567/0, 14-15=-567/0, 15-16=-1188/0, 16-17=-1188/0, 17-18=-1028/0, 18-19=-1028/0  
BOT CHORD 35-36=0/1669, 34-35=0/1669, 33-34=0/3207, 32-33=0/2530, 31-32=0/1323, 30-31=-166/370, 29-30=-166/370, 28-29=-166/370, 27-28=-552/131, 24-25=0/974, 23-24=0/1188, 22-23=0/1188, 21-22=0/632  
WEBS 11-27=-725/0, 8-31=-128/374, 11-28=0/541, 13-27=-991/0, 19-21=-728/0, 13-25=0/751, 19-22=0/462, 15-25=-486/0, 17-22=-271/3, 15-24=0/340, 2-36=-1910/0, 6-32=0/1424, 5-32=-490/0, 4-33=0/460, 6-31=-1333/0, 2-34=0/1690, 3-34=-556/0, 3-33=-1145/0

- NOTES**
- 1) Unbalanced floor live loads have been considered for this design.
  - 2) All plates are 1.5x3 MT20 unless otherwise indicated.
  - 3) 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.
  - 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.
  - 6) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1004 lb down at 3-11-4 on top chord. The design/selection of such connection device(s) is the responsibility of others.
  - 7) 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: 21-36=-7, 1-20=-67  
Concentrated Loads (lb)  
Vert: 3=-968 (F)



February 16, 2024

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

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818 Soundside Road  
Edenton, NC 27932

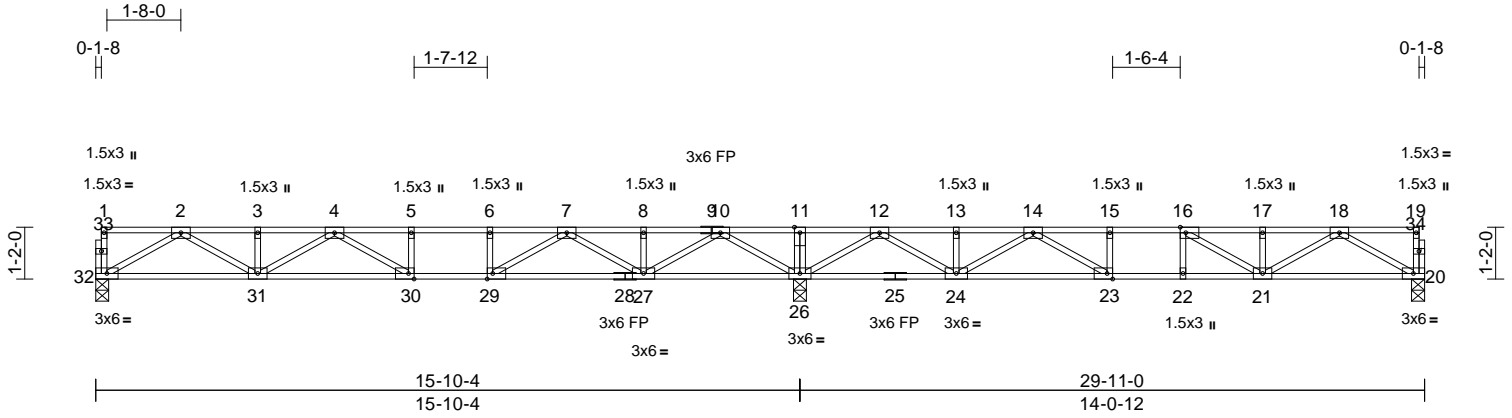


Job 24060041	Truss F11	Truss Type Floor	Qty 12	Ply 1	DRB - 198 FaNC Job Reference (optional)	I63649363
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Thu Feb 15 09:05:58  
ID: XePDxjXBdonprSHghdaYxEzuVXZ-RFC?PsB70Hq3NSgPqnL8w3uITXbGKWRcDoi7J4zJC?f

Page: 1



Scale = 1:51.9

Plate Offsets (X, Y): [16:0-1-8,Edge], [23:0-1-8,Edge], [29:0-1-8,Edge], [30:0-1-8,Edge]

Loading	(psf)	Spacing	1-4-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.60	Vert(LL)	-0.13	30-31	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.68	Vert(CT)	-0.19	30-31	>999	240		
BCLL	0.0	Rep Stress Incr	YES	WB	0.45	Horz(CT)	0.03	20	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-MSH							Weight: 150 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 6-0-0 oc bracing.

**REACTIONS** (size) 20=0-3-8, 26=0-3-8, 32=0-3-8  
 Max Grav 20=437 (LC 4), 26=1311 (LC 1), 32=501 (LC 3)

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

TOP CHORD  
 1-32=-47/0, 19-20=-49/0, 1-2=-3/0,  
 2-3=-1291/0, 3-4=-1291/0, 4-5=-1623/0,  
 5-6=-1623/0, 6-7=-1623/0, 7-8=-691/310,  
 8-10=-691/310, 10-11=0/1534, 11-12=0/1534,  
 12-13=-604/444, 13-14=-604/444,  
 14-15=-1257/18, 15-16=-1257/18,  
 16-17=-1071/0, 17-18=-1071/0, 18-19=-3/0  
 BOT CHORD  
 31-32=0/770, 30-31=0/1583, 29-30=0/1623,  
 27-29=-101/1223, 26-27=-596/0,  
 24-26=-730/0, 23-24=-233/1026,  
 22-23=-18/1257, 21-22=-18/1257,  
 20-21=0/655  
 WEBS  
 11-26=-137/0, 10-26=-1182/0, 2-32=-887/0,  
 10-27=0/947, 2-31=0/608, 8-27=-130/0,  
 3-31=-101/0, 7-27=-687/0, 4-31=-341/1,  
 7-29=0/647, 4-30=-210/134, 5-30=-60/42,  
 6-29=-235/0, 12-26=-1082/0, 18-20=-754/0,  
 12-24=0/846, 18-21=0/486, 13-24=-122/0,  
 17-21=-163/0, 14-24=-586/0,  
 16-21=-215/141, 14-23=0/510, 15-23=-175/0,  
 16-22=-84/8

**NOTES**

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All plates are 3x5 MT20 unless otherwise indicated.
- 3) 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.
- 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



February 16, 2024

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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 and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbccomponents.com)



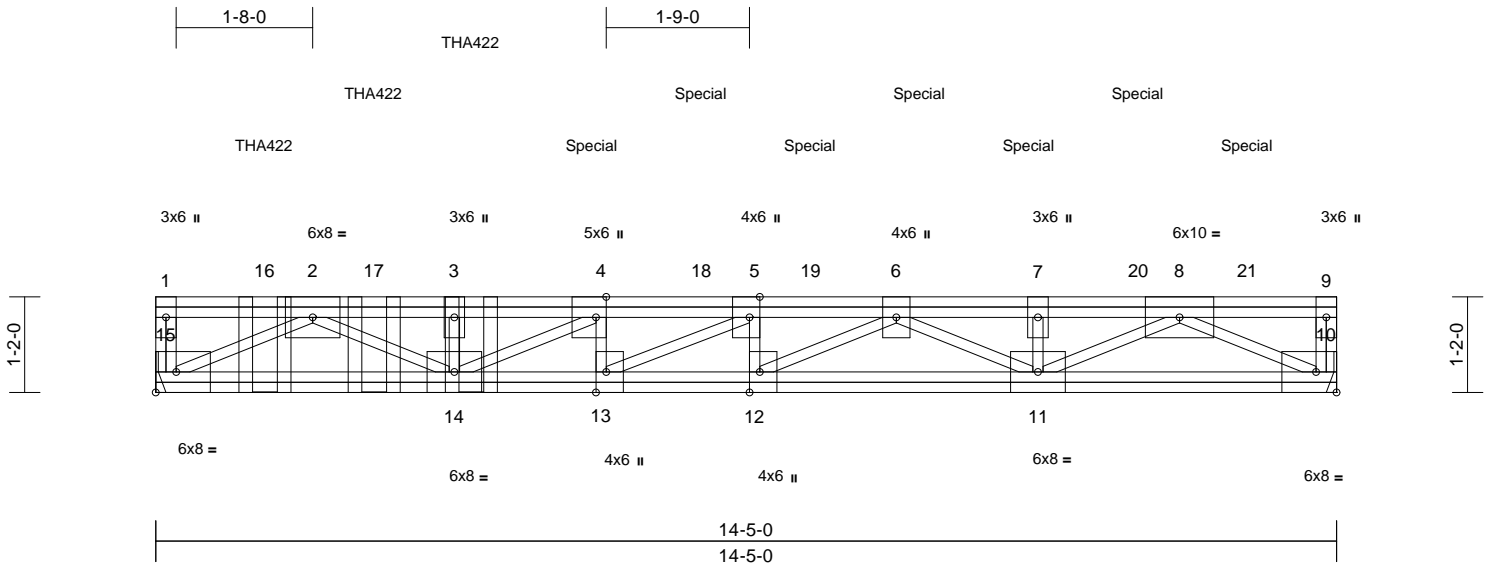
818 Soundside Road  
 Edenton, NC 27932

Job 24060041	Truss F12	Truss Type Floor Girder	Qty 1	Ply 1	DRB - 198 FaNC Job Reference (optional)	163649364
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Thu Feb 15 09:05:58  
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Page: 1



Scale = 1:28.1

Plate Offsets (X, Y): [4:0-3-0,Edge], [5:0-3-0,Edge], [12:0-3-0,Edge], [13:0-3-0,Edge]

Loading	(psf)	Spacing	1-4-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.69	Vert(LL)	-0.17	12	>993	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.58	Vert(CT)	-0.17	12-13	>999	240		
BCLL	0.0	Rep Stress Incr	NO	WB	0.97	Horz(CT)	0.03	10	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-MSH							Weight: 115 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 6-0-0 oc bracing.

**REACTIONS** (size) 10= Mechanical, 15= Mechanical  
Max Uplift 10=987 (LC 3), 15=221 (LC 3)  
Max Grav 10=884 (LC 1), 15=1013 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-15=-79/0, 9-10=-76/63, 1-2=0/0, 2-3=-2896/1425, 3-4=-2896/1425, 4-5=-3448/2670, 5-6=-3592/3411, 6-7=-2608/2822, 7-8=-2608/2822, 8-9=0/0  
BOT CHORD 14-15=-554/1790, 13-14=-2670/3448, 12-13=-3411/3592, 11-12=-3413/3289, 10-11=-1808/1549  
WEBS 8-10=-1740/2031, 2-15=-2010/622, 8-11=-1147/1199, 2-14=-986/1252, 7-11=-179/259, 3-14=-290/0, 6-11=-771/669, 4-14=-620/1399, 6-12=0/343, 4-13=-344/79, 5-12=-144/21, 5-13=-161/824

- 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.
- Use Simpson Strong-Tie THA422 (6-16d Girder, 6-10d Truss) or equivalent spaced at 1-4-0 oc max. starting at 1-4-0 from the left end to 3-10-4 to connect truss(es) to back face of top chord.
- Fill all nail holes where hanger is in contact with lumber.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 65 lb down and 335 lb up at 5-4-0, 65 lb down and 335 lb up at 6-8-0, 65 lb down and 335 lb up at 8-0-0, 65 lb down and 335 lb up at 9-4-0, 65 lb down and 335 lb up at 10-8-0, and 65 lb down and 335 lb up at 12-0-0, and 65 lb down and 335 lb up at 13-4-0 on top chord. The design/selection of such connection device(s) is the responsibility of others.
- In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard

- Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (lb/ft)  
Vert: 10-15=-7, 1-9=-67  
Concentrated Loads (lb)  
Vert: 7=-65 (B), 3=-142 (B), 6=-65 (B), 4=-65 (B), 16=-131 (B), 17=-131 (B), 18=-65 (B), 19=-65 (B), 20=-65 (B), 21=-65 (B)

- NOTES**
- Unbalanced floor live loads have been considered for this design.
  - Refer to girder(s) for truss to truss connections.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 221 lb uplift at joint 15 and 987 lb uplift at joint 10.
  - 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.



February 16, 2024

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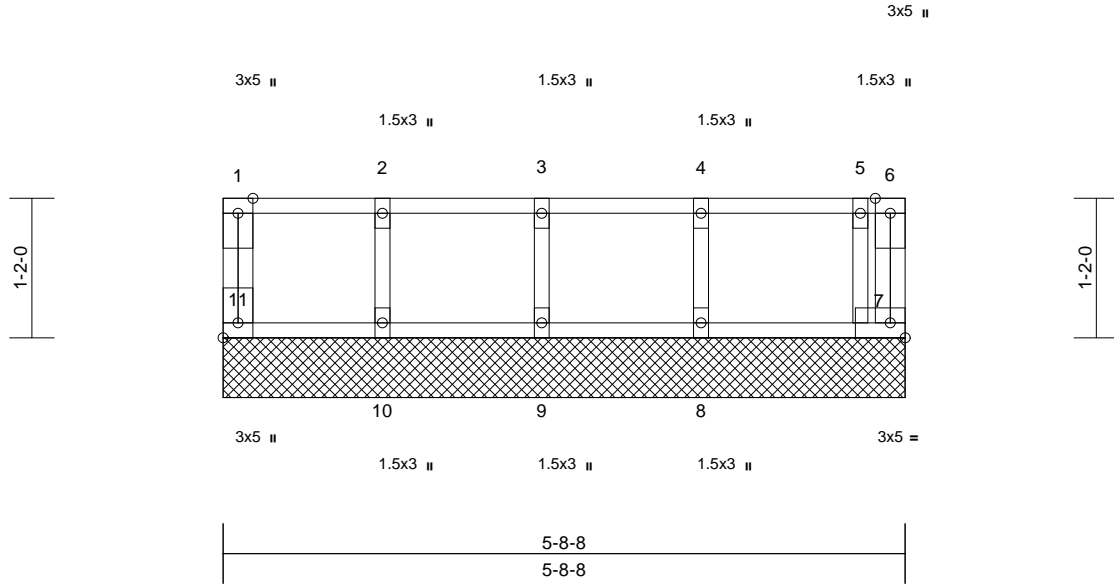
818 Soundside Road  
Edenton, NC 27932

Job 24060041	Truss FW05	Truss Type Floor Supported Gable	Qty 1	Ply 1	DRB - 198 FaNC Job Reference (optional)	I63649365
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Thu Feb 15 09:05:59  
ID:M1Acg1bSekvkSR4yXL32kuzuVPk-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWRcDoi7J4zJC?f

Page: 1



Scale = 1:19.3

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

Loading	(psf)	Spacing	1-4-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.26	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.08	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	NO	WB	0.09	Horiz(TL)	0.00	7	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-MR							Weight: 28 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)

1) Dead + Floor Live (balanced): Lumber Increase=1.00,  
Plate Increase=1.00  
Uniform Loads (lb/ft)  
Vert: 7-11=-7, 1-6=-267 (F=-200)

**BRACING**

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

**REACTIONS**

(size) 7=5-8-8, 8=5-8-8, 9=5-8-8,  
10=5-8-8, 11=5-8-8  
Max Grav 7=227 (LC 1), 8=393 (LC 1), 9=364  
(LC 1), 10=336 (LC 1), 11=172 (LC  
1)

**FORCES**

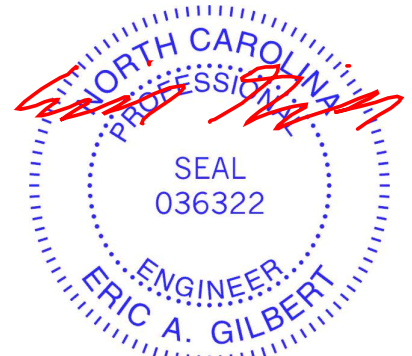
(lb) - Maximum Compression/Maximum  
Tension

TOP CHORD 1-11=-159/0, 6-7=0/33, 1-2=-41/0, 2-3=-41/0,  
3-4=-41/0, 4-5=-41/0, 5-6=-3/0  
BOT CHORD 10-11=0/41, 9-10=0/41, 8-9=0/41, 7-8=0/41  
WEBS 2-10=-338/0, 3-9=-354/0, 4-8=-377/0,  
5-7=-262/0

**NOTES**

- 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 2018 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.
- 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



February 16, 2024

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**TRENCO**  
A MITEK Affiliate

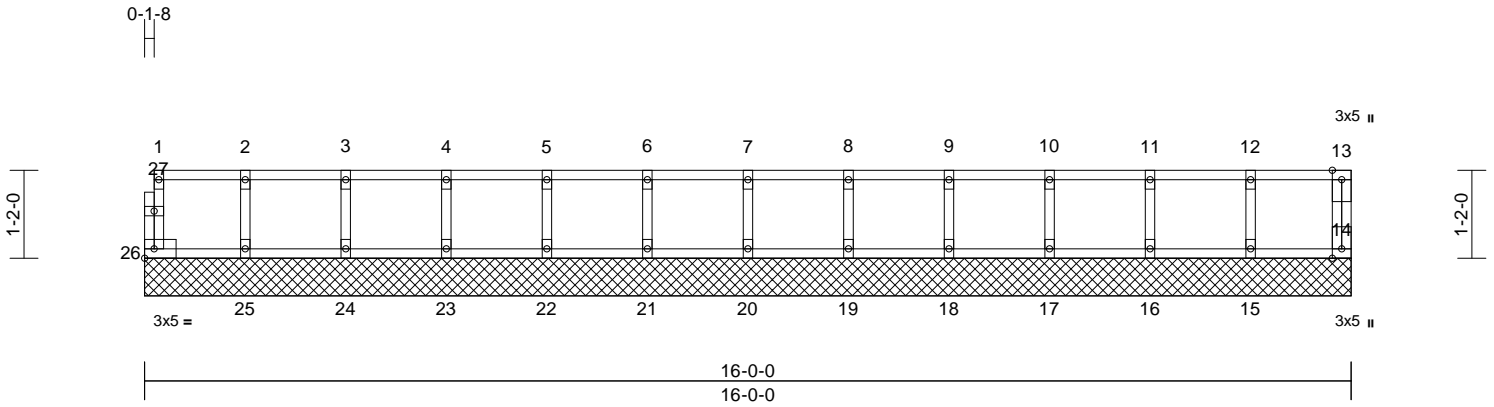
818 Soundside Road  
Edenton, NC 27932

Job 24060041	Truss FW16	Truss Type Floor Supported Gable	Qty 1	Ply 1	DRB - 198 FaNC Job Reference (optional)	I63649366
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Thu Feb 15 09:05:59  
ID:yUcnjZmkwxlzFXpWsqxFlSzuVXF-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC7f

Page: 1



Scale = 1:30.6

Loading	(psf)	Spacing	1-4-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	Horiz(TL)	0.00	14	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-MR						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) 14=16-0-0, 15=16-0-0, 16=16-0-0, 17=16-0-0, 18=16-0-0, 19=16-0-0, 20=16-0-0, 21=16-0-0, 22=16-0-0, 23=16-0-0, 24=16-0-0, 25=16-0-0, 26=16-0-0  
Max Grav 14=42 (LC 1), 15=95 (LC 1), 16=98 (LC 1), 17=98 (LC 1), 18=98 (LC 1), 19=98 (LC 1), 20=98 (LC 1), 21=98 (LC 1), 22=98 (LC 1), 23=98 (LC 1), 24=99 (LC 1), 25=95 (LC 1), 26=38 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-26=-34/0, 13-14=-38/0, 1-2=-7/0, 2-3=-7/0, 3-4=-7/0, 4-5=-7/0, 5-6=-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  
BOT CHORD 25-26=0/7, 24-25=0/7, 23-24=0/7, 22-23=0/7, 21-22=0/7, 20-21=0/7, 19-20=0/7, 18-19=0/7, 17-18=0/7, 16-17=0/7, 15-16=0/7, 14-15=0/7  
WEBS 2-25=-87/0, 3-24=-90/0, 4-23=-89/0, 5-22=-89/0, 6-21=-89/0, 7-20=-89/0, 8-19=-89/0, 9-18=-89/0, 10-17=-89/0, 11-16=-89/0, 12-15=-87/0

**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.

- 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.
- 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



February 16, 2024

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ENGINEERING BY  
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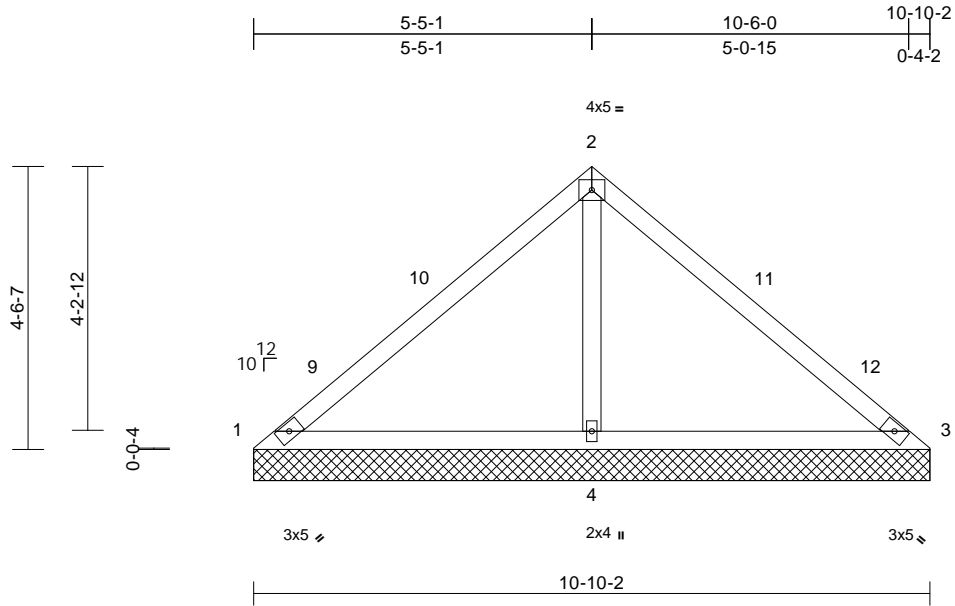
818 Soundside Road  
Edenton, NC 27932

Job 24060041	Truss V1	Truss Type Valley	Qty 1	Ply 1	DRB - 198 FaNC Job Reference (optional)	163649367
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Thu Feb 15 09:05:59  
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Page: 1



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.58	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.51	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.26	Horiz(TL)	0.01	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 42 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 or 10-0-0 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

**REACTIONS** (size) 1=10-10-2, 3=10-10-2, 4=10-10-2  
Max Horiz 1=-102 (LC 12)  
Max Uplift 1=-74 (LC 21), 3=-74 (LC 20), 4=-137 (LC 14)  
Max Grav 1=74 (LC 20), 3=74 (LC 21), 4=904 (LC 21)

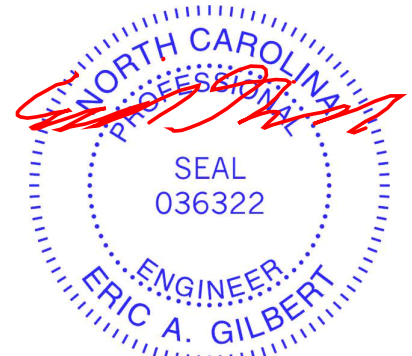
**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-143/451, 2-3=-143/451  
BOT CHORD 1-4=-262/198, 3-4=-262/198  
WEBS 2-4=-711/312

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 74 lb uplift at joint 1, 74 lb uplift at joint 3 and 137 lb uplift at joint 4.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard

**NOTES**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-5 to 3-0-5, Exterior(2R) 3-0-5 to 7-10-6, Exterior(2E) 7-10-6 to 10-10-6 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.



February 16, 2024

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

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



818 Soundside Road  
Edenton, NC 27932

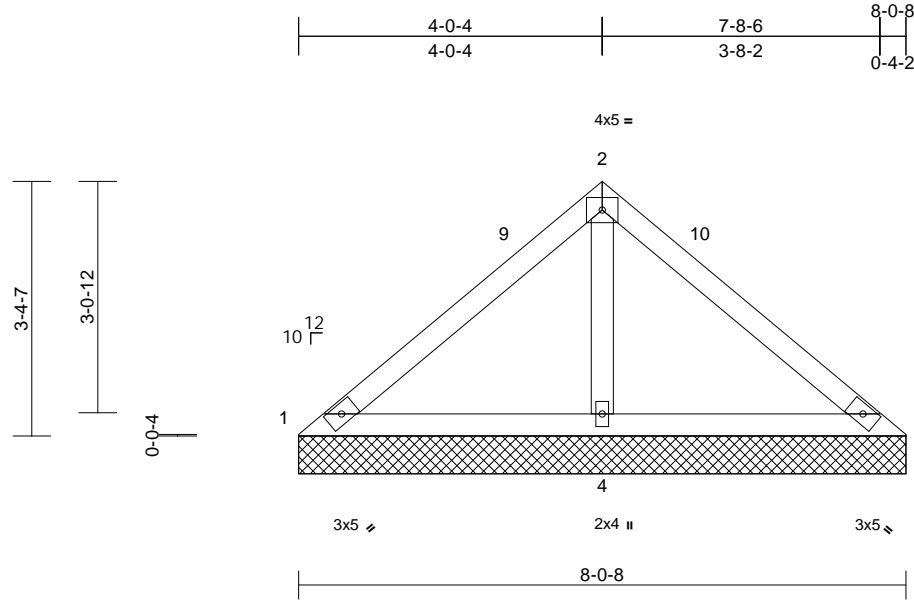


Job 24060041	Truss V2	Truss Type Valley	Qty 1	Ply 1	DRB - 198 FaNC Job Reference (optional)	163649368
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Carter Components (Sanford, NC), Sanford, NC - 27332,

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Page: 1



Scale = 1:30.5

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.34	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.33	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.12	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0											
										Weight: 30 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 or 8-0-8 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

#### REACTIONS

(size) 1=8-0-8, 3=8-0-8, 4=8-0-8  
Max Horiz 1=-75 (LC 10)  
Max Uplift 1=-35 (LC 21), 3=-35 (LC 20),  
4=-91 (LC 14)  
Max Grav 1=105 (LC 20), 3=105 (LC 21),  
4=628 (LC 21)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

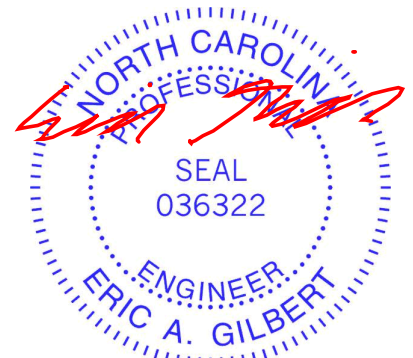
TOP CHORD 1-2=-111/282, 2-3=-111/282  
BOT CHORD 1-4=-192/173, 3-4=-192/173  
WEBS 2-4=-460/234

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-5 to 3-0-5, Exterior(2R) 3-0-5 to 5-0-13, Exterior(2E) 5-0-13 to 8-0-13 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.

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 35 lb uplift at joint 1, 35 lb uplift at joint 3 and 91 lb uplift at joint 4.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



February 16, 2024

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

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

ENGINEERING BY  
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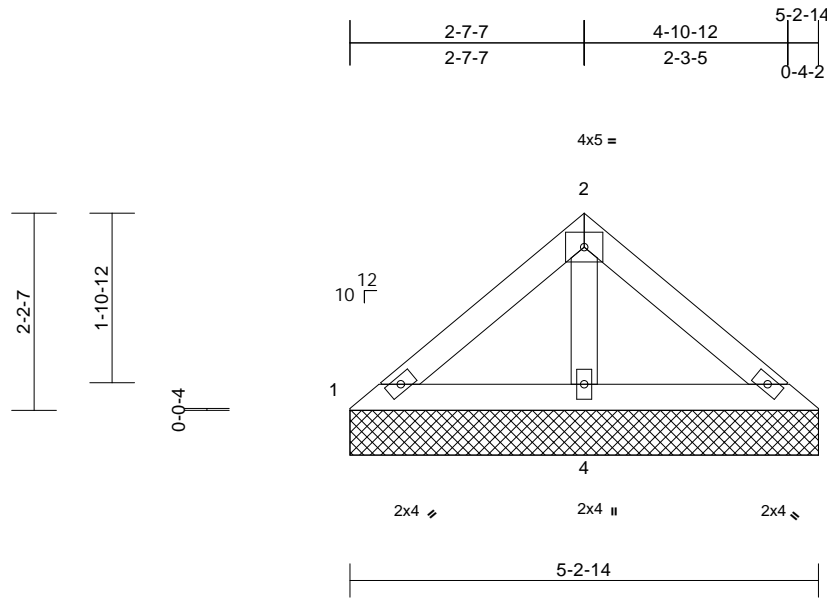
818 Soundside Road  
Edenton, NC 27932

Job 24060041	Truss V3	Truss Type Valley	Qty 1	Ply 1	DRB - 198 FaNC Job Reference (optional)	163649369
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Thu Feb 15 09:06:00  
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Page: 1



Scale = 1:25.8

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.11	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.13	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0											
										Weight: 19 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 or 5-2-14 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

#### REACTIONS

(size) 1=5-2-14, 3=5-2-14, 4=5-2-14  
Max Horiz 1=-47 (LC 12)  
Max Uplift 3=-6 (LC 15), 4=-39 (LC 14)  
Max Grav 1=92 (LC 20), 3=92 (LC 21), 4=329 (LC 21)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

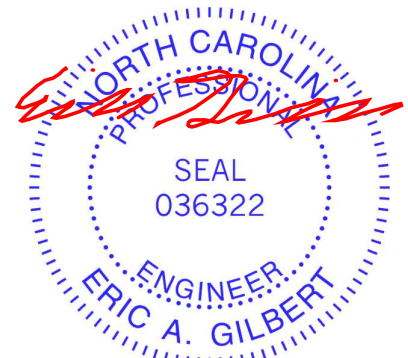
TOP CHORD 1-2=-84/121, 2-3=-84/121  
BOT CHORD 1-4=-92/99, 3-4=-92/99  
WEBS 2-4=-210/114

#### NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust)  
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;  
Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 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) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10

- 5) Unbalanced snow loads have been considered for this design.
- 6) Gable requires continuous bottom chord bearing.
- 7) Gable studs spaced at 4-0-0 oc.
- 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 6 lb uplift at joint 3 and 39 lb uplift at joint 4.
- 11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



February 16, 2024

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

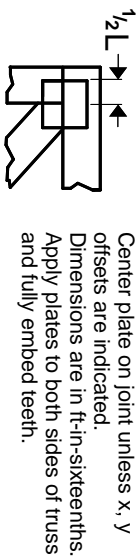
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall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



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# 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-  $\frac{1}{16}$ \" from outside edge of truss.



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

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

## PLATE SIZE

4 X 4

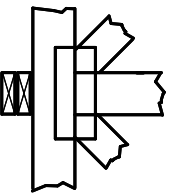
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## LATERAL BRACING LOCATION



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

## BEARING



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

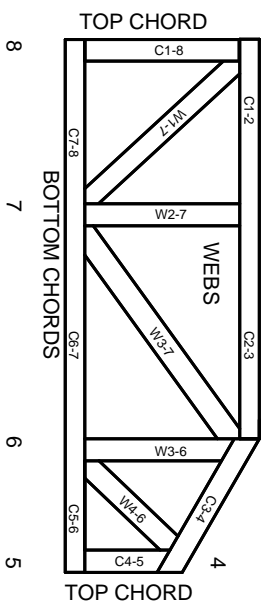
## Industry Standards:

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

# Numbering System



1 TOP CHORDS  
2 JOINT ID TYP.



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

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

# Product Code Approvals

ICC-ES Reports:

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

# Design General Notes

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

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

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ENGINEERING BY  
**TRENGO**  
A MITek Affiliate

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

# 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.