

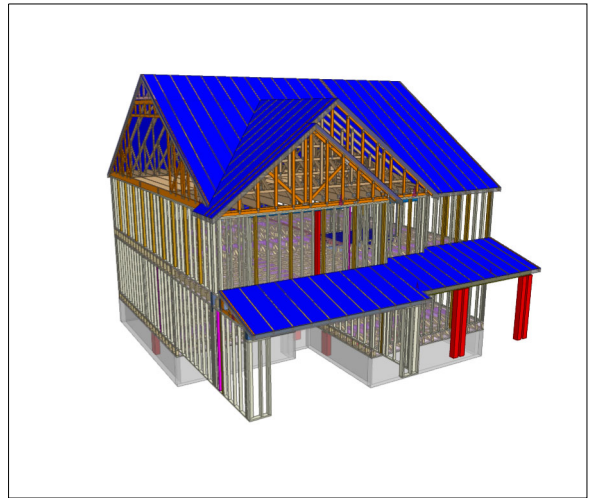


Carter Sanford Component Plant
298 Harvey Faulk Rd
Sanford, NC 27332

Phone #:919-775-1450

Builder: HH Hunt Homes Raleigh
Durham

Model: Grayson BC 3FL SP FE GLH



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.

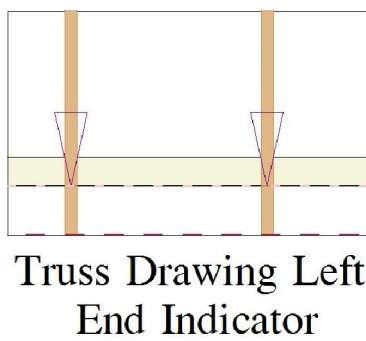
Approved By: _____

Date: _____

REFER TO FINAL TRUSS ENGINEERING SHEETS FOR PLY TO PLY CONNECTIONS

TRUSS TO TRUSS CONNECTIONS ARE TOE-NAILED, UNLESS NOTED OTHERWISE

ALL BEARING POINTS MUST BE INSTALLED PRIOR TO SETTING ANY COMPONENTS



**** All uplift connectors shown within these documents are recommendations only. Per ANSI/TPI-1, all uplift connectors are the responsibility of the bldg designer and or contractor.**

Revisions	
00/00/00	Name
00/00/00	Name
00/00/00	Name
00/00/00	Name

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: 25060036-01
51 Magnolia Acres-Roof-Grayson BC 3FL SP FE GLH

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

Pages or sheets covered by this seal: I74037050 thru I74037080

My license renewal date for the state of North Carolina is December 31, 2025.

North Carolina COA: C-0844



June 9, 2025

Gilbert, Eric

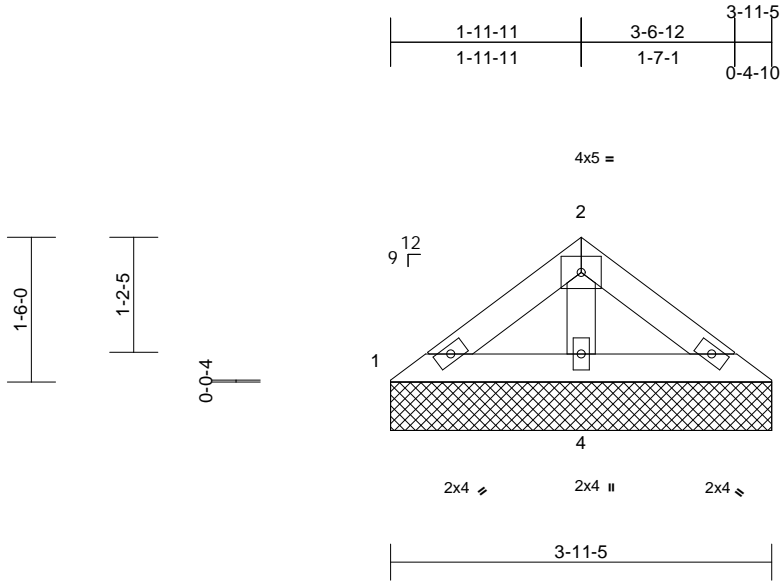
IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which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

Job	Truss	Truss Type	Qty	Ply	51 Magnolia Acres-Roof-Grayson BC 3FL SP FE GLH I74037050
25060036-01	V7	Valley	1	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.04	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.07	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.02	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 13 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 3-11-5 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS

(size)	1=3-11-5, 3=3-11-5, 4=3-11-5
Max Horiz	1=-31 (LC 12)
Max Uplift	1=-4 (LC 14), 3=-9 (LC 15), 4=-20 (LC 14)
Max Grav	1=75 (LC 20), 3=75 (LC 21), 4=221 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension

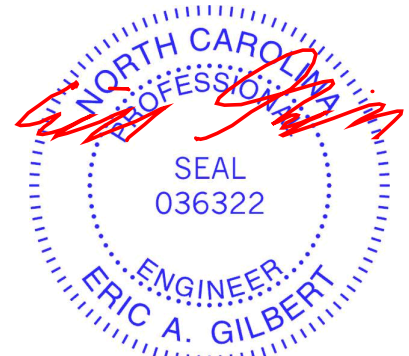
TOP CHORD	1-2=-68/69, 2-3=-68/69
BOT CHORD	1-4=-58/57, 3-4=-58/57
WEBS	2-4=-140/56

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) 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.
- All bearings are assumed to be SP No.2 .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 4 lb uplift at joint 1, 9 lb uplift at joint 3 and 20 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



June 9,2025

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.sbcacompnents.com)

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Edenton, NC 27932

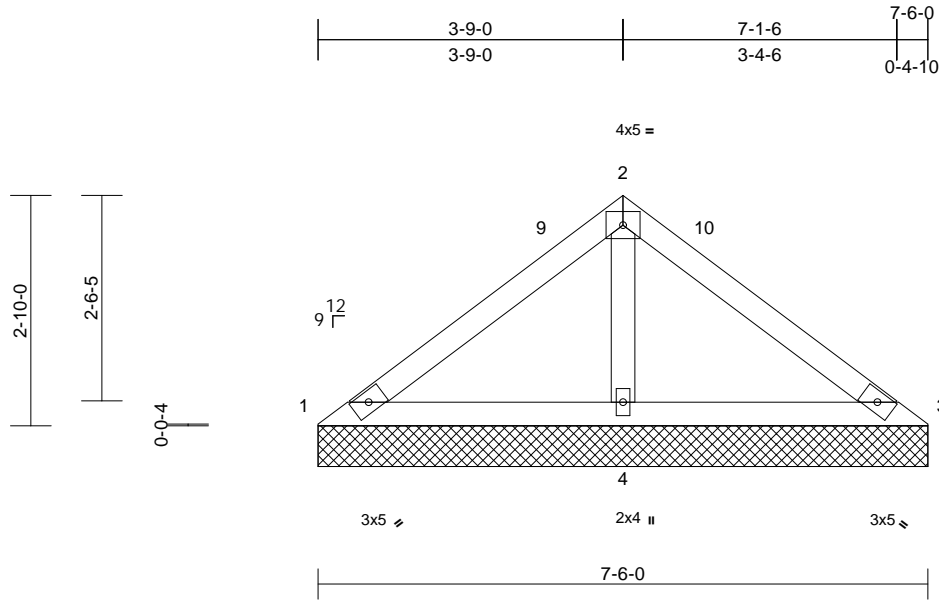
Job	Truss	Truss Type	Qty	Ply	51 Magnolia Acres-Roof-Grayson BC 3FL SP FE GLH I74037051
25060036-01	V6	Valley	1	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

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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	0.27	Vert(LL)	n/a	-	n/a	999	MT20 Weight: 27 lb FT = 20%
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.28	Vert(TL)	n/a	-	n/a	999	
TCDL	10.0	Rep Stress Incr	YES	WB	0.09	Horiz(TL)	0.00	4	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP							
BCDL	10.0										

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 7-6-0 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS

(size)	1=7-6-0, 3=7-6-0, 4=7-6-0
Max Horiz	1=-62 (LC 10)
Max Uplift	1=-20 (LC 21), 3=-20 (LC 20), 4=-67 (LC 14)
Max Grav	1=104 (LC 20), 3=104 (LC 21), 4=554 (LC 20)

FORCES

	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=-89/249, 2-3=-89/249
BOT CHORD	1-4=-200/147, 3-4=-200/147
WEBS	2-4=-439/191

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 4-6-5, Exterior(2E) 4-6-5 to 7-6-5 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.
- All bearings are assumed to be SP No.2 .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 20 lb uplift at joint 1, 20 lb uplift at joint 3 and 67 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



June 9,2025

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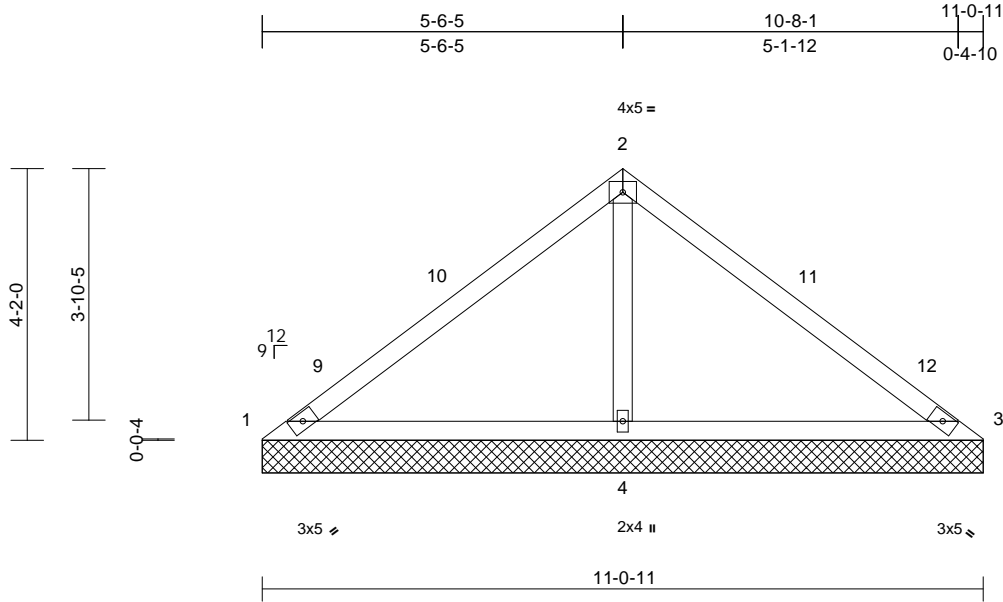
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	51 Magnolia Acres-Roof-Grayson BC 3FL SP FE GLH I74037052
25060036-01	V5	Valley	1	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

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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	0.60	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.52	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.24	Horiz(TL)	0.01	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 41 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=11-0-11, 3=11-0-11, 4=11-0-11
Max Horiz	1=-94 (LC 12)
Max Uplift	1=-78 (LC 21), 3=-78 (LC 20), 4=-122 (LC 14)
Max Grav	1=74 (LC 20), 3=74 (LC 21), 4=924 (LC 21)

FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-133/475, 2-3=-133/475
BOT CHORD	1-4=-335/185, 3-4=-335/185
WEBS	2-4=-783/284

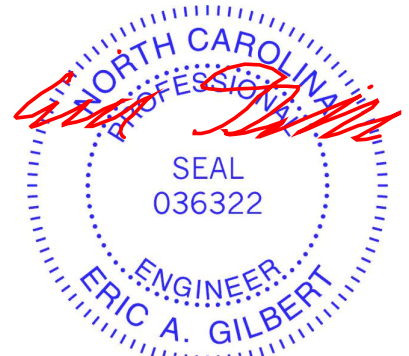
NOTES

- 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 8-1-0, Exterior(2E) 8-1-0 to 11-1-0 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
- 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.
- All bearings are assumed to be SP No.2 .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 78 lb uplift at joint 1, 78 lb uplift at joint 3 and 122 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



June 9,2025

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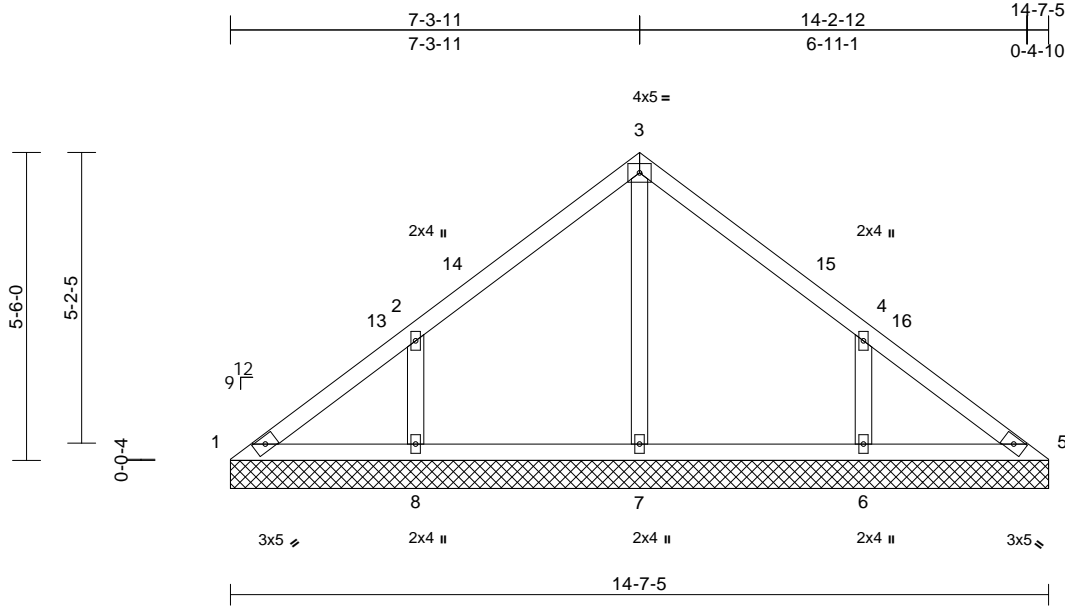
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	51 Magnolia Acres-Roof-Grayson BC 3FL SP FE GLH I74037053
25060036-01	V4	Valley	1	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

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Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.30	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.11	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.12	Horiz(TL)	0.00	5	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH							
BCDL	10.0									Weight: 60 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 6-0-0 oc bracing.

REACTIONS

(size)	1=14-7-5, 5=14-7-5, 6=14-7-5, 7=14-7-5, 8=14-7-5
Max Horiz	1=125 (LC 11)
Max Uplift	1=-16 (LC 10), 6=-138 (LC 15), 8=-140 (LC 14)
Max Grav	1=109 (LC 25), 5=93 (LC 1), 6=466 (LC 21), 7=314 (LC 21), 8=466 (LC 20)

FORCES

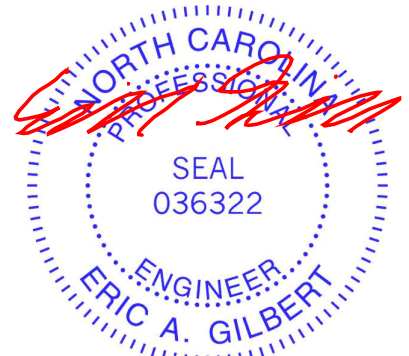
(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-140/135, 2-3=-151/114, 3-4=-151/102, 4-5=-113/100
BOT CHORD	1-8=-57/120, 7-8=-57/86, 6-7=-57/86, 5-6=-57/86
WEBS	3-7=-236/0, 2-8=-384/178, 4-6=-384/177

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 Exterior(2E) 0-0-5 to 3-0-5, Interior (1) 3-0-5 to 4-4-0, Exterior(2R) 4-4-0 to 10-4-0, Interior (1) 10-4-0 to 11-7-11, Exterior(2E) 11-7-11 to 14-7-11 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.
- All bearings are assumed to be SP No.2 .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 16 lb uplift at joint 1, 140 lb uplift at joint 8 and 138 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.

LOAD CASE(S) Standard



June 9,2025

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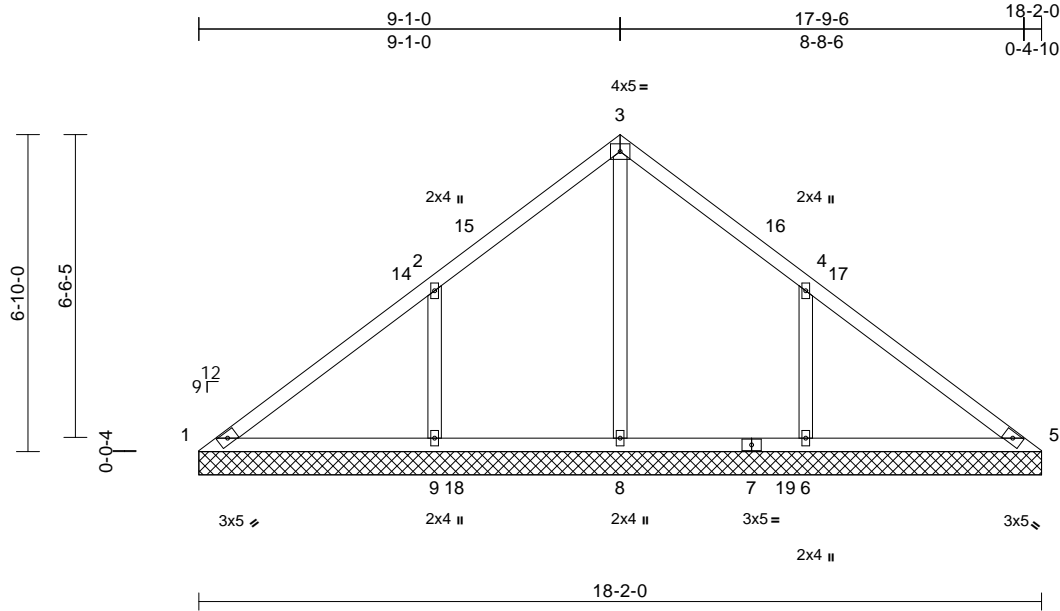
Job	Truss	Truss Type	Qty	Ply	51 Magnolia Acres-Roof-Grayson BC 3FL SP FE GLH I74037054
25060036-01	V3	Valley	1	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Fri Jun 06 13:02:49

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Scale = 1:49.7

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	0.40	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.22	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.31	Horiz(TL)	0.00	5	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH							
BCDL	10.0									Weight: 78 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 6-0-0 oc bracing.

REACTIONS

(size)	1=18-2-0, 5=18-2-0, 6=18-2-0, 8=18-2-0, 9=18-2-0
Max Horiz	1=-156 (LC 10)
Max Uplift	1=-14 (LC 10), 6=-176 (LC 15), 9=-178 (LC 14)
Max Grav	1=103 (LC 25), 5=101 (LC 21), 6=566 (LC 6), 8=549 (LC 24), 9=566 (LC 5)

FORCES

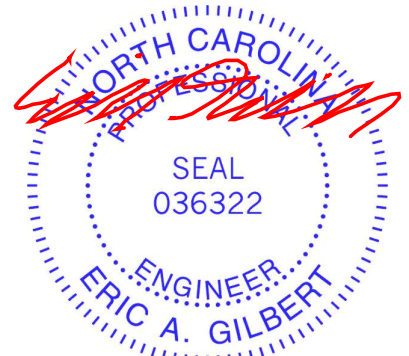
(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-137/321, 2-3=-40/239, 3-4=-40/223, 4-5=-107/297
BOT CHORD	1-9=-199/136, 8-9=-199/136, 6-8=-199/136, 5-6=-199/136
WEBS	3-8=-385/0, 2-9=-424/213, 4-6=-424/212

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, Interior (1) 3-0-5 to 6-1-5, Exterior(2R) 6-1-5 to 12-1-5, Interior (1) 12-1-5 to 15-2-5, Exterior(2E) 15-2-5 to 18-2-5 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, with BCDL = 10.0psf.
- All bearings are assumed to be SP No.2 .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 14 lb uplift at joint 1, 178 lb uplift at joint 9 and 176 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.

LOAD CASE(S) Standard



June 9,2025

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.sbcacompnents.com)

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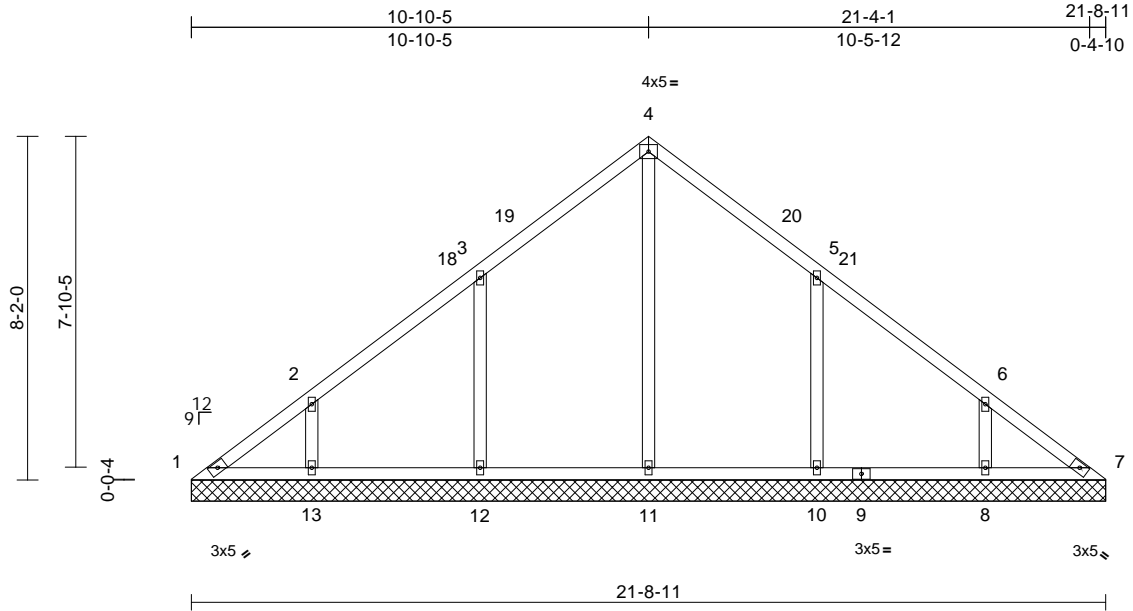
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	51 Magnolia Acres-Roof-Grayson BC 3FL SP FE GLH I74037055
25060036-01	V2	Valley	1	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Fri Jun 06 13:02:49
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Page: 1



Scale = 1:54.7

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.30	Vert(LL)	n/a	-	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.17	Vert(TL)	n/a	-	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.26	Horiz(TL)	0.01	7	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH							
BCDL	10.0										
										Weight: 101 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 6-0-0 oc bracing.

REACTIONS

(size)	1=21-8-11, 7=21-8-11, 8=21-8-11, 10=21-8-11, 11=21-8-11, 12=21-8-11, 13=21-8-11
Max Horiz	1=187 (LC 11)
Max Uplift	1=-38 (LC 10), 8=-103 (LC 15), 10=-152 (LC 15), 12=-152 (LC 14), 13=-106 (LC 14)
Max Grav	1=135 (LC 30), 7=102 (LC 27), 8=363 (LC 25), 10=480 (LC 6), 11=413 (LC 32), 12=480 (LC 5), 13=367 (LC 24)

FORCES

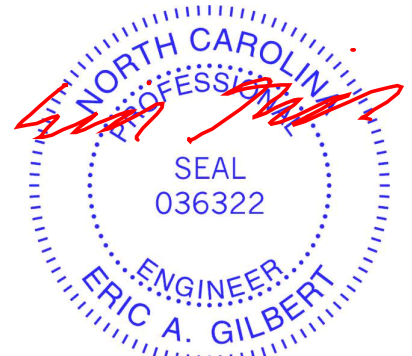
(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-181/159, 2-3=-146/125, 3-4=-166/172, 4-5=-166/148, 5-6=-98/76, 6-7=-144/94
BOT CHORD	1-13=-69/145, 12-13=-69/136, 11-12=-69/136, 10-11=-69/136, 8-10=-69/136, 7-8=-69/136
WEBS	4-11=-216/0, 3-12=-385/201, 2-13=-260/148, 5-10=-385/201, 6-8=-260/147

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 2-10-11, Interior (1) 2-10-11 to 7-10-11, Exterior(2R) 7-10-11 to 13-10-11, Interior (1) 13-10-11 to 18-9-0, Exterior(2E) 18-9-0 to 21-9-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- All plates are 2x4 MT20 unless otherwise indicated.
- 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, with BCDL = 10.0psf.
- All bearings are assumed to be SP No.2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 38 lb uplift at joint 1, 152 lb uplift at joint 12, 106 lb uplift at joint 13, 152 lb uplift at joint 10 and 103 lb uplift at joint 8.
- 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



June 9, 2025

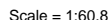
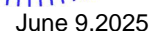
WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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.sbcacompnents.com)

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Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Fri Jun 06 13:02:49 Page: 1
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LOAD CASE(S) Standard

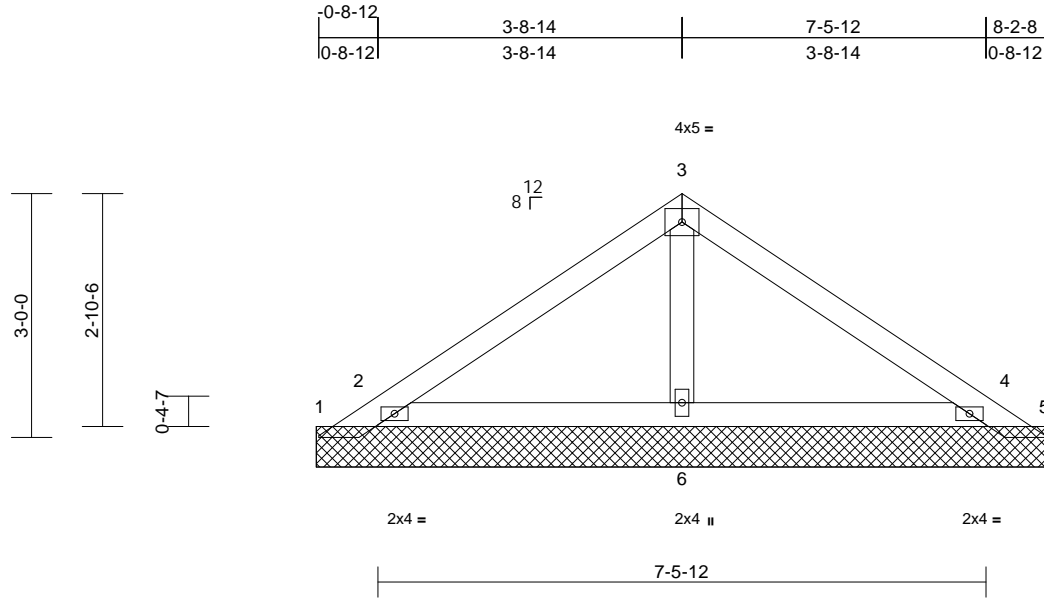
Job	Truss	Truss Type	Qty	Ply	51 Magnolia Acres-Roof-Grayson BC 3FL SP FE GLH I74037057
25060036-01	PB2-3	Piggyback	1	3	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Fri Jun 06 13:02:48

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Scale = 1:28.3

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	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.04	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.01	Horiz(TL)	0.00	4	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP							
BCDL	10.0										
										Weight: 91 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 (size)	1=9-0-0, 2=9-0-0, 4=9-0-0, 5=9-0-0, 6=9-0-0
Max Horiz	1=-66 (LC 10)
Max Uplift	1=-274 (LC 21), 2=-147 (LC 14), 4=-136 (LC 15), 5=-272 (LC 22)
Max Grav	1=109 (LC 14), 2=618 (LC 21), 4=606 (LC 22), 5=83 (LC 15), 6=233 (LC 21)

FORCES

	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=-97/185, 2-3=-154/117, 3-4=-154/116, 4-5=-70/183
BOT CHORD	2-6=-111/73, 4-6=-111/73
WEBS	3-6=-128/26

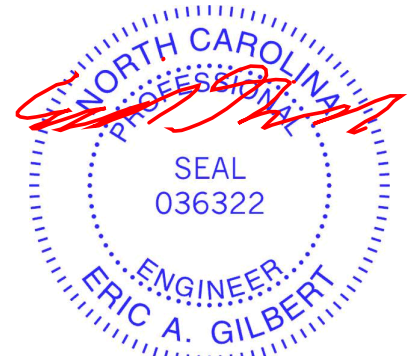
NOTES

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

- Wind: ASCE 7-16; 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) 0-3-5 to 3-3-5, Exterior(2R) 3-3-5 to 5-8-11, Exterior(2E) 5-8-11 to 8-8-11 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.
- All bearings are assumed to be SP No.2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 274 lb uplift at joint 1 and 272 lb uplift at joint 5.
- 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.

- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.
- LOAD CASE(S)** Standard



June 9, 2025

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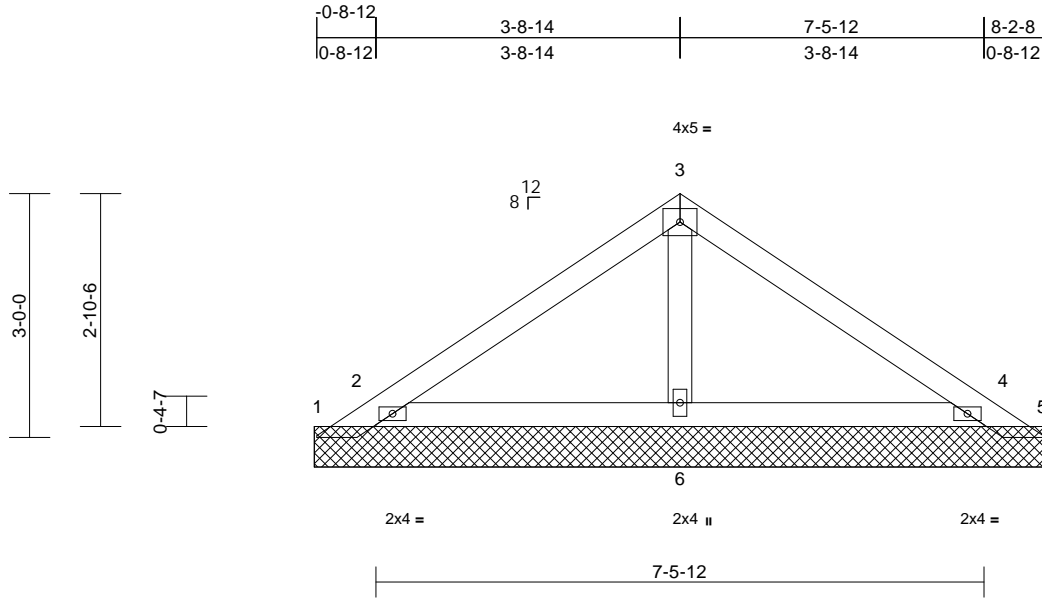
Job	Truss	Truss Type	Qty	Ply	51 Magnolia Acres-Roof-Grayson BC 3FL SP FE GLH I74037058
25060036-01	PB2-2	Piggyback	1	2	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Fri Jun 06 13:02:48

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Scale = 1:28.3

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	0.18	Vert(LL)	n/a	-	n/a	999	MT20
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.05	Vert(TL)	n/a	-	n/a	999	244/190
TCDL	10.0	Rep Stress Incr	YES	WB	0.01	Horiz(TL)	0.00	4	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP							
BCDL	10.0										
Weight: 61 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 (size)	1=9-0-0, 2=9-0-0, 4=9-0-0, 5=9-0-0, 6=9-0-0
Max Horiz	1=-66 (LC 10)
Max Uplift	1=-284 (LC 21), 2=-149 (LC 14), 4=-138 (LC 15), 5=-281 (LC 22)
Max Grav	1=111 (LC 14), 2=630 (LC 21), 4=618 (LC 22), 5=86 (LC 15), 6=228 (LC 21)

FORCES

	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=-98/190, 2-3=-156/133, 3-4=-156/132, 4-5=-72/189
BOT CHORD	2-6=-119/74, 4-6=-119/74
WEBS	3-6=-125/25

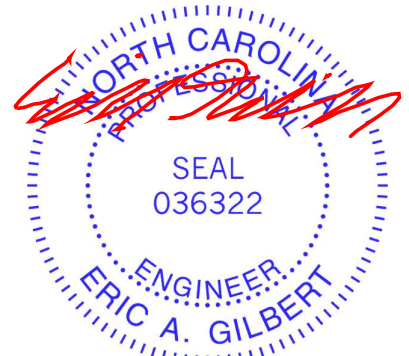
NOTES

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

- Wind: ASCE 7-16; 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) 0-3-5 to 3-3-5, Exterior(2R) 3-3-5 to 5-8-11, Exterior(2E) 5-8-11 to 8-8-11 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.
- All bearings are assumed to be SP No.2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 284 lb uplift at joint 1 and 281 lb uplift at joint 5.
- 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.

- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.
- LOAD CASE(S)** Standard



June 9,2025

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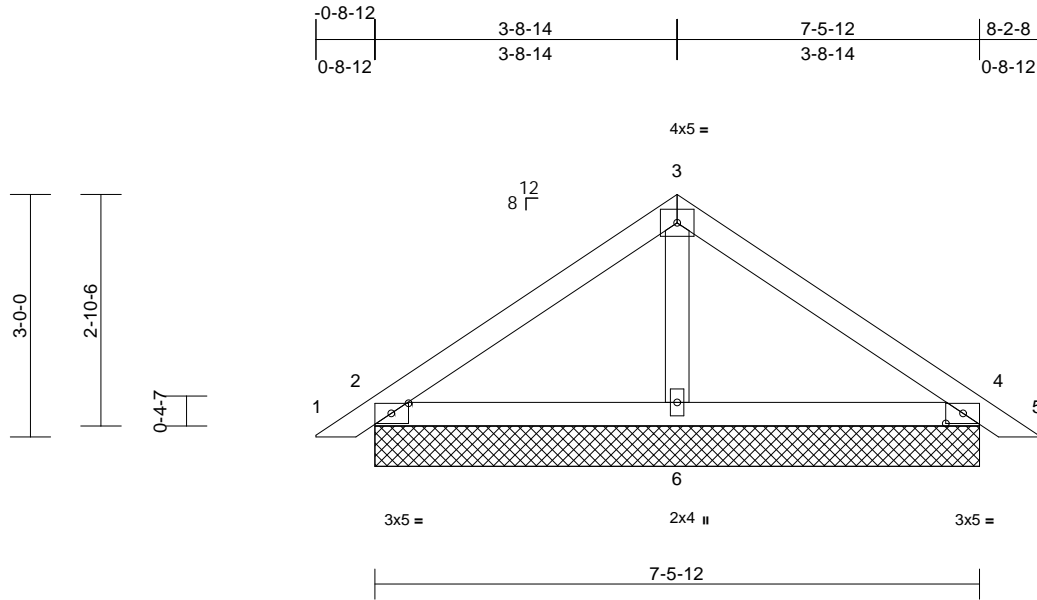
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	51 Magnolia Acres-Roof-Grayson BC 3FL SP FE GLH I74037059
25060036-01	PB2	Piggyback	14	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Fri Jun 06 13:02:48
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Page: 1



Scale = 1:28.5

Plate Offsets (X, Y): [2-0-2-9,0-1-8], [4-0-2-9,0-1-8]

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	0.28	Vert(LL)	n/a	-	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.29	Vert(CT)	n/a	-	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.00	2	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 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=7-5-12, 4=7-5-12, 6=7-5-12
Max Horiz 2=-66 (LC 12)
Max Uplift 2=-39 (LC 14), 4=-48 (LC 15)
Max Grav 2=296 (LC 21), 4=296 (LC 22), 6=263 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/26, 2-3=-178/94, 3-4=-178/94, 4-5=0/26

BOT CHORD 2-6=-23/74, 4-6=-11/74
WEBS 3-6=-109/14

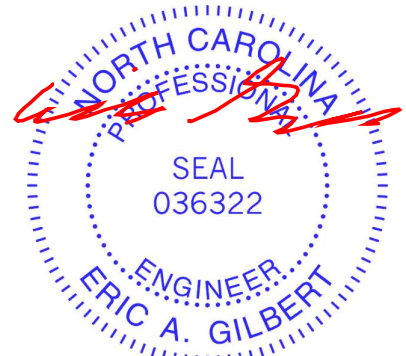
NOTES

- 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) 0-3-5 to 3-3-5, Exterior(2R) 3-3-5 to 5-8-11, Exterior(2E) 5-8-11 to 8-8-11 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.
- 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.
- All bearings are assumed to be SP No.2.
- 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.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard



June 9,2025

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818 Soundside Road
Edenton, NC 27932

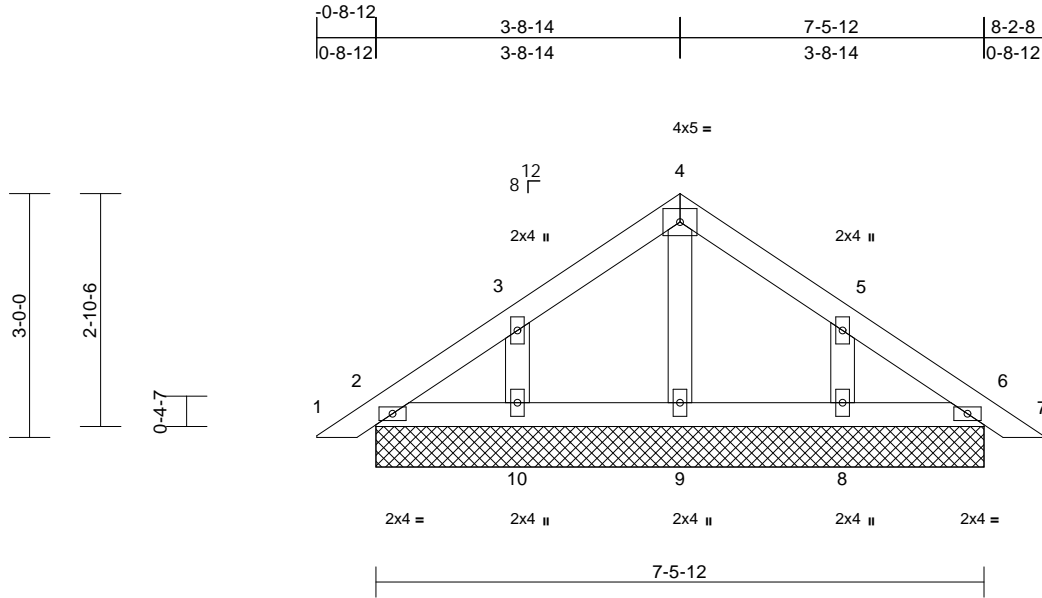
Job	Truss	Truss Type	Qty	Ply	51 Magnolia Acres-Roof-Grayson BC 3FL SP FE GLH I74037060
25060036-01	PB1	Piggyback	2	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Fri Jun 06 13:02:48

Page: 1

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Scale = 1:28.3

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	0.08	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	6	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP							
BCDL	10.0									Weight: 33 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

(size)	2=7-5-12, 6=7-5-12, 8=7-5-12, 9=7-5-12, 10=7-5-12
Max Horiz	2=66 (LC 13)
Max Uplift	2=-7 (LC 15), 6=-3 (LC 15), 8=-69 (LC 15), 10=-70 (LC 14)
Max Grav	2=141 (LC 21), 6=141 (LC 22), 8=261 (LC 22), 9=120 (LC 21), 10=261 (LC 21)

FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/26, 2-3=-50/46, 3-4=-85/76, 4-5=-85/76, 5-6=-33/33, 6-7=0/26
BOT CHORD	2-10=-18/59, 9-10=-18/59, 8-9=-18/59, 6-8=-18/59
WEBS	4-9=-82/0, 3-10=-213/127, 5-8=-213/127

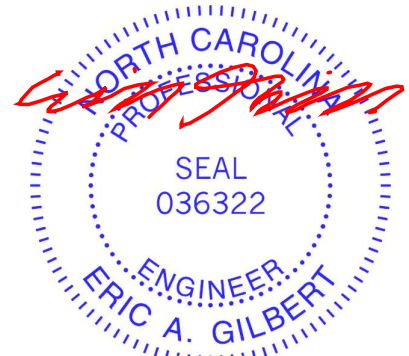
NOTES

- 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) 0-3-5 to 3-3-5, Exterior(2R) 3-3-5 to 5-8-11, Exterior(2E) 5-8-11 to 8-8-11 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.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2.
- 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.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard



June 9, 2025

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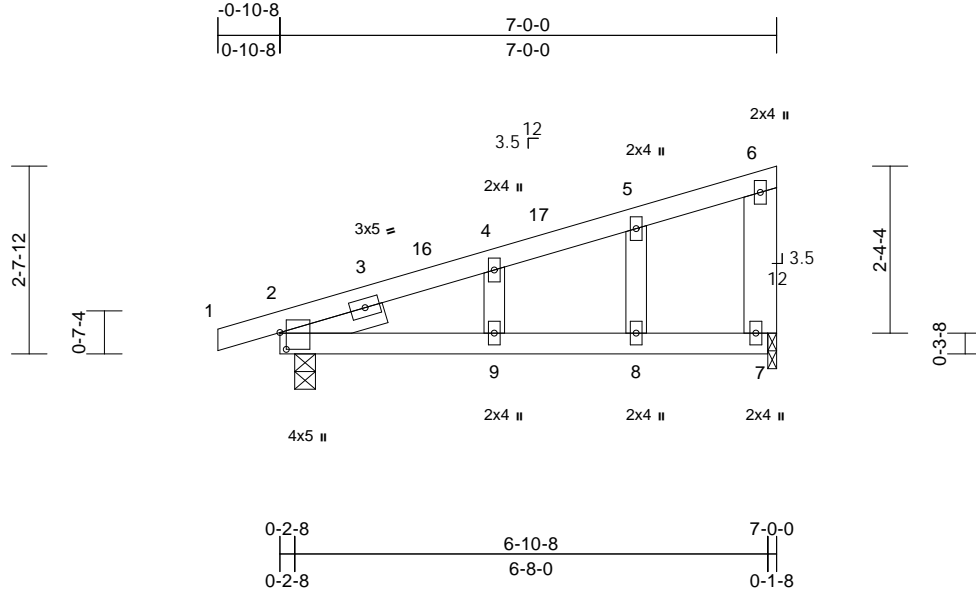
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	51 Magnolia Acres-Roof-Grayson BC 3FL SP FE GLH I74037061
25060036-01	K5	Monopitch Structural Gable	1	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Fri Jun 06 13:02:48
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Page: 1



Scale = 1:32.5

Plate Offsets (X, Y): [2:0-2-14,0-1-1]

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	0.66	Vert(LL)	-0.16	8-9	>496	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.73	Vert(CT)	-0.26	8-9	>309	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.04	2	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0											
											Weight: 33 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3 *Except* 7-6:2x6 SP No.2
SLIDER Left 2x4 SP No.3 -- 1-6-0

BRACING

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

REACTIONS (size) 2=0-3-8, 7=0-1-8
Max Horiz 2=90 (LC 13)
Max Uplift 2=-74 (LC 10), 7=-46 (LC 14)
Max Grav 2=442 (LC 21), 7=336 (LC 21)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/15, 2-4=-189/60, 4-5=-45/60, 5-6=-31/65, 6-7=-188/103
BOT CHORD 2-9=-29/43, 8-9=-29/43, 7-8=-29/43
WEBS 4-9=-79/81, 5-8=-70/85

NOTES

- 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) 0-1-0 to 3-1-0, Interior (1) 3-1-0 to 4-8-12, Exterior(2E) 4-8-12 to 7-8-12 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.
- 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.
- Bearings are assumed to be: Joint 2 SP No.2, Joint 7 SP No.2.
- Bearing at joint(s) 7 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate at joint(s) 7.
- 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.
- 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



June 9,2025

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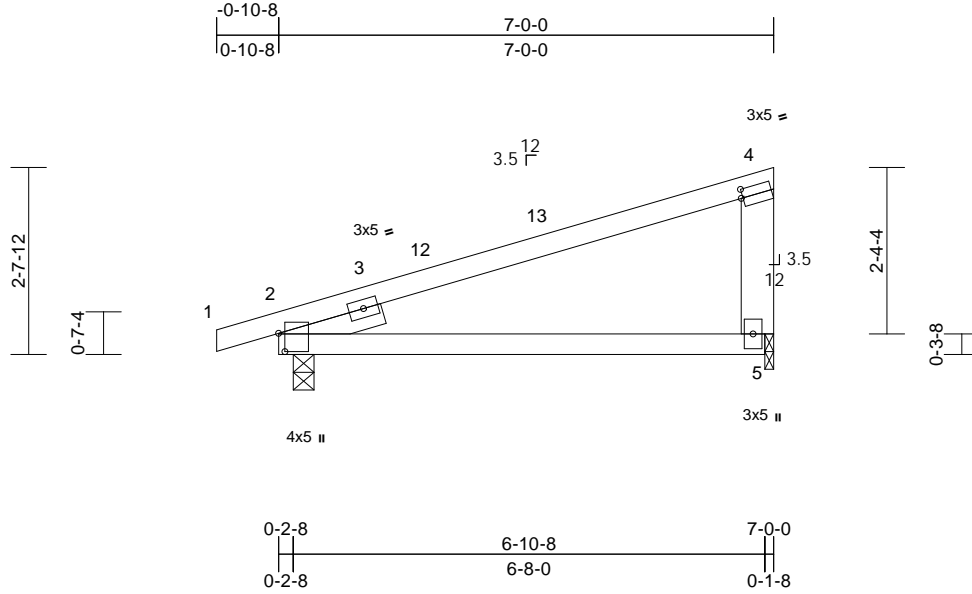
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	51 Magnolia Acres-Roof-Grayson BC 3FL SP FE GLH I74037062
25060036-01	K4	Monopitch	6	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Fri Jun 06 13:02:48
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Page: 1



Scale = 1:32.6

Plate Offsets (X, Y): [2:0-3-2,0-1-1], [4:0-0-5,0-1-8]

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	0.67	Vert(LL)	-0.04	5-10	>999	240	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.41	Vert(CT)	-0.07	5-10	>999	180	
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.01	2	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MR							
BCDL	10.0										
										Weight: 30 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS (size) 2=0-3-8, 5=0-1-8
Max Horiz 2=97 (LC 11)
Max Uplift 2=-73 (LC 10), 5=-48 (LC 14)
Max Grav 2=442 (LC 21), 5=336 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension

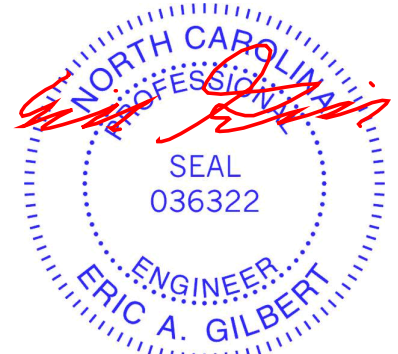
TOP CHORD 1-2=0/15, 2-4=-277/86, 4-5=-230/177
BOT CHORD 2-5=-132/237

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) 0-1-0 to 3-1-0, Interior (1) 3-1-0 to 4-8-12, Exterior(2E) 4-8-12 to 7-8-12 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.
- 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) Bearings are assumed to be: Joint 2 SP No.2 , Joint 5 SP No.2 .
- 8) Bearing at joint(s) 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 9) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 5.
- 10) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 5. This connection is for uplift only and does not consider lateral forces.
- 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



June 9,2025

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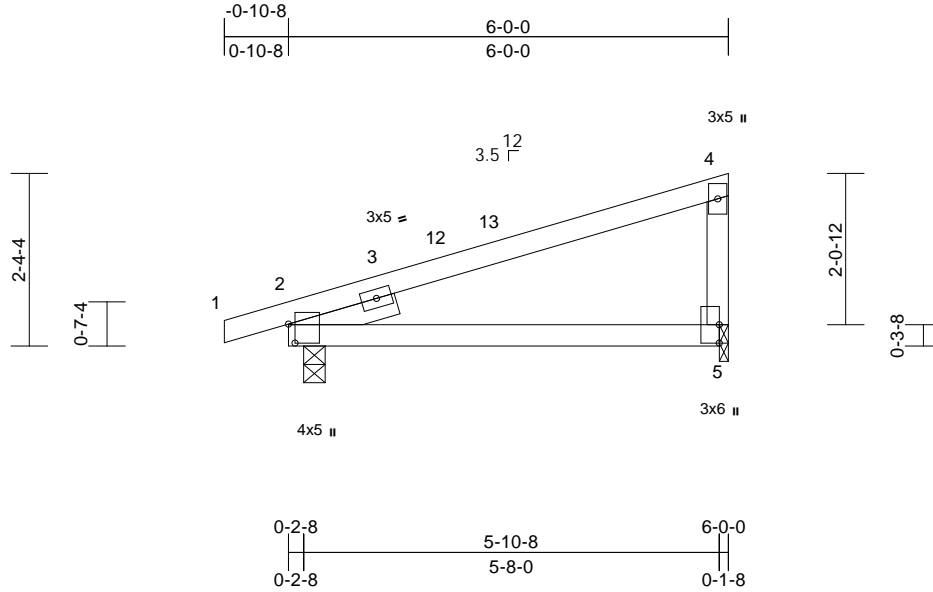
Job	Truss	Truss Type	Qty	Ply	51 Magnolia Acres-Roof-Grayson BC 3FL SP FE GLH I74037063
25060036-01	K3	Monopitch	3	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Fri Jun 06 13:02:48

Page: 1

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Scale = 1:31.4

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

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	0.83	Vert(LL)	-0.02	5-10	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.29	Vert(CT)	-0.04	5-10	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.01	2	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MR								
BCDL	10.0											
											Weight: 24 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3
SLIDER Left 2x4 SP No.3 -- 1-6-0

BRACING

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

REACTIONS (size) 2=0-3-8, 5=0-1-8
Max Horiz 2=85 (LC 11)
Max Uplift 2=-68 (LC 10), 5=-41 (LC 14)
Max Grav 2=421 (LC 21), 5=282 (LC 21)

FORCES

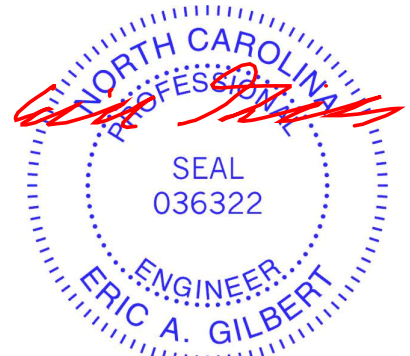
(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/21, 2-4=-205/92, 4-5=-191/155
BOT CHORD 2-5=-108/188

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) 0-1-0 to 3-1-0, Interior (1) 3-1-0 to 3-9-12, Exterior(2E) 3-9-12 to 6-9-12 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.
- 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) Bearings are assumed to be: Joint 2 SP No.2 , Joint 5 SP No.3 .
- 8) Bearing at joint(s) 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 9) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 5.
- 10) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 5. This connection is for uplift only and does not consider lateral forces.
- 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



June 9,2025

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.sbcacompnents.com)

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818 Soundside Road
Edenton, NC 27932

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Fri Jun 06 13:02:48 Page: 1
ID:JC8GeR8VOWwUJcwQaa2Bb5z90?7-RfC?PsB70Hq3NSqPanL8w3ulTXbGKWRcd0J74zJC?f



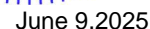
LUMBER	
TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3
BRACING	
TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
REACTIONS	(size) 2=0-5-4, 6= Mechanical
	Max Horiz 2=75 (LC 13)
	Max Uplift 2=-81 (LC 10), 6=-41 (LC 14)
	Max Grav 2=423 (LC 21), 6=325 (LC 21)
FORCES	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=0/29, 2-3=-137/59, 3-4=-7/0, 3-6=-232/144
BOT CHORD	2-6=-30/147, 5-6=0/0

- 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) Bearings are assumed to be: Joint 2 SP No.2 .
- 8) Refer to girder(s) for truss to truss connections.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 41 lb uplift at joint 6.
- 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.
- 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

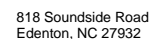
LOAD CASE(S) Standard

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) -1-2-8 to 1-9-8, Interior (1) 1-9-8 to 3-0-0, Exterior(2E) 3-0-0 to 6-0-0 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) 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); 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.



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 Components Association (www.sbcacomponents.com)



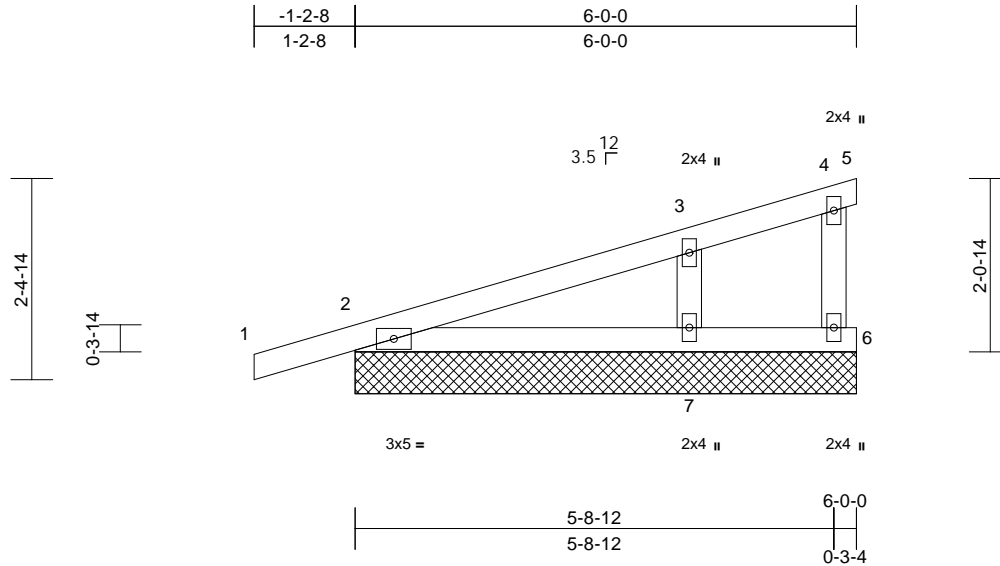
Job	Truss	Truss Type	Qty	Ply	51 Magnolia Acres-Roof-Grayson BC 3FL SP FE GLH I74037065
25060036-01	K1	Monopitch Supported Gable	1	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Fri Jun 06 13:02:48

Page: 1

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Scale = 1:27.6

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	0.24	Vert(LL)	n/a	-	n/a	999	MT20
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.37	Vert(CT)	n/a	-	n/a	999	244/190
TCDL	10.0	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.00	5	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP							
BCDL	10.0										
										Weight: 24 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=6'-0-0, 5=6'-0-0, 6=6'-0-0, 7=6'-0-0
	Max Horiz	2=72 (LC 11)
	Max Uplift	2=63 (LC 10), 7=36 (LC 14)
	Max Grav	2=301 (LC 21), 5=63 (LC 21), 6=57 (LC 7), 7=402 (LC 21)

FORCES

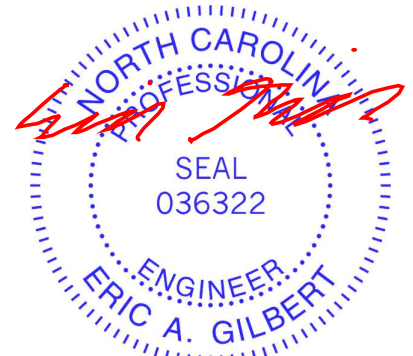
	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=0/29, 2-3=63/78, 3-4=43/29, 4-5=7/17, 4-6=0/77
BOT CHORD	2-7=38/88, 6-7=21/38
WEBS	3-7=327/254

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) -1-2-8 to 1-9-8, Exterior(2N) 1-9-8 to 6-0-0 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 requires continuous bottom chord bearing.
- 7) Gable studs spaced at 2'-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) All bearings are assumed to be SP No.2.
- 11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 63 lb uplift at joint 2, 36 lb uplift at joint 7 and 63 lb uplift at joint 2.
- 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



June 9, 2025

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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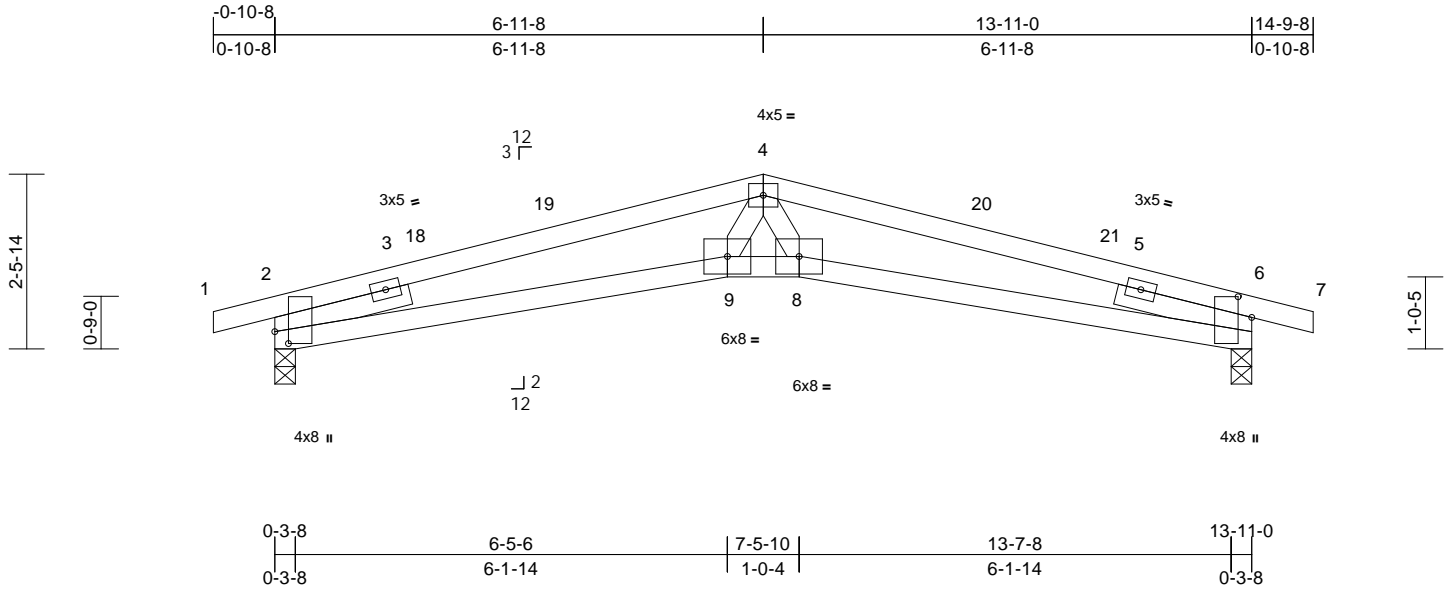
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	51 Magnolia Acres-Roof-Grayson BC 3FL SP FE GLH
25060036-01	H2	Roof Special	5	1	I74037066
Job Reference (optional)					

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Fri Jun 06 13:02:48
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Page: 1



Scale = 1:32.8

Plate Offsets (X, Y): [2:0-2-1,0-2-5], [6:0-3-9,0-2-5]

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	0.72	Vert(LL)	-0.13	8-9	>999	240	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	1.00	Vert(CT)	-0.27	8-9	>621	180	
TCDL	10.0	Rep Stress Incr	YES	WB	0.20	Horz(CT)	0.12	6	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.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3
SLIDER	Left 2x4 SP No.3 -- 2-0-0, Right 2x4 SP No.3 -- 2-0-0

BRACING

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

REACTIONS

(size)	2=0-3-8, 6=0-3-8
Max Horiz	2=31 (LC 14)
Max Uplift	2=-96 (LC 10), 6=-96 (LC 11)
Max Grav	2=715 (LC 21), 6=715 (LC 22)

FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/18, 2-4=-1891/672, 4-6=-1891/672, 6-7=0/18
BOT CHORD	2-9=-580/1809, 8-9=-543/1641, 6-8=-580/1809
WEBS	4-8=-61/473, 4-9=-61/473

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

- 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.
- All bearings are assumed to be SP No.2 .
- Bearing at joint(s) 2, 6 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 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.
- 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



June 9,2025

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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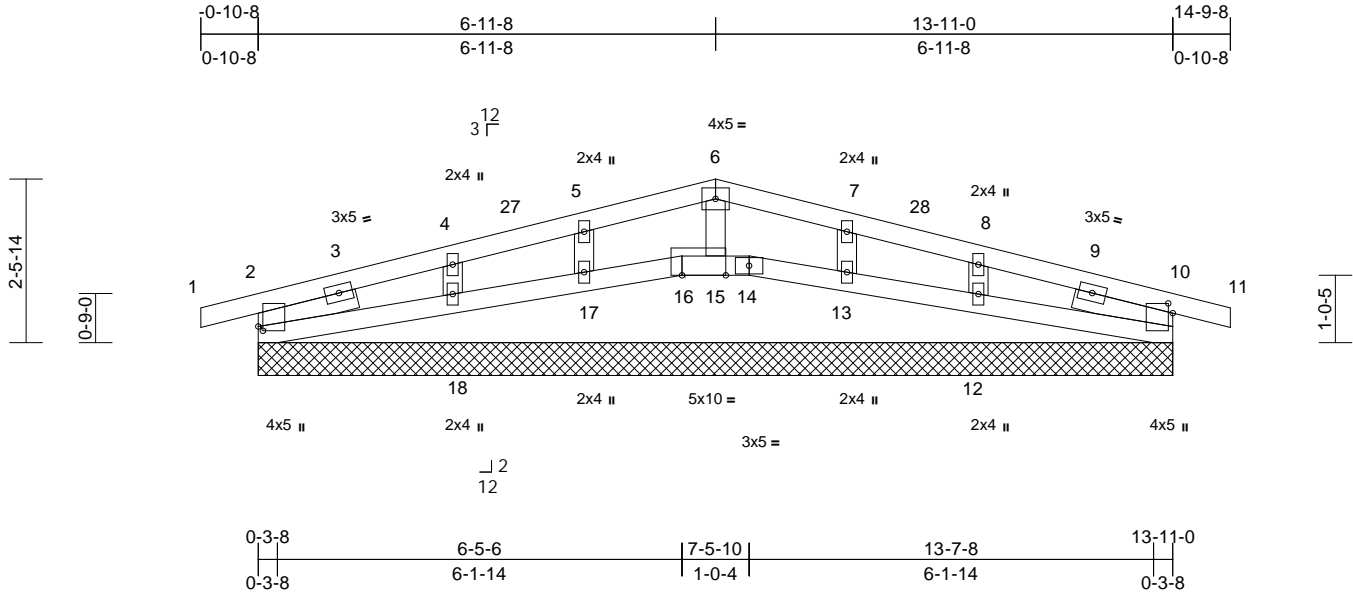
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	51 Magnolia Acres-Roof-Grayson BC 3FL SP FE GLH I74037067
25060036-01	H1	Roof Special Supported Gable	1	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Fri Jun 06 13:02:47
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Page: 1



Scale = 1:35.1

Plate Offsets (X, Y): [2:0-0-13,0-0-13], [10:0-1-13,0-0-13]												
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	0.09	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	0.04	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 55 lb	FT = 20%

LUMBER	
TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
OTHERS	2x4 SP No.3
SLIDER	Left 2x4 SP No.3 -- 1-6-13, Right 2x4 SP No.3 -- 1-6-13
BRACING	
TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
REACTIONS (size)	2=13-11-0, 10=13-11-0, 12=13-11-0, 13=13-11-0, 14=13-11-0, 15=13-11-0, 16=13-11-0, 17=13-11-0, 18=13-11-0
Max Horiz	2=31 (LC 14)
Max Uplift	2=-46 (LC 10), 10=-54 (LC 11), 12=-45 (LC 15), 13=-31 (LC 11), 15=-11 (LC 10), 17=-30 (LC 10), 18=-48 (LC 14)
Max Grav	2=230 (LC 21), 10=230 (LC 22), 12=284 (LC 22), 13=193 (LC 22), 14=49 (LC 7), 15=90 (LC 1), 16=49 (LC 7), 17=193 (LC 21), 18=284 (LC 21)
FORCES (lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/18, 2-4=-89/39, 4-5=-77/72, 5-6=-82/108, 6-7=-82/108, 7-8=-77/72, 8-10=-89/39, 10-11=0/18
BOT CHORD	2-18=-5/58, 17-18=-3/53, 16-17=-4/54, 15-16=-2/51, 14-15=-2/51, 13-14=-4/54, 12-13=-4/53, 10-12=-3/58
WEBS	6-15=-88/53, 5-17=-171/122, 4-18=-205/114, 7-13=-171/122, 8-12=-205/114

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCCL=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
- 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.
- 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.
- All bearings are assumed to be SP No.2.

- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 46 lb uplift at joint 2, 54 lb uplift at joint 10, 11 lb uplift at joint 15, 30 lb uplift at joint 17, 48 lb uplift at joint 18, 31 lb uplift at joint 13, 45 lb uplift at joint 12, 46 lb uplift at joint 2 and 54 lb uplift at joint 10.
 - Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 16, 14, 15, 17, 18, 13, 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



June 9,2025

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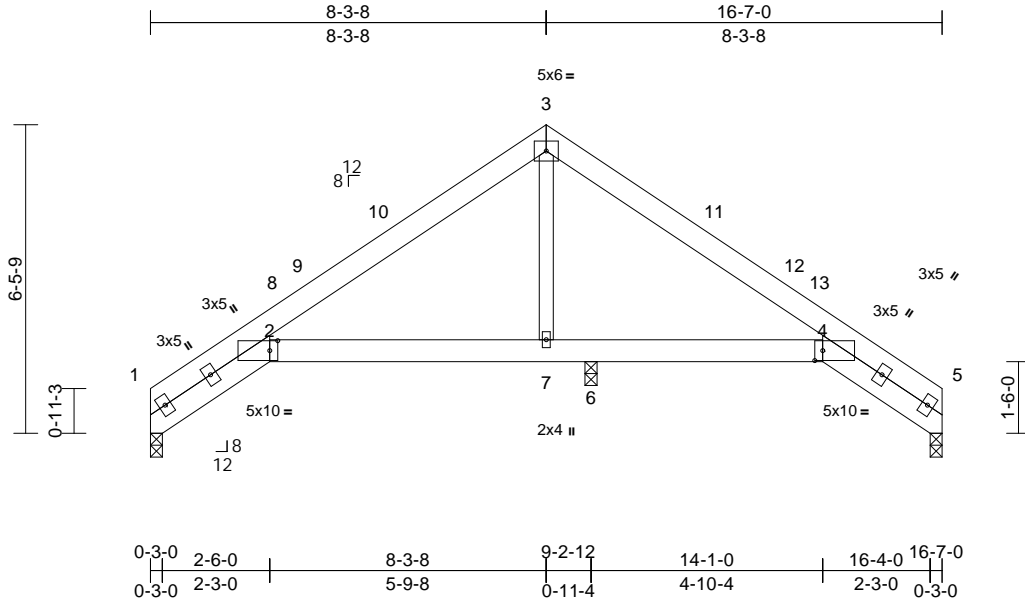
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	51 Magnolia Acres-Roof-Grayson BC 3FL SP FE GLH I74037068
25060036-01	G1	Roof Special	4	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Fri Jun 06 13:02:47
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Page: 1



Scale = 1:48.3

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

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	0.47	Vert(LL)	-0.12	2-7	>944	240	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.63	Vert(CT)	-0.18	2-7	>607	180	
TCDL	10.0	Rep Stress Incr	YES	WB	0.27	Horz(CT)	0.07	6	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH							
BCDL	10.0										
										Weight: 96 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3

BRACING

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

REACTIONS

(size) 1=0-3-0, 5=0-3-0, 6=0-3-0
Max Horiz 1=134 (LC 11)
Max Uplift 1=-16 (LC 14), 5=-23 (LC 15),
6=-79 (LC 14)
Max Grav 1=318 (LC 20), 5=156 (LC 21),
6=1012 (LC 21)

FORCES

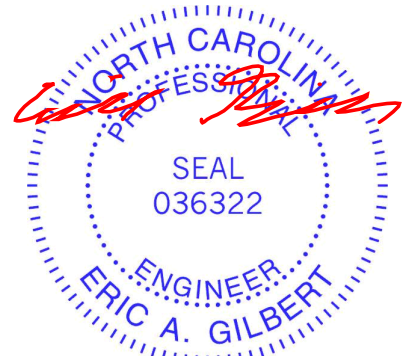
(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-172/117, 2-3=-62/356, 3-4=-64/425,
4-5=-64/39
BOT CHORD 2-7=-246/167, 6-7=-246/167, 4-6=-246/167
WEBS 3-7=-714/148

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) 0-2-0 to 3-2-0, Interior (1) 3-2-0 to 5-3-8, Exterior(2R) 5-3-8 to 11-3-8, Interior (1) 11-3-8 to 13-5-0, Exterior(2E) 13-5-0 to 16-5-0 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 a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3'-06"-00 tall by 2'-00"-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2 .
- Bearing at joint(s) 1, 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1, 6, 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.

LOAD CASE(S) Standard



June 9,2025

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818 Soundside Road
Edenton, NC 27932

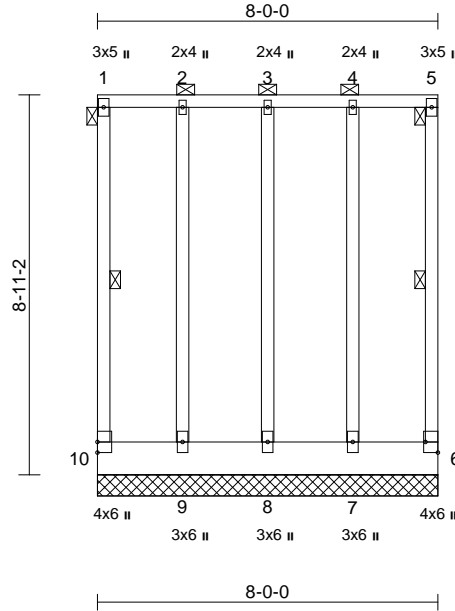
Job	Truss	Truss Type	Qty	Ply	51 Magnolia Acres-Roof-Grayson BC 3FL SP FE GLH I74037069
25060036-01	E2-2	Flat Girder	1	2	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Fri Jun 06 13:02:47

Page: 1

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Scale = 1:54.1

Plate Offsets (X, Y): [6:Edge,0-3-8]

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	0.78	Vert(LL)	n/a	-	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.02	Vert(TL)	n/a	-	999		
TCDL	10.0	Rep Stress Incr	NO	WB	0.31	Horiz(TL)	0.00	6	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MR							
BCDL	10.0										
										Weight: 204 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x10 SP 2400F 2.0E
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.3

BRACING

TOP CHORD	2-0-0 oc purlins (6-0-0 max.): 1-5, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 1-10, 5-6

REACTIONS

(size)	6=8-0-0, 7=8-0-0, 8=8-0-0, 9=8-0-0, 10=8-0-0
Max Horiz	10=288 (LC 8)
Max Uplift	6=408 (LC 9), 7=522 (LC 8), 8=55 (LC 8), 9=523 (LC 9), 10=459 (LC 8)
Max Grav	6=410 (LC 10), 7=1257 (LC 22), 8=1069 (LC 18), 9=1280 (LC 21), 10=1212 (LC 22)

FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-10=-1020/215, 1-2=-34/15, 2-3=-34/15, 3-4=-34/15, 4-5=-34/15, 5-6=-161/164
BOT CHORD	9-10=-180/154, 8-9=-180/154, 7-8=-180/154, 6-7=-180/154
WEBS	3-8=-1030/83, 2-9=-1015/237, 4-7=-988/235

NOTES

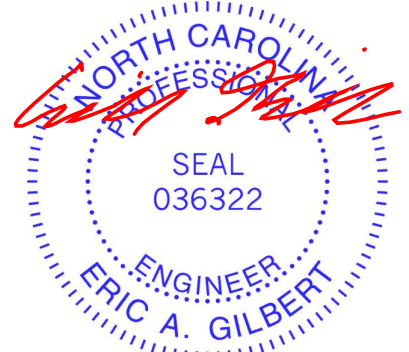
- 2-ply truss to be connected together as follows:
Top chords connected with 10d (0.131"x3") nails as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected with 10d (0.131"x3") nails as follows: 2x10 - 2 rows staggered at 0-9-0 oc.

- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
- 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
- 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.
- Provide adequate drainage to prevent water ponding.
- 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.
- All bearings are assumed to be SP 2400F 2.0E .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 459 lb uplift at joint 10, 408 lb uplift at joint 6, 55 lb uplift at joint 8, 523 lb uplift at joint 9 and 522 lb uplift at joint 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.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 994 lb down and 64 lb up at 0-1-12, 972 lb down and 52 lb up at 2-0-12, and 972 lb down and 52 lb up at 4-1-8, and 972 lb down and 52 lb up at 6-1-8 on top chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-5=-60, 6-10=-20
Concentrated Loads (lb)
Vert: 1=-956, 3=-892, 2=-892, 4=-892



June 9,2025

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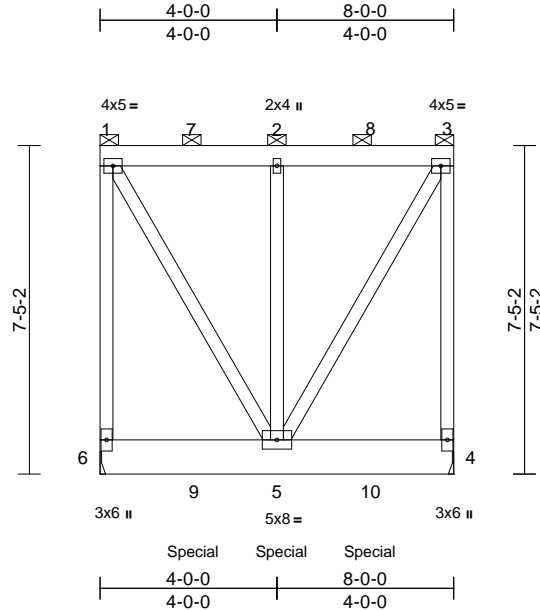
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	51 Magnolia Acres-Roof-Grayson BC 3FL SP FE GLH I74037070
25060036-01	E1-2	Flat Girder	1	2	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Fri Jun 06 13:02:47
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Page: 1



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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.30	Vert(LL)	-0.01	5	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.08	Vert(CT)	-0.02	5	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.28	Horz(CT)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0											
											Weight: 198 lb	FT = 20%

LUMBER

TOP CHORD	2x6 SP No.2
BOT CHORD	2x10 SP 2400F 2.0E
WEBS	2x4 SP No.3

BRACING

TOP CHORD	2-0-0 oc purlins (6-0-0 max.): 1-3, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS	(size)	4= Mechanical, 6= Mechanical
	Max Horiz	6=234 (LC 9)
	Max Uplift	4=-354 (LC 9), 6=-348 (LC 8)
	Max Grav	4=1622 (LC 1), 6=1861 (LC 1)

FORCES

	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-6=-1444/292, 1-2=-543/92, 2-3=-543/92, 3-4=-1167/289
BOT CHORD	5-6=-204/183, 4-5=-87/66
WEBS	1-5=-291/1129, 2-5=-835/93, 3-5=-291/1129

NOTES

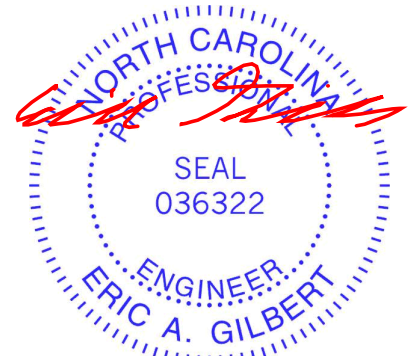
- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc, 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x10 - 2 rows staggered at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
- 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.
- Provide adequate drainage to prevent water ponding.
- 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.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 348 lb uplift at joint 6 and 354 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.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 309 lb down and 9 lb up at 0-1-12, 298 lb down and 14 lb up at 2-0-12, and 298 lb down and 14 lb up at 4-1-8, and 298 lb down and 14 lb up at 6-1-8 on top chord, and 607 lb down and 140 lb up at 2-1-8, and 607 lb down and 140 lb up at 4-1-8, and 607 lb down and 140 lb up at 6-1-8 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-60, 4-6=-20
Concentrated Loads (lb)

Vert: 5=-600 (B), 1=-290, 2=-258, 7=-258, 8=-258, 9=-600 (B), 10=-600 (B)



June 9, 2025

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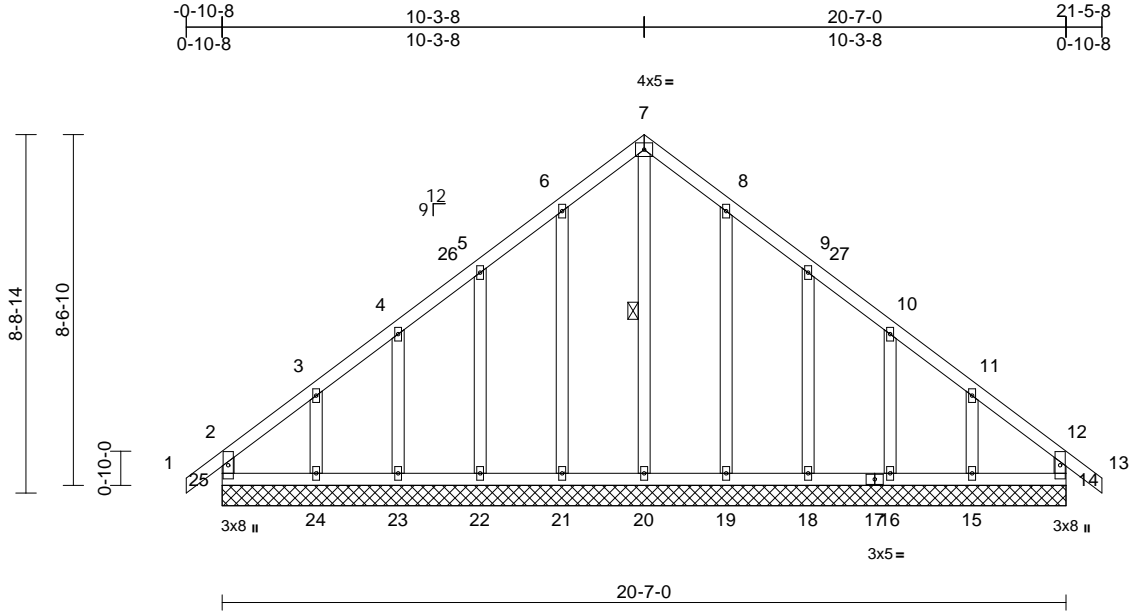
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	51 Magnolia Acres-Roof-Grayson BC 3FL SP FE GLH I74037071
25060036-01	D1	Common Supported Gable	1	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

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Page: 1



Scale = 1:56.2												
Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.13	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.20	Horz(CT)	0.00	14	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MR								
BCDL	10.0											
											Weight: 136 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.
WEBS	1 Row at midpt 7-20

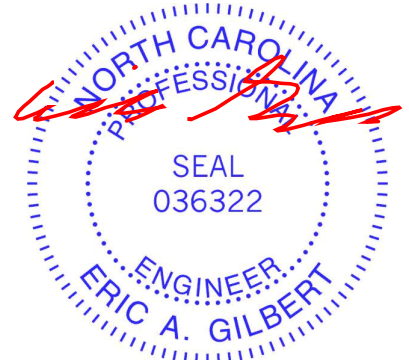
REACTIONS (size)	
	14=20-7-0, 15=20-7-0, 16=20-7-0, 18=20-7-0, 19=20-7-0, 20=20-7-0, 21=20-7-0, 22=20-7-0, 23=20-7-0, 24=20-7-0, 25=20-7-0
Max Horiz	25=218 (LC 12)
Max Uplift	14=40 (LC 11), 15=118 (LC 15), 16=52 (LC 15), 18=74 (LC 15), 19=60 (LC 15), 21=61 (LC 14), 22=74 (LC 14), 23=50 (LC 14), 24=125 (LC 14), 25=72 (LC 10)
Max Grav	14=172 (LC 25), 15=207 (LC 26), 16=161 (LC 26), 18=216 (LC 22), 19=266 (LC 22), 20=225 (LC 15), 21=266 (LC 21), 22=216 (LC 21), 23=160 (LC 1), 24=217 (LC 25), 25=197 (LC 26)

FORCES (lb) - Maximum Compression/Maximum Tension	
TOP CHORD	2-25=-164/67, 1-2=0/37, 2-3=-152/139, 3-4=-114/107, 4-5=-100/139, 5-6=-113/213, 6-7=-149/278, 7-8=-149/278, 8-9=-113/213, 9-10=-81/137, 10-11=-83/81, 11-12=-112/97, 12-13=0/37, 12-14=-142/63
BOT CHORD	24-25=-92/128, 23-24=-92/128, 22-23=-92/128, 21-22=-92/128, 20-21=-92/128, 19-20=-92/128, 18-19=-92/128, 16-18=-92/128, 15-16=-92/128, 14-15=-92/128

WEBS	
	7-20=-265/84, 6-21=-226/86, 5-22=-176/102, 4-23=-142/89, 3-24=-163/126, 8-19=-226/85, 9-18=-176/102, 10-16=-143/87, 11-15=-159/125

- 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 2-3-8, Exterior(2N) 2-3-8 to 7-3-8, Corner(3R) 7-3-8 to 13-3-8, Exterior(2N) 13-3-8 to 18-3-8, Corner(3E) 18-3-8 to 21-5-8 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.
 - All bearings are assumed to be SP No.2 .
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 72 lb uplift at joint 25, 40 lb uplift at joint 14, 61 lb uplift at joint 21, 74 lb uplift at joint 22, 50 lb uplift at joint 23, 125 lb uplift at joint 24, 60 lb uplift at joint 19, 74 lb uplift at joint 18, 52 lb uplift at joint 16 and 118 lb uplift at joint 15.
 - 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



June 9,2025

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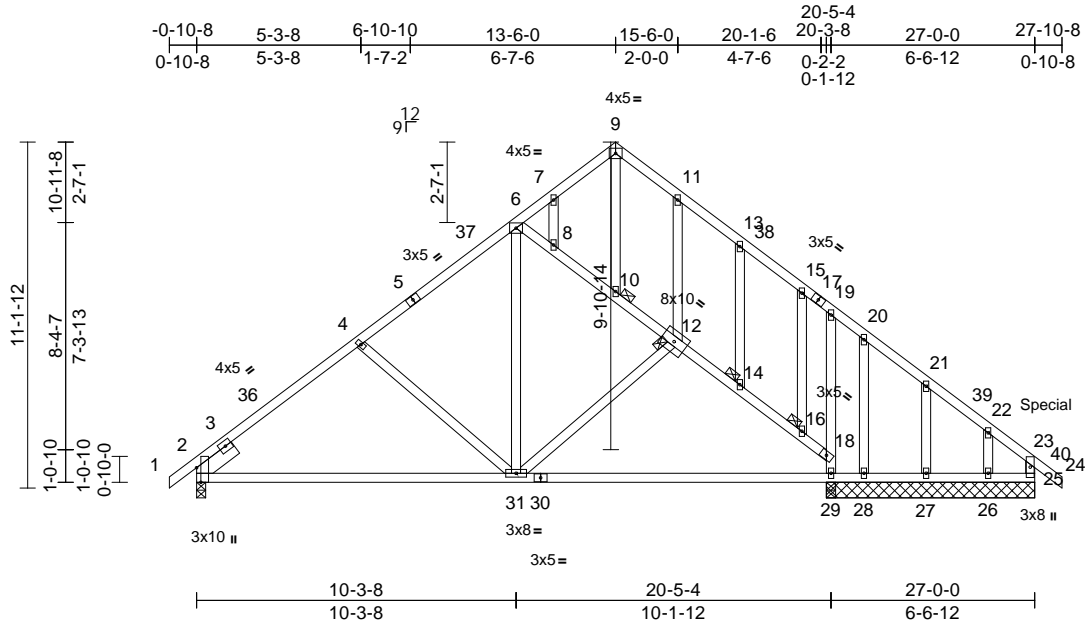
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	51 Magnolia Acres-Roof-Grayson BC 3FL SP FE GLH I74037072
25060036-01	C1	Common Structural Gable	1	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Fri Jun 06 13:02:47
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Page: 1



Scale = 1:74.2

Plate Offsets (X, Y): [2:0-5-10,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	0.39	Vert(LL)	-0.15	31-34	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.84	Vert(CT)	-0.31	31-34	>794	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.73	Horz(CT)	0.03	25	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
Weight: 199 lb											FT = 20%	

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3 *Except* 25-23,19-29:2x4 SP No.2
OTHERS	2x4 SP No.3
SLIDER	Left 2x6 SP No.2 -- 1-6-0

BRACING

TOP CHORD	Structural wood sheathing directly applied or 5-2-15 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
JOINTS	1 Brace at Jt(s): 10, 14, 16, 12

REACTIONS

(size)	2=0-3-8, 25=6-8-8, 26=6-8-8, 27=6-8-8, 28=6-8-8, 29=0-3-8
Max Horiz	2=268 (LC 13)
Max Uplift	2=72 (LC 56), 25=264 (LC 11), 26=332 (LC 57), 27=46 (LC 15), 28=383 (LC 7), 29=130 (LC 15)
Max Grav	2=979 (LC 46), 25=647 (LC 28), 26=154 (LC 11), 27=235 (LC 26), 28=73 (LC 14), 29=1022 (LC 22)

FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/32, 2-4=1138/140, 4-6=933/139, 6-7=340/78, 7-9=326/118, 9-11=280/114, 11-13=291/64, 13-15=313/37, 15-19=366/31, 19-20=269/38, 20-21=374/28, 21-22=381/40, 22-23=499/73, 23-24=96/130, 23-25=536/245, 6-8=570/149, 8-10=617/174, 10-12=538/146, 12-14=628/207, 14-16=674/234, 16-18=641/224

BOT CHORD	2-31=227/889, 29-31=1/668, 28-29=49/333, 27-28=49/333, 26-27=49/333, 25-26=49/333
WEBS	9-10=66/132, 7-8=102/44, 11-12=225/114, 13-14=93/48, 15-16=16/62, 20-28=21/97, 21-27=179/96, 22-26=131/242, 6-31=33/457, 4-31=310/193, 12-31=166/100, 18-29=803/340, 18-19=420/200

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 10-3-8, Corner(3R) 10-3-8 to 16-6-0, Exterior(2N) 16-6-0 to 24-10-8, Corner(3E) 24-10-8 to 27-10-8 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 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.
- All bearings are assumed to be SP No.2 .
- 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.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



June 9,2025

Continued on page 2

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Job	Truss	Truss Type	Qty	Ply	51 Magnolia Acres-Roof-Grayson BC 3FL SP FE GLH I74037072
25060036-01	C1	Common Structural Gable	1	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Fri Jun 06 13:02:47
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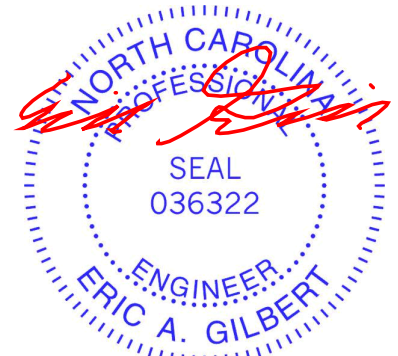
Page: 2

15) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 204 lb down and 171 lb up at 27'-4"-12" on top chord. The design/selection of such connection device(s) is the responsibility of others.

16) 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 + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-6=-60, 6-9=-60, 9-23=-60, 23-24=-60,
25-32=-20
Concentrated Loads (lb)
Vert: 40=56 (B)



June 9, 2025

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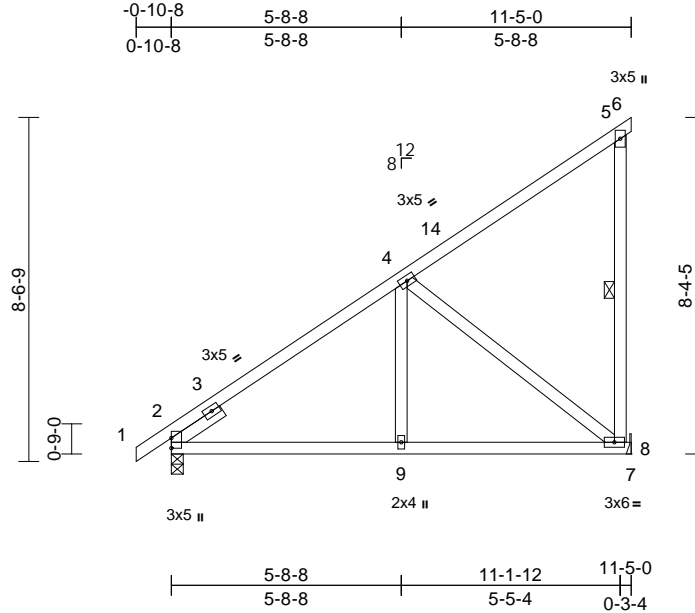
Job	Truss	Truss Type	Qty	Ply	51 Magnolia Acres-Roof-Grayson BC 3FL SP FE GLH I74037073
25060036-01	B2	Monopitch	3	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Fri Jun 06 13:02:46

Page: 1

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Scale = 1:57.2

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.65	Vert(LL)	-0.03	8-9	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.30	Vert(CT)	-0.05	8-9	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.48	Horz(CT)	0.01	2	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 68 lb	FT = 20%

LUMBER

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

BRACING

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

WEBS	1 Row at midpt	5-8
------	----------------	-----

REACTIONS	(size)	2=0-3-8, 8= Mechanical
	Max Horiz	2=289 (LC 13)
	Max Uplift	2=-32 (LC 14), 8=-128 (LC 14)
	Max Grav	2=535 (LC 21), 8=620 (LC 21)

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

TOP CHORD	1-2=0/29, 2-4=-401/114, 4-5=-194/164, 5-6=-15/0, 5-8=-260/71
-----------	--

BOT CHORD	2-9=-217/512, 8-9=-102/512, 7-8=0/0
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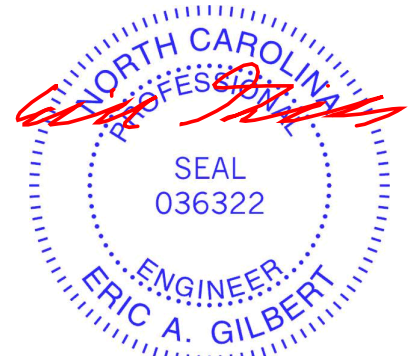
WEBS	4-9=0/247, 4-8=-542/194
------	-------------------------

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) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 8-5-0, Exterior(2E) 8-5-0 to 11-5-0 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) 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) Bearings are assumed to be: Joint 2 SP No.2 .
- 8) Refer to girder(s) for truss to truss connections.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 128 lb uplift at joint 8.
- 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.
- 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



June 9,2025

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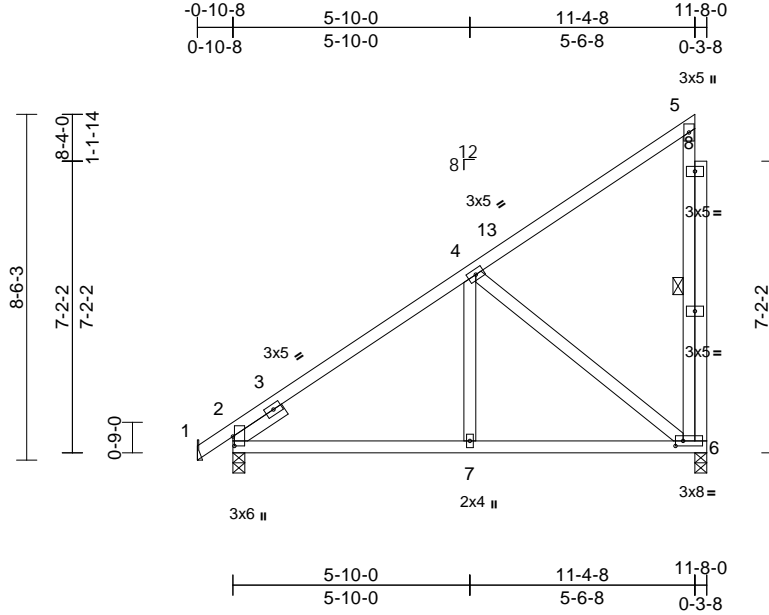
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	51 Magnolia Acres-Roof-Grayson BC 3FL SP FE GLH I74037074
25060036-01	B1	Monopitch	3	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

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Page: 1



Scale = 1:56.7

Plate Offsets (X, Y): [2:0-2-13,0-0-7], [6:0-2-4,0-1-8]

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	0.57	Vert(LL)	-0.02	6-7	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.29	Vert(CT)	-0.05	6-7	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.46	Horz(CT)	0.01	6	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 79 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
SLIDER Left 2x4 SP No.3 -- 1-6-0

BRACING

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

REACTIONS

(size) 1= Mechanical, 2=0-3-8, 6=0-3-8
Max Horiz 1=286 (LC 11)
Max Uplift 1=-171 (LC 25), 2=-190 (LC 14), 6=-113 (LC 14)
Max Grav 1=176 (LC 11), 2=670 (LC 25), 6=590 (LC 21)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-334/516, 2-4=-415/286, 4-5=-197/166, 5-6=-229/76
BOT CHORD 2-7=-84/485, 6-7=-84/485
WEBS 4-7=0/242, 4-6=-506/177

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) -0-9-12 to 2-2-4, Interior (1) 2-2-4 to 8-2-12, Exterior(2E) 8-2-12 to 11-2-12 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 a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 6) Bearings are assumed to be: , Joint 2 SP No.2 , Joint 6 SP No.2 .
- 7) Refer to girder(s) for truss to truss connections.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 171 lb uplift at joint 1.
- 9) 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.
- 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



June 9,2025

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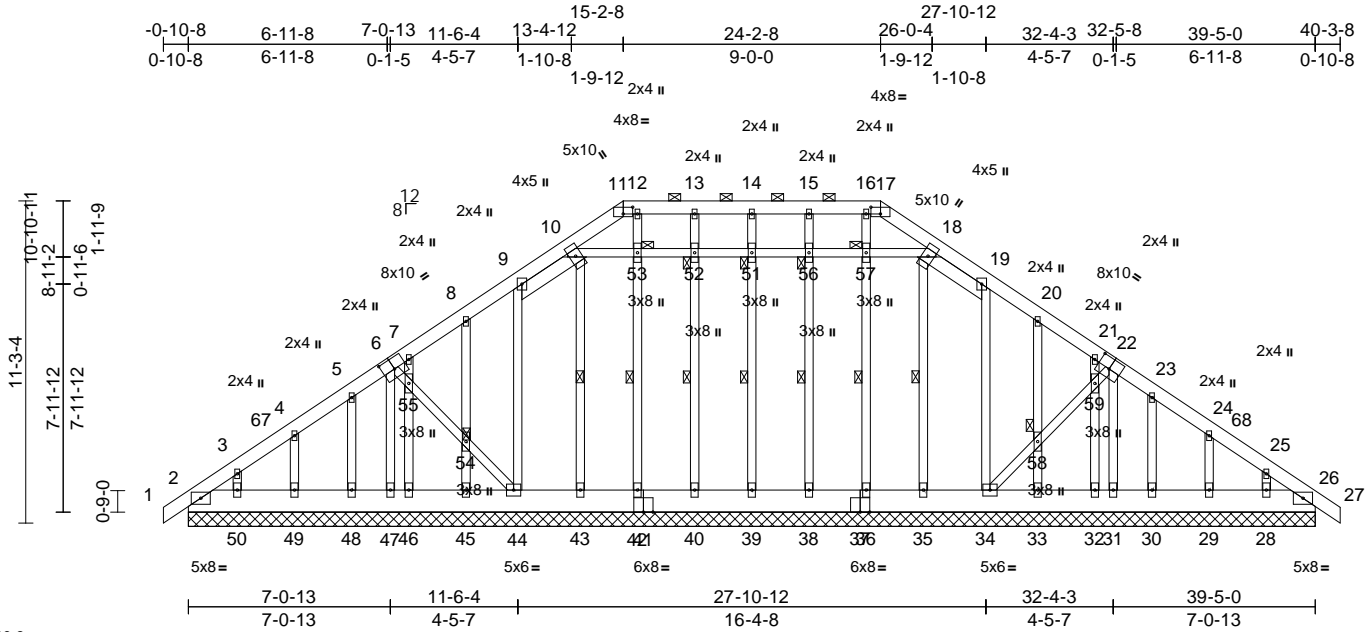
Job	Truss	Truss Type	Qty	Ply	51 Magnolia Acres-Roof-Grayson BC 3FL SP FE GLH I74037075
25060036-01	A6	Attic Supported Gable	1	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Fri Jun 06 13:02:46

Page: 1

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Scale = 1:80.6

Plate Offsets (X, Y): [6:0-5-0,0-4-8], [11:0-4-0,0-2-13], [17:0-4-0,0-2-13], [22:0-5-0,0-4-8]

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	0.01	Vert(LL)	n/a	-	n/a	999	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.00	Vert(CT)	n/a	-	n/a	999	
TCDL	10.0	Rep Stress Incr	YES	WB	0.18	Horz(CT)	0.00	26	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH							
BCDL	10.0										
Weight: 494 lb FT = 20%											

LUMBER

TOP CHORD 2x6 SP 2400F 2.0E *Except* 9-10,19-18:2x6 SP No.2
BOT CHORD 2x10 SP 2400F 2.0E
WEBS 2x4 SP No.3 *Except* 10-18:2x4 SP No.2
OTHERS 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 11-17.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 39-51, 40-52, 42-53, 10-43, 38-56, 36-57, 18-35
JOINTS 1 Brace at Jt(s): 51, 52, 53, 54, 56, 57, 58

REACTIONS

(size) 2=39-5-0, 26=39-5-0, 28=39-5-0, 29=39-5-0, 30=39-5-0, 31=39-5-0, 32=39-5-0, 33=39-5-0, 34=39-5-0, 35=39-5-0, 36=39-5-0, 38=39-5-0, 39=39-5-0, 40=39-5-0, 42=39-5-0, 43=39-5-0, 44=39-5-0, 45=39-5-0, 46=39-5-0, 47=39-5-0, 48=39-5-0, 49=39-5-0, 50=39-5-0
Max Horiz 2=253 (LC 13)
Max Uplift 2=55 (LC 10), 26=5 (LC 11), 28=60 (LC 15), 29=62 (LC 15), 30=28 (LC 15), 31=1 (LC 14), 32=10 (LC 15), 33=48 (LC 15), 34=83 (LC 15), 35=9 (LC 15), 38=25 (LC 11), 39=31 (LC 10), 40=24 (LC 11), 42=13 (LC 11), 43=20 (LC 14), 44=82 (LC 14), 45=50 (LC 14), 46=12 (LC 14), 48=30 (LC 14), 49=61 (LC 14), 50=63 (LC 14)

Max Grav 2=185 (LC 54), 26=166 (LC 42), 28=158 (LC 27), 29=176 (LC 27), 30=130 (LC 27), 31=74 (LC 42), 32=138 (LC 42), 33=213 (LC 46), 34=222 (LC 54), 35=226 (LC 46), 36=164 (LC 43), 38=225 (LC 41), 39=233 (LC 41), 40=225 (LC 41), 42=164 (LC 45), 43=226 (LC 44), 44=221 (LC 52), 45=213 (LC 44), 46=138 (LC 42), 47=74 (LC 42), 48=132 (LC 26), 49=175 (LC 26), 50=162 (LC 26)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/29, 2-3=-186/148, 3-4=-183/136, 4-5=-173/119, 5-7=-150/118, 7-8=-167/130, 8-9=-150/160, 9-10=-132/176, 10-11=-109/104, 11-12=-76/97, 12-13=-76/97, 13-14=-76/97, 14-15=-76/97, 15-16=-76/97, 16-17=-76/97, 17-18=-109/93, 18-19=-132/141, 19-20=-130/109, 20-21=-120/78, 21-23=-93/55, 23-24=-111/37, 24-25=-129/50, 25-26=-133/63, 26-27=0/29

BOT CHORD

2-50=-103/179, 49-50=-103/179, 48-49=-103/179, 47-48=-103/179, 46-47=-103/179, 45-46=-103/179, 44-45=-103/179, 43-44=-92/198, 42-43=-92/198, 40-42=-92/198, 39-40=-92/198, 38-39=-92/198, 36-38=-92/198, 35-36=-92/198, 34-35=-89/196, 33-34=-60/150, 32-33=-60/150, 31-32=-60/150, 30-31=-60/150, 29-30=-60/150, 28-29=-60/150, 26-28=-60/150

WEBS

6-55=-32/61, 54-55=-32/59, 44-54=-34/63, 9-44=-166/59, 19-34=-166/54, 34-58=-44/70, 58-59=-42/66, 22-59=-43/68, 10-53=-53/97, 52-53=-53/97, 51-52=-53/97, 51-56=-53/97, 56-57=-53/97, 18-57=-53/97, 6-47=-65/6, 22-31=-65/6, 14-51=-191/53, 39-51=-193/55, 13-52=-187/51, 40-52=-185/49, 12-53=-124/36, 42-53=-125/36, 10-43=-184/46, 8-54=-176/77, 45-54=-175/72, 7-55=-106/30, 46-55=-104/32, 5-48=-97/50, 4-49=-140/89, 3-50=-103/66, 15-56=-187/51, 38-56=-185/49, 16-57=-124/17, 36-57=-125/18, 18-35=-184/35, 20-58=-176/77, 33-58=-175/71, 21-59=-106/27, 32-59=-104/30, 23-30=-97/49, 24-29=-140/90, 25-28=-103/65

NOTES

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



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Continued on page 2

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	51 Magnolia Acres-Roof-Grayson BC 3FL SP FE GLH I74037075
25060036-01	A6	Attic Supported Gable	1	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Fri Jun 06 13:02:46
ID:ER4UXzbddJM4_xevB0ZOMXz90Lm-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?fi

Page: 2

- 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 3-0-13, Interior (1)
3-0-13 to 9-7-10, Exterior(2R) 9-7-10 to 29-8-8, Interior
(1) 29-8-8 to 36-4-3, Exterior(2E) 36-4-3 to 40-3-8 zone;
cantilever left and right exposed ; end vertical left and
right exposed;C-C for members and forces & MWFRS
for reactions shown; Lumber DOL=1.60 plate grip
DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss
only. For studs exposed to wind (normal to the face),
see Standard Industry Gable End Details as applicable,
or consult qualified building designer as per ANSI/TPI 1.
- 4) TCELL: 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) 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) Provide adequate drainage to prevent water ponding.
- 8) All plates are 3x6 MT20 unless otherwise indicated.
- 9) Gable requires continuous bottom chord bearing.
- 10) Gable studs spaced at 2-0-0 oc.
- 11) This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.
- 12) * 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.
- 13) All bearings are assumed to be SP 2400F 2.0E .
- 14) Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 55 lb uplift at joint
2, 5 lb uplift at joint 26, 82 lb uplift at joint 44, 83 lb uplift
at joint 34, 1 lb uplift at joint 31, 31 lb uplift at joint 39, 24
lb uplift at joint 40, 13 lb uplift at joint 42, 20 lb uplift at
joint 43, 50 lb uplift at joint 45, 12 lb uplift at joint 46, 30
lb uplift at joint 48, 61 lb uplift at joint 49, 63 lb uplift at
joint 50, 25 lb uplift at joint 38, 9 lb uplift at joint 35, 48 lb
uplift at joint 33, 10 lb uplift at joint 32, 28 lb uplift at joint
30, 62 lb uplift at joint 29, 60 lb uplift at joint 28 and 55 lb
uplift at joint 2.
- 15) Beveled plate or shim required to provide full bearing
surface with truss chord at joint(s) 2, 60.
- 16) This truss is designed in accordance with the 2018
International Residential Code sections R502.11.1 and
R802.10.2 and referenced standard ANSI/TPI 1.
- 17) Graphical purlin representation does not depict the size
or the orientation of the purlin along the top and/or
bottom chord.
- 18) Attic room checked for L/360 deflection.

LOAD CASE(S) Standard



June 9,2025

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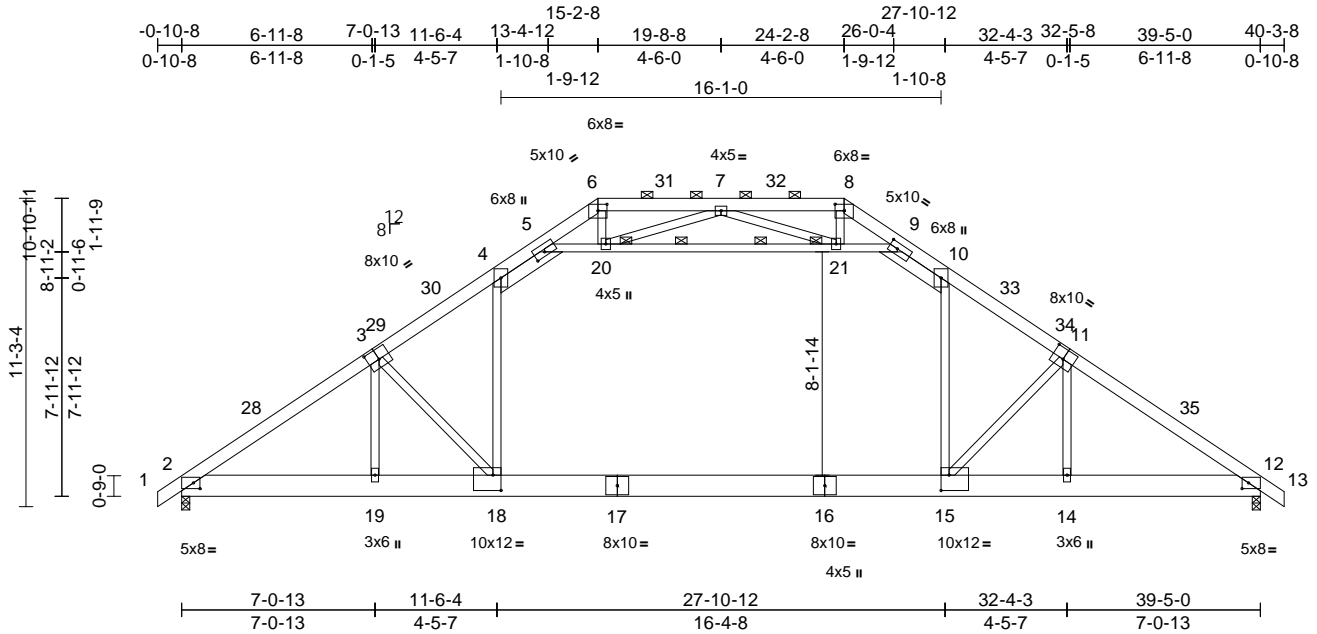
Job 25060036-01	Truss A5	Truss Type Attic	Qty 2	Ply 1	51 Magnolia Acres-Roof-Grayson BC 3FL SP FE GLH I74037076 Job Reference (optional)
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Fri Jun 06 13:02:45

Page: 1

ID:D7ZeMTnRDKQzxP6iiGyN2oz90UZ-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWwCDoi7J4zJC7f



Scale = 1:84.2

[2:0-2-14,0-2-8], [3:0-5-0,0-4-8], [5:0-4-11,0-1-11], [6:0-4-0,0-2-13], [8:0-4-0,0-2-13], [9:0-3-11,0-2-8], [11:0-5-0,0-4-8], [12:0-2-14,0-2-8], [15:0-3-8,0-6-12],

Plate Offsets (X, Y): [18:0-3-8,0-6-12]

loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.54	Vert(LL)	-0.36	15-18	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.45	Vert(CT)	-0.56	15-18	>843	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.68	Horz(CT)	0.04	12	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH		Attic	-0.24	15-18	>824	360		
BCDL	10.0										Weight: 368 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP 2400F 2.0E *Except* 4-5,10-9:2x6 SP No.2
BOT CHORD 2x10 SP 2400F 2.0E
WEBS 2x4 SP No.3 *Except* 5-9:2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-9-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 6-8.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2 Rows at 1/3 pts 20-21
JOINTS 1 Brace at Jt(s): 20, 21

REACTIONS

(size) 2=0-3-8, 12=0-3-8
Max Horiz 2=253 (LC 13)
Max Grav 2=2248 (LC 48), 12=2248 (LC 48)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/29, 2-4=-3811/0, 4-5=-2786/56, 5-6=-783/266, 6-7=-535/388, 7-8=-535/388, 8-9=-783/265, 9-10=-2786/56, 10-12=-3811/0, 12-13=0/29
BOT CHORD 2-19=-10/3092, 18-19=-9/3094, 15-18=0/2889, 14-15=0/3094, 12-14=0/3092, 3-18=-696/350, 4-18=0/1452, 10-15=0/1452, 11-15=-696/352, 5-20=-3168/0, 20-21=-2655/0, 9-21=-3168/0, 3-19=-584/158, 11-14=-584/158, 6-20=-17/535, 8-21=-17/535, 7-20=-768/226, 7-21=-768/226

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) -0-10-8 to 3-0-13, Interior (1) 3-0-13 to 9-7-10, Exterior(2R) 9-7-10 to 29-9-6, Interior (1) 29-9-6 to 36-4-3, Exterior(2E) 36-4-3 to 40-3-8 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.
- Provide adequate drainage to prevent water ponding.
- 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.
- Ceiling dead load (5.0 psf) on member(s). 4-5, 9-10, 5-20, 20-21, 9-21; Wall dead load (5.0psf) on member (s).4-18, 10-15
- Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 15-18
- All bearings are assumed to be SP 2400F 2.0E .
- 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.

13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

14) Attic room checked for L/360 deflection.

LOAD CASE(S) Standard



June 9,2025

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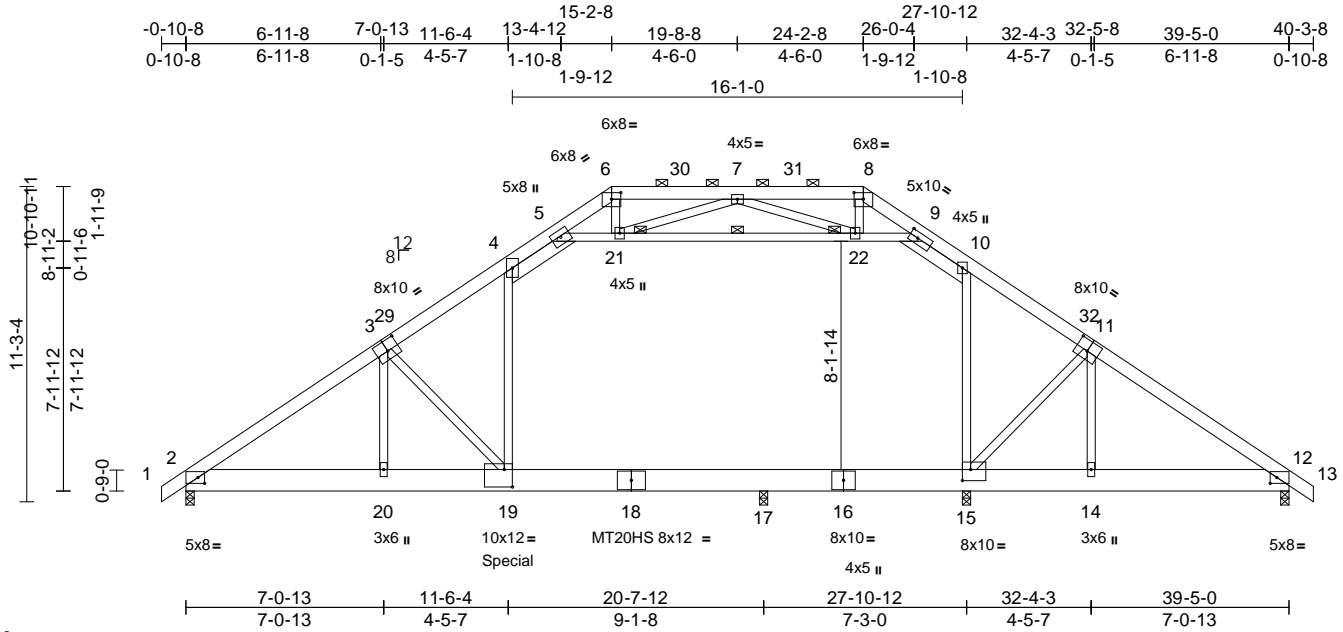
Job	Truss	Truss Type	Qty	Ply	51 Magnolia Acres-Roof-Grayson BC 3FL SP FE GLH I74037077
25060036-01	A4-2	Attic Girder	1	2	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Fri Jun 06 13:02:45

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Scale = 1:82.3

Plate Offsets (X, Y): [2:0-2-14,0-2-8], [3:0-5-0,0-4-8], [6:0-4-0,0-2-13], [8:0-4-0,0-2-13], [9:0-3-11,0-2-8], [11:0-5-0,0-4-8], [12:0-2-14,0-2-8], [15:0-3-8,0-4-12], [19:0-3-8,0-7-8]

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	0.67	Vert(LL)	-0.27	17-19	>928	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.57	Vert(CT)	-0.44	17-19	>566	180	MT20HS	187/143
TCDL	10.0	Rep Stress Incr	NO	WB	0.61	Horz(CT)	0.04	12	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH		Attic	-0.27	17-19	>811	360		
BCDL	10.0											
Weight: 736 lb											FT = 20%	

LUMBER

TOP CHORD 2x6 SP 2400F 2.0E *Except* 4-5,10-9:2x6 SP No.2
BOT CHORD 2x10 SP 2400F 2.0E
WEBS 2x4 SP No.3 *Except* 5-9:2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 6-8.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 21-22
JOINTS 1 Brace at Jt(s): 21, 22

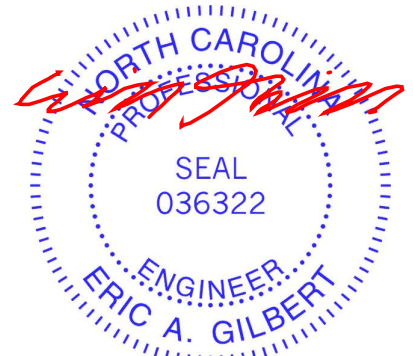
REACTIONS (size) 2=0-3-8, 12=0-3-8, 15=0-3-8, 17=0-3-8
Max Horiz 2=-253 (LC 10)
Max Uplift 2=-44 (LC 12), 15=-2843 (LC 46)
Max Grav 2=3915 (LC 47), 12=3532 (LC 47), 15=95 (LC 9), 17=4435 (LC 19)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/29, 2-4=-6491/47, 4-5=-3745/96, 5-6=-649/332, 6-7=-349/485, 7-8=0/1171, 8-9=-402/653, 9-10=-3874/91, 10-12=-5852/48, 12-13=0/29
BOT CHORD 2-20=-77/5551, 19-20=-76/5548, 17-19=0/4398, 15-17=0/4398, 14-15=0/4836, 12-14=0/4837
WEBS 4-19=0/3016, 10-15=-21/2541, 5-21=-4851/0, 21-22=-4709/0, 9-22=-5573/36, 3-20=-116/814, 3-19=-1697/282, 11-15=-778/128, 11-14=0/284, 6-21=0/571, 8-22=-7/840, 7-21=-647/193, 7-22=-1137/161

NOTES

- 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: 2x10 - 2 rows staggered at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; 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 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.
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.
- 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.
- Ceiling dead load (5.0 psf) on member(s). 4-5, 9-10, 5-21, 21-22, 9-22; Wall dead load (5.0psf) on member (s).4-19, 10-15
- Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 17-19, 15-17
- All bearings are assumed to be SP 2400F 2.0E .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 2843 lb uplift at joint 15.
- 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) 1, 3 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.



June 9,2025

Continued on page 2

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Job	Truss	Truss Type	Qty	Ply	51 Magnolia Acres-Roof-Grayson BC 3FL SP FE GLH I74037077
25060036-01	A4-2	Attic Girder	1	2	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

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Page: 2

- 19) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 20) This truss has large uplift reaction(s) from gravity load case(s). Proper connection is required to secure truss against upward movement at the bearings. Building designer must provide for uplift reactions indicated.
- 21) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1602 lb down and 366 lb up at 11-6-8 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- 22) Attic room checked for L/360 deflection.

LOAD CASE(S) Standard

- 1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-4=-60, 4-5=-70, 5-6=-60, 6-8=-60, 8-9=-60, 9-10=-70, 10-13=-60, 19-23=-20, 17-19=-130 (F=-100), 15-17=-30, 15-26=-20, 5-21=-10, 21-22=-10, 9-22=-10
Drag: 4-19=-10, 10-15=-10
Concentrated Loads (lb)
Vert: 19=-1602 (F)
- 3) Dead + 0.75 Roof Live (balanced) + 0.75 Attic Floor: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-4=-50, 4-5=-60, 5-6=-50, 6-8=-50, 8-9=-50, 9-10=-60, 10-13=-50, 19-23=-20, 17-19=-415 (F=-325), 15-17=-90, 15-26=-20, 5-21=-10, 21-22=-10, 9-22=-10
Drag: 4-19=-10, 10-15=-10
Concentrated Loads (lb)
Vert: 19=-1113 (F)



June 9, 2025

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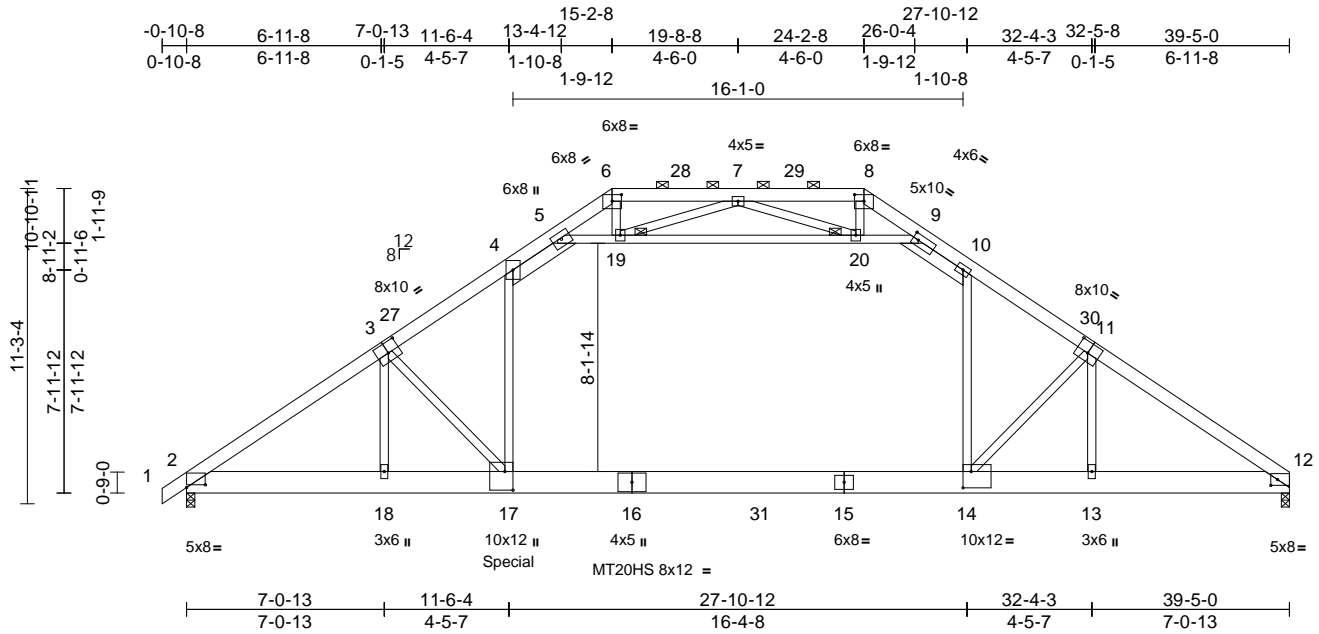
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	51 Magnolia Acres-Roof-Grayson BC 3FL SP FE GLH I74037078
25060036-01	A3-3	Attic Girder	1	3	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Fri Jun 06 13:02:45
ID:Ebw7aMQOieKjQOyr6VeNfWz91LG-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC7f

Page: 1



Scale = 1:82.3

Plate Offsets (X, Y): [2:0-8-0,0-1-3], [3:0-5-0,0-4-8], [6:0-4-0,0-2-13], [8:0-4-0,0-2-13], [9:0-2-7,0-2-8], [11:0-5-0,0-4-8], [12:0-2-14,0-2-8], [14:0-3-8,0-7-0], [17:0-8-0,0-3-8]

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	0.90	Vert(LL)	-0.44	14-17	>999	240	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.68	Vert(CT)	-0.68	14-17	>691	180	187/143
TCDL	10.0	Rep Stress Incr	NO	WB	0.77	Horz(CT)	0.04	12	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH		Attic	-0.32	14-17	>618	360	
BCDL	10.0										
Weight: 1096 lb FT = 20%											

LUMBER

TOP CHORD 2x6 SP 2400F 2.0E *Except* 4-5,10-9:2x6 SP No.2
BOT CHORD 2x10 SP 2400F 2.0E
WEBS 2x4 SP No.3 *Except* 5-9:2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 6-8.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
JOINTS 1 Brace at Jt(s): 19, 20

REACTIONS

(size) 2=0-3-8, 12=0-3-8
Max Horiz 2=248 (LC 59)
Max Grav 2=5235 (LC 47), 12=3898 (LC 49)

FORCES

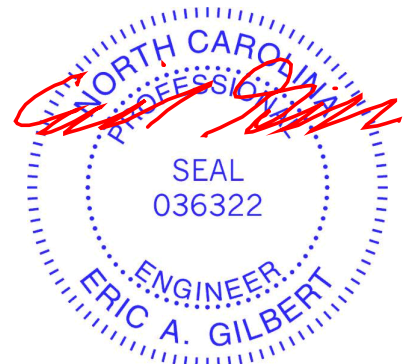
(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/29, 2-4=-8736/0, 4-5=-5312/0, 5-6=-719/363, 6-7=-474/671, 7-8=0/2195, 8-9=-75/1310, 9-10=-5591/0, 10-12=-7763/0
BOT CHORD 2-18=0/7446, 17-18=0/7446, 14-17=0/6346, 13-14=0/4996, 12-13=0/4985
WEBS 4-17=0/5142, 10-14=0/3556, 5-19=-7012/0, 19-20=-7019/0, 9-20=-8604/0, 3-18=-867/786, 3-17=-1831/523, 11-14=-67/2406, 11-13=-3021/0, 6-19=0/639, 8-20=0/1308, 7-19=-377/441, 7-20=-1823/139

NOTES

- 3-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: 2x10 - 2 rows staggered at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-7-0 oc.

- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; 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 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.
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.
- 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.
- Ceiling dead load (5.0 psf) on member(s). 4-5, 9-10, 5-19, 19-20, 9-20; Wall dead load (5.0psf) on member (s).4-17, 10-14
- Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 14-17
- All bearings are assumed to be SP 2400F 2.0E .

- 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) 1, 3 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1841 lb down and 360 lb up at 11-6-8 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- Attic room checked for L/360 deflection.
- LOAD CASE(S)** Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)



June 9,2025

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.

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ENGINEERING BY
TRENCO
A MiTek Affiliate

818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	51 Magnolia Acres-Roof-Grayson BC 3FL SP FE GLH I74037078
25060036-01	A3-3	Attic Girder	1	3	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Fri Jun 06 13:02:45
ID:EbW7aMQOieKjQOyr6VeNfWz91LG-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrcDoi7J4zJC?fi

Page: 2

Vert: 1-4=-60, 4-5=-70, 5-6=-60, 6-8=-60, 8-9=-60,
9-10=-70, 10-12=-60, 17-21=-20, 17-31=-130
(F=-100), 14-31=-30, 14-24=-20, 5-19=-10,
19-20=-10, 9-20=-10
Drag: 4-17=-10, 10-14=-10

Concentrated Loads (lb)

Vert: 17=-1841 (B)

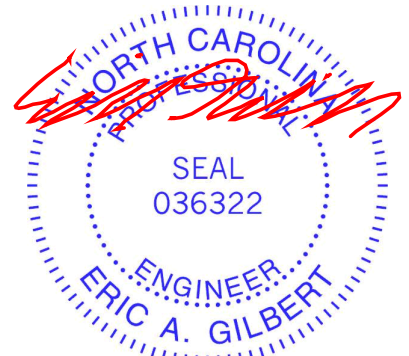
- 3) Dead + 0.75 Roof Live (balanced) + 0.75 Attic Floor:
Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (lb/ft)

Vert: 1-4=-50, 4-5=-60, 5-6=-50, 6-8=-50, 8-9=-50,
9-10=-60, 10-12=-50, 17-21=-20, 17-31=-415
(F=-325), 14-31=-90, 14-24=-20, 5-19=-10,
19-20=-10, 9-20=-10
Drag: 4-17=-10, 10-14=-10

Concentrated Loads (lb)

Vert: 17=-1291 (B)



June 9, 2025

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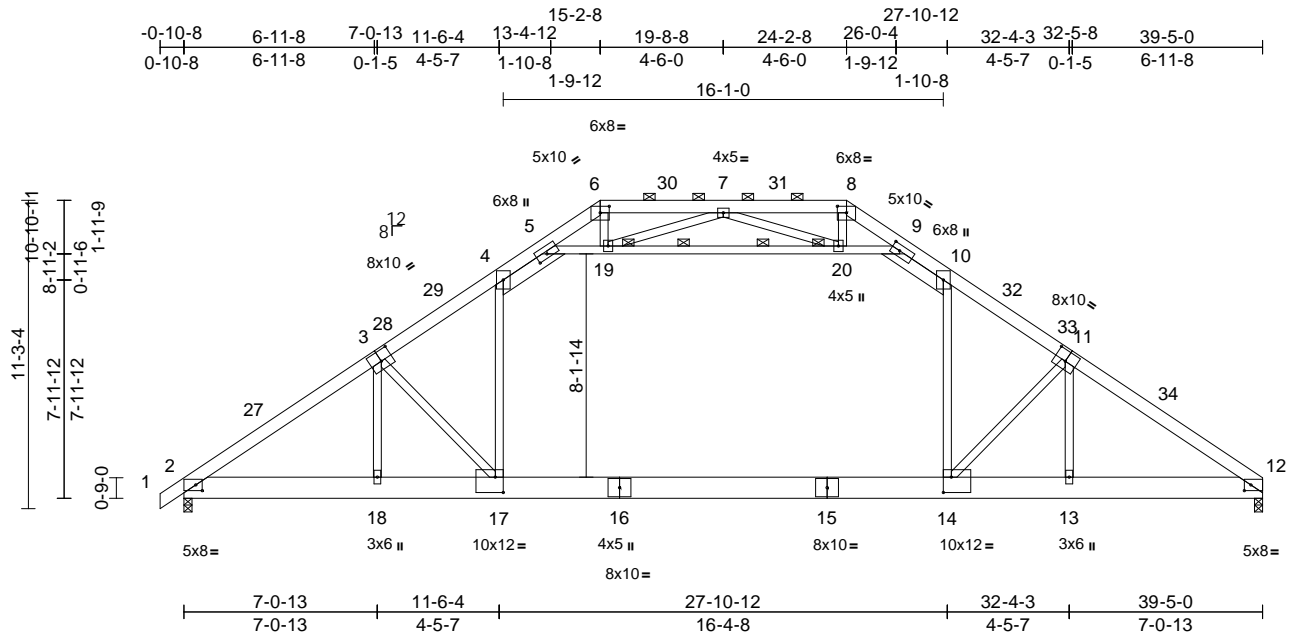
Job	Truss	Truss Type	Qty	Ply	51 Magnolia Acres-Roof-Grayson BC 3FL SP FE GLH I74037079
25060036-01	A2	Attic	12	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Fri Jun 06 13:02:44

Page: 1

ID:HqhpfPEoJlwqZOKF_R3hCfz91ZiRfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCdoi7J4zJC?f



Scale = 1:84.2

[2:0-2-14,0-2-8], [3:0-5-0,0-4-8], [5:0-4-11,0-1-11], [6:0-4-0,0-2-13], [8:0-4-0,0-2-13], [9:0-3-11,0-2-8], [11:0-5-0,0-4-8], [12:0-2-14,0-2-8], [14:0-3-8,0-6-12],

Plate Offsets (X, Y): [17:0-3-8,0-6-12]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.54	Vert(LL)	-0.36	14-17	>999	240	MT20
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.45	Vert(CT)	-0.56	14-17	>843	180	244/190
TCDL	10.0	Rep Stress Incr	YES	WB	0.68	Horz(CT)	0.04	12	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH		Attic	-0.24	14-17	>824	360	
BCDL	10.0										Weight: 365 lb FT = 20%

LUMBER

TOP CHORD 2x6 SP 2400F 2.0E *Except* 4-5,10-9:2x6 SP No.2
BOT CHORD 2x10 SP 2400F 2.0E
WEBS 2x4 SP No.3 *Except* 5-9:2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-8-15 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 6-8.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2 Rows at 1/3 pts 19-20
JOINTS 1 Brace at Jt(s): 19, 20

REACTIONS (size) 2=0-3-8, 12=0-3-8
Max Horiz 2=248 (LC 11)
Max Grav 2=2245 (LC 48), 12=2203 (LC 48)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/29, 2-4=-3807/0, 4-5=-2786/59, 5-6=-783/266, 6-7=-535/389, 7-8=-535/387, 8-9=-784/265, 9-10=-2785/59, 10-12=-3810/0
BOT CHORD 2-18=-19/3083, 17-18=-18/3085, 14-17=0/2884, 13-14=0/3092, 12-13=0/3091
WEBS 3-17=-686/350, 4-17=0/1451, 10-14=0/1452, 11-14=-702/354, 5-19=-3167/0, 19-20=-2654/0, 9-20=-3166/0, 6-19=-17/535, 8-20=-17/535, 7-19=-768/226, 7-20=-768/226, 3-18=-585/154, 11-13=-578/163

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) -0-10-8 to 3-0-13, Interior (1) 3-0-13 to 9-7-10, Exterior(2R) 9-7-10 to 29-9-6, Interior (1) 29-9-6 to 35-5-11, Exterior(2E) 35-5-11 to 39-5-0 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.
- Provide adequate drainage to prevent water ponding.
- 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.
- Ceiling dead load (5.0 psf) on member(s). 4-5, 9-10, 5-19, 19-20, 9-20; Wall dead load (5.0psf) on member (s).4-17, 10-14
- Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 14-17
- All bearings are assumed to be SP 2400F 2.0E .
- 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.

13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

14) Attic room checked for L/360 deflection.

LOAD CASE(S) Standard



June 9,2025

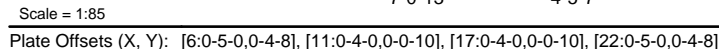
WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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.sbcacompnents.com)

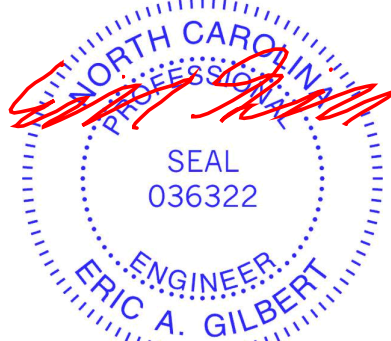
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818 Soundside Road
Edenton, NC 27932

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Fri Jun 06 13:02:43 Page: 1
ID:Bewk5TuonkDnYyMyCvxaVez91R6-RfC?PsB70Hg3NSqPanL8w3uITxbGKWRCdoi7J4zJC?f



LUMBER		FORCES		NOTES	
TOP CHORD	2x6 SP 2400F 2.0E *Except* 9-10,19-18:2x6 SP No.2	TOP CHORD	(lb) - Maximum Compression/Maximum Tension 11-12=-1140/220, 12-13=-1140/220, 13-14=-1140/220, 14-15=-1140/220, 15-16=-1140/220, 16-17=-1140/220, 17-18=-1245/224, 18-19=-904/215, 19-20=-761/159, 20-21=-766/115, 21-23=-708/101, 23-24=-590/82, 24-25=-591/89, 25-26=-570/90, 1-2=0/29, 2-3=-570/139, 3-4=-590/137, 4-5=-590/132, 5-7=-708/134, 7-8=-766/144, 8-9=-761/159, 9-10=-904/215, 10-11=-1245/224	1) Unbalanced roof live loads have been considered for this design.	
BOT CHORD	2x10 SP 2400F 2.0E	BOT CHORD	2-42=-114/470, 41-42=-114/470, 40-41=-114/470, 39-40=-114/470, 38-39=-114/471, 37-38=-114/471, 36-37=-114/471, 33-36=-104/624, 32-33=-73/470, 31-32=-73/470, 30-31=-73/470, 29-30=-73/469, 28-29=-73/469, 27-28=-73/469, 26-27=-73/469	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 3-0-13, Exterior(2N) 3-0-13 to 11-3-3, Corner(3R) 11-3-3 to 19-1-13, Exterior(2N) 19-1-13 to 20-3-3, Corner(3R) 20-3-3 to 27-10-12, Exterior(2N) 27-10-12 to 35-5-11, Corner(3E) 35-5-11 to 39-5-0 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	
WEBS	2x4 SP No.3	WEBS	6-47=-22/228, 46-47=-21/221, 36-46=-22/234, 9-36=-530/49, 19-33=-533/26, 33-50=-47/234, 50-51=-44/221, 22-51=-46/228, 10-45=-102/515, 44-45=-101/516, 43-44=-101/516, 43-48=-101/516, 48-49=-101/516, 18-49=-102/515, 6-39=-189/16, 22-30=-189/15, 14-43=-3/20, 13-44=-53/27, 12-45=-7/107, 8-46=-143/66, 37-46=-155/63, 7-47=-165/35, 38-47=-157/36, 5-40=-153/50, 4-41=-146/90, 3-42=-111/66, 15-48=-53/27, 16-49=-7/107, 20-50=-143/66, 32-50=-155/63, 21-51=-165/35, 31-51=-157/36, 23-29=-153/50, 24-28=-146/90, 25-27=-112/67	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.	
OTHERS	2x4 SP No.3			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	
BRACING					
TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 11-17.				
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.				
JOINTS	1 Brace at Jt(s): 43, 44, 45, 46, 48, 49, 50				
REACTIONS					
(size)	2=39-5-0, 26=39-5-0, 27=39-5-0, 28=39-5-0, 29=39-5-0, 30=39-5-0, 31=39-5-0, 32=39-5-0, 33=39-5-0, 36=39-5-0, 37=39-5-0, 38=39-5-0, 39=39-5-0, 40=39-5-0, 41=39-5-0, 42=39-5-0				
Max Horiz	2=248 (LC 11)				
Max Uplift	2=62 (LC 10), 26=35 (LC 11), 27=71 (LC 15), 28=62 (LC 15), 29=20 (LC 15), 30=165 (LC 21), 32=991 (LC 21), 37=991 (LC 21), 39=164 (LC 21), 40=23 (LC 14), 41=62 (LC 14), 42=64 (LC 14)				
Max Grav	2=457 (LC 22), 26=388 (LC 23), 27=194 (LC 54), 28=197 (LC 54), 29=209 (LC 27), 30=114 (LC 23), 31=580 (LC 21), 32=179 (LC 42), 33=1534 (LC 21), 36=1534 (LC 21), 37=179 (LC 42), 38=579 (LC 21), 39=115 (LC 22), 40=212 (LC 26), 41=199 (LC 52), 42=178 (LC 52)				



June 9, 2025

Continued on page 2

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	51 Magnolia Acres-Roof-Grayson BC 3FL SP FE GLH I74037080
25060036-01	A1	Attic Supported Gable	1	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Fri Jun 06 13:02:43
ID:Bewk5TuonkDnYvMyCyxgVez91R6-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrcDoi7J4zJC?f

Page: 2

- 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) Provide adequate drainage to prevent water ponding.
- 8) All plates are 2x4 MT20 unless otherwise indicated.
- 9) Gable requires continuous bottom chord bearing.
- 10) Gable studs spaced at 2-0-0 oc.
- 11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 12) * 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.
- 13) Ceiling dead load (5.0 psf) on member(s). 18-19, 10-45, 44-45, 43-44, 43-48, 48-49, 18-49, 9-10; Wall dead load (5.0psf) on member(s).9-36, 19-33
- 14) All bearings are assumed to be SP 2400F 2.0E .
- 15) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 62 lb uplift at joint 2, 35 lb uplift at joint 26, 164 lb uplift at joint 39, 165 lb uplift at joint 30, 991 lb uplift at joint 37, 23 lb uplift at joint 40, 62 lb uplift at joint 41, 64 lb uplift at joint 42, 991 lb uplift at joint 32, 20 lb uplift at joint 29, 62 lb uplift at joint 28 and 71 lb uplift at joint 27.
- 16) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 17) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 18) Attic room checked for L/360 deflection.

LOAD CASE(S) Standard



June 9,2025

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

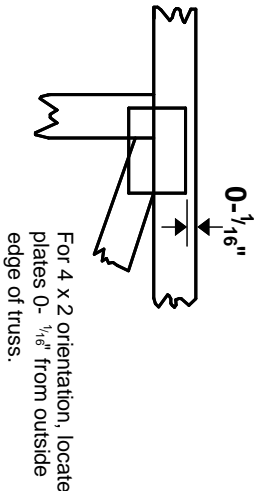
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall 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.sbcacompnents.com)

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Edenton, NC 27932

Symbols

PLATE LOCATION AND ORIENTATION



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

PLATE SIZE

4 X 4

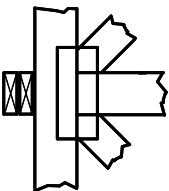
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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.

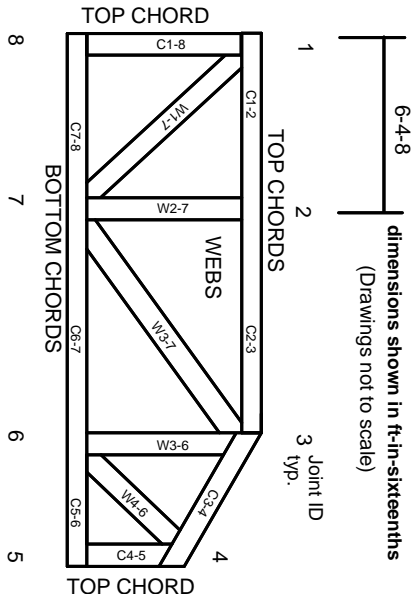
BEARING



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: Building Component Safety Information, Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



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

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

Product Code Approvals

ICC-ES Reports:
ESR-1988, ESR-2362, ESR-2685, ESR-3282
ESR-4722, ESL-1388

Design General Notes

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

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

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General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

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

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