

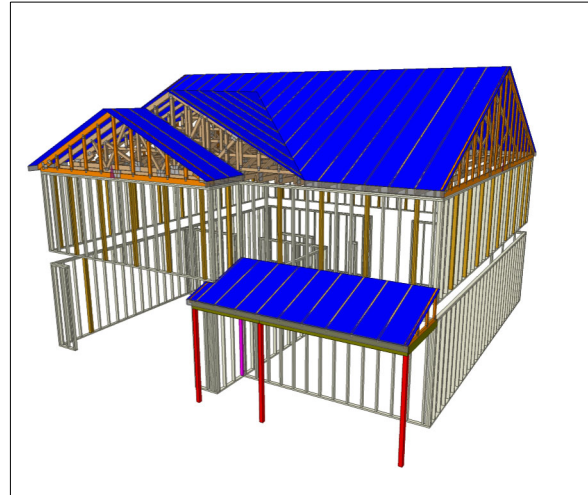


Carter Sanford Component Plant  
298 Harvey Faulk Rd  
Sanford, NC 27332

Phone #:919-775-1450

**Builder: DR Horton Inc**

**Model: Hayden K STY 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:** \_\_\_\_\_

**General Notes:**

\*\* CUTTING OR DRILLING OF COMPONENTS SHOULD NOT BE DONE WITHOUT CONTACTING COMPONENT SUPPLIER FIRST. CUSTOMER TAKES FULL RESPONSIBILITY FOR COMPONENTS IF CUT BEFORE AUTHORIZATION.

\*\* ALL BEARING POINTS MUST BE INSTALLED PRIOR TO SETTING ANY COMPONENTS.

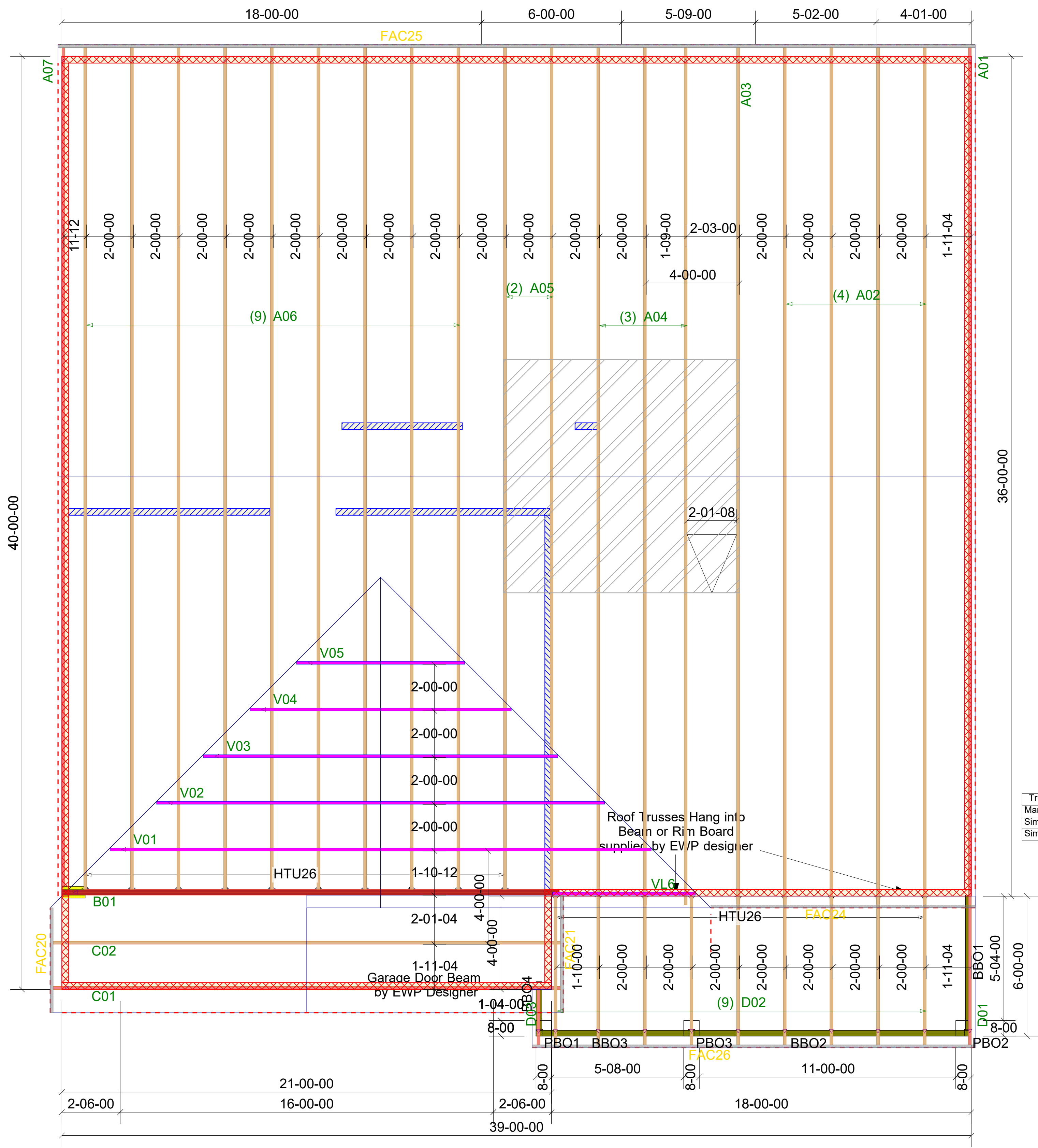
Revisions	
00/00/00	Name
00/00/00	Name
00/00/00	Name
00/00/00	Name
00/00/00	Name

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



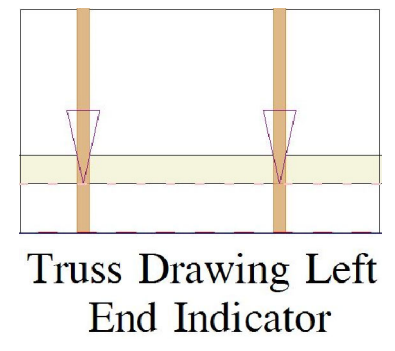
DR Horton Inc  
**40 Mason Ridge-Roof-Hayden**  
 K STY GLH  
**ROOF PLACEMENT PLAN**

Scale:	NTS
Date:	8/2/2024
Designer:	Nate Donaldson
Project Number:	24070190-01
Sheet Number:	1/1



Hatch Legend	
	AHU Platform
	8' 1-1/8" BRG HGT AFF
	9' 1-1/8" BRG HGT AFF

Truss Connector Total List		
Manuf	Product	Qty
Simpson	HTU26	20
Simpson	One H2.5A	75



\*\* DAMAGED COMPONENTS SHOULD NOT BE INSTALLED UNLESS TOLD TO BY THE COMPONENT PLANT. \*\* TRUSS TO TRUSS CONNECTIONS ARE TOE-NAILED, UNLESS NOTED OTHERWISE.  
 \*\* FRAMER MUST REFER TO PLANS WHILE SETTING COMPONENTS.

\*\* ALL UPLIFT CONNECTORS SHOWN WITHIN THESE DOCUMENTS ARE RECOMMENDATIONS ONLY. PER ANSIT/TP1, ALL UPLIFT CONNECTORS ARE THE RESPONSIBILITY OF THE BLDG DESIGNER AND/OR CONTRACTOR.  
 \*\* DIMENSIONS ARE READ AS: FOOT-INCH-SIXTEENTH.  
 \*\* GIRDERS MUST BE FULLY CONNECTED TOGETHER PRIOR TO ADDING ANY LOADS.

\*\* TRIANGULAR SYMBOL NEAR END OF TRUSS INDICATES LEFT END OF TRUSS AS SHOWN ON INDIVIDUAL TRUSS DRAWINGS.

\*\* PLUMBING DROPS NOTED ARE IN THE APPROXIMATE LOCATIONS PER PLAN. BUILDER TO VERIFY LOCATIONS BEFORE SETTING TRUSSES.

\*\* REFER TO FINAL TRUSS ENGINEERING SHEETS FOR PLY TO PLY CONNECTIONS.

RE: 24070190  
 40 Mason Ridge-Roof-Hayden K GLH

Trenco  
 818 Soundside Rd  
 Edenton, NC 27932

**Site Information:**

Customer: DR Horton Inc Project Name: 24070190  
 Lot/Block: 40 Model:  
 Address: Subdivision: Mason Ridge  
 City: State:

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

Design Code: IRC2018/TPI2014 Design Program: MiTek 20/20 8.7  
 Wind Code: ASCE 7-16 Wind Speed: 130 mph  
 Roof Load: 40.0 psf Floor Load: N/A psf

This package includes 19 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date
1	I65546179	A01	5/15/2024
2	I65546180	A02	5/15/2024
3	I65546181	A03	5/15/2024
4	I65546182	A04	5/15/2024
5	I65546183	A05	5/15/2024
6	I65546184	A06	5/15/2024
7	I65546185	A07	5/15/2024
8	I65546186	B01	5/15/2024
9	I65546187	C01	5/15/2024
10	I65546188	C02	5/15/2024
11	I65546189	D01	5/15/2024
12	I65546190	D02	5/15/2024
13	I65546191	D03	5/15/2024
14	I65546192	V01	5/15/2024
15	I65546193	V02	5/15/2024
16	I65546194	V03	5/15/2024
17	I65546195	V04	5/15/2024
18	I65546196	V05	5/15/2024
19	I65546197	VL6	5/15/2024

The truss drawing(s) referenced above have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Carter Components (Sanford, NC)).  
 Truss Design Engineer's Name: Gilbert, Eric  
 My license renewal date for the state of North Carolina is December 31, 2024.  
 North Carolina COA: C-0844

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



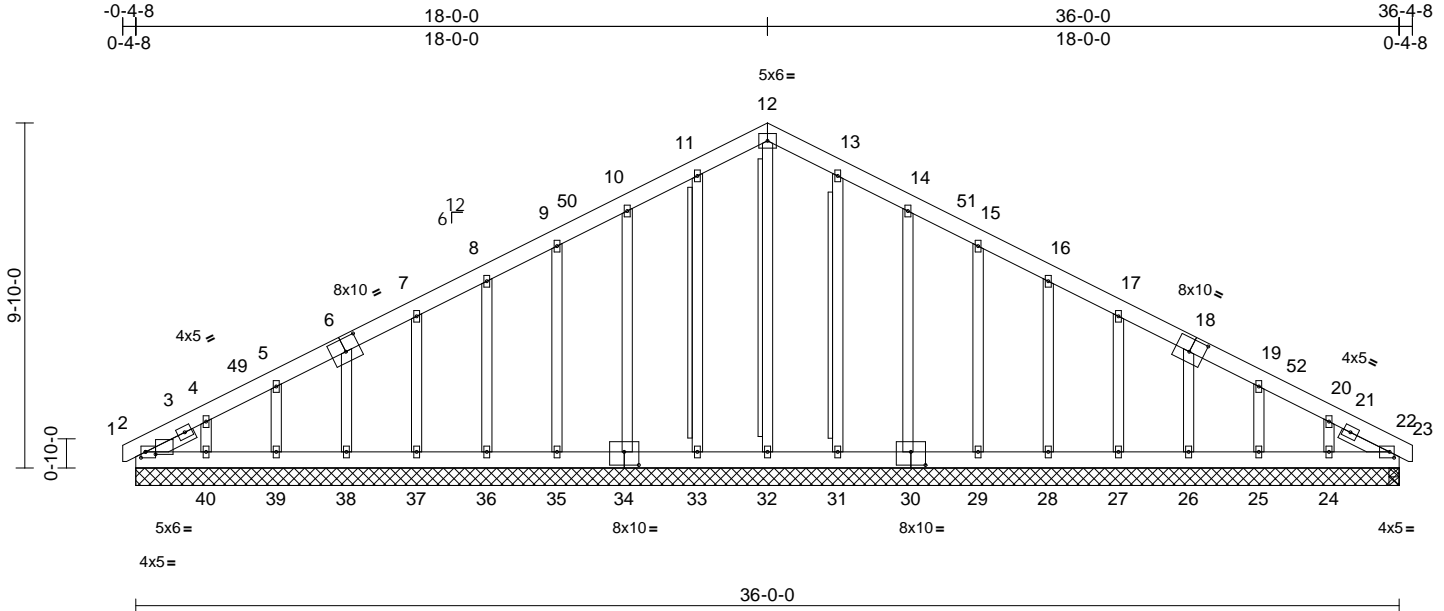


Job 24070190	Truss A01	Truss Type Common Supported Gable	Qty 1	Ply 1	40 Mason Ridge-Roof-Hayden K GLH Job Reference (optional)
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Carter Components (Sanford, NC), Sanford, NC - 27332,

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Page: 1



Scale = 1:65.7

Plate Offsets (X, Y): [2:0-1-9,0-2-0], [2:0-3-7,0-0-13], [6:0-5-0,0-4-8], [18:0-5-0,0-4-8], [22:0-1-9,0-2-0], [30:0-5-0,0-4-8], [34:0-5-0,0-4-8]

Loading	(psf)	Spacing	1-11-4	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.05	Vert(LL)	0.00	43	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	0.00	43	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.18	Horz(CT)	0.01	22	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 304 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x6 SP No.2  
BOT CHORD 2x6 SP No.2  
OTHERS 2x4 SP No.3 \*Except\* 0-0,0-0,0-0:2x4 SP No.2(flat)  
SLIDER Left 2x4 SP No.3 -- 1-6-0, Right 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.  
WEBS T-Brace: 2x4 SP No.2 - 12-32, 11-33, 13-31  
Fasten (2X) T and I braces to narrow edge of web with 10d (0.131"x3") nails, 6in o.c., with 3in minimum end distance.  
Brace must cover 90% of web length.

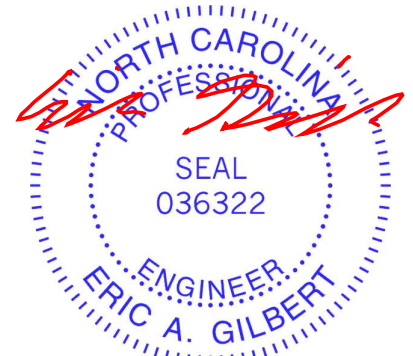
**REACTIONS** All bearings 36-0-0.  
(lb) - Max Horiz 2=141 (LC 14), 41=141 (LC 14)  
Max Uplift All uplift 100 (lb) or less at joint(s) 2, 24, 25, 26, 27, 28, 29, 30, 31, 33, 34, 35, 36, 37, 38, 39, 40, 41  
Max Grav All reactions 250 (lb) or less at joint (s) 2, 22, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 45

**FORCES** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 11-12=102/253, 12-13=102/253

**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 Corner(3E) -0-3-14 to 3-3-4, Exterior(2N) 3-3-4 to 14-4-15, Corner(3R) 14-4-15 to 21-7-2, Exterior(2N) 21-7-2 to 32-8-12, Corner(3E) 32-8-12 to 36-3-14 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.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 33, 34, 35, 36, 37, 38, 39, 40, 31, 30, 29, 28, 27, 26, 25, and 24. 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.
  - Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.
- LOAD CASE(S)** Standard



May 15, 2024

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

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



818 Soundside Road  
Edenton, NC 27932

Job 24070190	Truss A02	Truss Type Common	Qty 4	Ply 1	40 Mason Ridge-Roof-Hayden K GLH Job Reference (optional)	165546180
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Carter Components (Sanford, NC), Sanford, NC - 27332,

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Page: 1

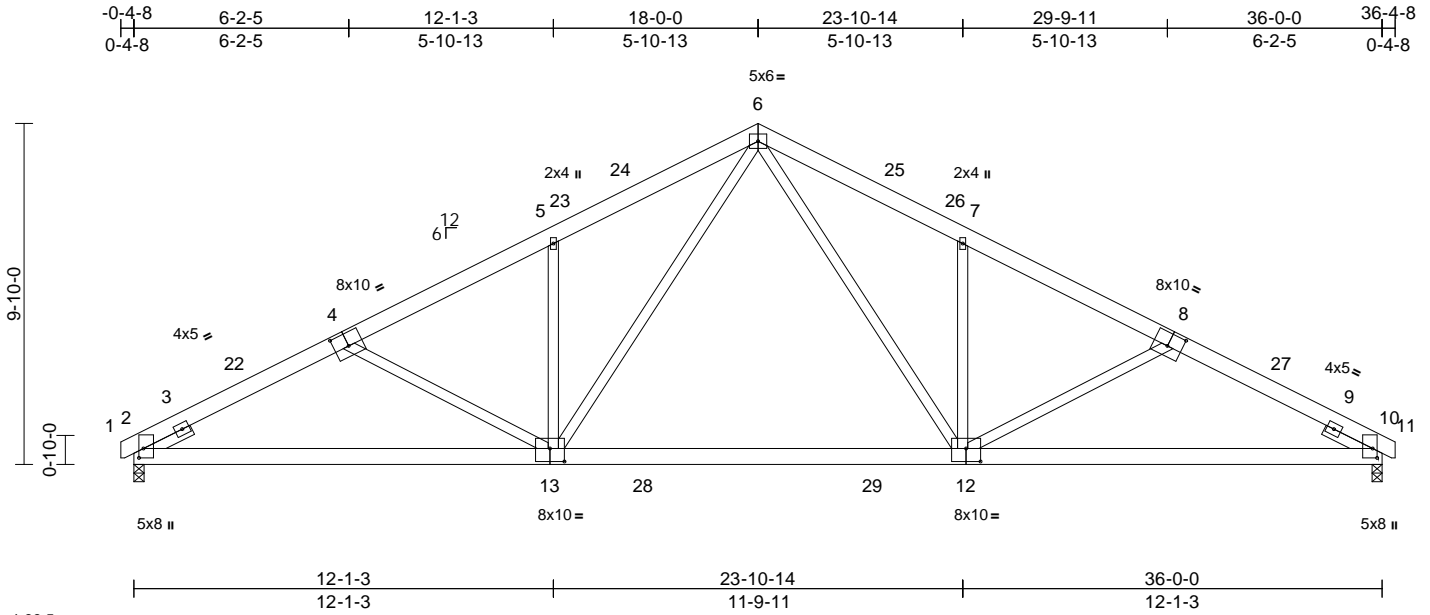


Plate Offsets (X, Y): [2:0-3-4,0-1-9], [4:0-5-0,0-4-8], [8:0-5-0,0-4-8], [10:0-3-4,0-1-9], [12:0-5-0,0-4-8], [13:0-5-0,0-4-8]

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	0.34	Vert(LL)	-0.28	12-13	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.80	Vert(CT)	-0.45	12-13	>947	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.43	Horz(CT)	0.07	10	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 254 lb	FT = 20%

**LUMBER**

TOP CHORD 2x6 SP No.2  
 BOT CHORD 2x6 SP No.2  
 WEBS 2x4 SP No.3 \*Except\* 12-6,13-6:2x4 SP No.2  
 SLIDER Left 2x4 SP No.3 -- 1-6-0, Right 2x4 SP No.3 -- 1-6-0

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 4-0-5 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS**

(size) 2=0-3-8, 10=0-3-8  
 Max Horiz 2=145 (LC 14), 10=-145 (LC 15)  
 Max Uplift 2=-145 (LC 14), 10=-145 (LC 15)  
 Max Grav 2=1591 (LC 3), 10=1591 (LC 3)

**FORCES**

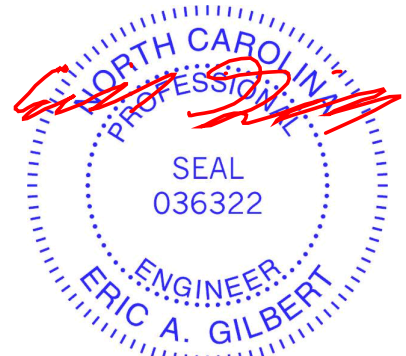
(lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-2=0/13, 2-5=-2924/301, 5-6=-2726/382, 6-7=-2726/382, 7-10=-2924/301, 10-11=0/13  
 BOT CHORD 2-10=-301/2526  
 WEBS 6-12=-204/1211, 7-12=-510/224, 8-12=-291/182, 6-13=-204/1211, 5-13=-510/225, 4-13=-291/181

**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) -0-3-14 to 3-3-4, Interior (1) 3-3-4 to 14-4-15, Exterior(2R) 14-4-15 to 21-7-2, Interior (1) 21-7-2 to 32-8-12, Exterior(2E) 32-8-12 to 36-3-14 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, with BCDL = 10.0psf.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 10. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



May 15, 2024

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

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



818 Soundside Road  
 Edenton, NC 27932

Job 24070190	Truss A03	Truss Type Common	Qty 1	Ply 1	40 Mason Ridge-Roof-Hayden K GLH Job Reference (optional)	165546181
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Carter Components (Sanford, NC), Sanford, NC - 27332,

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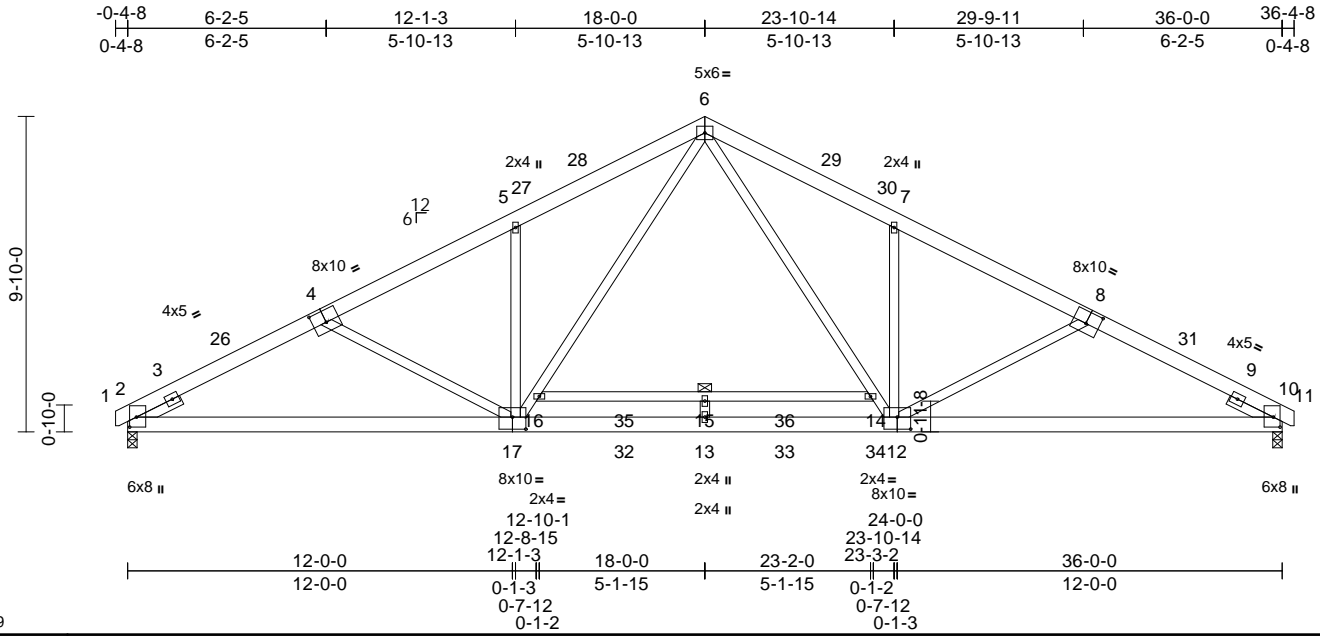


Plate Offsets (X, Y): [2:0-3-12,0-2-9], [4:0-5-0,0-4-8], [8:0-5-0,0-4-8], [10:0-3-12,0-2-9], [12:0-5-0,0-4-8], [17:0-5-0,0-4-8]

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	0.58	Vert(LL)	-0.35	15	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.59	Vert(CT)	-0.73	15	>591	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.39	Horz(CT)	0.07	10	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 271 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x6 SP No.2  
BOT CHORD 2x6 SP 2400F 2.0E \*Except\* 16-14:2x4 SP No.2  
WEBS 2x4 SP No.3 \*Except\* 12-6,17-6:2x4 SP No.2  
SLIDER Left 2x4 SP No.3 -- 1-6-0, Right 2x4 SP No.3 -- 1-6-0

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 3-2-4 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 2=0-3-8, 10=0-3-8  
Max Horiz 2=145 (LC 14)  
Max Grav 2=1903 (LC 3), 10=1903 (LC 3)

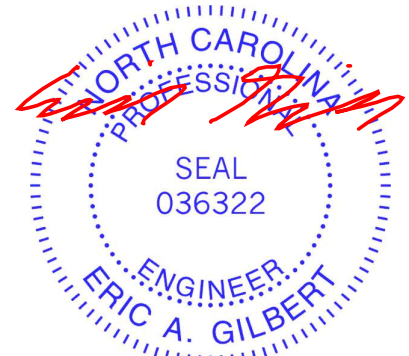
**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/13, 2-5=-3582/0, 5-6=-3434/3, 6-7=-3435/4, 7-10=-3583/0, 10-11=0/13  
BOT CHORD 2-13=-8/3091, 10-13=0/3092, 15-16=-18/97, 14-15=-18/97  
WEBS 5-17=-517/214, 4-17=-238/233, 7-12=-520/216, 6-14=-3/1579, 12-14=-43/1540, 8-12=-238/235, 16-17=-44/1539, 6-16=-3/1578, 13-15=-267/0

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 200.0lb AC unit load placed on the bottom chord, 18-0-0 from left end, supported at two points, 5-0-0 apart.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard

**NOTES**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-3-14 to 3-3-4, Interior (1) 3-3-4 to 14-4-15, Exterior(2R) 14-4-15 to 21-7-2, Interior (1) 21-7-2 to 32-8-12, Exterior(2E) 32-8-12 to 36-3-14 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60



May 15, 2024

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

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818 Soundside Road  
Edenton, NC 27932

Job 24070190	Truss A04	Truss Type Common	Qty 3	Ply 1	40 Mason Ridge-Roof-Hayden K GLH Job Reference (optional)	165546182
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Mon May 13 15:45:28  
ID:5n1bX0l2OldsE9NkoPgR0WzyTt\_-RfC?PsB70Hq3NSgPqnL8w3uITXbGKwCrCDoi7J4zJC7f

Page: 1

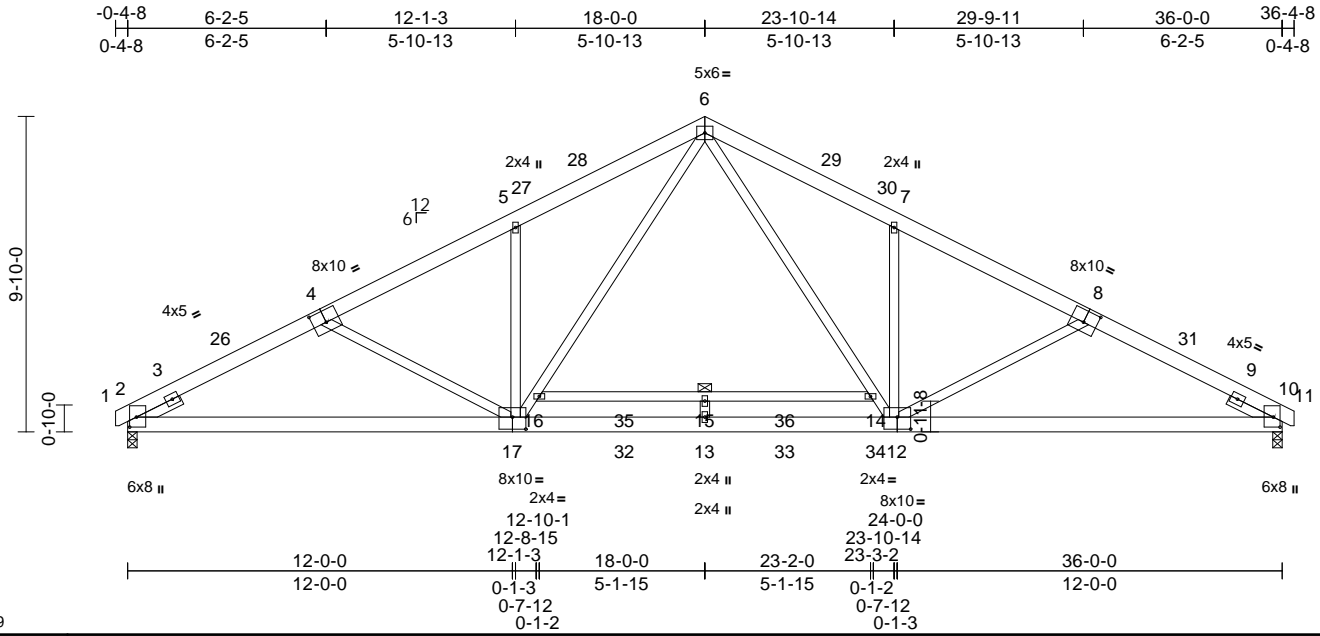


Plate Offsets (X, Y): [2:0-3-12,0-2-9], [4:0-5-0,0-4-8], [8:0-5-0,0-4-8], [10:0-3-12,0-2-9], [12:0-5-0,0-4-8], [17:0-5-0,0-4-8]

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	0.57	Vert(LL)	-0.35	15	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.59	Vert(CT)	-0.73	15	>591	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.39	Horz(CT)	0.07	10	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 271 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x6 SP No.2  
BOT CHORD 2x6 SP 2400F 2.0E \*Except\* 16-14:2x4 SP No.2  
WEBS 2x4 SP No.3 \*Except\* 17-6,12-6:2x4 SP No.2  
SLIDER Left 2x4 SP No.3 -- 1-6-0, Right 2x4 SP No.3 -- 1-6-0

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 3-2-5 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 2=0-3-8, 10=0-3-8  
Max Horiz 2=145 (LC 19)  
Max Grav 2=1903 (LC 3), 10=1903 (LC 3)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/13, 2-5=-3582/0, 5-6=-3434/3, 6-7=-3434/3, 7-10=-3582/0, 10-11=0/13  
BOT CHORD 2-13=-8/3091, 10-13=0/3091, 15-16=-18/97, 14-15=-18/97  
WEBS 5-17=-517/214, 16-17=-44/1539, 6-16=-2/1578, 4-17=-238/233, 6-14=-2/1578, 12-14=-43/1539, 7-12=-517/214, 8-12=-238/234, 13-15=-267/0

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
  - 200.0lb AC unit load placed on the bottom chord, 18-0-0 from left end, supported at two points, 5-0-0 apart.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- LOAD CASE(S)** Standard

- NOTES**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-3-14 to 3-3-4, Interior (1) 3-3-4 to 14-4-15, Exterior(2R) 14-4-15 to 21-7-2, Interior (1) 21-7-2 to 32-8-12, Exterior(2E) 32-8-12 to 36-3-14 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60



May 15, 2024

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818 Soundside Road  
Edenton, NC 27932

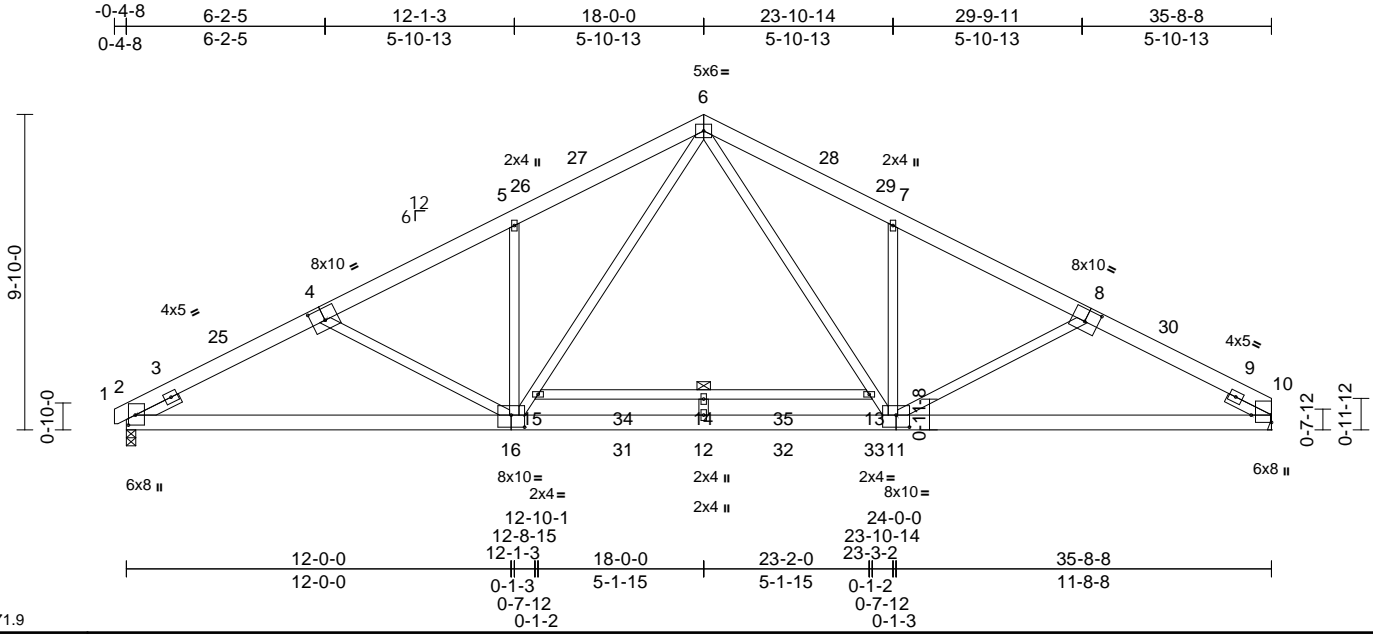


Job 24070190	Truss A05	Truss Type Common	Qty 2	Ply 1	40 Mason Ridge-Roof-Hayden K GLH Job Reference (optional)	165546183
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Mon May 13 15:45:28  
ID:ZxUg4o5WaT\_uCnUoMvmmixzyTIV-RfC?PsB70Hq3NSgPqnL8w3uTXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:71.9  
Plate Offsets (X, Y): [2:0-3-12,0-2-9], [4:0-5-0,0-4-8], [8:0-5-0,0-4-8], [10:Edge,0-7-10], [11:0-5-0,0-4-8], [16:0-5-0,0-4-8]

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	0.69	Vert(LL)	-0.35	14	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.60	Vert(CT)	-0.73	14	>585	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.40	Horz(CT)	0.07	10	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 268 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x6 SP No.2  
BOT CHORD 2x6 SP 2400F 2.0E \*Except\* 15-13:2x4 SP No.2  
WEBS 2x4 SP No.3 \*Except\* 16-6,11-6:2x4 SP No.2  
SLIDER Left 2x4 SP No.3 -- 1-6-0, Right 2x4 SP No.3 -- 1-6-0

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

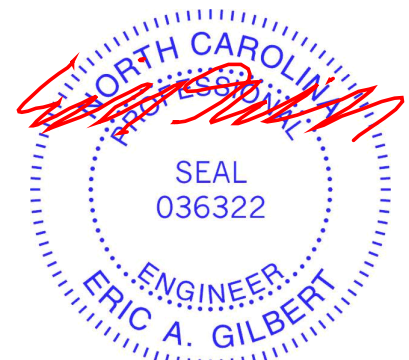
**REACTIONS** (size) 2=0-3-8, 10= Mechanical  
Max Horiz 2=150 (LC 14)  
Max Grav 2=1895 (LC 3), 10=1875 (LC 3)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/13, 2-5=-3567/0, 5-6=-3418/3, 6-7=-3398/5, 7-10=-3517/0  
BOT CHORD 2-12=-13/3076, 10-12=0/3019, 14-15=-18/95, 13-14=-18/95  
WEBS 5-16=-518/214, 7-11=-528/216, 8-11=-208/235, 15-16=-44/1543, 6-15=-2/1583, 6-13=-3/1548, 11-13=-44/1507, 4-16=-238/233, 12-14=-266/0

**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) -0-3-14 to 3-2-14, Interior (1) 3-2-14 to 14-5-4, Exterior(2R) 14-5-4 to 21-6-12, Interior (1) 21-6-12 to 32-1-12, Exterior(2E) 32-1-12 to 35-8-8 zone; cantilever left and right exposed; end vertical left exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 200.0lb AC unit load placed on the bottom chord, 18-0-0 from left end, supported at two points, 5-0-0 apart.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Refer to girder(s) for truss to truss connections.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



May 15, 2024



Job 24070190	Truss A06	Truss Type Common	Qty 9	Ply 1	40 Mason Ridge-Roof-Hayden K GLH Job Reference (optional)	I65546184
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Mon May 13 15:45:29  
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Page: 1

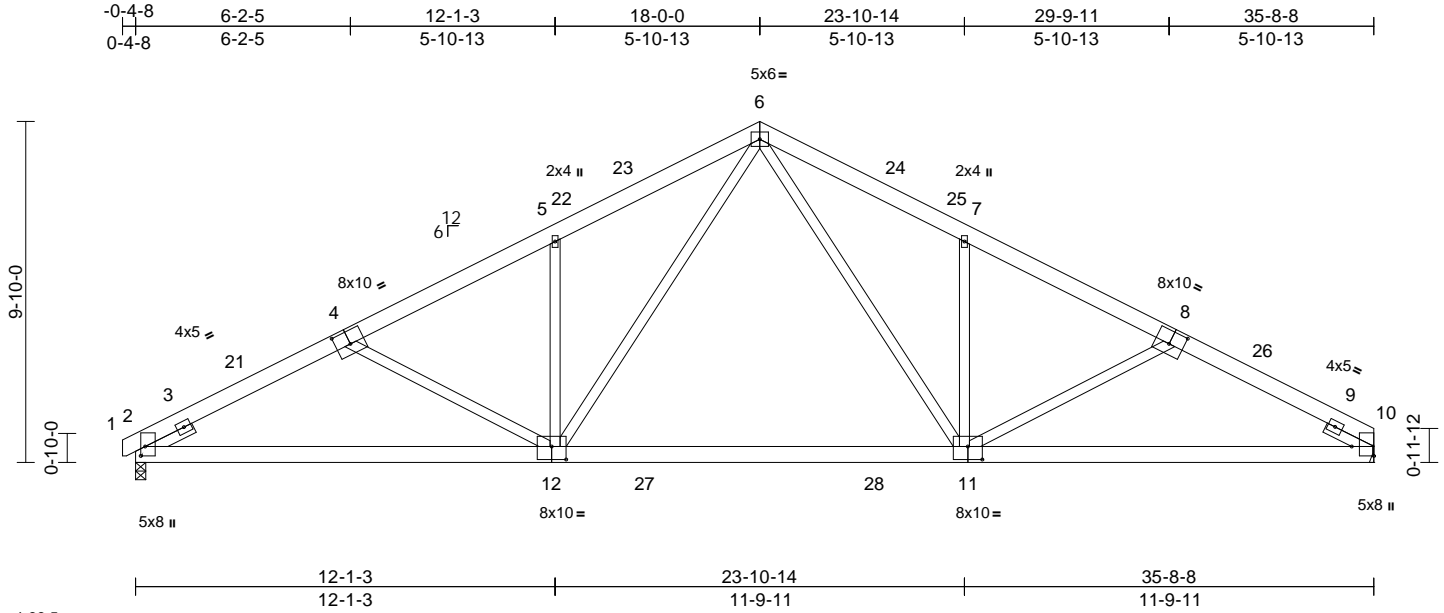


Plate Offsets (X, Y): [2:0-3-4,0-1-9], [4:0-5-0,0-4-8], [8:0-5-0,0-4-8], [10:Edge,0-7-10], [11:0-5-0,0-4-8], [12:0-5-0,0-4-8]

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	0.43	Vert(LL)	-0.28	11-12	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.81	Vert(CT)	-0.46	11-12	>932	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.43	Horz(CT)	0.07	10	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
										Weight: 252 lb	FT = 20%	

**LUMBER**

TOP CHORD 2x6 SP No.2  
 BOT CHORD 2x6 SP No.2  
 WEBS 2x4 SP No.3 \*Except\* 11-6,12-6:2x4 SP No.2  
 SLIDER Left 2x4 SP No.3 -- 1-6-0, Right 2x4 SP No.3 -- 1-6-0

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 3-10-15 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS**

(size) 2=0-3-8, 10= Mechanical  
 Max Horiz 2=150 (LC 14), 10=-135 (LC 15)  
 Max Uplift 2=-145 (LC 14), 10=-135 (LC 15)  
 Max Grav 2=1584 (LC 3), 10=1561 (LC 3)

**FORCES**

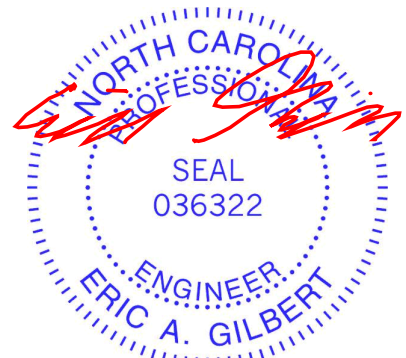
(lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-2=0/13, 2-5=-2910/299, 5-6=-2712/381, 6-7=-2695/380, 7-10=-2867/298  
 BOT CHORD 2-10=-306/2513  
 WEBS 7-11=-517/225, 5-12=-510/225, 4-12=-291/181, 6-11=-202/1185, 6-12=-204/1215, 8-11=-263/178

**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) -0-3-14 to 3-2-14, Interior (1) 3-2-14 to 14-5-4, Exterior(2R) 14-5-4 to 21-6-12, Interior (1) 21-6-12 to 32-1-12, Exterior(2E) 32-1-12 to 35-8-8 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, with BCDL = 10.0psf.
- Refer to girder(s) for truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 135 lb uplift at joint 10.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



May 15, 2024

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 Edenton, NC 27932

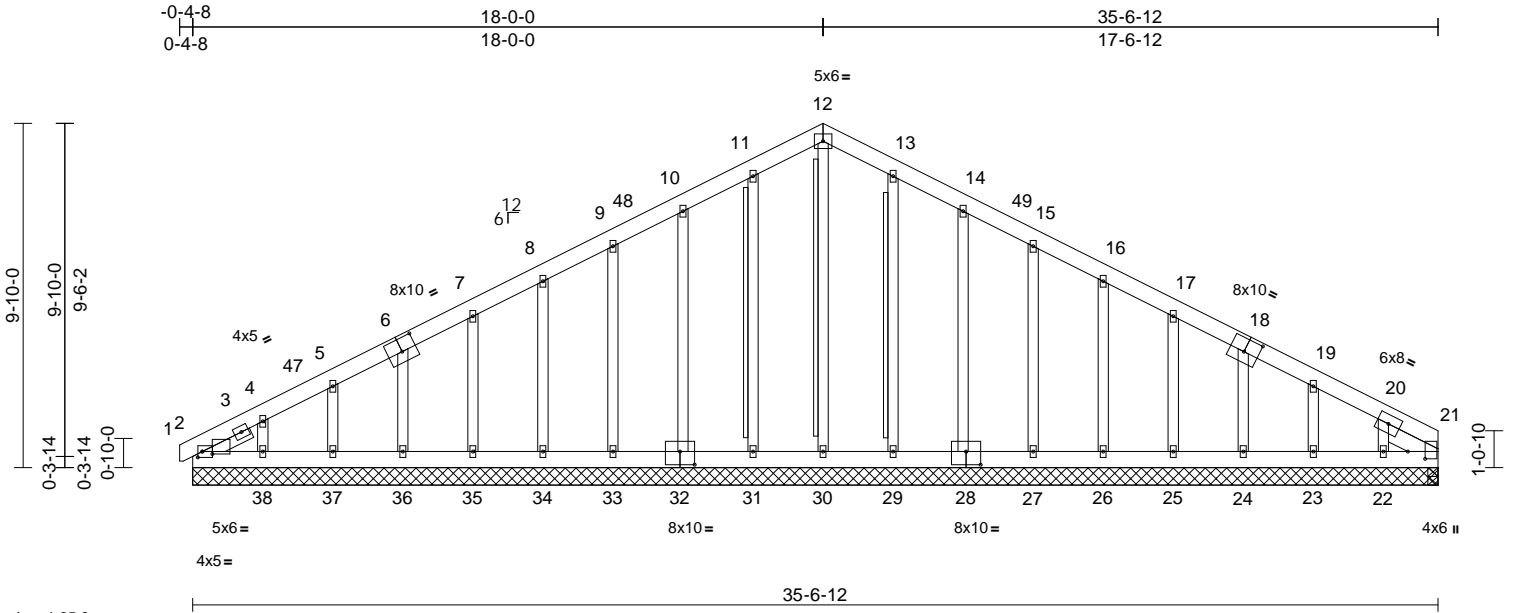
Job 24070190	Truss A07	Truss Type Common Supported Gable	Qty 1	Ply 1	40 Mason Ridge-Roof-Hayden K GLH Job Reference (optional)	165546185
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Mon May 13 15:45:29

Page: 1

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Scale = 1:65.8

Plate Offsets (X, Y): [2:0-1-9,0-2-0], [2:0-3-7,0-0-13], [6:0-5-0,0-4-8], [18:0-5-0,0-4-8], [21:0-2-8,0-5-15], [28:0-5-0,0-4-8], [32:0-5-0,0-4-8]

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	0.05	Vert(LL)	0.00	45	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	0.00	45	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.19	Horz(CT)	0.01	21	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 303 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x6 SP No.2  
BOT CHORD 2x6 SP No.2  
OTHERS 2x4 SP No.3 \*Except\* 0-0,0-0,0-0:2x4 SP No.2(flat)  
SLIDER Left 2x4 SP No.3 -- 1-6-0, Right 2x6 SP No.2 -- 1-7-7

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
WEBS T-Brace: 2x4 SP No.2 - 12-30, 11-31, 13-29  
Fasten (2X) T and I braces to narrow edge of web with 10d (0.131"x3") nails, 6in o.c., with 3in minimum end distance.  
Brace must cover 90% of web length.

**REACTIONS** (size)  
2=35-6-12, 21=35-6-12,  
22=35-6-12, 23=35-6-12,  
24=35-6-12, 25=35-6-12,  
26=35-6-12, 27=35-6-12,  
28=35-6-12, 29=35-6-12,  
30=35-6-12, 31=35-6-12,  
32=35-6-12, 33=35-6-12,  
34=35-6-12, 35=35-6-12,  
36=35-6-12, 37=35-6-12,  
38=35-6-12, 39=35-6-12,  
43=35-6-12  
Max Horiz 2=152 (LC 14), 43=152 (LC 14)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/9, 2-4=-196/61, 4-5=-151/61, 5-7=-113/88, 7-8=-68/112, 8-9=-66/135, 9-10=-78/169, 10-11=-93/218, 11-12=-105/252, 12-13=-105/252, 13-14=-93/218, 14-15=-78/169, 15-16=-66/123, 16-17=-55/78, 17-19=-73/35, 19-20=-101/29, 20-21=-82/26  
BOT CHORD 2-38=-42/137, 37-38=-42/137, 36-37=-42/137, 35-36=-44/140, 34-35=-44/140, 33-34=-44/140, 31-33=-44/140, 30-31=-43/139, 29-30=-43/139, 27-29=-44/140, 26-27=-44/140, 25-26=-44/140, 24-25=-44/140, 23-24=-42/137, 22-23=-42/137, 21-22=-42/137

**WEBS**  
12-30=-132/22, 11-31=-197/52, 10-32=-191/87, 9-33=-138/78, 8-34=-126/77, 7-35=-131/80, 6-36=-125/77, 5-37=-120/79, 4-38=-128/133, 13-29=-197/48, 14-28=-191/87, 15-27=-138/78, 16-26=-126/77, 17-25=-131/80, 18-24=-125/75, 19-23=-123/100, 20-22=-108/135

**NOTES**  
1) Unbalanced roof live loads have been considered for this design.  
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-3-14 to 3-2-14, Exterior(2N) 3-2-14 to 14-5-4, Corner(3R) 14-5-4 to 21-6-12, Exterior (2N) 21-6-12 to 32-0-0, Corner(3E) 32-0-0 to 35-6-12 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



May 15, 2024

Continued on page 2

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

Job 24070190	Truss A07	Truss Type Common Supported Gable	Qty 1	Ply 1	40 Mason Ridge-Roof-Hayden K GLH Job Reference (optional)	I65546185
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Mon May 13 15:45:29  
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Page: 2

- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 5) Unbalanced snow loads have been considered for this design.
- 6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 7) All plates are 2x4 MT20 unless otherwise indicated.
- 8) Gable studs spaced at 2-0-0 oc.
- 9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 10) \* 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.
- 11) Bearings are assumed to be: , Joint 21 User Defined .
- 12) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 31, 32, 33, 34, 35, 36, 37, 38, 29, 28, 27, 26, 25, 24, 23, 22, and 2. This connection is for uplift only and does not consider lateral forces.
- 13) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 14) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.

**LOAD CASE(S)** Standard

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

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



818 Soundside Road  
Edenton, NC 27932

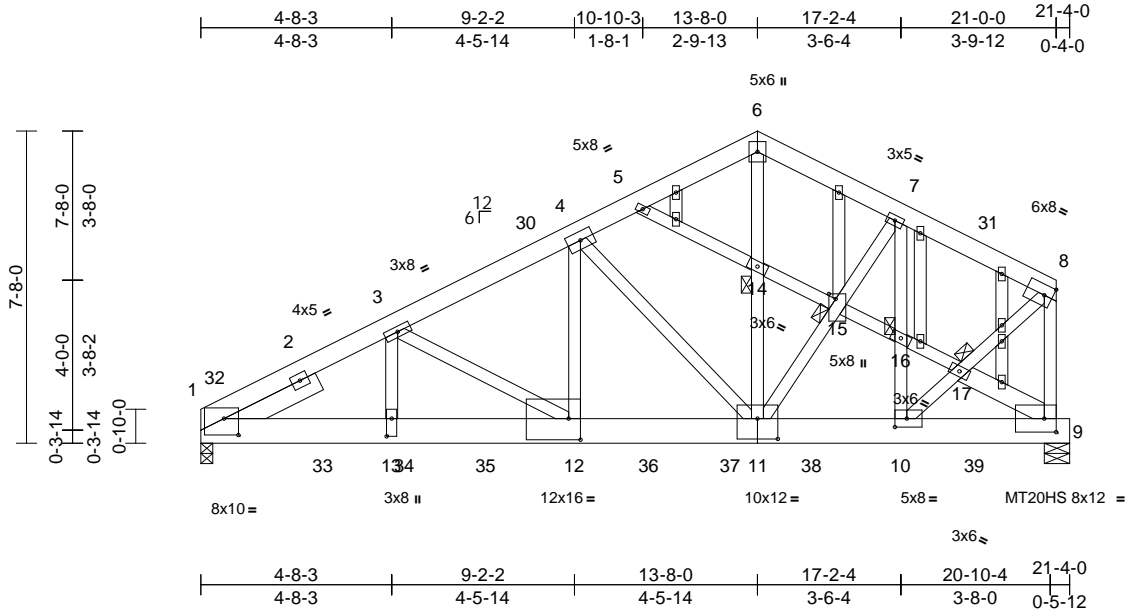
Job 24070190	Truss B01	Truss Type Common Girder	Qty 1	Ply 2	40 Mason Ridge-Roof-Hayden K GLH Job Reference (optional)	I65546186
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 E Apr 25 2024 Print: 8.730 E Apr 25 2024 MiTek Industries, Inc. Tue May 14 15:38:47

Page: 1

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Scale = 1:56.6  
Plate Offsets (X, Y): [1:0-4-4,0-4-14], [9:0-3-8,0-4-0], [10:0-3-8,0-2-8], [11:0-6-0,0-6-0], [12:0-3-8,0-6-4], [13:0-5-4,0-1-8], [15:0-1-8,0-2-0]

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	0.80	Vert(LL)	-0.13	12-13	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.48	Vert(CT)	-0.24	12-13	>999	180	MT20HS	187/143
TCDL	10.0	Rep Stress Incr	NO	WB	0.84	Horz(CT)	0.05	9	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 442 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x6 SP No.2  
BOT CHORD 2x8 SP 2400F 2.0E  
WEBS 2x4 SP No.3 \*Except\* 12-4,11-6,10-8:2x4 SP No.2, 17-9:2x6 SP No.2  
OTHERS 2x4 SP No.3  
SLIDER Left 2x6 SP No.2 -- 2-6-0

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 3-9-1 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**JOINTS**  
1 Brace at Jt(s): 14, 15, 16, 17

**REACTIONS** (lb/size) 1=8152/0-3-8, (req. 0-3-10), 9=9310/0-7-8  
Max Horiz 1=168 (LC 12)  
Max Uplift 1=784 (LC 12)  
Max Grav 1=8826 (LC 5), 9=10231 (LC 6)

**FORCES** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-13=-13158/1157, 3-4=-10477/889, 4-5=-6956/560, 5-6=-5791/469, 6-7=-5593/458, 7-8=-4906/205, 8-9=-6334/263  
BOT CHORD 1-13=-1134/11584, 12-13=-1134/11584, 10-12=-833/9316, 9-10=-167/1807  
WEBS 3-13=-223/2667, 4-12=-470/5220, 11-14=-379/5187, 6-14=-379/5173, 10-16=-1295/424, 7-16=-1392/432, 3-12=-2644/348, 4-11=-3923/462, 11-15=-340/1184, 7-15=-341/1190, 5-14=-1864/192, 14-15=-1892/193, 15-16=-1941/201, 16-17=-2038/206, 9-17=-2117/205, 10-17=-238/6035, 8-17=-218/5866

- 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, 2x4 - 1 row at 0-9-0 oc.  
Bottom chords connected as follows: 2x8 - 2 rows staggered at 0-6-0 oc.  
Web connected as follows: 2x4 - 1 row at 0-9-0 oc, Except member 4-12 2x4 - 1 row at 0-6-0 oc, member 7-10 2x4 - 1 row at 0-7-0 oc, 2x6 - 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.
- 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 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.
- All plates are MT20 plates unless otherwise indicated.
- 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.
- WARNING: Required bearing size at joint(s) 1 greater than input bearing size.
- LGT2 Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1. 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.
- LGT2 Hurricane ties must have two studs in line below the truss.



May 15, 2024

Continued on page 2

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

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



818 Soundside Road  
Edenton, NC 27932



Job 24070190	Truss B01	Truss Type Common Girder	Qty 1	Ply 2	40 Mason Ridge-Roof-Hayden K GLH Job Reference (optional)	I65546186
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 E Apr 25 2024 Print: 8.730 E Apr 25 2024 MiTek Industries, Inc. Tue May 14 15:38:47

Page: 2

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17) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1543 lb down and 146 lb up at 1-0-0, 1542 lb down and 147 lb up at 3-0-0, 1542 lb down and 147 lb up at 5-0-0, 1542 lb down and 147 lb up at 7-0-0, 1542 lb down and 147 lb up at 9-0-0, 1542 lb down and 147 lb up at 11-0-0, 1542 lb down and 147 lb up at 13-0-0, 1542 lb down and 147 lb up at 15-0-0, 1542 lb down and 147 lb up at 17-0-0, and 1855 lb down at 19-0-0, and 1862 lb down at 20-10-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

**LOAD CASE(S)** Standard

- 1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 1-6=-58, 6-8=-58, 9-26=-19  
Concentrated Loads (lb)  
Vert: 9=-1617 (B), 12=-1403 (B), 10=-1403 (B), 32=-1404 (B), 33=-1403 (B), 34=-1403 (B), 35=-1403 (B), 36=-1403 (B), 37=-1403 (B), 38=-1403 (B), 39=-1611 (B)

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

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



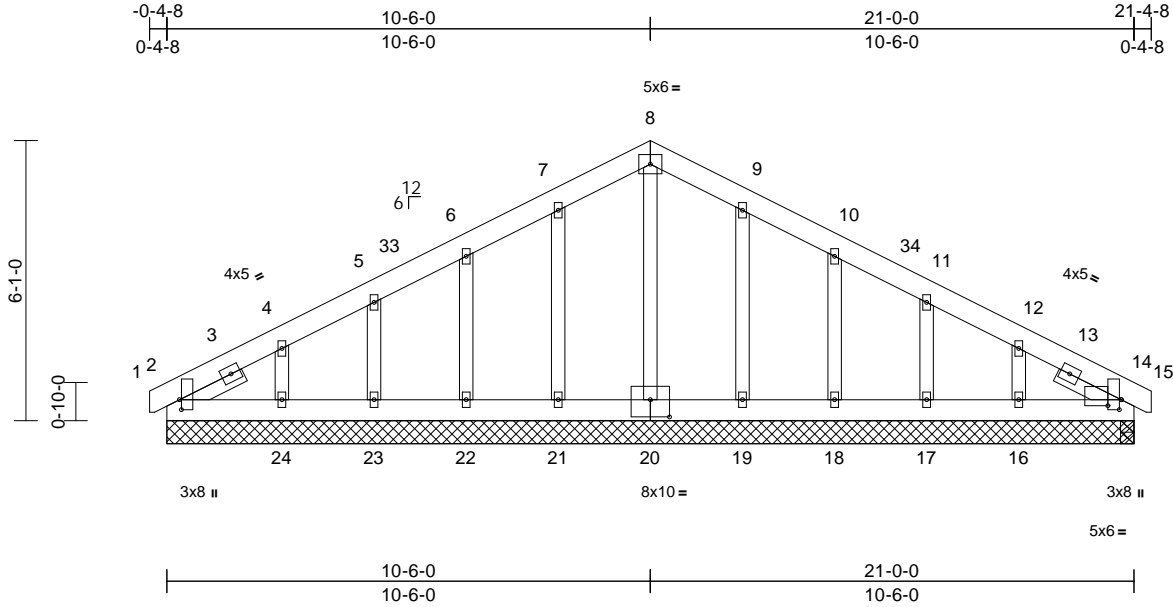
818 Soundside Road  
Edenton, NC 27932

Job 24070190	Truss C01	Truss Type Common Supported Gable	Qty 1	Ply 1	40 Mason Ridge-Roof-Hayden K GLH Job Reference (optional)
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 E Apr 25 2024 Print: 8.730 E Apr 25 2024 MiTek Industries, Inc. Tue May 14 15:41:01  
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Page: 1



Scale = 1:50

Plate Offsets (X, Y): [2:0-2-10,0-0-8], [14:0-2-10,0-0-8], [14:0-3-8,0-1-9], [20:0-5-0,0-4-8]

Loading	(psf)	Spacing	1-11-4	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.03	Vert(LL)	0.00	31	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	0.00	31	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.00	14	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 151 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x6 SP No.2  
BOT CHORD 2x6 SP No.2  
OTHERS 2x4 SP No.3  
SLIDER Left 2x4 SP No.3 -- 1-6-0, Right 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** All bearings 21-0-0.  
(lb) - Max Horiz 2=83 (LC 14), 29=83 (LC 14)  
Max Uplift All uplift 100 (lb) or less at joint(s) 2, 16, 17, 18, 19, 21, 22, 23, 24, 29  
Max Grav All reactions 250 (lb) or less at joint (s) 2, 14, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 29

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

- 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) -0-3-14 to 2-6-0, Exterior(2N) 2-6-0 to 7-6-0, Corner(3R) 7-6-0 to 13-6-0, Exterior(2N) 13-6-0 to 18-3-14, Corner(3E) 18-3-14 to 21-3-14 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.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 21, 22, 23, 24, 19, 18, 17, 16, and 2. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



May 15, 2024

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

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

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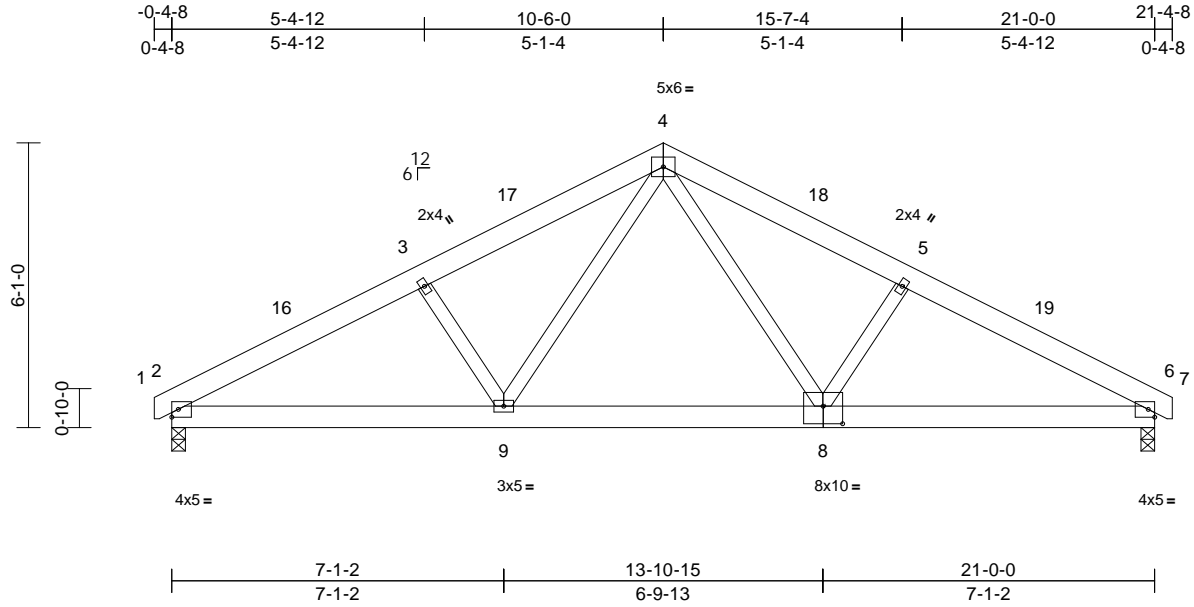
818 Soundside Road  
Edenton, NC 27932

Job 24070190	Truss C02	Truss Type Common	Qty 1	Ply 1	40 Mason Ridge-Roof-Hayden K GLH Job Reference (optional)	I65546188
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Mon May 13 15:45:30  
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Page: 1



Scale = 1:49.2  
Plate Offsets (X, Y): [8:0-5-0,0-4-8]

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	Vert(LL)	-0.04	8-9	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	Vert(CT)	-0.08	8-9	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	Horz(CT)	0.02	6	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH							
BCDL	10.0									Weight: 134 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 5-11-14 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

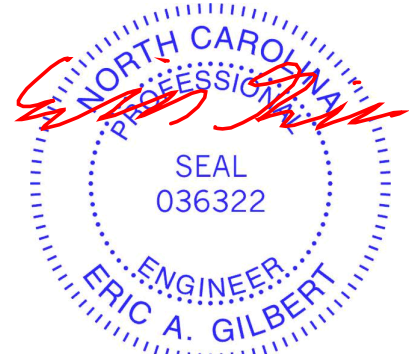
**REACTIONS** (size) 2=0-3-8, 6=0-3-8  
Max Horiz 2=86 (LC 18)  
Max Uplift 2=-86 (LC 14), 6=-86 (LC 15)  
Max Grav 2=902 (LC 21), 6=902 (LC 22)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/9, 2-3=-1438/254, 3-4=-1274/269, 4-5=-1275/269, 5-6=-1438/254, 6-7=0/9  
BOT CHORD 2-9=-154/1221, 6-9=-154/1221  
WEBS 3-9=-350/169, 4-9=-72/484, 4-8=-73/485, 5-8=-350/169

- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 6 and 2. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard

- NOTES**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=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) -0-3-14 to 2-8-2, Interior (1) 2-8-2 to 7-6-0, Exterior(2R) 7-6-0 to 13-6-0, Interior (1) 13-6-0 to 18-3-14, Exterior(2E) 18-3-14 to 21-3-14 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



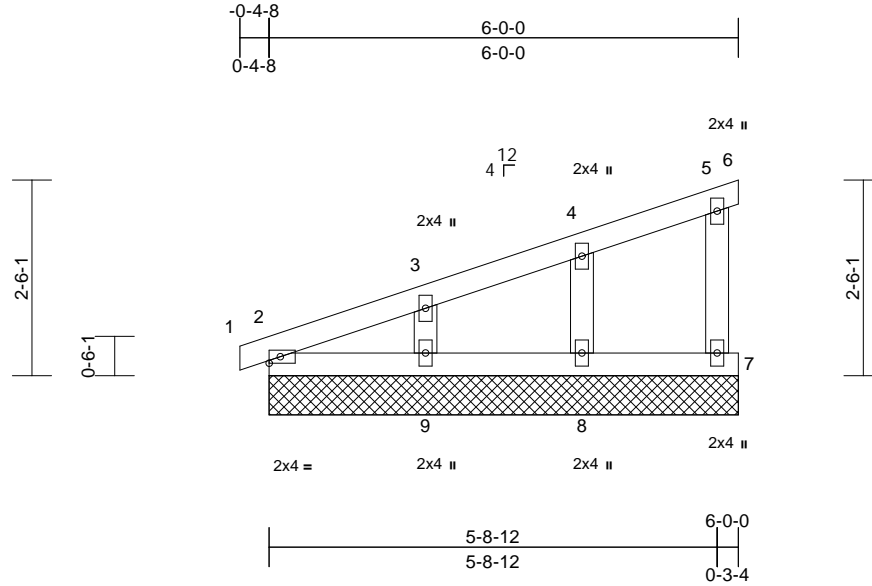
May 15, 2024

Job 24070190	Truss D01	Truss Type Monopitch Supported Gable	Qty 1	Ply 1	40 Mason Ridge-Roof-Hayden K GLH Job Reference (optional)	165546189
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Mon May 13 15:45:30  
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Page: 1



Scale = 1:29.5

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	0.07	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	6	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 25 lb	FT = 20%

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

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, 6=6-0-0, 7=6-0-0, 8=6-0-0, 9=6-0-0, 10=6-0-0	
Max Horiz	2=77 (LC 10), 10=77 (LC 10)
Max Uplift	6=-16 (LC 21), 7=-26 (LC 14), 8=-28 (LC 10), 9=-48 (LC 14)
Max Grav	2=120 (LC 21), 6=5 (LC 14), 7=117 (LC 21), 8=206 (LC 21), 9=235 (LC 21), 10=120 (LC 21)

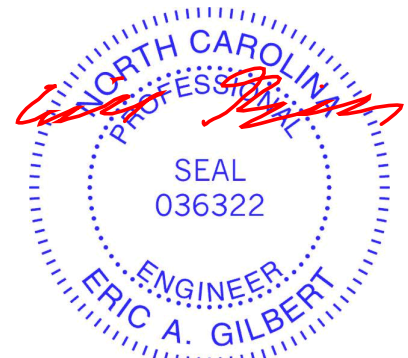
FORCES (lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/10, 2-3=-159/51, 3-4=-94/34, 4-5=-35/20, 5-6=-13/5, 5-7=-103/103
BOT CHORD	2-9=-100/34, 8-9=0/0, 7-8=0/0
WEBS	4-8=-170/166, 3-9=-180/186

**NOTES**

- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-4-8 to 2-7-8, Exterior(2N) 2-7-8 to 6-0-0 zone; cantilever left and right exposed; end vertical left exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 6) Gable 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 16 lb uplift at joint 6, 26 lb uplift at joint 7, 28 lb uplift at joint 8 and 48 lb uplift at joint 9.
- 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



May 15, 2024

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

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



818 Soundside Road  
Edenton, NC 27932

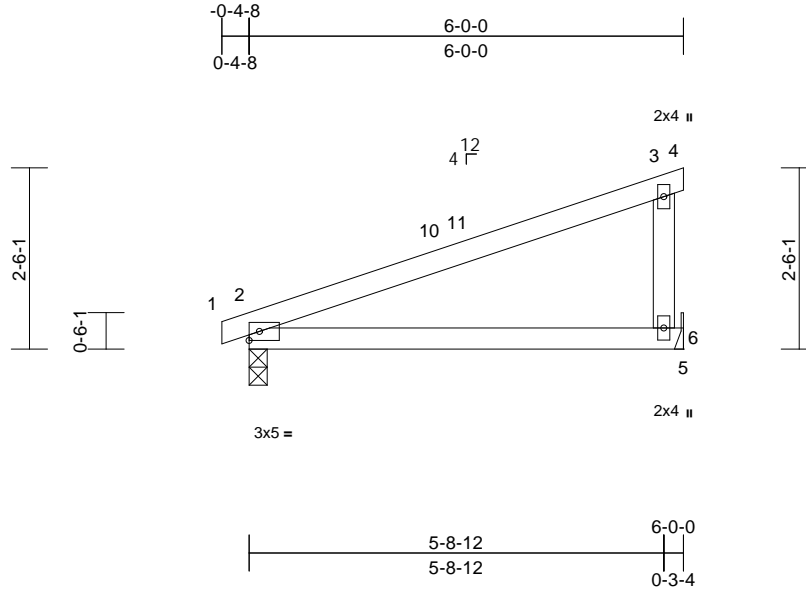


Job 24070190	Truss D02	Truss Type Monopitch	Qty 9	Ply 1	40 Mason Ridge-Roof-Hayden K GLH Job Reference (optional)	I65546190
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Mon May 13 15:45:30  
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Scale = 1:31.8

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	0.75	Vert(LL)	0.12	6-9	>590	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.50	Vert(CT)	-0.14	6-9	>486	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.02	2	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0											
											Weight: 22 lb	FT = 20%

#### LUMBER

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

#### BRACING

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

#### REACTIONS

(size) 2=0-3-0, 6= Mechanical  
Max Horiz 2=79 (LC 10)  
Max Uplift 2=-85 (LC 10), 6=-103 (LC 20)  
Max Grav 2=346 (LC 21), 6=341 (LC 21)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/11, 2-3=-92/90, 3-4=-8/0, 3-6=-250/190  
BOT CHORD 2-6=-203/152, 5-6=0/0

#### NOTES

- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust)  
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-4-8 to 2-7-8, Interior (1) 2-7-8 to 3-0-0, Exterior(2E) 3-0-0 to 6-0-0 zone; cantilever left and right exposed; end vertical left exposed; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 7) Refer to girder(s) for truss to truss connections.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 103 lb uplift at joint 6.
- 9) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
- 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



May 15, 2024

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

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



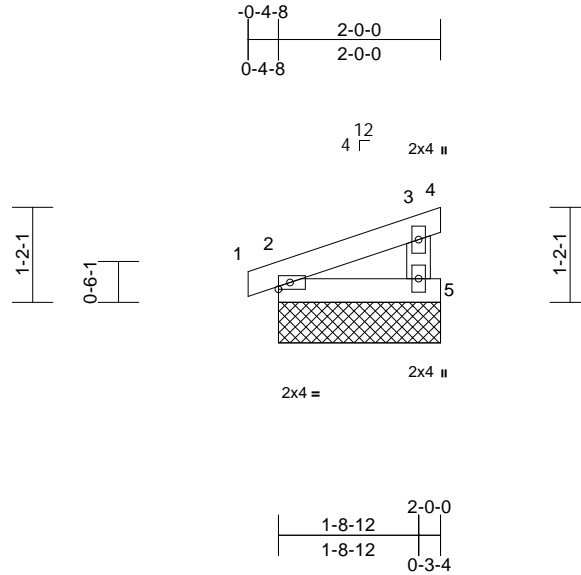
818 Soundside Road  
Edenton, NC 27932

Job 24070190	Truss D03	Truss Type Monopitch Supported Gable	Qty 1	Ply 1	40 Mason Ridge-Roof-Hayden K GLH Job Reference (optional)	165546191
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Mon May 13 15:45:30  
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Page: 1



Scale = 1:28.4

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	0.04	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 8 lb	FT = 20%

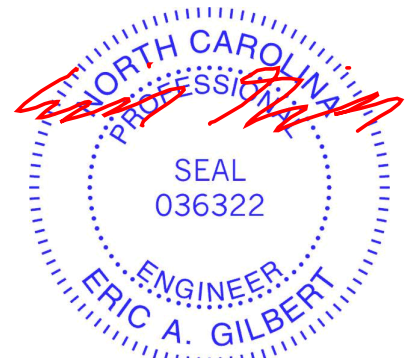
LUMBER	
TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3
BRACING	
TOP CHORD	Structural wood sheathing directly applied or 2-0-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
REACTIONS	
(size)	2=2-0-0, 4=2-0-0, 5=2-0-0, 6=2-0-0
Max Horiz	2=30 (LC 10), 6=30 (LC 10)
Max Uplift	2=-15 (LC 10), 4=-43 (LC 21), 5=-39 (LC 14), 6=-15 (LC 10)
Max Grav	2=108 (LC 21), 4=13 (LC 14), 5=153 (LC 21), 6=108 (LC 21)
FORCES	
(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/9, 2-3=-37/22, 3-4=-20/14, 3-5=-132/145
BOT CHORD	2-5=-46/20

- 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 15 lb uplift at joint 2, 43 lb uplift at joint 4, 39 lb uplift at joint 5 and 15 lb uplift at joint 2.
- 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**

- 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) zone; cantilever left and right exposed; end vertical left 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.



May 15, 2024

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

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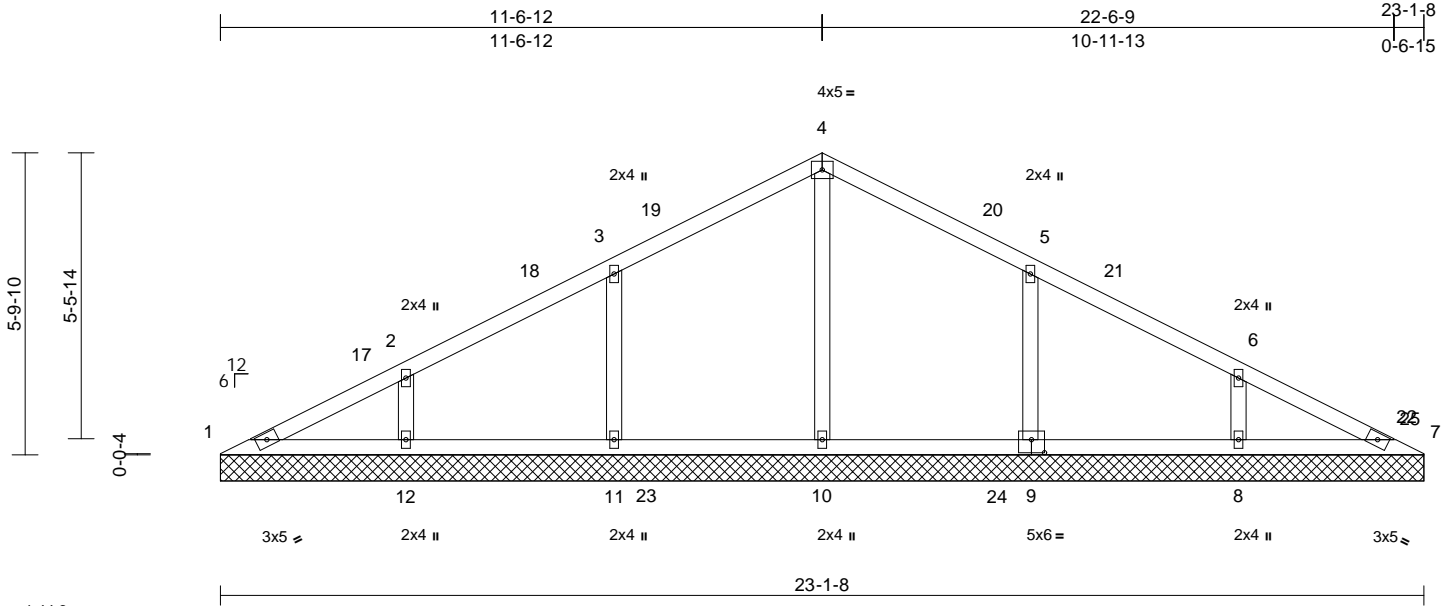
818 Soundside Road  
Edenton, NC 27932

Job 24070190	Truss V01	Truss Type Valley	Qty 1	Ply 1	40 Mason Ridge-Roof-Hayden K GLH Job Reference (optional)	165546192
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Mon May 13 15:45:30  
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Page: 1



Scale = 1:44.3

Plate Offsets (X, Y): [9:0-3-0,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.31	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.17	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.15	Horiz(TL)	0.00	7	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 92 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=23-1-8, 7=23-1-8, 8=23-1-8,  
9=23-1-8, 10=23-1-8, 11=23-1-8,  
12=23-1-8  
Max Horiz 1=94 (LC 14)  
Max Uplift 1=9 (LC 15), 8=78 (LC 15),  
9=100 (LC 15), 11=99 (LC 14),  
12=81 (LC 14)  
Max Grav 1=106 (LC 20), 7=75 (LC 21),  
8=340 (LC 3), 9=472 (LC 6),  
10=422 (LC 5), 11=470 (LC 5),  
12=344 (LC 3)

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

TOP CHORD 1-2=-156/100, 2-3=-43/116, 3-4=-79/128,  
4-5=-81/118, 5-6=-32/97, 6-7=-127/92  
BOT CHORD 1-12=-47/143, 11-12=-47/74, 10-11=-47/74,  
8-10=-49/75, 7-8=-49/113  
WEBS 4-10=-248/7, 3-11=-390/149, 2-12=-244/117,  
5-9=-391/150, 6-8=-242/116

**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) 0-0-8 to 3-0-8, Interior (1) 3-0-8 to 8-7-4, Exterior(2R) 8-7-4 to 14-7-4, Interior (1) 14-7-4 to 19-7-1, Exterior(2E) 19-7-1 to 22-7-1 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 9 lb uplift at joint 1, 99 lb uplift at joint 11, 81 lb uplift at joint 12, 100 lb uplift at joint 9 and 78 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



May 15, 2024

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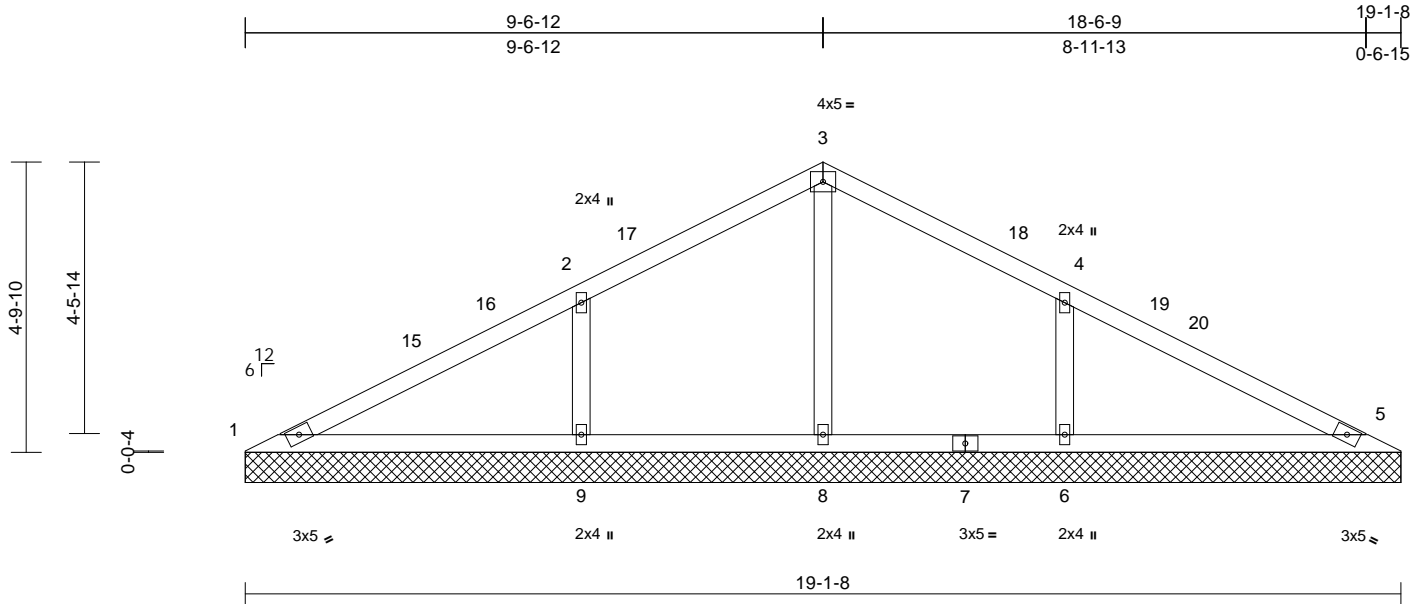
818 Soundside Road  
Edenton, NC 27932

Job 24070190	Truss V02	Truss Type Valley	Qty 1	Ply 1	40 Mason Ridge-Roof-Hayden K GLH Job Reference (optional)	165546193
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Mon May 13 15:45:30  
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Page: 1



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.49	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.26	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.21	Horiz(TL)	-0.01	5	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
										Weight: 71 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=19-1-8, 5=19-1-8, 6=19-1-8,  
8=19-1-8, 9=19-1-8, 14=19-1-8  
Max Horiz 1=77 (LC 14)  
Max Uplift 1=-45 (LC 36), 6=-125 (LC 15),  
9=-130 (LC 14)  
Max Grav 1=110 (LC 35), 5=1 (LC 1), 6=579 (LC 21), 8=566 (LC 21), 9=588 (LC 20), 14=1 (LC 1)

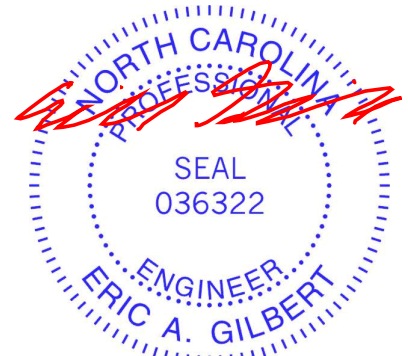
**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-146/425, 2-3=0/393, 3-4=0/413,  
4-5=-132/441  
BOT CHORD 1-9=-328/126, 8-9=-328/98, 6-8=-328/98,  
5-6=-328/98  
WEBS 3-8=-516/65, 2-9=-448/171, 4-6=-445/172

- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 45 lb uplift at joint 1, 130 lb uplift at joint 9 and 125 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

**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) 0-0-8 to 3-0-8, Interior (1) 3-0-8 to 6-7-4, Exterior(2R) 6-7-4 to 12-7-4, Interior (1) 12-7-4 to 15-7-1, Exterior(2E) 15-7-1 to 18-7-1 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60



May 15, 2024

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

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818 Soundside Road  
Edenton, NC 27932

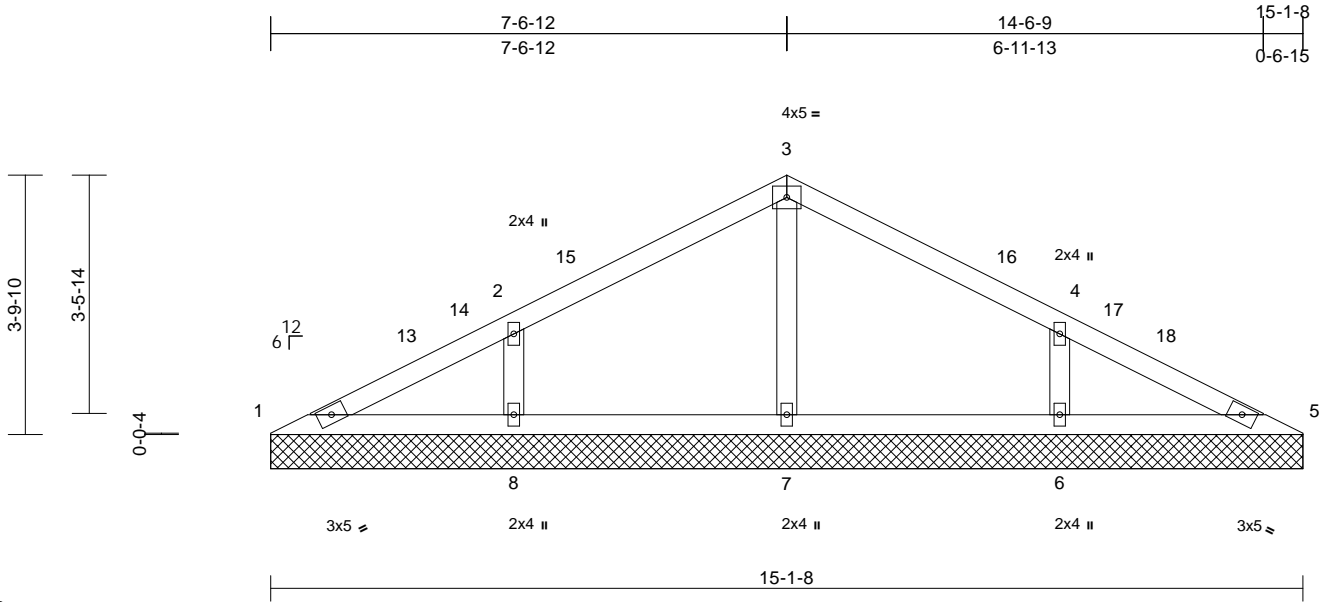


Job 24070190	Truss V03	Truss Type Valley	Qty 1	Ply 1	40 Mason Ridge-Roof-Hayden K GLH Job Reference (optional)	165546194
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Mon May 13 15:45:31  
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Page: 1



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.31	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.11	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.08	Horiz(TL)	0.00	5	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
- 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=15-1-8, 5=15-1-8, 6=15-1-8, 7=15-1-8, 8=15-1-8
- Max Horiz 1=-58 (LC 15)
- Max Uplift 1=-7 (LC 15), 5=-6 (LC 15), 6=-97 (LC 15), 8=-98 (LC 14)
- Max Grav 1=93 (LC 35), 5=93 (LC 36), 6=482 (LC 21), 7=337 (LC 20), 8=482 (LC 20)

**FORCES**

(lb) - Maximum Compression/Maximum Tension

- TOP CHORD 1-2=-125/109, 2-3=-66/113, 3-4=-66/105, 4-5=-125/109
- BOT CHORD 1-8=-56/105, 7-8=-56/53, 6-7=-56/53, 5-6=-56/105
- WEBS 3-7=-261/76, 2-8=-390/170, 4-6=-390/170

**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) 0-0-8 to 3-0-8, Interior (1) 3-0-8 to 4-7-4, Exterior(2R) 4-7-4 to 10-7-4, Interior (1) 10-7-4 to 12-2-0, Exterior(2E) 12-2-0 to 15-2-0 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 7 lb uplift at joint 1, 6 lb uplift at joint 5, 98 lb uplift at joint 8 and 97 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



May 15, 2024

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



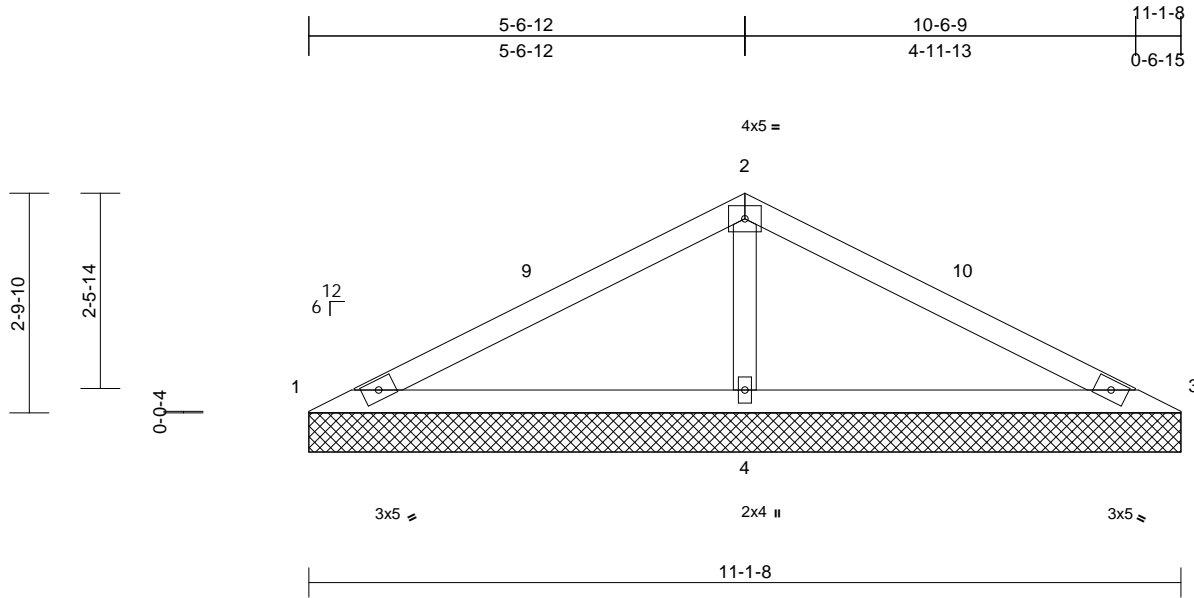
818 Soundside Road  
Edenton, NC 27932

Job 24070190	Truss V04	Truss Type Valley	Qty 1	Ply 1	40 Mason Ridge-Roof-Hayden K GLH Job Reference (optional)	I65546195
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Mon May 13 15:45:31  
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Page: 1



Scale = 1:29.4

Loading (psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	Plate Grip DOL	1.15	TC	0.54	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	Lumber DOL	1.15	BC	0.51	Vert(TL)	n/a	-	n/a	999		
TCDL	Rep Stress Incr	YES	WB	0.15	Horiz(TL)	0.01	4	n/a	n/a		
BCLL	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL										Weight: 36 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=11-1-8, 3=11-1-8, 4=11-1-8  
Max Horiz 1=42 (LC 14)  
Max Uplift 1=50 (LC 21), 3=50 (LC 20), 4=72 (LC 14)  
Max Grav 1=126 (LC 20), 3=126 (LC 21), 4=856 (LC 21)

**FORCES**

(lb) - Maximum Compression/Maximum Tension

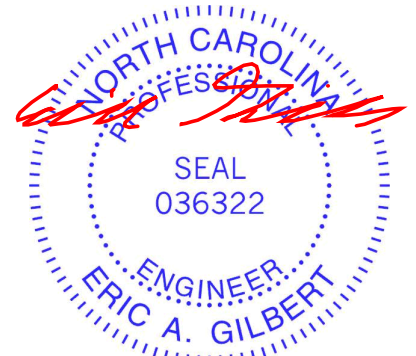
TOP CHORD 1-2=-164/491, 2-3=-164/491  
BOT CHORD 1-4=-374/216, 3-4=-374/216  
WEBS 2-4=-667/341

**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) 0-0-8 to 3-0-8, Exterior(2R) 3-0-8 to 8-2-0, Exterior(2E) 8-2-0 to 11-2-0 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 50 lb uplift at joint 1, 50 lb uplift at joint 3 and 72 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



May 15, 2024

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

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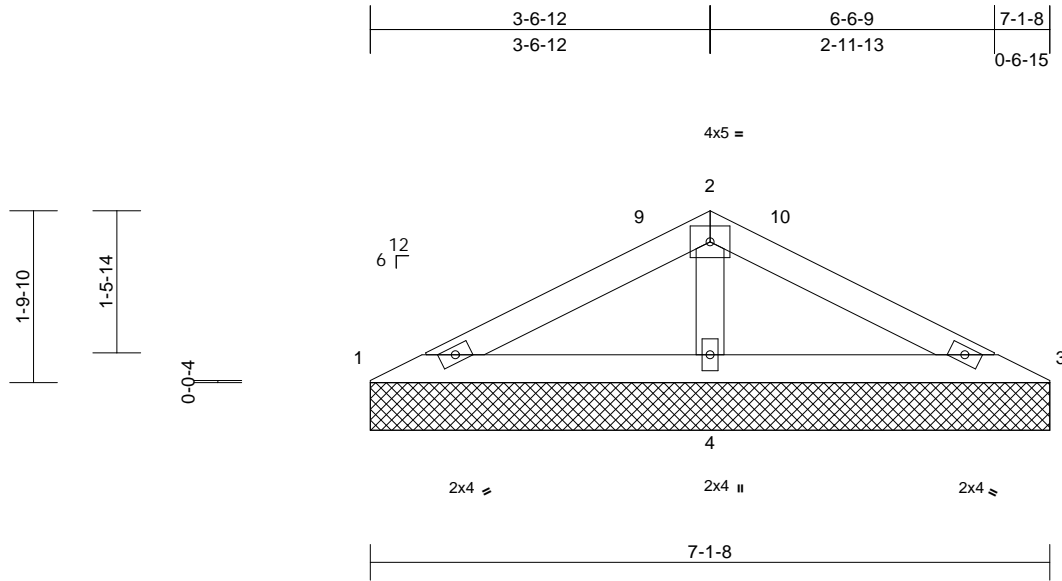
Job 24070190	Truss V05	Truss Type Valley	Qty 1	Ply 1	40 Mason Ridge-Roof-Hayden K GLH Job Reference (optional)	165546196
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Mon May 13 15:45:31

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	0.20	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.22	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 22 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 7-1-8 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

**REACTIONS** (size) 1=7-1-8, 3=7-1-8, 4=7-1-8  
Max Horiz 1=26 (LC 14)  
Max Uplift 1=-10 (LC 14), 3=-16 (LC 15), 4=-36 (LC 14)  
Max Grav 1=110 (LC 20), 3=110 (LC 21), 4=462 (LC 20)

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

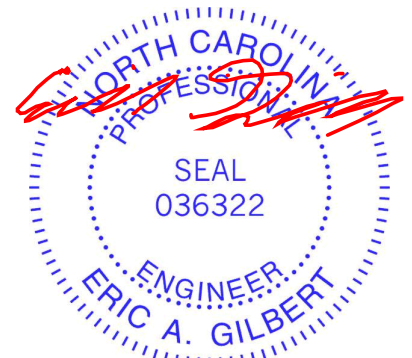
TOP CHORD 1-2=-124/225, 2-3=-124/225  
BOT CHORD 1-4=-195/133, 3-4=-195/133  
WEBS 2-4=-336/182

**NOTES**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-8 to 3-0-8, Exterior(2R) 3-0-8 to 4-2-0, Exterior(2E) 4-2-0 to 7-2-0 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
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- 4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 5) Unbalanced snow loads have been considered for this design.
- 6) Gable requires continuous bottom chord bearing.
- 7) Gable studs spaced at 4-0-0 oc.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 10 lb uplift at joint 1, 16 lb uplift at joint 3 and 36 lb uplift at joint 4.
- 11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



May 15, 2024

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

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



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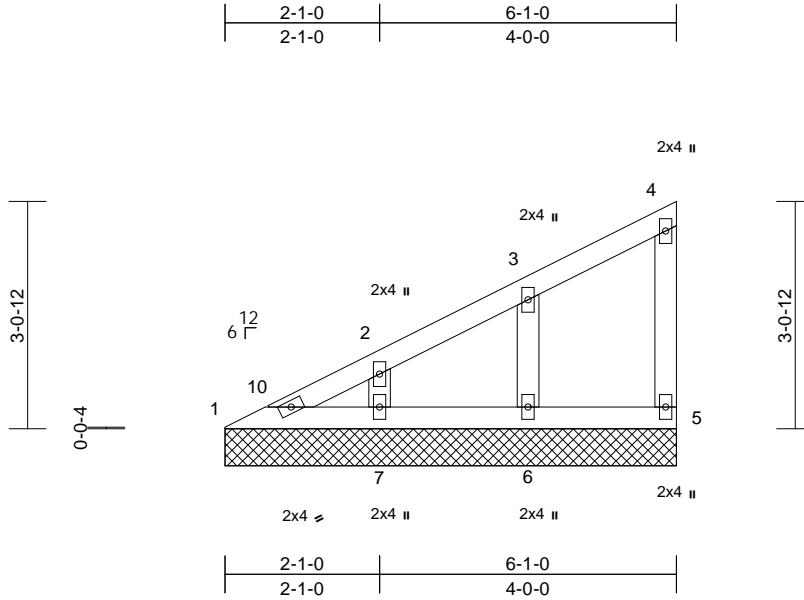
Job 24070190	Truss VL6	Truss Type Valley	Qty 1	Ply 1	40 Mason Ridge-Roof-Hayden K GLH Job Reference (optional)	I65546197
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Mon May 13 15:45:31

Page: 1

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Scale = 1:31

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	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.04	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0											
										Weight: 25 lb	FT = 20%	

#### LUMBER

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

#### 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)	1=6-1-0, 5=6-1-0, 6=6-1-0, 7=6-1-0
Max Horiz	1=104 (LC 14)
Max Uplift	5=-16 (LC 14), 6=-48 (LC 14), 7=-38 (LC 14)
Max Grav	1=81 (LC 20), 5=85 (LC 20), 6=243 (LC 20), 7=256 (LC 20)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-226/75, 2-3=-148/53, 3-4=-48/23, 4-5=-69/70
BOT CHORD	1-7=-103/80, 6-7=0/0, 5-6=0/0
WEBS	3-6=-206/214, 2-7=-184/166

#### 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) zone; cantilever 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) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 2-0-0 oc.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 16 lb uplift at joint 5, 48 lb uplift at joint 6 and 38 lb uplift at joint 7.
- 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



May 15, 2024

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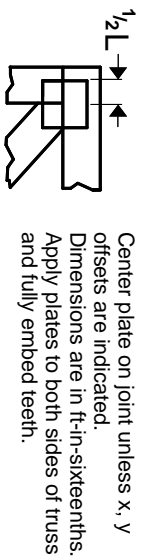
ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932

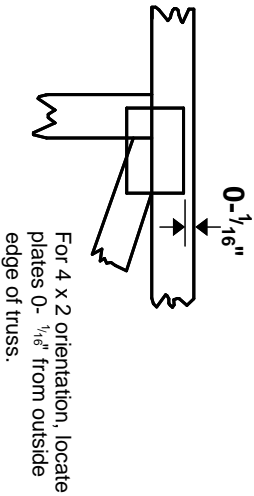


# Symbols

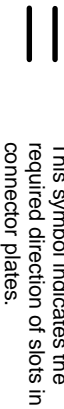
## PLATE LOCATION AND ORIENTATION



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



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



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

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

## PLATE SIZE

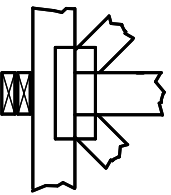
**4 X 4**  
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## LATERAL BRACING LOCATION



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

## BEARING

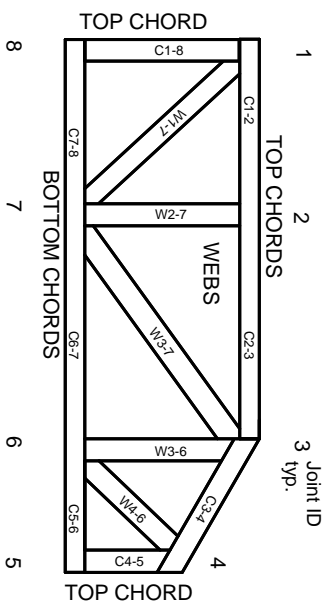


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

## Industry Standards:

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

# Numbering System



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

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

# Product Code Approvals

ICC-ES Reports:

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

# Design General Notes

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

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

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**MITek**

ENGINEERING BY  
**TRENGO**  
A MITek Affiliate

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

# General Safety Notes

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

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