

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: 25020278-B
SPENCER-Roof

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

Pages or sheets covered by this seal: I71811832 thru I71811869

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

North Carolina COA: C-0844



March 5, 2025

Gilbert, Eric

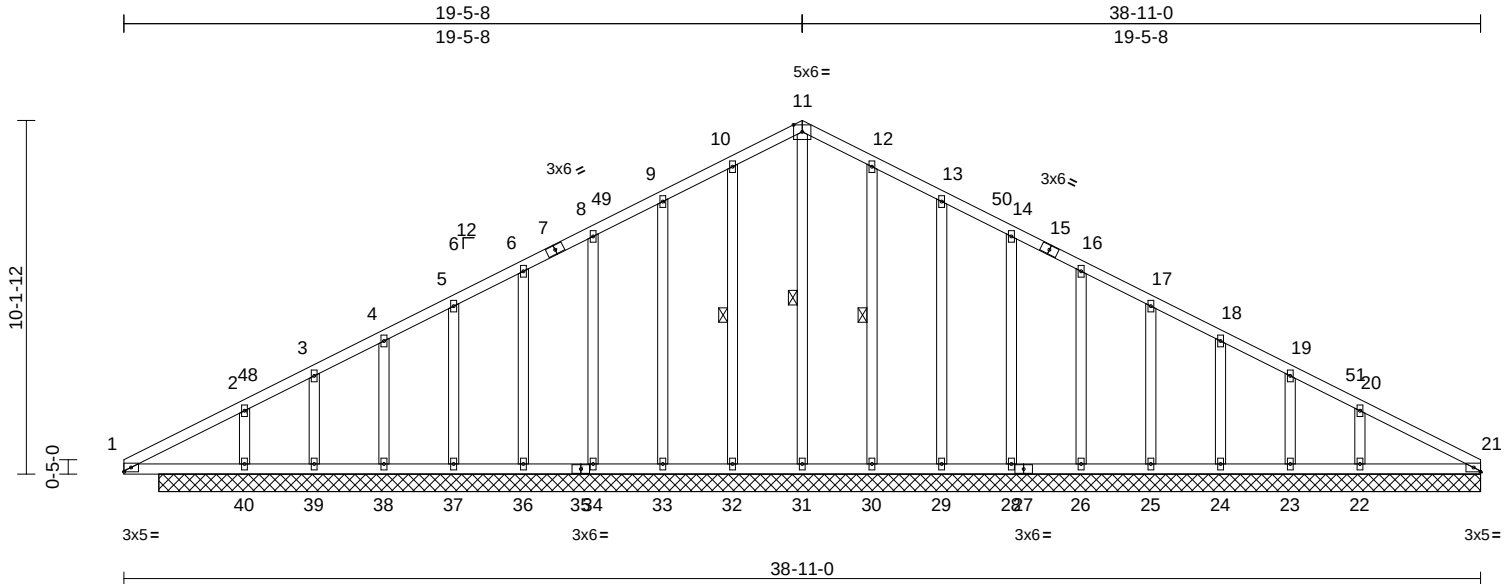
IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which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

Job	Truss	Truss Type	Qty	Ply	SPENCER-Roof	I71811832
25020278-B	A01	Common Supported Gable	1	1	Job Reference (optional)	

Carter Components (Chesapeake), Chesapeake, VA - 23323,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Mar 04 15:35:25
ID:bLXgm6WoUed?J6NsHb?wOVzrtGN-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrcDoi7J4zJC?f

Page: 1



Scale = 1:66.1

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	0.29	Vert(LL)	n/a	-	n/a	999	244/190
Snow (Pf/Pg)	20.8/30.0	Lumber DOL	1.15	BC	0.26	Vert(TL)	n/a	-	n/a	999	
TCDL	10.0	Rep Stress Incr	YES	WB	0.23	Horiz(TL)	0.02	21	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH							
BCDL	10.0										
Weight: 258 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.

WEBS 1 Row at midpt 11-31, 10-32, 12-30

REACTIONS (size)
21=37-11-0, 22=37-11-0,
23=37-11-0, 24=37-11-0,
25=37-11-0, 26=37-11-0,
28=37-11-0, 29=37-11-0,
30=37-11-0, 31=37-11-0,
32=37-11-0, 33=37-11-0,
34=37-11-0, 36=37-11-0,
37=37-11-0, 38=37-11-0,
39=37-11-0, 40=37-11-0

Max Horiz 40=219 (LC 15)

Max Uplift 22=-152 (LC 15), 23=-161 (LC 16),

24=-62 (LC 16), 25=-87 (LC 16),

26=-81 (LC 16), 28=-82 (LC 16),

29=-88 (LC 16), 30=-72 (LC 16),

32=-72 (LC 15), 33=-88 (LC 15),

34=-82 (LC 15), 36=-81 (LC 15),

37=-88 (LC 15), 38=-60 (LC 15),

39=-171 (LC 15), 40=-157 (LC 16)

Max Grav 21=0 (LC 19), 22=410 (LC 39),

23=120 (LC 28), 24=198 (LC 39),

25=158 (LC 1), 26=164 (LC 1),

28=181 (LC 22), 29=231 (LC 22),

30=258 (LC 22), 31=359 (LC 28),

32=258 (LC 21), 33=231 (LC 21),

34=181 (LC 21), 36=164 (LC 1),

37=158 (LC 1), 38=198 (LC 38),

39=125 (LC 29), 40=407 (LC 38)

FORCES (lb) - Maximum Compression/Maximum Tension

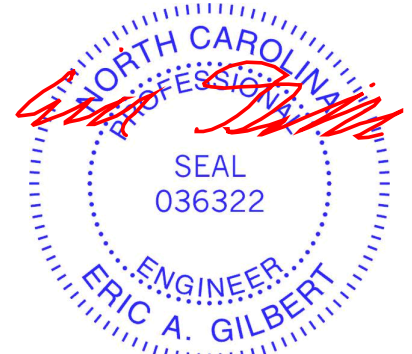
TOP CHORD 1-2=-156/271, 2-3=-96/257, 3-4=-23/267,
4-5=0/280, 5-6=0/292, 6-8=0/305,
8-9=-15/316, 9-10=-34/376, 10-11=-53/433,
11-12=-53/433, 12-13=-34/376,
13-14=-15/316, 14-16=0/305, 16-17=0/292,
17-18=0/280, 18-19=-24/268, 19-20=-94/256,
20-21=-156/271

BOT CHORD 1-40=-214/197, 39-40=-214/194,
38-39=-214/194, 37-38=-214/194,
36-37=-214/194, 34-36=-214/194,
33-34=-214/194, 32-33=-214/194,
31-32=-214/194, 30-31=-214/194,
29-30=-214/194, 28-29=-214/194,
26-28=-214/194, 25-26=-214/194,
24-25=-214/194, 23-24=-214/194,
22-23=-214/194, 21-22=-214/194
WEBS 11-31=-319/0, 10-32=-218/104,
9-33=-190/128, 8-34=-142/118,
6-36=-140/121, 5-37=-138/119,
4-38=-151/130, 3-39=-93/140,
2-40=-248/270, 12-30=-218/104,
13-29=-191/128, 14-28=-142/118,
16-26=-140/121, 17-25=-138/119,
18-24=-151/131, 19-23=-93/135,
20-22=-249/273

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 C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 0-0-0 to 3-10-13, Exterior(2N) 3-10-13 to 19-5-8, Corner(3R) 19-5-8 to 23-5-8, Exterior (2N) 23-5-8 to 38-11-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33

- 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); Pg=30.0 psf; Pf=20.8 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; 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 studs spaced at 2-0-0 oc.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2 .



March 5, 2025

Continued on page 2

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

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

ENGINEERING BY
TRENCO
A MiTek Affiliate

818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	SPENCER-Roof
25020278-B	A01	Common Supported Gable	1	1	I71811832
Job Reference (optional)					

- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 72 lb uplift at joint 32, 88 lb uplift at joint 33, 82 lb uplift at joint 34, 81 lb uplift at joint 36, 88 lb uplift at joint 37, 60 lb uplift at joint 38, 171 lb uplift at joint 39, 157 lb uplift at joint 40, 72 lb uplift at joint 30, 88 lb uplift at joint 29, 82 lb uplift at joint 28, 81 lb uplift at joint 26, 87 lb uplift at joint 25, 62 lb uplift at joint 24, 161 lb uplift at joint 23 and 152 lb uplift at joint 22.
- 11) Non Standard bearing condition. Review required.
- 12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

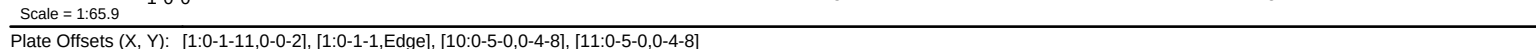
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Carter Components (Chesapeake), Chesapeake, VA - 23323, Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Mar 04 15:35:26 Page: 1
ID:bLGxm6WoUEd?J6NsHb?wOVzrtGN-RfC?PsB70Ha3NSqPanL8w3ulTXbGKWRcD7J4zJC?f



LUMBER		3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=30.0 psf; Pf=20.8 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
TOP CHORD	2x4 SP No.1 *Except* 1-3,7-9:2x4 SP No.2	4) Unbalanced snow loads have been considered for this design.
BOT CHORD	2x6 SP 2400F 2.0E *Except* 11-10:2x6 SP No.2	5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
WEBS	2x4 SP No.3 *Except* 11-5,10-5:2x4 SP No.2	6) All bearings are assumed to be SP 2400F 2.0E .
WEDGE	Left: 2x8 SP 2400F 2.0E	7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 404 lb uplift at joint 9 and 421 lb uplift at joint 1.
BRACING		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.
TOP CHORD	Structural wood sheathing directly applied.	
BOT CHORD	Rigid ceiling directly applied or 2-2-0 oc bracing.	
WEBS	1 Row at midpt 5-10	
REACTIONS	(size) 1=0-3-8, 9=0-3-8 Max Horiz 1=219 (LC 15) Max Uplift 1=-421 (LC 15), 9=-404 (LC 16) Max Grav 1=1778 (LC 4), 9=1687 (LC 4)	
FORCES	(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-3304/712, 2-4=-2997/611, 4-5=-3075/774, 5-6=-3240/811, 6-8=-3181/645, 8-9=-3616/791	
BOT CHORD	1-9=-731/3175	
WEBS	4-11=-556/385, 5-11=-423/1278, 2-11=-337/302, 5-10=-468/1555, 6-10=-524/372, 8-10=-529/363	
		LOAD CASE(S) Standard

- NOTES**
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-16; Vult=130mph (3-second gust)
 Vasd=103mph; TCDFL=6.0psf; BCDFL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-0 to 3-10-13, Interior (1) 3-10-13 to 19-5-8, Exterior(2R) 19-5-8 to 23-4-5, Interior (1) 23-4-5 to 38-11-0 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33



March 5.2025

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

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITER REFERENCE PAGE MIT-1473 (rev. 1/2/2023) BEFORE USE.

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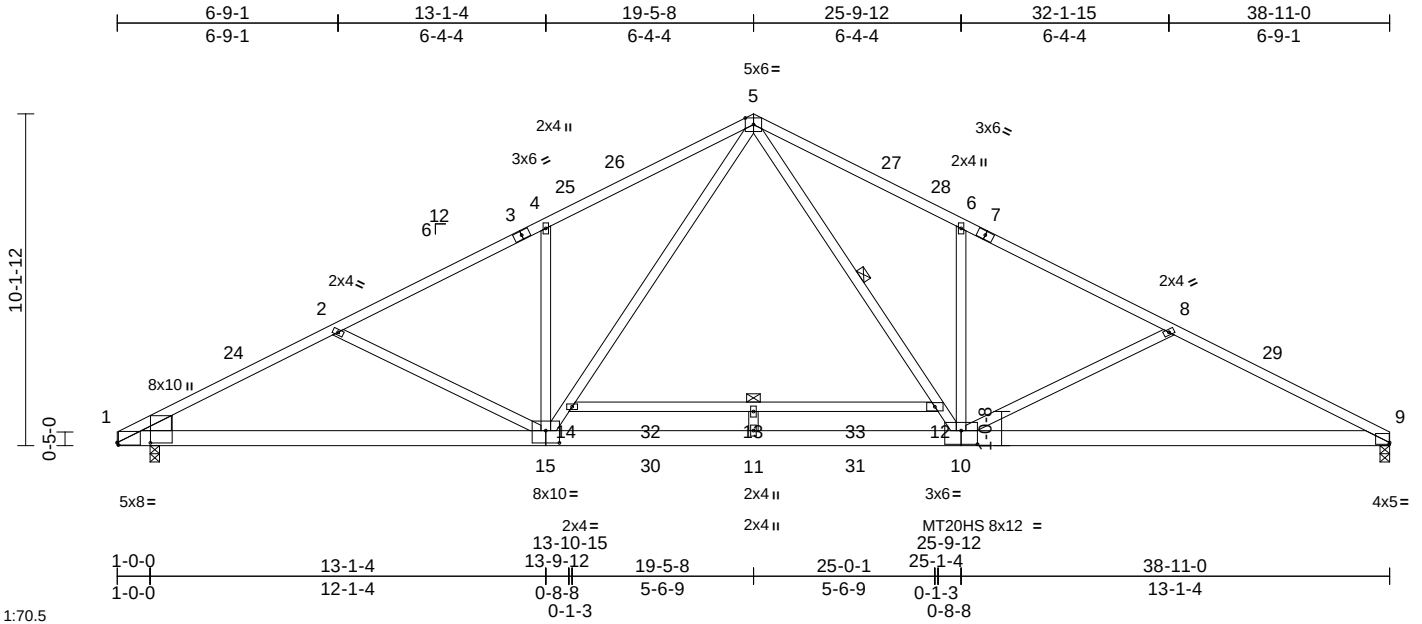
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	SPENCER-Roof	I71811834
25020278-B	A03	Common	4	1	Job Reference (optional)	

Carter Components (Chesapeake), Chesapeake, VA - 23323,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Mar 04 15:35:26
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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	0.98	Vert(LL)	-0.50	11-15	>943	240	MT20	244/190
Snow (Pf/Pg)	20.8/30.0	Lumber DOL	1.15	BC	0.67	Vert(CT)	-0.84	11-15	>557	180	MT20HS	187/143
TCDL	10.0	Rep Stress Incr	YES	WB	0.94	Horz(CT)	0.07	9	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 249 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP 2400F 2.0E *Except* 3-1,7-9:2x4 SP No.2
BOT CHORD	2x6 SP 2400F 2.0E *Except* 14-12:2x4 SP No.2
WEBS	2x4 SP No.3 *Except* 15-5,10-5:2x4 SP No.2
WEDGE	Left: 2x6 SP No.2

BRACING

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

WEBS 1 Row at midpt 5-10

REACTIONS

(size)	1=0-3-8, 9=0-3-8
Max Horiz	1=219 (LC 15)
Max Uplift	1=-351 (LC 15), 9=-337 (LC 16)
Max Grav	1=2023 (LC 4), 9=1919 (LC 4)

FORCES

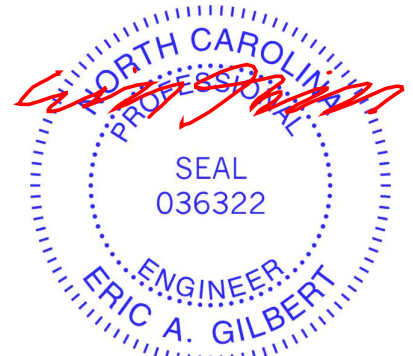
	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=-3816/566, 2-4=-3509/454, 4-5=-3607/616, 5-6=-3802/651, 6-8=-3740/485, 8-9=-4179/633
BOT CHORD	1-11=-605/3296, 9-11=-460/3663, 13-14=-69/0, 12-13=-69/0
WEBS	4-15=-560/383, 14-15=-380/1419, 5-14=-342/1545, 2-15=-302/320, 6-10=-524/373, 5-12=-382/1872, 10-12=-420/1747, 8-10=-513/367, 11-13=-318/0

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 C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-0 to 3-10-13, Interior (1) 3-10-13 to 19-5-8, Exterior(2R) 19-5-8 to 23-4-5, Interior (1) 23-4-5 to 38-11-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=30.0 psf; Pf=20.8 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; 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.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- All bearings are assumed to be SP 2400F 2.0E .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 337 lb uplift at joint 9 and 351 lb uplift at joint 1.
- 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



March 5, 2025

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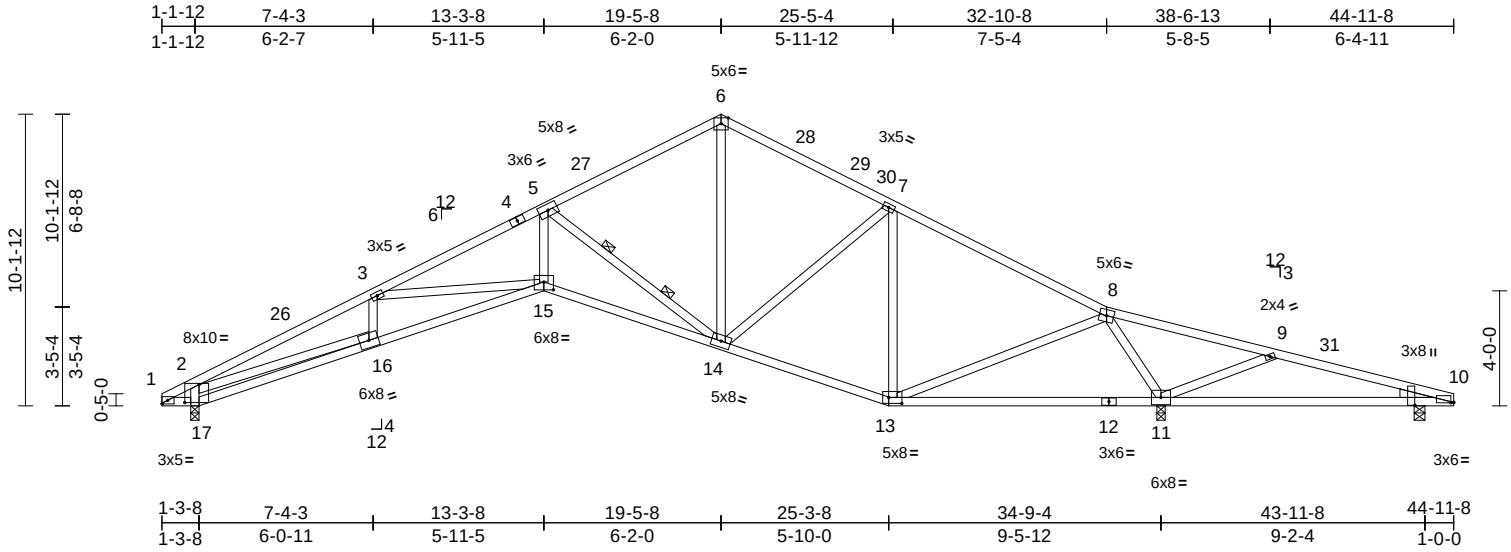
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	SPENCER-Roof	I71811835
25020278-B	B01	Roof Special	3	1	Job Reference (optional)	

Carter Components (Chesapeake), Chesapeake, VA - 23323,

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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	0.92	Vert(LL)	0.40 15-16	>999	240	MT20	244/190
Snow (Pf/Pg)	20.8/30.0	Lumber DOL	1.15	BC	0.77	Vert(CT)	-0.74 15-16	>546	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.88	Horz(CT)	0.44 11	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH							
BCDL	10.0										
										Weight: 235 lb FT = 20%	

LUMBER
TOP CHORD 2x4 SP No.1 *Except* 6-8,1-4:2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 17-15,15-13:2x4 SP No.1
WEBS 2x4 SP No.3 *Except* 16-2,5-15:2x4 SP No.2
WEDGE Right: 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied or 4-11-5 oc bracing.
WEBS 2 Rows at 1/3 pts 5-14

REACTIONS (size) 10=0-4-8, 11=0-3-8, 17=0-3-8
Max Horiz 17=220 (LC 15)
Max Uplift 10=-195 (LC 21), 11=-552 (LC 16), 17=-356 (LC 15)
Max Grav 10=239 (LC 45), 11=2382 (LC 1), 17=1375 (LC 21)

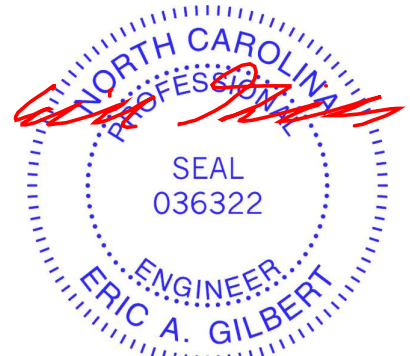
FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-525/190, 2-3=-4216/1236, 3-5=-4047/1162, 5-6=-1477/599, 6-7=-1485/607, 7-8=-1205/467, 8-9=-604/1820, 9-10=-360/1194
BOT CHORD 1-17=-252/607, 16-17=-405/453, 15-16=-1210/3864, 14-15=-907/3765, 13-14=-179/1049, 11-13=-656/274, 10-11=-1110/368
WEBS 2-17=-1459/674, 2-16=-874/3372, 6-14=-289/905, 7-14=-67/496, 7-13=-809/311, 8-13=-444/1649, 8-11=-2280/868, 9-11=-993/420, 3-16=-264/185, 3-15=-268/286, 5-15=-588/2508, 5-14=-3047/929

- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-0 to 4-6-0, Interior (1) 4-6-0 to 19-5-8, Exterior(2R) 19-5-8 to 23-11-8, Interior (1) 23-11-8 to 44-11-8 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=1.33
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=30.0 psf; Pf=20.8 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Bearings are assumed to be: Joint 17 SP No.3 , Joint 11 SP No.2 , Joint 10 SP No.2 .
- Bearing at joint(s) 17 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 552 lb uplift at joint 11, 356 lb uplift at joint 17 and 195 lb uplift at joint 10.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

NOTES

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



March 5, 2025

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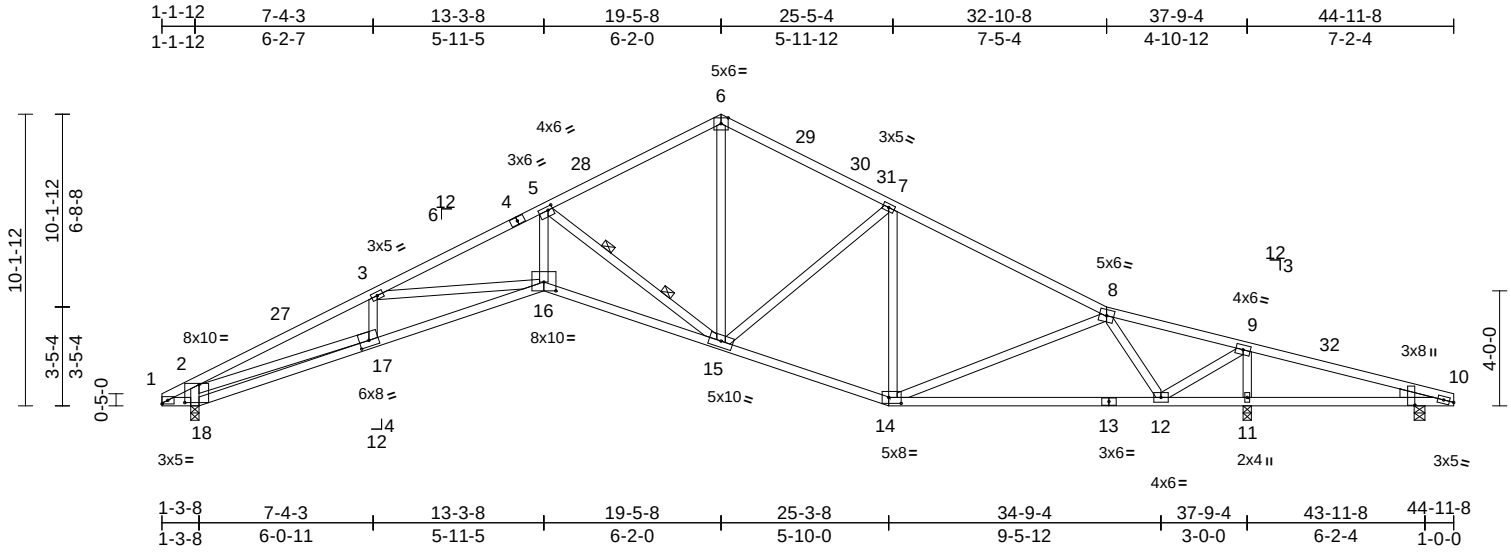
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	SPENCER-Roof	I71811836
25020278-B	B02	Roof Special	1	1	Job Reference (optional)	

Carter Components (Chesapeake), Chesapeake, VA - 23323,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Mar 04 15:35:26
ID:bLGxm6WoUed?J6NsHb?wOVzrtGN-RfC?PsB70Hq3NSgPqnL8w3uITXbGKwRCDoi7J4zJC?

Page: 1



Scale = 1:80.2

Plate Offsets (X, Y): [2:0-6-0,0-7-8], [5:0-2-0,0-1-8], [10:0-1-14,0-1-8], [10:0-1-2,1-4-4], [14:0-5-4,0-2-8], [16:0-5-0,0-3-11], [17:0-4-0,0-2-8]

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	0.97	Vert(LL)	0.47	16-17	>936	240	244/190
Snow (Pf/Pg)	20.8/30.0	Lumber DOL	1.15	BC	0.87	Vert(CT)	-0.86	16-17	>511	180	
TCDL	10.0	Rep Stress Incr	YES	WB	0.99	Horz(CT)	0.51	11	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH							
BCDL	10.0										
Weight: 236 lb FT = 20%											

LUMBER

TOP CHORD 2x4 SP No.1 *Except* 8-10:2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 18-16,16-14:2x4 SP No.1
WEBS 2x4 SP No.3 *Except* 17-2,5-16:2x4 SP No.2
WEDGE Right: 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied or 2-4-13 oc bracing.

WEBS 2 Rows at 1/3 pts 5-15

REACTIONS

(size) 10=0-4-8, 11=0-3-8, 18=0-3-8
Max Horiz 18=220 (LC 15)
Max Uplift 10=277 (LC 21), 11=535 (LC 16), 18=393 (LC 15)
Max Grav 10=136 (LC 45), 11=2323 (LC 1), 18=1525 (LC 21)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-600/205, 2-3=-4933/1473, 3-5=-4864/1463, 5-6=-1957/755, 6-7=-1967/767, 7-8=-1919/706, 8-9=-693/293, 9-10=-404/1490
BOT CHORD 1-18=-267/681, 17-18=-412/489, 16-17=-1342/4533, 15-16=-1137/4463, 14-15=-403/1675, 12-14=-356/1253, 11-12=-1408/436, 10-11=-1408/436

WEBS

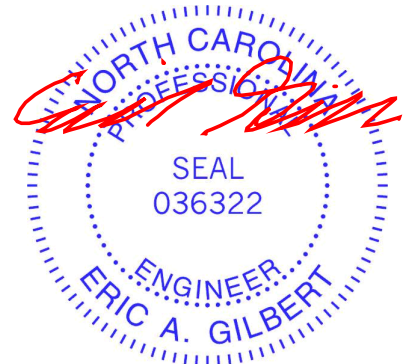
3-17=-332/208, 6-15=-431/1333, 7-15=-143/316, 7-14=-522/220, 8-14=-115/528, 2-18=-1640/729, 8-12=-1353/542, 2-17=-1076/3962, 5-16=-690/2946, 3-16=-155/251, 5-15=-3442/1036, 9-11=-2212/701, 9-12=-603/2306

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 C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-0 to 4-6-0, Interior (1) 4-6-0 to 19-5-8, Exterior(2R) 19-5-8 to 23-11-8, Interior (1) 23-11-8 to 44-11-8 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=1.33
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=30.0 psf; Pf=20.8 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Bearings are assumed to be: Joint 18 SP No.3 , Joint 11 SP No.2 , Joint 10 SP No.2 .
- Bearing at joint(s) 18 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 535 lb uplift at joint 11, 393 lb uplift at joint 18 and 277 lb uplift at joint 10.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



March 5, 2025

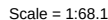
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818 Soundside Road
Edenton, NC 27932

Carter Components (Chesapeake), Chesapeake, VA - 23323, Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Mar 04 15:35:27 Page: 1
ID: bLGxm6WoUEd?J6NsHb?wOVzrtGN-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWRcD0i7J4zJC?f

[illegible]

TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.1 *Except* 1-17:2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 16-2:2x4 SP No.1,
15-5,14-5:2x4 SP No.2

SLIDER Right 2x6 SP No.2 -- 2-6-0

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

WEBS 2 Rows at 1/3 pts 5-14

REACTIONS (size) 11=0-3-8, 17=0-3-8
Max Horiz 17=234 (LC 15)
Max Uplift 11=385 (LC 16), 17=-416 (LC 15)
Max Grav 11=1498 (LC 1), 17=1595 (LC 1)

FORCES (lb) - Maximum Compression/Maximum
Tension

TOP CHORD 1-2=-590/204, 2-3=-5317/1426,
3-5=-5340/1333, 5-6=-2207/620,
6-7=-2211/630, 7-9=-2245/616,
9-11=-2549/624

BOT CHORD 1-17=-263/670, 16-17=-421/458,
15-16=-1460/4901, 14-15=-1220/4915,
13-14=-354/2020, 12-13=-449/2172,
11-12=-449/2172

WEBS 2-17=-1729/675, 2-16=-1011/4340,
3-16=-372/201, 3-15=-95/243,
5-15=-769/3207, 5-14=-3627/1106,
6-14=-333/1540, 7-14=-211/312,
7-13=-343/137, 9-13=-317/224, 9-12=0/113

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 C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-0 to 3-9-9, Interior (1) 3-9-9 to 19-5-8, Exterior(2R) 19-5-8 to 23-3-1, Interior (1) 23-3-1 to 37-11-0 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=30.0 psf; Pf=20.8 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) All plates are MT20 plates unless otherwise indicated.
- 6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 7) Bearings are assumed to be: Joint 17 SP No.3 , Joint 11 SP No.1 .
- 8) Bearing at joint(s) 17 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 385 lb uplift at joint 11 and 416 lb uplift at joint 17.
- 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



March 5.2025



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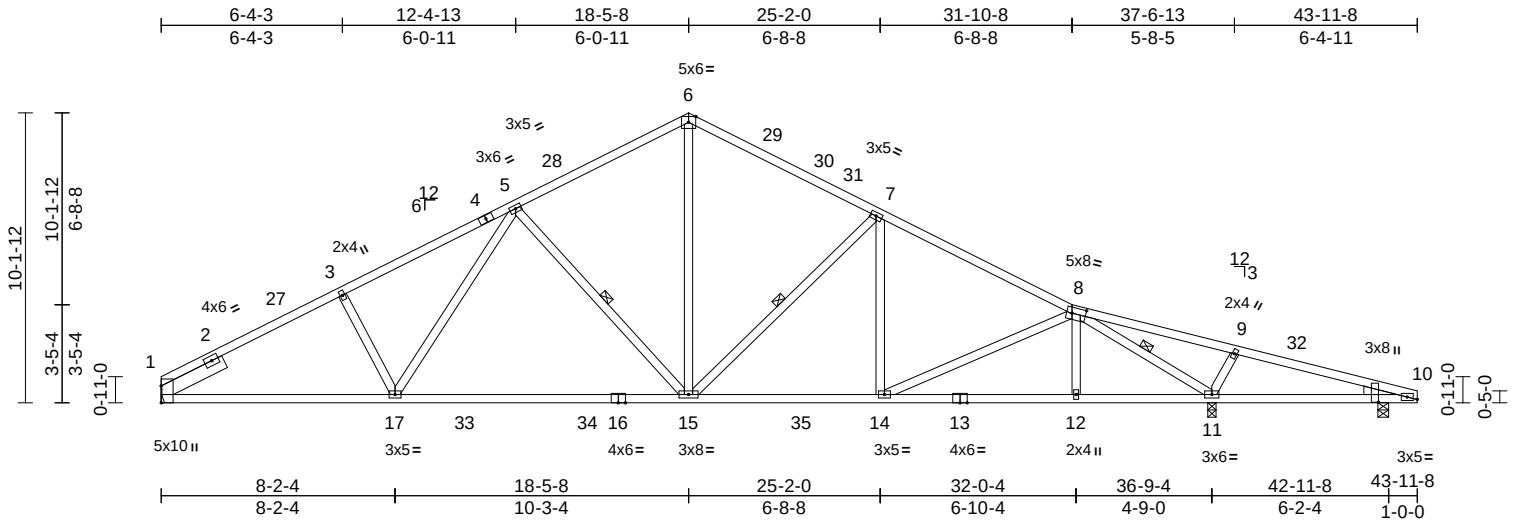
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	SPENCER-Roof	I71811838
25020278-B	B04	Roof Special	6	1	Job Reference (optional)	

Carter Components (Chesapeake), Chesapeake, VA - 23323,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Mar 04 15:35:27
IDb:Lgxm6WoUEd?J6NsHb?wOVzrtGN-RfC?PsB70Hq3NSgPqnL8w3uITXbGKwRCDoi7J4zJC?f

Page: 1



Scale = 1:80.6

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.95	Vert(LL)	-0.45	15-17	>984	240	MT20	244/190
Snow (Pf/Pg)	20.8/30.0	Lumber DOL	1.15	BC	0.96	Vert(CT)	-0.78	15-17	>562	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.74	Horz(CT)	0.10	11	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
Weight: 237 lb											FT = 20%	

LUMBER

TOP CHORD 2x4 SP No.2 *Except* 1-4:2x4 SP 2400F 2.0E
BOT CHORD 2x4 SP No.1
WEBS 2x4 SP No.3
WEDGE Right: 2x4 SP No.3
SLIDER Left 2x6 SP No.2 -- 2-6-0

BRACING

TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 1 Row at midpt 5-15, 7-15, 8-11

REACTIONS (size) 1= Mechanical, 10=0-4-8, 11=0-3-8
Max Horiz 1=233 (LC 16)
Max Uplift 1=376 (LC 15), 10=104 (LC 12), 11=539 (LC 16)
Max Grav 1=1616 (LC 5), 10=280 (LC 45), 11=2183 (LC 4)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-3=-3031/846, 3-5=-2915/877, 5-6=-2107/733, 6-7=-2115/726, 7-8=-2594/763, 8-9=-194/804, 9-10=-151/626
BOT CHORD 1-17=-636/2577, 15-17=-474/2203, 14-15=-440/2197, 12-14=-463/2112, 11-12=-459/2119, 10-11=-573/185
WEBS 3-17=-192/259, 5-17=-131/565, 5-15=-773/399, 6-15=-384/1444, 7-15=-705/364, 7-14=0/253, 8-14=-65/176, 8-12=0/213, 8-11=-3454/888, 9-11=-562/260

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 C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-0 to 4-4-12, Interior (1) 4-4-12 to 18-5-8, Exterior(2R) 18-5-8 to 22-10-4, Interior (1) 22-10-4 to 43-11-8 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=1.33
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=30.0 psf; Pf=20.8 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- * This truss has been designed for a 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.
- Bearings are assumed to be: , Joint 11 SP No.1 , Joint 10 SP No.1 .
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 376 lb uplift at joint 1, 539 lb uplift at joint 11 and 104 lb uplift at joint 10.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



March 5, 2025

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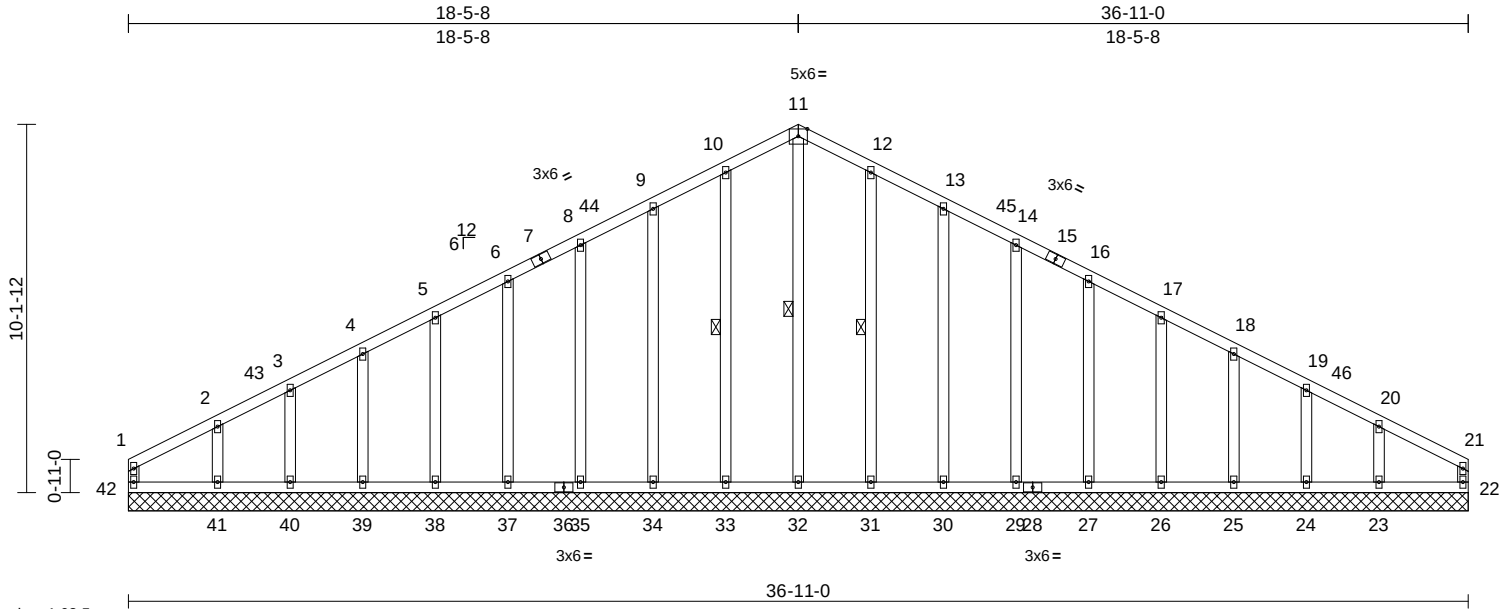
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	SPENCER-Roof	I71811839
25020278-B	C01	Common Supported Gable	1	1	Job Reference (optional)	

Carter Components (Chesapeake), Chesapeake, VA - 23323,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Mar 04 15:35:27
ID:bLGxm6WoUEd?J6NsHb?wOVzrtGN-RfC?PsB70Hq3NSgPqnL8w3uITxbGKWrcDoi7J4zJC?f

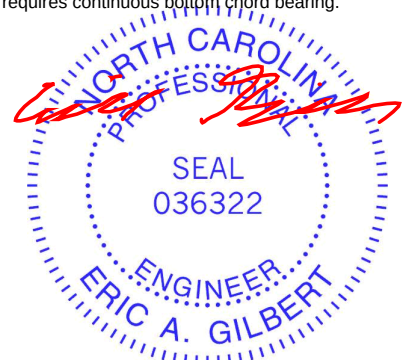
Page: 1



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.17	Vert(LL)	n/a	-	999	MT20	244/190
Snow (Pf/Pg)	20.8/30.0	Lumber DOL	1.15	BC	0.11	Vert(TL)	n/a	-	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.23	Horiz(TL)	0.01	22	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MR							
BCDL	10.0										
										Weight: 254 lb FT = 20%	

LUMBER		Max Grav	22=126 (LC 29), 23=195 (LC 22), 24=154 (LC 1), 25=165 (LC 1), 26=163 (LC 22), 27=163 (LC 1), 29=181 (LC 22), 30=234 (LC 22), 31=249 (LC 22), 32=264 (LC 16), 33=249 (LC 21), 34=234 (LC 21), 35=181 (LC 21), 37=163 (LC 1), 38=163 (LC 21), 39=165 (LC 1), 40=154 (LC 1), 41=202 (LC 26), 42=147 (LC 28)	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 C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 0-1-12 to 3-9-11, Exterior(2N) 3-9-11 to 18-5-8, Corner(3R) 18-5-8 to 22-1-7, Exterior (2N) 22-1-7 to 36-9-4 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=1.33 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); Pg=30.0 psf; Pf=20.8 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10 5) Unbalanced snow loads have been considered for this design. 6) All plates are 2x4 MT20 unless otherwise indicated. 7) Gable requires continuous bottom chord bearing.
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.				
WEBS 1 Row at midpt 11-32, 10-33, 12-31				
REACTIONS (size)				
22=36-11-0, 23=36-11-0, 24=36-11-0, 25=36-11-0, 26=36-11-0, 27=36-11-0, 29=36-11-0, 30=36-11-0, 31=36-11-0, 32=36-11-0, 33=36-11-0, 34=36-11-0, 35=36-11-0, 37=36-11-0, 38=36-11-0, 39=36-11-0, 40=36-11-0, 41=36-11-0, 42=36-11-0				
Max Horiz 42=184 (LC 11)				
Max Uplift 22=37 (LC 15), 23=170 (LC 16), 24=56 (LC 16), 25=89 (LC 16), 26=81 (LC 16), 27=83 (LC 16), 29=81 (LC 16), 30=89 (LC 16), 31=71 (LC 16), 33=73 (LC 15), 34=88 (LC 15), 35=81 (LC 15), 37=83 (LC 15), 38=81 (LC 15), 39=90 (LC 15), 40=52 (LC 15), 41=186 (LC 15), 42=65 (LC 16)				
FORCES		(lb) - Maximum Compression/Maximum Tension		
TOP CHORD		1-42=-104/67, 1-2=-183/110, 2-3=-118/131, 3-4=-93/164, 4-5=-86/197, 5-6=-103/247, 6-8=-123/312, 8-9=-145/375, 9-10=-169/444, 10-11=-189/500, 11-12=-189/500, 12-13=-169/444, 13-14=-145/375, 14-16=-123/312, 16-17=-103/247, 17-18=-86/183, 18-19=-68/129, 19-20=-87/96, 20-21=-146/72, 21-22=-88/45		
BOT CHORD		41-42=-61/131, 40-41=-61/131, 39-40=-61/131, 38-39=-61/131, 37-38=-61/131, 35-37=-61/131, 34-35=-61/131, 33-34=-61/131, 32-33=-61/131, 31-32=-61/131, 30-31=-61/131, 29-30=-61/131, 27-29=-61/131, 26-27=-61/131, 25-26=-61/131, 24-25=-61/131, 23-24=-61/131, 22-23=-61/131		
WEBS		11-32=-333/78, 10-33=-209/101, 9-34=-194/129, 8-35=-141/118, 6-37=-140/120, 5-38=-140/120, 4-39=-142/123, 3-40=-132/116, 2-41=-175/241, 12-31=-209/101, 13-30=-194/129, 14-29=-141/118, 16-27=-140/120, 17-26=-139/120, 18-25=-142/123, 19-24=-132/116, 20-23=-173/241		

NOTES



March 5, 2025

Continued on page 2

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ENGINEERING BY
TRENCO
A MiTek Affiliate

818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	SPENCER-Roof
25020278-B	C01	Common Supported Gable	1	1	I71811839
					Job Reference (optional)

- 8) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 9) Gable studs spaced at 2-0-0 oc.
- 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) All bearings are assumed to be SP No.2 .
- 12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 37 lb uplift at joint 22, 65 lb uplift at joint 42, 73 lb uplift at joint 33, 88 lb uplift at joint 34, 81 lb uplift at joint 35, 83 lb uplift at joint 37, 81 lb uplift at joint 38, 90 lb uplift at joint 39, 52 lb uplift at joint 40, 186 lb uplift at joint 41, 71 lb uplift at joint 31, 89 lb uplift at joint 30, 81 lb uplift at joint 29, 83 lb uplift at joint 27, 81 lb uplift at joint 26, 89 lb uplift at joint 25, 56 lb uplift at joint 24 and 170 lb uplift at joint 23.
- 13) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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

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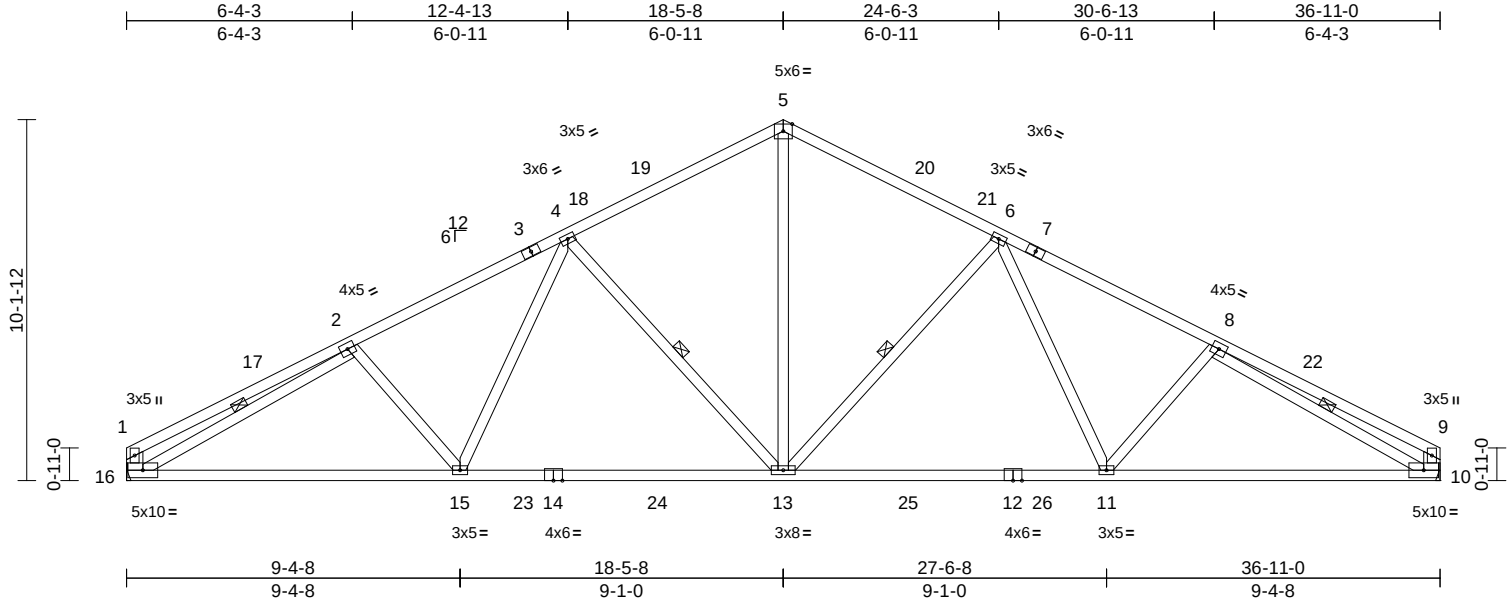
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	SPENCER-Roof	I71811840
25020278-B	C02	Common	10	1	Job Reference (optional)	

Carter Components (Chesapeake), Chesapeake, VA - 23323,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Mar 04 15:35:27
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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	0.80	Vert(LL)	-0.25	11-13	>999	240	MT20	244/190
Snow (Pf/Pg)	20.8/30.0	Lumber DOL	1.15	BC	0.79	Vert(CT)	-0.42	11-13	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.69	Horz(CT)	0.11	10	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 215 lb	FT = 20%

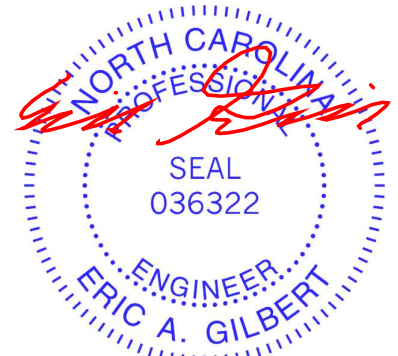
LUMBER	
TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.1
WEBS	2x4 SP No.3 *Except* 16-1,10-9:2x6 SP No.2
BRACING	
TOP CHORD	Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 7-7-12 oc bracing.
WEBS	1 Row at midpt 6-13, 4-13, 2-16, 8-10
REACTIONS	(size) 10= Mechanical, 16= Mechanical
	Max Horiz 16=185 (LC 11)
	Max Uplift 10=381 (LC 16), 16=381 (LC 15)
	Max Grav 10=1628 (LC 4), 16=1628 (LC 4)
FORCES	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=-610/177, 2-4=-2924/627, 4-5=-2176/571, 5-6=-2176/571, 6-8=-2924/627, 8-9=-610/177, 1-16=-437/182, 9-10=-437/182
BOT CHORD	15-16=-655/2608, 13-15=-449/2292, 11-13=-356/2291, 10-11=-494/2605
WEBS	5-13=-284/1513, 6-13=-766/381, 6-11=-90/528, 8-11=-185/264, 4-13=-766/381, 4-15=-90/528, 2-15=-185/263, 2-16=-2519/485, 8-10=-2519/484

- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-2-12 to 3-10-11, Interior (1) 3-10-11 to 18-5-8, Exterior(2R) 18-5-8 to 22-1-7, Interior (1) 22-1-7 to 36-8-4 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=1.33
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=30.0 psf; Pf=20.8 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 381 lb uplift at joint 16 and 381 lb uplift at joint 10.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

NOTES

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



March 5, 2025

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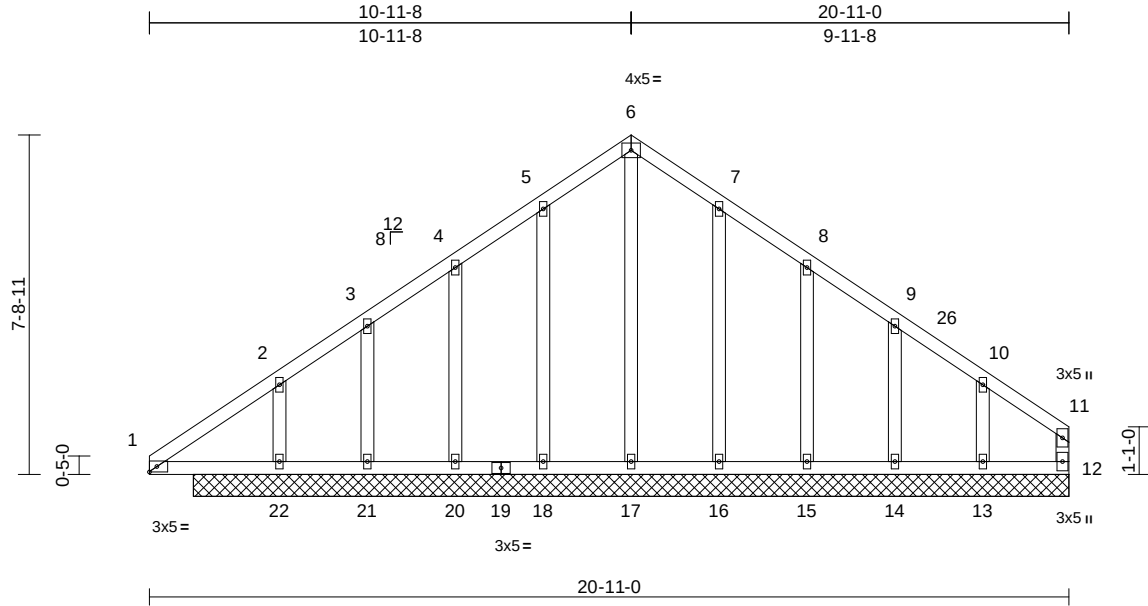
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	SPENCER-Roof	I71811841
25020278-B	D01	Common Supported Gable	1	1	Job Reference (optional)	

Carter Components (Chesapeake), Chesapeake, VA - 23323,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Mar 04 15:35:27
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Scale = 1:52.4

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.32	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	20.8/30.0	Lumber DOL	1.15	BC	0.17	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.33	Horiz(TL)	-0.01	12	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH							
BCDL	10.0										
Weight: 126 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 10'-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6'-0-0 oc bracing.

REACTIONS (size)
12=19-11-0, 13=19-11-0,
14=19-11-0, 15=19-11-0,
16=19-11-0, 17=19-11-0,
18=19-11-0, 20=19-11-0,
21=19-11-0, 22=19-11-0
Max Horiz 22=261 (LC 12)
Max Uplift 12=-226 (LC 12), 13=-205 (LC 14),
14=-79 (LC 14), 15=-112 (LC 14),
16=-99 (LC 14), 18=-98 (LC 13),
20=-103 (LC 13), 21=-119 (LC 13),
22=-115 (LC 13)
Max Grav 12=176 (LC 9), 13=356 (LC 23),
14=150 (LC 35), 15=188 (LC 23),
16=197 (LC 23), 17=354 (LC 24),
18=193 (LC 22), 20=191 (LC 22),
21=139 (LC 22), 22=323 (LC 1)

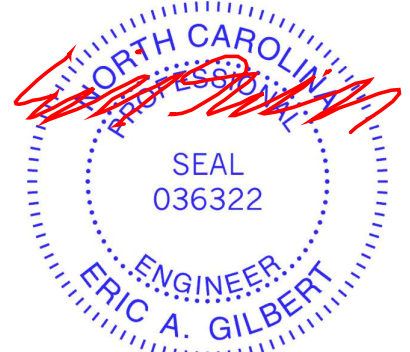
FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 11-12=-116/167, 6-7=-102/322, 7-8=-55/262,
8-9=-78/242, 9-10=-109/242,
10-11=-185/309, 1-2=-73/212, 2-3=-11/156,
3-4=-6/181, 4-5=-56/241, 5-6=-102/322
BOT CHORD 1-22=-151/111, 21-22=-242/168,
20-21=-242/168, 18-20=-242/168,
17-18=-242/168, 16-17=-242/168,
15-16=-242/168, 14-15=-242/168,
13-14=-242/168, 12-13=-242/168

WEBS
6-17=-313/7, 5-18=-170/122, 4-20=-173/141,
3-21=-122/129, 2-22=-258/198,
7-16=-172/124, 8-15=-165/138,
9-14=-155/128, 10-13=-223/180

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 C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 0-0-0 to 2-11-8, Exterior(2N) 2-11-8 to 10-11-8, Corner(3R) 10-11-8 to 13-11-8, Exterior(2N) 13-11-8 to 20-9-4 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=1.33
- 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); Pg=30.0 psf; Pf=20.8 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable studs spaced at 2'-0-0 oc.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3'-06-00 tall by 2'-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 226 lb uplift at joint 12, 98 lb uplift at joint 18, 103 lb uplift at joint 20, 119 lb uplift at joint 21, 115 lb uplift at joint 22, 99 lb uplift at joint 16, 112 lb uplift at joint 15, 79 lb uplift at joint 14 and 205 lb uplift at joint 13.
- Non Standard bearing condition. Review required.

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



March 5, 2025

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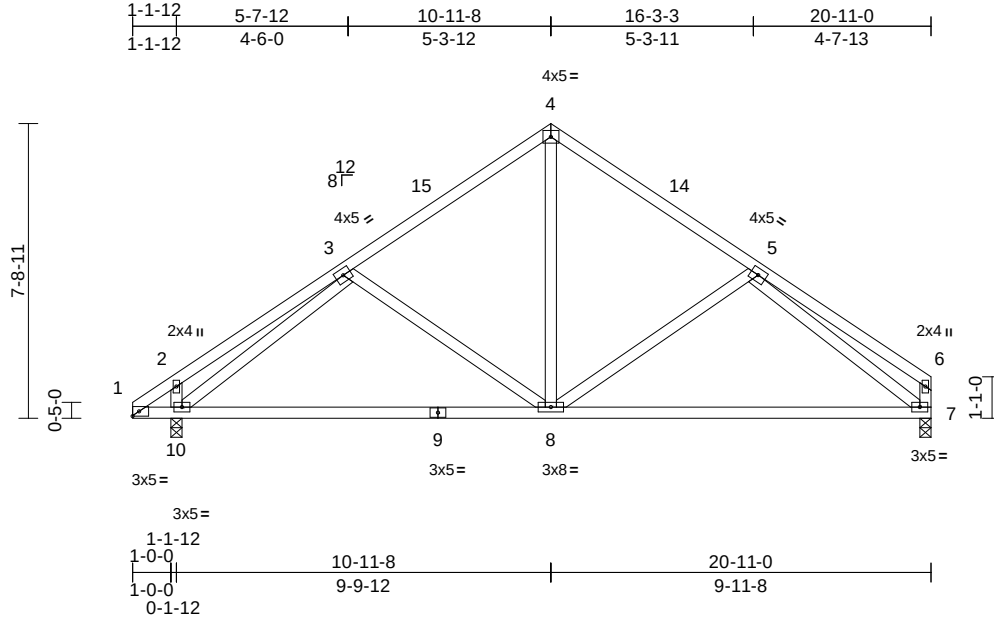
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	SPENCER-Roof	I71811842
25020278-B	D02	Common	2	1	Job Reference (optional)	

Carter Components (Chesapeake), Chesapeake, VA - 23323,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Mar 04 15:35:27
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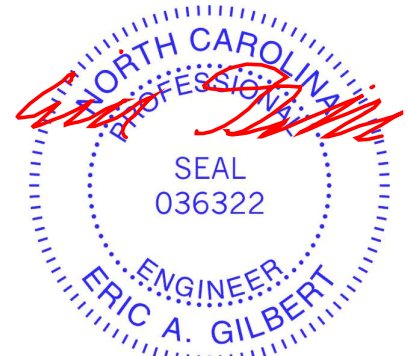
Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.37	Vert(LL)	0.02	8	>999	240	MT20	244/190
Snow (Pf/Pg)	20.8/30.0	Lumber DOL	1.15	BC	0.64	Vert(CT)	-0.21	7-8	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.56	Horz(CT)	0.02	7	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 117 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 5-8-12 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
REACTIONS	(size) 7=0-3-8, 10=0-3-8
	Max Horiz 10=261 (LC 12)
	Max Uplift 7=-191 (LC 14), 10=-223 (LC 13)
	Max Grav 7=798 (LC 1), 10=897 (LC 1)
FORCES	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	4-5=-901/261, 5-6=-308/75, 1-2=-245/8, 2-3=-364/81, 3-4=-901/262, 6-7=-274/97
BOT CHORD	1-10=0/214, 8-10=-271/839, 7-8=-195/836
WEBS	5-8=-290/292, 4-8=-101/541, 3-8=-289/284, 5-7=-859/259, 3-10=-773/269, 2-10=-251/265

- 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 C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 10-11-8, Exterior(2R) 10-11-8 to 13-11-8, Interior (1) 13-11-8 to 20-9-4 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=1.33
 - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=30.0 psf; Pf=20.8 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10

- * 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.
- All bearings are assumed to be SP No.2 .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 191 lb uplift at joint 7 and 223 lb uplift at joint 10.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



March 5, 2025

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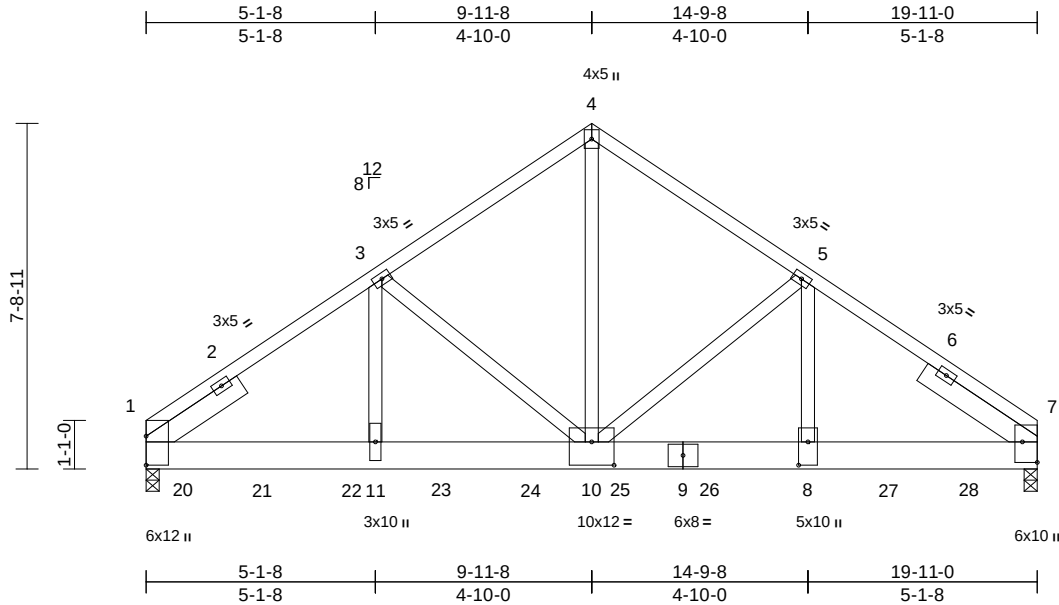
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	SPENCER-Roof	I71811843
25020278-B	D03	Common Girder	1	3	Job Reference (optional)	

Carter Components (Chesapeake), Chesapeake, VA - 23323,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Mar 04 15:35:28
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Page: 1



Scale = 1:51.5

Plate Offsets (X, Y): [7:Edge,0-4-0], [8:0-6-4,0-2-8], [10:0-6-0,0-6-4]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.91	Vert(LL)	-0.10	10-11	>999	240	MT20	244/190
Snow (Pf/Pg)	20.8/30.0	Lumber DOL	1.15	BC	0.36	Vert(CT)	-0.18	10-11	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.66	Horz(CT)	0.04	7	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 446 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x8 SP 2400F 2.0E
WEBS 2x4 SP No.2
SLIDER Left 2x6 SP No.2 -- 2-6-0, Right 2x6 SP No.2 -- 3-0-0

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-9-13 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=0-3-8, 7=0-3-8
Max Horiz 1=222 (LC 8)
Max Uplift 1=2224 (LC 9), 7=2094 (LC 10)
Max Grav 1=9017 (LC 4), 7=8478 (LC 4)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 4-5=-7611/1976, 5-7=-10113/2530, 1-3=-10093/2522, 3-4=-7612/1976
BOT CHORD 1-11=-2115/8257, 10-11=-2115/8257, 8-10=-1982/8269, 7-8=-1982/8269
WEBS 4-10=-2001/8023, 3-10=-2513/811, 3-11=-706/2988, 5-10=-2530/817, 5-8=-719/3039

NOTES

- 3-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x8 - 2 rows staggered at 0-5-0 oc.
Web connected as follows: 2x4 - 1 row at 0-4-0 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.

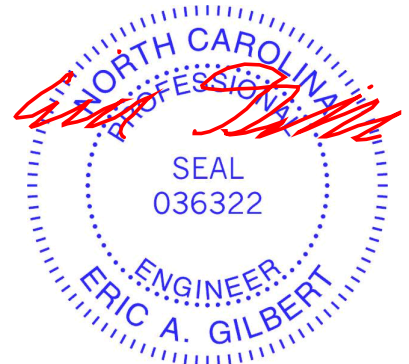
- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.33

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=30.0 psf; Pf=20.8 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- * 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.
- All bearings are assumed to be SP 2400F 2.0E .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 2094 lb uplift at joint 7 and 2224 lb uplift at joint 1.
- 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.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1609 lb down and 392 lb up at 0-10-0, 1608 lb down and 393 lb up at 2-7-4, 1608 lb down and 393 lb up at 4-7-4, 1608 lb down and 393 lb up at 6-7-4, 1608 lb down and 393 lb up at 8-7-4, 1608 lb down and 393 lb up at 10-7-4, 1608 lb down and 393 lb up at 12-7-4, 1608 lb down and 393 lb up at 14-7-4, and 1608 lb down and 393 lb up at 16-7-4, and 1608 lb down and 393 lb up at 18-4-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)

Vert: 4-7=-62, 1-4=-62, 12-16=-20
Concentrated Loads (lb)
Vert: 8=-1467 (B), 20=-1469 (B), 21=-1467 (B), 22=-1467 (B), 23=-1467 (B), 24=-1467 (B), 25=-1467 (B), 26=-1467 (B), 27=-1467 (B), 28=-1467 (B)



March 5, 2025

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

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ENGINEERING BY
TRENCO
A MiTek Affiliate

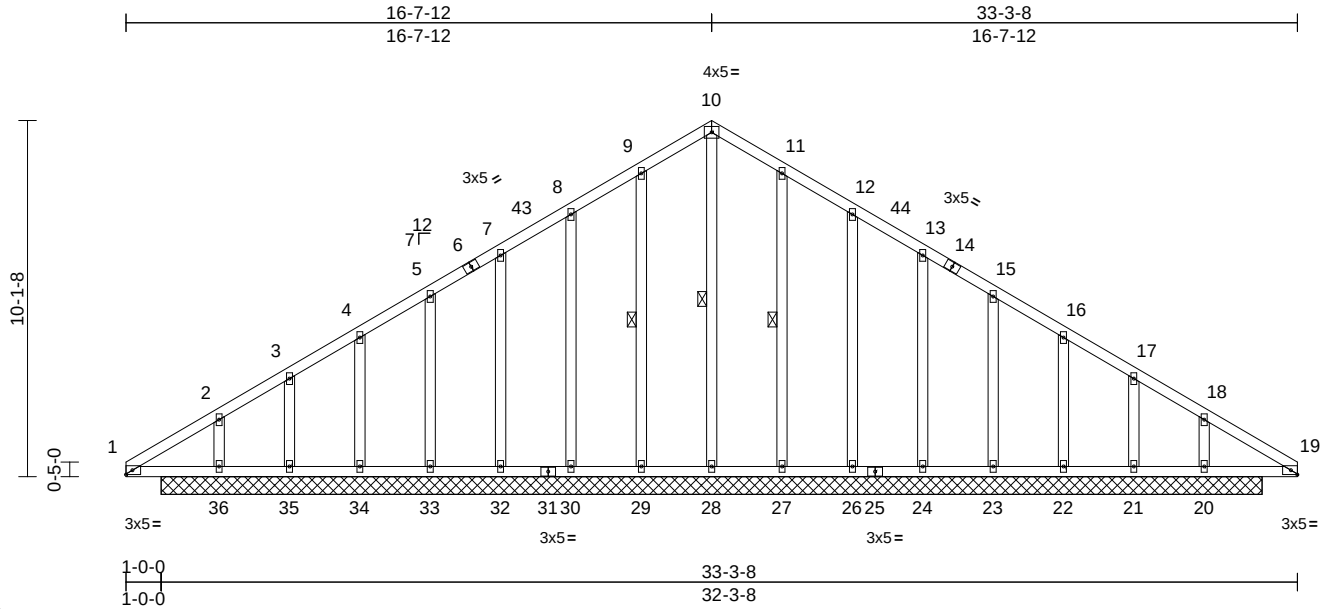
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	SPENCER-Roof	I71811844
25020278-B	E01	Common Supported Gable	1	1	Job Reference (optional)	

Carter Components (Chesapeake), Chesapeake, VA - 23323,

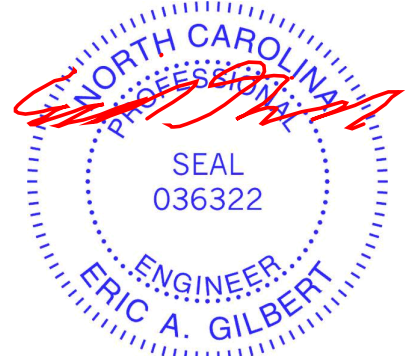
Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Mar 04 15:35:28
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Page: 1



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	0.19	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	20.8/30.0	Lumber DOL	1.15	BC	0.25	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.21	Horiz(TL)	-0.01	20	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
Weight: 224 lb FT = 20%												

LUMBER		TOP CHORD	1-2=-151/278, 2-3=-156/274, 3-4=-77/238, 4-5=-59/245, 5-7=-48/259, 7-8=-86/294, 8-9=-125/364, 9-10=-162/422, 10-11=-162/422, 11-12=-125/364, 12-13=-86/293, 13-15=-48/252, 15-16=-44/238, 16-17=-63/228, 17-18=-139/261, 18-19=-142/268	4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=30.0 psf; Pf=20.8 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
BRACING		BOT CHORD	1-36=-232/179, 35-36=-223/170, 34-35=-223/170, 33-34=-223/170, 32-33=-223/170, 30-32=-223/170, 29-30=-223/170, 28-29=-223/170, 27-28=-223/170, 26-27=-223/170, 24-26=-223/170, 23-24=-223/170, 22-23=-223/170, 21-22=-223/170, 20-21=-223/170, 19-20=-223/170	5) Unbalanced snow loads have been considered for this design.
REACTIONS	(size)	WEBS	10-28=-329/56, 9-29=-223/103, 8-30=-190/123, 7-32=-160/114, 5-33=-158/119, 4-34=-165/108, 3-35=-174/167, 2-36=-215/120, 11-27=-223/103, 12-26=-190/123, 13-24=-160/114, 15-23=-158/118, 16-22=-165/108, 17-21=-168/162, 18-20=-215/120	6) All plates are 2x4 MT20 unless otherwise indicated.
FORCES	(lb) - Maximum Compression/Maximum Tension	NOTES	1) Unbalanced roof live loads have been considered for this design.	7) Gable studs spaced at 2-0-0 oc.
			2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 0-0-0 to 3-4-1, Exterior(2N) 3-4-1 to 16-7-12, Corner(3R) 16-7-12 to 19-11-13, Exterior(2N) 19-11-13 to 33-3-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33	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.
			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.	9) All bearings are assumed to be SP No.2.
				10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 79 lb uplift at joint 29, 99 lb uplift at joint 30, 89 lb uplift at joint 32, 99 lb uplift at joint 33, 62 lb uplift at joint 34, 210 lb uplift at joint 35, 167 lb uplift at joint 36, 79 lb uplift at joint 27, 100 lb uplift at joint 26, 89 lb uplift at joint 24, 99 lb uplift at joint 23, 65 lb uplift at joint 22, 199 lb uplift at joint 21 and 153 lb uplift at joint 20.
				11) Non Standard bearing condition. Review required.



March 5, 2025

Continued on page 2

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ENGINEERING BY
TRENCO
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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	SPENCER-Roof
25020278-B	E01	Common Supported Gable	1	1	I71811844
Job Reference (optional)					

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

LOAD CASE(S) Standard

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

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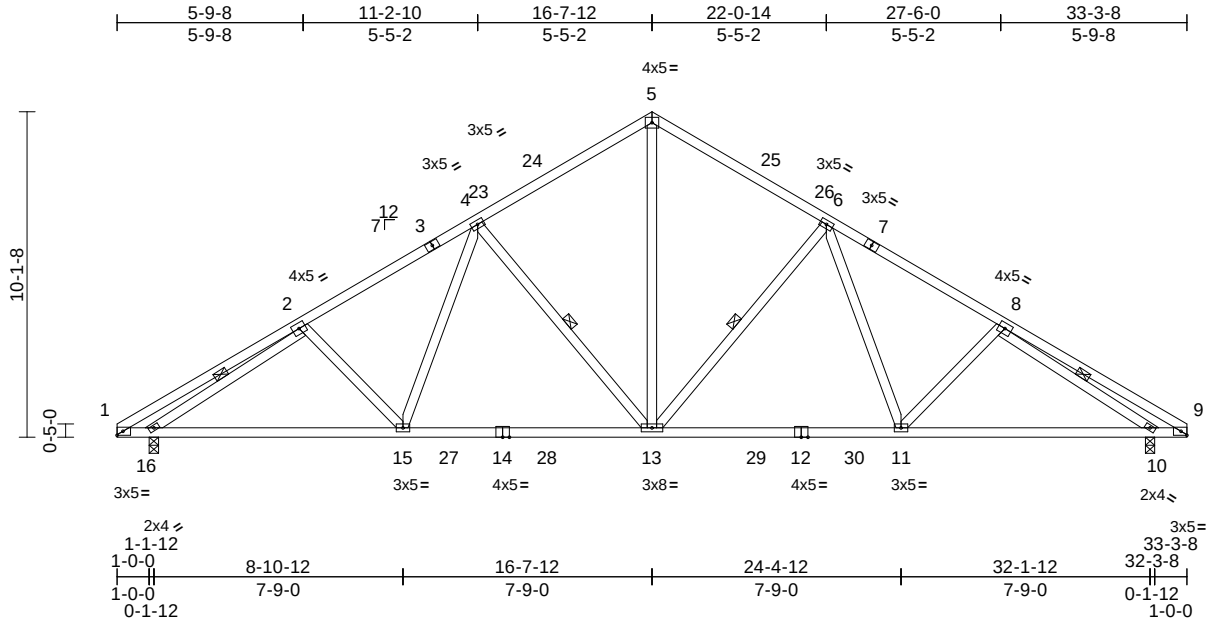
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	SPENCER-Roof	I71811845
25020278-B	E02	Common	2	1	Job Reference (optional)	

Carter Components (Chesapeake), Chesapeake, VA - 23323,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Mar 04 15:35:28
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Page: 1



Scale = 1:71.7

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.58	-0.16	13-15	>999	240	MT20	244/190
Snow (Pf/Pg)	20.8/30.0	Lumber DOL	1.15	BC	0.82	-0.27	13-15	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.51	0.08	10	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH							
BCDL	10.0										
Weight: 196 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 3-6-9 oc purlins.

BOT CHORD Rigid ceiling directly applied or 8-0-0 oc bracing.

WEBS 1 Row at midpt 6-13, 4-13, 2-16, 8-10

REACTIONS (size) 10=0-3-8, 16=0-3-8
Max Horiz 16=-324 (LC 11)
Max Uplift 10=-346 (LC 16), 16=-346 (LC 15)
Max Grav 10=1561 (LC 27), 16=1561 (LC 26)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-670/122, 2-4=-2414/487,
4-5=-1825/455, 5-6=-1825/455,
6-8=-2414/488, 8-9=-670/121

BOT CHORD 1-16=-53/475, 15-16=-533/2043,
13-15=-346/1777, 11-13=-199/1777,
10-11=-314/2043, 9-10=-53/475

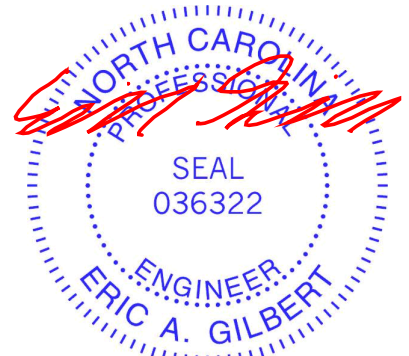
WEBS 5-13=-276/1405, 6-13=-701/350,
6-11=-75/444, 8-11=-173/236, 4-13=-701/350,
4-15=-74/444, 2-15=-173/236,
2-16=-1929/414, 8-10=-1929/414

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 C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-0 to 3-4-1, Interior (1) 3-4-1 to 16-7-12, Exterior(2R) 16-7-12 to 19-11-13, Interior (1) 19-11-13 to 33-3-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=30.0 psf; Pf=20.8 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- All plates are 3x5 MT20 unless otherwise indicated.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- All bearings are assumed to be SP No.2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 346 lb uplift at joint 16 and 346 lb uplift at joint 10.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



March 5, 2025

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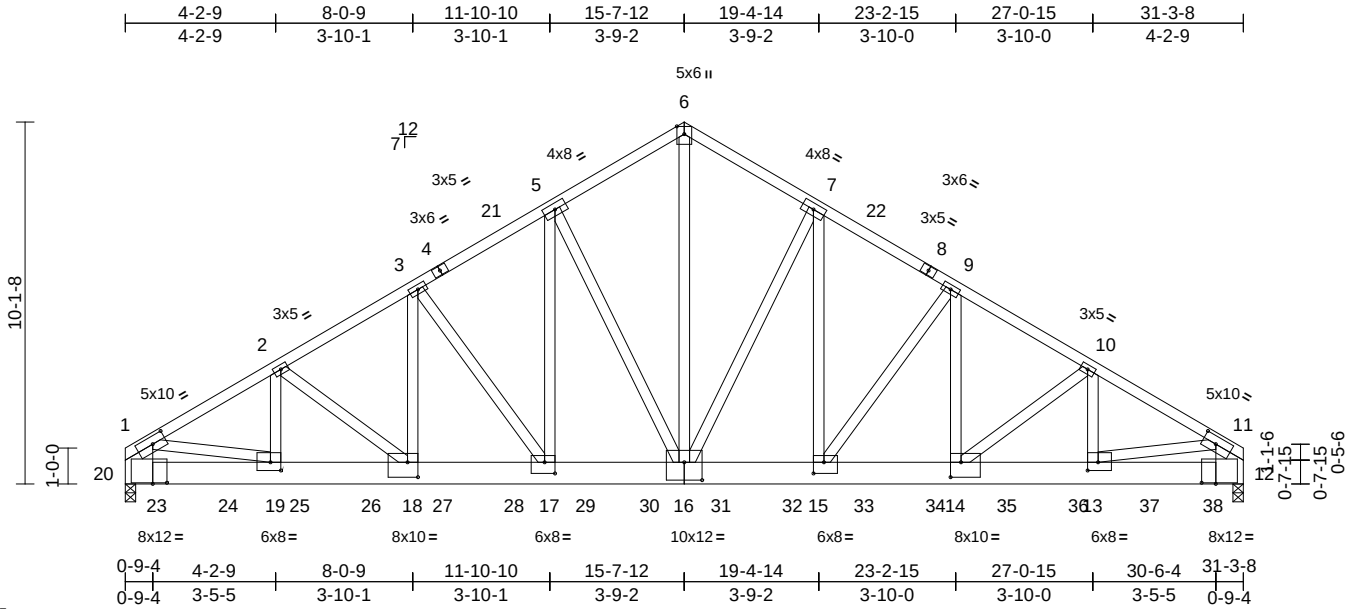
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	SPENCER-Roof	I71811846
25020278-B	E03	Common Girder	1	3	Job Reference (optional)	

Carter Components (Chesapeake), Chesapeake, VA - 23323,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Mar 04 15:35:28
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Page: 1



Scale = 1:64.5

[1:0-4-8,0-2-8], [11:0-4-8,0-2-8], [12:0-4-12,0-0-6], [13:0-3-8,0-2-12], [14:0-3-8,0-5-0], [15:0-3-8,0-3-12], [16:0-6-0,0-6-0], [17:0-3-8,0-3-12], [18:0-3-8,0-5-0],

Plate Offsets (X, Y): [19:0-3-8,0-2-12], [20:0-4-12,0-0-6]

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	0.79	Vert(LL)	-0.21	16-17	>999	240	MT20
Snow (Pf/Pg)	20.8/30.0	Lumber DOL	1.15	BC	0.38	Vert(CT)	-0.38	16-17	>955	180	244/190
TCDL	10.0	Rep Stress Incr	NO	WB	0.87	Horz(CT)	0.07	12	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH							
BCDL	10.0										Weight: 827 lb FT = 20%

LUMBER		
TOP CHORD	2x4 SP No.2	
BOT CHORD	2x8 SP 2400F 2.0E *Except* 20-1,12-11:2x10 SP 2400F 2.0E	
WEBS	2x4 SP No.2 *Except* 16-6:2x4 SP No.1	
BRACING		
TOP CHORD	Sheathed or 4-6-6 oc purlins.	
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.	
REACTIONS		
(size)	12=0-3-8, 20=0-3-8	
Max Horiz	20=-297 (LC 7)	
Max Uplift	12=-3471 (LC 12), 20=-3405 (LC 11)	
Max Grav	12=14038 (LC 6), 20=13792 (LC 5)	
FORCES		
(lb) - Maximum Compression/Maximum Tension		
TOP CHORD	1-2=-17052/4217, 2-3=-17266/4311, 3-5=-15044/3796, 5-6=-12613/3264, 6-7=-12613/3264, 7-9=-15024/3794, 9-10=-17292/4323, 10-11=-17145/4247	
BOT CHORD	19-20=-1223/4218, 18-19=-3771/14654, 17-18=-3742/14896, 15-17=-3177/12942, 14-15=-3565/14918, 13-14=-3596/14733, 12-13=-1056/4241, 1-20=-10788/2705, 11-12=-10836/2718	
WEBS	1-19=-2596/10689, 11-13=-2588/10694, 2-19=-441/167, 2-18=-124/360, 3-18=-869/3544, 3-17=-3303/956, 5-17=-1305/5153, 5-16=-4645/1315, 6-16=-3146/12398, 7-16=-4607/1310, 7-15=-1299/5109, 9-15=-3370/977, 9-14=-892/3621, 10-14=-104/286, 10-13=-371/146	

NOTES

- 3-ply truss to be connected together with Simpson SDS 1/4 x 4-1/2 screws as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x8 - 2 rows staggered at 0-6-0 oc, 2x10 - 2 rows staggered at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.33
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=30.0 psf; Pf=20.8 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP 2400F 2.0E .
- Bearing at joint(s) 20, 12 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 3405 lb uplift at joint 20 and 3471 lb uplift at joint 12.
- 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.



March 5, 2025

Continued on page 2

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	SPENCER-Roof
25020278-B	E03	Common Girder	1	3	I71811846
Job Reference (optional)					

12) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1597 lb down and 388 lb up at 0-10-12, 1596 lb down and 388 lb up at 2-10-12, 1596 lb down and 388 lb up at 4-10-12, 1596 lb down and 388 lb up at 6-10-12, 1596 lb down and 388 lb up at 8-10-12, 1596 lb down and 388 lb up at 10-10-12, 1608 lb down and 393 lb up at 12-10-12, 1608 lb down and 393 lb up at 14-8-4, 1608 lb down and 393 lb up at 16-8-4, 1608 lb down and 393 lb up at 18-8-4, 1608 lb down and 393 lb up at 20-8-4, 1608 lb down and 393 lb up at 22-8-4, 1608 lb down and 393 lb up at 24-8-4, 1608 lb down and 393 lb up at 26-8-4, and 1608 lb down and 393 lb up at 28-8-4, and 1609 lb down and 392 lb up at 30-5-8 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=-62, 6-11=-62, 12-20=-20
Concentrated Loads (lb)
Vert: 23=-1464 (B), 24=-1463 (B), 25=-1463 (B), 26=-1463 (B), 27=-1463 (B), 28=-1463 (B), 29=-1467 (B), 30=-1467 (B), 31=-1467 (B), 32=-1467 (B), 33=-1467 (B), 34=-1467 (B), 35=-1467 (B), 36=-1467 (B), 37=-1467 (B), 38=-1469 (B)

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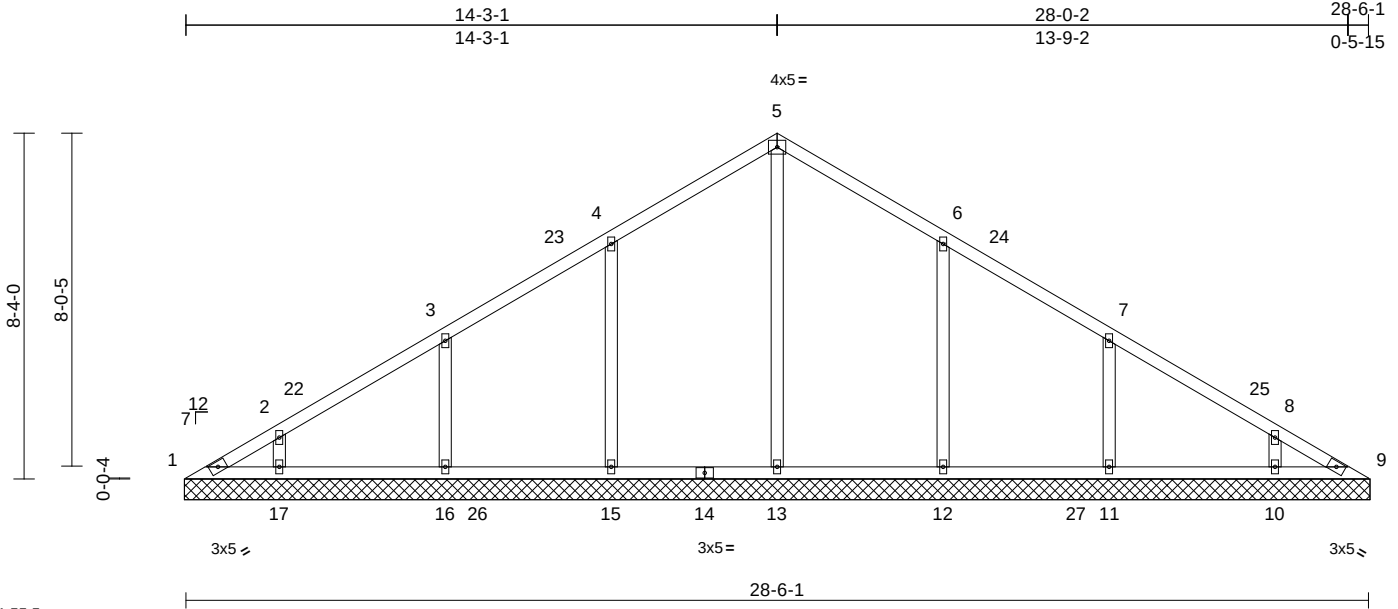
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	SPENCER-Roof	I71811847
25020278-B	V1	Valley	1	1	Job Reference (optional)	

Carter Components (Chesapeake), Chesapeake, VA - 23323,

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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	0.30	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	20.8/30.0	Lumber DOL	1.15	BC	0.16	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.27	Horiz(TL)	0.01	9	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
Weight: 129 lb FT = 20%												

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

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

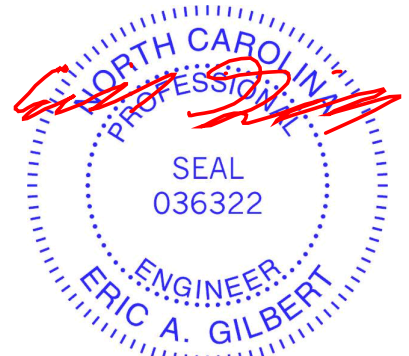
REACTIONS (size)
1=28-6-15, 9=28-6-15, 10=28-6-15,
11=28-6-15, 12=28-6-15,
13=28-6-15, 15=28-6-15,
16=28-6-15, 17=28-6-15
Max Horiz 1=273 (LC 12)
Max Uplift 1=-62 (LC 11), 9=-2 (LC 12),
10=-131 (LC 16), 11=-189 (LC 16),
12=-198 (LC 16), 15=-198 (LC 15),
16=-188 (LC 15), 17=-136 (LC 15)
Max Grav 1=120 (LC 27), 9=75 (LC 29),
10=353 (LC 27), 11=447 (LC 27),
12=520 (LC 6), 13=418 (LC 29),
15=520 (LC 5), 16=446 (LC 26),
17=358 (LC 26)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-252/219, 2-3=-199/180, 3-4=-171/186,
4-5=-191/266, 5-6=-191/262, 6-7=-126/124,
7-8=-118/74, 8-9=-177/109
BOT CHORD 1-17=-93/172, 16-17=-87/172,
15-16=-87/172, 13-15=-87/172,
12-13=-87/172, 11-12=-87/172,
10-11=-87/172, 9-10=-87/172
WEBS 5-13=-219/0, 4-15=-396/246, 3-16=-323/235,
2-17=-279/195, 6-12=-396/246,
7-11=-323/236, 8-10=-279/193

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 C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 0-0-0 to 3-0-0, Exterior(2N) 3-0-0 to 14-3-7, Corner(3R) 14-3-7 to 17-3-7, Exterior(2N) 17-3-7 to 28-6-15 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=1.33
- 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); Pg=30.0 psf; Pf=20.8 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; 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 live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- All bearings are assumed to be SP No.2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 62 lb uplift at joint 1, 2 lb uplift at joint 9, 198 lb uplift at joint 15, 188 lb uplift at joint 16, 136 lb uplift at joint 17, 198 lb uplift at joint 12, 189 lb uplift at joint 11 and 131 lb uplift at joint 10.
- Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 9.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



March 5, 2025

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

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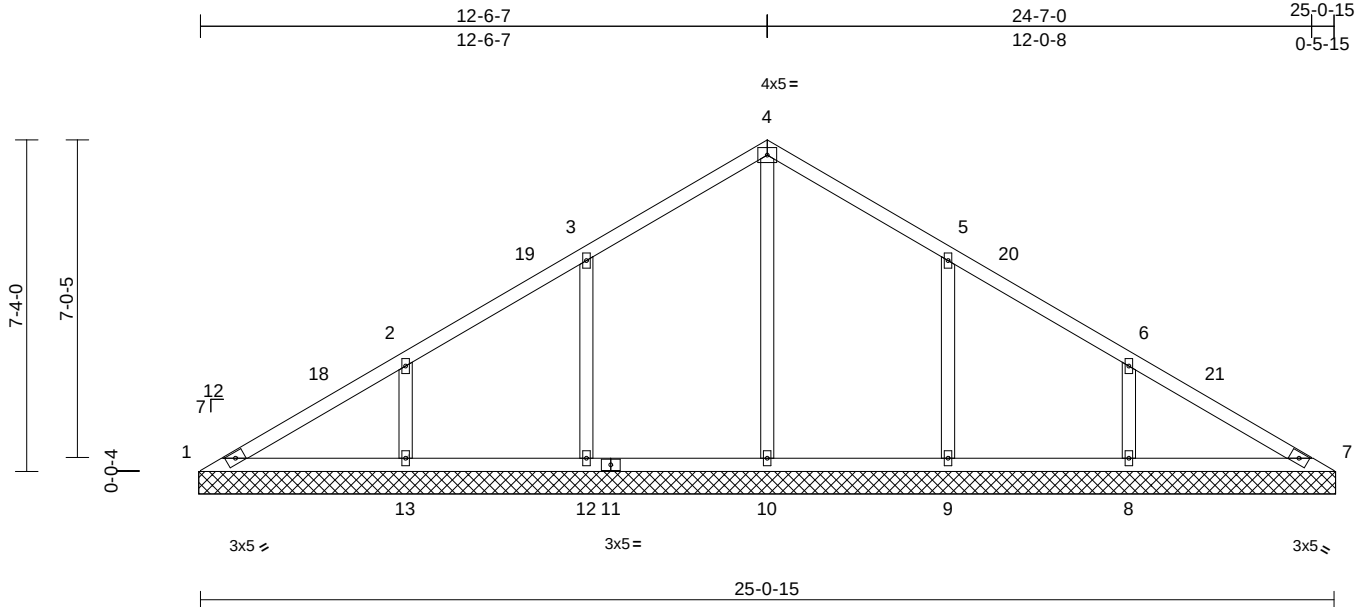
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	SPENCER-Roof	I71811848
25020278-B	V2	Valley	1	1	Job Reference (optional)	

Carter Components (Chesapeake), Chesapeake, VA - 23323,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Mar 04 15:35:29
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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	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	20.8/30.0	Lumber DOL	1.15	BC	0.20	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.30	Horiz(TL)	0.01	7	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH							
BCDL	10.0										
										Weight: 108 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.

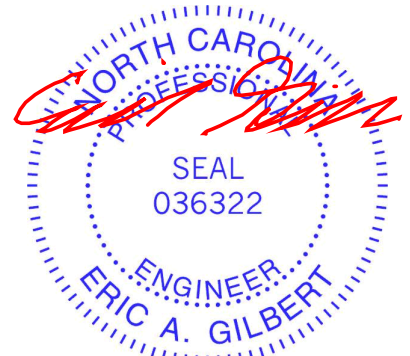
REACTIONS (size) 1=25-1-13, 7=25-1-13, 8=25-1-13, 9=25-1-13, 10=25-1-13, 12=25-1-13, 13=25-1-13
Max Horiz 1=-239 (LC 11)
Max Uplift 1=-26 (LC 11), 8=-203 (LC 16), 9=-193 (LC 16), 12=-193 (LC 15), 13=-205 (LC 15)
Max Grav 1=143 (LC 27), 7=124 (LC 22), 8=492 (LC 27), 9=467 (LC 6), 10=538 (LC 26), 12=467 (LC 5), 13=494 (LC 26)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-224/286, 2-3=-101/234, 3-4=-55/233, 4-5=-55/215, 5-6=-3/160, 6-7=-171/218
BOT CHORD 1-13=-161/219, 12-13=-161/176, 10-12=-161/176, 9-10=-161/176, 8-9=-161/176, 7-8=-161/176
WEBS 4-10=-323/0, 3-12=-390/247, 2-13=-349/232, 5-9=-390/247, 6-8=-349/231

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 C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 0-0-0 to 3-0-0, Exterior(2N) 3-0-0 to 12-6-14, Corner(3R) 12-6-14 to 15-6-14, Exterior(2N) 15-6-14 to 25-1-13 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
- 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); Pg=30.0 psf; Pf=20.8 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; 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 live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- All bearings are assumed to be SP No.2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 26 lb uplift at joint 1, 193 lb uplift at joint 12, 205 lb uplift at joint 13, 193 lb uplift at joint 9 and 203 lb uplift at joint 8.
- Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 7.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



March 5, 2025

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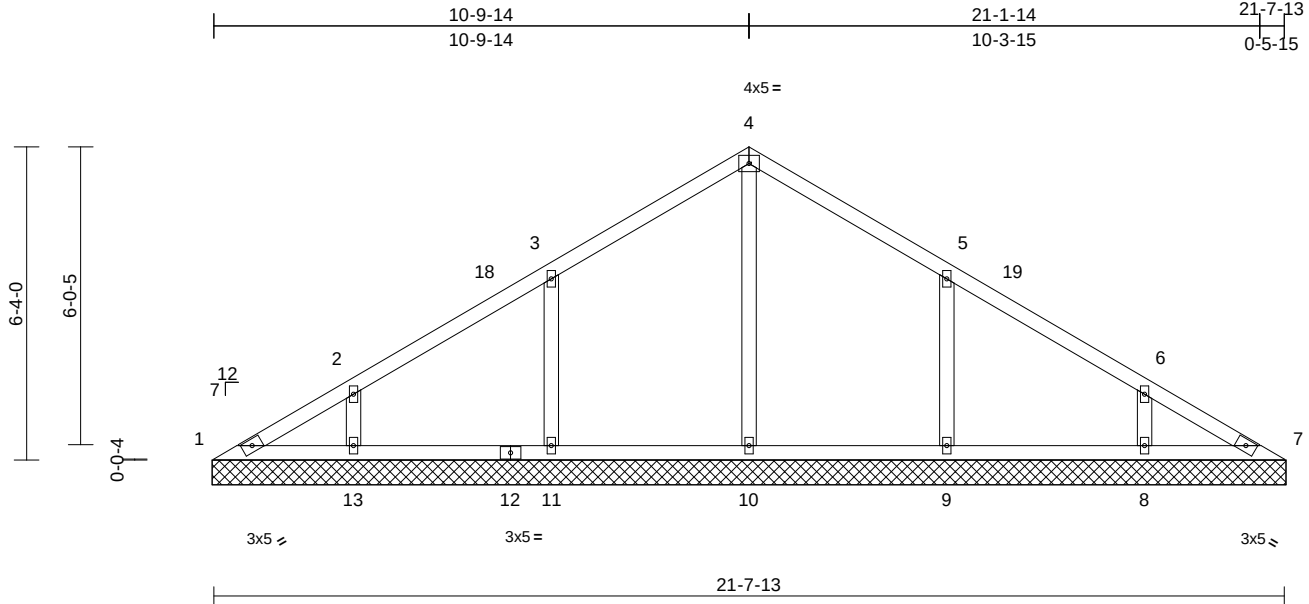
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	SPENCER-Roof	I71811849
25020278-B	V3	Valley	1	1	Job Reference (optional)	

Carter Components (Chesapeake), Chesapeake, VA - 23323,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Mar 04 15:35:29
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Scale = 1:46.6

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/Pg)	20.8/30.0	Lumber DOL	1.15	BC	0.17	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.16	Horiz(TL)	0.00	7	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 90 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS

(size)	1=21-8-10, 7=21-8-10, 8=21-8-10, 9=21-8-10, 10=21-8-10, 11=21-8-10, 13=21-8-10
Max Horiz	1=206 (LC 14)
Max Uplift	1=-33 (LC 11), 8=-149 (LC 16), 9=-207 (LC 16), 11=-207 (LC 15), 13=-152 (LC 15)
Max Grav	1=119 (LC 27), 7=92 (LC 22), 8=376 (LC 27), 9=495 (LC 6), 10=417 (LC 26), 11=495 (LC 5), 13=379 (LC 26)

FORCES

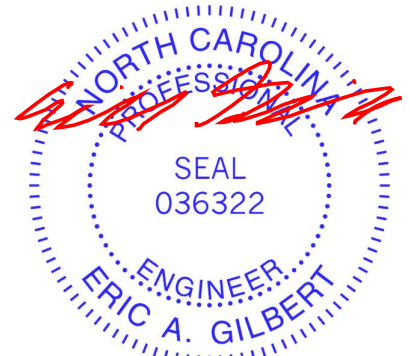
(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-186/170, 2-3=-137/133, 3-4=-137/202, 4-5=-137/202, 5-6=-75/77, 6-7=-125/91
BOT CHORD	1-13=-72/156, 11-13=-72/128, 10-11=-72/128, 9-10=-72/128, 8-9=-72/128, 7-8=-72/128
WEBS	4-10=-230/0, 3-11=-404/257, 2-13=-281/209, 5-9=-404/256, 6-8=-281/209

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 C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 0-0-0 to 2-10-5, Exterior(2N) 2-10-5 to 10-10-5, Corner(3R) 10-10-5 to 13-10-5, Exterior(2N) 13-10-5 to 21-8-10 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=1.33
- 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); Pg=30.0 psf; Pf=20.8 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; 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 live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- All bearings are assumed to be SP No. 2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 33 lb uplift at joint 1, 207 lb uplift at joint 11, 152 lb uplift at joint 13, 207 lb uplift at joint 9 and 149 lb uplift at joint 8.
- Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 7.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



March 5, 2025

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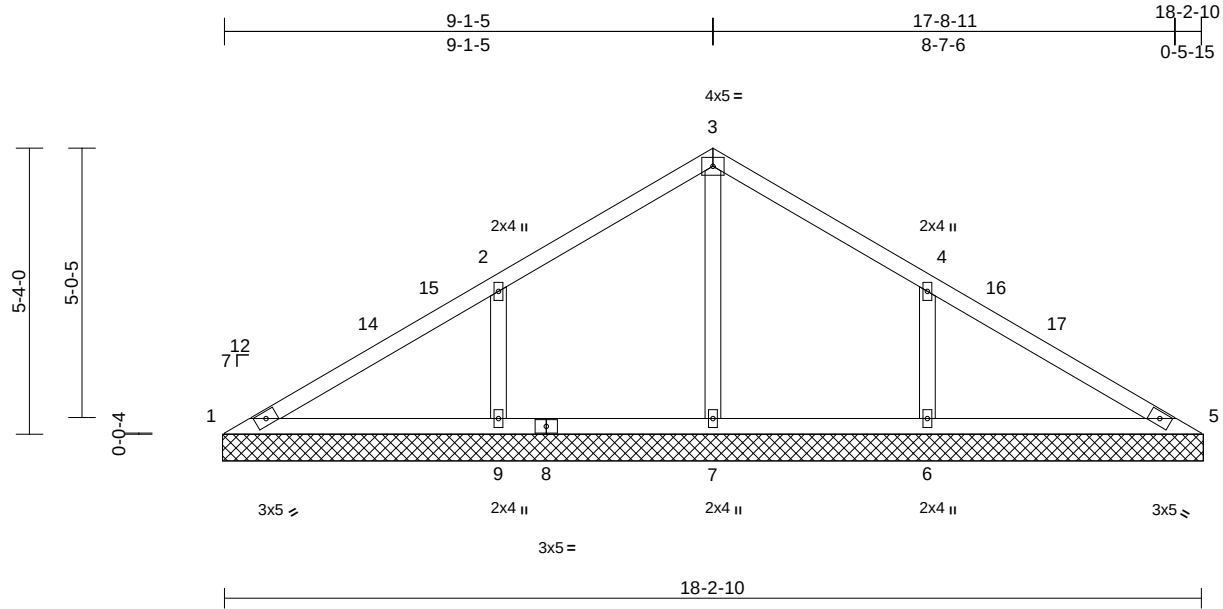
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	SPENCER-Roof	I71811850
25020278-B	V4	Valley	1	1	Job Reference (optional)	

Carter Components (Chesapeake), Chesapeake, VA - 23323,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Mar 04 15:35:29
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Page: 1



Scale = 1:43

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	0.42	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	20.8/30.0	Lumber DOL	1.15	BC	0.22	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.20	Horiz(TL)	0.00	6	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=18-3-8, 5=18-3-8, 6=18-3-8, 7=18-3-8, 9=18-3-8
Max Horiz	1=-172 (LC 13)
Max Uplift	1=-12 (LC 16), 5=-9 (LC 16), 6=-247 (LC 16), 7=-10 (LC 15), 9=-248 (LC 15)
Max Grav	1=103 (LC 38), 5=103 (LC 39), 6=575 (LC 22), 7=437 (LC 1), 9=575 (LC 21)

FORCES

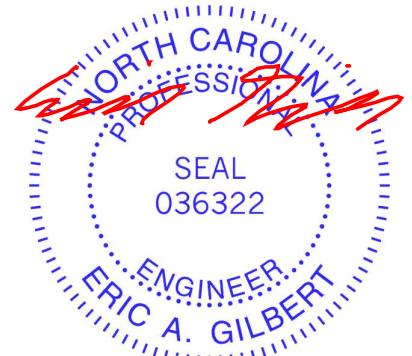
(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-156/323, 2-3=-10/248, 3-4=0/240, 4-5=-149/305
BOT CHORD	1-9=-235/213, 7-9=-235/213, 6-7=-235/213, 5-6=-235/213
WEBS	3-7=-404/110, 2-9=-445/313, 4-6=-445/313

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 C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 0-0-0 to 3-0-0, Exterior(2N) 3-0-0 to 9-1-12, Corner(3R) 9-1-12 to 12-1-12, Exterior(2N) 12-1-12 to 18-3-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33

- 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); Pg=30.0 psf; Pf=20.8 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; 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 live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 12 lb uplift at joint 1, 9 lb uplift at joint 5, 10 lb uplift at joint 7, 248 lb uplift at joint 9 and 247 lb uplift at joint 6.
- Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 5.
- 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



March 5, 2025

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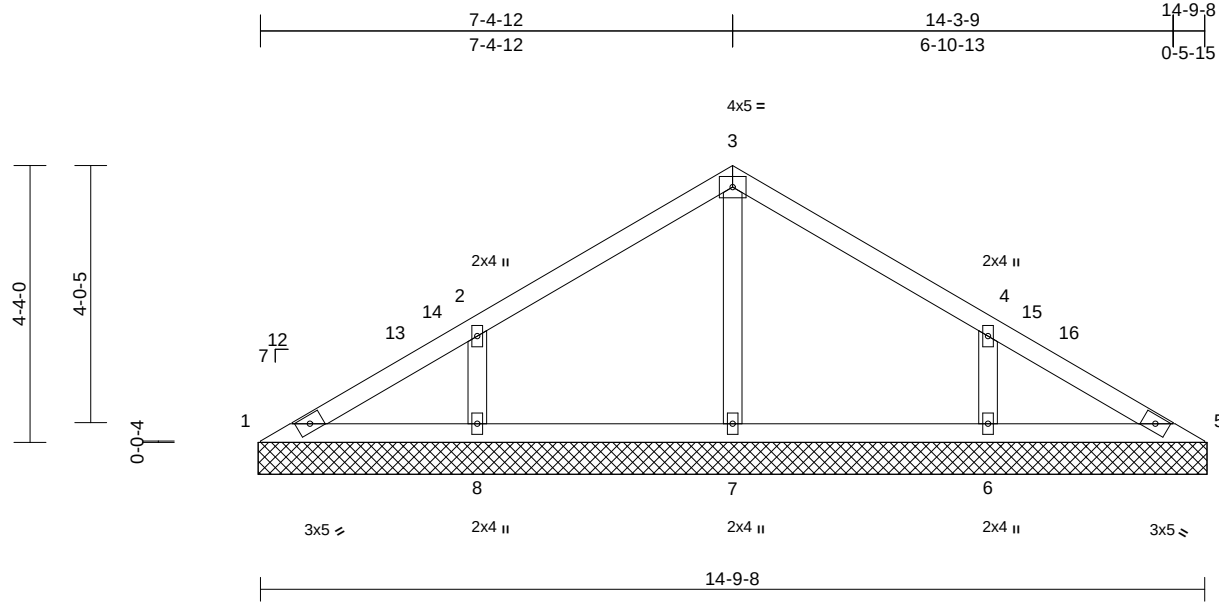
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	SPENCER-Roof	I71811851
25020278-B	V5	Valley	1	1	Job Reference (optional)	

Carter Components (Chesapeake), Chesapeake, VA - 23323,

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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	0.32	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	20.8/30.0	Lumber DOL	1.15	BC	0.08	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.09	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 56 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=14-10-6, 5=14-10-6, 6=14-10-6, 7=14-10-6, 8=14-10-6
Max Horiz	1=-139 (LC 11)
Max Uplift	1=-24 (LC 16), 5=-10 (LC 16), 6=-196 (LC 16), 8=-197 (LC 15)
Max Grav	1=100 (LC 27), 5=91 (LC 22), 6=487 (LC 22), 7=338 (LC 21), 8=487 (LC 21)

FORCES

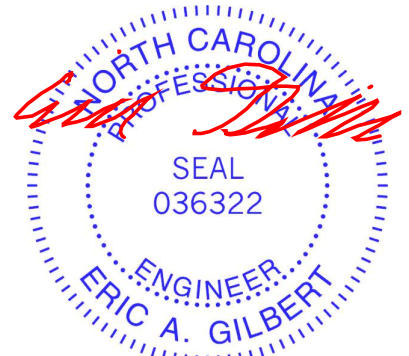
(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-147/154, 2-3=-100/131, 3-4=-100/124, 4-5=-120/111
BOT CHORD	1-8=-72/140, 7-8=-72/117, 6-7=-72/117, 5-6=-72/117
WEBS	3-7=-266/85, 2-8=-400/301, 4-6=-400/301

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 C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 0-0-0 to 3-0-0, Exterior(2N) 3-0-0 to 7-5-3, Corner(3R) 7-5-3 to 10-5-3, Exterior(2N) 10-5-3 to 14-10-6 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33

- 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); Pg=30.0 psf; Pf=20.8 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; 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 live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 24 lb uplift at joint 1, 10 lb uplift at joint 5, 197 lb uplift at joint 8 and 196 lb uplift at joint 6.
- Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 5.
- 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



March 5, 2025

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

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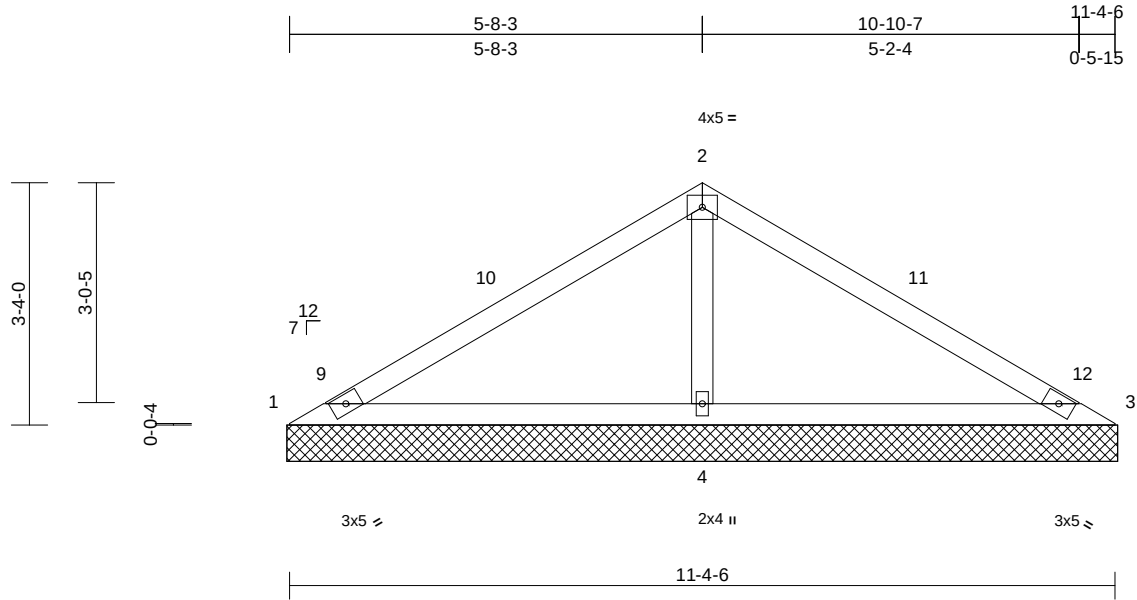
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	SPENCER-Roof	I71811852
25020278-B	V6	Valley	1	1	Job Reference (optional)	

Carter Components (Chesapeake), Chesapeake, VA - 23323,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Mar 04 15:35:29
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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	0.62	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	20.8/30.0	Lumber DOL	1.15	BC	0.55	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.19	Horiz(TL)	0.01	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 39 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 9-4-6 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS

(size)	1=11-5-3, 3=11-5-3, 4=11-5-3
Max Horiz	1=106 (LC 12)
Max Uplift	1=-80 (LC 22), 3=-80 (LC 21), 4=-243 (LC 15)
Max Grav	1=90 (LC 21), 3=90 (LC 22), 4=953 (LC 22)

FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-323/555, 2-3=-319/555
BOT CHORD	1-4=-468/403, 3-4=-468/403
WEBS	2-4=-880/594

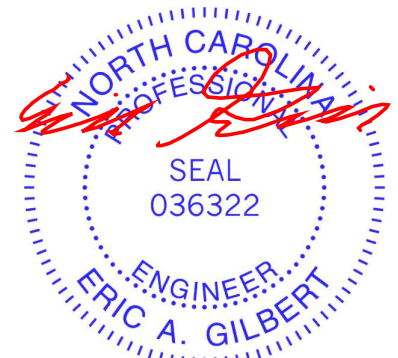
NOTES

- 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 C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 0-0-0 to 3-0-0, Exterior(2N) 3-0-0 to 5-8-10, Corner(3R) 5-8-10 to 8-8-10, Exterior(2N) 8-8-10 to 11-5-3 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=1.33
- 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); Pg=30.0 psf; Pf=20.8 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; 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 live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2 .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 80 lb uplift at joint 1, 80 lb uplift at joint 3 and 243 lb uplift at joint 4.
- Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 3.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S)

Standard



March 5, 2025

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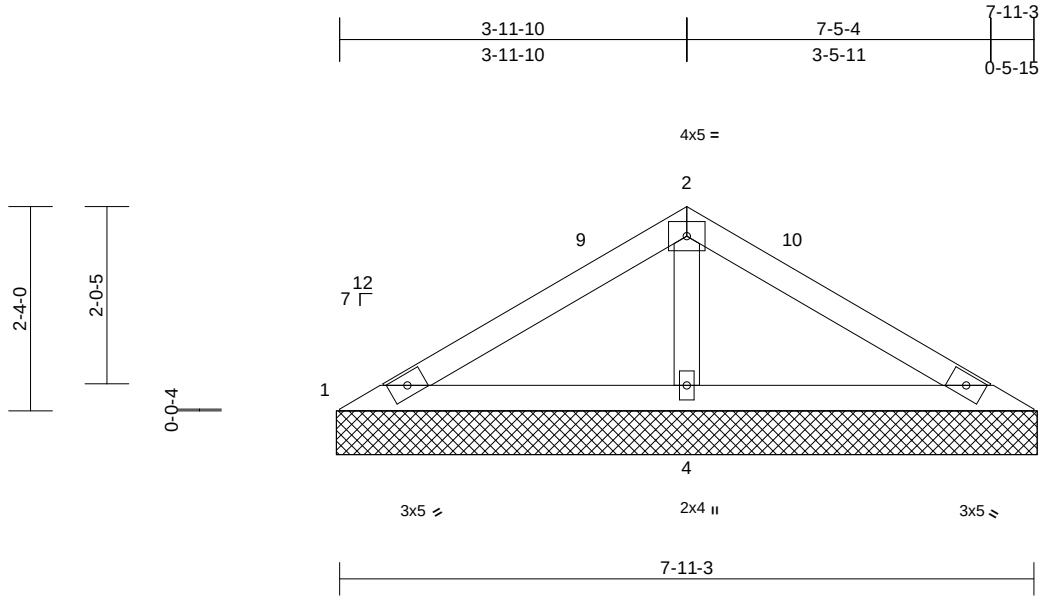
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	SPENCER-Roof	I71811853
25020278-B	V7	Valley	1	1	Job Reference (optional)	

Carter Components (Chesapeake), Chesapeake, VA - 23323,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Mar 04 15:35:29
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Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.30	Vert(LL)	n/a	-	n/a	999	MT20
Snow (Pf/Pg)	20.8/30.0	Lumber DOL	1.15	BC	0.30	Vert(TL)	n/a	-	n/a	999	244/190
TCDL	10.0	Rep Stress Incr	YES	WB	0.12	Horiz(TL)	0.00	4	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP							
BCDL	10.0										
Weight: 26 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 7-11-3 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS

(size)	1=8-0-1, 3=8-0-1, 4=8-0-1
Max Horiz	1=-72 (LC 11)
Max Uplift	1=-20 (LC 22), 3=-23 (LC 11), 4=-147 (LC 15)
Max Grav	1=109 (LC 21), 3=109 (LC 22), 4=589 (LC 21)

FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-222/321, 2-3=-214/321
BOT CHORD	1-4=-294/307, 3-4=-294/307
WEBS	2-4=-518/399

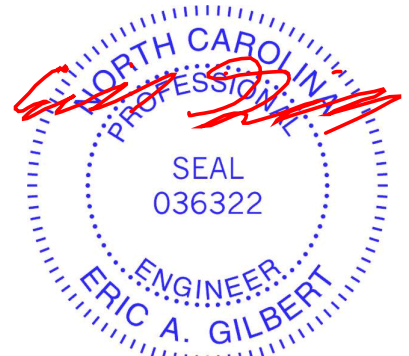
NOTES

- 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 C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 0-0-0 to 3-0-0, Exterior(2N) 3-0-0 to 4-0-1, Corner(3R) 4-0-1 to 6-11-2, Exterior(2N) 6-11-2 to 8-0-1 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=1.33
- 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); Pg=30.0 psf; Pf=20.8 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; 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 live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 20 lb uplift at joint 1, 23 lb uplift at joint 3 and 147 lb uplift at joint 4.
- Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 3.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S)

Standard



March 5, 2025

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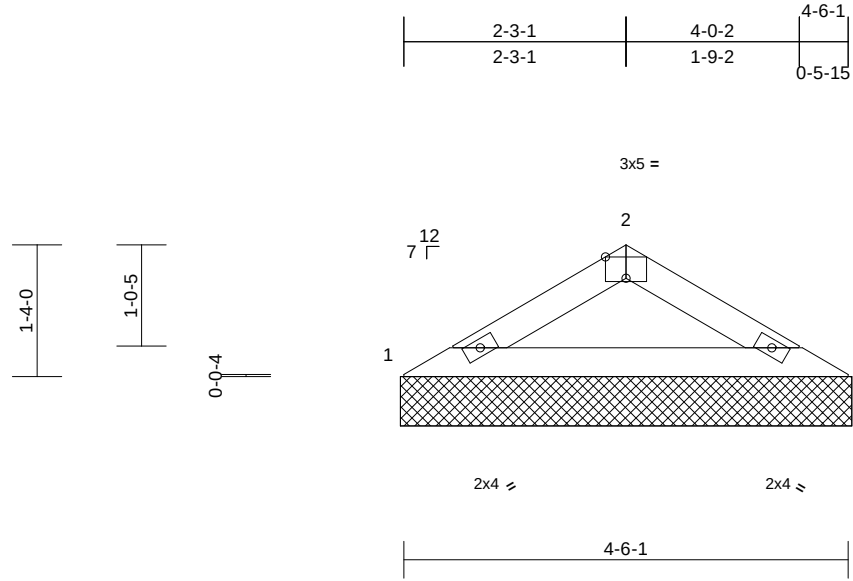
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	SPENCER-Roof	I71811854
25020278-B	V8	Valley	1	1	Job Reference (optional)	

Carter Components (Chesapeake), Chesapeake, VA - 23323,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Mar 04 15:35:29
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Page: 1



Scale = 1:23.4

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.17	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	20.8/30.0	Lumber DOL	1.15	BC	0.15	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 13 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-6-1 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=4-6-15, 3=4-6-15
Max Horiz 1=39 (LC 14)
Max Uplift 1=48 (LC 15), 3=48 (LC 16)
Max Grav 1=216 (LC 21), 3=216 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension

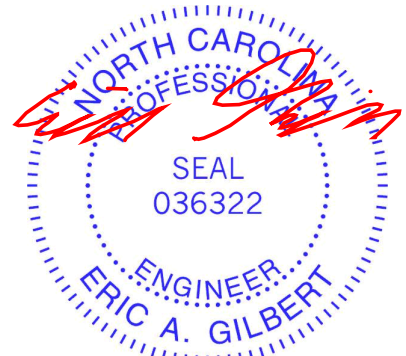
TOP CHORD 1-2=-397/332, 2-3=-397/332
BOT CHORD 1-3=-265/332

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 C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 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=1.33
- 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); Pg=30.0 psf; Pf=20.8 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; 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 live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2 .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 48 lb uplift at joint 1 and 48 lb uplift at joint 3.
- Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 3.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



March 5, 2025

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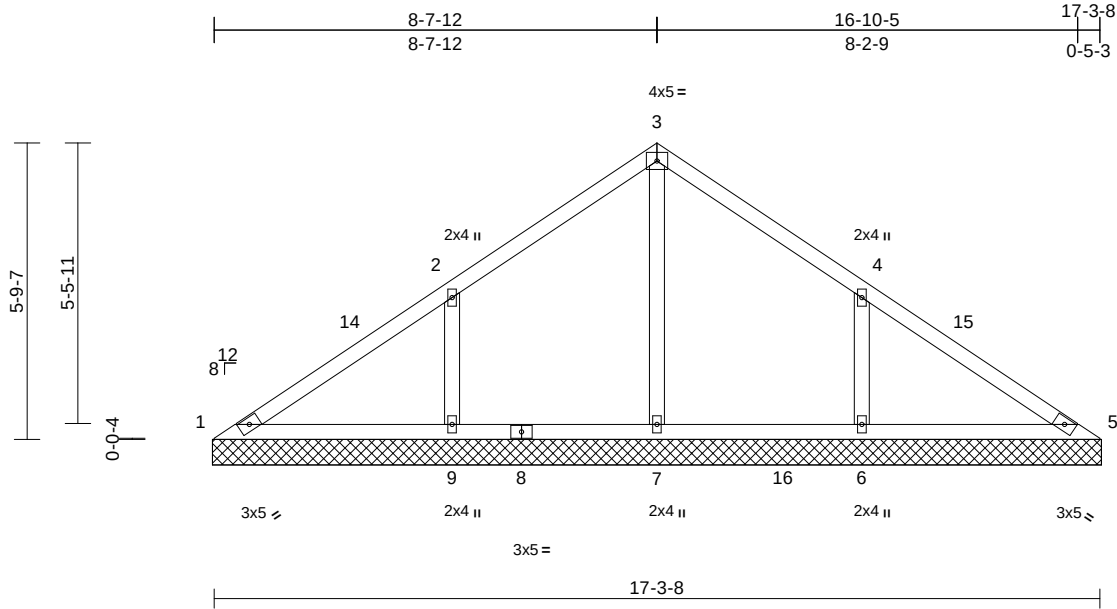
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	SPENCER-Roof	I71811855
25020278-B	V9	Valley	1	1	Job Reference (optional)	

Carter Components (Chesapeake), Chesapeake, VA - 23323,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Mar 04 15:35:29
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Page: 1



Scale = 1:45

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	0.29	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	20.8/30.0	Lumber DOL	1.15	BC	0.18	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.21	Horiz(TL)	0.00	5	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH							
BCDL	10.0									Weight: 70 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=17-4-4, 5=17-4-4, 6=17-4-4, 7=17-4-4, 9=17-4-4
Max Horiz	1=-187 (LC 9)
Max Uplift	1=-18 (LC 9), 6=-257 (LC 14), 9=-259 (LC 13)
Max Grav	1=109 (LC 23), 5=100 (LC 35), 6=546 (LC 23), 7=531 (LC 22), 9=550 (LC 22)

FORCES

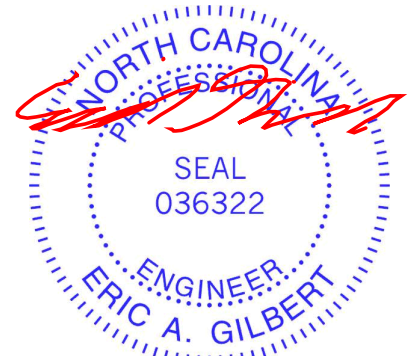
(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-162/305, 2-3=-21/230, 3-4=0/209, 4-5=-143/269
BOT CHORD	1-9=-195/211, 7-9=-195/211, 6-7=-195/211, 5-6=-195/211
WEBS	3-7=-377/79, 2-9=-388/336, 4-6=-388/336

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 C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 0-0-0 to 3-0-0, Exterior(2N) 3-0-0 to 8-8-2, Corner(3R) 8-8-2 to 11-8-2, Exterior(2N) 11-8-2 to 17-4-4 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=1.33

- 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); Pg=30.0 psf; Pf=20.8 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- All bearings are assumed to be SP No.2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 18 lb uplift at joint 1, 259 lb uplift at joint 9 and 257 lb uplift at joint 6.
- Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 5.
- 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



March 5, 2025

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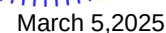
Carter Components (Chesapeake), Chesapeake, VA - 23323, Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Mar 04 15:35:30 Page: 1
ID:bLGxm6WoUed?J6NsHb?wOVzrtGN-RfC?PsB70Ha3NSqPanL8w3ulTXbGKWRcd0i7J4zJC?f



- 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; Pg=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=30.0 psf; Pf=20.8 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 4-0-0 oc.
- 7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 8) All bearings are assumed to be SP No.2 .
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 27 lb uplift at joint 1, 3 lb uplift at joint 5, 212 lb uplift at joint 8 and 210 lb uplift at joint 6.
- 10) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 5.
- 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.

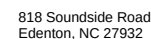
LOAD CASE(S) Standard

- 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 C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 0-0-0 to 3-2-2, Exterior(2N) 3-2-2 to 7-2-2, Corner(3R) 7-2-2 to 10-2-2, Exterior(2N) 10-2-2 to 14-4-4 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=1.33

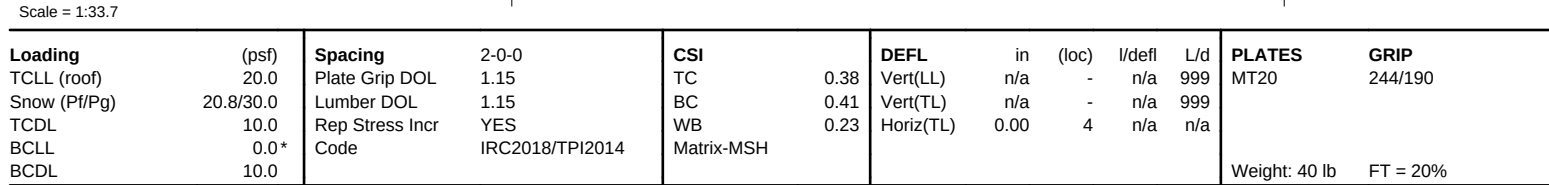


WARNING – Verify design parameters and READ NOTES ON THIS AND INCLUDED MITER REFERENCE PAGE MIT-17-19 (Rev. 1/2/2025) BEFORE USE.

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



Carter Components (Chesapeake), Chesapeake, VA - 23323, Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Mar 04 15:35:30 Page: 1
ID:BLGxm6WoUEd?J6NsHb?wOVzrtGN-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrcDOI7J4zJC?f



- 4) TCELL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=30.0 psf; Pf=20.8 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 4'-0" oc.
- 7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3'-06"-00 tall by 2'-00"-00 wide will fit between the bottom chord and any other members.
- 8) All bearings are assumed to be SP No.2 .
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 53 lb uplift at joint 1, 53 lb uplift at joint 3 and 269 lb uplift at joint 4.
- 10) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 3.
- 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

-

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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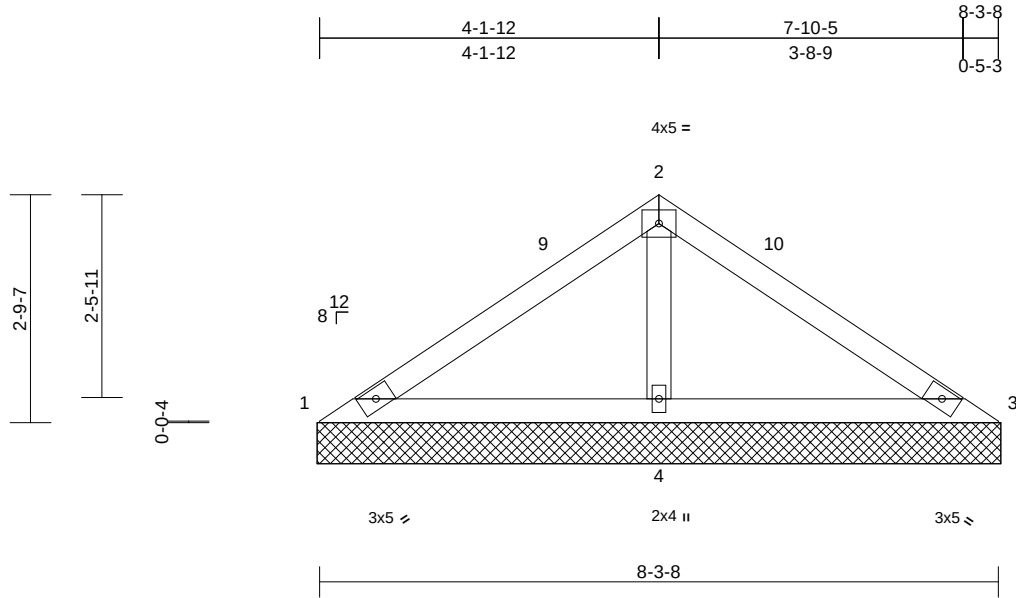


Job	Truss	Truss Type	Qty	Ply	SPENCER-Roof	I71811858
25020278-B	V12	Valley	1	1	Job Reference (optional)	

Carter Components (Chesapeake), Chesapeake, VA - 23323,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Mar 04 15:35:30
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Page: 1



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Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.23	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	20.8/30.0	Lumber DOL	1.15	BC	0.31	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.14	Horiz(TL)	0.00	4	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP							
BCDL	10.0									Weight: 29 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD	Structural wood sheathing directly applied or 8-3-8 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS

(size)	1=8-4-4, 3=8-4-4, 4=8-4-4
Max Horiz	1=-87 (LC 11)
Max Uplift	1=-18 (LC 35), 3=-22 (LC 9), 4=-176 (LC 13)
Max Grav	1=66 (LC 34), 3=66 (LC 35), 4=618 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-251/344, 2-3=-242/344
BOT CHORD	1-4=-307/344, 3-4=-307/344
WEBS	2-4=-583/460

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 C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 0-0-0 to 3-0-0, Exterior(2N) 3-0-0 to 4-2-2, Corner(3R) 4-2-2 to 7-4-11, Exterior(2N) 7-4-11 to 8-4-4 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=1.33
- 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); Pg=30.0 psf; Pf=20.8 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 18 lb uplift at joint 1, 22 lb uplift at joint 3 and 176 lb uplift at joint 4.
- Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 3.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



March 5, 2025

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

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

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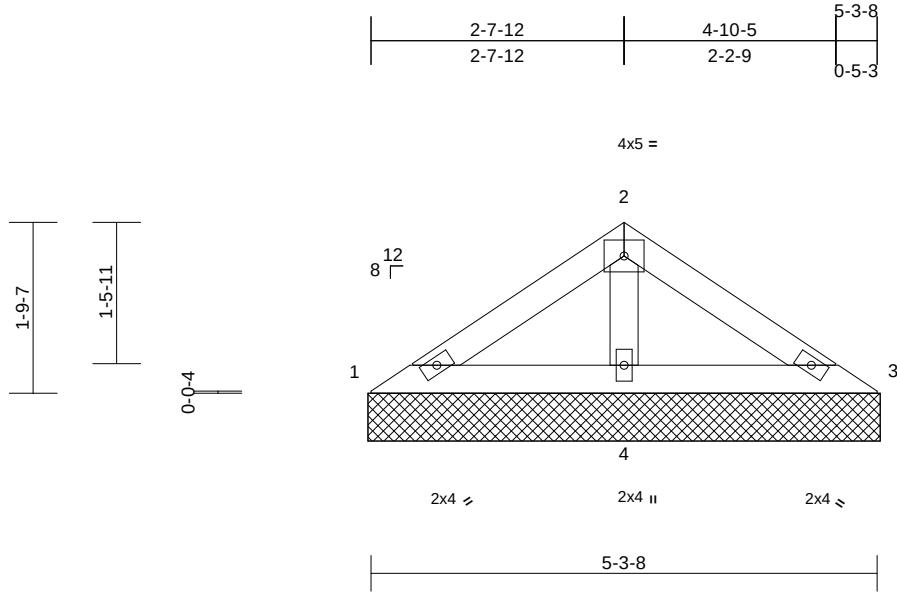
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	SPENCER-Roof	I71811859
25020278-B	V13	Valley	1	1	Job Reference (optional)	

Carter Components (Chesapeake), Chesapeake, VA - 23323,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Mar 04 15:35:30
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Page: 1



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Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.08	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	20.8/30.0	Lumber DOL	1.15	BC	0.14	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.08	Horiz(TL)	0.00	4	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP							
BCDL	10.0									Weight: 17 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD	Structural wood sheathing directly applied or 5-3-8 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS

(size)	1=5-4-4, 3=5-4-4, 4=5-4-4
Max Horiz	1=-54 (LC 9)
Max Uplift	1=-13 (LC 13), 3=-22 (LC 14), 4=-83 (LC 13)
Max Grav	1=65 (LC 34), 3=65 (LC 35), 4=333 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-93/138, 2-3=-93/138
BOT CHORD	1-4=-134/191, 3-4=-134/191
WEBS	2-4=-274/255

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 C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 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=1.33
- 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); Pg=30.0 psf; Pf=20.8 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10

- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2 .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 13 lb uplift at joint 1, 22 lb uplift at joint 3 and 83 lb uplift at joint 4.
- Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 3.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



March 5,2025

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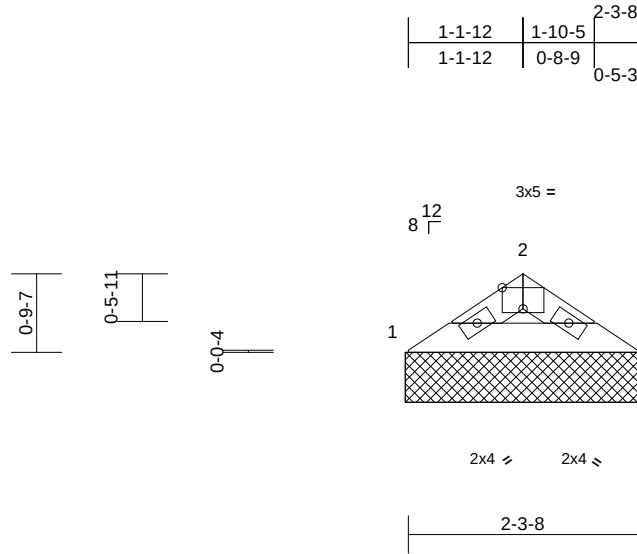
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	SPENCER-Roof	I71811860
25020278-B	V14	Valley	1	1	Job Reference (optional)	

Carter Components (Chesapeake), Chesapeake, VA - 23323,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Mar 04 15:35:30
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Page: 1



Scale = 1:23

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.05	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	20.8/30.0	Lumber DOL	1.15	BC	0.05	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0											
											Weight: 6 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-3-8 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=2-4-4, 3=2-4-4
Max Horiz 1=-20 (LC 11)
Max Uplift 1=-25 (LC 13), 3=-25 (LC 14)
Max Grav 1=96 (LC 1), 3=96 (LC 1)

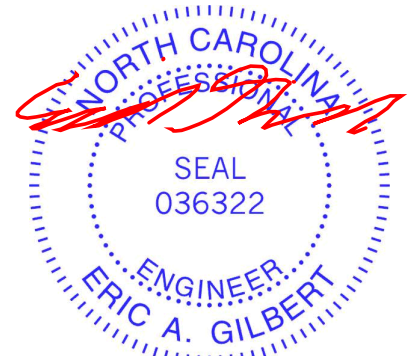
FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-162/152, 2-3=-162/152
BOT CHORD 1-3=-103/127

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 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=1.33
- 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); Pg=30.0 psf; Pf=20.8 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.

- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
 - All bearings are assumed to be SP No.2.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 25 lb uplift at joint 1 and 25 lb uplift at joint 3.
 - Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 3.
 - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- LOAD CASE(S)** Standard



March 5, 2025

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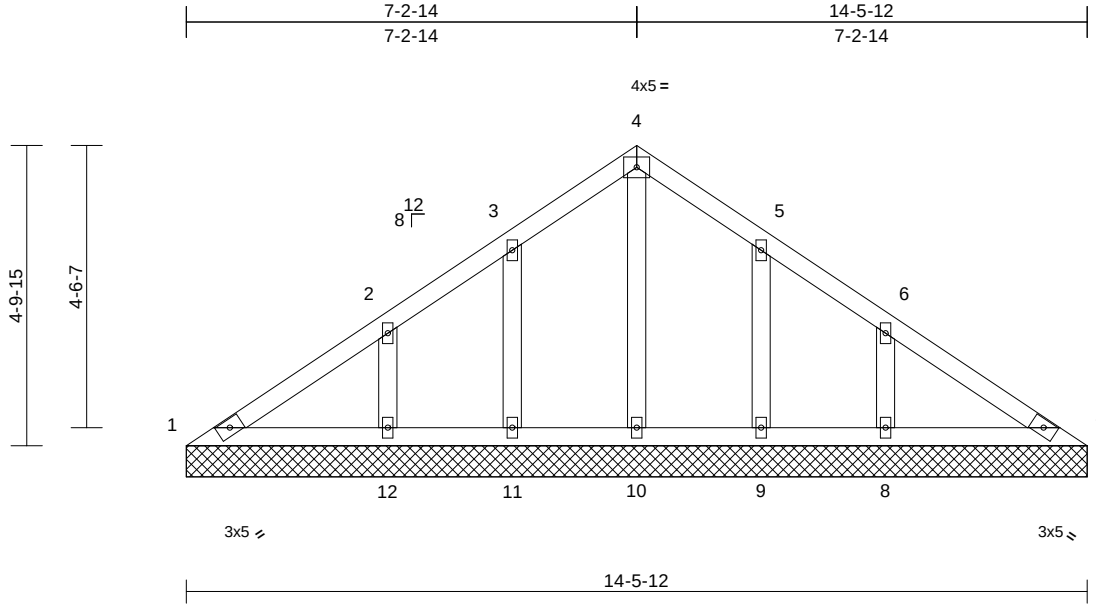
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	SPENCER-Roof	I71811861
25020278-B	V15G	Valley	1	1	Job Reference (optional)	

Carter Components (Chesapeake), Chesapeake, VA - 23323,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Mar 04 15:35:30
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Page: 1



Scale = 1:37

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.11	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	20.8/30.0	Lumber DOL	1.15	BC	0.11	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.07	Horiz(TL)	0.00	7	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 66 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=14-5-12, 7=14-5-12, 8=14-5-12, 9=14-5-12, 10=14-5-12, 11=14-5-12, 12=14-5-12
Max Horiz	1=155 (LC 10)
Max Uplift	1=-18 (LC 14), 8=-145 (LC 14), 9=-93 (LC 14), 11=-93 (LC 13), 12=-147 (LC 13)
Max Grav	1=100 (LC 23), 7=89 (LC 35), 8=283 (LC 23), 9=156 (LC 23), 10=225 (LC 1), 11=156 (LC 22), 12=286 (LC 22)

FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-135/171, 2-3=-56/121, 3-4=-40/144, 4-5=-40/143, 5-6=0/81, 6-7=-104/131
BOT CHORD	1-12=-101/165, 11-12=-101/165, 10-11=-101/165, 9-10=-101/165, 8-9=-101/165, 7-8=-101/165
WEBS	4-10=-174/0, 3-11=-159/153, 2-12=-225/223, 5-9=-159/153, 6-8=-225/223

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 C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 0-0-0 to 3-2-14, Exterior(2N) 3-2-14 to 7-2-14, Corner(3R) 7-2-14 to 10-2-14, Exterior(2N) 10-2-14 to 14-5-12 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=1.33
- 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); Pg=30.0 psf; Pf=20.8 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 18 lb uplift at joint 1, 93 lb uplift at joint 11, 147 lb uplift at joint 12, 93 lb uplift at joint 9 and 145 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



March 5, 2025

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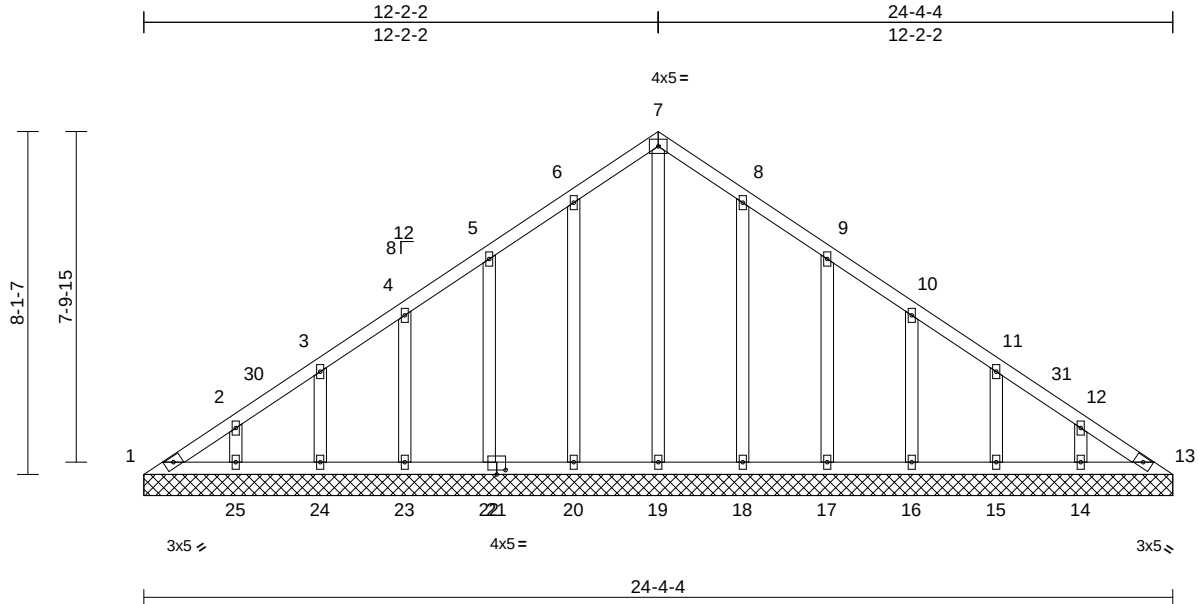
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	SPENCER-Roof	I71811862
25020278-B	V16G	Valley	1	1	Job Reference (optional)	

Carter Components (Chesapeake), Chesapeake, VA - 23323,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Mar 04 15:35:30
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Page: 1



Scale = 1:54.5

Plate Offsets (X, Y): [21:0-2-8,0-1-4]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	n/a	-	n/a	999	244/190
Snow (Pf/Pg)	20.8/30.0	Lumber DOL	1.15	BC	0.04	Vert(TL)	n/a	-	n/a	999	
TCDL	10.0	Rep Stress Incr	YES	WB	0.23	Horiz(TL)	0.01	13	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH							
BCDL	10.0										
Weight: 142 lb FT = 20%											

LUMBER

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

BRACING

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

REACTIONS (size) 1=24-4-4, 13=24-4-4, 14=24-4-4, 15=24-4-4, 16=24-4-4, 17=24-4-4, 18=24-4-4, 19=24-4-4, 20=24-4-4, 22=24-4-4, 23=24-4-4, 24=24-4-4, 25=24-4-4

Max Horiz 1=-265 (LC 9)

Max Uplift 1=-60 (LC 9), 14=-77 (LC 14), 15=-110 (LC 14), 16=-100 (LC 14), 17=-107 (LC 14), 18=-99 (LC 14), 20=-102 (LC 13), 22=-105 (LC 13), 23=-101 (LC 13), 24=-108 (LC 13), 25=-83 (LC 13)

Max Grav 1=129 (LC 23), 13=85 (LC 25), 14=201 (LC 23), 15=179 (LC 23), 16=184 (LC 23), 17=182 (LC 23), 18=191 (LC 23), 19=219 (LC 14), 20=194 (LC 22), 22=180 (LC 22), 23=185 (LC 22), 24=177 (LC 22), 25=207 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-250/213, 2-3=-197/183, 3-4=-154/153, 4-5=-131/155, 5-6=-108/205, 6-7=-152/253, 7-8=-152/253, 8-9=-107/178, 9-10=-71/96, 10-11=-67/56, 11-12=-118/85, 12-13=-183/113

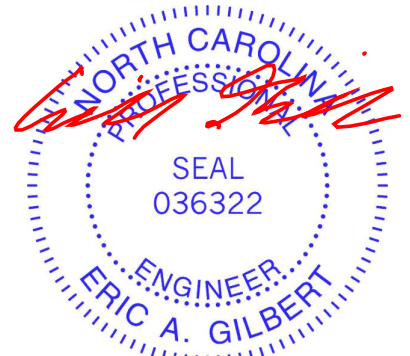
BOT CHORD 1-25=-98/192, 24-25=-98/192, 23-24=-98/192, 22-23=-98/192, 20-22=-98/192, 19-20=-98/192, 18-19=-98/192, 17-18=-98/192, 16-17=-98/192, 15-16=-98/192, 14-15=-98/192, 13-14=-98/192, 7-19=-195/61, 6-20=-167/126, 5-22=-165/129, 4-23=-164/125, 3-24=-164/132, 2-25=-163/116, 8-18=-167/123, 9-17=-165/131, 10-16=-164/124, 11-15=-164/132, 12-14=-163/116

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 C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 0-0-0 to 3-0-0, Exterior(2N) 3-0-0 to 12-2-2, Corner(3R) 12-2-2 to 15-2-2, Exterior(2N) 15-2-2 to 24-4-4 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=1.33
- 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); Pg=30.0 psf; Pf=20.8 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.

- This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 60 lb uplift at joint 1, 102 lb uplift at joint 20, 105 lb uplift at joint 22, 101 lb uplift at joint 23, 108 lb uplift at joint 24, 83 lb uplift at joint 25, 99 lb uplift at joint 18, 107 lb uplift at joint 17, 100 lb uplift at joint 16, 110 lb uplift at joint 15 and 77 lb uplift at joint 14.
- 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



March 5, 2025

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

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

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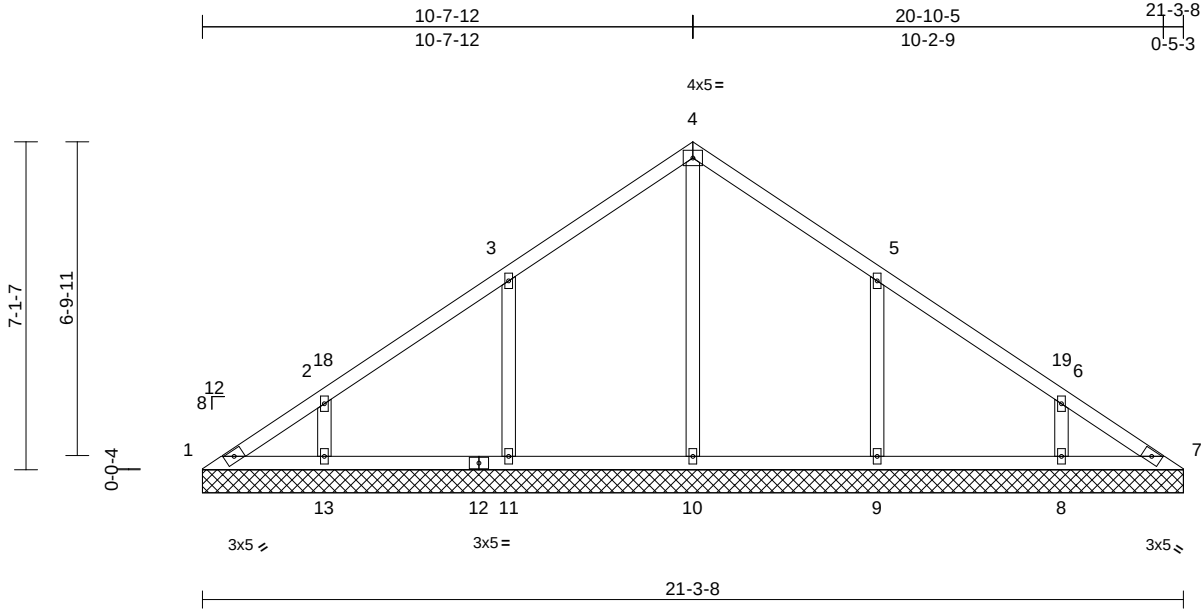
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	SPENCER-Roof	I71811863
25020278-B	V17	Valley	1	1	Job Reference (optional)	

Carter Components (Chesapeake), Chesapeake, VA - 23323,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Mar 04 15:35:30
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Scale = 1:50

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
Snow (Pf/Pg)	20.8/30.0	Lumber DOL	1.15	BC	0.17	Vert(TL)	n/a	-	n/a	999	244/190
TCDL	10.0	Rep Stress Incr	YES	WB	0.18	Horiz(TL)	0.01	7	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH							
BCDL	10.0										
Weight: 93 lb FT = 20%											

LUMBER

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

BRACING

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

REACTIONS

(size)	1=21-3-8, 7=21-3-8, 8=21-3-8, 9=21-3-8, 10=21-3-8, 11=21-3-8, 13=21-3-8
Max Horiz	1=-232 (LC 9)
Max Uplift	1=-51 (LC 9), 8=-160 (LC 14), 9=-232 (LC 14), 11=-231 (LC 13), 13=-164 (LC 13)
Max Grav	1=132 (LC 23), 7=92 (LC 22), 8=371 (LC 23), 9=488 (LC 23), 10=412 (LC 25), 11=488 (LC 22), 13=375 (LC 22)

FORCES

(lb) - Maximum Compression/Maximum Tension

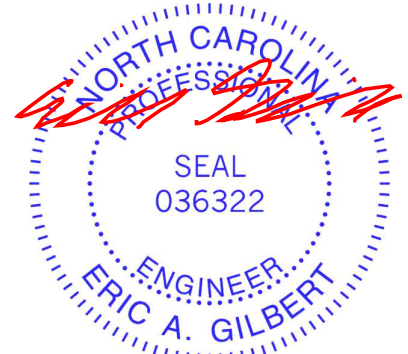
TOP CHORD	1-2=-204/188, 2-3=-166/145, 3-4=-165/227, 4-5=-165/227, 5-6=-100/74, 6-7=-144/99
BOT CHORD	1-13=-80/155, 11-13=-80/155, 10-11=-80/155, 9-10=-80/155, 8-9=-80/155, 7-8=-80/155
WEBS	4-10=-206/0, 3-11=-356/282, 2-13=-283/231, 5-9=-356/282, 6-8=-283/231

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 C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 0-0-6 to 3-0-6, Exterior(2N) 3-0-6 to 10-8-2, Corner(3R) 10-8-2 to 13-8-2, Exterior(2N) 13-8-2 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=1.33
- 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); Pg=30.0 psf; Pf=20.8 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 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 live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- All bearings are assumed to be SP No.2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 51 lb uplift at joint 1, 231 lb uplift at joint 11, 164 lb uplift at joint 13, 232 lb uplift at joint 9 and 160 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



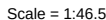
March 5, 2025

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

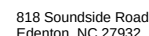
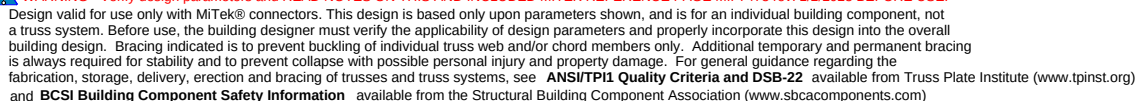
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall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

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Page: 1LOAD CASE(S) Standard

- March 5, 2025

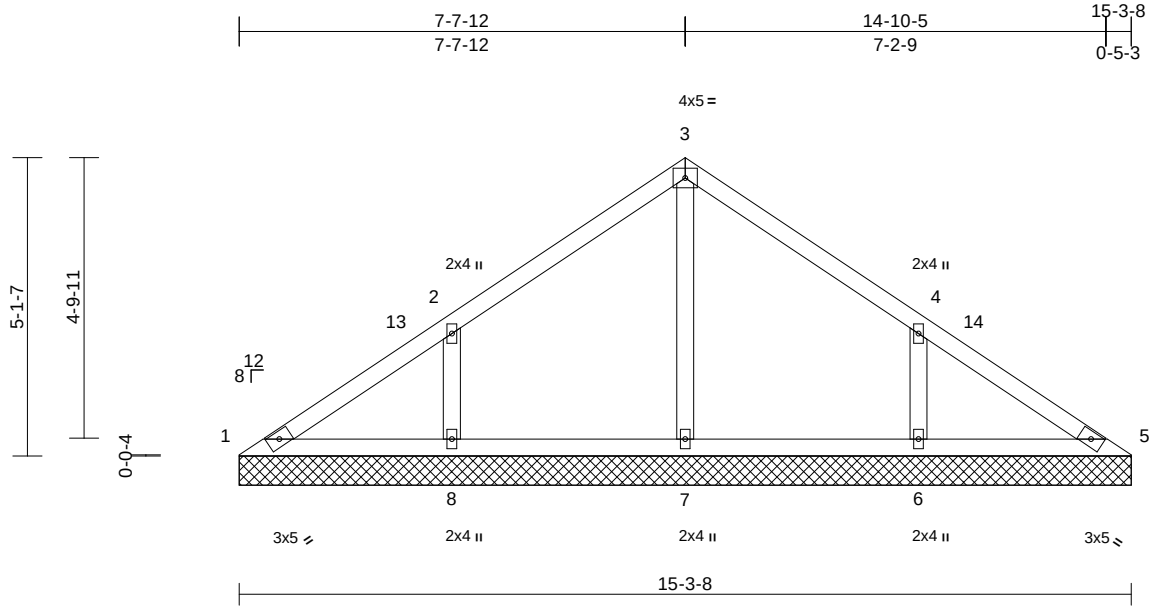


Job	Truss	Truss Type	Qty	Ply	SPENCER-Roof	I71811865
25020278-B	V19	Valley	1	1	Job Reference (optional)	

Carter Components (Chesapeake), Chesapeake, VA - 23323,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Mar 04 15:35:31
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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	0.22	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	20.8/30.0	Lumber DOL	1.15	BC	0.10	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.12	Horiz(TL)	0.00	5	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH							
BCDL	10.0									Weight: 61 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS

(size)	1=15-3-8, 5=15-3-8, 6=15-3-8, 7=15-3-8, 8=15-3-8
Max Horiz	1=165 (LC 10)
Max Uplift	1=-25 (LC 14), 6=-224 (LC 14), 8=-227 (LC 13)
Max Grav	1=113 (LC 23), 5=95 (LC 35), 6=405 (LC 23), 7=336 (LC 1), 8=408 (LC 22)

FORCES

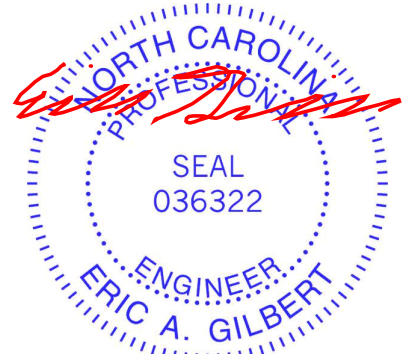
(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-154/180, 2-3=-71/147, 3-4=-67/137, 4-5=-114/131
BOT CHORD	1-8=-89/150, 7-8=-89/150, 6-7=-89/150, 5-6=-89/150
WEBS	3-7=-264/57, 2-8=-350/328, 4-6=-350/328

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 C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 0-0-6 to 3-0-6, Exterior(2N) 3-0-6 to 7-8-2, Corner(3R) 7-8-2 to 10-8-2, Exterior(2N) 10-8-2 to 15-3-14 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=1.33

- 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); Pg=30.0 psf; Pf=20.8 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 25 lb uplift at joint 1, 227 lb uplift at joint 8 and 224 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



March 5, 2025

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

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

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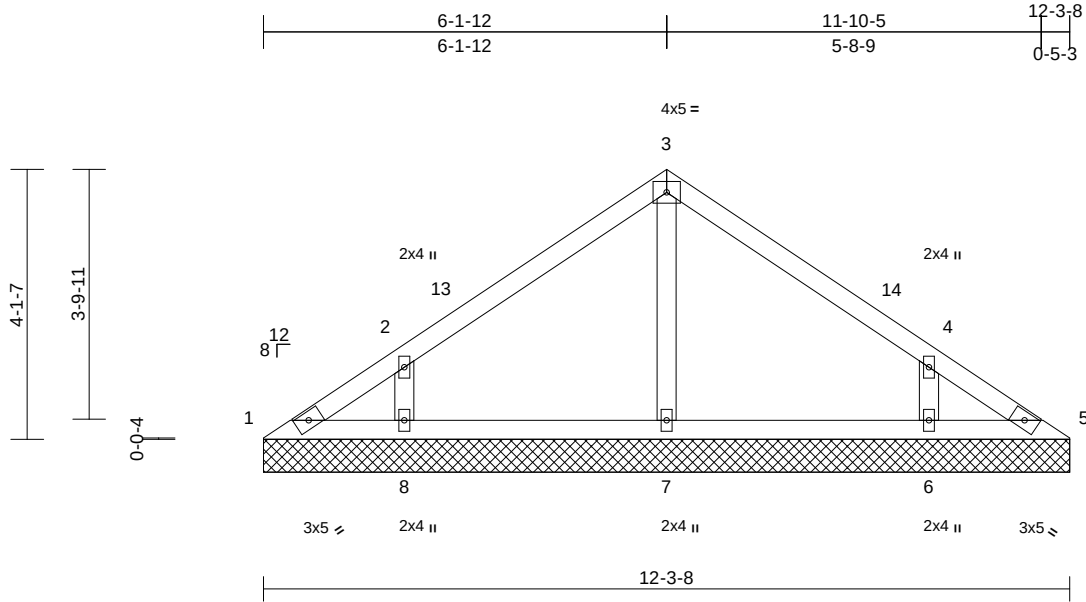
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	SPENCER-Roof	I71811866
25020278-B	V20	Valley	1	1	Job Reference (optional)	

Carter Components (Chesapeake), Chesapeake, VA - 23323,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Mar 04 15:35:31
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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	0.19	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	20.8/30.0	Lumber DOL	1.15	BC	0.09	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.11	Horiz(TL)	0.00	5	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH							
BCDL	10.0									Weight: 47 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS

(size)	1=12-3-8, 5=12-3-8, 6=12-3-8, 7=12-3-8, 8=12-3-8
Max Horiz	1=-132 (LC 9)
Max Uplift	1=-33 (LC 9), 5=-3 (LC 13), 6=-189 (LC 14), 8=-192 (LC 13)
Max Grav	1=87 (LC 23), 5=64 (LC 22), 6=343 (LC 23), 7=270 (LC 1), 8=346 (LC 22)

FORCES

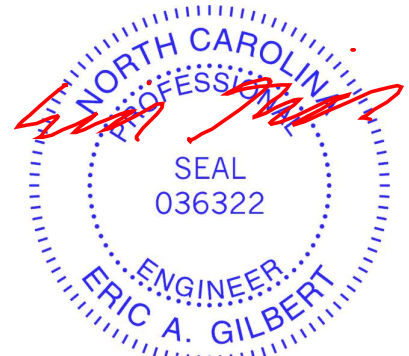
(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-120/113, 2-3=-152/168, 3-4=-152/168, 4-5=-82/62
BOT CHORD	1-8=-37/80, 7-8=-36/79, 6-7=-36/79, 5-6=-36/79
WEBS	3-7=-185/51, 2-8=-343/370, 4-6=-343/370

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 C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 0-0-6 to 3-0-6, Exterior(2N) 3-0-6 to 6-2-2, Corner(3R) 6-2-2 to 9-2-2, Exterior(2N) 9-2-2 to 12-3-14 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=1.33

- 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); Pg=30.0 psf; Pf=20.8 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 33 lb uplift at joint 1, 3 lb uplift at joint 5, 192 lb uplift at joint 8 and 189 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



March 5, 2025

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

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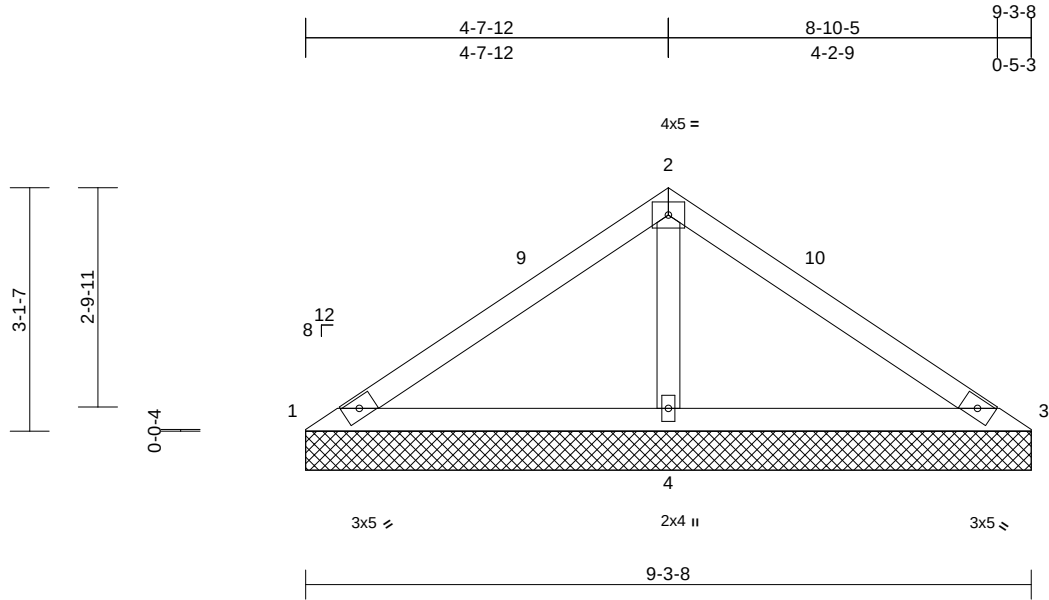
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	SPENCER-Roof	I71811867
25020278-B	V21	Valley	1	1	Job Reference (optional)	

Carter Components (Chesapeake), Chesapeake, VA - 23323,

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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	0.24	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	20.8/30.0	Lumber DOL	1.15	BC	0.31	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.15	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 33 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD	Structural wood sheathing directly applied or 9-3-8 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS

(size)	1=9-3-8, 3=9-3-8, 4=9-3-8
Max Horiz	1=98 (LC 10)
Max Uplift	1=-18 (LC 35), 3=-25 (LC 9), 4=-189 (LC 13)
Max Grav	1=75 (LC 34), 3=75 (LC 35), 4=680 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-229/359, 2-3=-221/359
BOT CHORD	1-4=-295/319, 3-4=-295/319
WEBS	2-4=-655/493

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 C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 0-0-6 to 3-0-6, Exterior(2N) 3-0-6 to 4-8-2, Corner(3R) 4-8-2 to 7-8-2, Exterior(2N) 7-8-2 to 9-3-14 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=1.33
- 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); Pg=30.0 psf; Pf=20.8 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 18 lb uplift at joint 1, 25 lb uplift at joint 3 and 189 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



March 5, 2025

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

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

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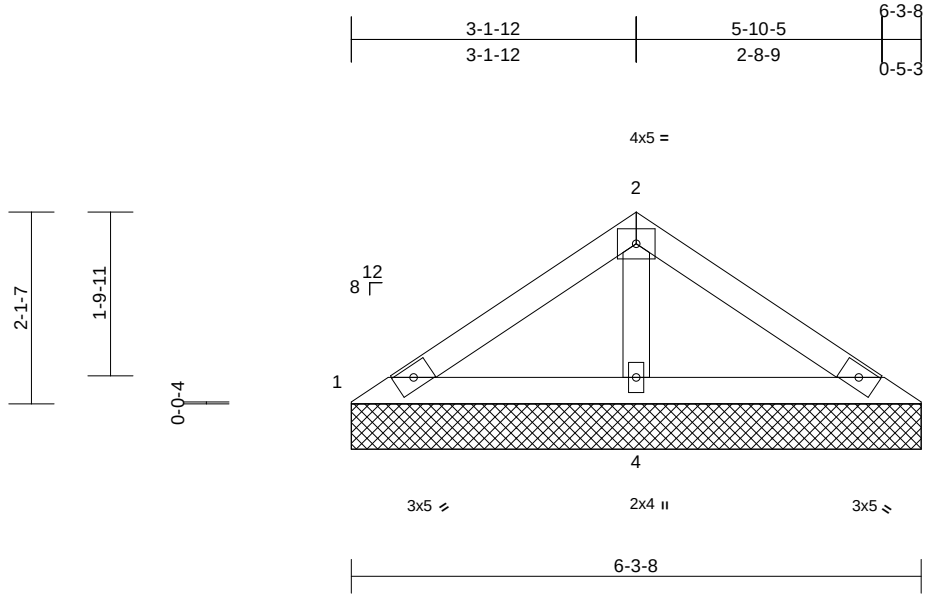
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	SPENCER-Roof	I71811868
25020278-B	V22	Valley	1	1	Job Reference (optional)	

Carter Components (Chesapeake), Chesapeake, VA - 23323,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Mar 04 15:35:31
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Page: 1



Scale = 1:25.4

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.13	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	20.8/30.0	Lumber DOL	1.15	BC	0.20	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.10	Horiz(TL)	0.00	3	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP							
BCDL	10.0									Weight: 21 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 6-3-8 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS

(size)	1=6-3-8, 3=6-3-8, 4=6-3-8
Max Horiz	1=-65 (LC 9)
Max Uplift	1=-10 (LC 13), 3=-21 (LC 14), 4=-108 (LC 13)
Max Grav	1=69 (LC 34), 3=69 (LC 35), 4=411 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-139/189, 2-3=-139/189
BOT CHORD	1-4=-177/244, 3-4=-177/244
WEBS	2-4=-360/337

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 C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 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=1.33
- 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); Pg=30.0 psf; Pf=20.8 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10

- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 10 lb uplift at joint 1, 21 lb uplift at joint 3 and 108 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



March 5, 2025

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

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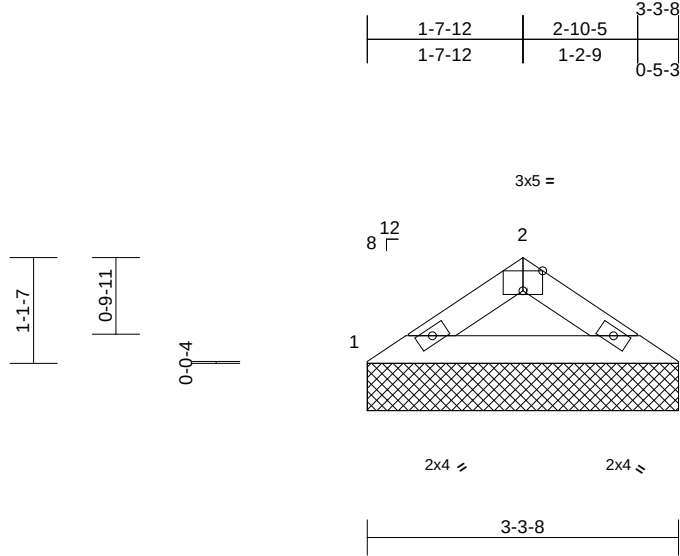
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	SPENCER-Roof	I71811869
25020278-B	V23	Valley	1	1	Job Reference (optional)	

Carter Components (Chesapeake), Chesapeake, VA - 23323,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Mar 04 15:35:31
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Page: 1



Scale = 1:24.4

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.09	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	20.8/30.0	Lumber DOL	1.15	BC	0.08	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0											
											Weight: 9 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-3-8 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=3-3-8, 3=3-3-8
Max Horiz 1=-31 (LC 9)
Max Uplift 1=-34 (LC 13), 3=-34 (LC 14)
Max Grav 1=134 (LC 1), 3=134 (LC 1)

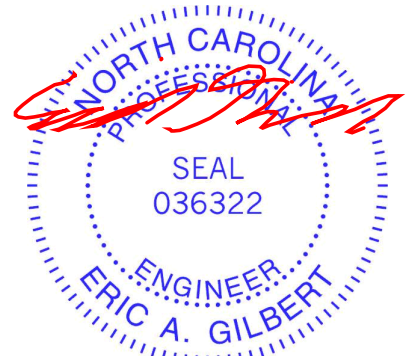
FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-245/216, 2-3=-245/216
BOT CHORD 1-3=-155/192

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 C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 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=1.33
- 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); Pg=30.0 psf; Pf=20.8 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.

- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
 - All bearings are assumed to be SP No.2.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 34 lb uplift at joint 1 and 34 lb uplift at joint 3.
 - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- LOAD CASE(S)** Standard



March 5, 2025

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

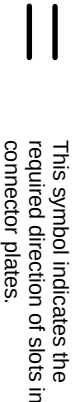
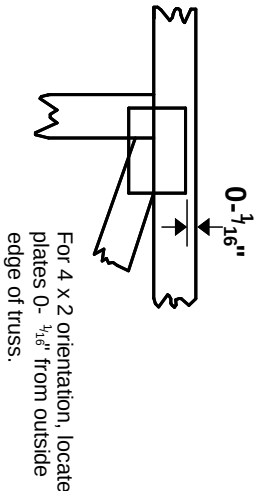
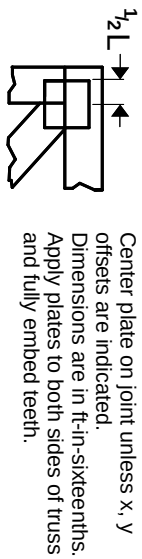
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall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

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Symbols

PLATE LOCATION AND ORIENTATION



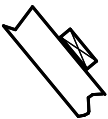
* Plate location details available in MITek software or upon request.

PLATE SIZE

4 X 4

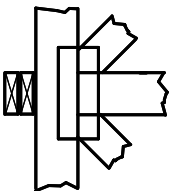
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



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

BEARING

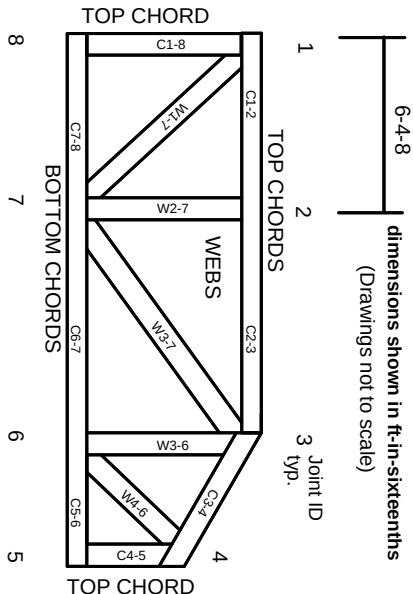


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TP1.1: 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 1 section 6.3. These truss designs rely on lumber values established by others.

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General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

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

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