

RE: 2411-0320-E - Cooper III Rev.4-Elev - 1 / 6-Roof

Trenco

818 Soundside Rd
 Edenton, NC 27932

Site Information:

Project Customer: DRB Raleigh Project Name: DRB Raleigh Model Track

Lot/Block: Subdivision:

Model:

Address:

City: State: NC

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

Design Code: IRC2021/TPI2014

Design Program: MiTek 20/20 8.8

Wind Code: ASCE 7-16

Design Method: MWFRS (Envelope)/C-C hybrid Wind ASCE 7-16

Wind Speed: 120 mph

Floor Load: N/A psf

Roof Load: 40.0 psf

Mean Roof Height (feet): 25

Exposure Category: B

No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	I71681505	A2	2/28/25	35	I71681539	A4A	2/28/25
2	I71681506	A2G	2/28/25	36	I71681540	A4G	2/28/25
3	I71681507	A1	2/28/25	37	I71681541	G2G	2/28/25
4	I71681508	B1	2/28/25	38	I71681542	G2	2/28/25
5	I71681509	A1G	2/28/25	39	I71681543	G2A	2/28/25
6		B1G	2/28/25	40	I71681544	PB4	2/28/25
7	I71681511	A1A	2/28/25	41	I71681545	VB4	2/28/25
8	I71681512	P1	2/28/25		I71681546	VB3	2/28/25
9	I71681513	PB2	2/28/25	43	I71681547	VB2	2/28/25
10	I71681514	PB2G	2/28/25	44	I71681548	VB1	2/28/25
11	I71681515	PB1	2/28/25	45	I71681549	VG4	2/28/25
12	I71681516	PB1G	2/28/25	46	I71681550	PB5	2/28/25
13	I71681517	PB3	2/28/25	47	I71681551	PB5G	2/28/25
14	I71681518	G1A	2/28/25	48	I71681552	A5	2/28/25
	I71681519	V1G	2/28/25	49	I71681553	A5G	2/28/25
16	I71681520	V2	2/28/25	50	I71681554	H1	2/28/25
17	I71681521	V3	2/28/25		I71681555	H1G	2/28/25
18	I71681522	V4	2/28/25	52	I71681556	H2G	2/28/25
19	I71681523	V5	2/28/25	53	I71681557	H2	2/28/25
20	I71681524	V1	2/28/25	54	I71681558	A4T	2/28/25
21	I71681525	M1	2/28/25	55	I71681559	A1C	2/28/25
22	I71681526	G1G	2/28/25	56	I71681560	A1B	2/28/25
23	I71681527	G1	2/28/25	57	I71681561	A2B	2/28/25
	I71681528	A3	2/28/25	58	I71681562	A2C	2/28/25
25	I71681529	A1T	2/28/25	59	I71681563	F1G	2/28/25
26	I71681530	A3G	2/28/25		I71681564	F1	2/28/25
27	I71681531	A2T	2/28/25				
28	I71681532	A2A	2/28/25				
29	I71681533	C1G	2/28/25				
30	I71681534	C1	2/28/25				
31	I71681535	C1A	2/28/25				
32	I71681536	VA2	2/28/25				
	I71681537	VA1	2/28/25				
34	I71681538	A4	2/28/25				

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

Truss Design Engineer's Name: Gilbert, Eric

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

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.



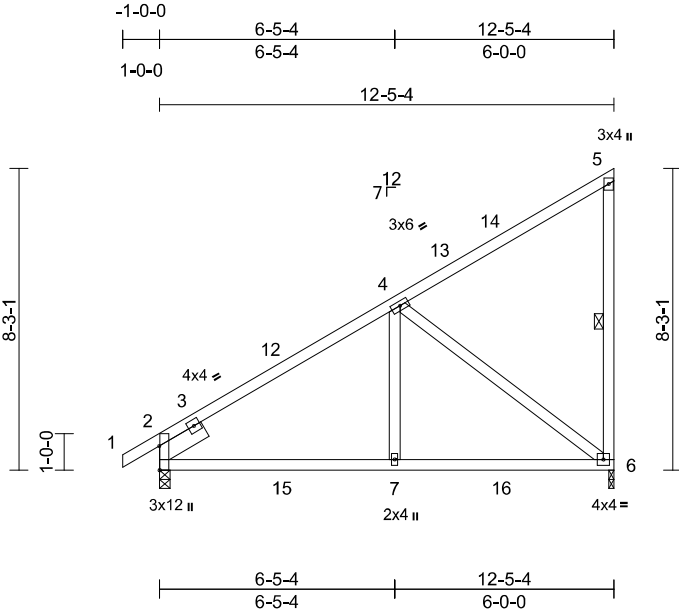
February 28, 2025

Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 1 / 6-Roof	I71681508
	B1	Monopitch	30	1	Job Reference (optional)	

Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Feb 18 2025 Print: 8.830 S Feb 18 2025 MiTek Industries, Inc. Wed Feb 26 19:52:55
ID:PG_85eDjrFYDCiYm7kJD4syAUC2-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:63.1

Plate Offsets (X, Y): [2:0-7-15,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.68	Vert(LL)	-0.12	6-7	>999	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.36	Vert(CT)	-0.15	6-7	>999	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.58	Horz(CT)	0.02	2	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.02	7-10	>999	240		
BCDL	10.0										Weight: 73 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP DSS
WEBS 2x4 SP No.3
SLIDER Left 2x6 SP No.2 – 1-6-0

BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 5-6

REACTIONS (size) 2=0-3-8, 6=0-1-12
Max Horiz 2=196 (LC 15)
Max Uplift 6=-11 (LC 16)
Max Grav 2=554 (LC 2), 6=544 (LC 23)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/41, 2-4=-529/231, 4-5=-161/132, 5-6=-300/99
BOT CHORD 2-7=-362/533, 6-7=-203/533
WEBS 4-7=0/369, 4-6=-576/159

- NOTES**
- Wind: ASCE 7-16; Vult=120mph (3-second gust)
Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 12-3-8 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
 - Unbalanced snow loads have been considered for this design.

- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- Plates checked for a plus or minus 5 degree rotation about its center.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP DSS .
- Provide mechanical connection (by others) of truss to bearing plate at joint(s) 6.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 6. This connection is for uplift only and does not consider lateral forces.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard

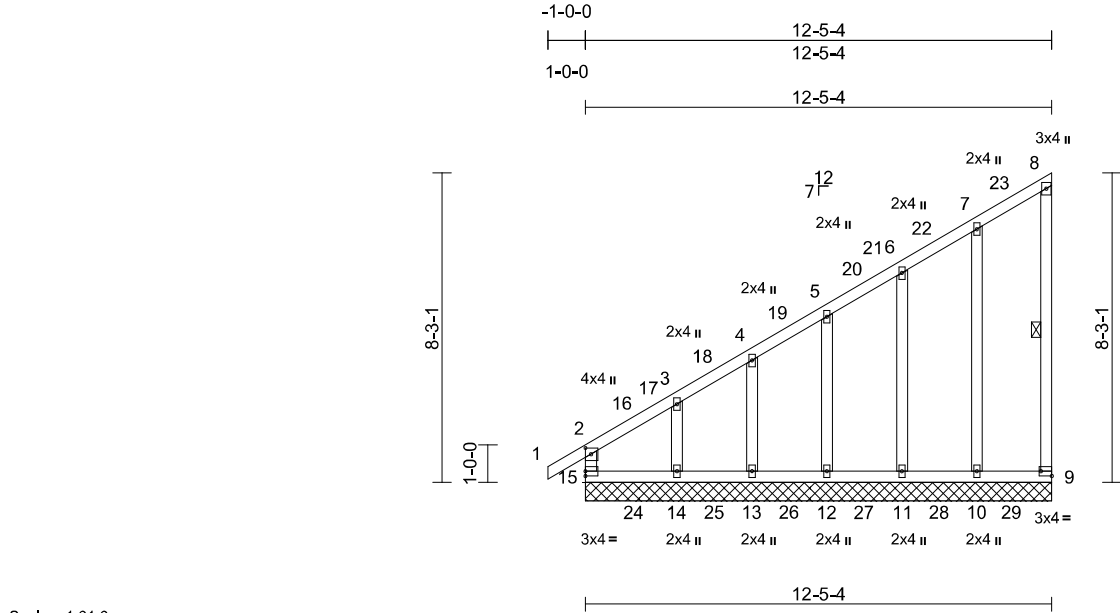


February 28, 2025

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)

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

Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 1 / 6-Roof	I71681510
	B1G	Monopitch Supported Gable	5	1	Job Reference (optional)	



Scale = 1:61.6									
Plate Offsets (X, Y): [2:0-2-0,0-1-12], [9:Edge,0-1-8]									
Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.59	Vert(LL)	n/a	-	n/a
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.25	Vert(CT)	n/a	-	n/a
TCDL	10.0	Rep Stress Incr	YES	WB	0.25	Horz(CT)	0.00	9	n/a
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS					
BCDL	10.0								
					PLATES GRIP				
					MT20 244/190				
					Weight: 85 lb FT = 20%				

LUMBER		1) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Corner (3E) -1-0-0 to 2-0-0, Exterior(2N) 2-0-0 to 12-3-8 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60	13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 33 lb uplift at joint 15, 24 lb uplift at joint 9, 11 lb uplift at joint 10, 7 lb uplift at joint 11, 16 lb uplift at joint 12 and 78 lb uplift at joint 14.
TOP CHORD	2x4 SP No.2	2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.	14) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
BOT CHORD	2x4 SP No.2	3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10	15) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
WEBS	2x4 SP No.3	4) Unbalanced snow loads have been considered for this design.	
OTHERS	2x4 SP No.3	5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.	
BRACING		6) Plates checked for a plus or minus 5 degree rotation about its center.	LOAD CASE(S) Standard
TOP CHORD	Structural wood sheathing directly applied, except end verticals.	7) Gable requires continuous bottom chord bearing.	
BOT CHORD	Rigid ceiling directly applied.	8) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).	
WEBS	1 Row at midpt 8-9	9) Gable studs spaced at 2-0-0 oc.	
REACTIONS	(size)	10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.	
	9=12-5-4, 10=12-5-4, 11=12-5-4, 12=12-5-4, 13=12-5-4, 14=12-5-4, 15=12-5-4	11) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.	
	Max Horiz 15=201 (LC 13)	12) All bearings are assumed to be SP No.2 .	
	Max Uplift 9=-24 (LC 13), 10=-11 (LC 16), 11=-7 (LC 16), 12=-16 (LC 16), 14=-78 (LC 13), 15=-33 (LC 12)		
	Max Grav 9=284 (LC 65), 10=337 (LC 64), 11=332 (LC 63), 12=334 (LC 62), 13=330 (LC 61), 14=343 (LC 60), 15=320 (LC 59)		
FORCES	(lb) - Maximum Compression/Maximum Tension		
TOP CHORD	2-15=-300/150, 1-2=0/47, 2-3=-456/315, 3-4=-336/242, 4-5=-299/228, 5-6=-239/197, 6-7=-188/178, 7-8=-96/110, 8-9=-264/43		
BOT CHORD	14-15=-110/144, 13-14=-110/144, 12-13=-110/144, 11-12=-110/144, 10-11=-110/144, 9-10=-110/144		
WEBS	7-10=-278/159, 6-11=-278/105, 5-12=-281/94, 4-13=-283/71, 3-14=-291/209		
NOTES			

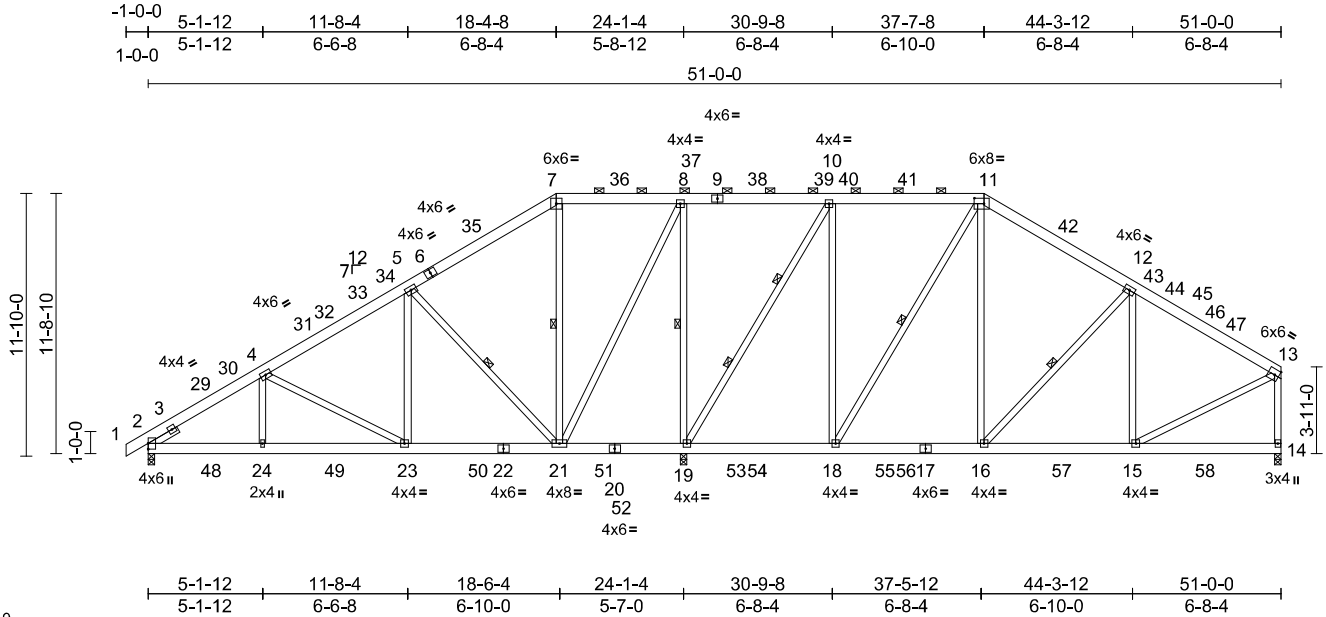


Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 1 / 6-Roof	I71681511
	A1A	Piggyback Base	11	1	Job Reference (optional)	

Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Feb 18 2025 Print: 8.830 S Feb 18 2025 MiTek Industries, Inc. Wed Feb 26 19:52:41
ID:bFWe8TNxnA2q4v43k0QCqyAQoy-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWRCdoi7J4zJC7f

Page: 1



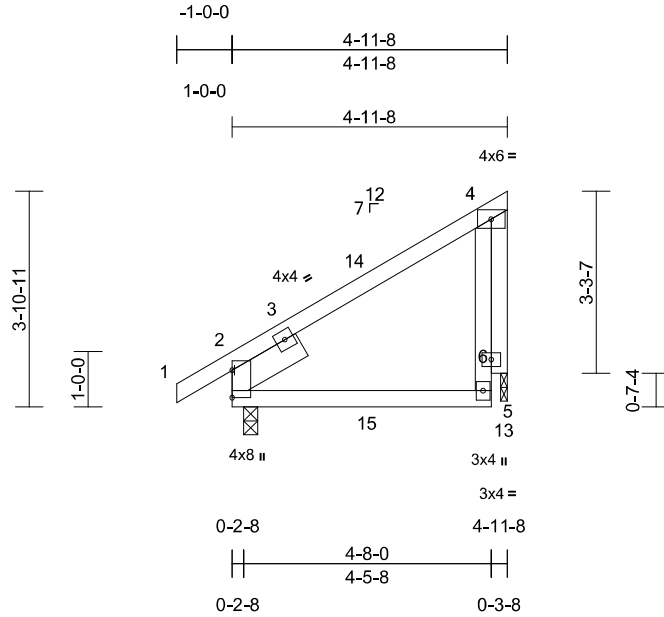
Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 1 / 6-Roof
	P1	Monopitch	20	1	Job Reference (optional)
					I71681512

Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Feb 18 2025 Print: 8.830 S Feb 18 2025 MiTek Industries, Inc. Wed Feb 26 19:53:03

Page: 1

ID:OSB5YkZzx4txW1fXUKym3zzB_t-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCdoi7J4zJC?f



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	0.48	Vert(LL)	-0.03	5-9	>999	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.45	Vert(CT)	-0.04	5-9	>999	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.01	2	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.01	5-9	>999	240		
BCDL	10.0										Weight: 30 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals.

BOT CHORD Rigid ceiling directly applied.

REACTIONS

(size)	2-0-3-0, 13-0-1-8
Max Horiz	2=62 (LC 16)
Max Uplift	13=30 (LC 13)
Max Grav	2=400 (LC 40), 13=305 (LC 42)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/41, 2-4=-161/120, 5-6=-51/292,

4-6=-81/193

BOT CHORD 2-5=-72/86

WEBS 4-13=-223/73

NOTES

- 1) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 4-6-4 zone; cantilever left and right exposed; end vertical left and right exposed; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.

- 5) Plates checked for a plus or minus 5 degree rotation about its center.
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 8) Bearings are assumed to be: Joint 2 SP No.2 , Joint 13 SP No.3 .
- 9) Bearing at joint(s) 13 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 at joint(s) 13.
- 11) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 13. This connection is for uplift only and does not consider lateral forces.
- 12) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 13) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



February 28, 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)

ENGINEERING BY
TRENCO
A MiTek Affiliate

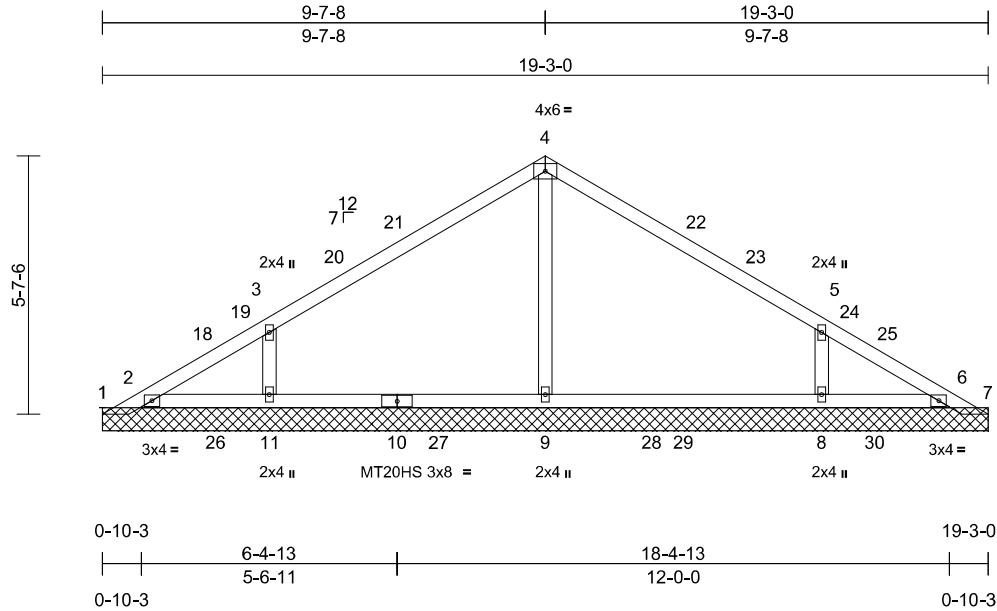
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 1 / 6-Roof	I71681515
	PB1	Piggyback	48	1	Job Reference (optional)	

Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Feb 18 2025 Print: 8.830 S Feb 18 2025 MiTek Industries, Inc. Wed Feb 26 19:53:03
ID:1g_pehrTmPIq7LuwuRQV2cyATvA-RFC?PsB70Hq3NSgPqnL8w3uITXbGKWrcDoi7J4zJC?f

Page: 1



Scale = 1:50.1

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.63	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.70	n/a	-	n/a	999	MT20HS	187/143
TCDL	10.0	Rep Stress Incr	YES	WB	0.17	Horiz(TL)	0.00	7	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS							
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.
BOT CHORD	Rigid ceiling directly applied.

REACTIONS	(size)	1=19-3-0, 2=19-3-0, 6=19-3-0, 7=19-3-0, 8=19-3-0, 9=19-3-0, 11=19-3-0
Max Horiz		1=-87 (LC 12)
Max Uplift		1=-122 (LC 62), 2=-171 (LC 63), 6=-176 (LC 64), 7=-120 (LC 65), 8=-37 (LC 17), 11=-37 (LC 16)
Max Grav		1=276 (LC 44), 2=371 (LC 68), 6=358 (LC 66), 7=279 (LC 60), 8=514 (LC 35), 9=553 (LC 34), 11=514 (LC 34)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-104/96, 2-3=-96/73, 3-4=-157/84, 4-5=-157/81, 5-6=-92/62, 6-7=-71/72
BOT CHORD	2-11=-57/87, 9-11=-16/59, 8-9=-16/59, 6-8=-57/84
WEBS	4-9=-315/26, 3-11=-378/124, 5-8=-378/124

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-3-8 to 3-3-8, Interior (1) 3-3-8 to 9-7-8, Exterior(2R) 9-7-8 to 12-7-8, Interior (1) 12-7-8 to 18-11-8 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=1.60

- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- All plates are MT20 plates unless otherwise indicated.
- Plates checked for a plus or minus 5 degree rotation about its center.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- All bearings are assumed to be SP No.2 .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 122 lb uplift at joint 1 and 120 lb uplift at joint 7.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 11, 8, and 6. This connection is for uplift only and does not consider lateral forces.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard



February 28, 2025

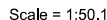
WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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)

ENGINEERING BY
TRENCO
A MiTek Affiliate

818 Soundside Road
Edenton, NC 27932

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Feb 18 2025 Print: 8.830 S Feb 18 2025 MiTek Industries, Inc. Wed Feb 26 19:53:04 Page: 1
ID:TS?fUnlpBF1wyFUxJr0o7yAU T-RfC?PsB70Hq3NSqPanL8w3ujTXbGKWrcDoi7J4zJC?f



LUMBER	
TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.3
OTHERS	2x4 SP No.3
BRACING	
TOP CHORD	Structural wood sheathing directly applied.
BOT CHORD	Rigid ceiling directly applied.
REACTIONS	
(size)	2=17-6-11, 6=17-6-11, 10=17-6-11, 12=17-6-11, 13=17-6-11, 14=17-6-11, 15=17-6-11, 16=17-6-11, 17=17-6-11, 18=17-6-11
Max Horiz	2=87 (LC 15)
Max Uplift	12=15 (LC 17), 13=9 (LC 17), 14=12 (LC 17), 16=12 (LC 16), 17=9 (LC 16), 18=15 (LC 16)
Max Grav	2=312 (LC 65), 6=289 (LC 59), 10=312 (LC 85), 12=366 (LC 83), 13=322 (LC 82), 14=336 (LC 81), 15=292 (LC 80), 16=336 (LC 79), 17=322 (LC 78), 18=366 (LC 77)
FORCES	
	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=0/23, 2-3=-106/79, 3-4=-77/70, 4-5=-77/71, 5-6=-80/100, 6-7=-80/100, 7-8=-77/71, 8-9=-77/70, 9-10=-106/79, 10-11=0/23
BOT CHORD	2-18=-26/74, 17-18=-26/45, 16-17=-26/45, 14-16=-26/45, 13-14=-26/45, 12-13=-26/45, 10-12=-26/74
WEBS	6-15=0/0, 5-16=-284/55, 4-17=-280/41, 3-18=-305/48, 7-14=-284/55, 8-13=-280/41, 9-12=-305/48
NOTES	
1) Unbalanced roof live loads have been considered for this design.	



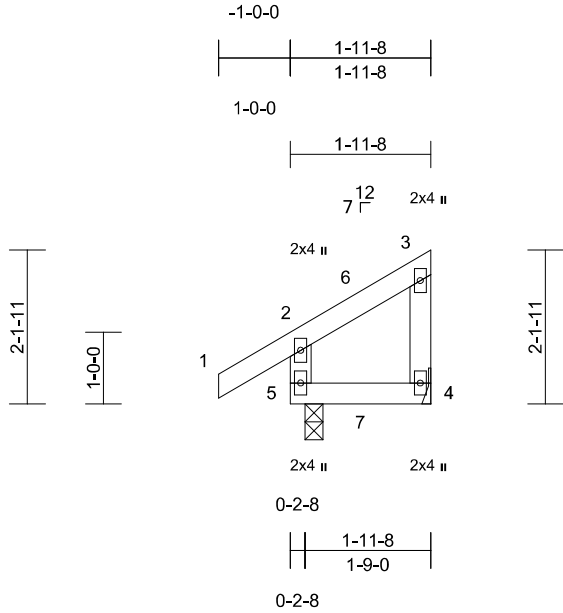
February 28, 2025



Design valid for use only with MiTek® connectors. This design is based only on 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 Components Association (www.sbcacompnents.com)

818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 1 / 6-Roof
	M1	Monopitch	5	1	Job Reference (optional)
					I71681525



Scale = 1:32.2												
Loading (psf)		Spacing 2-0-0		CSI		DEFL in (loc) l/defl L/d					PLATES GRIP	
TCLL (roof) 20.0		Plate Grip DOL 1.15		TC 0.18		Vert(LL) 0.00 4-5 >999 360					MT20 244/190	
Snow (Pf/Pg) 15.4/20.0		Lumber DOL 1.15		BC 0.19		Vert(CT) 0.00 4-5 >999 240						
TCDL 10.0		Rep Stress Incr YES		WB 0.00		Horz(CT) 0.00 4 n/a n/a						
BCLL 0.0*		Code IRC2021/TPI2014		Matrix-MR		Wind(LL) 0.00 4-5 >999 240						
BCDL 10.0											Weight: 11 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 1-11-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 4= Mechanical, 5=0-3-0
Max Horiz 5=49 (LC 13)
Max Uplift 4=-30 (LC 13), 5=-1 (LC 12)
Max Grav 4=278 (LC 42), 5=317 (LC 40)

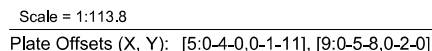
FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/47, 2-3=-97/47, 3-4=-262/60, 2-5=-299/104
BOT CHORD 4-5=-35/32

- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 8) Bearings are assumed to be: Joint 5 SP No.2 .
- 9) Refer to girder(s) for truss to truss connections.
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 30 lb uplift at joint 4 and 1 lb uplift at joint 5.
- 11) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- LOAD CASE(S)** Standard

- NOTES**
- 1) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- 5) Plates checked for a plus or minus 5 degree rotation about its center.




Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Feb 18 2025 Print: 8.830 S Feb 18 2025 MiTek Industries, Inc. Wed Feb 26 19:52:49 Page: 1
ID:eW?e6daPLXKyNUOUDcC2wYyATYH-RfC?PsB70Hg3NSgPqnL8w3u1TXbGKWRcD0i7J4zJC?f



LUMBER		WEBS	4-20=-898/64, 5-20=-104/229, 6-20=-69/1011, 6-19=-2266/0, 6-17=0/1141, 16-17=-589/38, 16-25=-528/79, 7-25=-530/83, 12-13=-262/163, 13-26=-200/204, 9-26=-200/205, 10-12=0/1070, 14-16=0/12, 13-14=0/12, 25-26=-8/7, 1-23=0/1559, 9-25=-16/5, 14-15=0/196, 3-23=-115/220, 3-22=-331/53, 4-22=0/432
TOP CHORD	2x4 SP No.2 *Except* 5-8,8-9:2x4 SP SS		
BOT CHORD	2x4 SP SS		
WEBS	2x4 SP No.3 *Except* 20-5,6-20,6-19,7-17,9-12,25-26:2x4 SP No.2, 24-1:2x6 SP No.2		
BRACING		NOTES	
TOP CHORD	Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 5-9.	1) Unbalanced roof live loads have been considered for this design.	11) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
BOT CHORD	Rigid ceiling directly applied.	2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TC DL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-2-12 to 4-7-0, Interior (1) 4-7-0 to 18-4-8, Exterior(2R) 18-4-8 to 24-6-7, Interior (1) 24-6-7 to 37-7-8, Exterior(2E) 37-7-8 to 43-5-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60	12) Bottom chord live load (20.0 psf) and additional bottom chord dead load (20.0 psf) applied only to room. 15-17, 12-15
WEBS	1 Row at midpt 4-20, 5-20, 25-26, 10-11, 9-25		13) All bearings are assumed to be SP SS .
WEBS	2 Rows at 1/3 pts 6-19		14) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 11.
JOINTS	1 Brace at Jt(s): 25, 26		15) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
REACTIONS	(size) 11=0-1-12, 19=0-3-8, 24=0-3-8 Max Horiz 24=252 (LC 13) Max Grav 11=1336 (LC 59), 19=2229 (LC 50), 24=1388 (LC 57)		16) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
FORCES	(lb) - Maximum Compression/Maximum Tension		17) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
TOP CHORD	1-3=-2089/0, 3-4=-1881/3, 4-5=-1286/74, 5-6=-1012/80, 6-7=-707/17, 7-9=-705/17, 9-10=-872/0, 1-24=-1400/0, 10-11=-1364/0	3) TC LL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0	18) Attic room checked for L/360 deflection.
BOT CHORD	23-24=-295/418, 22-23=-128/1889, 20-22=-116/1641, 19-20=-37/462, 17-19=-37/462, 15-17=0/692, 12-15=0/692, 11-12=-111/119	4) Unbalanced snow loads have been considered for this design.	
		5) 250.0lb AC unit load placed on the bottom chord, 33-4-0	

room checked for L/360 deflection.



SEAL
036322
ENGINEER
ERIC A. GILBERT

February 28, 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/TPH Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbccomponents.com).

ENGINEERING BY
TRENCO
A Mitek Affiliate

818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 1 / 6-Roof
	A3	Attic	6	1	I71681528
Job Reference (optional)					

LOAD CASE(S) Standard

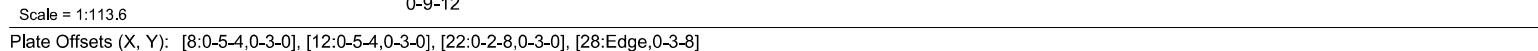
 **WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/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)



818 Soundside Road
Edenton, NC 27932

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Feb 18 2025 Print: 8.830 S Feb 18 2025 MiTek Industries, Inc. Wed Feb 26 19:52:45 Page: 1
ID:bFWe8TNxnA2q4vI43k0QCqyAQov-RfC?PsB70Hg3NSqPnL8w3uJTXbGKWrCDoI7J4zJC?f



LUMBER			WEBS	8-23=0/915, 8-22=-1475/52, 10-19=0/1071, 12-19=-944/10, 12-17=0/664, 13-17=-501/74, 13-16=-189/177, 14-16=0/758, 9-20=-1203/44, 10-20=-1637/20, 7-24=0/571, 7-23=-1066/62, 6-26=0/400, 6-24=-771/42, 4-26=-297/61, 20-22=-937/99, 9-22=-17/895
TOP CHORD	2x6 SP No.2			
BOT CHORD	2x6 SP No.2 *Except* 28-4:2x4 SP No.2, 22-21:2x4 SP No.3			
WEBS	2x4 SP No.3 *Except* 19-12,20-10:2x4 SP No.2			
SLIDER	Left 2x4 SP No.3 -- 1-6-0			
BRACING				
TOP CHORD	Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 8-12,			
BOT CHORD	Rigid ceiling directly applied.			
WEBS	1 Row at midpt 8-22, 12-19, 13-17, 9-20, 7-23			
WEBS	2 Rows at 1/3 pts 10-20			
REACTIONS	(size) 2=0-3-8, 15=0-3-8, 20=0-3-8 Max Horiz 2=214 (LC 15) Max Grav 2=775 (LC 57), 15=1022 (LC 59), 20=2970 (LC 3)			
FORCES	(lb) - Maximum Compression/Maximum Tension			
TOP CHORD	1-2=0/41, 2-4=-1050/28, 4-6=-1408/0, 6-7=-748/66, 7-8=-65/401, 8-9=-2/714, 9-10=0/884, 10-12=-264/227, 12-13=-672/163, 13-14=-922/84, 14-15=-944/34			
BOT CHORD	2-28=-109/746, 27-28=-21/384, 4-27=-6/348, 26-27=-65/1417, 24-26=-19/1290, 23-24=-18/580, 22-23=-278/147, 21-22=-170/62, 20-21=-76/6, 19-20=-208/245, 17-19=0/496, 16-17=0/718, 15-16=-39/64			



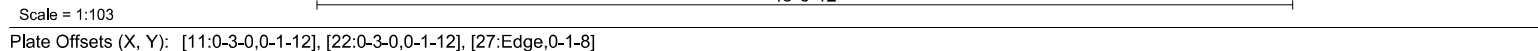
WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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.tpins.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbccomponents.com).

ENGINEERING BY
TRENCO
A MiTek Affiliat

818 Soundside Road
Edenton, NC 27932

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Feb 18 2025 Print: 8.830 S Feb 18 2025 MiTek Industries, Inc. Wed Feb 26 19:52:50 Page: 1
ID:Ji4xyVLKTXKyNltxh nWisvAQ0e-RfC?PsB70Hg3NSaPanL8w3uITXBGKWRCd0i7J4zJC?f



LUMBER		Max Grav	27=275 (LC 160), 28=326 (LC 159), 29=335 (LC 158), 30=332 (LC 157), 31=333 (LC 156), 32=333 (LC 155), 33=333 (LC 154), 34=333 (LC 153), 35=333	WEBS	17-35=-264/35, 15-37=-264/35, 14-38=-264/35, 13-39=-264/43, 12-40=-264/31, 10-41=-267/37, 9-42=-269/64, 8-43=-270/55, 7-44=-278/58, 6-45=-272/59, 5-46=-274/50, 4-47=-282/62,
TOP CHORD	2x4 SP No.2				
BOT CHORD	2x4 SP No.2				
WEBS	2x4 SP No.3				
OTHERS	2x4 SP No.3				

BRACING		(LC 152), 37=333 (LC 151),	3-48=-284/50, 2-49=-290/147,
TOP CHORD	Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 11-22.	38=333 (LC 150), 39=333 (LC 149), 40=333 (LC 148), 41=333 (LC 147), 42=333 (LC 146),	18-34=-264/35, 19-33=-264/35, 20-32=-264/43, 21-31=-264/31, 23-30=-266/35, 24-29=-270/73, 25-28=-262/107
BOT CHORD	Rigid ceiling directly applied.	43=332 (LC 145), 44=336 (LC 144), 45=333 (LC 143), 46=330 (LC 142), 47=334 (LC 141),	
WEBS	1 Row at midpt 26-27, 17-35, 15-37, 14-38, 13-39, 12-40, 10-41, 9-42, 8-43, 18-34, 19-33, 20-32, 21-31, 23-30 24-29 25-28	48=332 (LC 140), 49=339 (LC 139), 50=283 (LC 138)	
		FORCES	NOTES
		(lb) - Maximum Compression/Maximum	1) Unbalanced roof live loads have been considered for this design.

REACTIONS (size)			Tension
	27=43-6-12, 28=43-6-12, 29=43-6-12, 30=43-6-12, 31=43-6-12, 32=43-6-12, 33=43-6-12, 34=43-6-12, 35=43-6-12, 37=43-6-12, 38=43-6-12, 39=43-6-12, 40=43-6-12, 41=43-6-12, 42=43-6-12, 43=43-6-12, 44=43-6-12, 45=43-6-12, 46=43-6-12, 47=43-6-12, 48=43-6-12, 49=43-6-12, 50=43-6-12	TOP CHORD	1-50=-268/160, 1-2=-358/297, 2-3=-273/235, 3-4=-243/221, 4-5=-200/195, 5-7=-173/175, 7-8=-156/183, 8-9=-167/222, 9-10=-193/265, 10-11=-169/228, 11-12=-169/246, 12-13=-169/246, 13-14=-169/246, 14-15=-169/246, 15-17=-169/246, 17-18=-169/246, 18-19=-169/246, 19-20=-169/246, 20-21=-169/246, 21-22=-169/246, 22-23=-169/228, 23-24=-193/265, 24-25=-161/218, 25-26=-182/238, 26-27=-256/207
Max Horiz	50=252 (LC 13)	BOT CHORD	49-50=-111/146, 48-49=-111/146, 47-48=-111/146, 46-47=-111/146, 45-46=-111/146, 44-45=-113/148, 43-44=-113/148, 41-43=-113/148, 40-41=-113/148, 39-40=-113/148, 38-39=-113/148, 37-38=-113/148, 35-37=-113/148, 34-35=-113/148, 33-34=-113/148, 32-33=-113/148, 31-32=-113/148, 30-31=-113/148, 29-30=-113/148, 28-29=-113/148, 27-28=-113/148
Max Uplift	27=-21 (LC 16), 28=-11 (LC 12), 29=-17 (LC 17), 31=-2 (LC 13), 40=-1 (LC 13), 41=-13 (LC 13), 42=-15 (LC 16), 43=-10 (LC 16), 44=-11 (LC 16), 45=-12 (LC 16), 46=-5 (LC 16), 47=-17 (LC 16), 49=-125 (LC 13), 50=-121 (LC 14)		



February 28, 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 on 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 Components Association (www.sbcacompnents.com)

818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 1 / 6-Roof
	A3G	Piggyback Base Supported Gable	1	1	I71681530
Job Reference (optional)					

Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Feb 18 2025 Print: 8.830 S Feb 18 2025 MiTek Industries, Inc. Wed Feb 26 19:52:50
ID:Jj4xyVLkTXkyNltxh_nWisYAQ0e-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrcDoi7J4zJC?f

Page: 2

- 2) Wind: ASCE 7-16; Vult=120mph (3-second gust)
Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Corner (3E) 0-1-12 to 4-6-0, Exterior(2N) 4-6-0 to 18-4-8, Corner(3R) 18-4-8 to 22-8-12, Exterior(2N) 22-8-12 to 37-7-8, Corner(3R) 37-7-8 to 42-0-0, Exterior(2N) 42-0-0 to 43-5-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
- 5) Unbalanced snow loads have been considered for this design.
- 6) Provide adequate drainage to prevent water ponding.
- 7) Plates checked for a plus or minus 5 degree rotation about its center.
- 8) Gable requires continuous bottom chord bearing.
- 9) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 10) Gable studs spaced at 2-0-0 oc.
- 11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 12) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 13) All bearings are assumed to be SP No.2 .
- 14) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 50, 27, 40, 41, 42, 43, 44, 45, 46, 47, 49, 31, 29, and 28. This connection is for uplift only and does not consider lateral forces.
- 15) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 16) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- 17) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

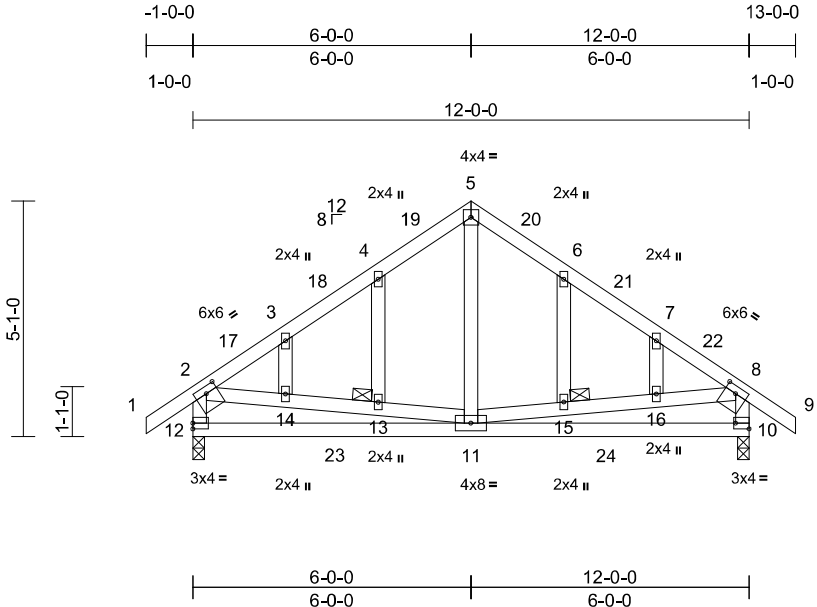
 **WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

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



818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 1 / 6-Roof	I71681533
	C1G	Common Supported Gable	1	1	Job Reference (optional)	



Scale = 1:49.8		Plate Offsets (X, Y): [2:0-3-0,0-1-12], [8:0-3-0,0-1-12], [10:Edge,0-1-8]	
Loading	(psf)	Spacing	2-0-0
TCLL (roof)	20.0	Plate Grip DOL	1.15
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15
TCDL	10.0	Rep Stress Incr	YES
BCLL	0.0 *	Code	IRC2021/TPI2014
BCDL	10.0		
CSI		DEFL	in (loc) l/defl L/d
TC	0.64	Vert(LL)	-0.12 11-12 >999 360
BC	0.76	Vert(CT)	-0.14 11-12 >971 240
WB	0.55	Horz(CT)	0.00 10 n/a n/a
Matrix-AS		Wind(LL)	0.02 11-12 >999 240
		PLATES	GRIP
		MT20	244/190
		Weight: 81 lb	FT = 20%

LUMBER		2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 6-0-0, Exterior(2R) 6-0-0 to 9-0-0, Interior (1) 9-0-0 to 13-0-0 zone; cantilever left and right exposed; end vertical left and right exposed; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60	14) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
TOP CHORD	2x4 SP No.2	3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.	LOAD CASE(S) Standard
BOT CHORD	2x4 SP No.2	4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10	
WEBS	2x4 SP No.3	5) Unbalanced snow loads have been considered for this design.	
OTHERS	2x4 SP No.3	6) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.	
BRACING		7) Plates checked for a plus or minus 5 degree rotation about its center.	
TOP CHORD	Structural wood sheathing directly applied, except end verticals.	8) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).	
BOT CHORD	Rigid ceiling directly applied.	9) Gable studs spaced at 2-0-0 oc.	
JOINTS	1 Brace at Jt(s): 13, 15	10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.	
REACTIONS	(size) 10=0-3-0, 12=0-3-0 Max Horiz 12=95 (LC 15) Max Grav 10=537 (LC 2), 12=537 (LC 2)	11) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.	
FORCES	(lb) - Maximum Compression/Maximum Tension	12) All bearings are assumed to be SP No.2 .	
TOP CHORD	2-12=-479/197, 1-2=0/52, 2-3=-471/162, 3-4=-412/179, 4-5=-400/205, 5-6=-400/205, 6-7=-412/180, 7-8=-471/162, 8-9=0/52, 8-10=-479/197	13) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.	
BOT CHORD	11-12=-116/285, 10-11=-87/285		
WEBS	5-11=-108/305, 2-14=-48/225, 13-14=-56/223, 11-13=-61/228, 11-15=-61/228, 15-16=-56/223, 8-16=-48/225, 4-13=-118/35, 3-14=-75/39, 6-15=-118/35, 7-16=-75/39		
NOTES			
1) Unbalanced roof live loads have been considered for this design.			



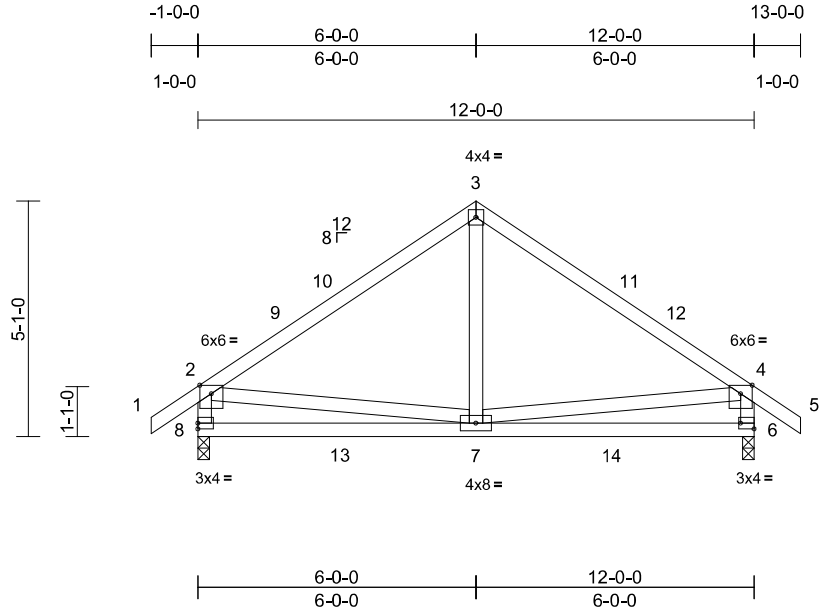
February 28, 2025

Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 1 / 6-Roof	I71681534
	C1	Common	4	1	Job Reference (optional)	

Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Feb 18 2025 Print: 8.830 S Feb 18 2025 MiTek Industries, Inc. Wed Feb 26 19:52:56
ID:HVV5MQfmTnPHdoydAL6hibzjYIA-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrcDoi7J4zJC?f

Page: 1



Scale = 1:49.8												
Plate Offsets (X, Y): [6:Edge,0-1-8]												
Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.80	Vert(LL)	-0.12	6-7	>999	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.76	Vert(CT)	-0.14	6-7	>977	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.12	Horz(CT)	0.00	6	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.02	7-8	>999	240		
BCDL	10.0										Weight: 69 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, except end verticals.
BOT CHORD Rigid ceiling directly applied.

REACTIONS (size) 6=0-3-0, 8=0-3-0
Max Horiz 8=95 (LC 15)
Max Grav 6=537 (LC 2), 8=537 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/52, 2-3=-484/199, 3-4=-484/199, 4-5=0/52, 2-8=-482/198, 4-6=-482/198
BOT CHORD 7-8=-130/323, 6-7=-98/323
WEBS 3-7=-79/314, 2-7=-71/216, 4-7=-71/216

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 6-0-0, Exterior(2R) 6-0-0 to 9-0-0, Interior (1) 9-0-0 to 13-0-0 zone; cantilever left and right exposed; end vertical left and right exposed; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.

- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- Plates checked for a plus or minus 5 degree rotation about its center.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2 .
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



February 28, 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)

ENGINEERING BY
TRENCO
A MiTek Affiliate

818 Soundside Road
Edenton, NC 27932

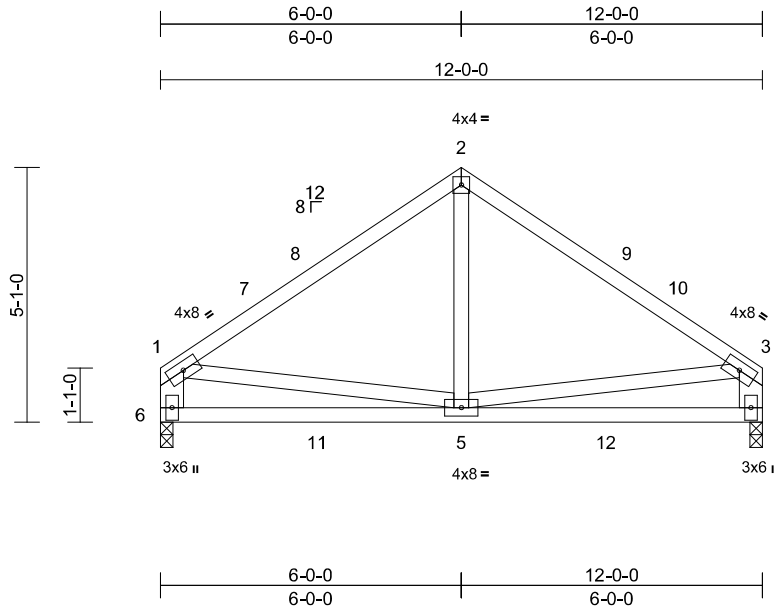
Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 1 / 6-Roof	I71681535
	C1A	Common	1	1	Job Reference (optional)	

Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Feb 18 2025 Print: 8.830 S Feb 18 2025 MiTek Industries, Inc. Wed Feb 26 19:52:56

Page: 1

ID:IIUN3sHITRq1EdLQfYXfGMzjYkN-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrcDoi7J4zJC?f



Scale = 1:46

loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.72	Vert(LL)	-0.11	5-6	>999	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.80	Vert(CT)	-0.13	5-6	>999	240		
TCDL	10.0	Rep Stress Incr	NO	WB	0.36	Horz(CT)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.01	5-6	>999	240		
BCDL	10.0											
											Weight: 66 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 6-1,4-3:2x6 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD Rigid ceiling directly applied.

REACTIONS

(size) 4=0-3-0, 6=0-3-0
Max Horiz 6=83 (LC 52)
Max Uplift 4=-445 (LC 60), 6=-445 (LC 57)
Max Grav 4=766 (LC 43), 6=766 (LC 42)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-1031/738, 2-3=-1031/741,
1-6=-769/555, 3-4=-765/560
BOT CHORD 5-6=-633/742, 4-5=-604/683
WEBS 2-5=0/304, 1-5=-568/690, 3-5=-571/693

NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-2-12 to 3-2-12, Interior (1) 3-2-12 to 6-0-0, Exterior(2R) 6-0-0 to 9-0-0, Interior (1) 9-0-0 to 11-9-4 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=1.60
- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) Plates checked for a plus or minus 5 degree rotation about its center.

- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 8) All bearings are assumed to be SP No.2 .
- 9) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 6 and 4. This connection is for uplift only and does not consider lateral forces.
- 10) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 11) This truss has been designed for a total drag load of 100 plf. Lumber DOL=(1.33) Plate grip DOL=(1.33) Connect truss to resist drag loads along bottom chord from 0-0-0 to 12-0-0 for 100.0 plf.
- 12) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



February 28, 2025

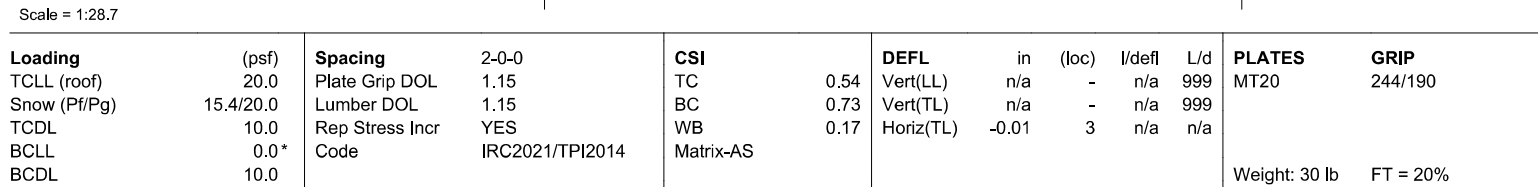
WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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)

ENGINEERING BY
TRENCO
A MiTek Affiliate

818 Soundside Road
Edenton, NC 27932

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Feb 18 2025 Print: 8.830 S Feb 18 2025 MiTek Industries, Inc. Wed Feb 26 19:53:07 Page: 1
ID:ovib|0dpkLZU|jaN57HZWDTz|YmW-RfC?PsB70Hq3N\$QanL8w3u|TXbGKWrCdoiJ4zJC?f



- 5) Unbalanced snow loads have been considered for this design.
- 6) Plates checked for a plus or minus 5 degree rotation about its center.
- 7) Gable requires continuous bottom chord bearing.
- 8) Gable studs spaced at 4'-0" o.c.
- 9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3'-0" tall by 2'-0" wide will fit between the bottom chord and other members.
- 11) All bearings are assumed to be SP No.3 .
- 12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 2 lb uplift at joint 1, 251 lb uplift at joint 3 and 2 lb uplift at joint 1.
- 13) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 14) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard

February 28, 2025

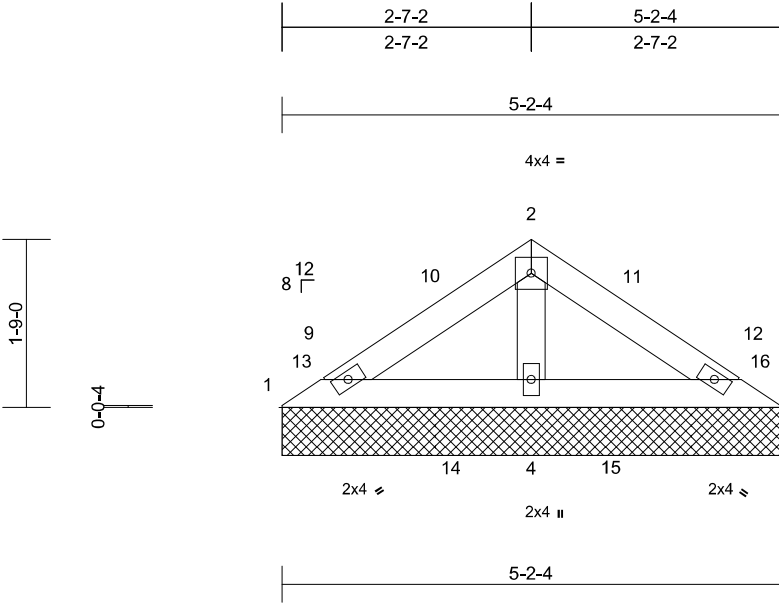


Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall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



818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 1 / 6-Roof	I71681537
	VA1	Valley	1	1	Job Reference (optional)	



Scale = 1:24

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.24	Vert(LL)	n/a	-	n/a	999	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.31	Vert(TL)	n/a	-	n/a	999	
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horiz(TL)	0.00	4	n/a	n/a	
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS							
BCDL	10.0										
										Weight: 17 lb	FT = 20%

LUMBER	
TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.3
OTHERS	2x4 SP No.3
BRACING	
TOP CHORD	Structural wood sheathing directly applied.
BOT CHORD	Rigid ceiling directly applied.
REACTIONS	
(size)	1=5-2-4, 3=5-2-4, 4=5-2-4
Max Horiz	1=-25 (LC 12)
Max Uplift	1=-27 (LC 50), 3=-27 (LC 48)
Max Grav	1=278 (LC 47), 3=278 (LC 51), 4=410 (LC 57)
FORCES	
(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-215/178, 2-3=-215/178
BOT CHORD	1-4=-112/162, 3-4=-112/162
WEBS	2-4=-305/79

- NOTES**
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
 - 4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
 - 5) Unbalanced snow loads have been considered for this design.

- 6) Plates checked for a plus or minus 5 degree rotation about its center.
- 7) Gable requires continuous bottom chord bearing.
- 8) Gable studs spaced at 4-0-0 oc.
- 9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 11) All bearings are assumed to be SP No.3 .
- 12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 27 lb uplift at joint 1 and 27 lb uplift at joint 3.
- 13) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 14) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



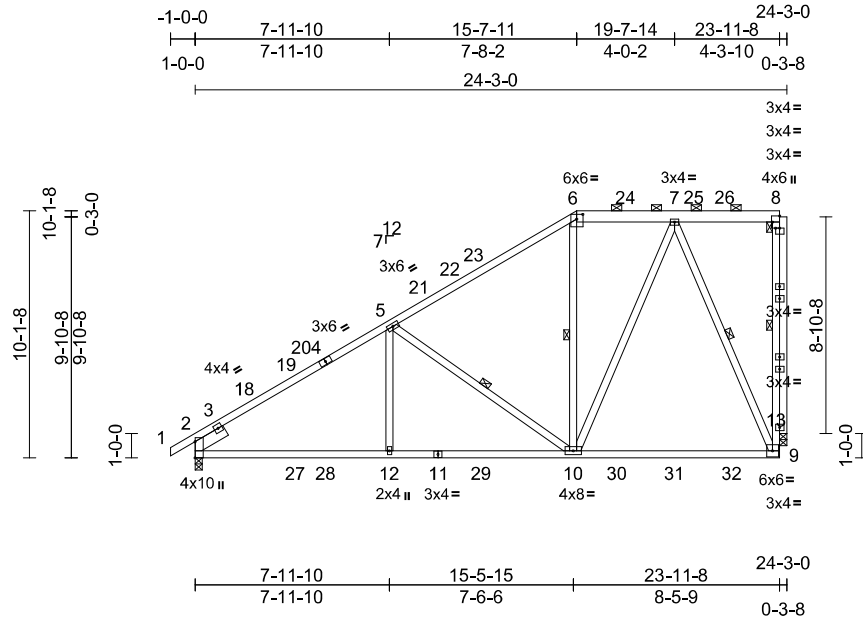
February 28,2025

Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 1 / 6-Roof	I71681538
	A4	Piggyback Base	8	1	Job Reference (optional)	

Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Feb 18 2025 Print: 8.830 S Feb 18 2025 MiTek Industries, Inc. Wed Feb 26 19:52:52
ID:X6fz5k6uCWTC9dlojlyCKbyAQcN-RfC?PsB70Hq3NSgPqnl8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:94.6									
Plate Offsets (X, Y): [6:0-3-0,0-2-5], [8:Edge,0-3-8], [8:0-2-0,0-0-0]									
Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.98	Vert(LL)	-0.28	9-10	>999
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.57	Vert(CT)	-0.38	9-10	>745
TCDL	10.0	Rep Stress Incr	YES	WB	0.59	Horz(CT)	-0.03	2	n/a
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.03	9-10	>999
BCDL	10.0								
Weight: 180 lb FT = 20%									

LUMBER	
TOP CHORD	2x4 SP No.2 *Except* 6-8:2x6 SP No.2
BOT CHORD	2x4 SP SS
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.3
SLIDER	Left 2x6 SP No.2 -- 1-6-0
BRACING	
TOP CHORD	Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 6-8.
BOT CHORD	Rigid ceiling directly applied.
WEBS	1 Row at midpt 8-9, 5-10, 6-10, 7-9
REACTIONS	
(size)	2=0-3-8, 13=0-3-8
Max Horiz	2=243 (LC 15)
Max Grav	2=1241 (LC 50), 13=1128 (LC 43)
FORCES	
(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/41, 2-5=-1758/263, 5-6=-1084/98, 6-7=-830/101, 7-8=-154/152, 9-13=-56/1143, 8-13=-298/56
BOT CHORD	2-12=-335/1550, 10-12=-183/1550, 9-10=-119/508
WEBS	5-12=0/371, 5-10=-840/68, 6-10=-130/155, 7-10=-59/933, 7-9=-1056/104

- NOTES**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 2-4-14, Interior (1) 2-4-14 to 15-7-11, Exterior(2R) 15-7-11 to 20-5-8, Interior (1) 20-5-8 to 23-9-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- Plates checked for a plus or minus 5 degree rotation about its center.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Bearings are assumed to be: Joint 2 SP SS , Joint 13 SP No.3 .
- Bearing at joint(s) 13 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



February 28, 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)

ENGINEERING BY
TRENCO
A MiTek Affiliate

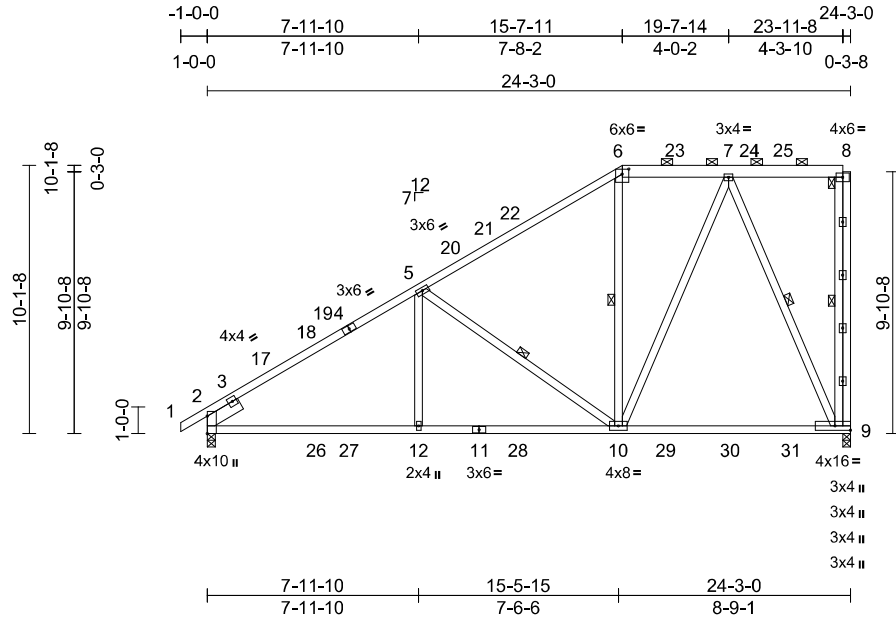
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 1 / 6-Roof	I71681539
	A4A	Piggyback Base	13	1	Job Reference (optional)	

Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Feb 1 2025 Print: 8.830 S Feb 1 2025 MiTek Industries, Inc. Thu Feb 27 14:25:57
ID:X6fz5k6uCWTC9dJlyCKbyAQcN-ak_8cd3YUaMe0xOtJxOx62di?mhQqJ017GS?1bzgvge

Page: 1



Scale = 1:87

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.90	Vert(LL)	-0.28	9-10	>999	360	MT20	244/190
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.57	Vert(CT)	-0.38	9-10	>747	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.52	Horz(CT)	-0.03	2	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.03	9-10	>999	240		
BCDL	10.0											
Weight: 181 lb											FT = 20%	

LUMBER

TOP CHORD 2x4 SP No.2 *Except* 6-8:2x6 SP No.2
BOT CHORD 2x4 SP SS
WEBS 2x4 SP No.3
SLIDER Left 2x6 SP No.2 -- 1-6-0

BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 6-8.

BOT CHORD Rigid ceiling directly applied.

WEBS 1 Row at midpt 8-9, 5-10, 6-10, 7-9

REACTIONS (lb/size) 2=914/0-3-8, 9=925/0-3-8
Max Horiz 2=243 (LC 15)
Max Grav 2=1250 (LC 42), 9=1149 (LC 39)

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

TOP CHORD 2-3=-634/263, 3-17=-1630/0, 17-18=-1599/0, 18-19=-1548/0, 4-19=-1546/0, 4-5=-1458/12, 5-20=-964/56, 20-21=-859/68, 21-22=-823/74, 6-22=-822/97, 6-23=-710/100, 7-23=-711/100, 8-9=-300/50

BOT CHORD 2-26=-336/1417, 26-27=-186/1417, 12-27=-186/1417, 11-12=-186/1417, 11-28=-186/1417, 10-28=-186/1417, 10-29=-124/408, 29-30=-124/408, 30-31=-124/408, 9-31=-124/408

WEBS 5-12=0/370, 5-10=-822/69, 7-10=-54/891, 7-9=-910/113

NOTES

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

- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 2-4-14, Interior (1) 2-4-14 to 15-7-11, Exterior(2R) 15-7-11 to 20-5-8, Interior (1) 20-5-8 to 24-1-4 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=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0; Min. flat roof snow load governs. Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- Plates checked for a plus or minus 5 degree rotation about its center.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

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

LOAD CASE(S) Standard



February 28, 2025

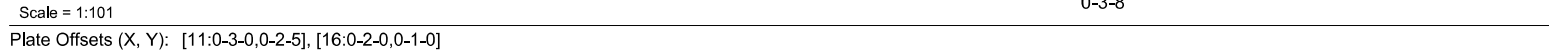
WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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)

ENGINEERING BY
TRENCO
A MiTek Affiliate

818 Soundside Road
Edenton, NC 27932

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Feb 18 2025 Print: 8.830 S Feb 18 2025 MiTek Industries, Inc. Wed Feb 26 19:52:53 Page: 1
ID:edDe3RcDvYg7BT2hCWrvI5yATeh-RfC?PsB70Hg3NSgPqnL8w3uITXbGKWRcDoi7J4zJC?f




LUMBER		TOP CHORD	2x4 SP No.2 *Except* 11-16:2x6 SP No.2	TOP CHORD	2-30=-300/196, 1-2=50/51, 2-3=-450/369, 3-4=-345/293, 4-5=-320/283, 5-7=-277/257, 7-8=-238/235, 8-9=-198/211, 9-10=-159/191, 10-11=-158/191, 11-12=-139/176, 12-13=-141/181, 13-14=-141/181, 14-15=-141/181, 15-16=-141/181, 17-31=0/0, 16-31=-257/156	5)	Unbalanced snow loads have been considered for this design.
BRACING		BOT CHORD	2x4 SP No.2	BOT CHORD	29-30=-125/160, 28-29=-125/160, 27-28=-125/160, 25-27=-125/160, 24-25=-125/160, 23-24=-125/160, 22-23=-125/160, 21-22=-125/160, 20-21=-125/160, 19-20=-125/160, 18-19=-125/160, 17-18=-125/160	6)	This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
		WEBS	2x6 SP No.2 *Except* 16-17:2x4 SP No.3	WEBS	15-18=-216/92, 14-19=-231/40, 13-20=-233/49, 12-21=-257/87, 10-22=-263/71, 9-23=-273/64, 8-24=-275/56, 7-25=-278/55, 5-27=-281/63, 4-28=-285/49, 3-29=-285/184	7)	Provide adequate drainage to prevent water ponding.
		OTHERS	2x4 SP No.3			8)	Plates checked for a plus or minus 5 degree rotation about its center.
TOP CHORD			Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 11-16.			9)	Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
BOT CHORD			Rigid ceiling directly applied.			10)	Gable studs spaced at 2-0-0 oc.
WEBS			1 Row at midpt 16-17, 15-18, 14-19, 13-20, 12-21, 10-22			11)	This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
REACTIONS			(size) 17=23-11-8, 18=23-11-8, 19=23-11-8, 20=23-11-8, 21=23-11-8, 22=23-11-8, 23=23-11-8, 24=23-11-8, 25=23-11-8, 27=23-11-8, 28=23-11-8, 29=23-11-8, 30=23-11-8, 31=0-3-8	WEBS		12)	* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
			Max Horiz 30=247 (LC 13)			13)	Bearings are assumed to be: Joint 29 SP No.2 , Joint 31 SP No.3 .
			Max Uplift 17=-43 (LC 15), 19=-6 (LC 13), 20=-6 (LC 12), 21=-19 (LC 13), 22=-1 (LC 13), 23=-13 (LC 16), 24=-10 (LC 16), 25=-9 (LC 16), 27=-16 (LC 16), 29=-117 (LC 13), 30=-62 (LC 12), 31=-60 (LC 12)			14)	Bearing at joint(s) 31 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
			Max Grav 17=265 (LC 114), 18=325 (LC 113), 19=335 (LC 112), 20=332 (LC 111), 21=334 (LC 110), 22=332 (LC 109), 23=333 (LC 108), 24=333 (LC 107), 25=322 (LC 106), 27=333 (LC 105), 28=333 (LC 104), 29=332 (LC 103), 30=319 (LC 102), 31=257 (LC 77)				
FORCES			(lb) - Maximum Compression/Maximum Tension	NOTES			
				1)	Unbalanced roof live loads have been considered for this design.		
				2)	Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDD=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Corner (3E) -1-0-0 to 2-3-0, Exterior(2N) 2-3-0 to 15-7-11, Corner(3R) 15-7-11 to 19-0-9, Exterior(2N) 19-0-9 to 23-9-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60		
				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=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0		

Continued on page 2

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

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



818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 1 / 6-Roof
	A4G	Piggyback Base Supported Gable	2	1	I71681540
					Job Reference (optional)

- 15) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 43 lb uplift at joint 17.
- 16) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 30, 31, 19, 20, 21, 22, 23, 24, 25, 27, and 29. This connection is for uplift only and does not consider lateral forces.
- 17) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 18) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- 19) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

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

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



818 Soundside Road
Edenton, NC 27932

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Feb 18 2025 Print: 8.830 S Feb 18 2025 MiTek Industries, Inc. Wed Feb 26 19:53:00 Page: 1
ID:mxq81MBDPZmru0edJruKqeziYAL-RfC?PsB70Hg3NSqPqnL8w3uITXbGKWCrDoi7J4zJC?f



Plate Offsets (X, Y): [2:0-2-14,0-2-0], [6:0-4-4,0-2-0], [9:0-4-4,0-2-0], [13:0-2-14,0-2-0]

LUMBER		BOT CHORD	28-29=-222/242, 27-28=-222/242, 24-27=-19/242, 22-24=-19/242, 18-22=-13/242, 17-18=-13/242, 16-17=-80/111, 15-16=-80/111, 23-26=-27/18, 21-23=-10/153, 20-21=-10/153, 19-20=-27/22	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.
TOP CHORD	2x4 SP No.2		2-41=-23/890, 27-41=-24/952, 26-27=-490/105, 26-35=-425/119, 3-35=-375/132, 17-19=-491/107, 19-34=-427/122, 12-34=-375/132, 17-39=-20/947, 13-39=-19/886, 5-32=0/400, 30-32=-113/142, 30-37=-104/155, 36-37=-104/155, 31-36=-104/155, 31-33=-113/142, 10-33=0/400, 21-22=-185/0, 18-20=-273/0, 23-24=-273/0, 23-27=-28/283, 22-23=-8/123, 20-22=-14/124, 17-20=-18/280, 6-30=-169/163, 9-31=-169/163, 35-43=-376/0, 32-43=-349/5, 33-40=-349/4, 34-40=-376/0, 34-38=-306/4, 13-38=-274/3, 2-42=-274/5, 35-42=-306/8, 8-36=-125/44, 7-37=-125/44, 38-39=-70/5, 16-39=-139/0, 11-40=-104/38, 41-42=-70/5, 28-41=-139/2, 4-43=-104/38	
BOT CHORD	2x4 SP No.2			4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
WEBS	2x4 SP No.3 *Except* 3-27,12-17,5-10:2x4 SP No.2	WEBS		
OTHERS	2x4 SP No.3			5) Unbalanced snow loads have been considered for this design.
BRACING				6) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
TOP CHORD	Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 6-9.			7) Provide adequate drainage to prevent water ponding.
BOT CHORD	Rigid ceiling directly applied.			8) Plates checked for a plus or minus 5 degree rotation about its center.
JOINTS	1 Brace at Jt(s): 36, 37, 38, 39, 41, 42			9) Gable requires continuous bottom chord bearing.
REACTIONS				10) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
(size)	15=20-0-0, 16=20-0-0, 17=20-0-0, 18=20-0-0, 22=20-0-0, 24=20-0-0, 27=20-0-0, 28=20-0-0, 29=20-0-0			11) Gable studs spaced at 2-0-0 oc.
Max Horiz	29=-238 (LC 14)			12) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
Max Uplift	15=-2 (LC 13), 16=-24 (LC 98), 17=-555 (LC 45), 27=-555 (LC 45), 28=-26 (LC 94), 29=-7 (LC 12)			
Max Grav	15=1156 (LC 46), 16=333 (LC 110), 17=143 (LC 13), 18=467 (LC 23), 22=363 (LC 23), 24=467 (LC 23), 27=124 (LC 12), 28=333 (LC 103), 29=1156 (LC 46)			
FORCES				
(lb) - Maximum Compression/Maximum Tension				
TOP CHORD	2-29=-1139/19, 1-2=0/72, 2-3=-327/38, 3-4=-354/103, 4-5=-357/120, 5-6=-666/60, 6-7=-592/56, 7-8=-592/56, 8-9=-592/56, 9-10=-666/60, 10-11=-357/121, 11-12=-355/103, 12-13=-327/38, 13-14=0/72, 13-15=-1134/13			
		NOTES		
		1) Unbalanced roof live loads have been considered for this design.		
		2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCdL=6.0psf; BCdL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Corner (3E) 1-0-0 to 2-0-0, Exterior(2N) 2-0-0 to 7-0-0, Corner (3R) 7-0-0 to 10-0-0, Exterior(2N) 10-0-0 to 13-0-0, Corner(3R) 13-0-0 to 16-0-0, Exterior(2N) 16-0-0 to 21-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60		

Continued on page 2

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

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



818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 1 / 6-Roof
	G2G	Attic Supported Gable	3	1	I71681541
			Job Reference (optional)		

- 13) * 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.
- 14) Ceiling dead load (10.0 psf) on member(s). 5-32, 30-32, 30-37, 36-37, 31-36, 31-33, 10-33
- 15) All bearings are assumed to be SP No.2 .
- 16) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 7 lb uplift at joint 29, 2 lb uplift at joint 15, 555 lb uplift at joint 27, 555 lb uplift at joint 17, 24 lb uplift at joint 16 and 26 lb uplift at joint 28.
- 17) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 18) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- 19) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 20) Attic room checked for L/360 deflection.

LOAD CASE(S) Standard

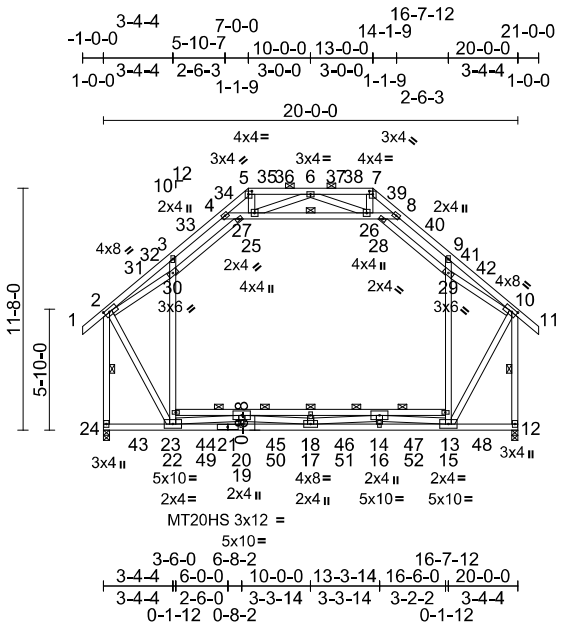
 **WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

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



818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 1 / 6-Roof	I71681542
	G2	Attic	6	1	Job Reference (optional)	



Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 1 / 6-Roof
	G2	Attic	6	1	I71681542
Job Reference (optional)					

- 16) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 17) Attic room checked for L/360 deflection.
- LOAD CASE(S)** Standard

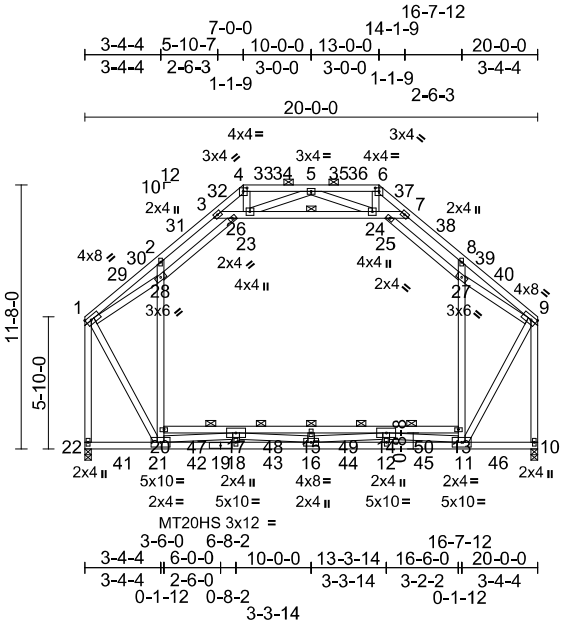
 **WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

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



818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 1 / 6-Roof	I71681543
	G2A	Attic	24	1	Job Reference (optional)	



Scale = 1:101.9									
Plate Offsets (X, Y): [4:0-2-0,0-1-13], [6:0-2-0,0-1-13]									
Loading		(psf)	Spacing		2-0-0	CSI		DEFL	
TCLL (roof)		20.0	Plate Grip DOL		1.15	TC		in	(loc)
Snow (Pf/Pg)		20.4/20.0	Lumber DOL		1.15	BC		l/defl	L/d
TCDL		10.0	Rep Stress Incr		YES	WB		Vert(LL)	-0.30
BCLL		0.0*	Code		IRC2021/TPI2014	Matrix-AS		Vert(CT)	-0.48
BCDL		10.0						Horz(CT)	0.05
								Wind(LL)	-0.05
								18-21	>999
								240	
								Weight: 211 lb FT = 20%	

LUMBER		WEBS		20-21=-445/171, 20-28=-404/201, 2-28=-333/197, 11-13=-445/168, 13-27=-404/198, 8-27=-333/197, 3-26=-626/285, 23-26=-553/165, 23-24=-328/347, 24-25=-553/165, 7-25=-624/285, 4-23=-80/285, 6-24=-78/284, 5-23=-457/206, 5-24=-457/207, 25-27=-480/452, 26-28=-480/456, 9-27=-332/352, 1-28=-332/358, 15-16=-324/0, 12-14=-64/229, 17-18=-59/229, 17-21=-2735/0, 16-17=0/1014, 14-16=0/1014, 11-14=-2735/0, 1-21=0/1237, 9-11=0/1238		9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.	
TOP CHORD		2x4 SP No.2				10) Ceiling dead load (10.0 psf) on member(s), 2-3, 7-8, 3-26, 23-26, 23-24, 24-25, 7-25	
BOT CHORD		2x4 SP SS *Except* 20-13:2x4 SP No.2				11) Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 17-20, 15-17, 14-15, 13-14	
WEBS		2x4 SP No.3 *Except* 2-21,8-11,3-7:2x4 SP No.2, 22-1,10-9:2x4 SP SS				12) All bearings are assumed to be SP SS .	
BRACING				NOTES		13) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.	
TOP CHORD		Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-6.		1) Unbalanced roof live loads have been considered for this design.		14) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.	
BOT CHORD		Rigid ceiling directly applied.		2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-1-12 to 3-4-4, Interior (1) 3-4-4 to 7-0-0, Exterior(2R) 7-0-0 to 11-2-15, Interior (1) 11-2-15 to 13-0-0, Exterior(2R) 13-0-0 to 17-2-15, Interior (1) 17-2-15 to 19-10-4 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=1.60		15) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.	
WEBS		1 Row at midpt 3-7		3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0		16) Attic room checked for L/360 deflection.	
REACTIONS		(size) 10=0-3-8, 22=0-3-8		4) Unbalanced snow loads have been considered for this design.			
		Max Horiz 22=-223 (LC 12)		5) Provide adequate drainage to prevent water ponding.			
		Max Grav 10=1548 (LC 51), 22=1548 (LC 51)		6) All plates are MT20 plates unless otherwise indicated.			
FORCES		(lb) - Maximum Compression/Maximum Tension		7) Plates checked for a plus or minus 5 degree rotation about its center.			
TOP CHORD		1-2=-1199/203, 2-3=-1076/324, 3-4=-598/156, 4-5=-496/135, 5-6=-496/134, 6-7=-598/154, 7-8=-1072/318, 8-9=-1193/191, 1-22=-1697/0, 9-10=-1700/0		8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.			
BOT CHORD		21-22=-225/253, 18-21=0/2969, 16-18=0/2969, 12-16=0/2969, 11-12=0/2969, 10-11=-78/86, 17-20=-32/218, 15-17=-3495/0, 14-15=-3495/0, 13-14=-40/223					

Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 1 / 6-Roof
	G2A	Attic	24	1	I71681543
Job Reference (optional)					

LOAD CASE(S) Standard

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

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



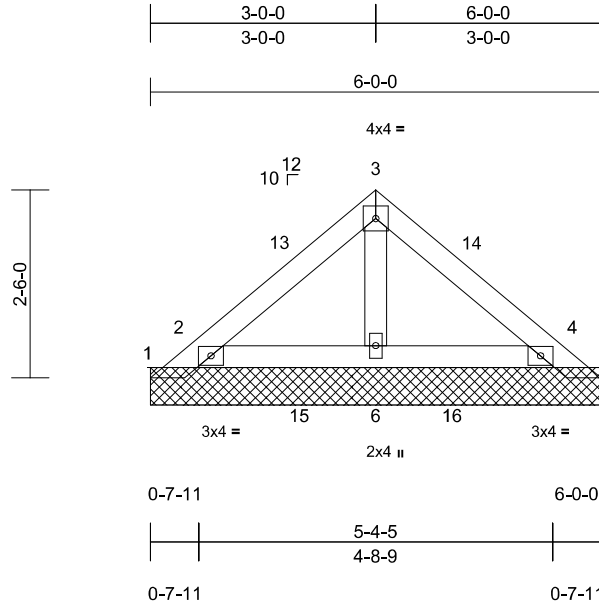
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 1 / 6-Roof	I71681544
	PB4	Piggyback	33	1	Job Reference (optional)	

Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Feb 18 2025 Print: 8.830 S Feb 18 2025 MiTek Industries, Inc. Wed Feb 26 19:53:05
ID:3eWpRgvucucx44nOV86Asy5zjYOv-RfC?PsB70Hq3NSgPqnL8w3uITXbGKwRCDoi7J4zJC?f

Page: 1



Scale = 1:30.7

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.22	Vert(LL)	n/a	-	n/a	999	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.20	Vert(TL)	n/a	-	n/a	999	
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horiz(TL)	0.00	10	n/a	n/a	
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS							
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.
BOT CHORD	Rigid ceiling directly applied.

REACTIONS	(size)	1=6-0-0, 2=6-0-0, 4=6-0-0, 5=6-0-0, 6=6-0-0
	Max Horiz	1=-37 (LC 14)
	Max Uplift	1=-210 (LC 46), 2=-24 (LC 16), 4=-20 (LC 17), 5=-208 (LC 47)
	Max Grav	1=222 (LC 44), 2=456 (LC 62), 4=446 (LC 60), 5=224 (LC 56), 6=328 (LC 63)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-54/147, 2-3=-157/86, 3-4=-157/85, 4-5=-37/146
BOT CHORD	2-6=-79/55, 4-6=-80/55
WEBS	3-6=-196/3

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Plates checked for a plus or minus 5 degree rotation about its center.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2 .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 210 lb uplift at joint 1 and 208 lb uplift at joint 5.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 4. This connection is for uplift only and does not consider lateral forces.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard



February 28, 2025

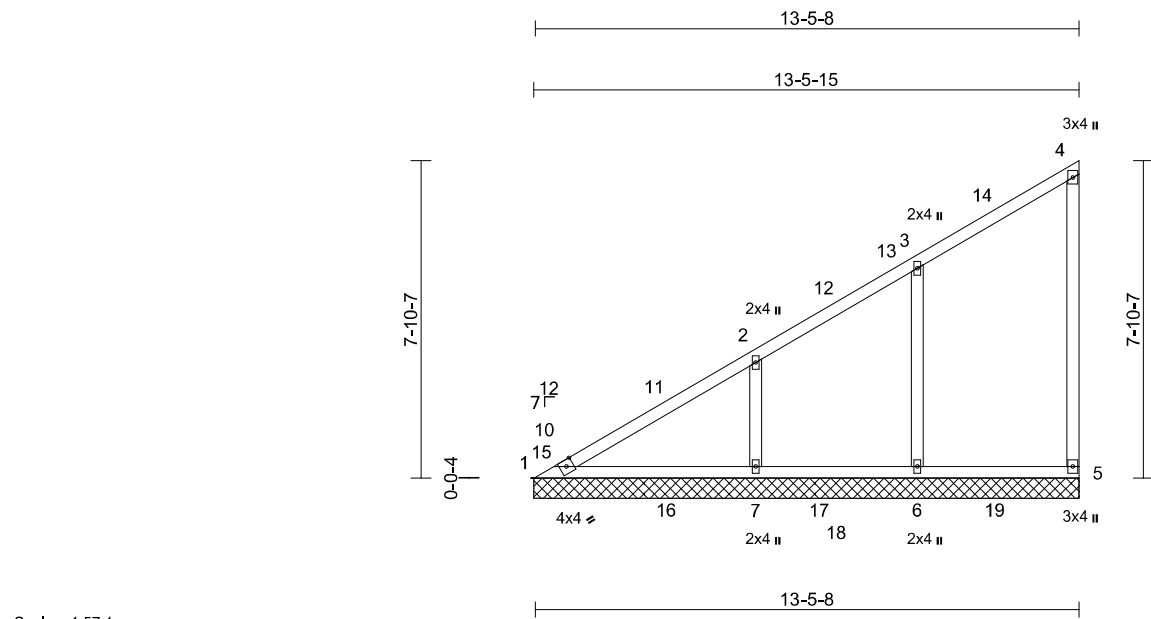
WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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)

ENGINEERING BY
TRENCO
A MiTek Affiliate

818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 1 / 6-Roof	I71681545
	VB4	Valley	3	1	Job Reference (optional)	



Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.52	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.58	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.17	Horiz(TL)	0.01	5	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS								
BCDL	10.0										Weight: 64 lb	FT = 20%

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

BRACING	
TOP CHORD	Structural wood sheathing directly applied, except end verticals.
BOT CHORD	Rigid ceiling directly applied.

REACTIONS	(size)	1=13-5-15, 5=13-5-15, 6=13-5-15, 7=13-5-15
	Max Horiz	1=187 (LC 13)
	Max Uplift	5=-15 (LC 13), 6=-22 (LC 16), 7=-20 (LC 16)
	Max Grav	1=344 (LC 44), 5=321 (LC 55), 6=418 (LC 5), 7=537 (LC 33)

FORCES	
	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=-497/257, 2-3=-214/183, 3-4=-126/115, 4-5=-286/69
BOT CHORD	1-7=-134/428, 6-7=-102/114, 5-6=-102/114
WEBS	3-6=-325/141, 2-7=-369/133

- NOTES**
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 13-4-3 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=1.60
 - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Plates checked for a plus or minus 5 degree rotation about its center.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- All bearings are assumed to be SP No.2 .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 15 lb uplift at joint 5, 22 lb uplift at joint 6 and 20 lb uplift at joint 7 .
- Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



February 28,2025

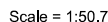
WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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)



818 Soundside Road
Edenton, NC 27932

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Feb 18 2025 Print: 8.830 S Feb 18 2025 MiTek Industries, Inc. Wed Feb 26 19:53:08 Page: 1
ID:1r5yTxxAFWdGnDUko?Q6DziY84-RfC?PsB70Hq3NSaPanL8w3ulTXbGKWrCdoi7J4zJC?f



LUMBER

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

BRACING

TOP CHORD	Structural wood sheathing directly applied, except end verticals.
BOT CHORD	Rigid ceiling directly applied.

REACTIONS

(size)	1=10-7-10, 5=10-7-10, 6=10-7-10, 7=10-7-10
Max Horiz	1=146 (LC 13)
Max Uplift	1=-2 (LC 12), 5=-10 (LC 13), 6=-24 (LC 16), 7=-8 (LC 16)
Max Grav	1=291 (LC 44), 5=317 (LC 55), 6=440 (LC 33), 7=397 (LC 53)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-300/185, 2-3=-209/159, 3-4=-121/95, 4-5=-284/76
BOT CHORD	1-7=-90/253, 6-7=-80/91, 5-6=-80/91
WEBS	3-6=-338/146, 2-7=-323/95

NOTES

- 1) Wind: ASCE 7-16; Vult=120mph (3-second gust)
Vasd=95mph; TCDFL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 10-5-14 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for load conditions in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1

- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) Plates checked for a plus or minus 5 degree rotation about its center.
- 6) Gable requires continuous bottom chord bearing.
- 7) Gable studs spaced at 4-0-0 oc.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 10) All bearings are assumed to be SP No.3 .
- 11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 10 lb uplift at joint 5, 2 lb uplift at joint 1, 24 lb uplift at joint 6 and 8 lb uplift at joint 7.
- 12) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1.
- 13) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 14) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



February 28, 2025

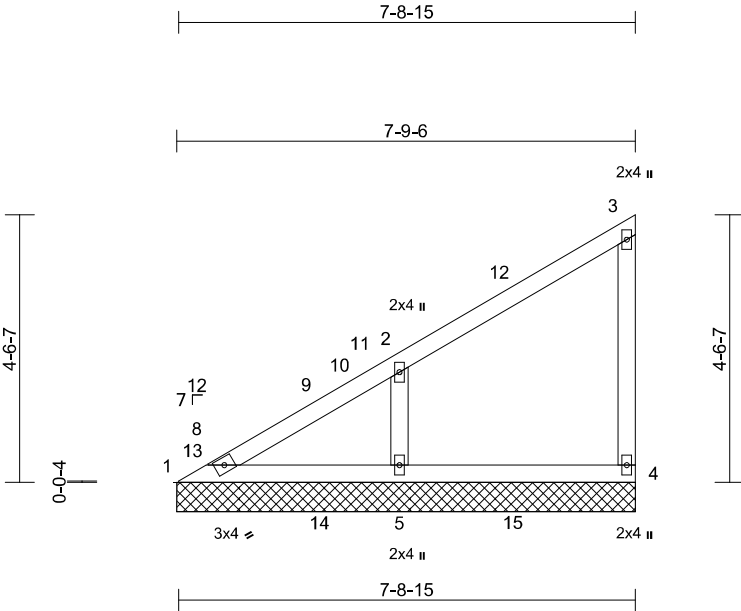


Design valid for use only with MiTek® connectors. This design is based only on parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall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



818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 1 / 6-Roof
	VB2	Valley	6	1	Job Reference (optional)
					I71681547



Scale = 1:39.1

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	0.46	Vert(LL)	n/a	-	n/a	999	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.85	Vert(TL)	n/a	-	n/a	999	
TCDL	10.0	Rep Stress Incr	YES	WB	0.07	Horiz(TL)	0.00	4	n/a	n/a	
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS							
BCDL	10.0										
										Weight: 32 lb	FT = 20%

LUMBER	
TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.3
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.3
BRACING	
TOP CHORD	Structural wood sheathing directly applied, except end verticals.
BOT CHORD	Rigid ceiling directly applied.
REACTIONS	
(size)	1=7-9-6, 4=7-9-6, 5=7-9-6
Max Horiz	1=105 (LC 13)
Max Uplift	4=-7 (LC 13), 5=-18 (LC 16)
Max Grav	1=310 (LC 43), 4=311 (LC 51), 5=443 (LC 50)
FORCES	
(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-390/150, 2-3=-101/85, 3-4=-282/82
BOT CHORD	1-5=-78/335, 4-5=-61/66
WEBS	2-5=-347/142

- NOTES**
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 7-7-10 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=1.60
 - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
 - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
 - Unbalanced snow loads have been considered for this design.

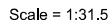
- Plates checked for a plus or minus 5 degree rotation about its center.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.3 .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 7 lb uplift at joint 4 and 18 lb uplift at joint 5.
- Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



February 28,2025

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Feb 18 2025 Print: 8.830 S Feb 18 2025 MiTek Industries, Inc. Wed Feb 26 19:53:07 Page: 1
ID:R8EqX9mOYDsF689owsJ8YGzYl8l-RfC?PsB70Hq3NSqPqnL8w3uITXbGKWrCDoI7J4zJC?f



LUMBER

NOTES

- LOAD CASE(S) Standard

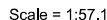


Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall 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 DSS-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Components Association (www.sbcacompnents.com)



818 Soundside Road
Edenton, NC 27932

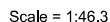
Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Feb 18 2025 Print: 8.830 S Feb 18 2025 MiTek Industries, Inc. Wed Feb 26 19:53:08 Page: 1
ID: VZlBpvM70G1UjUgODHf7d1bziY7X-RfC?PsB70Hg3NSaPanL8w3uITXBKWKrCDoi7J4zJC?f

LOAD CASE(S) Standard

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 Components Association (www.sbcacomponents.com)

818 Soundside Road
Edenton, NC 27932

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Feb 1 2025 Print: 8.830 S Feb 1 2025 MiTek Industries, Inc. Thu Feb 27 14:31:07 Page: 1
ID: SUzh1LF2rFSm2?pkLn5FzziXmJ-VNlKqJp?UoQfCa5ST2vegQTpHkRoTcYfPVPvdqzvo

[illegible]

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

TOP CHORD	Structural wood sheathing directly applied.
BOT CHORD	Rigid ceiling directly applied.

(lb) - Max Horiz 1=100 (LC 16)
 Max Uplift All uplift 100 (lb) or less at joint(s)
 2, 6, 7 except 1=261 (LC 46)
 Max Grav All reactions 250 (lb) or less at joint
 (s) 1 except 2=518 (LC 49), 6=423
 (LC 50), 7=308 (LC 51)

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

$$3-6=-336/139, 5-7=-308/34, 4-5=-280/51$$

- 1) Wind: ASCE 7-16; Vult=120mph (3-second gust)
Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat.
II; Exp B; Enclosed; MWFRS (envelope) and C-C
Exterior(2E) 0-3-8 to 3-3-8, Interior (1) 3-3-8 to 8-2-1
zone; cantilever left and right exposed ; end vertical left
and right exposed; C-C for members and forces &
MWFRS for reactions shown; Lumber DOL=1.60 plate
grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss
only. For studs exposed to wind (normal to the face),
see Standard Industry Gable End Details as applicable,
or consult qualified building designer as per ANSI/TPI 1.
- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15
Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL =
1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially
Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this
design.

- 5) Plates checked for a plus or minus 5 degree rotation about its center.
- 6) Gable studs spaced at 4'-0" oc.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3'-0" tall by 2'-0" wide will fit between the bottom chord and any other members.
- 9) Bearing at joint(s) 1, 2, 7, 2 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 100 lb uplift at joint (s) 7 except (jt=lb) 1=261.
- 11) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 6. This connection is for uplift only and does not consider lateral forces.
- 12) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 13) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- 14) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard



February 28, 2025

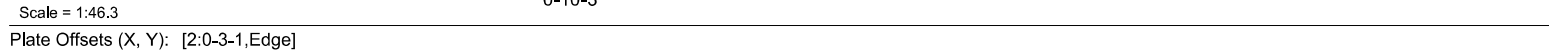


Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall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



818 Soundside Road
Edenton, NC 27932

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Feb 1 2025 Print: 8.830 S Feb 1 2025 MiTek Industries, Inc. Thu Feb 27 14:32:24 Page: 1
ID:moZG4C3F9zh5L609JdLx8PzjXIO-lBtRq4llLU7jxPTFUiri#09mqN?Qp_7ziz6fzgvab



LUMBER		3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
TOP CHORD	2x4 SP No.2	
BOT CHORD	2x4 SP No.3	
WEBS	2x4 SP No.3	
OTHERS	2x4 SP No.3	4) Unbalanced snow loads have been considered for this

REACTIONS All bearings 8-3-12, except 11=0-3-8
 (lb) - Max Horiz 1=100 (LC 16)
 Max Uplift All uplift 100 (lb) or less at joint(s)
 1, 2, 8, 9, 10, 11
 Max Grav All reactions 250 (lb) or less at joint
 (s) except 1=258 (LC 36), 2=306
 (LC 49), 8=339 (LC 58), 9=334 (LC
 57), 10=329 (LC 56), 11=282 (LC
 59)

NOTES

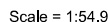
- 1) Wind: ASCE 7-16; Vult=120mph (3-second gust)
Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat.
II; Exp B; Enclosed; MWFRS (envelope) and C-C
Exterior(2E) 0-3-8 to 3-3-8, Interior (1) 3-3-8 to 8-2-1
zone; cantilever left and right exposed ; end vertical left
and right exposed; C-C for members and forces &
MWFRS for reactions shown; Lumber DOL=1.60 plate
grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss
only. For studs exposed to wind (normal to the face),
see Standard Industry Gable End Details as applicable,
or consult qualified building designer as per ANSI/TPI 1.

- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15; Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) Plates checked for a plus or minus 5 degree rotation about its center.
- 6) Gable studs spaced at 2'-0" oc.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3'-0" tall by 2'-0" wide will fit between the bottom chord and any other members.
- 9) Bearing at joint(s) 1, 2, 11, 2 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 100 lb uplift at joint (s) 1.
- 11) One RT4 MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 8, 9, 10, and 11. This connection is for uplift only and does not consider lateral forces.
- 12) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 13) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- 14) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

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

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

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Feb 18 2025 Print: 8.830 S Feb 18 2025 MiTek Industries, Inc. Wed Feb 26 19:53:01 Page: 1
ID:OCYxcFg g7uhGIMK3K0D69ziXSW-RfC?PsB70Hg3NSgPqnL8w3uITXbGKWKrCdoi7J4zJC?f

[illegible]

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=120mph (3-second gust)
Vasd=95mph; TCDF=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 6-8-15 to 9-8-15, Interior (1) 9-8-15 to 10-7-11, Exterior(2R) 10-7-11 to 13-7-11, Interior (1) 13-7-11 to 16-6-7 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) Plates checked for a plus or minus 5 degree rotation about its center.

- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3'-06"-00" tall by 2'-00"-00" wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 8) All bearings are assumed to be SP SS.
- 9) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 10) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard

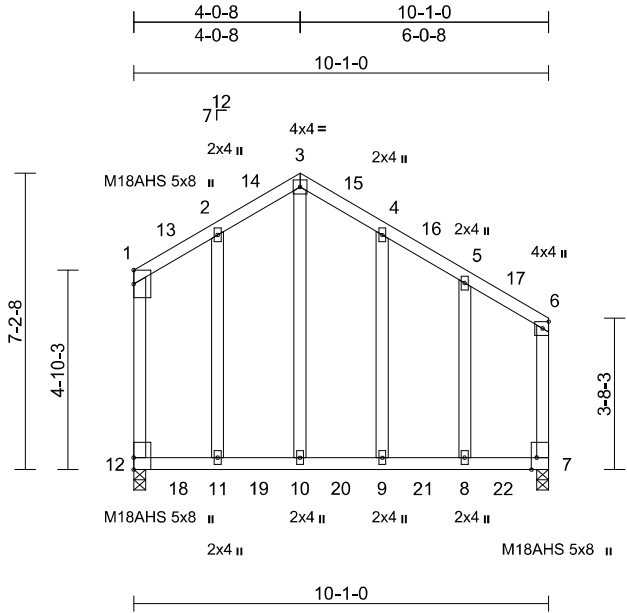


Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall 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 DSS-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Components Association (www.sbcacompnents.com)



818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 1 / 6-Roof	I71681555
	H1G	Common Supported Gable	2	1	Job Reference (optional)	



Scale = 1:56.1

Plate Offsets (X, Y): [7:0-3-8,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	0.96	Vert(LL)	-0.16	9-10	>724	360	M18AHS	186/179
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.64	Vert(CT)	-0.30	9-10	>393	240	MT20	244/190
TCDL	10.0	Rep Stress Incr	YES	WB	0.09	Horz(CT)	0.00	7	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.14	8-9	>854	240		
BCDL	10.0											
Weight: 77 lb											FT = 20%	

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2 *Except* 6-7:2x4 SP No.3
OTHERS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD Rigid ceiling directly applied.

REACTIONS (size) 7=0-3-8, 12=0-3-8
Max Horiz 12=-146 (LC 12)
Max Grav 7=449 (LC 49), 12=449 (LC 43)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-12=-365/113, 1-2=-250/135, 2-3=-211/166, 3-4=-184/169, 4-5=-213/124, 5-6=-231/70, 6-7=-363/97
BOT CHORD 11-12=-82/191, 10-11=-82/191, 9-10=-82/191, 8-9=-82/191, 7-8=-82/191
WEBS 3-10=-101/143, 2-11=-117/129, 4-9=-120/124, 5-8=-131/115

- NOTES**
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Corner (3E) 0-1-12 to 3-1-12, Exterior(2N) 3-1-12 to 4-0-8, Corner(3R) 4-0-8 to 7-0-8, Exterior(2N) 7-0-8 to 9-11-4 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=1.60
 - 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

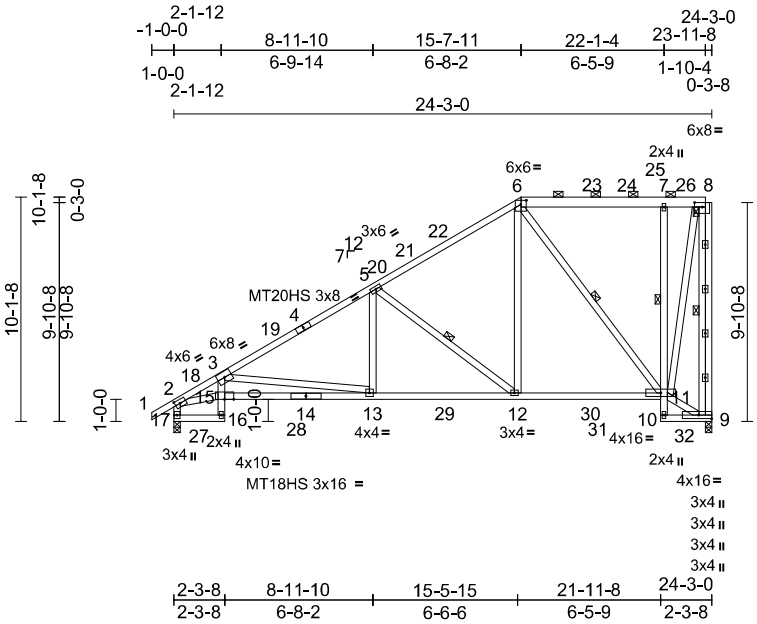
- 4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 5) Unbalanced snow loads have been considered for this design.
- 6) All plates are MT20 plates unless otherwise indicated.
- 7) Plates checked for a plus or minus 5 degree rotation about its center.
- 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 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 11) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 12) All bearings are assumed to be SP No.2 .
- 13) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 14) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



February 28,2025

Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 1 / 6-Roof	I71681558
	A4T	Piggyback Base	2	1	Job Reference (optional)	



Scale = 1:104

Plate Offsets (X, Y): [2:0-2-14,0-2-0], [6:0-3-0,0-2-5], [8:0-4-0,0-2-8]

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	0.74	Vert(LL)	-0.17	13-15	>999	360	MT20HS 187/143
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.90	Vert(CT)	-0.27	13-15	>999	240	MT20 244/190
TCDL	10.0	Rep Stress Incr	YES	WB	0.99	Horz(CT)	0.11	9	n/a	n/a	MT18HS 244/190
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.05	13-15	>999	240	
BCDL	10.0										Weight: 204 lb FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 6-8:2x6 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 16-3,7-10:2x4 SP No.3, 15-14, 14-11:2x4 SP SS
WEBS 2x4 SP No.3
BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 6-8.
BOT CHORD Rigid ceiling directly applied. Except: 1 Row at midpt 7-11
WEBS 1 Row at midpt 8-9, 5-12, 6-11
REACTIONS (lb/size) 9=919/0-3-8, 17=917/0-3-8
Max Horiz 17=247 (LC 13)
Max Grav 9=1101 (LC 39), 17=1204 (LC 42)
FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-18=-2530/1, 3-18=-2491/12, 3-19=-1760/0, 4-19=-1684/0, 4-5=-1664/0, 5-20=-986/34, 20-21=-964/38, 21-22=-863/54, 6-22=-850/74, 6-23=-275/119, 23-24=-275/118, 24-25=-277/118, 7-25=-277/118, 7-26=-267/118, 8-26=-267/118, 8-9=-1066/66, 2-17=-1165/0
BOT CHORD 15-16=-63/259, 3-15=-43/461, 15-28=-441/2620, 14-28=-441/2619, 13-14=-441/2619, 13-29=-216/1534, 12-29=-216/1534, 12-30=-165/768, 30-31=-165/768, 11-31=-165/768, 7-11=-502/89
WEBS 3-13=-1096/227, 5-13=0/457, 5-12=-940/66, 6-12=0/845, 6-11=-916/94, 2-15=-194/2053, 8-11=-113/1081
NOTES
1) Unbalanced roof live loads have been considered for this design.

2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 2-1-12, Interior (1) 2-1-12 to 15-7-11, Exterior(2R) 15-7-11 to 20-5-8, Interior (1) 20-5-8 to 24-1-4 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=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0; Min. flat roof snow load governs. Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) All plates are MT20 plates unless otherwise indicated.
8) Plates checked for a plus or minus 5 degree rotation about its center.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
11) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
12) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

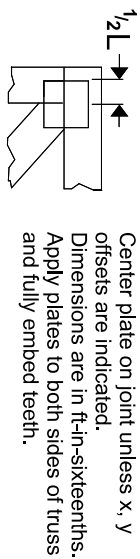
February 28, 2025

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)

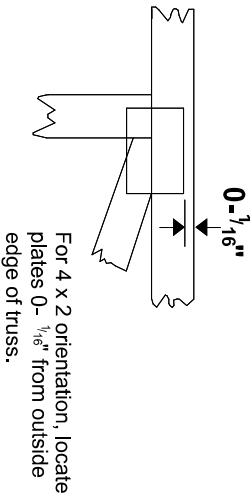
818 Soundside Road
Edenton, NC 27932

Symbols

PLATE LOCATION AND ORIENTATION



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



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

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

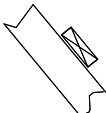
* Plate location details available in MITek software or upon request.

PLATE SIZE

4 X 4

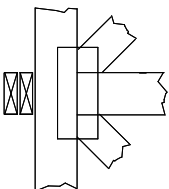
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



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

BEARING



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

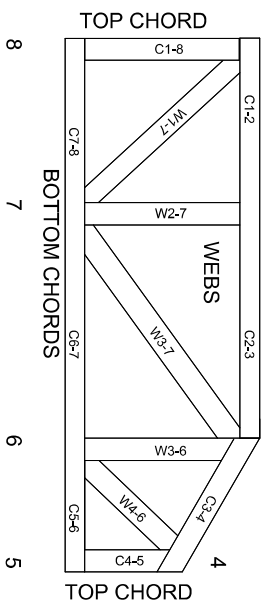
Industry Standards:

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

Numbering System

6-4-8 dimensions shown in ft-in-sixteenths (Drawings not to scale)

1 2 3 Joint ID typ.



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

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

Product Code Approvals

ICC-ES Reports:

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

Design General Notes

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

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

© 2023 MITek® All Rights Reserved

MITek

ENGINEERING BY
TRENCO
A MITek Affiliate

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

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TP1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TP1.
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 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.