

RE: Drayton Rev 2-Elev 2-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:

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	I71607518	P1G	2/25/25	35	I71607552	B1A	2/25/25
2	I71607519	VD1	2/25/25	36	I71607553	B1GR	2/25/25
3	I71607520	V5	2/25/25	37	I71607554	B2GR	2/25/25
4		V4	2/25/25	38	I71607555	G3G	2/25/25
5	I71607522	D1G	2/25/25	39	I71607556	G3	2/25/25
6	I71607523	D1	2/25/25	40	I71607557	A2	2/25/25
7	I71607524	VC1	2/25/25	41	I71607558	A2B	2/25/25
8	I71607525	P1	2/25/25		I71607559	A2A	2/25/25
9	I71607526	P2G	2/25/25	43	I71607560	A1	2/25/25
10	I71607527	P2	2/25/25	44	I71607561	A1GE	2/25/25
11	I71607528	V6	2/25/25	45	I71607562	A1C	2/25/25
12	I71607529	V3	2/25/25	46	I71607563	A1B	2/25/25
13		VC2	2/25/25	47	I71607564	A1A	2/25/25
14	I71607531	V7	2/25/25				
	I71607532	C2G	2/25/25				
16	I71607533	C2	2/25/25				
17	I71607534	C2A	2/25/25				
18	I71607535	V2	2/25/25				
19	I71607536	E1G	2/25/25				
20	I71607537	E1	2/25/25				
21	I71607538	E2G	2/25/25				
22	I71607539	E2	2/25/25				
23	I71607540	S1G	2/25/25				
	I71607541	S1	2/25/25				
25	I71607542	S1GR	2/25/25				
26	I71607543	C1G	2/25/25				
27	I71607544	C1	2/25/25				
28	I71607545	G1G	2/25/25				
29	I71607546	G1	2/25/25				
30	I71607547	G1A	2/25/25				
31	I71607548	G2G	2/25/25				
32	I71607549	V1	2/25/25				
	I71607550	B1G	2/25/25				
34	I71607551	B1	2/25/25				

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.



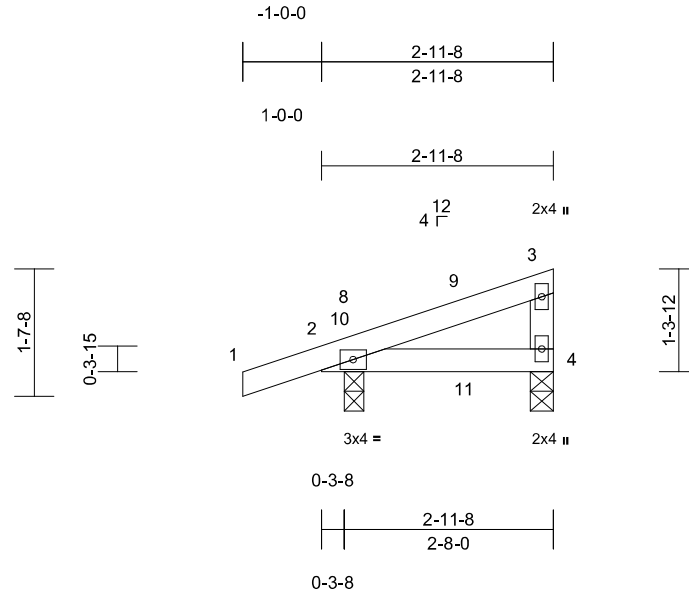
February 25, 2025

Job	Truss	Truss Type	Qty	Ply	Drayton Rev 2-Elev 2-Roof	171607518
	P1G	Monopitch	3	1	Job Reference (optional)	

Structural, LLC, Thurmont, MD - 21788,

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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	0.29	Vert(LL)	-0.01	4-7	>999	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.30	Vert(CT)	-0.02	4-7	>999	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP		Wind(LL)	0.00	4-7	>999	240		
BCDL	10.0										Weight: 12 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-11-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(size) 2=0-3-0, 4=0-3-8
Max Horiz 2=29 (LC 15)
Max Uplift 2=41 (LC 12), 4=-15 (LC 12)
Max Grav 2=333 (LC 43), 4=306 (LC 42)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/26, 2-3=-159/46, 3-4=-279/56
BOT CHORD 2-4=-30/128

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 2-9-12 zone; cantilever left and right exposed; end vertical left and right exposed; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); 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) 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) 4 and 2. 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.
- LOAD CASE(S)** Standard



February 25, 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/TPI Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



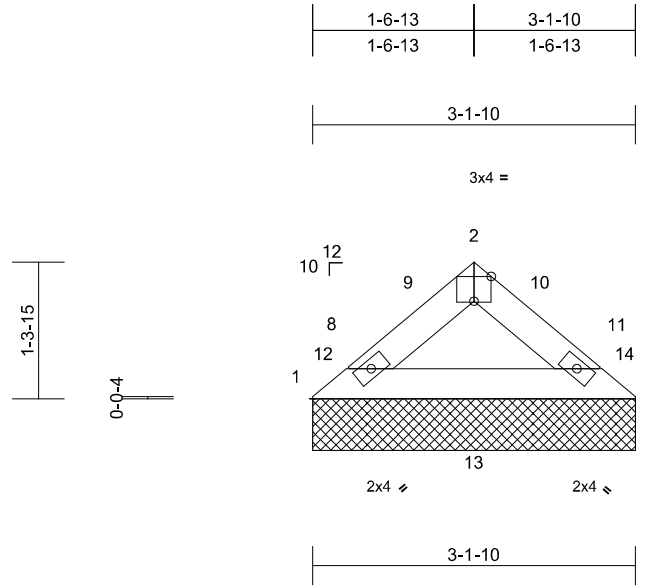
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Drayton Rev 2-Elev 2-Roof	171607521
	V4	Valley	3	1	Job Reference (optional)	

Structural, LLC, Thurmont, MD - 21788,

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

Loading	(psf)	Spacing		CSI		DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.18	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.37	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP							Weight: 9 lb	FT = 20%
BCDL	10.0											

LUMBER

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

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-1-10 oc purlins.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=3-1-10, 3=3-1-10
 Max Horiz 1=18 (LC 15)
 Max Grav 1=316 (LC 47), 3=316 (LC 51)

FORCES (lb) - Maximum Compression/Maximum Tension

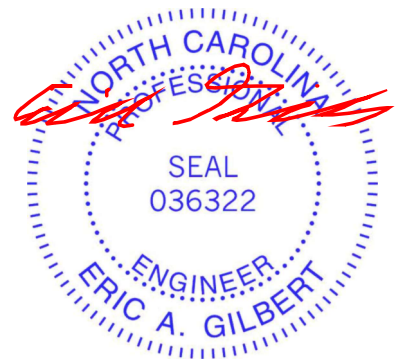
TOP CHORD 1-2=-364/63, 2-3=-364/63
 BOT CHORD 1-3=-41/274

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.3.
- 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



February 25, 2025

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Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent trussing 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)



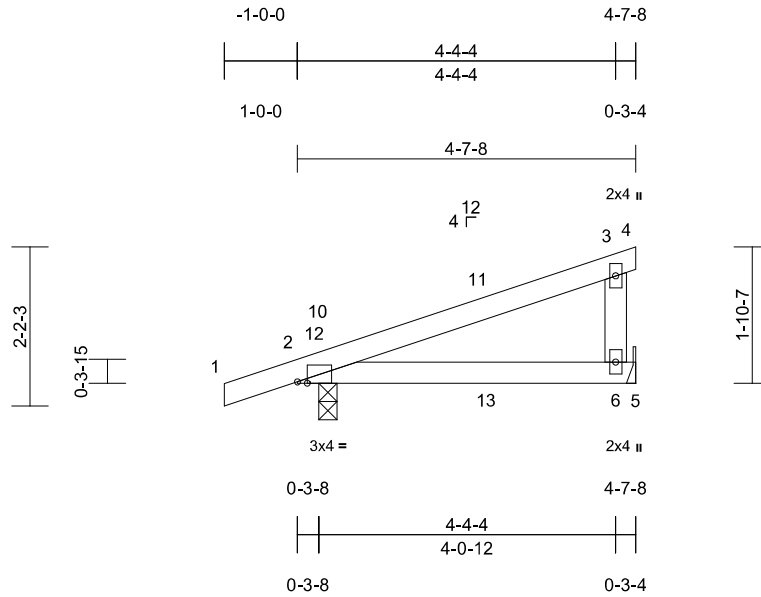
818 Soundside Road
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Drayton Rev 2-Elev 2-Roof	I71607525
	P1	Monopitch	9	1	Job Reference (optional)	

Structural, LLC, Thurmont, MD - 21788,

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Scale = 1:30.7

Plate Offsets (X, Y): [2:0-1-10,Edge]

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	Vert(LL)	-0.06	6-9	>907	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	Vert(CT)	-0.08	6-9	>676	240		
TCDL	10.0	Rep Stress Incr	YES	WB	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS	Wind(LL)	0.03	6-9	>999	240		
BSDL	10.0									Weight: 18 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.
 BOT CHORD Rigid ceiling directly applied.

REACTIONS

(size) 2=0-3-0, 6= Mechanical
 Max Horiz 2=44 (LC 12)
 Max Uplift 2=-44 (LC 12), 6=-29 (LC 12)
 Max Grav 2=362 (LC 42), 6=349 (LC 44)

FORCES

(lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=0/26, 2-3=-189/48, 3-4=-6/0
 BOT CHORD 2-6=-57/161, 5-6=0/0
 WEBS 3-6=-301/102

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 4-7-8 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 .
- 9) Refer to girder(s) for truss to truss connections.
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 29 lb uplift at joint 6.
- 11) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
- 12) This truss 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 25, 2025

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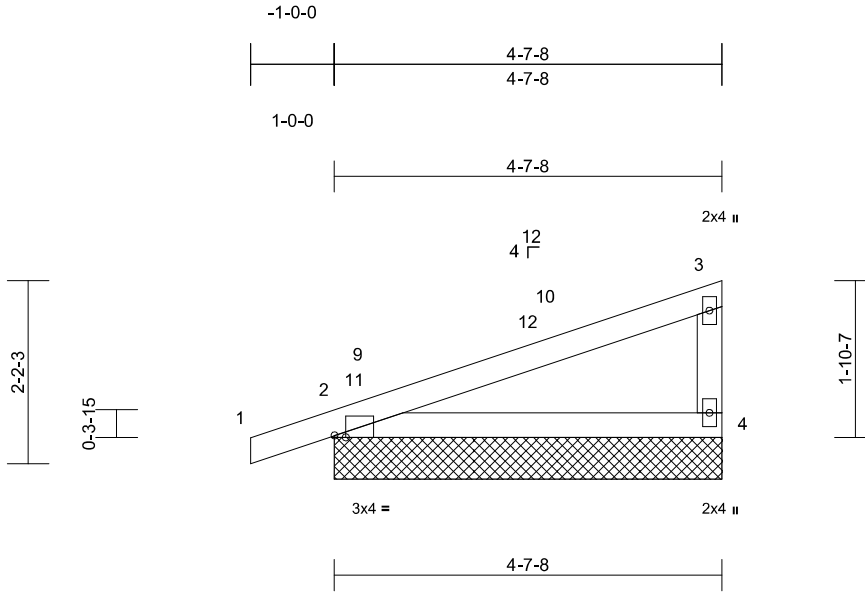
818 Soundside Road
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Drayton Rev 2-Elev 2-Roof	171607526
	P2G	Monopitch Supported Gable	3	1	Job Reference (optional)	

Structural, LLC, Thurmont, MD - 21788,

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Plate Offsets (X, Y): [2:0-1-10,Edge]

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	0.56	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.61	Vert(CT)	n/a	-	n/a	999	
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	n/a	n/a	
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS							
BCDL	10.0									Weight: 18 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS

(size) 2=4-7-8, 4=4-7-8
 Max Horiz 2=43 (LC 15)
 Max Uplift 2=-16 (LC 12)
 Max Grav 2=365 (LC 43), 4=352 (LC 47)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/26, 2-3=-191/54, 3-4=-297/136
 BOT CHORD 2-4=-61/164

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 Corner (3E) -1-0-0 to 2-0-0, Exterior(2N) 2-0-0 to 4-5-12 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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) 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) 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 2-0-0 oc.
- 9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 11) All bearings are assumed to be SP No.2 .
- 12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 16 lb uplift at joint 2 and 16 lb uplift at joint 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 25, 2025

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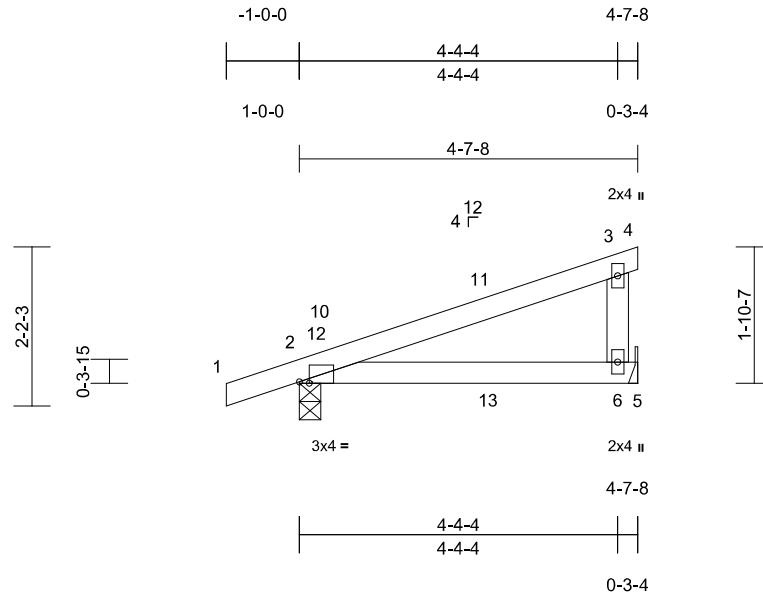
818 Soundside Road
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Drayton Rev 2-Elev 2-Roof	171607527
	P2	Monopitch	18	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. Mon Feb 24 12:58:01
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Page: 1



Scale = 1:30.7

Plate Offsets (X, Y): [2:0-1-10,Edge]

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	Vert(LL)	-0.06	6-9	>907	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	Vert(CT)	-0.08	6-9	>676	240		
TCDL	10.0	Rep Stress Incr	YES	WB	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS	Wind(LL)	0.02	6-9	>999	240		
B CDL	10.0									Weight: 18 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.
 BOT CHORD Rigid ceiling directly applied.

REACTIONS

(size) 2=0-3-8, 6= Mechanical
 Max Horiz 2=44 (LC 12)
 Max Uplift 2=-12 (LC 12)
 Max Grav 2=362 (LC 42), 6=349 (LC 44)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/26, 2-3=-189/48, 3-4=-6/0
 BOT CHORD 2-6=-29/161, 5-6=0/0
 WEBS 3-6=-301/91

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 4-7-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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 .
- 9) Refer to girder(s) for truss to truss connections.
- 10) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
- 11) This truss 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.

LOAD CASE(S) Standard



February 25, 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)



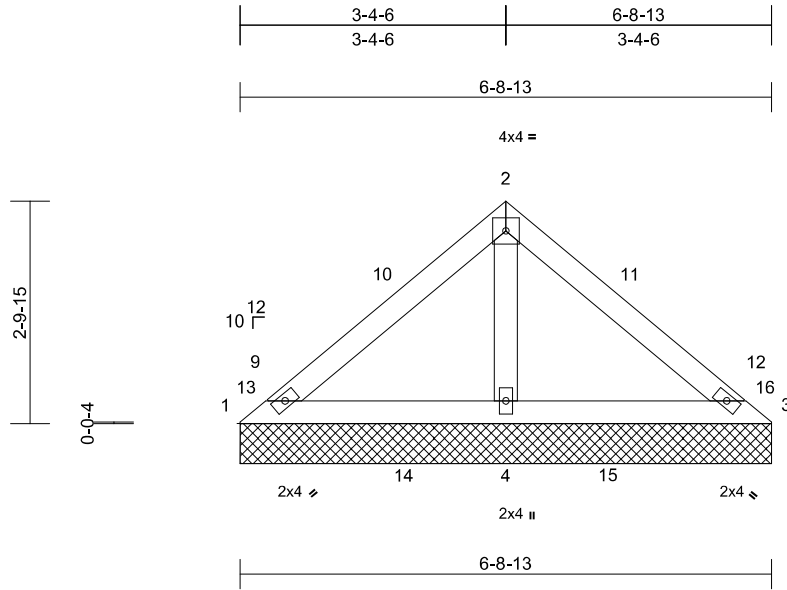
818 Soundside Road
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Drayton Rev 2-Elev 2-Roof	171607529
	V3	Valley	3	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. Mon Feb 24 12:58:03
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Page: 1



Scale = 1:28.4

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	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS							
BCDL	10.0									Weight: 25 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=6-8-13, 3=6-8-13, 4=6-8-13
 Max Horiz 1=42 (LC 12)
 Max Uplift 1=36 (LC 50), 3=36 (LC 48)
 Max Grav 1=275 (LC 47), 3=275 (LC 51),
 4=496 (LC 44)

FORCES (lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=-219/234, 2-3=-219/234
 BOT CHORD 1-4=-146/147, 3-4=-146/147
 WEBS 2-4=-361/151

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) 0-0-5 to 3-0-5, Interior (1) 3-0-5 to 3-4-11, Exterior(2R) 3-4-11 to 6-4-11, Interior (1) 6-4-11 to 6-9-2 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 36 lb uplift at joint 1 and 36 lb uplift at joint 3.
- 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 25, 2025

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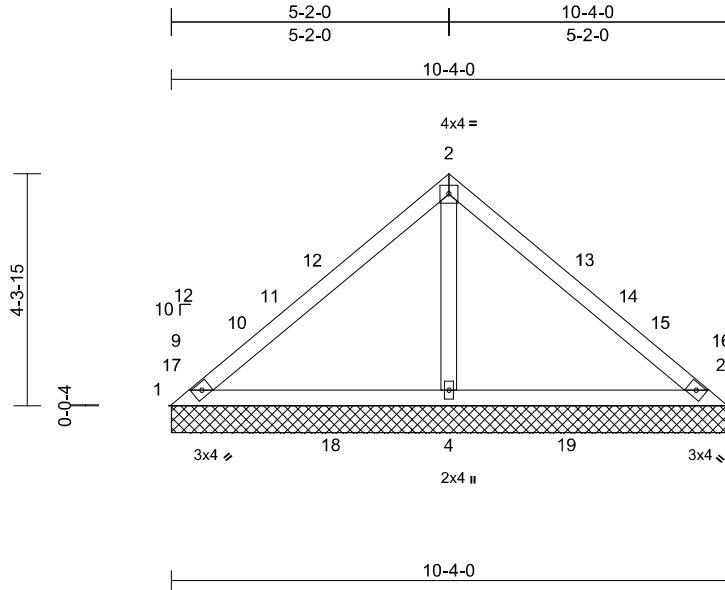
ENGINEERING BY
TRENCO
 A MiTek Affiliate
 818 Soundside Road
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Drayton Rev 2-Elev 2-Roof	171607535
	V2	Valley	3	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. Mon Feb 24 12:58:03
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Page: 1



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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	0.57	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.95	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.21	Horiz(TL)	0.01	4	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS								
BCDL	10.0										Weight: 39 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=10-4-0, 3=10-4-0, 4=10-4-0
 Max Horiz 1=-66 (LC 12)
 Max Uplift 1=-61 (LC 54), 3=-61 (LC 53)
 Max Grav 1=269 (LC 47), 3=269 (LC 51), 4=752 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=-224/336, 2-3=-224/336
 BOT CHORD 1-4=-230/155, 3-4=-230/155
 WEBS 2-4=-659/211

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) 0-0-5 to 3-0-5, Interior (1) 3-0-5 to 5-2-5, Exterior(2R) 5-2-5 to 8-2-5, Interior (1) 8-2-5 to 10-4-5 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 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

- 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 61 lb uplift at joint 1 and 61 lb uplift at joint 3.
- 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 25, 2025

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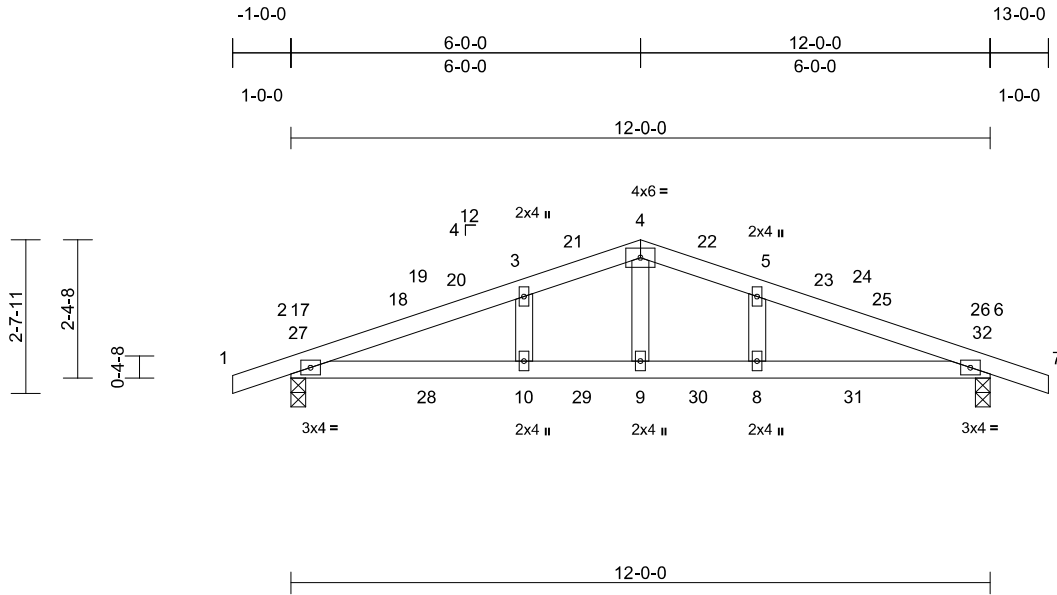
ENGINEERING BY
TRENCO
 A MiTek Affiliate
 818 Soundside Road
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Drayton Rev 2-Elev 2-Roof	171607543
	C1G	Common Supported Gable	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. Mon Feb 24 12:57:56
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Scale = 1:38.5

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	Vert(LL)	-0.10	10-13	>999	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	Vert(CT)	-0.14	10-13	>999	240		
TCDL	10.0	Rep Stress Incr	YES	WB	Horz(CT)	0.01	6	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TP12014	Matrix-AS	Wind(LL)	0.05	10-13	>999	240		
BCDL	10.0									Weight: 46 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) 2=0-3-0, 6=0-3-0
Max Horiz 2=-19 (LC 17)
Max Uplift 2=-88 (LC 12), 6=-88 (LC 13)
Max Grav 2=543 (LC 23), 6=543 (LC 24)

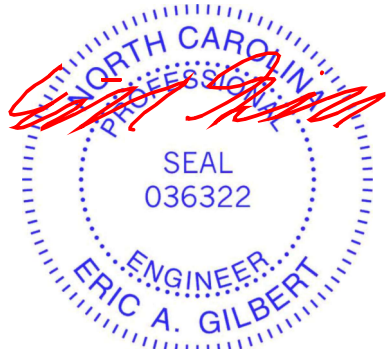
FORCES
(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/26, 2-3=-883/446, 3-4=-848/464,
4-5=-848/464, 5-6=-883/446, 6-7=0/26
BOT CHORD 2-10=-367/810, 9-10=-367/810,
8-9=-367/810, 6-8=-367/810
WEBS 4-9=-143/385, 3-10=-137/115, 5-8=-137/115

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
- 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/TP1 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=1.00

- 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.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2 .
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 6. This connection is for uplift only and does not consider lateral forces.
- This truss 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 25, 2025

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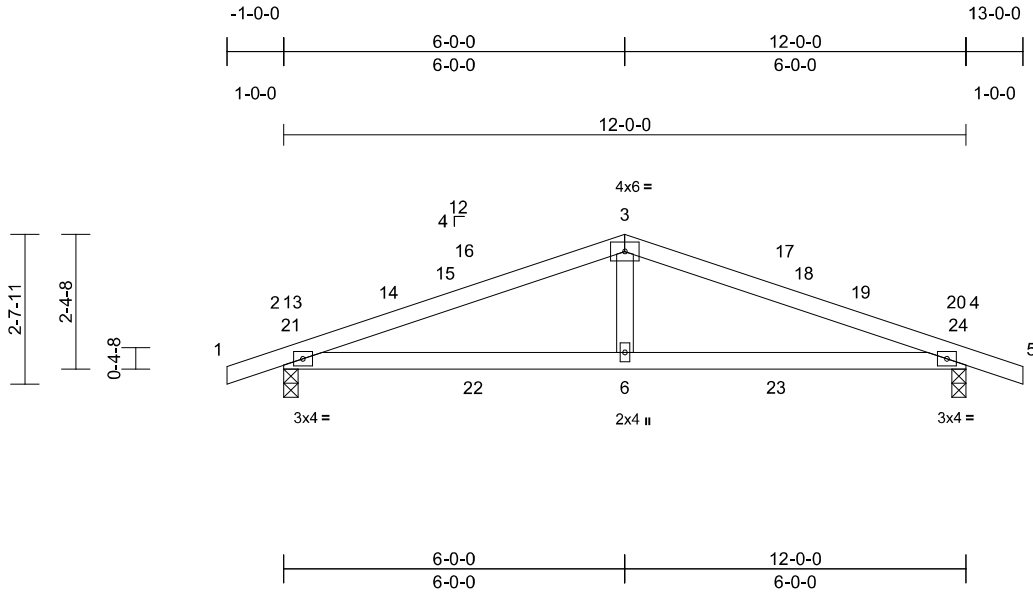
ENGINEERING BY
TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Drayton Rev 2-Elev 2-Roof	I71607544
	C1	Common	5	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. Mon Feb 24 12:57:56
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Page: 1



Scale = 1:39.4

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	Vert(LL)	-0.12	6-9	>999	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	Vert(CT)	-0.17	6-9	>868	240		
TCDL	10.0	Rep Stress Incr	YES	WB	Horz(CT)	0.01	4	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS	Wind(LL)	0.05	6-9	>999	240		
BCDL	10.0									Weight: 43 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.
 BOT CHORD Rigid ceiling directly applied.

REACTIONS
 (size) 2=0-3-0, 4=0-3-0
 Max Horiz 2=-19 (LC 17)
 Max Uplift 2=-88 (LC 12), 4=-88 (LC 13)
 Max Grav 2=543 (LC 23), 4=543 (LC 24)

FORCES
 (lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=0/26, 2-3=-882/449, 3-4=-882/449, 4-5=0/26
 BOT CHORD 2-6=-358/795, 4-6=-358/795
 WEBS 3-6=-88/382

- 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 .
- 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.

LOAD CASE(S) Standard

- 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.



February 25, 2025

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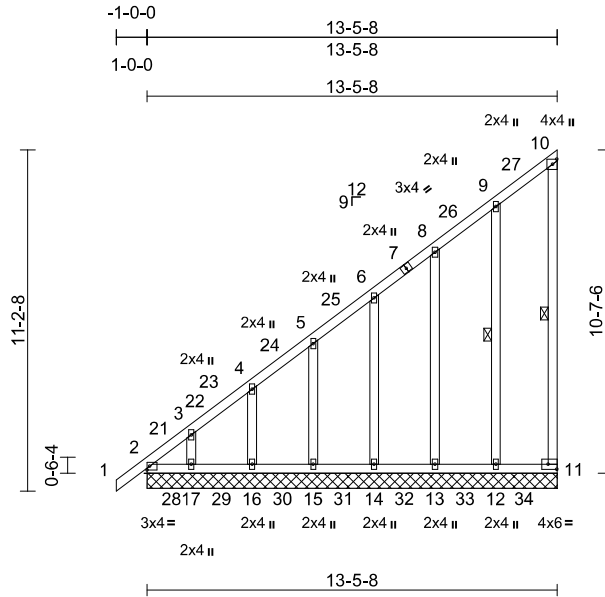
818 Soundside Road
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Drayton Rev 2-Elev 2-Roof	171607545
	G1G	Monopitch Supported Gable	2	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. Mon Feb 24 12:57:59
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Page: 1



Scale = 1:73.5

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

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	0.95	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.37	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.28	Horz(CT)	0.00	11	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS								
BCDL	10.0											
											Weight: 105 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.
WEBS	1 Row at midpt 10-11, 9-12

REACTIONS	(size)
Max Horiz	2=259 (LC 15)
Max Uplift	2=-55 (LC 12), 11=-55 (LC 15), 12=-27 (LC 16), 13=-15 (LC 16), 14=-22 (LC 16), 15=-20 (LC 16), 16=-16 (LC 16), 17=-44 (LC 16)
Max Grav	2=302 (LC 57), 11=283 (LC 73), 12=337 (LC 72), 13=332 (LC 71), 14=333 (LC 70), 15=332 (LC 69), 16=336 (LC 68), 17=320 (LC 67)

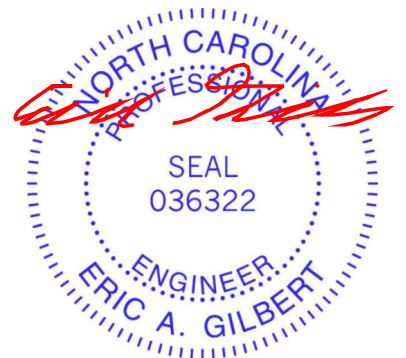
FORCES	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=0/49, 2-3=-625/414, 3-4=-543/368, 4-5=-471/333, 5-6=-396/297, 6-8=-321/259, 8-9=-254/236, 9-10=-113/124, 10-11=-264/46
BOT CHORD	2-17=-331/271, 16-17=-138/177, 15-16=-138/177, 14-15=-138/177, 13-14=-138/177, 12-13=-138/177, 11-12=-138/177
WEBS	9-12=-276/212, 8-13=-275/129, 6-14=-278/101, 5-15=-281/100, 4-16=-286/101, 3-17=-279/121

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 Corner (3E) -1-0-0 to 2-0-0, Exterior(2N) 2-0-0 to 13-3-12 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) 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) 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) 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 2-0-0 oc.
- 9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 11) All bearings are assumed to be SP No.2.
- 12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 55 lb uplift at joint 2, 55 lb uplift at joint 11, 27 lb uplift at joint 12, 15 lb uplift at joint 13, 22 lb uplift at joint 14, 20 lb uplift at joint 15, 16 lb uplift at joint 16, 44 lb uplift at joint 17 and 55 lb uplift at joint 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 25, 2025

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

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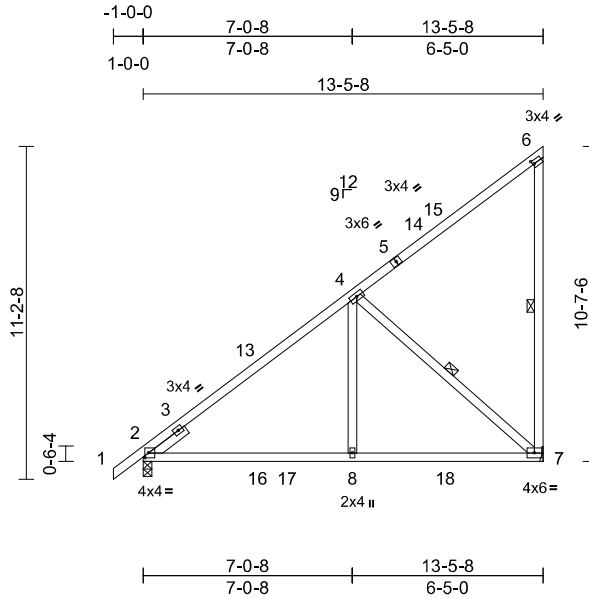
818 Soundside Road
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Drayton Rev 2-Elev 2-Roof	171607546
	G1	Monopitch	27	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. Mon Feb 24 12:57:59
 ID:naxoGksvaRSnbSKoo39DHjzuTCT-RFC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?F

Page: 1



Scale = 1:75.4

Plate Offsets (X, Y): [2:0-1-7,0-2-0], [6:0-0-12,0-1-8]

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	0.89	Vert(LL)	-0.19	7-8	>842	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.93	Vert(CT)	-0.23	8-11	>696	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.26	Horz(CT)	0.02	2	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	-0.05	7-8	>999	240		
BCDL	10.0										Weight: 84 lb	FT = 20%

LUMBER

- TOP CHORD 2x4 SP No.2
- BOT CHORD 2x4 SP No.2
- WEBS 2x4 SP No.3
- SLIDER Left 2x4 SP No.3 -- 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 6-7, 4-7

REACTIONS

- (size) 2=0-3-8, 7= Mechanical
- Max Horiz 2=259 (LC 15)
- Max Uplift 7=40 (LC 13)
- Max Grav 2=670 (LC 35), 7=662 (LC 34)

FORCES

- (lb) - Maximum Compression/Maximum Tension

- TOP CHORD 1-2=0/56, 2-4=-724/84, 4-6=-211/177, 6-7=-300/134
- BOT CHORD 2-8=-217/622, 7-8=-217/622
- WEBS 4-8=0/399, 4-7=-710/165

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 13-3-12 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=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, with BCDL = 10.0psf.
- Bearings are assumed to be: Joint 2 SP No.2 .
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 40 lb uplift at joint 7.
- 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 25, 2025

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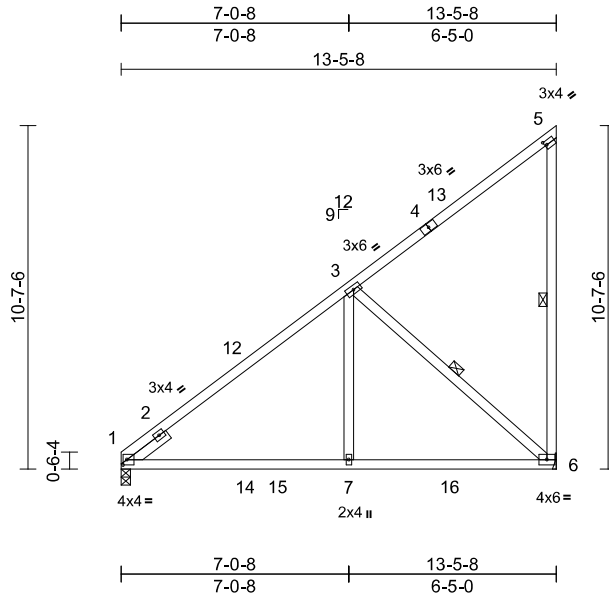
818 Soundside Road
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Drayton Rev 2-Elev 2-Roof	171607547
	G1A	Monopitch	3	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. Mon Feb 24 12:57:59
ID:85nYR3LNPQMErRolamMMMyzuTCG-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWRcDoi7J4zJC?f

Page: 1



Scale = 1:69.3

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

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	0.89	Vert(LL)	-0.19	6-7	>842	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.93	Vert(CT)	-0.23	7-10	>689	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.26	Horz(CT)	0.02	1	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.05	7-10	>999	240		
BCDL	10.0										Weight: 82 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 5-6, 3-6

REACTIONS (size) 1=0-3-8, 6= Mechanical
Max Horiz 1=250 (LC 15)
Max Uplift 6=40 (LC 13)
Max Grav 1=620 (LC 34), 6=665 (LC 33)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-3=-729/87, 3-5=-211/177, 5-6=-300/134
BOT CHORD 1-7=-219/626, 6-7=-219/626
WEBS 3-7=0/400, 3-6=-714/167

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) 0-1-12 to 3-1-12, Interior (1) 3-1-12 to 13-3-12 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); 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) Plates checked for a plus or minus 5 degree rotation about its center.

- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 7) Bearings are assumed to be: Joint 1 SP No.2 .
- 8) Refer to girder(s) for truss to truss connections.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 40 lb uplift at joint 6.
- 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 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 25, 2025

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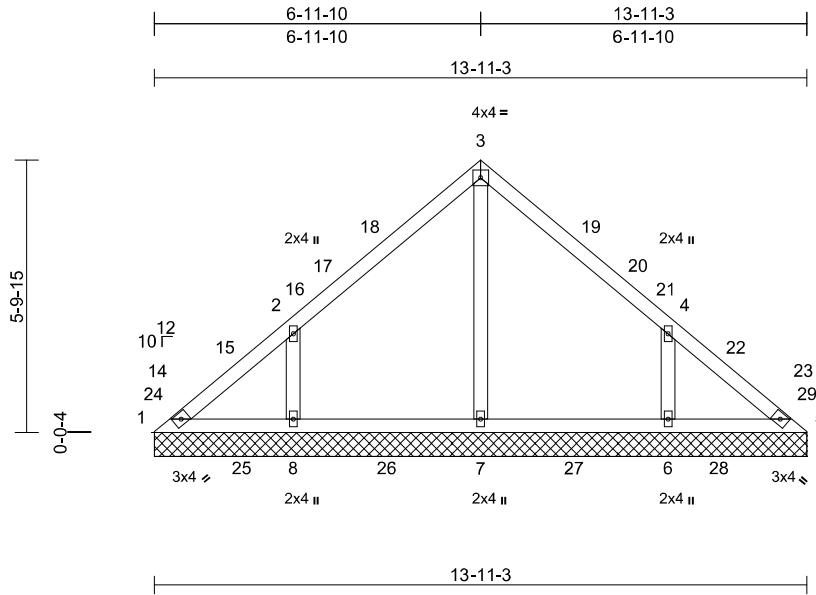
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Drayton Rev 2-Elev 2-Roof	171607549
	V1	Valley	3	1	Job Reference (optional)	

Structural, LLC, Thurmont, MD - 21788,

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Page: 1



Scale = 1:47.8

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	0.44	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.44	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.40	Horiz(TL)	-0.01	5	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS								
BCDL	10.0											
											Weight: 60 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS (size)

1=13-11-3, 5=13-11-3, 6=13-11-3,
 7=13-11-3, 8=13-11-3

Max Horiz 1=90 (LC 12)
 Max Uplift 1=-223 (LC 55), 5=-2 (LC 55),
 6=-47 (LC 17), 8=-51 (LC 16)
 Max Grav 1=257 (LC 49), 5=0 (LC 60), 6=410
 (LC 65), 7=765 (LC 55), 8=403 (LC 63)

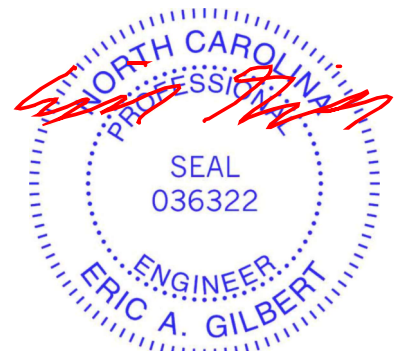
FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-232/497, 2-3=-42/509, 3-4=-102/504,
 4-5=-35/506
 BOT CHORD 1-8=-373/171, 7-8=-373/35, 6-7=-373/35,
 5-6=-373/38
 WEBS 3-7=-688/0, 2-8=-328/149, 4-6=-332/147

- 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 223 lb uplift at joint 1, 2 lb uplift at joint 5, 51 lb uplift at joint 8, 47 lb uplift at joint 6 and 2 lb uplift at joint 5.
- 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

- NOTES**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; VuIt=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) 0-0-5 to 2-11-14, Interior (1) 2-11-14 to 6-11-14, Exterior(2R) 6-11-14 to 9-11-14, Interior (1) 9-11-14 to 13-11-8 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.



February 25, 2025

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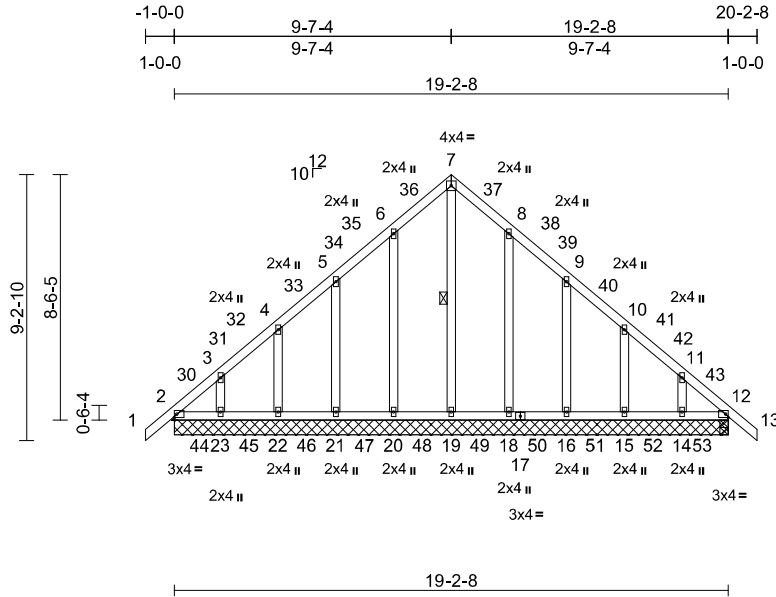
818 Soundside Road
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Drayton Rev 2-Elev 2-Roof	171607550
	B1G	Common Supported Gable	3	1	Job Reference (optional)	

Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 E Feb 1 2025 Print: 8.830 E Feb 1 2025 MiTek Industries, Inc. Mon Feb 24 13:22:10
ID:rzPvynr9dkqIS4qHBBlgewzuTKe-PfncmDjLBmo6v78_1_EAoG5vBMqBc_SieL9gezhuT

Page: 1



Scale = 1:77.7

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.21	Vert(LL)	-0.01	19-20	>999	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.19	Vert(CT)	-0.01	20-21	>999	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.23	Horz(CT)	0.00	12	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.00	14-26	>999	240		
BCDL	10.0										Weight: 127 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.
WEBS 1 Row at midpt 7-19

REACTIONS All bearings 19-2-8.
(lb) - Max Horiz 2=141 (LC 14)
Max Uplift All uplift 100 (lb) or less at joint(s)
2, 12, 14, 15, 16, 18, 20, 21, 22, 23
Max Grav All reactions 250 (lb) or less at joint
(s) except 2=311 (LC 65), 12=279
(LC 76), 14=323 (LC 87), 15=336
(LC 86), 16=333 (LC 85), 18=335
(LC 84), 19=321 (LC 83), 20=335
(LC 82), 21=333 (LC 81), 22=336
(LC 80), 23=323 (LC 79)

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

WEBS 6-20=-279/81, 5-21=-281/94, 4-22=-286/91,
3-23=-281/90, 8-18=-279/81, 9-16=-281/94,
10-15=-286/91, 11-14=-281/90

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 9-7-4, Corner (3R) 9-7-4 to 12-7-4, Exterior(2N) 12-7-4 to 20-2-8 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.
- 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.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- One RT4 MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 12, 2, 20, 21, 22, 23, 18, 16, 15, and 14. 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 25, 2025

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

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

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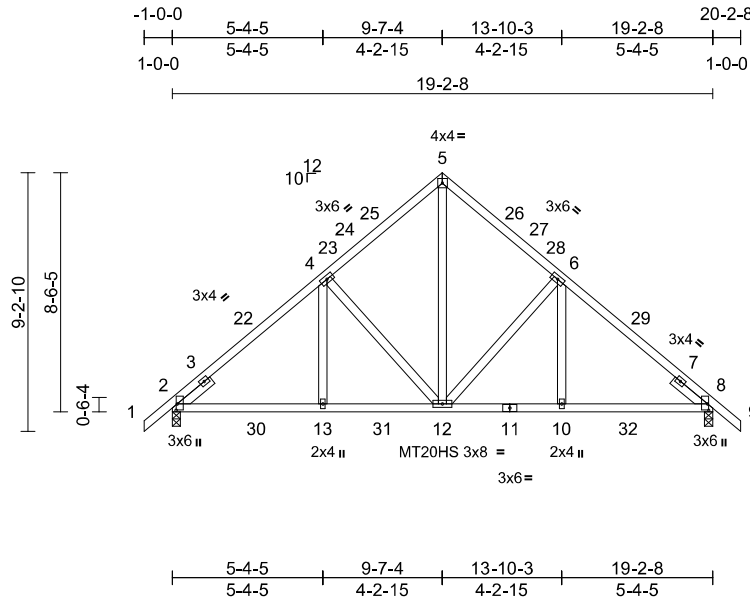
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Drayton Rev 2-Elev 2-Roof	171607551
	B1	Common	12	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. Mon Feb 24 12:57:54
 ID:ppBVPHCsfxb8AR8dJn7EzuTMm-Rfc?PsB70Hq3NSgPqnLw3uITXbGKwRCdoi7J4zJC?f

Page: 1



Scale = 1:79.6

Plate Offsets (X, Y): [2:0-2-11,0-0-8], [2:0-0-0,0-0-0], [8:0-2-11,0-0-8]

Loading	(psf)	Spacing		CSI		DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	2-0-0	TC	0.49	Vert(LL)	-0.07	13-20	>999	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.65	Vert(CT)	-0.10	13-20	>999	240	MT20HS	187/143
TCDL	10.0	Rep Stress Incr	YES	WB	0.25	Horz(CT)	0.02	8	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.01	13-20	>999	240		
BCDL	10.0										Weight: 117 lb	FT = 20%

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

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

REACTIONS
 (size) 2=0-3-8, 8=0-3-8
 Max Horiz 2=141 (LC 14)
 Max Grav 2=825 (LC 2), 8=825 (LC 2)

FORCES
 (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/60, 2-4=-871/54, 4-5=-713/113,
 5-6=-713/113, 6-8=-871/54, 8-9=0/60

BOT CHORD 2-13=0/651, 12-13=0/651, 10-12=0/648,
 8-10=0/648

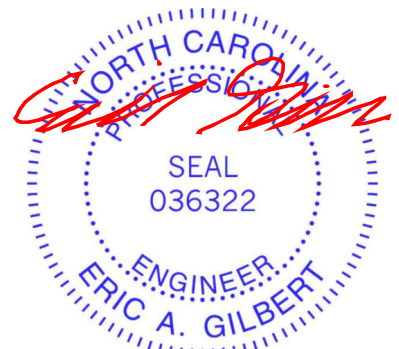
WEBS 4-13=0/335, 4-12=-338/87, 5-12=-64/573,
 6-12=-338/87, 6-10=0/335

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 9-7-4, Exterior(2R) 9-7-4 to 12-7-4, Interior (1) 12-7-4 to 20-2-8 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.
- All plates are MT20 plates unless otherwise indicated.
- 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 25, 2025

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

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

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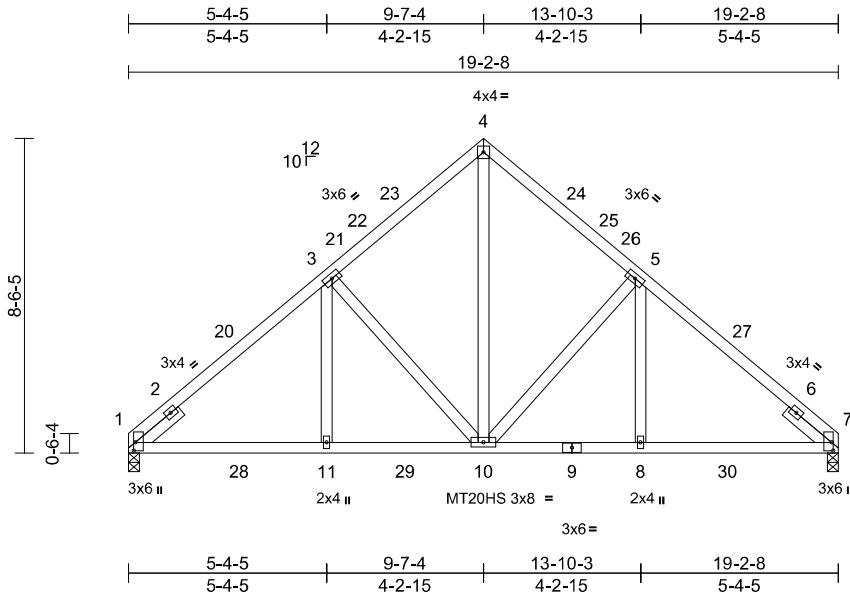
818 Soundside Road
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Drayton Rev 2-Elev 2-Roof	I71607552
	B1A	Common	3	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. Mon Feb 24 12:57:55
 ID:M9gzKZcYU4svvFSUf3OWzCzuTMF-RFC?PsB70Hq3NSgPqnL8w3uITXbGKWRcDoi7J4zJC?f

Page: 1



Scale = 1:60.6

Plate Offsets (X, Y): [1:0-2-11,0-0-8], [7:0-2-11,0-0-8], [7:0-0-0,0-0-0]

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	0.50	-0.07	11-14	>999	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.66	-0.10	11-14	>999	240	MT20HS	187/143
TCDL	10.0	Rep Stress Incr	YES	WB	0.26	0.02	7	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		0.02	11-14	>999	240		
BCDL	10.0									Weight: 113 lb	FT = 20%

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

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

REACTIONS (size) 1=0-3-8, 7=0-3-8
 Max Horiz 1=126 (LC 13)
 Max Grav 1=757 (LC 2), 7=757 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-3=-881/60, 3-4=-718/116, 4-5=-718/116, 5-7=-881/60

BOT CHORD 1-11=0/652, 10-11=0/652, 8-10=0/647, 7-8=0/647

WEBS 3-11=0/337, 3-10=-344/89, 4-10=-69/582, 5-10=-344/89, 5-8=0/337

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) 0-1-12 to 3-1-12, Interior (1) 3-1-12 to 9-7-4, Exterior(2R) 9-7-4 to 12-7-4, Interior (1) 12-7-4 to 19-0-12 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=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.
- 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 25, 2025

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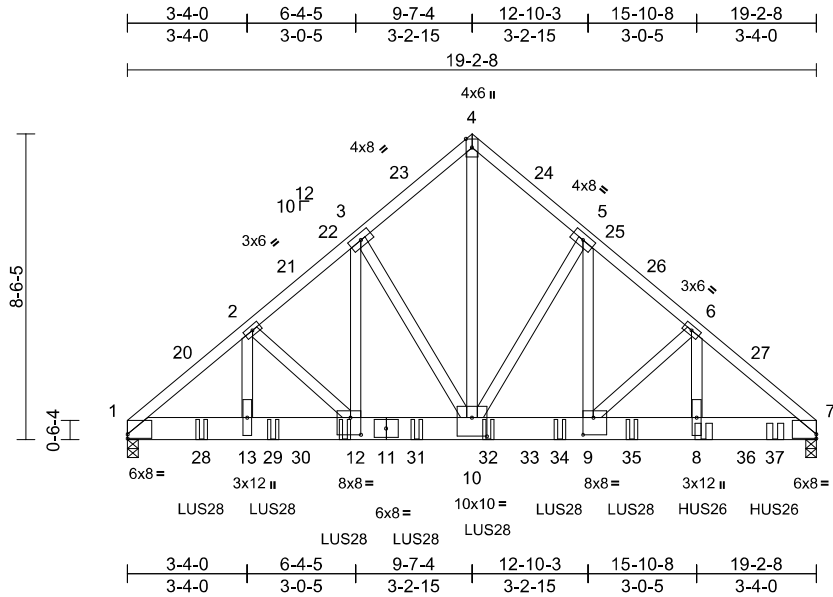
818 Soundside Road
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Drayton Rev 2-Elev 2-Roof	171607553
	B1GR	Common Girder	2	2	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. Mon Feb 24 12:57:55
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Page: 1



Scale = 1:62.5

Plate Offsets (X, Y): [1:Edge,0-1-7], [7:Edge,0-1-7], [9:0-3-8,0-5-12], [10:0-5-0,0-6-4], [12:0-3-8,0-5-12]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.47	Vert(LL)	-0.10	10-12	>999	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.38	Vert(CT)	-0.19	9-10	>999	240		
TCDL	10.0	Rep Stress Incr	NO	WB	0.89	Horz(CT)	0.03	7	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS		Wind(LL)	0.01	12	>999	240		
BCDL	10.0										Weight: 317 lb	FT = 20%

- LUMBER**
- TOP CHORD 2x4 SP No.2
 BOT CHORD 2x8 SP DSS
 WEBS 2x4 SP No.3 *Except* 10-4:2x4 SP No.2
- BRACING**
- TOP CHORD Structural wood sheathing directly applied or 3-8-5 oc purlins.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
- REACTIONS** (size) 1=0-3-8, 7=0-3-8, (req. 0-3-14)
 Max Horiz 1=128 (LC 10)
 Max Grav 1=6584 (LC 25), 7=7695 (LC 26)
- FORCES** (lb) - Maximum Compression/Maximum Tension
- TOP CHORD 1-2=-9052/0, 2-3=-7648/0, 3-4=-5973/0, 4-5=-5973/0, 5-6=-7827/0, 6-7=-9735/0
 BOT CHORD 1-13=0/7014, 12-13=0/7014, 10-12=0/5903, 9-10=0/5998, 8-9=0/7462, 7-8=0/7462
 WEBS 4-10=0/7373, 5-10=-2754/0, 5-9=0/3390, 3-10=-2489/0, 3-12=0/3049, 2-13=0/1766, 6-8=0/2445, 6-9=-2052/0, 2-12=-1516/0
- NOTES**
- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
 Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
 Bottom chords connected as follows: 2x8 - 2 rows staggered at 0-5-0 oc.
 Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
 - All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
 - Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
 - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); 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.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
 - WARNING: Required bearing size at joint(s) 7 greater than input bearing size.
 - All bearings are assumed to be SP DSS .
 - 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.
 - Use Simpson Strong-Tie LUS28 (6-10d Girder, 4-10d Truss) or equivalent spaced at 2-0-0 oc max. starting at 2-0-12 from the left end to 14-0-12 to connect truss(es) to back face of bottom chord.
 - Use Simpson Strong-Tie HUS26 (14-16d Girder, 4-16d Truss) or equivalent spaced at 2-0-0 oc max. starting at 16-0-12 from the left end to 18-0-12 to connect truss(es) to back face of bottom chord.
 - Fill all nail holes where hanger is in contact with lumber.
- LOAD CASE(S)** Standard
- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
- Uniform Loads (lb/ft)
 Vert: 1-4=-51, 4-7=-51, 14-17=-20
 Concentrated Loads (lb)
 Vert: 12=-1095 (B), 8=-1529 (B), 28=-1095 (B), 29=-1095 (B), 31=-1095 (B), 32=-1095 (B), 34=-1095 (B), 35=-1095 (B), 37=-1529 (B)



February 25, 2025

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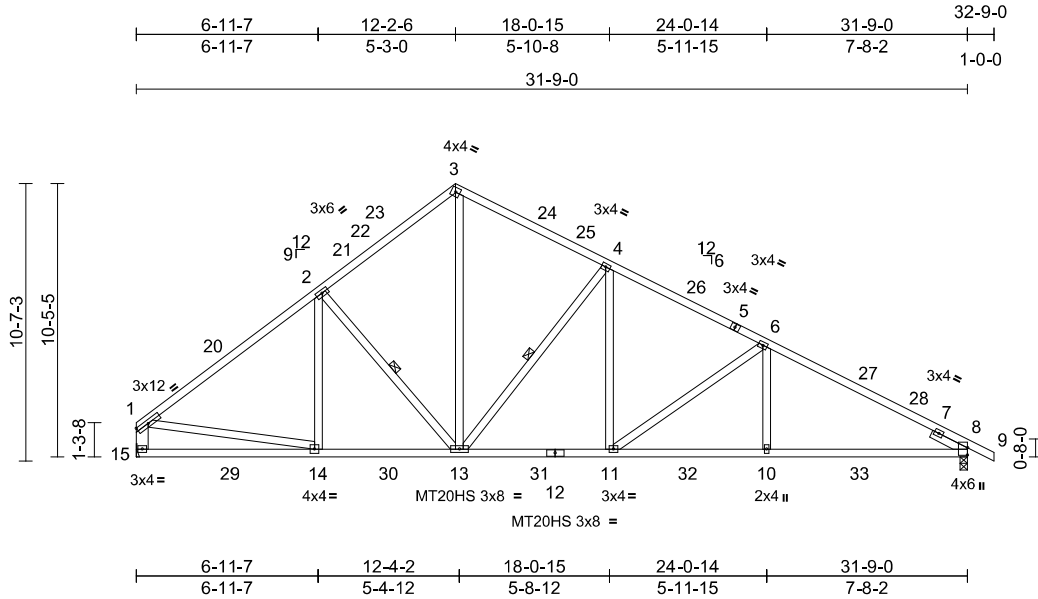
818 Soundside Road
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Drayton Rev 2-Elev 2-Roof	171607560
	A1	Roof Special	19	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. Mon Feb 24 12:57:49
 ID:rUNLQD7Tk?Edgxye2rMbazuTXB-RIC?PsbB70Hq3NSgPqL8w3ulTXbGKWrCDoI7J4zJC?f

Page: 1



Scale = 1:85.5

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

Loading	(psf)	Spacing		CSI		DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	2-0-0	TC	0.80	Vert(LL)	-0.18	10-18	>999	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.88	Vert(CT)	-0.25	10-11	>999	240	MT20HS	187/143
TCDL	10.0	Rep Stress Incr	YES	WB	0.60	Horz(CT)	0.06	8	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.04	11	>999	240		
BCDL	10.0										Weight: 193 lb	FT = 20%

LUMBER
 TOP CHORD 2x4 SP No.2
 BOT CHORD 2x4 SP SS *Except* 12-15:2x4 SP No.2
 WEBS 2x4 SP No.3 *Except* 15-1:2x6 SP No.2
 SLIDER Right 2x4 SP No.3 -- 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 2-13, 4-13

REACTIONS (size) 8=0-3-8, 15= Mechanical
 Max Horiz 15=180 (LC 14)
 Max Grav 8=1411 (LC 3), 15=1378 (LC 34)

FORCES (lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=-1779/91, 2-3=-1530/164, 3-4=-1381/161, 4-6=-1959/124, 6-8=-2480/85, 8-9=0/36, 1-15=-1379/85
 BOT CHORD 14-15=-66/383, 13-14=0/1317, 11-13=0/1647, 10-11=0/2132, 8-10=-78/2132
 WEBS 2-14=-33/263, 2-13=-362/100, 3-13=-61/1156, 4-13=-881/74, 1-14=0/1072, 4-11=0/584, 6-10=0/362, 6-11=-592/55

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) 1-3-1 to 4-5-3, Interior (1) 4-5-3 to 13-2-12, Exterior(2R) 13-2-12 to 16-4-13, Interior (1) 16-4-13 to 33-9-5 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- 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.
- All plates are MT20 plates unless otherwise indicated.
- 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 8 SP SS .
- Refer to girder(s) for truss to truss connections.
- 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 25, 2025

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITTEK 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)



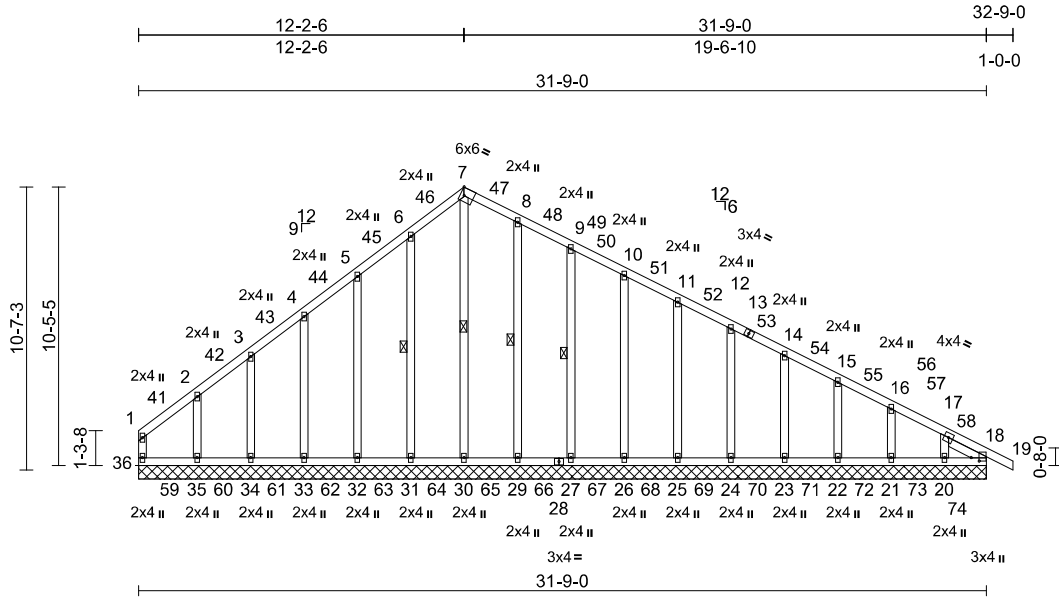
818 Soundside Road
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Drayton Rev 2-Elev 2-Roof	171607561
	A1GE	Roof Special	6	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. Mon Feb 24 12:57:52
 ID:RxdmSODcKFKugriEVCOxOSuTK9-RfC?PsB70Hq3NSgPqnL8w3uITXbGKwRCDoi7J4zJC?f

Page: 1

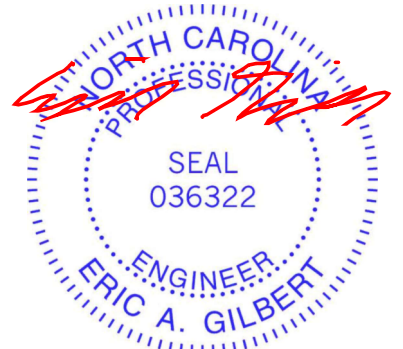


Scale = 1:83.9

Plate Offsets (X, Y): [7:Edge,0-3-8], [18:0-1-8,0-3-9]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.21	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.22	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.27	Horz(CT)	0.01	18	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS								
BCDL	10.0											
											Weight: 228 lb	FT = 20%

LUMBER	FORCES	NOTES
TOP CHORD 2x4 SP No.2	(lb) - Maximum Compression/Maximum Tension	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.
BOT CHORD 2x4 SP No.2	TOP CHORD 1-2=-117/67, 2-3=-81/95, 3-4=-98/129, 4-5=-99/193, 5-6=-131/261, 6-7=-158/317, 7-8=-144/292, 8-9=-130/262, 9-10=-110/221, 10-11=-92/183, 11-12=-96/144, 12-14=-103/106, 14-15=-110/67, 15-16=-118/58, 16-17=-125/56, 17-18=-150/79, 18-19=0/36, 1-36=-274/26	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	BOT CHORD 35-36=-43/132, 34-35=-43/132, 33-34=-43/132, 32-33=-43/132, 31-32=-43/132, 30-31=-43/132, 29-30=-43/132, 27-29=-43/132, 26-27=-43/132, 25-26=-43/132, 24-25=-43/132, 23-24=-43/132, 22-23=-43/132, 21-22=-43/132, 20-21=-43/132, 18-20=-43/132	5) Unbalanced snow loads have been considered for this design.
OTHERS 2x4 SP No.3	WEBS 7-30=-250/88, 6-31=-274/67, 5-32=-275/91, 4-33=-279/84, 3-34=-282/81, 2-35=-290/165, 8-29=-272/40, 9-27=-272/70, 10-26=-274/61, 11-25=-276/62, 12-24=-279/62, 14-23=-281/62, 15-22=-283/62, 16-21=-287/65, 17-20=-277/85	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.
SLIDER Right 2x4 SP No.3 -- 1-7-2		7) Plates checked for a plus or minus 5 degree rotation about its center.
BRACING		8) Gable requires continuous bottom chord bearing.
TOP CHORD Structural wood sheathing directly applied, except end verticals.		9) Gable studs spaced at 2-0-0 oc.
BOT CHORD Rigid ceiling directly applied.		10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
WEBS 1 Row at midpt 7-30, 6-31, 8-29, 9-27		
REACTIONS (size)		
Max Horiz 18=31-9-0, 20=31-9-0, 21=31-9-0, 22=31-9-0, 23=31-9-0, 24=31-9-0, 25=31-9-0, 26=31-9-0, 27=31-9-0, 29=31-9-0, 30=31-9-0, 31=31-9-0, 32=31-9-0, 33=31-9-0, 34=31-9-0, 35=31-9-0, 36=31-9-0		
Max Uplift 18=-21 (LC 13), 20=-27 (LC 17), 21=-6 (LC 17), 22=-7 (LC 17), 23=-6 (LC 17), 24=-6 (LC 17), 25=-6 (LC 17), 26=-6 (LC 17), 27=-10 (LC 17), 31=-12 (LC 16), 32=-23 (LC 16), 33=-22 (LC 16), 34=-9 (LC 16), 35=-64 (LC 16), 36=-30 (LC 12)		
Max Grav 18=308 (LC 113), 20=321 (LC 111), 21=335 (LC 110), 22=332 (LC 109), 23=333 (LC 108), 24=333 (LC 107), 25=333 (LC 106), 26=333 (LC 105), 27=333 (LC 104), 29=334 (LC 103), 30=324 (LC 102), 31=334 (LC 101), 32=333 (LC 100), 33=333 (LC 99), 34=331 (LC 98), 35=340 (LC 97), 36=294 (LC 96)		



February 25, 2025

Continued on page 2

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinstitute.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	Drayton Rev 2-Elev 2-Roof	I71607561
	A1GE	Roof Special	6	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. Mon Feb 24 12:57:52
 ID:RxmdSODcKfKugriEVCoXOSzuTK9-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 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.
- 12) All bearings are assumed to be SP No.2 .
- 13) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 18, 36, 31, 32, 33, 34, 35, 27, 26, 25, 24, 23, 22, 21, and 20. This connection is for uplift only and does not consider lateral forces.
- 14) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 18, 37.
- 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.

LOAD CASE(S) Standard

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

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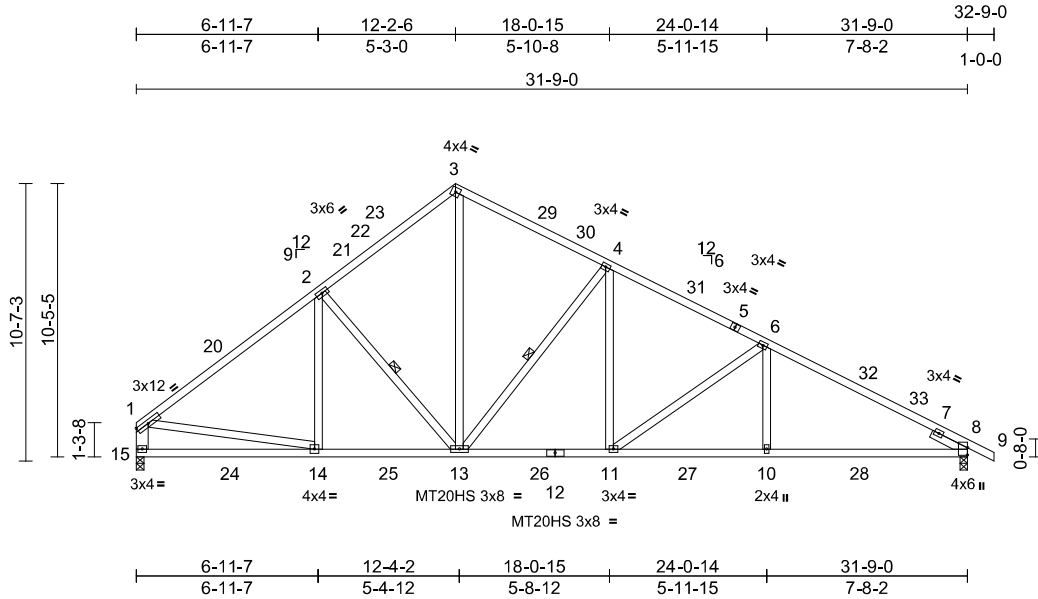
818 Soundside Road
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Drayton Rev 2-Elev 2-Roof	171607562
	A1C	Roof Special	15	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. Mon Feb 24 12:57:51
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Page: 1



Scale = 1:85.5

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

Loading	(psf)	Spacing		CSI		DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	2-0-0	TC	0.80	Vert(LL)	-0.18	10-18	>999	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.88	Vert(CT)	-0.25	10-11	>999	240	MT20HS	187/143
TCDL	10.0	Rep Stress Incr	YES	WB	0.60	Horz(CT)	0.06	8	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.04	11	>999	240		
BCDL	10.0										Weight: 193 lb	FT = 20%

LUMBER

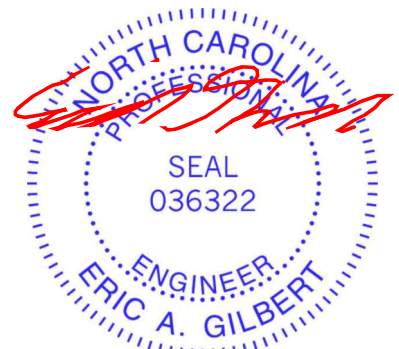
- TOP CHORD 2x4 SP No.2
 - BOT CHORD 2x4 SP SS *Except* 12-15:2x4 SP No.2
 - WEBS 2x4 SP No.3 *Except* 15-1:2x6 SP No.2
 - SLIDER Right 2x4 SP No.3 -- 1-6-0
- BRACING**
- TOP CHORD Structural wood sheathing directly applied, except end verticals.
 - BOT CHORD Rigid ceiling directly applied.
 - WEBS 1 Row at midpt 2-13, 4-13
- REACTIONS** (size) 8=0-3-8, 15=0-3-8
 Max Horiz 15=180 (LC 14)
 Max Grav 8=1411 (LC 3), 15=1378 (LC 34)
- FORCES** (lb) - Maximum Compression/Maximum Tension
- TOP CHORD 1-2=-1779/91, 2-3=-1530/164, 1-15=-1379/85, 3-4=-1381/161, 4-6=-1959/124, 6-8=-2480/85, 8-9=0/36
 - BOT CHORD 14-15=-66/383, 13-14=0/1317, 11-13=0/1647, 10-11=0/2132, 8-10=-78/2132
 - WEBS 3-13=-61/1156, 2-14=-33/263, 2-13=-362/100, 1-14=0/1072, 6-10=0/362, 4-11=0/584, 4-13=-881/74, 6-11=-592/55

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) 1-3-1 to 4-5-3, Interior (1) 4-5-3 to 13-2-12, Exterior(2R) 13-2-12 to 16-4-13, Interior (1) 16-4-13 to 33-9-5 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- 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.
- All plates are MT20 plates unless otherwise indicated.
- 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 15 SP No.2 , Joint 8 SP SS .
- 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 25, 2025

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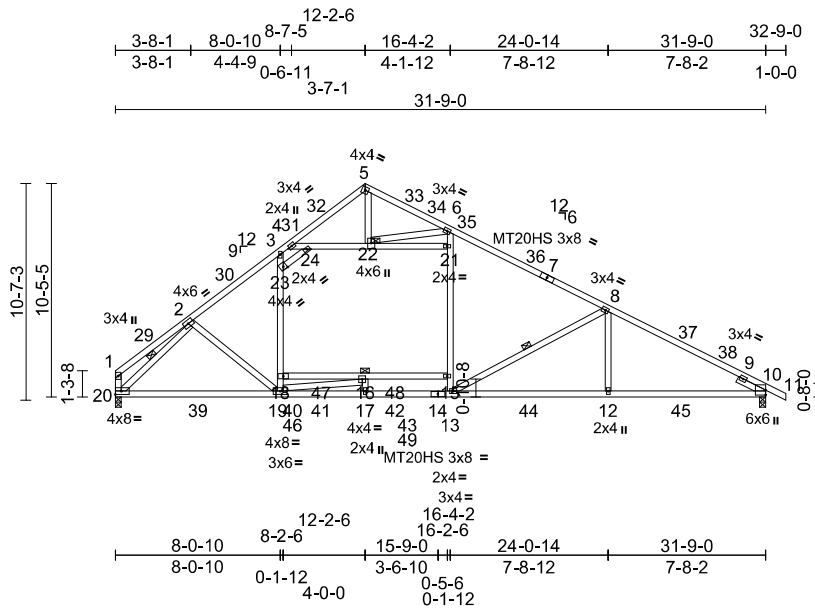
818 Soundside Road
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Drayton Rev 2-Elev 2-Roof	171607563
	A1B	Attic	13	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. Mon Feb 24 12:57:51
 ID:4Y8uDsoz3lAcJqlyPFfeimzuTRA-RfC?PsB70Hq3NSgPqnL8w3uITxbGKwCrDcoi7J4zJC?f

Page: 1



Scale = 1:109.4

Plate Offsets (X, Y): [23:0-2-0,0-1-12]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.84	Vert(LL)	-0.41	12-13	>924	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.76	Vert(CT)	-0.55	12-13	>693	240	MT20HS	187/143
TCDL	10.0	Rep Stress Incr	YES	WB	1.00	Horz(CT)	0.08	10	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.15	12-13	>999	240		
BCDL	10.0											
											Weight: 205 lb	FT = 20%

LUMBER
 TOP CHORD 2x4 SP No.2 *Except* 5-7:2x4 SP SS
 BOT CHORD 2x4 SP SS
 WEBS 2x4 SP No.3 *Except* 3-19:2x4 SP SS, 6-13,4-21:2x4 SP No.2
 SLIDER Right 2x4 SP No.3 -- 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 8-13, 2-20
 JOINTS 1 Brace at Jt(s): 22
REACTIONS (size) 10=0-3-8, 20=0-3-8
 Max Horiz 20=-179 (LC 14)
 Max Grav 10=1585 (LC 2), 20=1718 (LC 35)
FORCES (lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=-326/56, 2-3=-2313/0, 3-4=-1361/0, 4-5=-358/60, 5-6=-309/72, 6-8=-2295/0, 8-10=-2790/0, 10-11=0/36, 1-20=-335/43
 BOT CHORD 19-20=0/1630, 17-19=0/2169, 13-17=0/2169, 12-13=0/2408, 10-12=0/2408, 16-18=0/750, 15-16=-393/13
 WEBS 2-19=-13/247, 18-19=0/579, 18-23=0/718, 3-23=0/1028, 13-15=0/633, 15-21=0/806, 6-21=0/793, 8-13=-606/132, 8-12=0/340, 4-24=-1399/0, 22-24=-1811/0, 21-22=-84/387, 2-20=-2233/0, 16-17=-195/30, 5-22=0/78, 6-22=-2051/0, 16-19=-1167/0, 23-24=-685/83

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) 1-2-1 to 4-6-14, Interior (1) 4-6-14 to 13-2-12, Exterior(2R) 13-2-12 to 16-4-13, Interior (1) 16-4-13 to 33-9-5 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- 200.0lb AC unit load placed on the bottom chord, 11-2-1 from left end, supported at two points, 5-0-0 apart.
- All plates are MT20 plates unless otherwise indicated.
- 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.
- Bottom chord live load (20.0 psf) and additional bottom chord dead load (20.0 psf) applied only to room. 16-18, 15-16
- All bearings are assumed to be SP SS.
- 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.
 - Attic room checked for L/360 deflection.
- LOAD CASE(S)** Standard



February 25, 2025

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

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ENGINEERING BY
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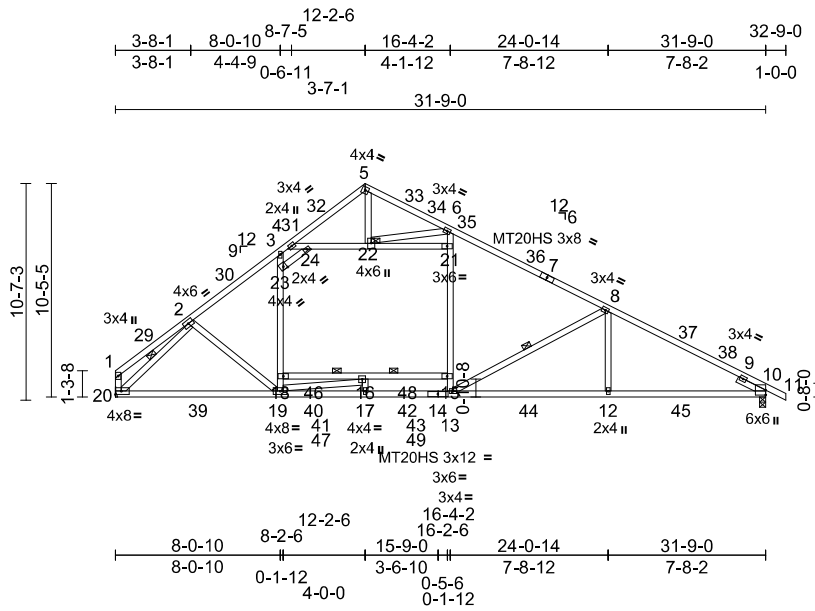
818 Soundside Road
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Drayton Rev 2-Elev 2-Roof	171607564
	A1A	Attic	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. Mon Feb 24 12:57:50
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Page: 1



Scale = 1:109.4

Plate Offsets (X, Y): [23:0-2-0,0-1-12]

Loading	(psf)	Spacing		CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	2-0-0	TC	0.87	Vert(LL)	-0.41	12-13	>927	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	1.00	Vert(CT)	-0.56	17	>679	240	MT20HS	187/143
TCDL	10.0	Rep Stress Incr	YES	WB	0.71	Horz(CT)	0.09	10	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.14	12-13	>999	240		
BCDL	10.0										Weight: 205 lb	FT = 20%

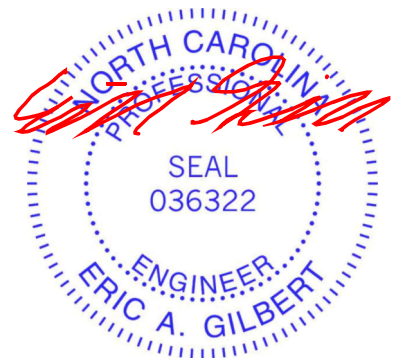
LUMBER
 TOP CHORD 2x4 SP No.2 *Except* 5-7:2x4 SP SS
 BOT CHORD 2x4 SP SS *Except* 18-15:2x4 SP No.2
 WEBS 2x4 SP No.3 *Except* 3-19,6-13:2x4 SP SS, 4-21:2x4 SP No.2
 SLIDER Right 2x4 SP No.3 -- 1-6-0
BRACING
 TOP CHORD Structural wood sheathing directly applied, except end verticals.
 BOT CHORD Rigid ceiling directly applied.
 WEBS 1 Row at midpt 8-13, 2-20
 JOINTS 1 Brace at Jt(s): 22
REACTIONS (size) 10=0-3-8, 20= Mechanical
 Max Horiz 20=-179 (LC 14)
 Max Grav 10=1591 (LC 2), 20=1712 (LC 35)
FORCES (lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=-319/62, 2-3=-2307/0, 3-4=-1356/0, 4-5=-363/61, 5-6=-313/74, 6-8=-2310/0, 8-10=-2803/0, 10-11=0/36, 1-20=-332/46
 BOT CHORD 19-20=0/1626, 17-19=0/2253, 13-17=0/2253, 12-13=0/2420, 10-12=0/2420, 16-18=0/740, 15-16=-489/0
 WEBS 2-19=-12/247, 18-19=0/584, 18-23=0/706, 3-23=0/1015, 13-15=0/660, 15-21=0/821, 6-21=0/803, 8-13=-604/132, 8-12=0/338, 4-24=-1381/0, 22-24=-1798/0, 21-22=-70/484, 2-20=-2233/0, 5-22=0/77, 6-22=-2107/0, 16-17=-209/15, 23-24=-680/41, 16-19=-1254/0

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) 1-2-1 to 4-6-14, Interior (1) 4-6-14 to 13-2-12, Exterior(2R) 13-2-12 to 16-4-13, Interior (1) 16-4-13 to 33-9-5 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- 200.0lb AC unit load placed on the bottom chord, 12-2-6 from left end, supported at two points, 5-0-0 apart.
- All plates are MT20 plates unless otherwise indicated.
- 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.
- Bottom chord live load (20.0 psf) and additional bottom chord dead load (20.0 psf) applied only to room. 16-18, 15-16
- Bearings are assumed to be: , Joint 10 SP SS .
- Refer to girder(s) for truss to truss connections.
- 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.
 - Attic room checked for L/360 deflection.
- LOAD CASE(S)** Standard



February 25, 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.tpinstitute.com) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

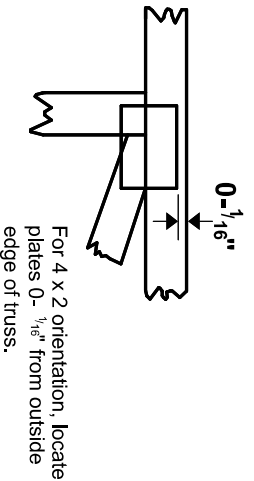


818 Soundside Road
 Edenton, NC 27932

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.



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

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

PLATE SIZE

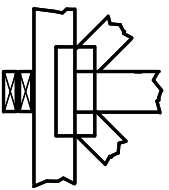
4 X 4
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



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

BEARING



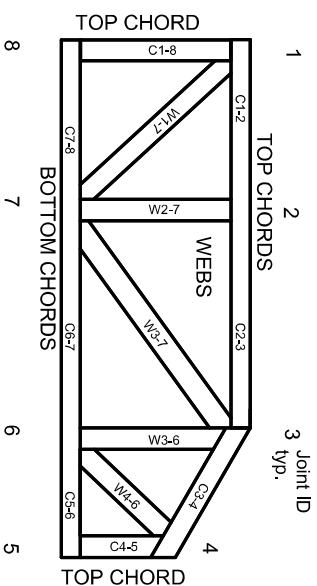
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

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

Numbering System

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



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

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

Product Code Approvals

ICC-ES Reports:

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

Design General Notes

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

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

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General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

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

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TRENCO
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MITek Engineering Reference Sheet: Mill-7473 rev. 1/21/2023