ENGINEERING BY TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

RE:

Site Information:
Project Customer: DRB Raleigh Project Name:
Lot/Block: Subdivision: DRB Raleigh
Model:
Address:
City: State:

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

Design Code: IRC2021/TPI2014
Wind Code: ASCE 7-16
Wind Speed: 120 mph
Roof Load: 40.0 psf
Mean Roof Height (feet): 25

Design Program: MiTek 20/20 8.8
Design Method: MWFRS (Envelope)/C-C hybrid Wind ASCE 7-16
Floor Load: N/A psf

Exposure Category: B

No.	Seal#	Truss Name	Date
1	I71233551	P1G	2/7/25
2	I71233552	P1	2/7/25
3		G1G	2/7/25
4	I71233554	G1	2/7/25
5	I71233555	C1G	2/7/25
6	I71233556	C1	2/7/25
7	I71233557	A2G	2/7/25
8	I71233558	A2	2/7/25
9	I71233559	A1G	2/7/25
10	I71233560	A1	2/7/25
11	I71233561	A1A	2/7/25
12		PB1G	2/7/25
13	I71233563	PB1	2/7/25
14	I71233564	V6	2/7/25
	I71233565	V5	2/7/25
16	I71233566	V4	2/7/25
17	I71233567	V3	2/7/25
18	I71233568	V2	2/7/25
19	I71233569	V1	2/7/25
20	I71233570	A2T	2/7/25
21		A1GET	2/7/25
22	I71233572	A1GE1	2/7/25
23	I71233573	A1AT	2/7/25

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 7,2025
Gilbert, Eric

Job	Truss	Truss Type	Qty	Ply	
	P1G	Monopitch Supported Gable	4	1	I71233551
					Job Reference (optional)

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Feb 1 2025 Print: 8.830 S Feb 1 2025 MiTek Industries, Inc. Wed Feb 05 11:31:04 Page: 1
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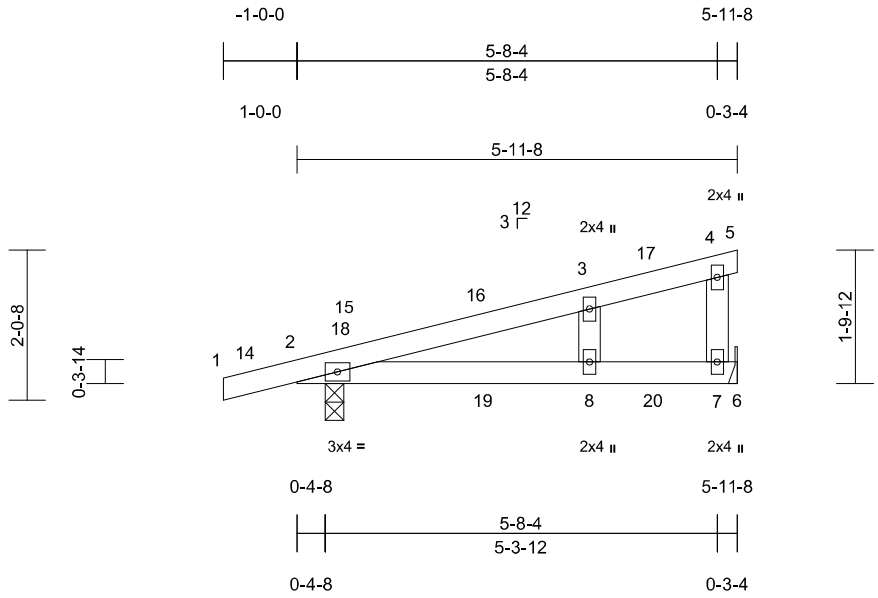

Scale = 1:30.3

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.58	Vert(LL)	-0.09	8-13	>771	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.62	Vert(CT)	-0.13	8-13	>518	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0 *	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.06	8-13	>999	240		
BCDL	10.0										Weight: 23 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.
BOT CHORD Rigid ceiling directly applied.

REACTIONS (size) 2=0-3-0, 7= Mechanical
Max Horiz 2=40 (LC 12)
Max Uplift 2=-57 (LC 12), 7=-33 (LC 12)
Max Grav 2=416 (LC 41), 7=367 (LC 49)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/20, 2-3=-181/169, 3-4=-29/50, 4-5=-5/0
BOT CHORD 2-8=-138/164, 7-8=0/0, 6-7=0/0
WEBS 3-8=-125/127, 4-7=-310/97

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 5-11-8 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) 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 studs spaced at 2-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Bearings are assumed to be: Joint 2 SP No.2 .
11) Refer to girder(s) for truss to truss connections.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 33 lb uplift at joint 7.
13) 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.
14) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
15) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard

February 7,2025

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

Job	Truss	Truss Type	Qty	Ply	
	P1	Monopitch	16	1	I71233552
					Job Reference (optional)

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Feb 1 2025 Print: 8.830 S Feb 1 2025 MiTek Industries, Inc. Wed Feb 05 11:31:04 Page: 1
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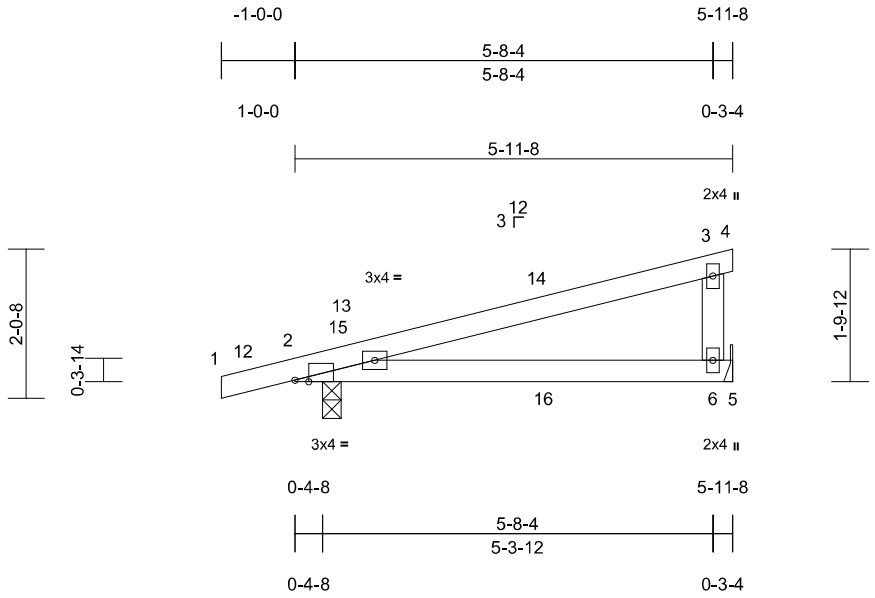

Scale = 1:30.5

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.70	Vert(LL)	-0.11	6-11	>621	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.78	Vert(CT)	-0.15	6-11	>449	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0 *	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.05	6-11	>999	240		
BCDL	10.0										Weight: 21 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=40 (LC 12)
Max Uplift 2=-57 (LC 12), 6=-33 (LC 12)
Max Grav 2=416 (LC 41), 6=367 (LC 47)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/20, 2-3=-183/169, 3-4=-5/0
BOT CHORD 2-6=-138/164, 5-6=0/0
WEBS 3-6=-311/117

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 5-11-8 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 33 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 7,2025

ENGINEERING BY TRENCO
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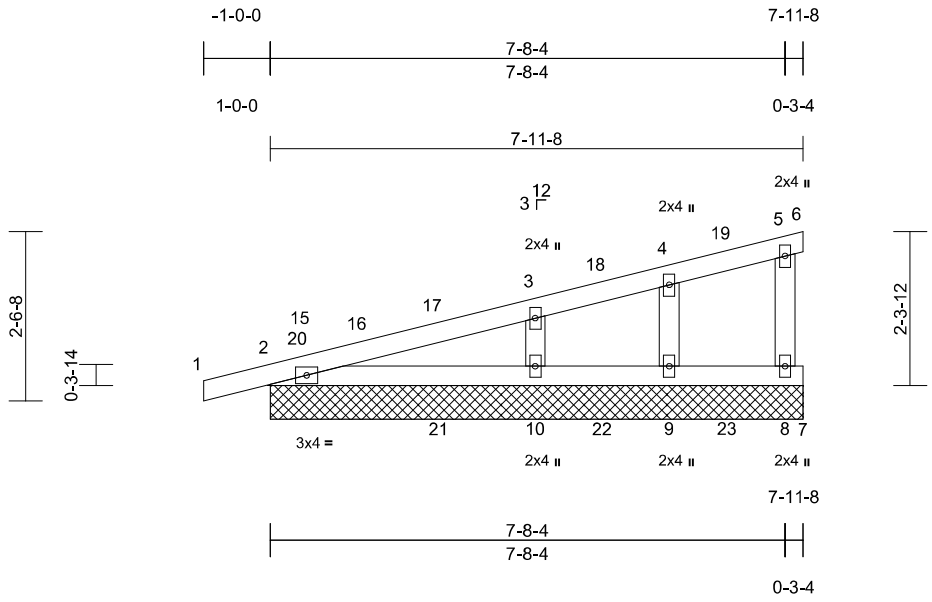
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	
	G1G	Monopitch Supported Gable	8	1	I71233553
					Job Reference (optional)



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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.31	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.33	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	6	n/a	n/a		
BCLL	0.0 *	Code	IRC2021/TPI2014	Matrix-AS								
BCDL	10.0										Weight: 31 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.
BOT CHORD Rigid ceiling directly applied.

REACTIONS (size) 2=7-11-8, 6=7-11-8, 7=7-11-8, 8=7-11-8, 9=7-11-8, 10=7-11-8
Max Horiz 2=51 (LC 12)
Max Uplift 2=-11 (LC 12), 6=-135 (LC 44), 7=-242 (LC 55), 8=-39 (LC 54), 9=-69 (LC 53)
Max Grav 2=341 (LC 57), 6=59 (LC 45), 7=55 (LC 54), 8=448 (LC 55), 9=297 (LC 60), 10=433 (LC 53)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/20, 2-3=-188/48, 3-4=-51/34, 4-5=-34/35, 5-6=-34/14
BOT CHORD 2-10=-39/171, 9-10=0/0, 8-9=0/0, 7-8=0/0
WEBS 4-9=-271/97, 3-10=-329/181, 5-8=-286/84

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 7-11-8 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
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 11 lb uplift at joint 2, 242 lb uplift at joint 7, 135 lb uplift at joint 6, 69 lb uplift at joint 9, 39 lb uplift at joint 8 and 11 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 7,2025

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

Job	Truss	Truss Type	Qty	Ply	
	G1	Monopitch	40	1	I71233554
					Job Reference (optional)

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Feb 1 2025 Print: 8.830 S Feb 1 2025 MiTek Industries, Inc. Wed Feb 05 11:31:04 Page: 1
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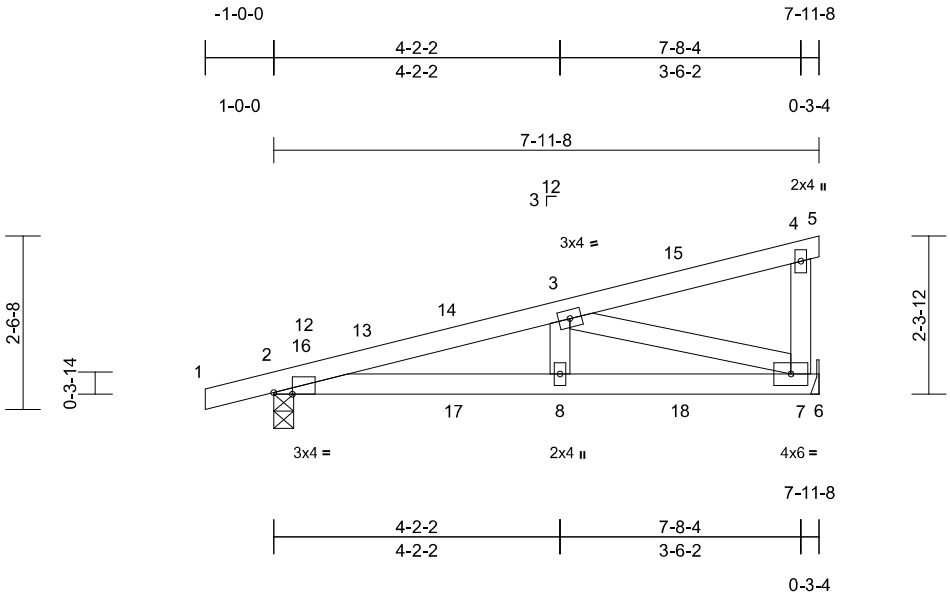

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Plate Offsets (X, Y): [2:0-3-4,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.43	Vert(LL)	-0.04	7-8	>999	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.59	Vert(CT)	-0.06	8-11	>999	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.22	Horz(CT)	0.01	7	n/a	n/a		
BCLL	0.0 *	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.02	8-11	>999	240		
BCDL	10.0										Weight: 34 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, 7= Mechanical
Max Horiz 2=51 (LC 12)
Max Uplift 2=-7 (LC 12)
Max Grav 2=428 (LC 52), 7=416 (LC 51)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/20, 2-3=-757/186, 3-4=-46/31, 4-5=-5/0
BOT CHORD 2-8=-250/731, 7-8=-250/731, 6-7=0/0
WEBS 3-8=0/328, 3-7=-764/262, 4-7=-287/74

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 7-11-8 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
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 7,2025

ENGINEERING BY TRENCO
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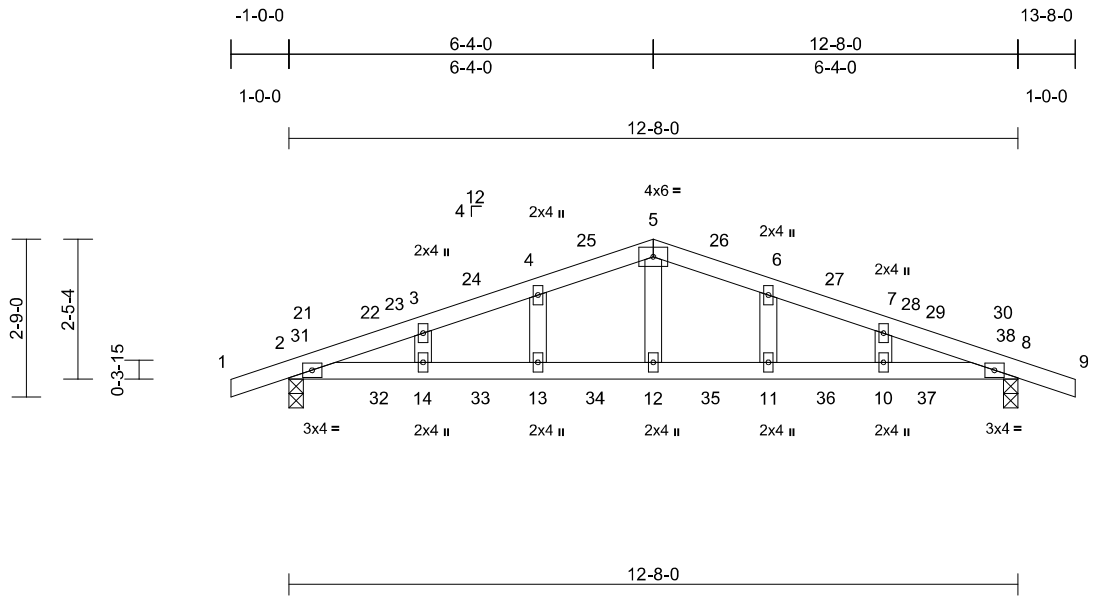
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	
	C1G	Common Supported Gable	2	1	I71233555
					Job Reference (optional)



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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.52	Vert(LL)	-0.12	13-14	>999	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.70	Vert(CT)	-0.18	13-14	>852	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.15	Horz(CT)	0.02	8	n/a	n/a		
BCLL	0.0 *	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.07	13-14	>999	240		
BCDL	10.0										Weight: 50 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, 8=0-3-0
Max Horiz 2=20 (LC 16)
Max Uplift 2=-91 (LC 12), 8=-91 (LC 13)
Max Grav 2=567 (LC 2), 8=567 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/26, 2-3=-961/456, 3-4=-942/469, 4-5=-926/484, 5-6=-926/484, 6-7=-942/469, 7-8=-961/456, 8-9=0/26
BOT CHORD 2-14=-385/888, 13-14=-385/888, 12-13=-385/888, 11-12=-385/888, 10-11=-385/888, 8-10=-385/888
WEBS 5-12=-149/406, 4-13=-141/110, 3-14=-123/127, 6-11=-141/110, 7-10=-123/127

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 6-4-0, Exterior(2R) 6-4-0 to 9-4-0, Interior (1) 9-4-0 to 13-8-0 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
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) 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.
7) Plates checked for a plus or minus 5 degree rotation about its center.
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) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 8. This connection is for uplift only and does not consider lateral forces.
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.

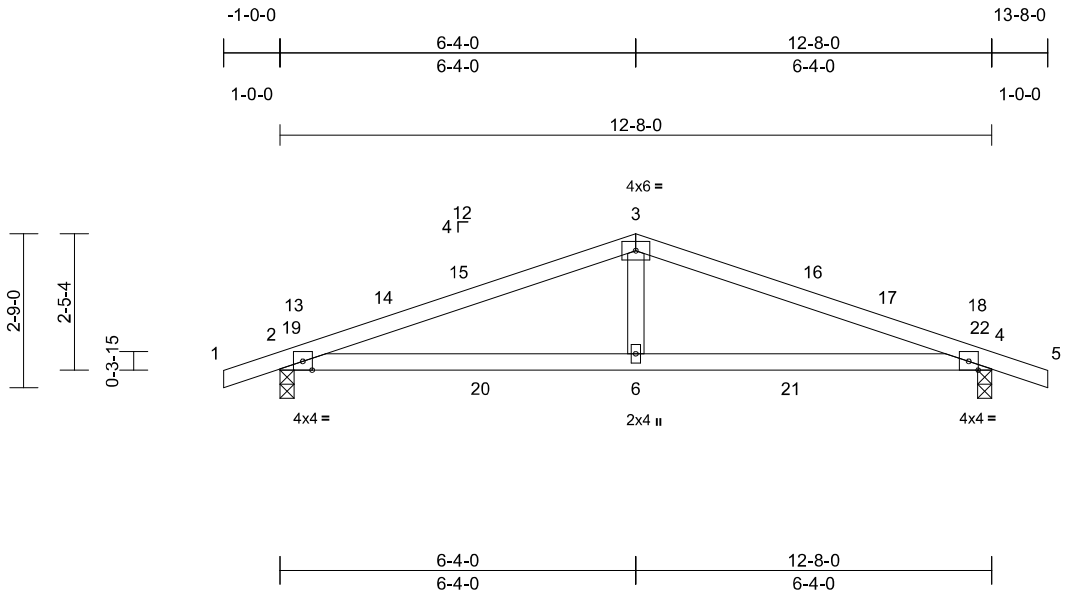
LOAD CASE(S) Standard

February 7,2025

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

Job	Truss	Truss Type	Qty	Ply	
	C1	Common	10	1	I71233556
					Job Reference (optional)

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Feb 1 2025 Print: 8.830 S Feb 1 2025 MiTek Industries, Inc. Wed Feb 05 11:31:03 Page: 1
ID:ZLwW6C_ZI4Jy3yz1gY4IZxyFL64-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:39.9

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	0.75	Vert(LL)	-0.15	6-9	>999	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.89	Vert(CT)	-0.20	6-9	>760	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.15	Horz(CT)	0.01	4	n/a	n/a		
BCLL	0.0 *	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.06	6-9	>999	240		
BCDL	10.0										Weight: 45 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=20 (LC 16)
Max Uplift 2=-91 (LC 12), 4=-91 (LC 13)
Max Grav 2=567 (LC 2), 4=567 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/26, 2-3=-950/468, 3-4=-950/468, 4-5=0/26
BOT CHORD 2-6=-374/870, 4-6=-374/870
WEBS 3-6=-95/399

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 6-4-0, Exterior(2R) 6-4-0 to 9-4-0, Interior (1) 9-4-0 to 13-8-0 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
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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) All bearings are assumed to be SP No.2 .
10) 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.
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

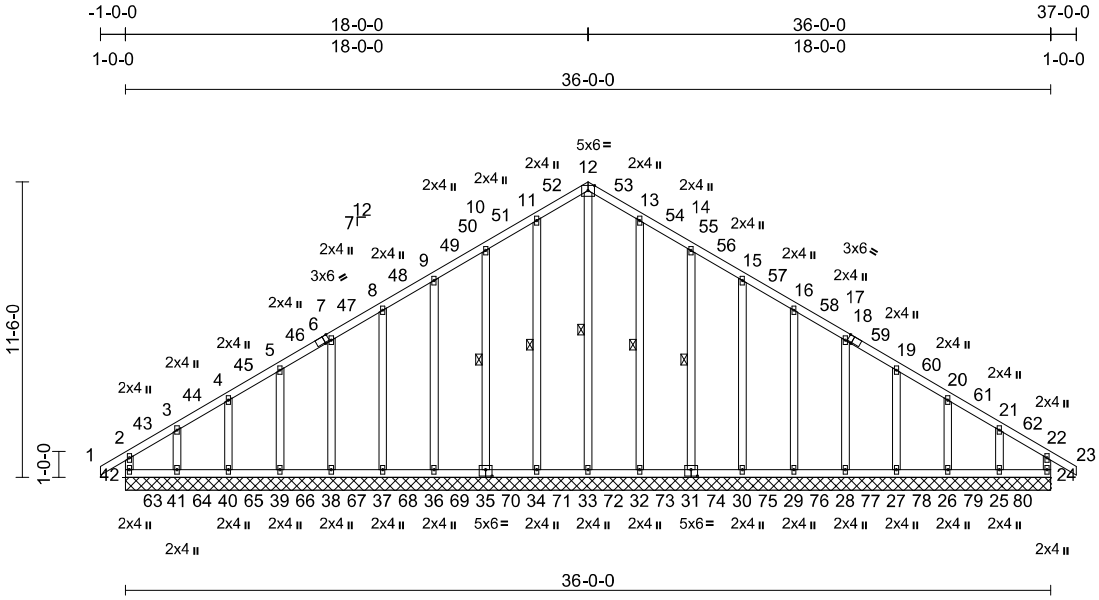
February 7,2025

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

Job	Truss	Truss Type	Qty	Ply	
	A2G	Common Supported Gable	4	1	I71233557
					Job Reference (optional)

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Feb 1 2025 Print: 8.830 S Feb 1 2025 MiTek Industries, Inc. Wed Feb 05 11:31:01 Page: 1

ID:cUxdvfvAgK?7JaA65uNU83yFL11-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:87.2

Plate Offsets (X, Y): [6:0-2-3,Edge], [18:0-2-3,Edge], [31:0-3-0,0-3-0], [35:0-3-0,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.21	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.19	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.31	Horz(CT)	0.01	24	n/a	n/a		
BCLL	0.0 *	Code	IRC2021/TPI2014	Matrix-AS								
BCDL	10.0										Weight: 273 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 12-33, 11-34, 10-35, 13-32, 14-31

REACTIONS (size) 24=36-0-0, 25=36-0-0, 26=36-0-0, 27=36-0-0, 28=36-0-0, 29=36-0-0, 30=36-0-0, 31=36-0-0, 32=36-0-0, 33=36-0-0, 34=36-0-0, 35=36-0-0, 36=36-0-0, 37=36-0-0, 38=36-0-0, 39=36-0-0, 40=36-0-0, 41=36-0-0, 42=36-0-0

Max Horiz 42=-195 (LC 14)

Max Uplift 24=-34 (LC 13), 25=-56 (LC 17), 27=-13 (LC 17), 28=-10 (LC 17), 29=-11 (LC 17), 30=-10 (LC 17), 31=-15 (LC 17), 34=-1 (LC 16), 35=-14 (LC 16), 36=-10 (LC 16), 37=-11 (LC 16), 38=-10 (LC 16), 39=-14 (LC 16), 41=-73 (LC 13), 42=-74 (LC 12)

Max Grav 24=315 (LC 117), 25=328 (LC 116), 26=334 (LC 115), 27=333 (LC 114), 28=333 (LC 113), 29=333 (LC 112), 30=333 (LC 111), 31=333 (LC 110), 32=334 (LC 109), 33=329 (LC 108), 34=334 (LC 107), 35=333 (LC 106), 36=333 (LC 105), 37=333 (LC 104), 38=333 (LC 103), 39=333 (LC 102), 40=334 (LC 101), 41=328 (LC 100), 42=315 (LC 99)

FORCES (lb) - Maximum Compression/Maximum Tension

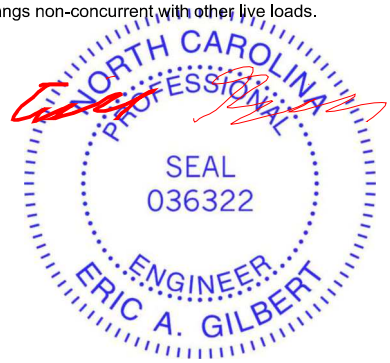
TOP CHORD 2-42=-297/61, 1-2=0/47, 2-3=-148/136, 3-4=-111/107, 4-5=-109/105, 5-7=-99/118, 7-8=-91/120, 8-9=-99/160, 9-10=-121/199, 10-11=-146/241, 11-12=-165/273, 12-13=-165/273, 13-14=-146/241, 14-15=-121/199, 15-16=-99/160, 16-17=-76/120, 17-19=-76/80, 19-20=-77/70, 20-21=-72/76, 21-22=-101/87, 22-23=0/47, 22-24=-297/30

BOT CHORD 41-42=-82/101, 40-41=-82/101, 39-40=-82/101, 38-39=-82/101, 37-38=-82/101, 36-37=-82/101, 34-36=-82/101, 33-34=-82/101, 32-33=-82/101, 30-32=-82/101, 29-30=-82/101, 28-29=-82/101, 27-28=-82/101, 26-27=-82/101, 25-26=-82/101, 24-25=-82/101

WEBS 12-33=-249/81, 11-34=-271/37, 10-35=-271/62, 9-36=-273/54, 8-37=-276/55, 7-38=-268/55, 5-39=-281/56, 4-40=-286/53, 3-41=-282/78, 13-32=-271/37, 14-31=-271/62, 15-30=-273/54, 16-29=-276/55, 17-28=-279/55, 19-27=-281/56, 20-26=-286/53, 21-25=-282/76

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 2-7-3, Exterior(2N) 2-7-3 to 18-0-0, Corner (3R) 18-0-0 to 21-7-3, Exterior(2N) 21-7-3 to 37-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) 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 7,2025

Continued on page 2

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

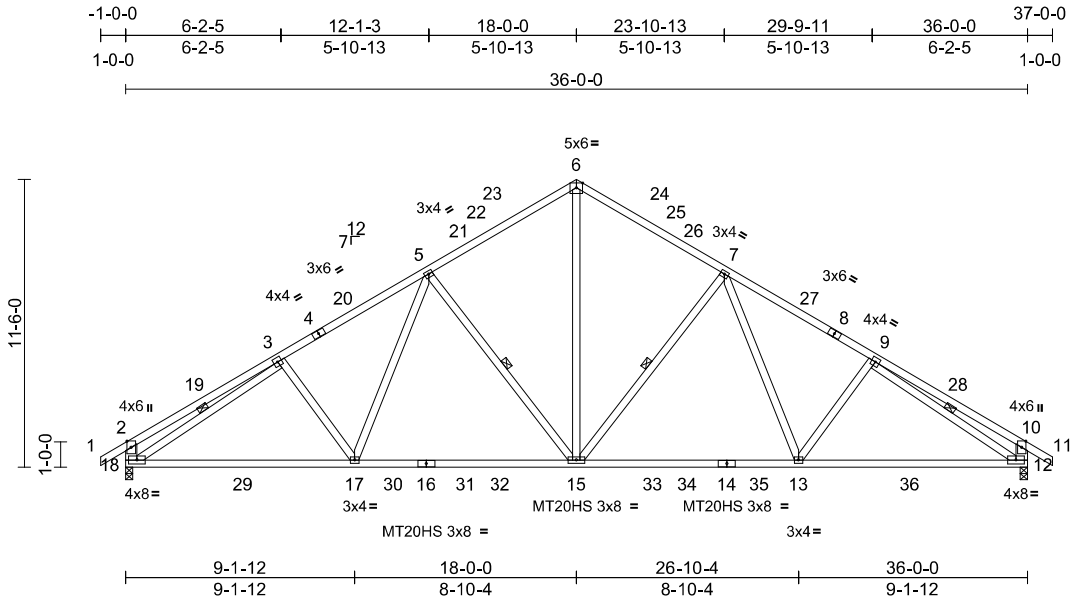
7) Plates checked for a plus or minus 5 degree rotation about its center.
8) Gable requires continuous bottom chord bearing.
9) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
10) Gable studs spaced at 2-0-0 oc.
11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
12) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
13) All bearings are assumed to be SP No.2 .
14) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 74 lb uplift at joint 42, 34 lb uplift at joint 24, 1 lb uplift at joint 34, 14 lb uplift at joint 35, 10 lb uplift at joint 36, 11 lb uplift at joint 37, 10 lb uplift at joint 38, 14 lb uplift at joint 39, 73 lb uplift at joint 41, 15 lb uplift at joint 31, 10 lb uplift at joint 30, 11 lb uplift at joint 29, 10 lb uplift at joint 28, 13 lb uplift at joint 27 and 56 lb uplift at joint 25.
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

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

Job	Truss	Truss Type	Qty	Ply	
	A2	Common	10	1	I71233558
					Job Reference (optional)

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Feb 1 2025 Print: 8.830 S Feb 1 2025 MiTek Industries, Inc. Wed Feb 05 11:31:01 Page: 1
ID:48S9zMVTSBrpsW8mgSHlJ5yFL1Y-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:89.4

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.72	Vert(LL)	-0.36	15-17	>999	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.65	Vert(CT)	-0.50	15-17	>845	240	MT20HS	187/143
TCDL	10.0	Rep Stress Incr	YES	WB	0.55	Horz(CT)	0.08	12	n/a	n/a		
BCLL	0.0 *	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.04	15-17	>999	240		
BCDL	10.0										Weight: 225 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP SS
WEBS 2x4 SP No.3 *Except* 18-2,12-10:2x6 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 7-15, 5-15, 3-18, 9-12

REACTIONS (size) 12=0-3-8, 18=0-3-8
Max Horiz 18=-196 (LC 14)
Max Grav 12=1696 (LC 35), 18=1696 (LC 34)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/51, 2-3=-721/76, 3-5=-2474/107, 5-6=-1860/154, 6-7=-1860/154, 7-9=-2474/107, 9-10=-721/76, 10-11=0/51, 2-18=-585/84, 10-12=-585/84
BOT CHORD 17-18=-8/2095, 15-17=0/1844, 13-15=0/1843, 12-13=0/2091
WEBS 6-15=-52/1447, 7-15=-675/103, 7-13=0/487, 9-13=-204/106, 5-15=-675/103, 5-17=0/487, 3-17=-204/106, 3-18=-1945/36, 9-12=-1945/36

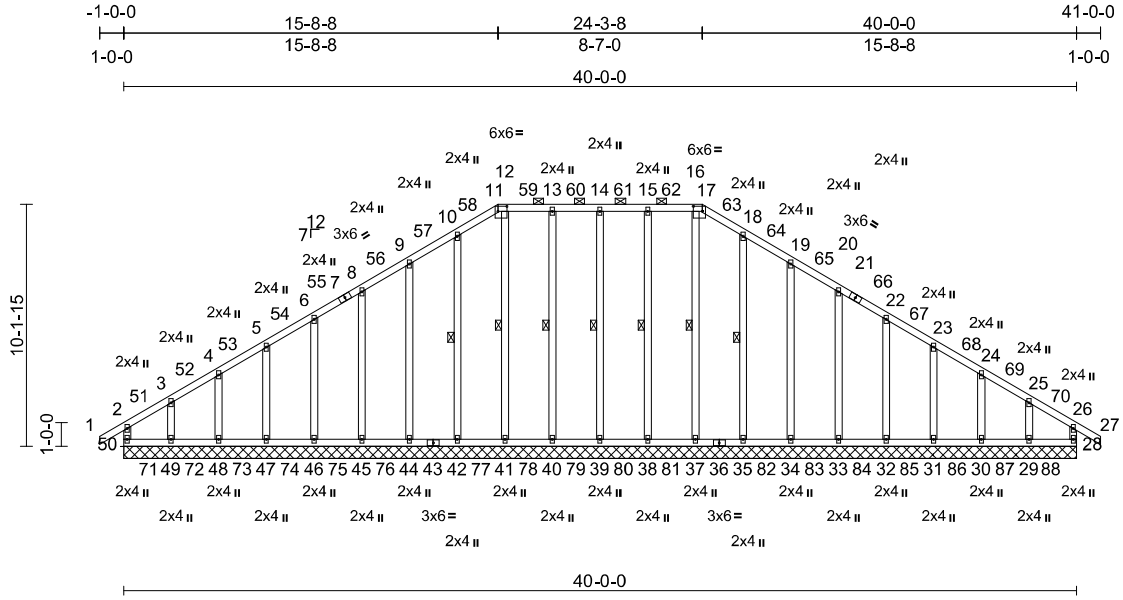
NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 2-7-3, Interior (1) 2-7-3 to 18-0-0, Exterior(2R) 18-0-0 to 21-7-3, Interior (1) 21-7-3 to 37-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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) All plates are MT20 plates unless otherwise indicated.
7) Plates checked for a plus or minus 5 degree rotation about its center.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
10) All bearings are assumed to be SP SS .
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 7,2025

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

Job	Truss	Truss Type	Qty	Ply	
	A1G	Piggyback Base Supported Gable	4	1	I71233559
					Job Reference (optional)



Scale = 1:94

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.21	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.19	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.31	Horz(CT)	0.01	28	n/a	n/a		
BCLL	0.0 *	Code	IRC2021/TPI2014	Matrix-AS								
BCDL	10.0										Weight: 310 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, and 2-0-0 oc purlins (6-0-0 max.): 11-17.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 14-39, 13-40, 12-41, 10-42, 15-38, 16-37, 18-35

REACTIONS (size) 28=40-0-0, 29=40-0-0, 30=40-0-0, 31=40-0-0, 32=40-0-0, 33=40-0-0, 34=40-0-0, 35=40-0-0, 37=40-0-0, 38=40-0-0, 39=40-0-0, 40=40-0-0, 41=40-0-0, 42=40-0-0, 44=40-0-0, 45=40-0-0, 46=40-0-0, 47=40-0-0, 48=40-0-0, 49=40-0-0, 50=40-0-0
Max Horiz 50=-174 (LC 14)
Max Uplift 28=-26 (LC 13), 29=-49 (LC 17), 30=-1 (LC 17), 31=-13 (LC 17), 32=-10 (LC 17), 33=-10 (LC 17), 34=-14 (LC 17), 44=-14 (LC 16), 45=-10 (LC 16), 46=-10 (LC 16), 47=-13 (LC 16), 49=-64 (LC 13), 50=-65 (LC 12)
Max Grav 28=315 (LC 153), 29=328 (LC 152), 30=334 (LC 151), 31=333 (LC 150), 32=333 (LC 149), 33=333 (LC 148), 34=333 (LC 147), 35=333 (LC 146), 37=332 (LC 145), 38=333 (LC 144), 39=333 (LC 143), 40=333 (LC 142), 41=332 (LC 141), 42=333 (LC 140), 44=333 (LC 139), 45=333 (LC 138), 46=333 (LC 137), 47=333 (LC 136), 48=334 (LC 135), 49=328 (LC 134), 50=315 (LC 133)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-50=-297/55, 1-2=0/47, 2-3=-130/122, 3-4=-99/95, 4-5=-96/96, 5-6=-96/94, 6-8=-93/132, 8-9=-110/171, 9-10=-130/213, 10-11=-147/242, 11-12=-129/225, 12-13=-129/225, 13-14=-129/225, 14-15=-129/225, 15-16=-129/225, 16-17=-129/225, 17-18=-147/242, 18-19=-130/213, 19-20=-110/171, 20-22=-93/132, 22-23=-76/92, 23-24=-91/57, 24-25=-71/76, 25-26=-90/73, 26-27=0/47, 26-28=-297/26
BOT CHORD 49-50=-72/91, 48-49=-72/91, 47-48=-72/91, 46-47=-72/91, 45-46=-72/91, 44-45=-72/91, 42-44=-72/91, 41-42=-72/91, 40-41=-72/91, 39-40=-72/91, 38-39=-72/91, 37-38=-72/91, 35-37=-72/91, 34-35=-72/91, 33-34=-72/91, 32-33=-72/91, 31-32=-72/91, 30-31=-72/91, 29-30=-72/91, 28-29=-72/91
WEBS 14-39=-267/37, 13-40=-268/38, 12-41=-260/3, 10-42=-271/34, 9-44=-273/62, 8-45=-276/54, 6-46=-279/55, 5-47=-281/56, 4-48=-286/54, 3-49=-282/75, 15-38=-268/38, 16-37=-264/3, 18-35=-271/34, 19-34=-273/62, 20-33=-276/54, 22-32=-279/55, 23-31=-281/56, 24-30=-286/54, 25-29=-282/73

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 3-0-0, Exterior(2N) 3-0-0 to 15-8-8, Corner (3R) 15-8-8 to 20-0-0, Exterior(2N) 20-0-0 to 24-3-8, Corner(3R) 24-3-8 to 28-0-0, Exterior(2N) 28-0-0 to 41-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

February 7,2025

Continued on page 2

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

3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
5) Unbalanced snow loads have been considered for this design.
6) 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.
7) Provide adequate drainage to prevent water ponding.
8) Plates checked for a plus or minus 5 degree rotation about its center.
9) Gable requires continuous bottom chord bearing.
10) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
11) Gable studs spaced at 2-0-0 oc.
12) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
13) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
14) All bearings are assumed to be SP No.2 .
15) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 65 lb uplift at joint 50, 26 lb uplift at joint 28, 14 lb uplift at joint 44, 10 lb uplift at joint 45, 10 lb uplift at joint 46, 13 lb uplift at joint 47, 64 lb uplift at joint 49, 14 lb uplift at joint 34, 10 lb uplift at joint 33, 10 lb uplift at joint 32, 13 lb uplift at joint 31, 1 lb uplift at joint 30 and 49 lb uplift at joint 29.
16) 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.
17) 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.
18) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	
	A1	Attic	28	1	I71233560
					Job Reference (optional)

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Feb 1 2025 Print: 8.830 S Feb 1 2025 MiTek Industries, Inc. Wed Feb 05 11:30:54 Page: 1
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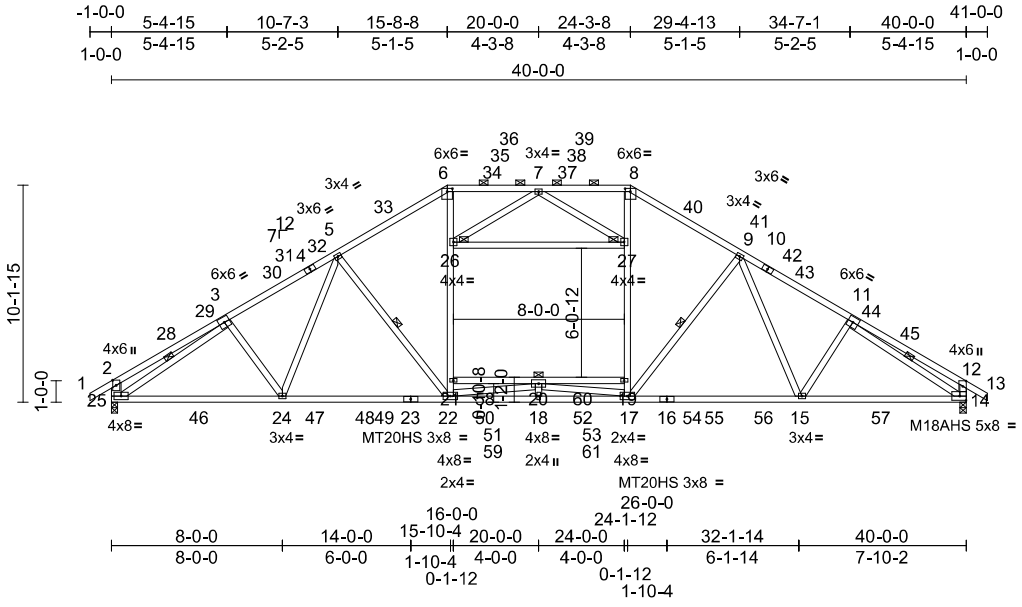

Scale = 1:104.8

Plate Offsets (X, Y): [6:0-3-0,0-1-12], [8:0-3-0,0-1-12], [12:0-3-0,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.97	Vert(LL)	-0.34	15-17	>999	360	MT20	244/190
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.67	Vert(CT)	-0.52	15-17	>922	240	MT20HS	187/143
TCDL	10.0	Rep Stress Incr	YES	WB	0.85	Horz(CT)	0.15	14	n/a	n/a	M18AHS	186/179
BCLL	0.0 *	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.10	22-24	>999	240		
BCDL	10.0										Weight: 288 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP SS *Except* 21-19:2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 6-22,8-17,26-27:2x4 SP No.2, 25-2:2x6 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (3-5-7 max.): 6-8.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 3-25, 11-14, 9-17, 5-22
JOINTS 1 Brace at Jt(s): 26, 27

REACTIONS (size) 14=0-3-8, 25=0-3-8
Max Horiz 25=-175 (LC 14)
Max Grav 14=2404 (LC 60), 25=2397 (LC 58)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/51, 2-3=-700/0, 3-5=-3702/0, 5-6=-3260/0, 6-7=-2781/0, 7-8=-2831/0, 8-9=-3289/0, 9-11=-3761/0, 11-12=-704/0, 12-13=0/47, 2-25=-556/38, 12-14=-554/39
BOT CHORD 24-25=0/3049, 22-24=0/3011, 18-22=0/3622, 17-18=0/3622, 15-17=0/3044, 14-15=0/3112, 20-21=-89/367, 19-20=-102/324
WEBS 21-22=0/1096, 21-26=0/1241, 6-26=0/1321, 17-19=0/1111, 19-27=0/1296, 8-27=0/1345, 26-27=-38/368, 3-25=-3166/0, 11-14=-3220/0, 9-17=-609/105, 9-15=-36/323, 11-15=-97/217, 3-24=-84/230, 5-24=-36/307, 5-22=-593/106, 7-26=-404/108, 7-27=-397/111, 18-20=0/299, 20-22=-1401/0, 17-20=-1390/0

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 3-0-0, Interior (1) 3-0-0 to 15-8-8, Exterior(2R) 15-8-8 to 21-4-6, Interior (1) 21-4-6 to 24-3-8, Exterior(2R) 24-3-8 to 29-11-6, Interior (1) 29-11-6 to 41-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
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) 200.0lb AC unit load placed on the bottom chord, 20-0-0 from left end, supported at two points, 5-0-0 apart.
7) Provide adequate drainage to prevent water ponding.
8) All plates are MT20 plates unless otherwise indicated.
9) Plates checked for a plus or minus 5 degree rotation about its center.
10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
11) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
12) Bottom chord live load (20.0 psf) and additional bottom chord dead load (20.0 psf) applied only to room. 20-21, 19-20
13) All bearings are assumed to be SP SS .
14) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
15) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
16) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
17) Attic room checked for L/360 deflection.

LOAD CASE(S) Standard

February 7,2025

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

Job	Truss	Truss Type	Qty	Ply	
	PB1G	Piggyback	8	1	I71233562
					Job Reference (optional)

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Feb 1 2025 Print: 8.830 S Feb 1 2025 MiTek Industries, Inc. Wed Feb 05 11:31:05 Page: 1
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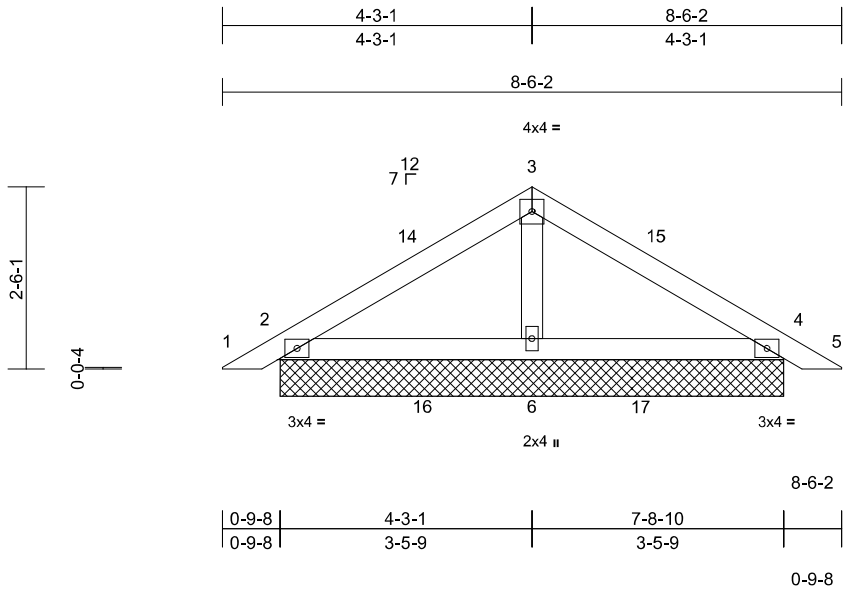


Scale = 1:30.8

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.39	Vert(LL)	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	0.05	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0 *	Code	IRC2021/TPI2014	Matrix-AS								
BCDL	10.0										Weight: 28 lb	FT = 20%

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

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

REACTIONS (size) 2=6-11-2, 4=6-11-2, 6=6-11-2
Max Horiz 2=-37 (LC 14)
Max Uplift 2=-2 (LC 16), 4=-6 (LC 17)
Max Grav 2=336 (LC 53), 4=336 (LC 61), 6=385 (LC 59)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/21, 2-3=-150/60, 3-4=-150/60, 4-5=0/21
BOT CHORD 2-6=-5/93, 4-6=-7/93
WEBS 3-6=-250/22

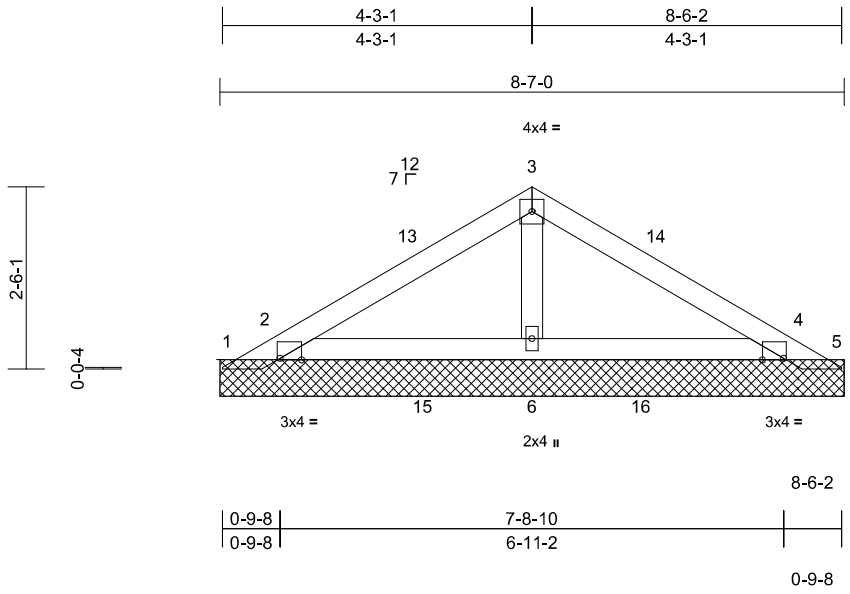
NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-3-11 to 3-3-11, Interior (1) 3-3-11 to 4-3-8, Exterior(2R) 4-3-8 to 7-3-8, Interior (1) 7-3-8 to 8-3-5 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) 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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) All bearings are assumed to be SP No.3 .
11) N/A
12) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
13) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
14) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

February 7,2025

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

Job	Truss	Truss Type	Qty	Ply	
	PB1	Piggyback	40	1	I71233563
					Job Reference (optional)



Scale = 1:30.8

Plate Offsets (X, Y): [2:0-3-9,Edge], [4:0-3-9,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.34	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.52	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.05	Horiz(TL)	0.00	10	n/a	n/a		
BCLL	0.0 *	Code	IRC2021/TPI2014	Matrix-AS								
BCDL	10.0										Weight: 28 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=8-7-0, 2=8-7-0, 4=8-7-0, 5=8-7-0, 6=8-7-0
Max Horiz 1=37 (LC 13)
Max Uplift 1=-303 (LC 46), 2=-20 (LC 16), 4=-22 (LC 17), 5=-300 (LC 47)
Max Grav 1=186 (LC 44), 2=573 (LC 46), 4=559 (LC 47), 5=189 (LC 56), 6=366 (LC 63)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-42/164, 2-3=-139/138, 3-4=-139/137, 4-5=-32/163
BOT CHORD 2-6=-128/47, 4-6=-128/47
WEBS 3-6=-250/21

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) 0-3-11 to 3-3-11, Interior (1) 3-3-11 to 4-3-8, Exterior(2R) 4-3-8 to 7-3-8, Interior (1) 7-3-8 to 8-3-5 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
5) Unbalanced snow loads have been considered for this design.
6) Plates checked for a plus or minus 5 degree rotation about its center.
7) Gable requires continuous bottom chord bearing.
8) Gable studs spaced at 4-0-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
11) All bearings are assumed to be SP No.3 .
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 303 lb uplift at joint 1 and 300 lb uplift at joint 5.
13) N/A
14) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
15) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
16) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

February 7,2025

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

Job	Truss	Truss Type	Qty	Ply	
	V6	Valley	4	1	I71233564
					Job Reference (optional)

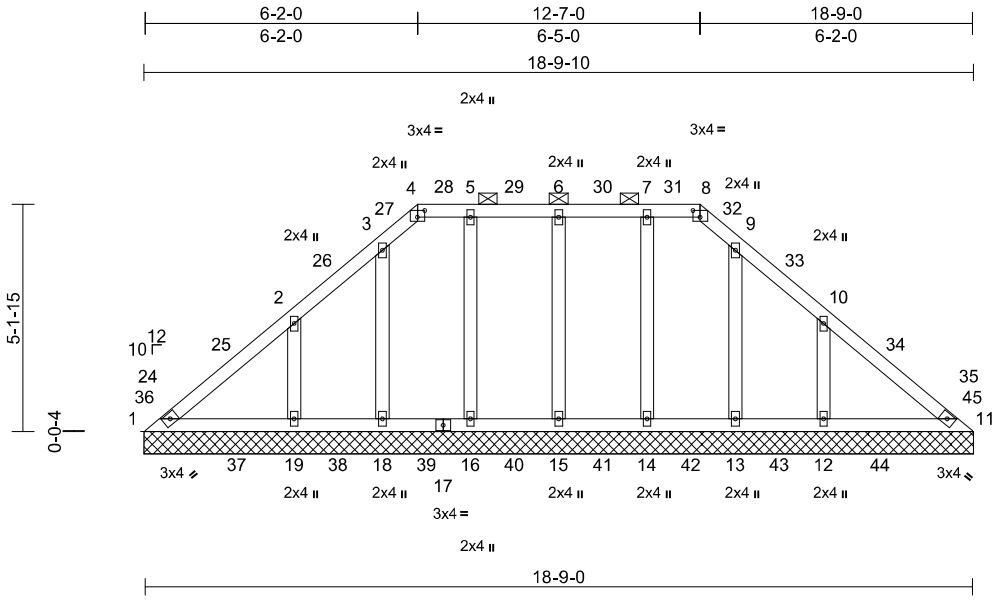


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Plate Offsets (X, Y): [2:0-0-0,Edge], [3:0-0-0,Edge], [4:0-2-0,0-1-13], [8:0-2-0,0-1-13]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.30	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.49	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.14	Horiz(TL)	0.00	11	n/a	n/a		
BCLL	0.0 *	Code	IRC2021/TPI2014	Matrix-AS								
BCDL	10.0										Weight: 99 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, except
2-0-0 oc purlins (6-0-0 max.): 4-8.
BOT CHORD Rigid ceiling directly applied.

REACTIONS (size) 1=18-9-10, 11=18-9-10, 12=18-9-10, 13=18-9-10, 14=18-9-10, 15=18-9-10, 16=18-9-10, 18=18-9-10, 19=18-9-10
Max Horiz 1=80 (LC 13)
Max Uplift 12=-37 (LC 17), 13=-1 (LC 100), 15=-4 (LC 12), 18=-1 (LC 93), 19=-38 (LC 16)
Max Grav 1=299 (LC 79), 11=299 (LC 91), 12=399 (LC 44), 13=320 (LC 108), 14=345 (LC 107), 15=327 (LC 106), 16=345 (LC 105), 18=320 (LC 104), 19=399 (LC 44)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-285/175, 2-3=-69/119, 3-4=-165/60, 4-5=-33/60, 5-6=-33/60, 6-7=-33/60, 7-8=-33/60, 8-9=-165/59, 9-10=-69/119, 10-11=-285/163
BOT CHORD 1-19=-75/210, 18-19=-75/74, 16-18=-75/74, 15-16=-75/74, 14-15=-75/74, 13-14=-75/74, 12-13=-75/74, 11-12=-75/210
WEBS 6-15=-274/40, 7-14=-285/13, 9-13=-276/31, 10-12=-313/87, 5-16=-285/14, 3-18=-276/33, 2-19=-313/87

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) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 6-2-5, Exterior(2R) 6-2-5 to 9-4-13, Interior (1) 9-4-13 to 12-7-5, Exterior(2R) 12-7-5 to 15-4-13, Interior (1) 15-4-13 to 18-9-10 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
5) Unbalanced snow loads have been considered for this design.
6) Provide adequate drainage to prevent water ponding.
7) Plates checked for a plus or minus 5 degree rotation about its center.
8) Gable requires continuous bottom chord bearing.
9) Gable studs spaced at 2-0-0 oc.
10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
11) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
12) All bearings are assumed to be SP No.3 .
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 4 lb uplift at joint 15, 1 lb uplift at joint 13, 37 lb uplift at joint 12, 1 lb uplift at joint 18 and 38 lb uplift at joint 19.
14) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 11.
15) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
16) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
17) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

February 7,2025

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

Job	Truss	Truss Type	Qty	Ply	
	V5	Valley	4	1	I71233565
					Job Reference (optional)

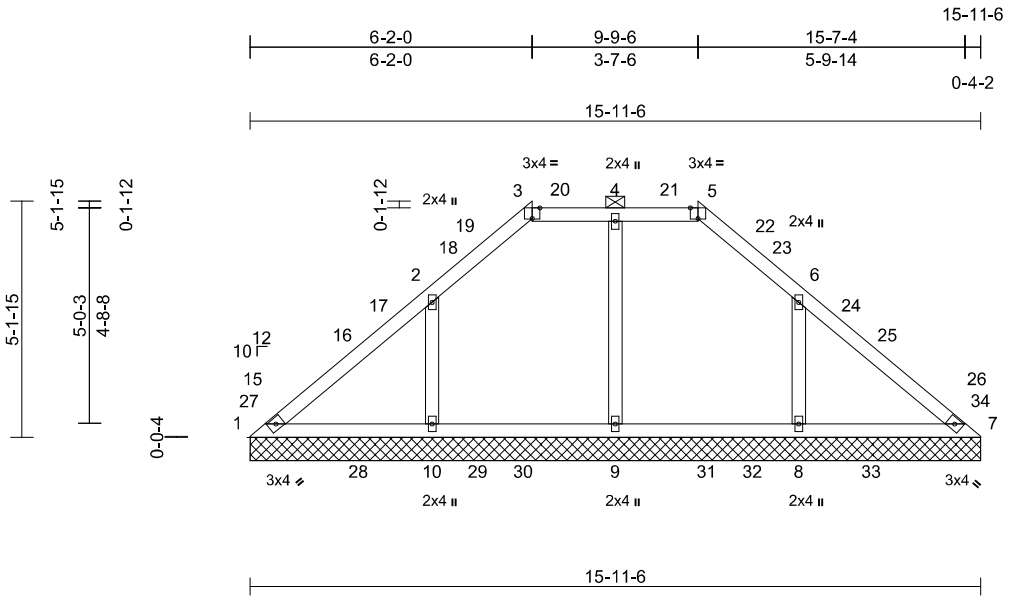

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Plate Offsets (X, Y): [3:0-2-0,Edge], [5:0-2-0,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.37	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.44	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.14	Horiz(TL)	0.01	7	n/a	n/a		
BCLL	0.0 *	Code	IRC2021/TPI2014	Matrix-AS								
BCDL	10.0										Weight: 66 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied, except
2-0-0 oc purlins (6-0-0 max.): 3-5.
BOT CHORD Rigid ceiling directly applied.

REACTIONS (size) 1=15-11-6, 7=15-11-6, 8=15-11-6, 9=15-11-6, 10=15-11-6
Max Horiz 1=-78 (LC 12)
Max Uplift 8=-31 (LC 17), 10=-34 (LC 16)
Max Grav 1=273 (LC 67), 7=321 (LC 83), 8=557 (LC 58), 9=413 (LC 49), 10=559 (LC 56)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-316/168, 2-3=-232/61, 3-4=-112/61, 4-5=-112/61, 5-6=-232/59, 6-7=-324/168
BOT CHORD 1-10=-43/238, 9-10=-43/111, 8-9=-43/111, 7-8=-43/241
WEBS 2-10=-383/116, 4-9=-312/31, 6-8=-384/115

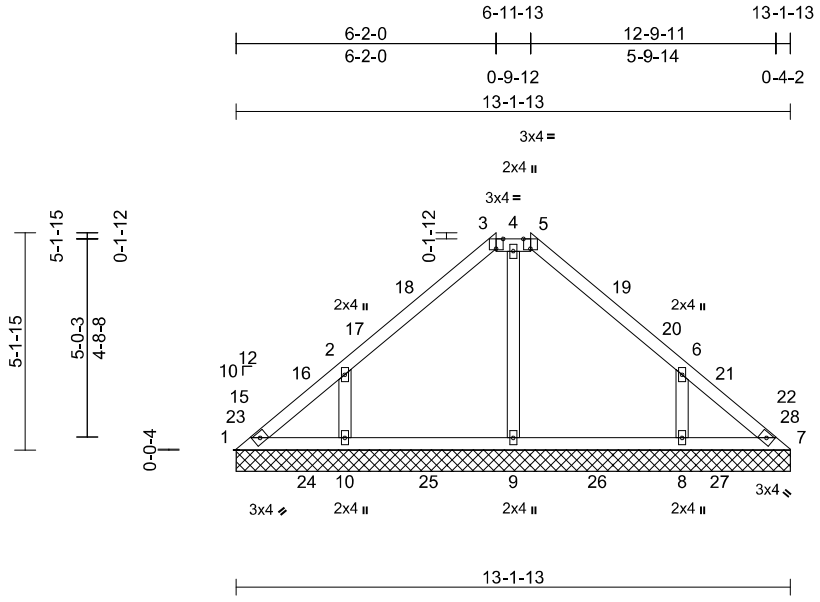
NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-4-13 to 3-4-13, Interior (1) 3-4-13 to 6-2-5, Exterior(2R) 6-2-5 to 9-2-5, Interior (1) 9-2-5 to 9-9-11, Exterior(2R) 9-9-11 to 12-9-11, Interior (1) 12-9-11 to 15-11-11 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
5) Unbalanced snow loads have been considered for this design.
6) Provide adequate drainage to prevent water ponding.
7) Plates checked for a plus or minus 5 degree rotation about its center.
8) Gable requires continuous bottom chord bearing.
9) Gable studs spaced at 4-0-0 oc.
10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
11) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
12) All bearings are assumed to be SP No.2 .
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 34 lb uplift at joint 10 and 31 lb uplift at joint 8.
14) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
15) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
16) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

February 7,2025

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

Job	Truss	Truss Type	Qty	Ply	
	V4	Valley	4	1	I71233566
					Job Reference (optional)



Scale = 1:53.1

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.38	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.43	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.12	Horiz(TL)	0.00	7	n/a	n/a		
BCLL	0.0 *	Code	IRC2021/TPI2014	Matrix-AS								
BCDL	10.0										Weight: 55 lb	FT = 20%

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

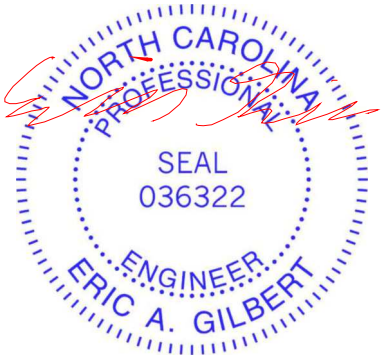
BRACING
TOP CHORD Structural wood sheathing directly applied, except
2-0-0 oc purlins (6-0-0 max.): 3-5.
BOT CHORD Rigid ceiling directly applied.

REACTIONS (size) 1=13-1-13, 7=13-1-13, 8=13-1-13, 9=13-1-13, 10=13-1-13
Max Horiz 1=78 (LC 13)
Max Uplift 1=-10 (LC 12), 8=-40 (LC 17), 10=-42 (LC 16)
Max Grav 1=296 (LC 75), 7=296 (LC 83), 8=441 (LC 44), 9=398 (LC 92), 10=441 (LC 44)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-268/140, 2-3=-204/103, 3-4=-111/112, 4-5=-111/112, 5-6=-204/100, 6-7=-268/140
BOT CHORD 1-10=-21/185, 9-10=-21/71, 8-9=-21/71, 7-8=-21/185
WEBS 4-9=-260/0, 6-8=-363/145, 2-10=-363/146

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 6-2-5, Exterior(2E) 6-2-5 to 7-0-1, Exterior(2R) 7-0-1 to 10-0-1, Interior (1) 10-0-1 to 13-2-2 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
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
5) Unbalanced snow loads have been considered for this design.
6) Provide adequate drainage to prevent water ponding.
7) Plates checked for a plus or minus 5 degree rotation about its center.
8) Gable requires continuous bottom chord bearing.
9) Gable studs spaced at 4-0-0 oc.
10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
11) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
12) All bearings are assumed to be SP No.2 .
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 10 lb uplift at joint 1, 40 lb uplift at joint 8 and 42 lb uplift at joint 10.
14) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
15) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
16) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



February 7,2025

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

Job	Truss	Truss Type	Qty	Ply	
	V3	Valley	4	1	I71233567
					Job Reference (optional)

Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Feb 1 2025 Print: 8.830 S Feb 1 2025 MiTek Industries, Inc. Wed Feb 05 11:31:05 Page: 1
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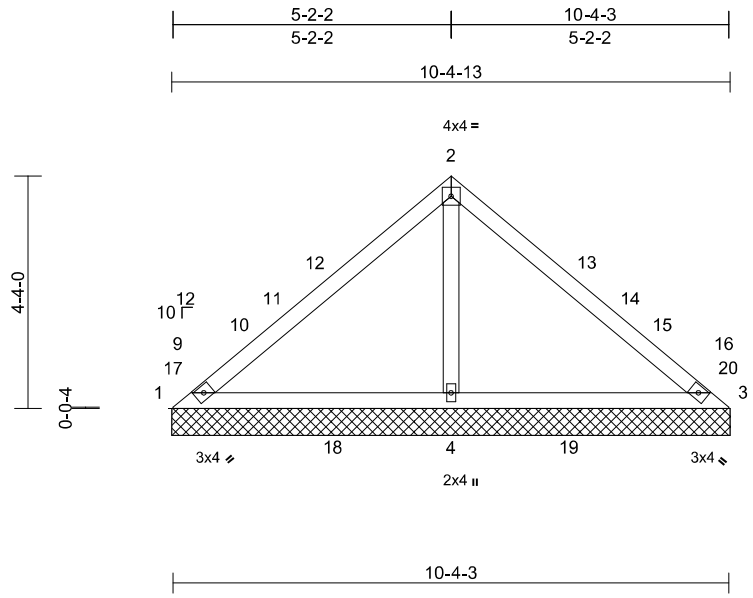

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.57	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.57	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	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: 40 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=10-4-13, 3=10-4-13, 4=10-4-13
Max Horiz 1=-66 (LC 12)
Max Uplift 1=-63 (LC 54), 3=-63 (LC 53)
Max Grav 1=267 (LC 47), 3=267 (LC 51), 4=764 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-221/346, 2-3=-221/346
BOT CHORD 1-4=-238/154, 3-4=-238/154
WEBS 2-4=-669/214

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) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 5-2-6, Exterior(2R) 5-2-6 to 8-2-6, Interior (1) 8-2-6 to 10-4-13 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Plates checked for a plus or minus 5 degree rotation about its center.
7) Gable requires continuous bottom chord bearing.
8) Gable studs spaced at 4-0-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
11) All bearings are assumed to be SP No.2 .
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 63 lb uplift at joint 1 and 63 lb uplift at joint 3.
13) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 3.
14) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
15) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard

February 7,2025

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

Job	Truss	Truss Type	Qty	Ply	
	V2	Valley	4	1	I71233568
					Job Reference (optional)

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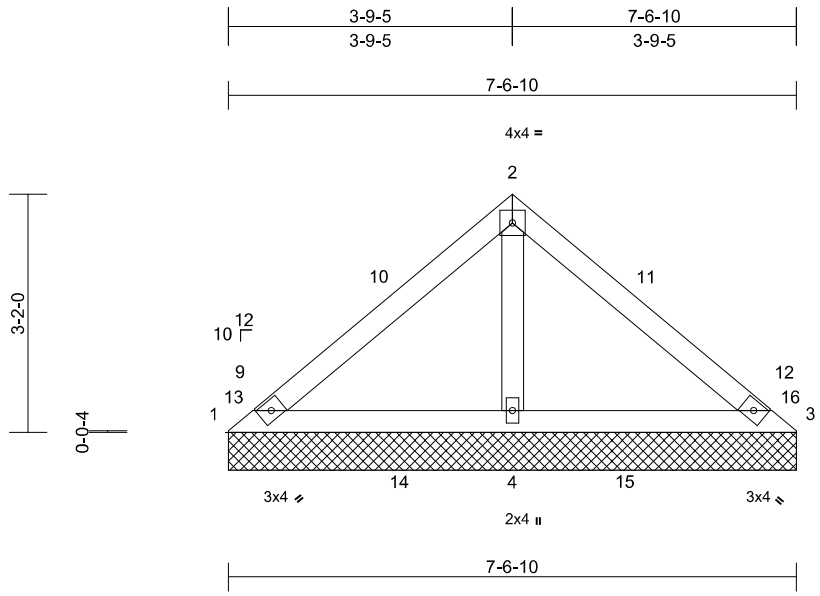

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.44	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.36	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.09	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0 *	Code	IRC2021/TPI2014	Matrix-AS								
BCDL	10.0										Weight: 28 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=7-6-10, 3=7-6-10, 4=7-6-10
Max Horiz 1=48 (LC 15)
Max Uplift 1=-44 (LC 45), 3=-44 (LC 44)
Max Grav 1=273 (LC 47), 3=273 (LC 51), 4=543 (LC 45)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-214/260, 2-3=-214/260
BOT CHORD 1-4=-176/147, 3-4=-176/147
WEBS 2-4=-428/173

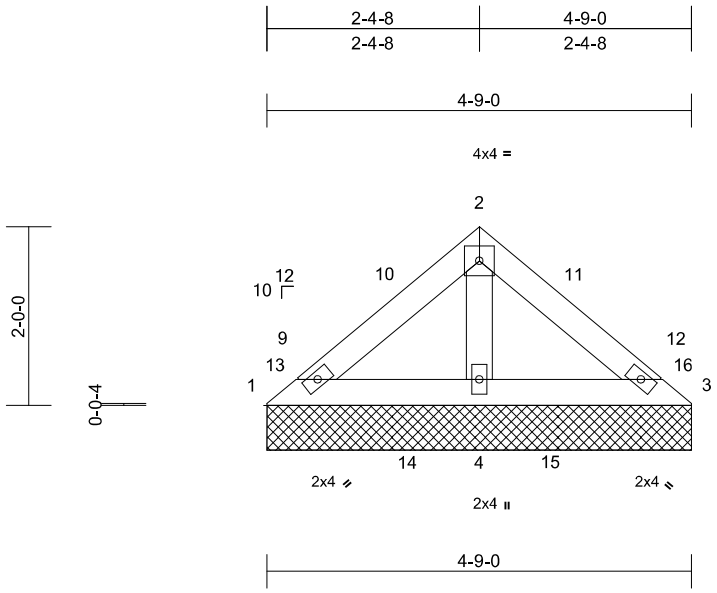
NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-0-5 to 3-0-5, Interior (1) 3-0-5 to 3-9-10, Exterior(2R) 3-9-10 to 6-9-9, Interior (1) 6-9-9 to 7-6-14 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Plates checked for a plus or minus 5 degree rotation about its center.
7) Gable requires continuous bottom chord bearing.
8) Gable studs spaced at 4-0-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
11) All bearings are assumed to be SP No.2 .
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 44 lb uplift at joint 1 and 44 lb uplift at joint 3.
13) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
14) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard

February 7,2025

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

Job	Truss	Truss Type	Qty	Ply	
	V1	Valley	4	1	I71233569
					Job Reference (optional)



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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.23	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.18	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.05	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0 *	Code	IRC2021/TPI2014	Matrix-AS								
BCDL	10.0										Weight: 17 lb	FT = 20%

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

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

REACTIONS (size) 1=4-9-0, 3=4-9-0, 4=4-9-0
Max Horiz 1=-29 (LC 14)
Max Uplift 1=-25 (LC 50), 3=-25 (LC 48)
Max Grav 1=278 (LC 47), 3=278 (LC 51), 4=394 (LC 57)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-208/159, 2-3=-208/159
BOT CHORD 1-4=-79/141, 3-4=-79/141
WEBS 2-4=-273/80

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Plates checked for a plus or minus 5 degree rotation about its center.
7) Gable requires continuous bottom chord bearing.
8) Gable studs spaced at 4-0-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
11) All bearings are assumed to be SP No.2 .
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 25 lb uplift at joint 1 and 25 lb uplift at joint 3.
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 7,2025

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

Job	Truss	Truss Type	Qty	Ply	
	A2T	Roof Special	6	1	I71233570
					Job Reference (optional)

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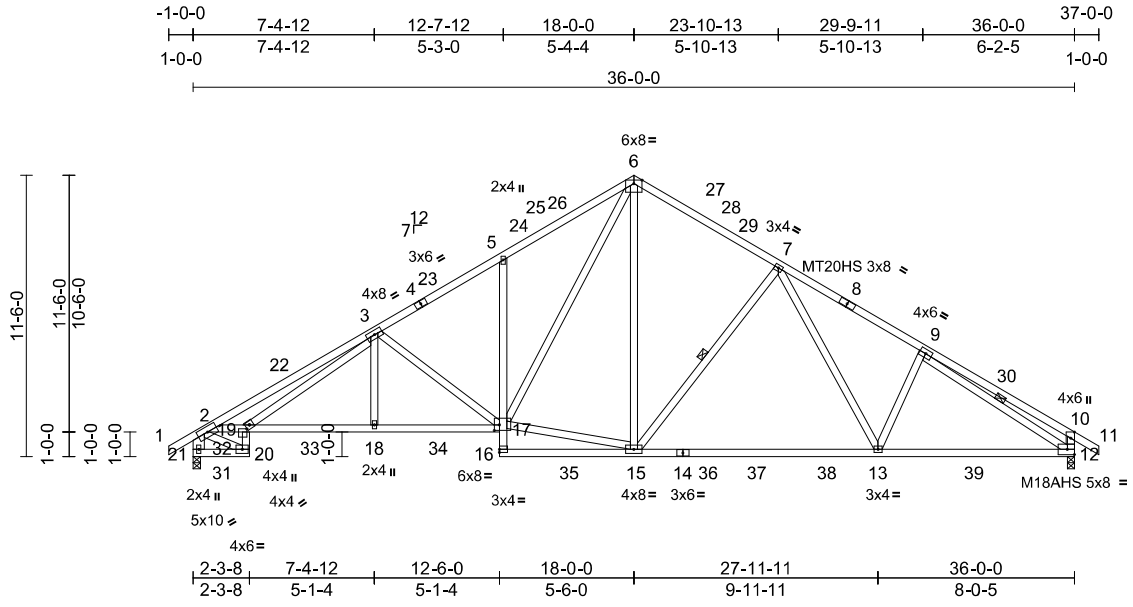

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Plate Offsets (X, Y): [10:0-3-0,Edge], [17:0-2-8,0-2-12], [19:0-2-0,0-1-4]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.91	Vert(LL)	-0.44	13-15	>968	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.92	Vert(CT)	-0.69	13-15	>624	240	MT20HS	187/143
TCDL	10.0	Rep Stress Incr	YES	WB	0.61	Horz(CT)	0.19	12	n/a	n/a	M18AHS	186/179
BCLL	0.0 *	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.07	5	>999	240		
BCDL	10.0										Weight: 247 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 20-19,5-16:2x4 SP No.3, 16-14,14-12:2x4 SP SS
WEBS 2x4 SP No.3 *Except* 21-2:2x6 SP No.2

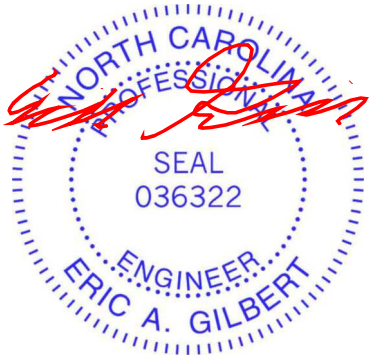
BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 7-15, 9-12

REACTIONS (size) 12=0-3-8, 21=0-3-8
Max Horiz 21=-198 (LC 14)
Max Grav 12=1680 (LC 35), 21=1688 (LC 34)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/60, 2-3=-3735/73, 3-5=-2485/106, 5-6=-2512/198, 6-7=-1840/154, 7-9=-2543/115, 9-10=-654/98, 10-11=0/47, 2-21=-1929/80, 10-12=-549/95
BOT CHORD 20-21=-142/563, 19-20=-68/350, 2-19=0/2944, 18-19=0/2606, 17-18=0/2607, 16-17=-26/169, 5-17=-344/117, 15-16=-74/179, 13-15=0/1815, 12-13=0/2131
WEBS 3-19=-72/720, 3-18=0/397, 3-17=-741/57, 15-17=0/1376, 6-17=-94/1281, 6-15=-13/642, 7-15=-667/112, 7-13=0/560, 9-13=-205/113, 2-20=-429/151, 9-12=-2052/0

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 2-7-3, Interior (1) 2-7-3 to 18-0-0, Exterior(2R) 18-0-0 to 21-7-3, Interior (1) 21-7-3 to 37-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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) All plates are MT20 plates unless otherwise indicated.
7) Plates checked for a plus or minus 5 degree rotation about its center.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
10) Bearings are assumed to be: Joint 21 SP No.2 , Joint 12 SP SS .
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



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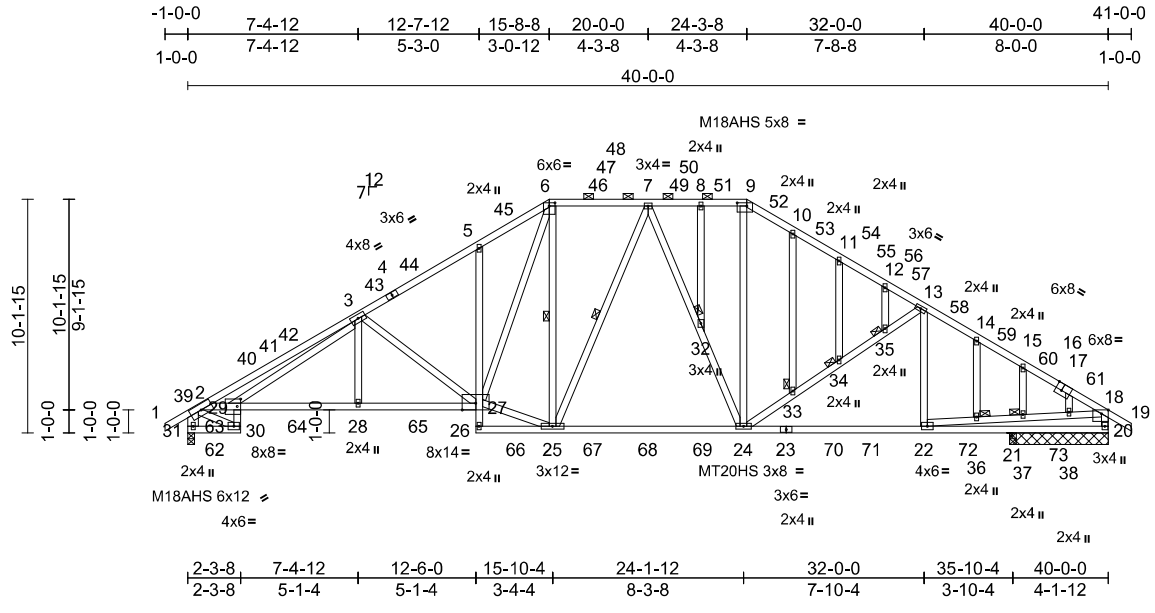
Job	Truss	Truss Type	Qty	Ply	
	A1GET	Piggyback Base Structural Gable	2	1	I71233571
					Job Reference (optional)



Scale = 1:97.3

Plate Offsets (X, Y): [6:0-3-0,0-1-12], [9:0-5-0,0-1-12], [16:0-3-4,Edge], [18:0-3-8,Edge], [29:0-1-12,0-4-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.93	Vert(LL)	-0.27	24-25	>999	360	MT20	244/190
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	1.00	Vert(CT)	-0.46	24-25	>936	240	M18AHS	186/179
TCDL	10.0	Rep Stress Incr	YES	WB	0.91	Horz(CT)	0.22	20	n/a	n/a	MT20HS	187/143
BCLL	0.0 *	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.07	5-27	>999	240		
BCDL	10.0										Weight: 322 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 30-29,5-26:2x4 SP No.3, 26-23,23-20:2x4 SP SS
WEBS 2x4 SP No.3 *Except* 31-2:2x6 SP No.2, 20-18,22-18:2x4 SP No.2
OTHERS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (3-9-7 max.): 6-9.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 6-25, 7-25
JOINTS 1 Brace at Jt(s): 32, 33, 34, 35, 36, 37

REACTIONS (size) 20=4-3-8, 21=0-3-8, 31=0-3-8
Max Horiz 31=-177 (LC 14)
Max Grav 20=1752 (LC 59), 21=359 (LC 117), 31=1930 (LC 57)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/143, 2-3=-4271/0, 3-5=-2974/26, 5-6=-2936/99, 6-7=-1977/84, 7-8=-1991/90, 8-9=-1991/90, 9-10=-2237/63, 10-11=-2308/51, 11-12=-2308/30, 12-13=-2427/25, 13-14=-2715/3, 14-15=-2855/0, 15-17=-2828/0, 17-18=-2918/0, 18-19=0/47, 2-31=-2179/9, 18-20=-1867/44
BOT CHORD 30-31=-119/676, 29-30=-59/393, 2-29=0/3402, 28-29=0/3095, 27-28=0/3095, 26-27=-83/146, 5-27=-362/110, 25-26=-81/114, 24-25=0/1931, 22-24=0/2403, 21-22=-46/532, 20-21=-46/532
WEBS 3-29=-59/722, 3-27=-833/37, 25-27=0/1919, 6-27=-50/1550, 6-25=-305/75, 7-25=-271/102, 7-32=-281/107, 24-32=-275/117, 9-24=0/761, 24-33=-636/96, 33-34=-638/95, 34-35=-559/80, 13-35=-611/89, 13-22=-182/198, 22-36=0/1889, 36-37=0/1873, 37-38=0/1880, 18-38=0/1874, 8-32=-42/31, 10-33=-54/58, 11-34=-179/41, 12-35=-32/99, 14-36=-29/174, 15-37=-209/30, 17-38=-13/164, 3-28=0/399, 2-30=-542/126

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 3-0-0, Interior (1) 3-0-0 to 15-8-8, Exterior(2R) 15-8-8 to 21-4-6, Interior (1) 21-4-6 to 24-3-8, Exterior(2R) 24-3-8 to 29-11-6, Interior (1) 29-11-6 to 41-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
5) Unbalanced snow loads have been considered for this design.
6) 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.
7) Provide adequate drainage to prevent water ponding.
8) All plates are MT20 plates unless otherwise indicated.
9) Plates checked for a plus or minus 5 degree rotation about its center.
10) Gable studs spaced at 2-0-0 oc.
11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
12) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
13) Bearings are assumed to be: Joint 31 SP No.2 , Joint 20 SP SS , Joint 21 SP SS .
14) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
15) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

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Continued on page 2

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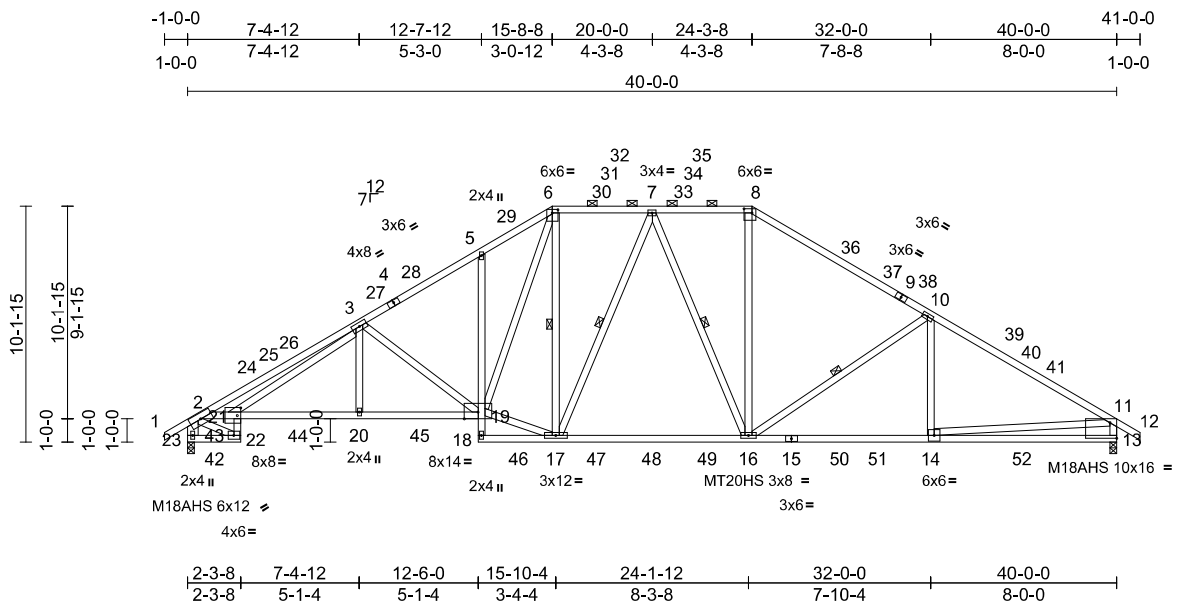
16) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	
	A1AT	Piggyback Base	6	1	I71233573
					Job Reference (optional)

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Feb 1 2025 Print: 8.830 S Feb 1 2025 MiTek Industries, Inc. Wed Feb 05 11:30:56 Page: 1

ID:MZITBs0qH8w?qSeJEAP5VHzoQr1-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:96.4

Plate Offsets (X, Y): [6:0-3-0,0-1-12], [8:0-4-0,0-2-4], [13:Edge,0-8-0], [21:0-1-12,0-4-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.87	Vert(LL)	-0.27	16-17	>999	360	MT20	244/190
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.59	Vert(CT)	-0.45	16-17	>999	240	M18AHS	186/179
TCDL	10.0	Rep Stress Incr	YES	WB	0.76	Horz(CT)	0.21	13	n/a	n/a	MT20HS	187/143
BCLL	0.0 *	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.07	5-19	>999	240		
BCDL	10.0										Weight: 285 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2 *Except* 8-9:2x4 SP SS
BOT CHORD 2x4 SP SS *Except* 23-22:2x4 SP No.2, 22-21,5-18:2x4 SP No.3
WEBS 2x4 SP No.3 *Except* 23-2:2x6 SP No.2, 13-11:2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (3-9-14 max.): 6-8.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 6-17, 7-17, 7-16, 10-16

REACTIONS (size) 13=0-3-8, 23=0-3-8
Max Horiz 23=-177 (LC 14)
Max Grav 13=1939 (LC 59), 23=1951 (LC 57)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/60, 2-3=-4264/0, 3-5=-3017/17, 5-6=-2978/91, 6-7=-2014/77, 7-8=-2039/80, 8-10=-2482/51, 10-11=-3064/0, 11-12=0/47, 2-23=-2174/4, 11-13=-1957/29
BOT CHORD 22-23=-127/594, 21-22=-59/357, 2-21=0/3397, 20-21=0/3140, 19-20=0/3140, 18-19=-86/144, 5-19=-361/110, 17-18=-70/121, 16-17=0/1974, 14-16=0/2557, 13-14=-13/611
WEBS 3-21=-61/661, 3-20=0/408, 3-19=-844/37, 17-19=0/1944, 6-19=-49/1552, 6-17=-293/83, 7-17=-283/99, 7-16=-270/114, 8-16=0/768, 10-16=-734/70, 10-14=-23/308, 11-14=0/1967, 2-22=-437/133

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 3-0-0, Interior (1) 3-0-0 to 15-8-8, Exterior(2R) 15-8-8 to 21-4-6, Interior (1) 21-4-6 to 24-3-8, Exterior(2R) 24-3-8 to 29-11-6, Interior (1) 29-11-6 to 41-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) All plates are MT20 plates unless otherwise indicated.
8) Plates checked for a plus or minus 5 degree rotation about its center.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
11) Bearings are assumed to be: Joint 23 SP No.2 , Joint 13 SP SS .
12) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
13) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
14) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

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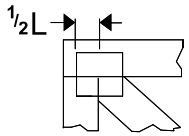
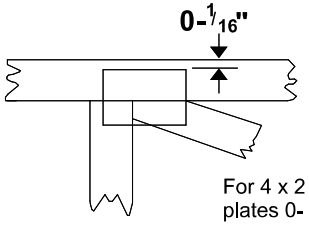
Symbols

PLATE LOCATION AND ORIENTATION



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



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

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

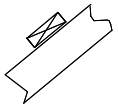
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

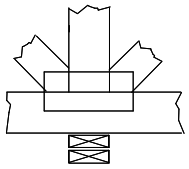
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



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

BEARING

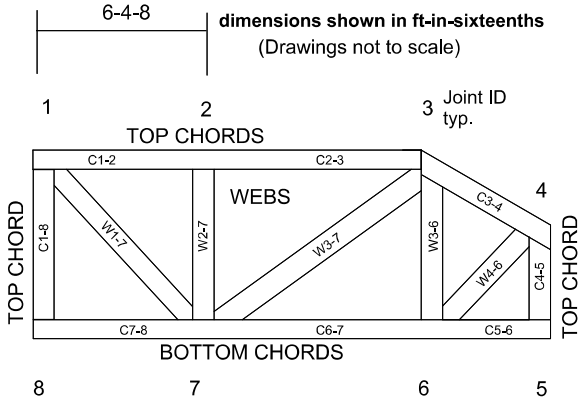


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-22: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



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

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

Product Code Approvals

ICC-ES Reports:

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

Design General Notes

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

Lumber design values are in accordance with ANSI/TPI 1 section 6.3 These truss designs rely on lumber values established by others.

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General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

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