ENGINEERING BY
TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: P02596-25453
1054 Serenity

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by 84 Lumber 2383 (Dunn, NC).

Pages or sheets covered by this seal: I73506957 thru I73506977

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

North Carolina COA: C-0844

May 16,2025

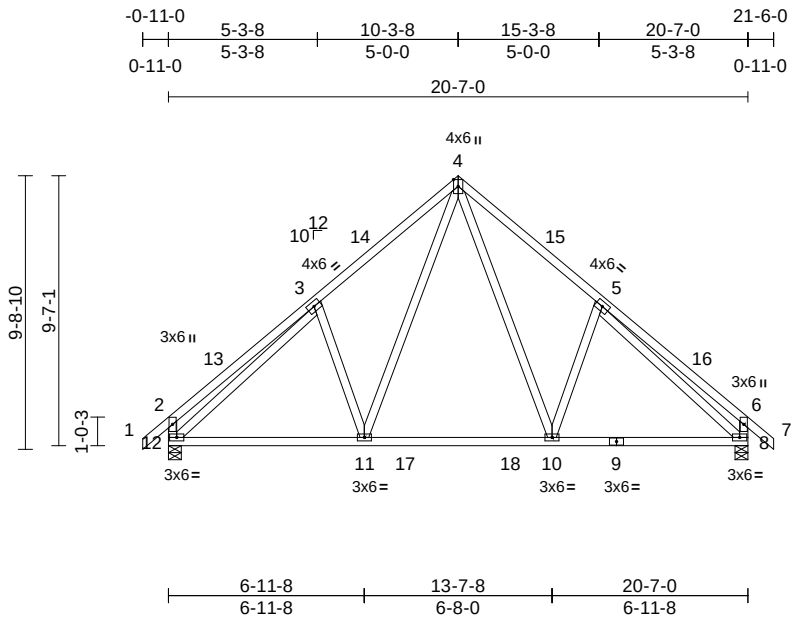
Gilbert, Eric

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

Job	Truss	Truss Type	Qty	Ply	1054 Serenity	
P02596-25453	A02	Common	11	1	Job Reference (optional)	I73506957

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Thu May 15 06:19:44 ID:NBwlDJhuMCNWEmNhHXYXTzzx4kX-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:81.8

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	0.32	Vert(LL)	-0.10	10-11	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.43	Vert(CT)	-0.14	10-11	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.61	Horz(CT)	0.02	8	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 140 lb	FT = 20%

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

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

REACTIONS (size) 8=0-5-8, 12=0-5-8
Max Horiz 12=-203 (LC 12)
Max Uplift 8=-79 (LC 15), 12=-79 (LC 14)
Max Grav 8=875 (LC 2), 12=875 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/41, 2-3=-322/154, 3-4=-846/201, 4-5=-846/201, 5-6=-321/153, 6-7=0/41, 2-12=-350/143, 6-8=-350/143
BOT CHORD 11-12=-90/740, 10-11=0/513, 8-10=-12/652
WEBS 4-10=-142/441, 5-10=-227/187, 4-11=-141/441, 3-11=-227/187, 3-12=-720/11, 5-8=-720/11

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 10-3-8, Exterior (2) 10-3-8 to 13-3-8, Interior (1) 13-3-8 to 21-6-0 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 79 lb uplift at joint 12 and 79 lb uplift at joint 8.

LOAD CASE(S) Standard

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

Job	Truss	Truss Type	Qty	Ply	1054 Serenity	
P02596-25453	A03	Hip	1	1	Job Reference (optional)	I73506958

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Thu May 15 06:19:45 Page: 1
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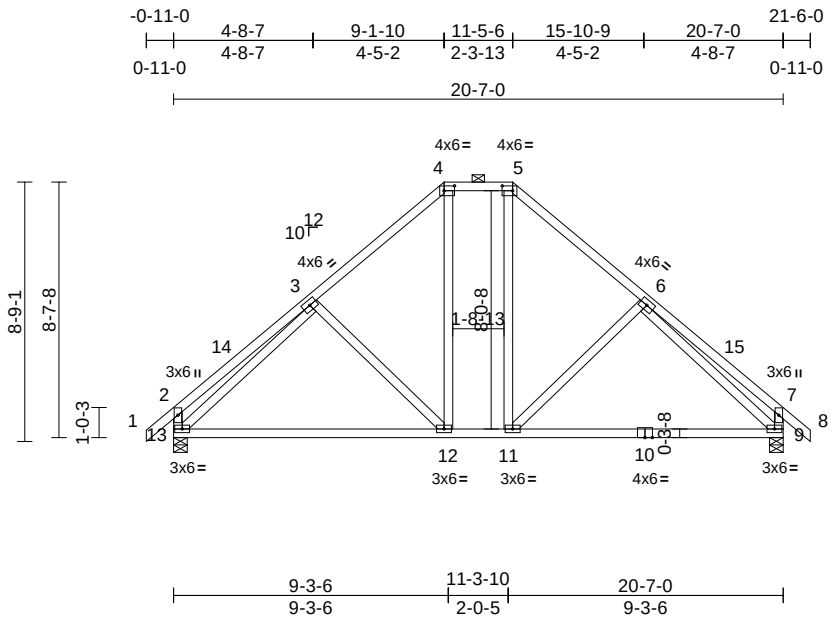

Scale = 1:77.8

Plate Offsets (X, Y): [4:0-4-4,0-2-0], [5:0-4-4,0-2-0]

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	0.30	Vert(LL)	-0.18	12-13	>999	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.70	Vert(CT)	-0.36	12-13	>684	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.43	Horz(CT)	0.02	9	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 136 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-5.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 9=0-5-8, 13=0-5-8
Max Horiz 13=186 (LC 13)
Max Uplift 9=-76 (LC 15), 13=-76 (LC 14)
Max Grav 9=875 (LC 2), 13=875 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/41, 2-3=-340/119, 3-4=-752/167, 4-5=-504/157, 5-6=-752/167, 6-7=-340/119, 7-8=0/41, 2-13=-355/115, 7-9=-354/115
BOT CHORD 12-13=-87/637, 11-12=-11/504, 9-11=-19/619
WEBS 3-12=-205/162, 4-12=-49/267, 5-11=-49/267, 6-11=-205/163, 3-13=-622/50, 6-9=-622/49

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 9-1-10, Exterior (2) 9-1-10 to 15-11-11, Interior (1) 15-11-11 to 21-6-0 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=16.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10, Lu=50-0-0
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 76 lb uplift at joint 13 and 76 lb uplift at joint 9.
10) 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

May 16,2025

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1054 Serenity	
P02596-25453	A04	Hip	1	1	Job Reference (optional)	I73506959

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

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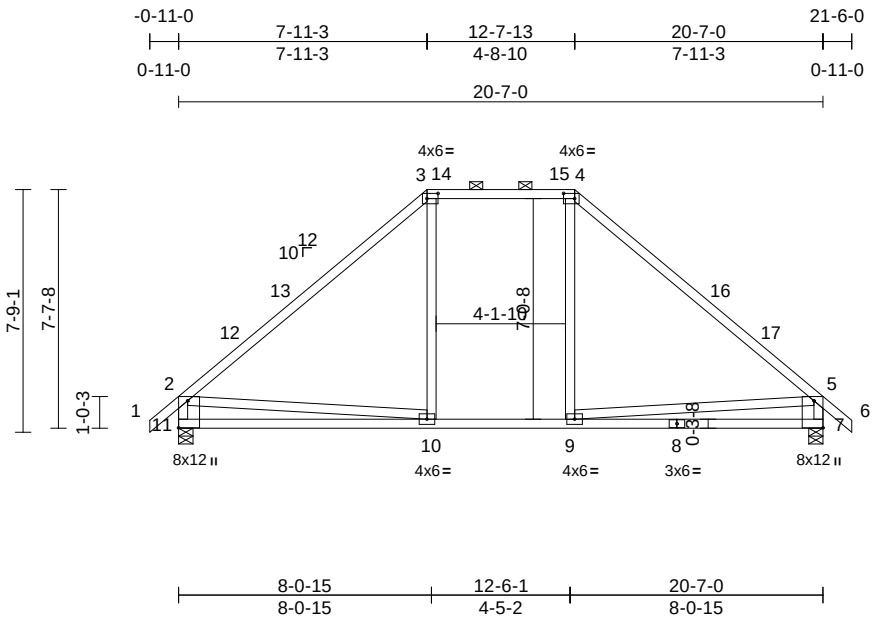

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Plate Offsets (X, Y): [3:0-4-4,0-2-0], [4:0-4-4,0-2-0], [7:Edge,0-3-8], [11:Edge,0-3-8]

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	0.82	Vert(LL)	-0.20	10-11	>999	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.64	Vert(CT)	-0.29	10-11	>832	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.26	Horz(CT)	0.02	7	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 118 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD	Structural wood sheathing directly applied or 4-7-5 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 3-4.
BOT CHORD	Rigid ceiling directly applied or 9-8-7 oc bracing.

REACTIONS (size) 7=0-5-8, 11=0-5-8
Max Horiz 11=166 (LC 13)
Max Uplift 7=-72 (LC 15), 11=-72 (LC 14)
Max Grav 7=875 (LC 2), 11=875 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/41, 2-3=-890/148, 3-4=-562/162, 4-5=-890/148, 5-6=0/41, 2-11=-798/153, 5-7=-798/153
BOT CHORD	10-11=-345/643, 9-10=-30/583, 7-9=-272/523
WEBS	3-10=-15/239, 4-9=-15/239, 2-10=-229/386, 5-9=-236/389

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 7-11-3, Exterior (2) 7-11-3 to 12-2-2, Interior (1) 12-2-2 to 12-7-13, Exterior (2) 12-7-13 to 16-10-11, Interior (1) 16-10-11 to 21-6-0 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=16.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10, Lu=50-0-0
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) Provide adequate drainage to prevent water ponding.
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, with BCDL = 10.0psf.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 72 lb uplift at joint 11 and 72 lb uplift at joint 7.
10) 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

May 16,2025

ENGINEERING BY TRENCO
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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1054 Serenity	
P02596-25453	A05	Hip	1	1	Job Reference (optional)	I73506960

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Thu May 15 06:19:46 Page: 1
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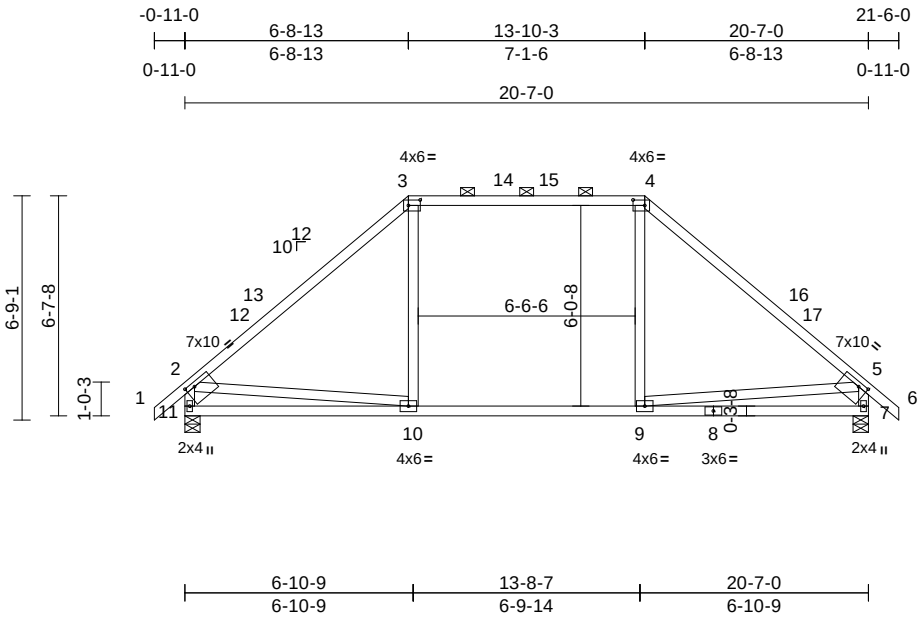

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Plate Offsets (X, Y): [2:0-3-4,0-1-8], [3:0-4-4,0-2-0], [4:0-4-4,0-2-0], [5:0-3-4,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.84	Vert(LL)	-0.21	10-11	>999	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.66	Vert(CT)	-0.24	10-11	>995	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.16	Horz(CT)	0.01	7	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 110 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-7-5 oc purlins, except end verticals, and 2-0-0 oc purlins (4-3-12 max.): 3-4.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 7=0-5-8, 11=0-5-8
Max Horiz 11=147 (LC 13)
Max Uplift 7=-66 (LC 15), 11=-66 (LC 14)
Max Grav 7=875 (LC 2), 11=875 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/41, 2-3=-953/146, 3-4=-648/154, 4-5=-953/146, 5-6=0/41, 2-11=-817/150, 5-7=-817/150
BOT CHORD 10-11=-263/448, 9-10=-48/648, 7-9=-202/357
WEBS 3-10=0/254, 4-9=0/254, 2-10=-202/556, 5-9=-207/558

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 6-8-13, Exterior (2) 6-8-13 to 10-11-11, Interior (1) 10-11-11 to 13-10-3, Exterior (2) 13-10-3 to 18-1-2, Interior (1) 18-1-2 to 21-6-0 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=16.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10, Lu=50-0-0
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) Provide adequate drainage to prevent water ponding.
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, with BCDL = 10.0psf.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 66 lb uplift at joint 11 and 66 lb uplift at joint 7.
10) 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

May 16,2025

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

Job	Truss	Truss Type	Qty	Ply	1054 Serenity	
P02596-25453	A06	Hip	1	1	Job Reference (optional)	I73506961

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

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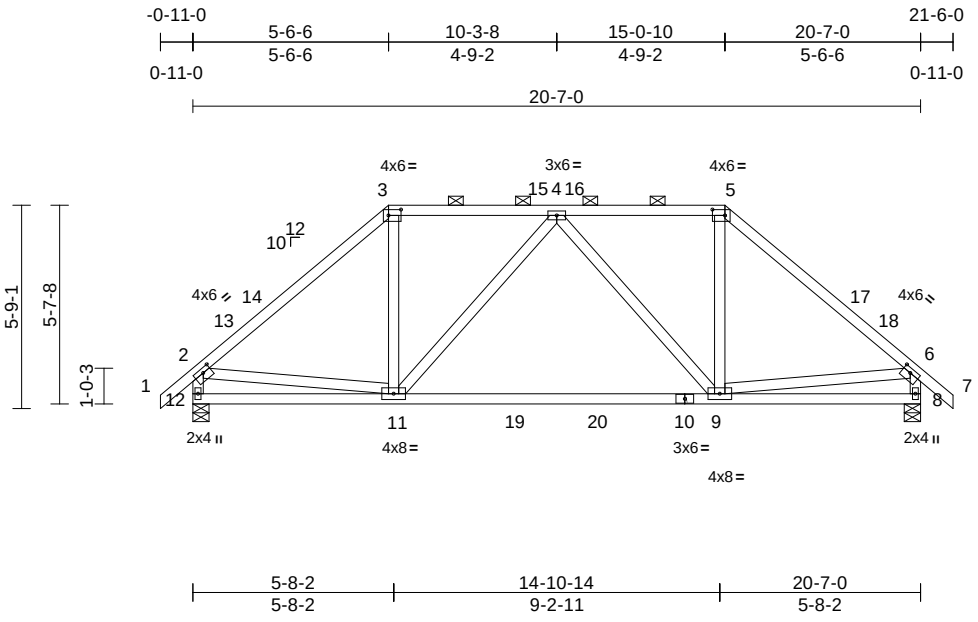

Scale = 1:65.2

Plate Offsets (X, Y): [2:0-2-12,0-1-8], [3:0-4-4,0-2-0], [5:0-4-4,0-2-0], [6:0-2-12,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.35	Vert(LL)	-0.15	9-11	>999	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.68	Vert(CT)	-0.29	9-11	>832	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.22	Horz(CT)	0.01	8	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 123 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-9-5 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 3-5.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 8=0-5-8, 12=0-5-8
Max Horiz 12=-128 (LC 12)
Max Uplift 8=-59 (LC 15), 12=-59 (LC 14)
Max Grav 8=875 (LC 2), 12=875 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/41, 2-3=-938/135, 3-4=-641/144, 4-5=-641/144, 5-6=-938/135, 6-7=0/41, 2-12=-836/142, 6-8=-836/143
BOT CHORD 11-12=-155/267, 9-11=-103/773, 8-9=-106/231
WEBS 3-11=-20/324, 4-11=-250/108, 4-9=-250/107, 5-9=-20/324, 2-11=-82/510, 6-9=-87/511

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 5-6-6, Exterior (2) 5-6-6 to 9-9-5, Interior (1) 9-9-5 to 15-0-10, Exterior (2) 15-0-10 to 19-3-8, Interior (1) 19-3-8 to 21-6-0 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=16.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10, Lu=50-0-0
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) Provide adequate drainage to prevent water ponding.
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, with BCDL = 10.0psf.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 59 lb uplift at joint 12 and 59 lb uplift at joint 8.
10) 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

May 16,2025

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

Job	Truss	Truss Type	Qty	Ply	1054 Serenity	
P02596-25453	A07	Hip	1	1	Job Reference (optional)	I73506962

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Thu May 15 06:19:46
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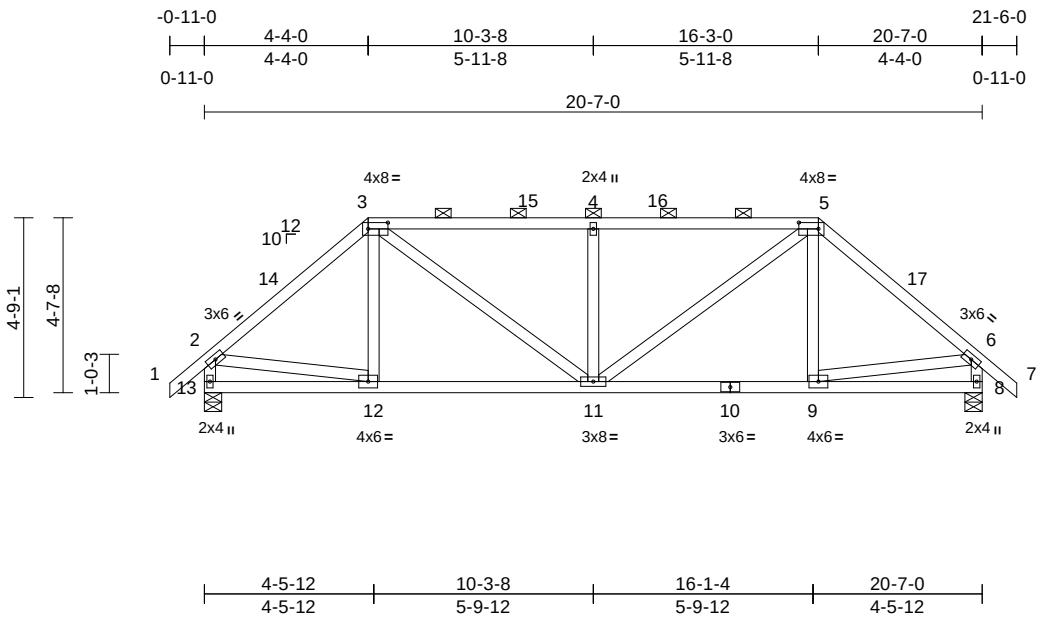

Scale = 1:61

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

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	0.51	Vert(LL)	-0.03	9-11	>999	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.33	Vert(CT)	-0.07	9-11	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.14	Horz(CT)	0.01	8	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 122 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-11-11 oc purlins, except end verticals, and 2-0-0 oc purlins (5-3-13 max.): 3-5.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 8=0-5-8, 13=0-5-8
Max Horiz 13=-108 (LC 12)
Max Uplift 8=-53 (LC 10), 13=-53 (LC 11)
Max Grav 8=875 (LC 2), 13=875 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/41, 2-3=-925/136, 3-4=-1006/177, 4-5=-1006/177, 5-6=-925/136, 6-7=0/41, 2-13=-837/144, 6-8=-837/144
BOT CHORD 12-13=-104/181, 11-12=-102/643, 9-11=-51/643, 8-9=-55/148
WEBS 3-12=0/136, 3-11=-109/482, 4-11=-413/128, 5-11=-109/482, 5-9=0/136, 2-12=-86/554, 6-9=-89/554

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 4-4-0, Exterior (2) 4-4-0 to 8-6-15, Interior (1) 8-6-15 to 16-3-0, Exterior (2) 16-3-0 to 20-5-4, Interior (1) 20-5-4 to 21-6-0 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=16.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10, Lu=50-0-0
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 53 lb uplift at joint 13 and 53 lb uplift at joint 8.
10) 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

May 16,2025

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

Job	Truss	Truss Type	Qty	Ply	1054 Serenity
P02596-25453	A08	Hip	1	1	I73506963
					Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Thu May 15 06:19:46 ID:khnVPf9MABH_PlsB3DlgYBzx4jw-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

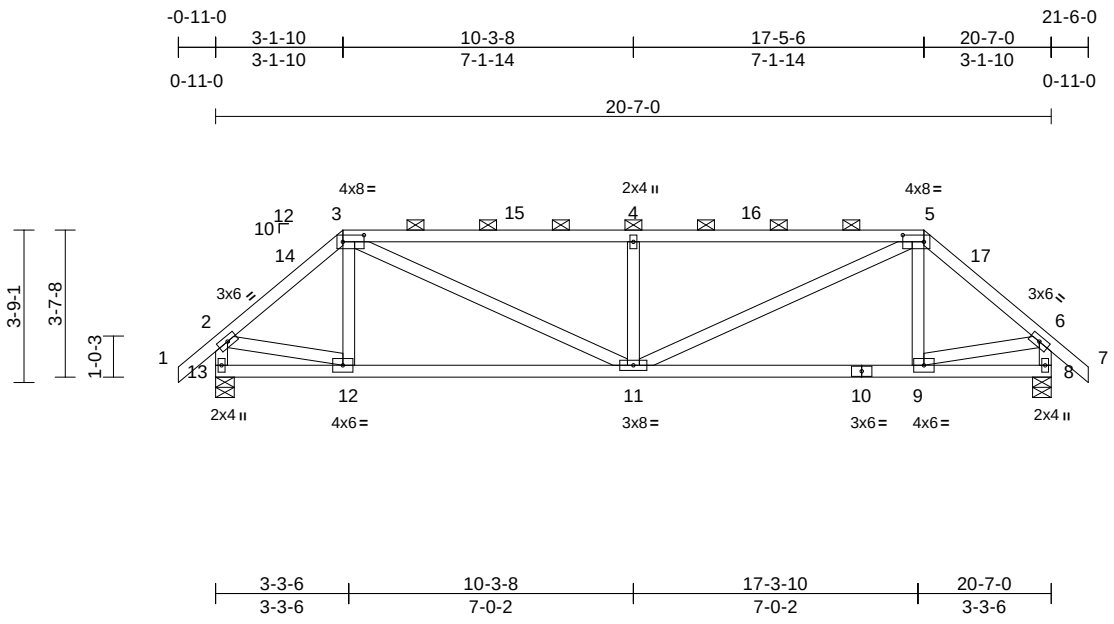

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Plate Offsets (X, Y): [3:0-6-4,0-2-0], [5:0-6-4,0-2-0]

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	0.73	Vert(LL)	-0.05	11-12	>999	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.45	Vert(CT)	-0.13	11-12	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.19	Horz(CT)	0.02	8	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 114 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (4-0-6 max.): 3-5.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 8=0-5-8, 13=0-5-8
Max Horiz 13=89 (LC 13)
Max Uplift 8=-76 (LC 10), 13=-76 (LC 11)
Max Grav 8=875 (LC 2), 13=875 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/41, 2-3=-913/128, 3-4=-1345/202, 4-5=-1345/202, 5-6=-913/128, 6-7=0/41, 2-13=-862/139, 6-8=-862/139
BOT CHORD 12-13=-73/102, 11-12=-109/659, 9-11=-66/659, 8-9=-21/63
WEBS 3-12=-50/105, 3-11=-149/777, 4-11=-495/152, 5-11=-149/777, 5-9=-50/105, 2-12=-88/675, 6-9=-91/675

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 3-1-10, Exterior (2) 3-1-10 to 7-4-8, Interior (1) 7-4-8 to 17-5-6, Exterior (2) 17-5-6 to 21-6-0 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=16.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10, Lu=50-0-0
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 76 lb uplift at joint 13 and 76 lb uplift at joint 8.
10) 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

May 16,2025

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

Job	Truss	Truss Type	Qty	Ply	1054 Serenity
P02596-25453	AE01	Common Supported Gable	1	1	I73506964 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Thu May 15 06:19:47 Page: 1
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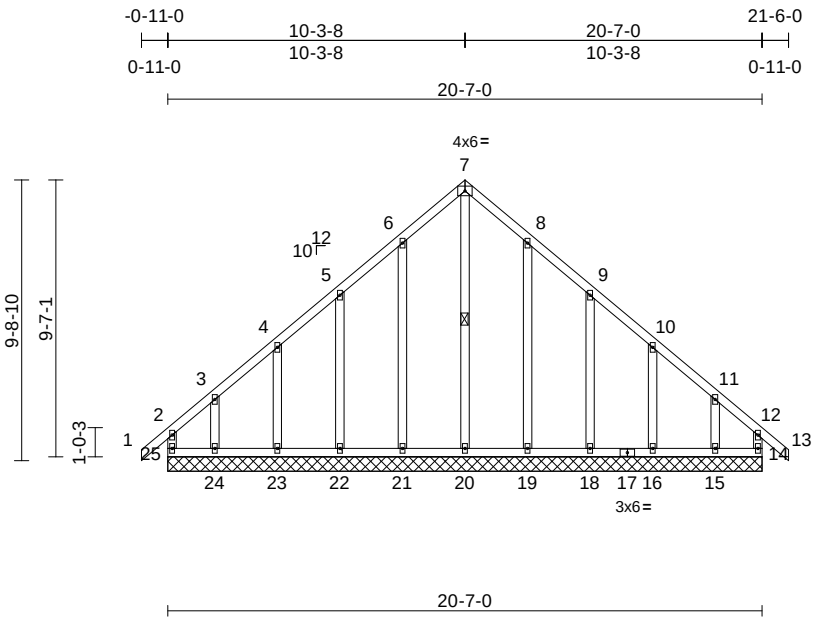

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.09	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.08	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.14	Horz(CT)	0.00	14	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 144 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS	1 Row at midpt 7-20

REACTIONS (size) 14=20-7-0, 15=20-7-0, 16=20-7-0, 18=20-7-0, 19=20-7-0, 20=20-7-0, 21=20-7-0, 22=20-7-0, 23=20-7-0, 24=20-7-0, 25=20-7-0
Max Horiz 25=203 (LC 13)
Max Uplift 14=-73 (LC 11), 15=-136 (LC 15), 16=-68 (LC 15), 18=-82 (LC 15), 19=-72 (LC 15), 21=-71 (LC 14), 22=-79 (LC 14), 23=-62 (LC 14), 24=-139 (LC 14), 25=-104 (LC 10)
Max Grav 14=183 (LC 26), 15=222 (LC 27), 16=216 (LC 31), 18=209 (LC 27), 19=215 (LC 27), 20=251 (LC 29), 21=207 (LC 26), 22=192 (LC 26), 23=189 (LC 30), 24=202 (LC 26), 25=198 (LC 27)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	2-25=-161/83, 1-2=0/41, 2-3=-153/144, 3-4=-106/106, 4-5=-93/126, 5-6=-144/169, 6-7=-199/231, 7-8=-199/231, 8-9=-144/169, 9-10=-87/111, 10-11=-81/83, 11-12=-121/110, 12-13=0/41, 12-14=-141/58
BOT CHORD	24-25=-94/107, 23-24=-94/107, 22-23=-94/107, 21-22=-94/107, 20-21=-94/107, 19-20=-94/107, 18-19=-94/107, 16-18=-94/107, 15-16=-94/107, 14-15=-94/107
WEBS	7-20=-246/142, 6-21=-148/82, 5-22=-136/89, 4-23=-140/81, 3-24=-136/112, 8-19=-147/81, 9-18=-136/89, 10-16=-141/82, 11-15=-133/108

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) -0-11-0 to 2-1-0, Exterior (2) 2-1-0 to 10-3-8, Corner (3) 10-3-8 to 13-3-8, Exterior (2) 13-3-8 to 21-6-0 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) All plates are 2x4 (||) MT20 unless otherwise indicated.
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 2-2-0 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 104 lb uplift at joint 25, 73 lb uplift at joint 14, 71 lb uplift at joint 21, 79 lb uplift at joint 22, 62 lb uplift at joint 23, 139 lb uplift at joint 24, 72 lb uplift at joint 19, 82 lb uplift at joint 18, 68 lb uplift at joint 16 and 136 lb uplift at joint 15.
14) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard

1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-43, 2-7=-43, 7-12=-43, 12-13=-43
Trapezoidal Loads (lb/ft)

May 16,2025

Continued on page 2

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Vert: 25=-20-to-24=-21 (F=-1), 24=-21 (F=-1)-to-23=-23 (F=-3), 23=-23 (F=-3)-to-22=-24 (F=-4), 22=-24 (F=-4)-to-21=-26 (F=-6), 21=-26 (F=-6)-to-20=-28 (F=-8), 20=-28 (F=-8)-to-19=-29 (F=-9), 19=-29 (F=-9)-to-18=-31 (F=-11), 18=-31 (F=-11)-to-17=-32 (F=-12), 17=-32 (F=-12)-to-16=-32 (F=-12), 16=-32 (F=-12)-to-15=-34 (F=-14), 15=-34 (F=-14)-to-14=-35 (F=-15)

May 16,2025

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

Job	Truss	Truss Type	Qty	Ply	1054 Serenity	
P02596-25453	AG09	Hip Girder	1	2	Job Reference (optional)	I73506965

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Thu May 15 06:19:47 Page: 1
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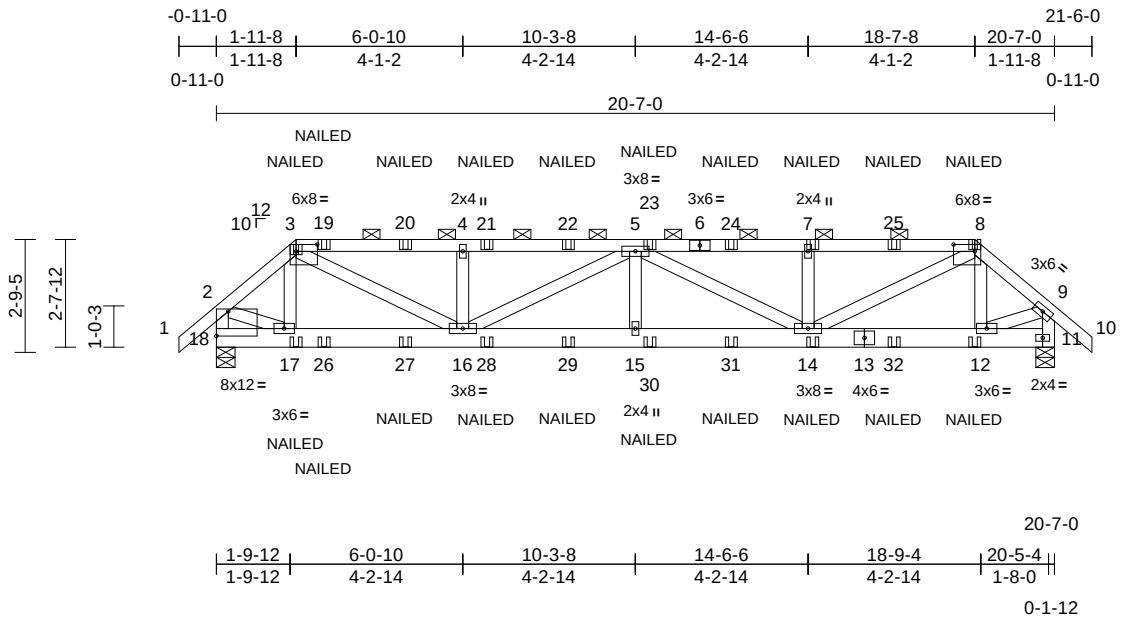

Scale = 1:56.6

Plate Offsets (X, Y): [3:0-6-4,0-2-0], [8:0-6-4,0-2-0], [18:Edge,0-7-4]

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	0.16	Vert(LL)	-0.04	15	>999	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.29	Vert(CT)	-0.09	15	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.18	Horz(CT)	0.02	11	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 260 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 3-8.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 11=0-5-8, 18=0-5-8
Max Horiz 18=-68 (LC 8)
Max Uplift 11=-270 (LC 6), 18=-287 (LC 7)
Max Grav 11=1209 (LC 27), 18=1244 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/41, 2-3=-1208/317, 3-4=-2197/560, 4-5=-2197/560, 5-7=-2175/551, 7-8=-2175/551, 8-9=-1169/299, 9-10=0/41, 2-18=-1249/290, 9-11=-1212/273
BOT CHORD 17-18=-54/70, 16-17=-262/913, 15-16=-670/2660, 14-15=-670/2660, 12-14=-224/879, 11-12=-6/30
WEBS 3-17=-203/90, 3-16=-359/1468, 4-16=-351/134, 5-16=-527/131, 5-15=0/246, 5-14=-550/141, 7-14=-348/132, 8-14=-366/1483, 8-12=-210/88, 2-17=-250/949, 9-12=-233/915

NOTES
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=16.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10, Lu=50-0-0
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
7) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
8) Provide adequate drainage to prevent water ponding.
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) Bearing at joint(s) 11 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 287 lb uplift at joint 18 and 270 lb uplift at joint 11.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
14) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidlines.

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-43, 2-3=-43, 3-8=-53, 8-9=-43, 9-10=-43, 11-18=-20
Concentrated Loads (lb)
Vert: 17=-29 (F), 3=-27 (F), 7=-21 (F), 14=-25 (F), 8=-27 (F), 12=-29 (F), 19=-23 (F), 20=-21 (F), 21=-21 (F), 22=-21 (F), 23=-21 (F), 24=-21 (F), 25=-21 (F), 26=-25 (F), 27=-25 (F), 28=-25 (F), 29=-25 (F), 30=-25 (F), 31=-25 (F), 32=-25 (F)

May 16,2025

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1054 Serenity
P02596-25453	CJ01	Jack-Open	2	1	I73506966 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Thu May 15 06:19:48
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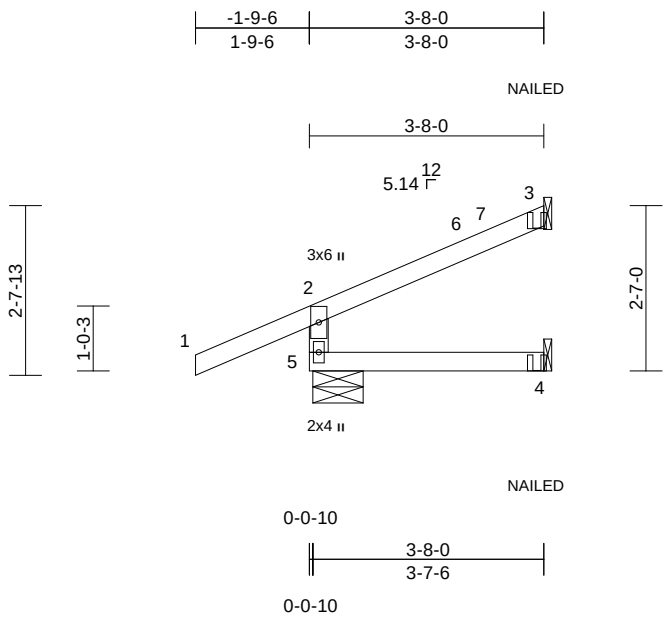


Scale = 1:36

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	0.28	Vert(LL)	-0.01	4-5	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.11	Vert(CT)	-0.01	4-5	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.01	3	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 15 lb	FT = 20%

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

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

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-9-7
Max Horiz 5=58 (LC 16)
Max Uplift 3=-58 (LC 16), 4=-5 (LC 16), 5=-34 (LC 16)
Max Grav 3=110 (LC 2), 4=87 (LC 7), 5=286 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-246/249, 1-2=0/46, 2-3=-53/22
BOT CHORD 4-5=0/0

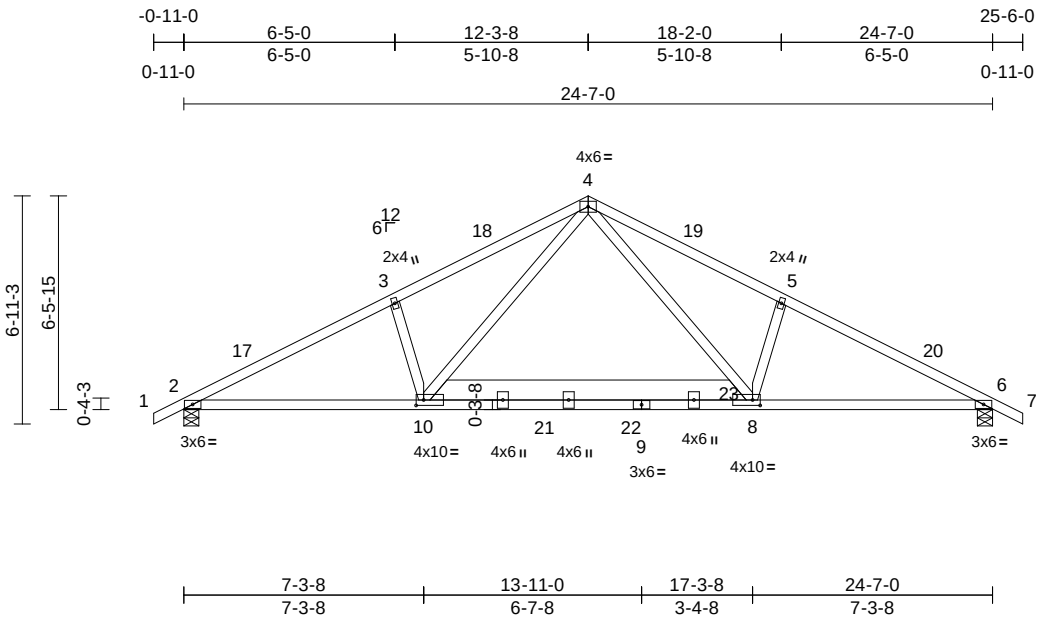
NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) -1-9-6 to 2-5-9, Exterior (2) 2-5-9 to 3-7-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
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) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 34 lb uplift at joint 5, 58 lb uplift at joint 3 and 5 lb uplift at joint 4.
11) "NAILED" indicates 2-12d (0.148"x3.25") toe-nails per NDS guidlines.
12) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-43, 2-3=-43, 4-5=-20
Concentrated Loads (lb)
Vert: 3=-26 (F), 4=-22 (F)

May 16,2025

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

Job	Truss	Truss Type	Qty	Ply	1054 Serenity
P02596-25453	G02	Common	2	1	I73506967
					Job Reference (optional)



Scale = 1:70

Plate Offsets (X, Y): [8:0-2-12,0-2-0], [10:0-2-12,0-2-0]

Loading	(psf)	Spacing	2-3-8	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.70	Vert(LL)	-0.09	8-10	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.87	Vert(CT)	-0.20	8-10	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.72	Horz(CT)	0.05	6	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 143 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 10-8:2x8 SP DSS
WEBS 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-3-12 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 6=0-5-8
Max Horiz 2=-99 (LC 17)
Max Uplift 2=-143 (LC 16), 6=-149 (LC 17)
Max Grav 2=1280 (LC 2), 6=1318 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/28, 2-3=-2192/251, 3-4=-2109/309, 4-5=-2192/325, 5-6=-2276/267, 6-7=0/28
BOT CHORD 2-10=-226/1911, 8-10=-79/1289, 6-8=-163/1985
WEBS 4-8=-187/1020, 5-8=-430/180, 4-10=-157/825, 3-10=-430/180

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 12-3-8, Exterior (2) 12-3-8 to 15-3-8, Interior (1) 15-3-8 to 25-6-0 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
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, with BCDL = 10.0psf.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 143 lb uplift at joint 2 and 149 lb uplift at joint 6.
10) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-4=-49, 4-7=-49, 11-14=-23, 4-23=-40 (F)

May 16,2025

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

Job	Truss	Truss Type	Qty	Ply	1054 Serenity	
P02596-25453	G03	Common	3	1	Job Reference (optional)	I73506968

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Thu May 15 06:19:48 Page: 1
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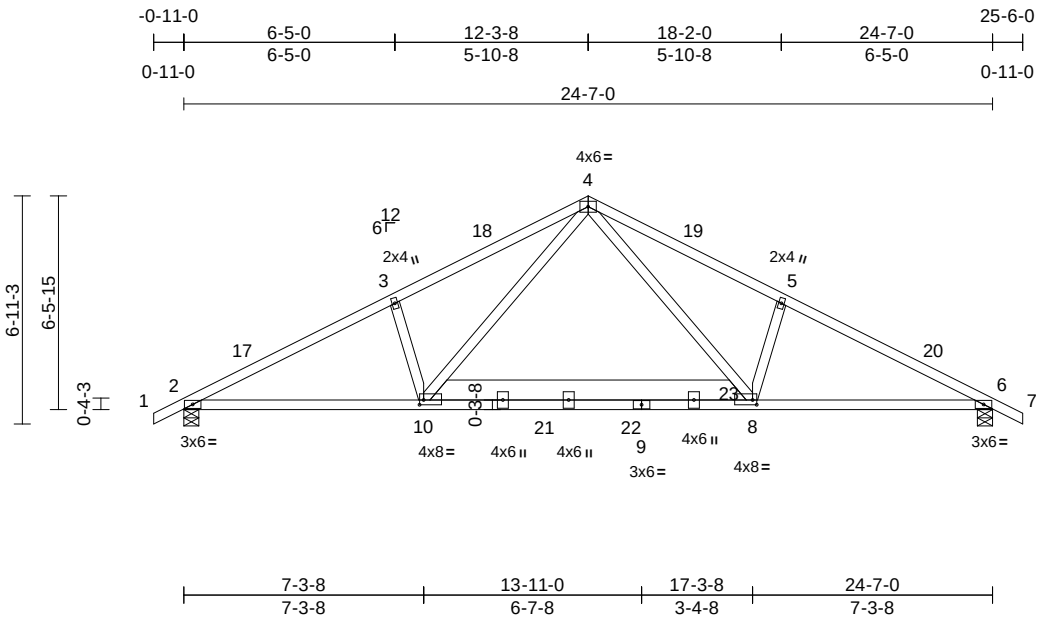

Scale = 1:70

Plate Offsets (X, Y): [8:0-1-8,0-1-12], [10:0-1-8,0-1-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.56	Vert(LL)	-0.08	8-10	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.77	Vert(CT)	-0.17	8-10	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.69	Horz(CT)	0.04	6	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 143 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 10-8:2x8 SP DSS
WEBS 2x4 SP No.2

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

REACTIONS (size) 2=0-5-8, 6=0-5-8
Max Horiz 2=86 (LC 20)
Max Uplift 2=-127 (LC 16), 6=-133 (LC 17)
Max Grav 2=1128 (LC 2), 6=1166 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/25, 2-3=-1938/224, 3-4=-1866/275, 4-5=-1949/290, 5-6=-2022/240, 6-7=0/25
BOT CHORD 2-10=-201/1690, 8-10=-73/1147, 6-8=-148/1764
WEBS 4-8=-167/915, 5-8=-375/157, 4-10=-137/720, 3-10=-375/157

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 12-3-8, Exterior (2) 12-3-8 to 15-3-8, Interior (1) 15-3-8 to 25-6-0 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
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, with BCDL = 10.0psf.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 127 lb uplift at joint 2 and 133 lb uplift at joint 6.
10) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-4=-43, 4-7=-43, 11-14=-20, 4-23=-40 (F)

May 16,2025

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

Job	Truss	Truss Type	Qty	Ply	1054 Serenity	
P02596-25453	G04	Common	1	1	Job Reference (optional)	I73506969

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Thu May 15 06:19:49

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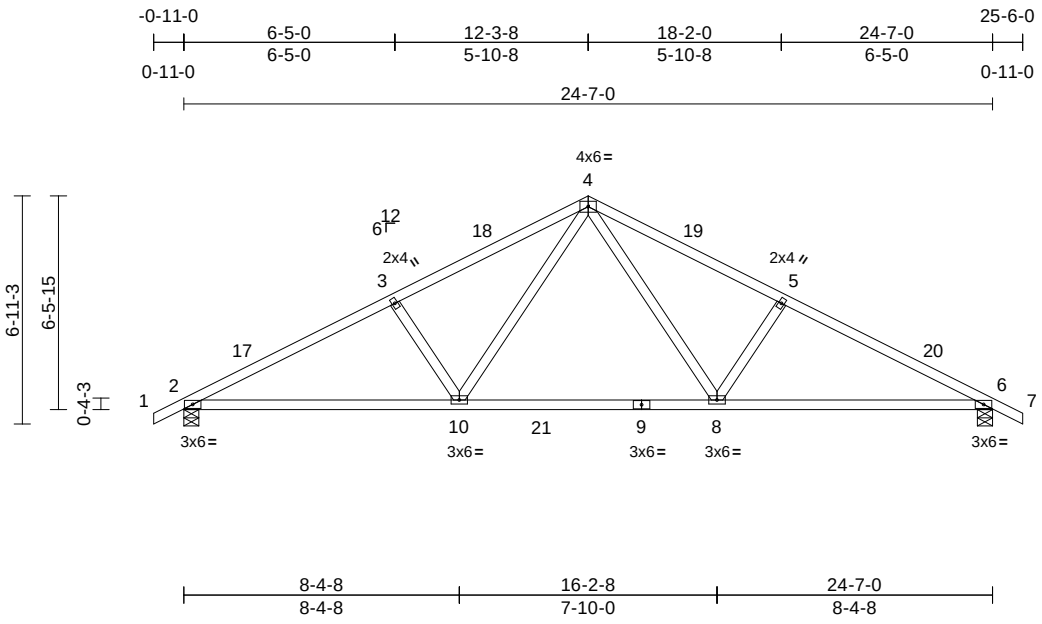

Scale = 1:70

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)	-0.15	8-10	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.71	Vert(CT)	-0.26	8-16	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.15	Horz(CT)	0.05	6	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 112 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-11-4 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 6=0-5-8
Max Horiz 2=-86 (LC 17)
Max Uplift 2=-113 (LC 16), 6=-113 (LC 17)
Max Grav 2=1038 (LC 2), 6=1038 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/25, 2-3=-1715/189, 3-4=-1537/211, 4-5=-1537/211, 5-6=-1715/189, 6-7=0/25
BOT CHORD 2-10=-177/1495, 8-10=-38/982, 6-8=-104/1495
WEBS 4-8=-104/594, 5-8=-384/155, 4-10=-104/594, 3-10=-384/155

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 12-3-8, Exterior (2) 12-3-8 to 15-3-8, Interior (1) 15-3-8 to 25-6-0 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
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, with BCDL = 10.0psf.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 113 lb uplift at joint 2 and 113 lb uplift at joint 6.

LOAD CASE(S) Standard

May 16,2025

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1054 Serenity	
P02596-25453	GE01	Common Supported Gable	1	1	Job Reference (optional)	I73506970

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Thu May 15 06:19:49 Page: 1
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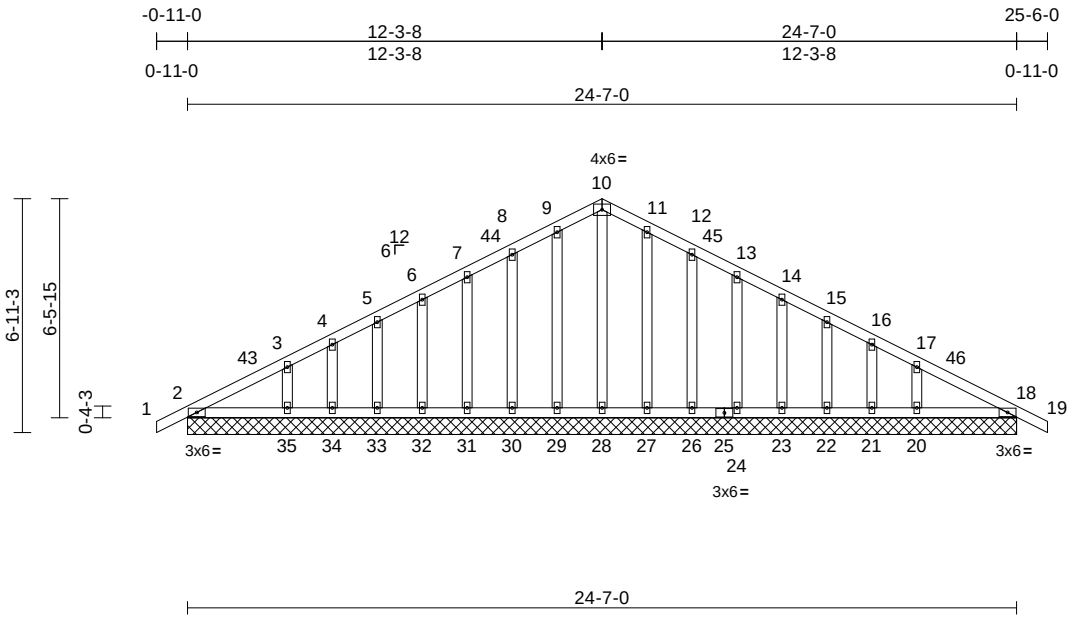

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	18	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 158 lb	FT = 20%

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

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

REACTIONS (size) 2=24-7-0, 18=24-7-0, 20=24-7-0, 21=24-7-0, 22=24-7-0, 23=24-7-0, 24=24-7-0, 26=24-7-0, 27=24-7-0, 28=24-7-0, 29=24-7-0, 30=24-7-0, 31=24-7-0, 32=24-7-0, 33=24-7-0, 34=24-7-0, 35=24-7-0
Max Horiz 2=-86 (LC 17)
Max Uplift 2=-11 (LC 17), 18=-7 (LC 17), 20=-63 (LC 17), 21=-15 (LC 17), 22=-32 (LC 17), 23=-29 (LC 17), 24=-29 (LC 17), 26=-33 (LC 17), 27=-20 (LC 17), 29=-23 (LC 16), 30=-31 (LC 16), 31=-27 (LC 16), 32=-27 (LC 16), 33=-30 (LC 16), 34=-14 (LC 16), 35=-57 (LC 16)
Max Grav 2=169 (LC 2), 18=190 (LC 2), 20=276 (LC 35), 21=64 (LC 2), 22=141 (LC 35), 23=122 (LC 35), 24=124 (LC 2), 26=122 (LC 35), 27=124 (LC 35), 28=128 (LC 33), 29=122 (LC 34), 30=117 (LC 34), 31=116 (LC 2), 32=111 (LC 34), 33=124 (LC 34), 34=60 (LC 2), 35=228 (LC 34)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/25, 2-3=-94/53, 3-4=-68/51, 4-5=-49/62, 5-6=-41/75, 6-7=-35/96, 7-8=-44/121, 8-9=-53/147, 9-10=-61/167, 10-11=-61/169, 11-12=-53/150, 12-13=-44/123, 13-14=-35/99, 14-15=-30/74, 15-16=-27/47, 16-17=-42/31, 17-18=-57/32, 18-19=0/25
BOT CHORD 2-35=-21/90, 34-35=-21/90, 33-34=-21/90, 32-33=-21/90, 31-32=-21/90, 30-31=-21/90, 29-30=-21/90, 28-29=-21/90, 27-28=-21/90, 26-27=-21/90, 24-26=-21/90, 23-24=-21/90, 22-23=-21/90, 21-22=-21/90, 20-21=-21/90, 18-20=-21/90
WEBS 10-28=-92/5, 9-29=-85/62, 8-30=-80/68, 7-31=-80/39, 6-32=-79/39, 5-33=-85/43, 4-34=-53/29, 3-35=-149/85, 11-27=-85/62, 12-26=-80/68, 13-24=-80/39, 14-23=-79/39, 15-22=-86/43, 16-21=-49/27, 17-20=-156/89

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) -0-11-0 to 2-1-0, Exterior (2) 2-1-0 to 12-3-8, Corner (3) 12-3-8 to 15-3-8, Exterior (2) 15-3-8 to 25-6-0 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
7) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
8) All plates are 2x4 (||) MT20 unless otherwise indicated.
9) Gable requires continuous bottom chord bearing.
10) Gable studs spaced at 1-4-0 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.

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Continued on page 2

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13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 11 lb uplift at joint 2, 7 lb uplift at joint 18, 23 lb uplift at joint 29, 31 lb uplift at joint 30, 27 lb uplift at joint 31, 27 lb uplift at joint 32, 30 lb uplift at joint 33, 14 lb uplift at joint 34, 57 lb uplift at joint 35, 20 lb uplift at joint 27, 33 lb uplift at joint 26, 29 lb uplift at joint 24, 29 lb uplift at joint 23, 32 lb uplift at joint 22, 15 lb uplift at joint 21, 63 lb uplift at joint 20, 11 lb uplift at joint 2 and 7 lb uplift at joint 18.
14) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 18.
15) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard

1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (lb/ft)
   Vert: 1-10=-43, 10-19=-43
   Trapezoidal Loads (lb/ft)
   Vert: 36=-20-to-38=-20 (F=0), 38=-20 (F=0)-to-35=-22 (F=-2), 35=-22 (F=-2)-to-34=-23 (F=-3), 34=-23 (F=-3)-to-33=-23 (F=-3), 33=-23 (F=-3)-to-32=-24 (F=-4), 32=-24 (F=-4)-to-31=-25 (F=-5), 31=-25 (F=-5)-to-30=-26 (F=-6), 30=-26 (F=-6)-to-29=-27 (F=-7), 29=-27 (F=-7)-to-28=-27 (F=-7), 28=-27 (F=-7)-to-27=-28 (F=-8), 27=-28 (F=-8)-to-26=-29 (F=-9), 26=-29 (F=-9)-to-25=-30 (F=-10), 25=-30 (F=-10)-to-24=-30 (F=-10), 24=-30 (F=-10)-to-23=-31 (F=-11), 23=-31 (F=-11)-to-22=-32 (F=-12), 22=-32 (F=-12)-to-21=-32 (F=-12), 21=-32 (F=-12)-to-20=-33 (F=-13), 20=-33 (F=-13)-to-42=-35 (F=-15), 42=-35 (F=-15)-to-40=-35 (F=-15)

May 16,2025

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

Job	Truss	Truss Type	Qty	Ply	1054 Serenity	
P02596-25453	J01	Jack-Open	2	1	Job Reference (optional)	I73506971

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Thu May 15 06:19:49
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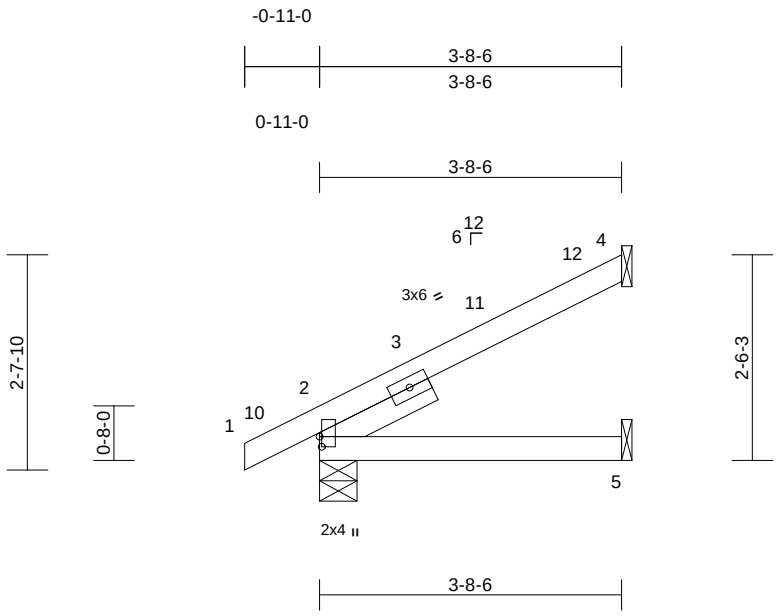
Page: 1



Scale = 1:28.2

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.17	Vert(LL)	0.01	5-8	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.13	Vert(CT)	-0.02	5-8	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.01	2	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 16 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-8-6 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 4= Mechanical, 5= Mechanical
Max Horiz 2=67 (LC 16)
Max Uplift 2=-17 (LC 16), 4=-39 (LC 16), 5=-1 (LC 16)
Max Grav 2=207 (LC 2), 4=92 (LC 2), 5=65 (LC 7)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/25, 2-4=-114/33
BOT CHORD 2-5=-98/65

NOTES
1) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 3-7-10 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
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) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 39 lb uplift at joint 4, 17 lb uplift at joint 2 and 1 lb uplift at joint 5.

LOAD CASE(S) Standard

NORTH CAROLINA PROFESSIONAL SEAL 036322 ENGINEER ERIC A. GILBERT

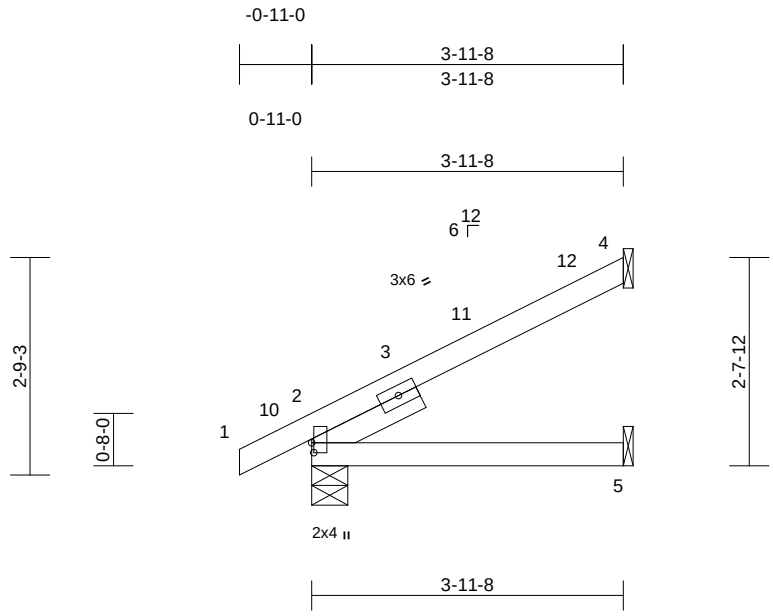
May 16,2025

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

Job	Truss	Truss Type	Qty	Ply	1054 Serenity
P02596-25453	J02	Jack-Open	8	1	I73506972 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Thu May 15 06:19:50 Page: 1
ID:1iOAEZ5iu7?jAXy2L9luNDzGf4K-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:29.3

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.20	Vert(LL)	0.01	5-8	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.16	Vert(CT)	-0.02	5-8	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.01	2	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 16 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-11-8 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 4= Mechanical, 5= Mechanical
Max Horiz 2=71 (LC 16)
Max Uplift 2=-18 (LC 16), 4=-42 (LC 16), 5=-1 (LC 16)
Max Grav 2=217 (LC 2), 4=99 (LC 2), 5=70 (LC 7)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/25, 2-4=-127/35
BOT CHORD 2-5=-113/73

NOTES
1) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 3-10-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
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) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 42 lb uplift at joint 4, 18 lb uplift at joint 2 and 1 lb uplift at joint 5.

LOAD CASE(S) Standard

NORTH CAROLINA PROFESSIONAL SEAL 036322 ENGINEER ERIC A. GILBERT

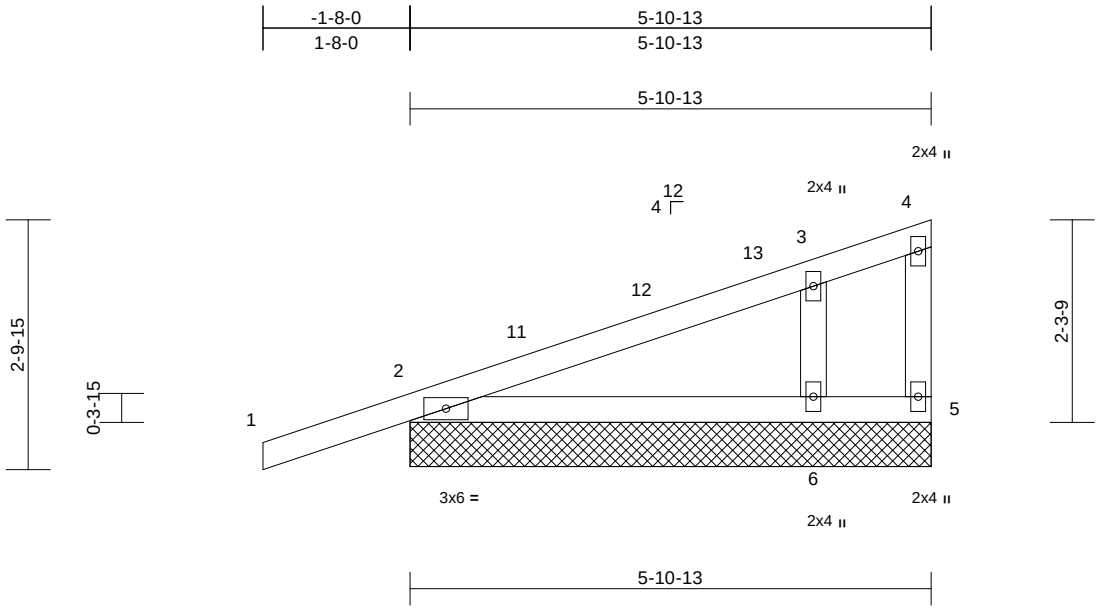
May 16,2025

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

Job	Truss	Truss Type	Qty	Ply	1054 Serenity
P02596-25453	P01E	Monopitch Supported Gable	1	1	I73506973 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Thu May 15 06:19:50 Page: 1
ID:TW?FPGBlJPtzzsT2aCrh_1zx4mS-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:26.1

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.21	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.24	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 25 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD	Structural wood sheathing directly applied or 5-10-13 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=5-10-13, 5=5-10-13, 6=5-10-13
Max Horiz 2=73 (LC 15)
Max Uplift 2=-74 (LC 12), 5=-2 (LC 2), 6=-60 (LC 16)
Max Grav 2=280 (LC 2), 5=46 (LC 7), 6=335 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/32, 2-3=-104/67, 3-4=-50/40, 4-5=-17/51
BOT CHORD	2-6=-37/100, 5-6=-27/37
WEBS	3-6=-258/202

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) -1-8-0 to 1-4-0, Exterior (2) 1-4-0 to 5-9-1 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
7) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
8) Gable requires continuous bottom chord bearing.
9) Gable studs spaced at 1-4-0 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 74 lb uplift at joint 2, 2 lb uplift at joint 5, 60 lb uplift at joint 6 and 74 lb uplift at joint 2.

LOAD CASE(S) Standard

May 16,2025

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

Job	Truss	Truss Type	Qty	Ply	1054 Serenity
P02596-25453	P02	Monopitch	6	1	I73506974
					Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Thu May 15 06:19:50 Page: 1
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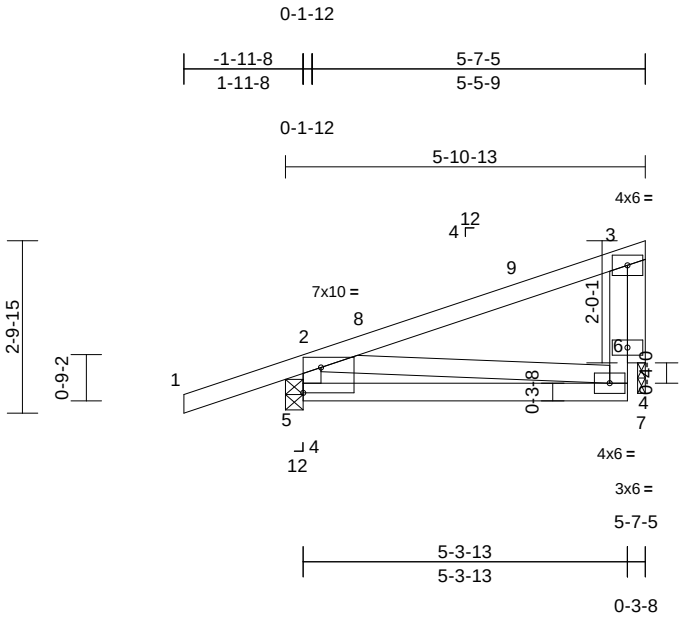

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Plate Offsets (X, Y): [2:Edge,0-5-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.31	Vert(LL)	0.06	4-5	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.32	Vert(CT)	-0.08	4-5	>840	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.00	7	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 33 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-10-13 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-8, 7=0-1-8
Max Horiz 2=86 (LC 12)
Max Uplift 2=-137 (LC 12), 7=-56 (LC 12)
Max Grav 2=366 (LC 2), 7=163 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/40, 2-3=-127/22, 4-6=-85/97, 3-6=-85/97
BOT CHORD 2-5=-88/101, 4-5=0/12
WEBS 2-4=-47/73, 3-7=-174/120

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -1-8-0 to 1-4-0, Interior (1) 1-4-0 to 5-5-9 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
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) Bearing at joint(s) 7 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
10) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 7.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 137 lb uplift at joint 2 and 56 lb uplift at joint 7.
12) Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.

LOAD CASE(S) Standard

May 16,2025

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

Job	Truss	Truss Type	Qty	Ply	1054 Serenity	
P02596-25453	P03G	Roof Special Girder	1	1	Job Reference (optional)	I73506975

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Thu May 15 06:19:50 Page: 1
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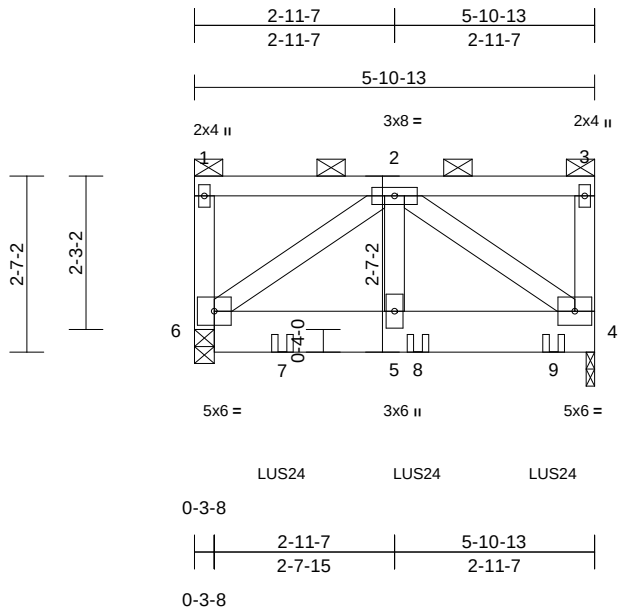

Scale = 1:34

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	0.12	Vert(LL)	0.00	5	>999	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	-0.01	5	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.10	Horz(CT)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 43 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x8 SP DSS
WEBS 2x4 SP No.2

BRACING
TOP CHORD 2-0-0 oc purlins: 1-3, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 4=0-1-8, 6=0-3-8
Max Horiz 6=-61 (LC 31)
Max Uplift 4=-89 (LC 7), 6=-81 (LC 6)
Max Grav 4=603 (LC 2), 6=516 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-6=-66/20, 1-2=-23/17, 2-3=-23/17, 3-4=-66/20
BOT CHORD 5-6=-79/379, 4-5=-79/379
WEBS 2-6=-478/84, 2-5=-16/376, 2-4=-478/83

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=16.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10, Lu=50-0-0
4) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
5) Provide adequate drainage to prevent water ponding.
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) Bearing at joint(s) 6 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
9) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 4.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 89 lb uplift at joint 4 and 81 lb uplift at joint 6.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
12) Use Simpson Strong-Tie LUS24 (4-10d Girder, 2-10d Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 1-3-9 from the left end to 5-3-9 to connect truss(es) to front face of bottom chord.
13) Fill all nail holes where hanger is in contact with lumber.
14) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-53, 4-6=-20
Concentrated Loads (lb)
Vert: 7=-172 (F), 8=-172 (F), 9=-178 (F)

May 16,2025

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

Job	Truss	Truss Type	Qty	Ply	1054 Serenity
P02596-25453	P04SE	Common Structural Gable	1	1	I73506976 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Thu May 15 06:19:50 Page: 1
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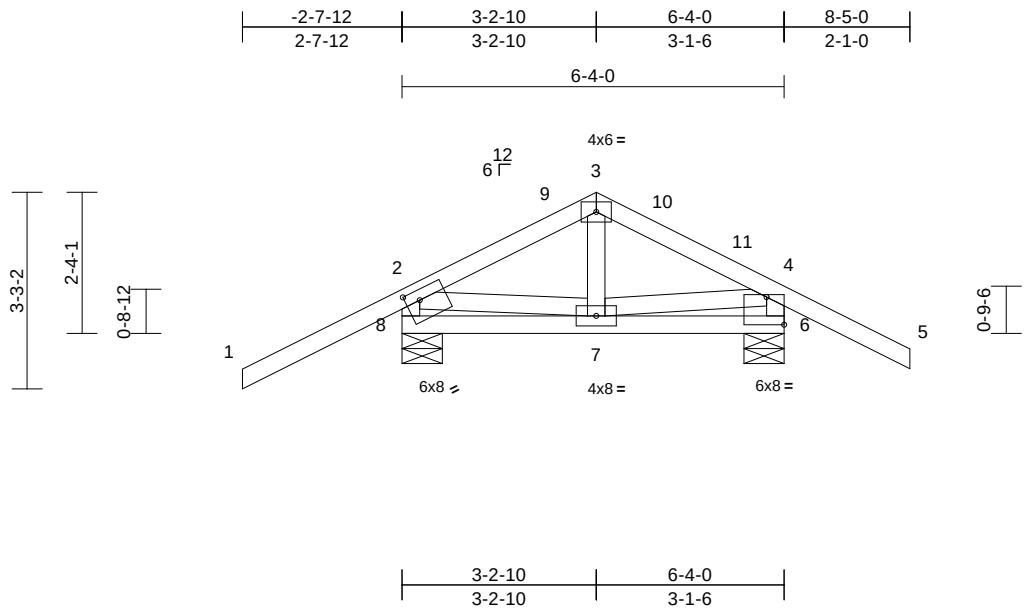


Scale = 1:38.2

Plate Offsets (X, Y): [6:Edge,0-5-8], [8:0-2-12,0-2-0]

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	0.58	Vert(LL)	0.00	7-8	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.08	Vert(CT)	-0.01	7-8	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	6	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 40 lb	FT = 20%

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

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

REACTIONS (size) 6=0-8-0, 8=0-8-0
Max Horiz 8=44 (LC 15)
Max Uplift 6=-59 (LC 17), 8=-72 (LC 16)
Max Grav 6=361 (LC 2), 8=423 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/75, 2-3=-182/37, 3-4=-169/43, 4-5=0/60, 2-8=-399/191, 4-6=-338/166
BOT CHORD 7-8=-49/48, 6-7=-8/8
WEBS 3-7=-6/106, 2-7=0/128, 4-7=0/126

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -2-7-12 to 0-1-12, Interior (1) 0-1-12 to 3-2-10, Exterior (2) 3-2-10 to 6-2-4, Interior (1) 6-2-4 to 8-5-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 72 lb uplift at joint 8 and 59 lb uplift at joint 6.

LOAD CASE(S) Standard

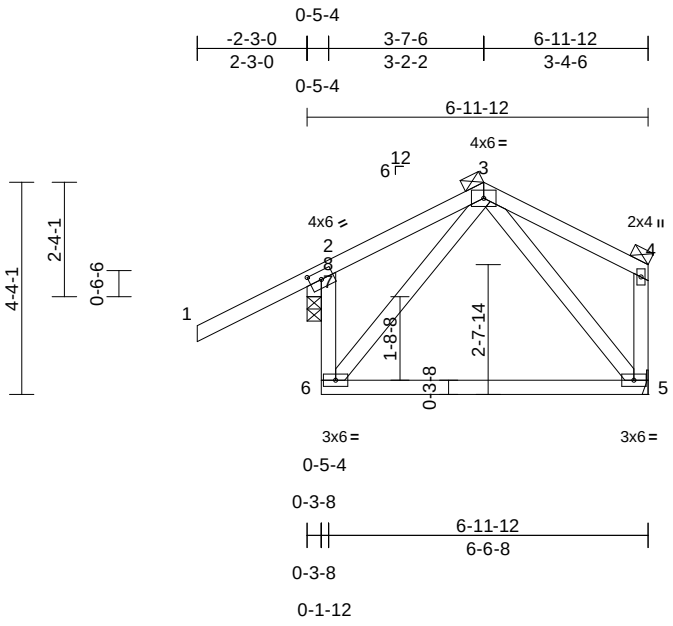
May 16,2025

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

Job	Truss	Truss Type	Qty	Ply	1054 Serenity
P02596-25453	P05	Roof Special	3	1	I73506977 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 8.83 E Feb 1 2025 Print: 8.830 E Feb 1 2025 MiTek Industries, Inc. Thu May 15 16:06:13 Page: 1
ID:aCiuRGkvGk4MP0alMD9mR0zx4n2-vraydDYbUMfuoFrQIXND0NETRE9sqMZuI4vkwgzGCUu



Scale = 1:47.1

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

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	0.53	Vert(LL)	-0.10	5-6	>764	240	MT20	244/190
Snow (Pf/Pg)	0.0/15.0	Lumber DOL	1.15	BC	0.53	Vert(CT)	-0.20	5-6	>382	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.02	Horz(CT)	-0.01	5	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 47 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-11-12 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (lb/size) 5=40/ Mechanical, 8=204/0-3-8
Max Horiz 8=67 (LC 13)
Max Uplift 8=-24 (LC 16)
Max Grav 5=117 (LC 7), 8=259 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/72, 2-3=-43/52, 3-4=0/0, 6-8=-13/140, 7-8=-204/210, 2-7=-32/26, 2-8=-126/91, 4-5=0/0
BOT CHORD 5-6=-27/18
WEBS 3-6=-48/41, 3-5=-28/43

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (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) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=0.0 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
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 crushing capacity of 565 psi.
10) Refer to girder(s) for truss to truss connections.
11) Bearing at joint(s) 8 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 24 lb uplift at joint 8.
13) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
14) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

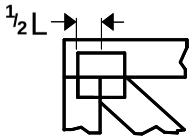
LOAD CASE(S) Standard

May 16,2025

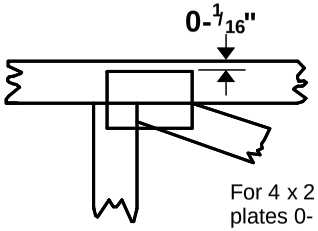
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Symbols

PLATE LOCATION AND ORIENTATION



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



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

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

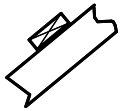
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

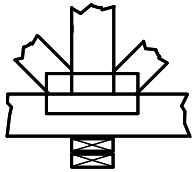
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



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

BEARING

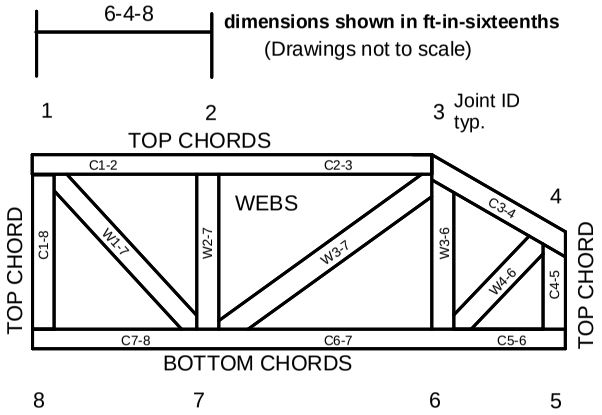


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/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.

MiTek®

ENGINEERING BY TRENCO
A MiTek Affiliate

MiTek Engineering Reference Sheet: MII-7473 rev. 1/2/2023

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/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.