ENGINEERING BY
TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: P04085-27897
1060 Serenity **REVISIED 10/10

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: I77066704 thru I77066737

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

North Carolina COA: C-0844

October 15,2025

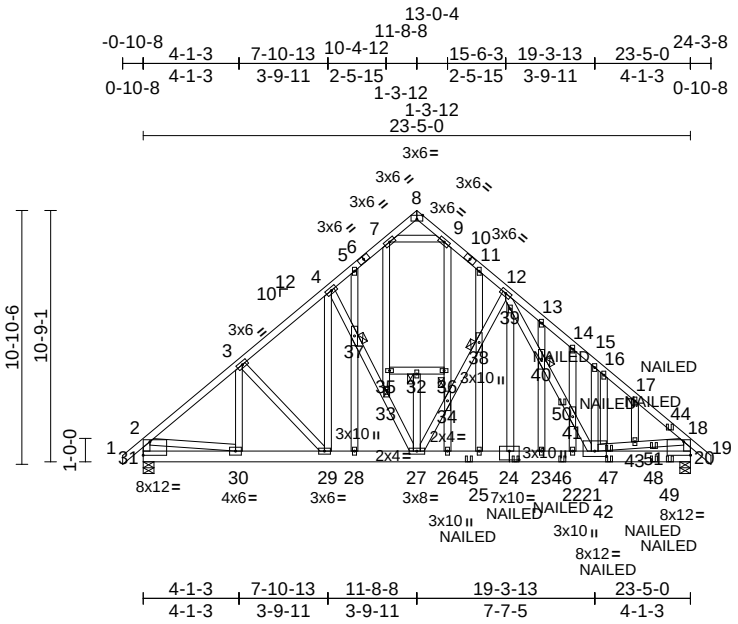
Galinski, John

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	1060 Serenity **REVISIED 10/10
P04085-27897	A01SE	Common Girder	1	1	I77066704 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Wed Oct 15 05:42:23 Page: 1

ID:VhdkN?qr6SKQygAoVXcUtdzOYQi-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:98.6

Plate Offsets (X, Y): [8:0-3-0,Edge], [20:Edge,0-7-0], [21:0-6-0,0-2-12], [24:0-5-0,0-4-8], [31:Edge,0-7-0]

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	0.34	Vert(LL)	-0.03	23	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.23	Vert(CT)	-0.06	23	>999	180		
TCDL	7.0	Rep Stress Incr	NO	WB	0.38	Horz(CT)	0.01	20	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 269 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD	Structural wood sheathing directly applied or 5-0-5 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
JOINTS	1 Brace at Jt(s): 32, 33, 34, 37, 38, 40

REACTIONS (size) 20=0-5-8, 31=0-5-8
Max Horiz 31=-212 (LC 8)
Max Uplift 20=-181 (LC 10), 31=-141 (LC 10)
Max Grav 20=1075 (LC 2), 31=968 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/35, 2-3=-1069/156, 3-4=-948/186, 4-5=-822/207, 5-7=-709/195, 7-8=-62/18, 8-9=-32/34, 9-11=-754/232, 11-12=-803/220, 12-13=-1105/287, 13-14=-1129/260, 14-15=-1189/256, 15-16=-933/193, 16-17=-1117/208, 17-18=-1204/199, 18-19=0/35, 2-31=-918/151, 18-20=-994/180

BOT CHORD 30-31=-196/269, 29-30=-165/809, 28-29=-95/698, 27-28=-95/698, 26-27=-65/731, 25-26=-65/731, 23-25=-65/731, 22-23=-65/730, 21-22=-65/730, 20-21=-68/301

WEBS 3-30=-38/82, 3-29=-160/113, 4-29=-51/93, 4-37=-229/144, 33-37=-306/161, 27-33=-194/145, 27-32=-40/135, 27-34=-292/134, 34-38=-365/160, 12-38=-373/166, 12-39=-192/425, 39-40=-153/267, 40-41=-146/280, 21-41=-153/280, 15-21=-431/109, 2-30=-31/650, 21-42=-41/591, 42-43=-42/562, 18-43=-43/563, 33-35=-54/179, 7-35=-74/246, 34-36=-106/309, 9-36=-125/377, 26-34=-81/227, 32-35=-38/12, 32-36=-38/12, 5-37=-30/115, 28-37=-60/227, 11-38=-18/38, 25-38=-19/43, 24-39=-49/171, 13-40=-37/53, 23-40=-39/36, 14-41=-24/42, 22-41=-19/22, 16-42=-30/215, 17-43=-28/56, 7-9=-572/194

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; 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) 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=10.0 psf; Pf=7.7 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) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 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) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
9) Vertical gable studs spaced at 1-4-0 oc and horizontal 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.

October 15,2025

Continued on page 2

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

12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 141 lb uplift at joint 31 and 181 lb uplift at joint 20.
13) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidlines.
14) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) . The design/selection of such connection device(s) is the responsibility of others.
15) Attic room checked for L/360 deflection.
16) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

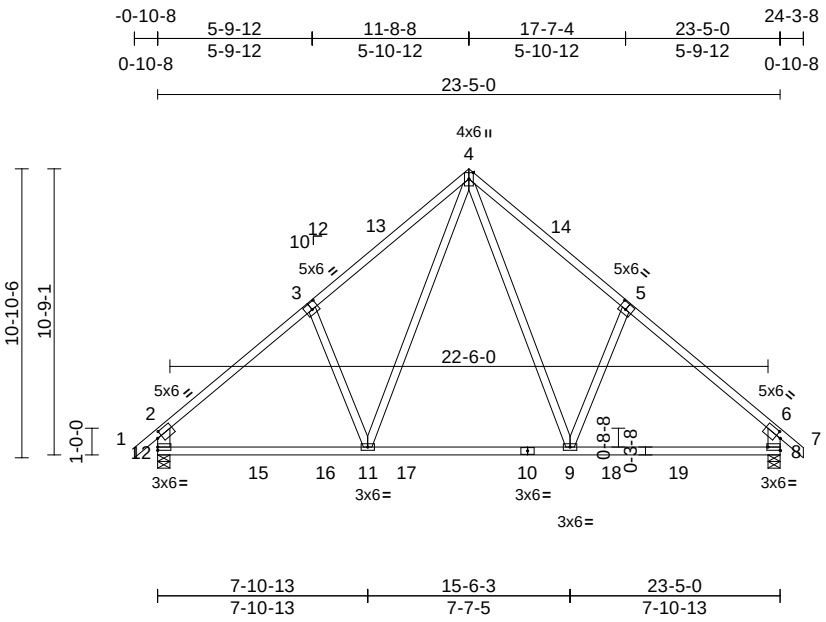
LOAD CASE(S) Standard

1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (lb/ft)
   Vert: 1-2=-29, 2-8=-29, 8-18=-29, 18-19=-29, 20-31=-20
   Concentrated Loads (lb)
   Vert: 24=-43 (F), 42=-39 (F), 44=25 (F), 45=-43 (F), 46=-5 (F), 47=-5 (F), 48=-5 (F), 50=-39 (F), 51=-39 (F)

Job	Truss	Truss Type	Qty	Ply	1060 Serenity **REVISIED 10/10
P04085-27897	A02	Common	2	1	I77066705 Job Reference (optional)

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

Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Wed Oct 15 05:42:25 Page: 1
ID:0lhnpzYPpm0sHs8o_WcUpMzOYLv-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:86.7

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.88	Vert(LL)	-0.22	9-11	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.72	Vert(CT)	-0.34	9-11	>806	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.35	Horz(CT)	0.03	8	n/a	n/a		
BCLL	0.0*	Code	IRC2021/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 *Except* 12-2,8-6:2x6 SP No.2

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

REACTIONS (size) 8=0-5-8, 12=0-5-8
Max Horiz 12=216 (LC 13)
Max Uplift 8=-118 (LC 15), 12=-118 (LC 14)
Max Grav 8=1049 (LC 27), 12=1050 (LC 26)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/38, 2-4=-1125/230, 4-6=-1125/230, 6-7=0/38, 2-12=-895/156, 6-8=-895/156
BOT CHORD 11-12=-128/892, 9-11=-16/625, 8-9=-39/792
WEBS 4-9=-160/549, 5-9=-219/210, 4-11=-160/551, 3-11=-219/210

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 11-8-8, Exterior(2R) 11-8-8 to 14-8-8, Interior (1) 14-8-8 to 24-3-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 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) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 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 118 lb uplift at joint 12 and 118 lb uplift at joint 8.

LOAD CASE(S) Standard

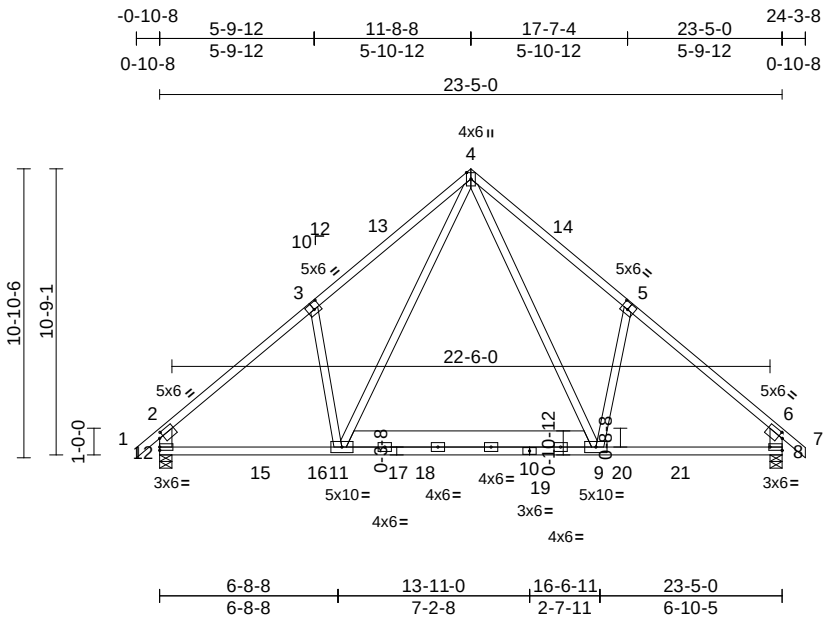
October 15,2025

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

Job	Truss	Truss Type	Qty	Ply	1060 Serenity **REVISIED 10/10
P04085-27897	A03	Common	5	1	I77066706 Job Reference (optional)

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

Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Wed Oct 15 05:42:25 Page: 1
ID:hV99ROYvyToSaDGW8f4A?9zOYJK-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:86.7

Plate Offsets (X, Y): [2:0-1-13,0-2-0], [3:0-3-0,0-3-0], [5:0-3-0,0-3-0], [6:0-1-13,0-2-0], [8:Edge,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.93	Vert(LL)	-0.14	9-11	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.79	Vert(CT)	-0.27	9-11	>999	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.37	Horz(CT)	0.02	8	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 165 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 11-9:2x8 SP DSS
WEBS 2x4 SP No.2 *Except* 12-2,8-6:2x6 SP No.2

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

REACTIONS (size) 8=0-5-8, 12=0-5-8
Max Horiz 12=-216 (LC 12)
Max Uplift 8=-67 (LC 15), 12=-69 (LC 14)
Max Grav 8=1101 (LC 28), 12=1099 (LC 27)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/38, 2-4=-1197/211, 4-6=-1199/201, 6-7=0/38, 2-12=-946/105, 6-8=-948/103
BOT CHORD 11-12=-77/946, 9-11=0/626, 8-9=0/846
WEBS 5-9=-230/235, 4-11=-158/647, 3-11=-234/238, 4-9=-144/655

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 11-8-8, Exterior(2R) 11-8-8 to 14-8-8, Interior (1) 14-8-8 to 24-3-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 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) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 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) 100.0lb AC unit load placed on the bottom chord, 12-0-0 from left end, supported at two points, 4-0-0 apart.
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 69 lb uplift at joint 12 and 67 lb uplift at joint 8.
10) Attic room checked for L/360 deflection.

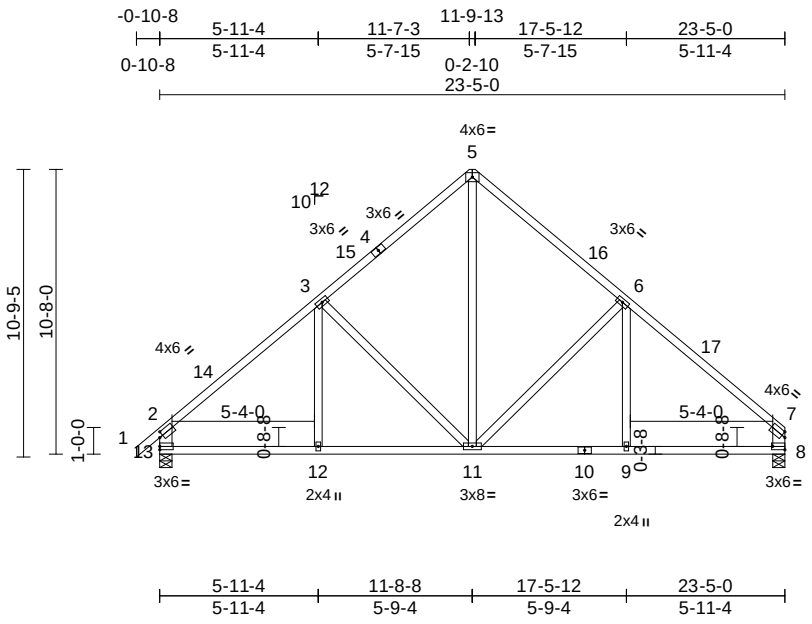
LOAD CASE(S) Standard

October 15,2025

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

Job	Truss	Truss Type	Qty	Ply	1060 Serenity **REVISIED 10/10
P04085-27897	A04	Hip	1	1	I77066707 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Wed Oct 15 05:42:26 Page: 1
ID:34_kp6ELbzI_m1DuvhsOLgzOY1f-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:86.3

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.80	Vert(LL)	-0.12	9-11	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.95	Vert(CT)	-0.23	9-11	>999	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.31	Horz(CT)	0.02	8	n/a	n/a		
BCLL	0.0*	Code	IRC2021/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 *Except* 13-2,8-7:2x6 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-2-11 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
2-2-0 oc bracing: 8-9.

REACTIONS (size) 8=0-5-8, 13=0-5-8
Max Horiz 13=209 (LC 11)
Max Uplift 8=-100 (LC 15), 13=-118 (LC 14)
Max Grav 8=848 (LC 2), 13=911 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/38, 2-3=-985/139, 3-5=-729/187, 5-6=-731/187, 6-7=-972/136, 2-13=-813/139, 7-8=-731/118
BOT CHORD 12-13=-131/692, 11-12=-131/692, 9-11=-50/656, 8-9=-50/656
WEBS 3-12=0/193, 3-11=-276/179, 6-9=0/177, 6-11=-278/179, 5-11=-131/492

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 11-8-8, Exterior(2R) 11-8-8 to 15-11-7, Interior (1) 15-11-7 to 23-2-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 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) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 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 118 lb uplift at joint 13 and 100 lb uplift at joint 8.

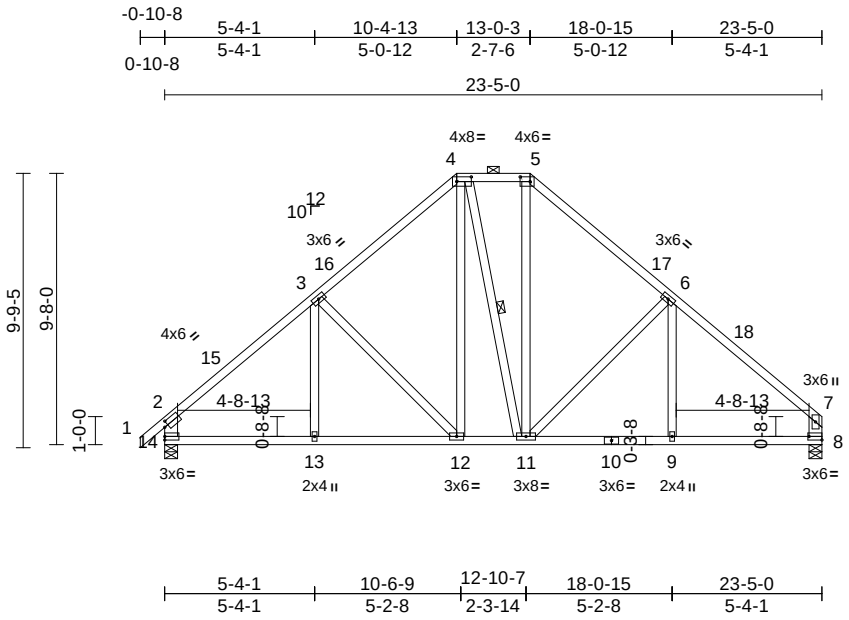
LOAD CASE(S) Standard

October 15,2025

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

Job	Truss	Truss Type	Qty	Ply	1060 Serenity **REVISIED 10/10 I77066708
P04085-27897	A05	Hip	1	1	Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Wed Oct 15 05:42:26 Page: 1
ID:MiRorKWPyLJaej3VJkI1JkzOY1H-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:82.1

Plate Offsets (X, Y): [2:0-1-11,0-2-0], [4:0-6-4,0-2-0], [5:0-4-4,0-2-0], [8:Edge,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.79	Vert(LL)	-0.11	9-11	>999	240	MT20	244/190
Snow (Pf/Pg)	12.7/10.0	Lumber DOL	1.15	BC	0.95	Vert(CT)	-0.21	9-11	>999	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.21	Horz(CT)	0.02	8	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 161 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2 *Except* 14-2,8-7:2x6 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-2-15 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, Except:
2-2-0 oc bracing: 8-9.
WEBS 1 Row at midpt 4-11

REACTIONS (size) 8=0-5-8, 14=0-5-8
Max Horiz 14=191 (LC 13)
Max Uplift 8=-97 (LC 15), 14=-115 (LC 14)
Max Grav 8=848 (LC 2), 14=911 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/38, 2-3=-985/123, 3-4=-765/163, 4-5=-526/161, 5-6=-770/175, 6-7=-970/130, 2-14=-810/133, 7-8=-726/111
BOT CHORD 13-14=-122/668, 12-13=-122/668, 11-12=-52/524, 9-11=-61/657, 8-9=-61/657
WEBS 3-13=0/173, 3-12=-235/159, 4-12=-84/247, 5-11=-76/258, 6-9=-6/150, 6-11=-234/158, 4-11=-100/115

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 10-4-13, Exterior(2E) 10-4-13 to 13-0-3, Exterior(2R) 13-0-3 to 17-3-2, Interior (1) 17-3-2 to 23-2-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=12.7 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) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 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 115 lb uplift at joint 14 and 97 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

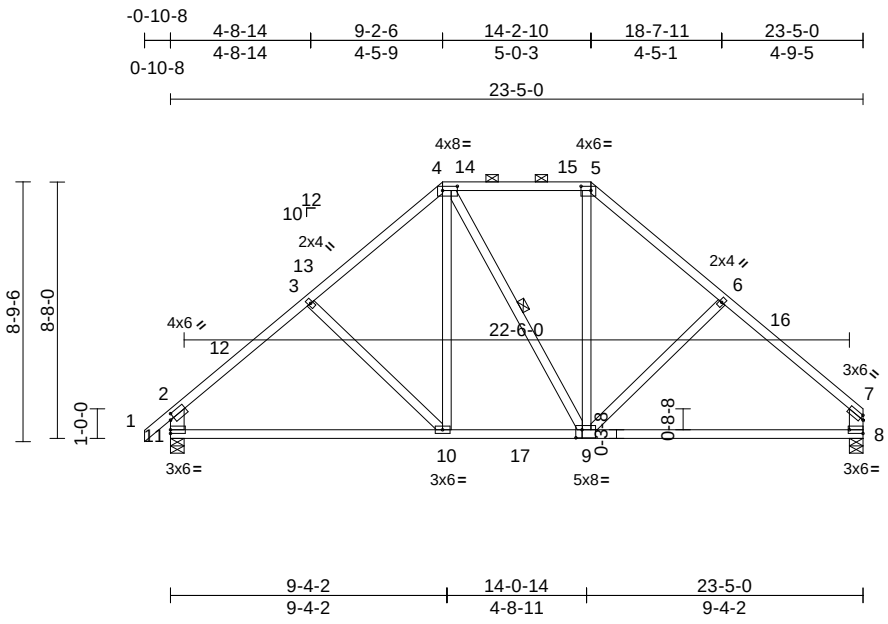
October 15,2025

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

Job	Truss	Truss Type	Qty	Ply	1060 Serenity **REVISIED 10/10
P04085-27897	A06	Hip	1	1	I77066709 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Wed Oct 15 05:42:26 Page: 1

ID:FkCkFVna?ozbfx9X1eAyg9zOY0y-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:77.9

Plate Offsets (X, Y): [2:0-1-11,0-2-0], [4:0-6-0,0-1-12], [5:0-4-0,0-1-12], [8:Edge,0-1-8], [9:0-2-8,0-3-4]

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	0.83	Vert(LL)	-0.19	10-11	>999	240	MT20	244/190
Snow (Pf/Pg)	12.7/10.0	Lumber DOL	1.15	BC	0.81	Vert(CT)	-0.38	10-11	>734	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.03	8	n/a	n/a		
BCLL	0.0*	Code	IRC2021/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 *Except* 11-2,8-7:2x6 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-4-9 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.
WEBS 1 Row at midpt 4-9

REACTIONS (size) 8=0-5-8, 11=0-5-8
Max Horiz 11=172 (LC 11)
Max Uplift 8=-93 (LC 15), 11=-111 (LC 14)
Max Grav 8=923 (LC 3), 11=977 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/38, 2-3=-1014/150, 3-4=-874/166, 4-5=-634/164, 5-6=-862/167, 6-7=-1008/151, 2-11=-809/154, 7-8=-745/123
BOT CHORD 10-11=-130/763, 8-10=-79/691
WEBS 3-10=-136/152, 4-10=-64/363, 5-9=-44/325, 6-9=-151/154, 4-9=-87/78

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 9-2-6, Exterior(2R) 9-2-6 to 13-5-5, Interior (1) 13-5-5 to 14-2-10, Exterior(2R) 14-2-10 to 18-8-15, Interior (1) 18-8-15 to 23-2-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=12.7 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) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 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 111 lb uplift at joint 11 and 93 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.

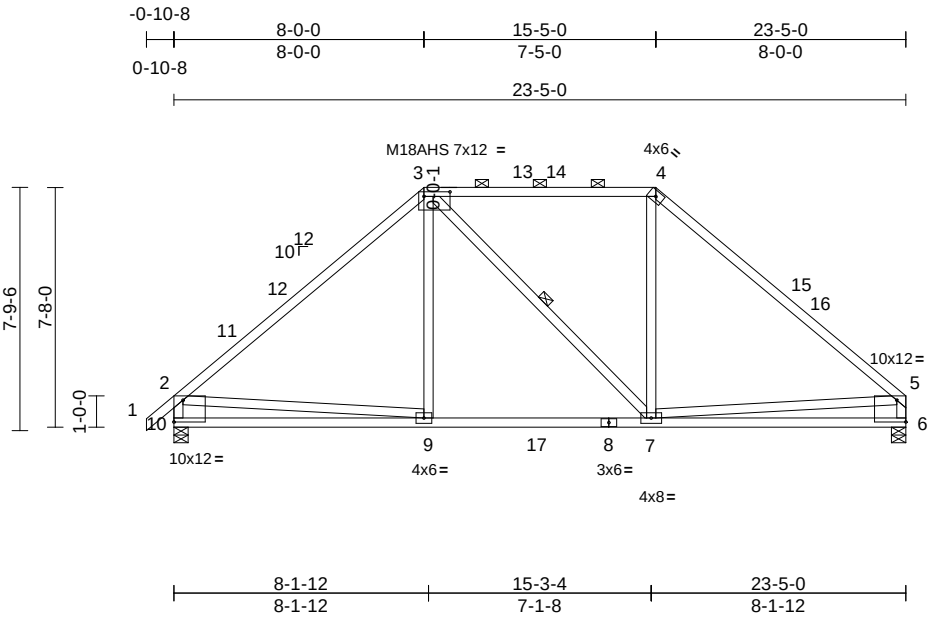
LOAD CASE(S) Standard

October 15,2025

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

Job	Truss	Truss Type	Qty	Ply	1060 Serenity **REVISIED 10/10	
P04085-27897	A07	Hip	1	1	Job Reference (optional)	I77066710

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Wed Oct 15 05:42:27 Page: 1
ID:cF3URrF1pnt3rxe1qKN5lNzOY0L-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:73.7

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.96	Vert(LL)	-0.10	6-7	>999	240	M18AHS	186/179
Snow (Pf/Pg)	12.7/10.0	Lumber DOL	1.15	BC	0.59	Vert(CT)	-0.21	6-7	>999	180	MT20	244/190
TCDL	7.0	Rep Stress Incr	YES	WB	0.18	Horz(CT)	0.02	6	n/a	n/a		
BCLL	0.0*	Code	IRC2021/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, except end verticals, and 2-0-0 oc purlins (4-6-8 max.): 3-4.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 3-7

REACTIONS (size) 6=0-5-8, 10=0-5-8
Max Horiz 10=153 (LC 11)
Max Uplift 6=-89 (LC 15), 10=-105 (LC 14)
Max Grav 6=934 (LC 3), 10=990 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/35, 2-3=-1053/141, 3-4=-714/163, 4-5=-1035/139, 2-10=-862/148, 5-6=-805/121
BOT CHORD 9-10=-335/609, 7-9=-103/727, 6-7=-156/367
WEBS 3-9=0/344, 4-7=0/315, 2-9=-156/462, 5-7=-124/480, 3-7=-85/94

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 8-0-0, Exterior(2R) 8-0-0 to 12-2-15, Interior (1) 12-2-15 to 15-5-0, Exterior(2R) 15-5-0 to 19-7-15, Interior (1) 19-7-15 to 23-3-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=12.7 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) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 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) All plates are MT20 plates unless otherwise indicated.
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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 105 lb uplift at joint 10 and 89 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.

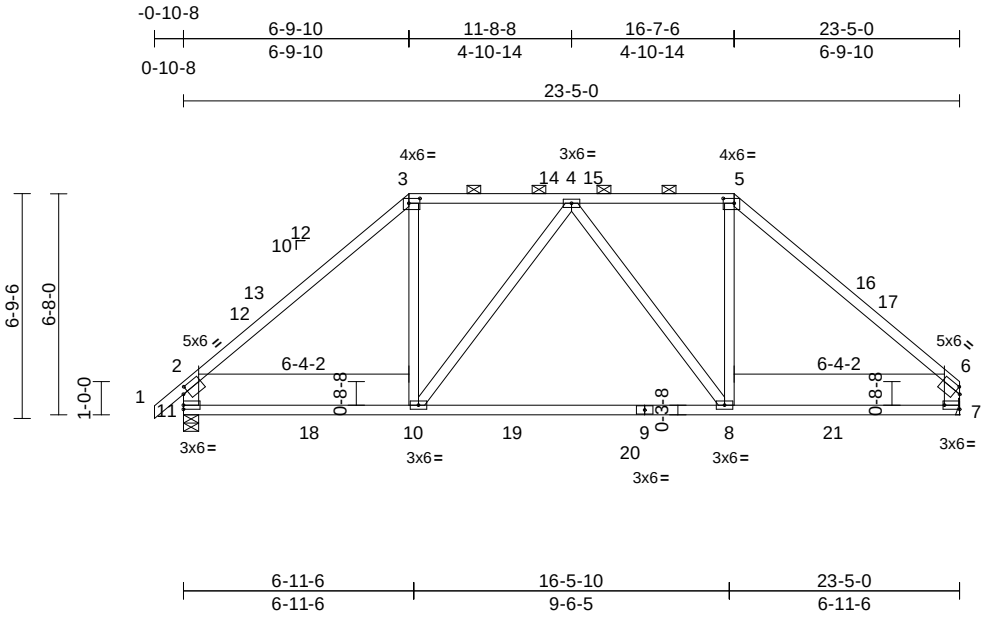
LOAD CASE(S) Standard

October 15,2025

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

Job	Truss	Truss Type	Qty	Ply	1060 Serenity **REVISIED 10/10	
P04085-27897	A08	Hip	1	1	Job Reference (optional)	I77066711

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Wed Oct 15 05:42:27 Page: 1
ID:cn7LaTfMpD9Ew9FZpT_37YzOY?p-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:69.5

Plate Offsets (X, Y): [2:0-1-13,0-2-0], [3:0-4-0,0-1-12], [5:0-4-0,0-1-12], [6:0-1-13,0-2-0], [7:Edge,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.96	Vert(LL)	-0.40	8-10	>696	240	MT20	244/190
Snow (Pf/Pg)	12.7/10.0	Lumber DOL	1.15	BC	1.00	Vert(CT)	-0.69	8-10	>402	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.28	Horz(CT)	0.03	7	n/a	n/a		
BCLL	0.0*	Code	IRC2021/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 *Except* 11-2,7-6:2x6 SP No.2

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

REACTIONS (size) 7= Mechanical, 11=0-5-8
Max Horiz 11=136 (LC 11)
Max Uplift 7=-81 (LC 15), 11=-99 (LC 14)
Max Grav 7=979 (LC 3), 11=1030 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/38, 2-3=-1138/130, 3-4=-778/153, 4-5=-776/152, 5-6=-1122/129, 2-11=-905/146, 6-7=-834/115
BOT CHORD 10-11=-120/767, 8-10=-131/873, 7-8=-54/765
WEBS 3-10=-36/516, 4-10=-251/127, 4-8=-255/128, 5-8=-36/495

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 6-9-10, Exterior(2R) 6-9-10 to 11-0-8, Interior (1) 11-0-8 to 16-7-6, Exterior(2R) 16-7-6 to 20-10-5, Interior (1) 20-10-5 to 23-2-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=12.7 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) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 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) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 99 lb uplift at joint 11 and 81 lb uplift at joint 7.
11) 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

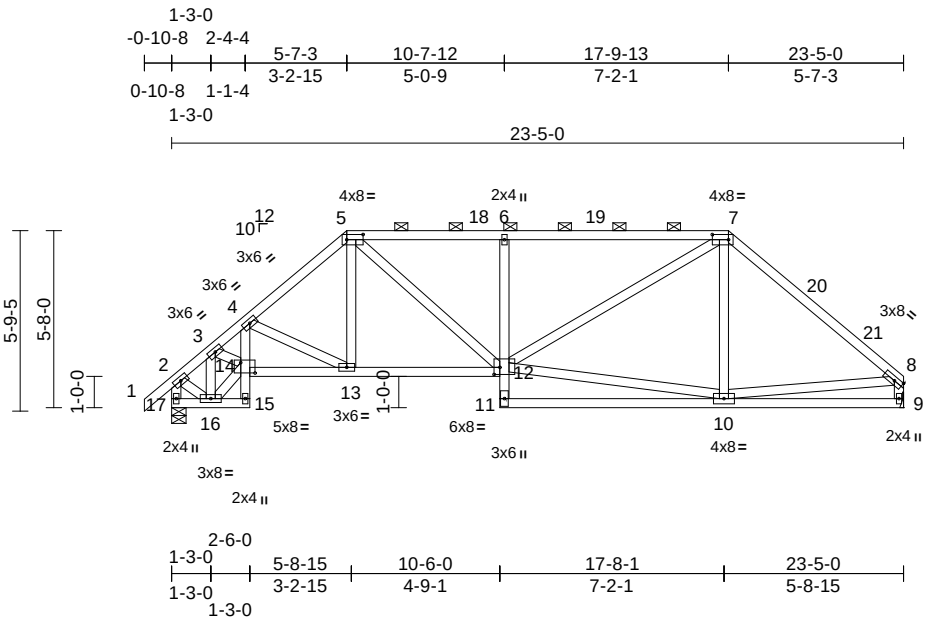
October 15,2025

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

Job	Truss	Truss Type	Qty	Ply	1060 Serenity **REVISIED 10/10
P04085-27897	A09	Hip	1	1	I77066712 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Wed Oct 15 05:42:27 Page: 1

ID:1eKunIvv5NhPKEmP_gLlxmzOY?V-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:73.7

Plate Offsets (X, Y): [5:0-6-4,0-2-0], [7:0-6-4,0-2-0], [12:0-2-4,0-2-12], [14:0-5-8,0-4-0]

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	0.61	Vert(LL)	-0.07	10-11	>999	240	MT20	244/190
Snow (Pf/Pg)	12.7/10.0	Lumber DOL	1.15	BC	0.38	Vert(CT)	-0.16	10-11	>999	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.19	Horz(CT)	0.05	9	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 155 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 4-8-9 oc purlins, except end verticals, and 2-0-0 oc purlins (4-4-14 max.): 5-7.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 9= Mechanical, 17=0-5-8
Max Horiz 17=116 (LC 13)
Max Uplift 9=-75 (LC 15), 17=-91 (LC 14)
Max Grav 9=854 (LC 2), 17=912 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/35, 2-3=-691/93, 3-4=-1526/256, 4-5=-1135/168, 5-6=-1163/193, 6-7=-1167/199, 7-8=-1003/129, 2-17=-871/124, 8-9=-808/109
BOT CHORD 16-17=-111/116, 15-16=-16/67, 14-15=-3/43, 4-14=-90/317, 13-14=-282/1222, 12-13=-163/832, 11-12=0/128, 6-12=-389/150, 10-11=0/88, 9-10=-79/141
WEBS 4-13=-440/151, 5-13=-26/276, 5-12=-137/480, 10-12=-82/634, 7-12=-166/589, 7-10=-28/165, 2-16=-39/541, 8-10=-111/566, 3-16=-820/167, 14-16=-179/623, 3-14=-148/756

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-4-4, Interior (1) 2-4-4 to 5-7-3, Exterior(2R) 5-7-3 to 9-10-2, Interior (1) 9-10-2 to 17-9-13, Exterior(2R) 17-9-13 to 22-0-11, Interior (1) 22-0-11 to 23-3-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=12.7 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) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 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) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 91 lb uplift at joint 17 and 75 lb uplift at joint 9.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

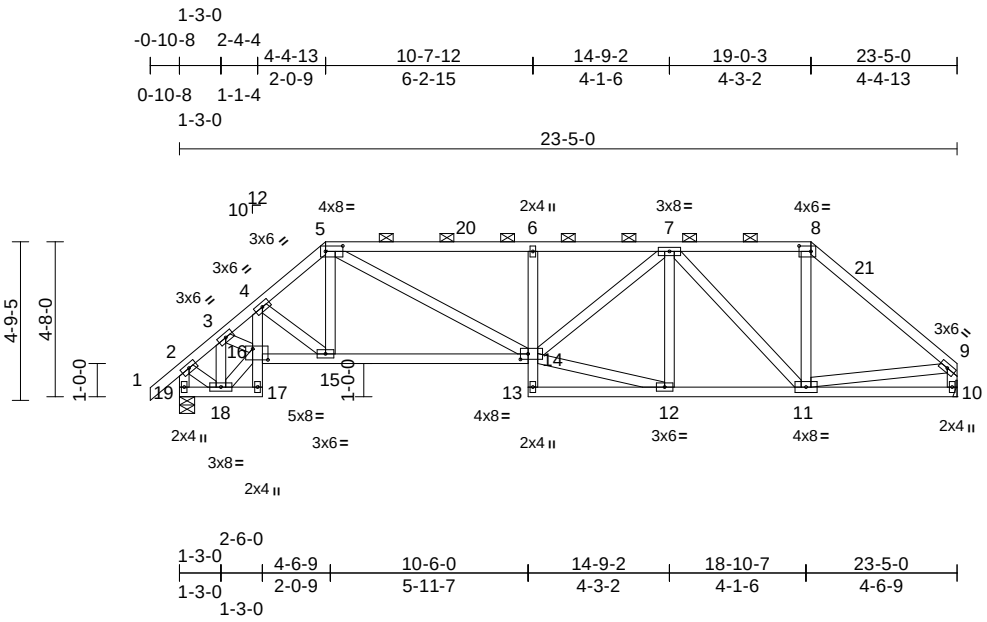
LOAD CASE(S) Standard

October 15,2025

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

Job	Truss	Truss Type	Qty	Ply	1060 Serenity **REVISIED 10/10
P04085-27897	A10	Hip	1	1	I77066713 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Wed Oct 15 05:42:28 Page: 1
ID:zH_4mo7qdC4i59j3bABDCnzOY?C-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:69.4

Plate Offsets (X, Y): [5:0-6-4,0-2-0], [8:0-4-4,0-2-0], [14:0-2-12,0-2-0], [16:0-5-8,0-4-0]

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	0.47	Vert(LL)	-0.06	6-14	>999	240	MT20	244/190
Snow (Pf/Pg)	12.7/10.0	Lumber DOL	1.15	BC	0.45	Vert(CT)	-0.14	14-15	>999	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.33	Horz(CT)	0.06	10	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 152 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 4-8-11 oc purlins, except end verticals, and 2-0-0 oc purlins (4-1-10 max.): 5-8.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 10= Mechanical, 19=0-5-8
Max Horiz 19=97 (LC 11)
Max Uplift 10=-98 (LC 10), 19=-102 (LC 11)
Max Grav 10=854 (LC 2), 19=912 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/35, 2-3=-691/95, 3-4=-1511/281, 4-5=-1199/202, 5-6=-1504/268, 6-7=-1469/260, 7-8=-720/131, 8-9=-989/143, 2-19=-870/119, 9-10=-809/110
BOT CHORD 18-19=-93/94, 17-18=-14/71, 16-17=-3/45, 4-16=-110/332, 15-16=-274/1171, 14-15=-189/920, 13-14=0/77, 6-14=-307/117, 12-13=-23/75, 11-12=-185/1071, 10-11=-47/102
WEBS 4-15=-318/113, 5-15=-16/290, 5-14=-173/696, 7-14=-118/518, 7-11=-550/132, 8-11=-51/392, 2-18=-49/549, 9-11=-111/606, 3-18=-827/179, 16-18=-179/624, 3-16=-145/723, 7-12=-163/66, 12-14=-167/1024

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-4-4, Interior (1) 2-4-4 to 4-4-13, Exterior(2R) 4-4-13 to 8-7-11, Interior (1) 8-7-11 to 19-0-3, Exterior(2E) 19-0-3 to 23-3-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=12.7 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) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 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) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 102 lb uplift at joint 19 and 98 lb uplift at joint 10.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

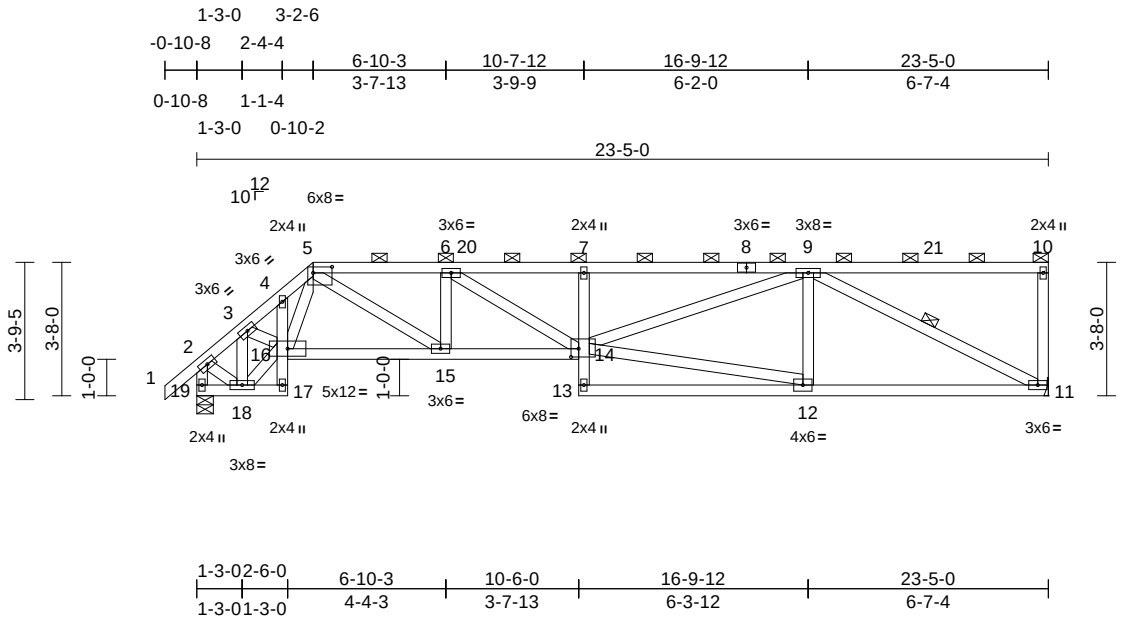
LOAD CASE(S) Standard

October 15,2025

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

Job	Truss	Truss Type	Qty	Ply	1060 Serenity **REVISIED 10/10
P04085-27897	A11	Half Hip	1	1	I77066714 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Wed Oct 15 05:42:28 Page: 1
ID:5brHChvzYt8dn_dMLcKDoGzOY_C-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:63.3

Plate Offsets (X, Y): [5:0-6-4,0-2-0], [14:0-2-8,0-2-12]

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	0.52	Vert(LL)	-0.11	7	>999	240	MT20	244/190
Snow (Pf/Pg)	12.7/10.0	Lumber DOL	1.15	BC	0.52	Vert(CT)	-0.19	14-15	>999	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.36	Horz(CT)	0.08	11	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 145 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 5-0-13 oc purlins, except end verticals, and 2-0-0 oc purlins (3-8-13 max.): 5-10.
BOT CHORD Rigid ceiling directly applied or 9-5-5 oc bracing.
WEBS 1 Row at midpt 9-11

REACTIONS (size) 11= Mechanical, 19=0-5-8
Max Horiz 19=104 (LC 11)
Max Uplift 11=-170 (LC 11), 19=-127 (LC 11)
Max Grav 11=854 (LC 2), 19=912 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/35, 2-3=-694/116, 3-4=-1320/279, 4-5=-1322/290, 5-6=-1739/354, 6-7=-2081/421, 7-9=-2052/418, 9-10=-65/52, 10-11=-152/57, 2-19=-875/127
BOT CHORD 18-19=-157/134, 17-18=-18/47, 16-17=-3/36, 4-16=-40/31, 15-16=-256/953, 14-15=-394/1739, 13-14=0/107, 7-14=-262/98, 12-13=-23/160, 11-12=-272/1262
WEBS 12-14=-253/1117, 9-14=-199/846, 9-12=-44/159, 9-11=-1388/277, 2-18=-70/565, 5-16=-104/216, 5-15=-192/952, 6-15=-413/132, 6-14=-107/417, 3-18=-761/183, 16-18=-205/602, 3-16=-135/597

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-3-2, Interior (1) 2-3-2 to 3-2-6, Exterior(2R) 3-2-6 to 7-5-5, Interior (1) 7-5-5 to 23-3-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=12.7 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) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 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) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 170 lb uplift at joint 11 and 127 lb uplift at joint 19.
11) 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

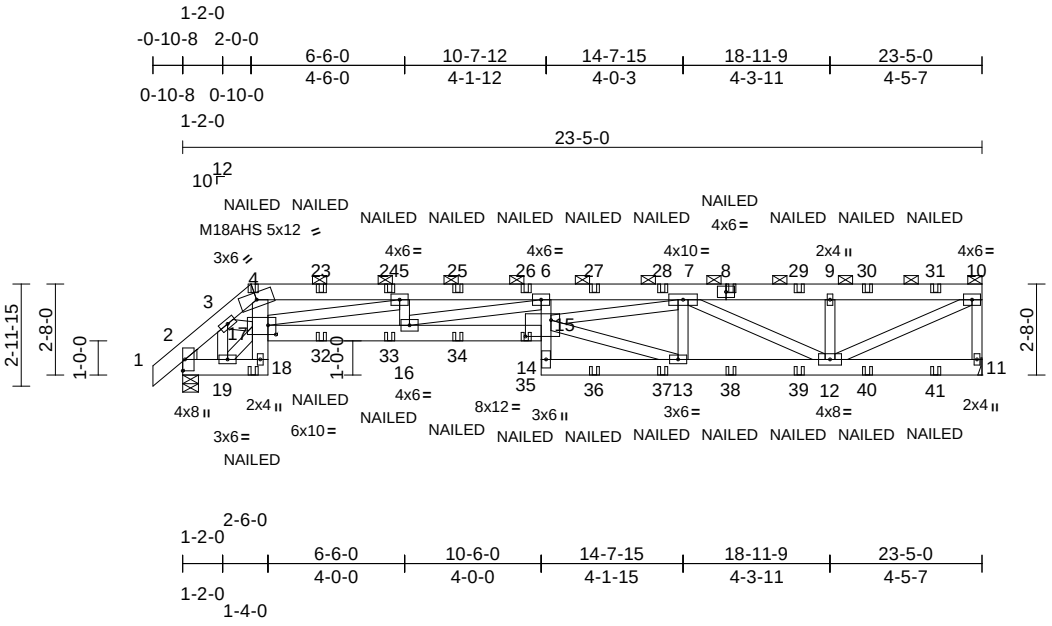
October 15,2025

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

Job	Truss	Truss Type	Qty	Ply	1060 Serenity **REVISIED 10/10	
P04085-27897	A12G	Half Hip Girder	1	2	Job Reference (optional)	I77066715

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Wed Oct 15 05:42:29 Page: 1

ID:LmeWC4sbPeYeDu?VrdECMRzOXxg-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:67.5

Plate Offsets (X, Y): [15:0-9-0,0-5-12], [17:0-2-12,0-3-4]

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	0.45	Vert(LL)	-0.22	14	>999	240	M18AHS	186/179
Snow (Pf/Pg)	12.7/10.0	Lumber DOL	1.15	BC	0.87	Vert(CT)	-0.42	14	>665	180	MT20	244/190
TCDL	7.0	Rep Stress Incr	NO	WB	0.43	Horz(CT)	0.14	11	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 342 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2 *Except* 6-14:2x4 SP No.2
WEBS 2x4 SP No.2
WEDGE Left: 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 (5-5-3 max.): 4-10.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 11= Mechanical
Max Horiz 2=67 (LC 9)
Max Uplift 2=-305 (LC 7), 11=-333 (LC 7)
Max Grav 2=1327 (LC 2), 11=1358 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/30, 2-3=-1319/329, 3-4=-2317/625, 4-5=-2379/645, 5-6=-5036/1325, 6-7=-6788/1769, 7-9=-2169/541, 9-10=-2169/541, 10-11=-1257/344
BOT CHORD 2-19=-245/803, 18-19=-81/264, 17-18=-20/188, 4-17=-274/1175, 16-17=-1351/5036, 15-16=-1897/7205, 14-15=0/151, 6-15=-117/678, 13-14=-168/664, 12-13=-870/3398, 11-12=-27/55
WEBS 5-17=-2767/724, 5-16=-67/398, 6-16=-2244/565, 13-15=-713/2805, 7-15=-971/3534, 7-13=-708/281, 7-12=-1394/365, 9-12=-252/160, 10-12=-586/2376, 3-19=-745/221, 17-19=-222/727, 3-17=-318/1160

NOTES

1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row 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 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; 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 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=12.7 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
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 7.7 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) All plates are MT20 plates unless otherwise indicated.
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) Refer to girder(s) for truss to truss connections.
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 333 lb uplift at joint 11 and 305 lb uplift at joint 2.
14) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
15) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.

LOAD CASE(S) Standard

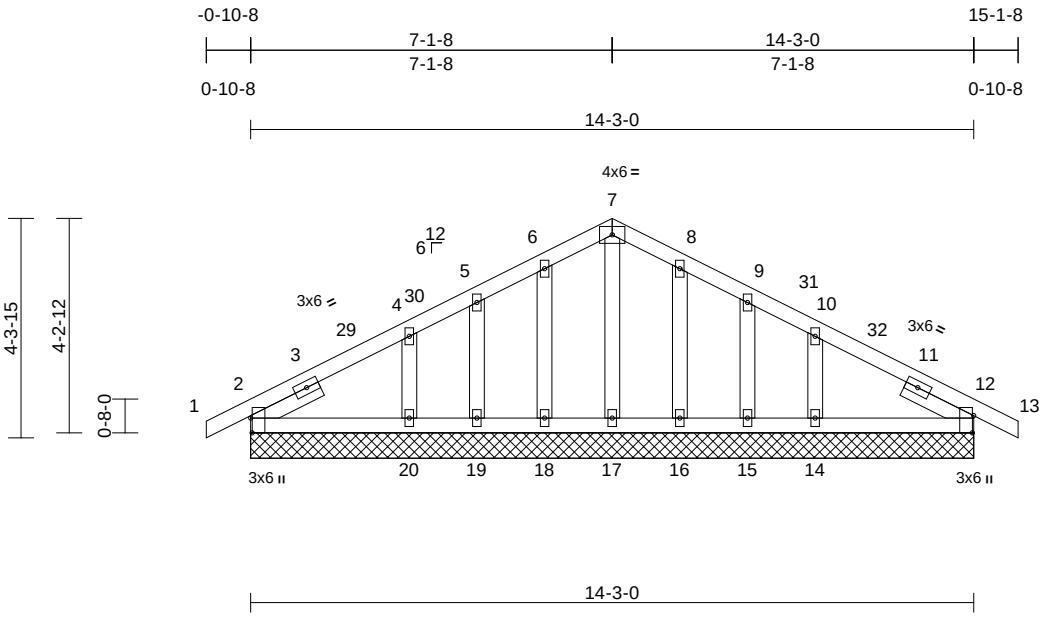
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-4=-29, 4-10=-39, 18-20=-20, 15-17=-20, 11-14=-20
Concentrated Loads (lb)
Vert: 4=-62 (B), 8=-57 (B), 18=-50 (B), 23=-27 (B), 24=-27 (B), 25=-27 (B), 26=-27 (B), 27=-57 (B), 28=-57 (B), 29=-57 (B), 30=-57 (B), 31=-57 (B), 32=-44 (B), 33=-44 (B), 34=-44 (B), 35=-44 (B), 36=-50 (B), 37=-50 (B), 38=-50 (B), 39=-50 (B), 40=-50 (B), 41=-50 (B)

October 15,2025

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

Job	Truss	Truss Type	Qty	Ply	1060 Serenity **REVISIED 10/10	
P04085-27897	B01E	Common Supported Gable	1	1	Job Reference (optional)	I77066716

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Wed Oct 15 05:42:29 Page: 1
ID:3zmjsJBX2xypy1ZhwoDYy7zOXxF-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:45.4

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.09	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.10	Vert(CT)	n/a	-	n/a	999		
TCDL	7.0	Rep Stress Incr	NO	WB	0.02	Horz(CT)	0.00	12	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 79 lb	FT = 20%

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

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=14-3-0, 12=14-3-0, 14=14-3-0, 15=14-3-0, 16=14-3-0, 17=14-3-0, 18=14-3-0, 19=14-3-0, 20=14-3-0
Max Horiz 2=50 (LC 16)
Max Uplift 2=-27 (LC 17), 12=-36 (LC 17), 14=-82 (LC 17), 15=-12 (LC 17), 16=-33 (LC 17), 18=-33 (LC 16), 19=-11 (LC 16), 20=-77 (LC 16)
Max Grav 2=191 (LC 2), 12=216 (LC 2), 14=272 (LC 37), 15=64 (LC 24), 16=134 (LC 37), 17=67 (LC 33), 18=124 (LC 36), 19=67 (LC 23), 20=222 (LC 36)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/21, 2-4=-86/49, 4-5=-93/99, 5-6=-82/122, 6-7=-84/151, 7-8=-84/151, 8-9=-82/122, 9-10=-95/100, 10-12=-108/44, 12-13=0/21
BOT CHORD 2-20=-3/69, 19-20=-3/69, 18-19=-3/69, 17-18=-3/69, 16-17=-3/69, 15-16=-3/69, 14-15=-3/69, 12-14=-3/69
WEBS 7-17=-84/33, 6-18=-79/54, 5-19=-52/40, 4-20=-140/110, 8-16=-79/54, 9-15=-48/38, 10-14=-150/114

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 2-1-8, Exterior(2N) 2-1-8 to 7-1-8, Corner(3R) 7-1-8 to 10-1-8, Exterior(2N) 10-1-8 to 15-1-8 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
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=10.0 psf; Pf=7.7 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 1.00 times flat roof load of 7.7 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.
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 27 lb uplift at joint 2, 36 lb uplift at joint 12, 33 lb uplift at joint 18, 11 lb uplift at joint 19, 77 lb uplift at joint 20, 33 lb uplift at joint 16, 12 lb uplift at joint 15, 82 lb uplift at joint 14, 27 lb uplift at joint 2 and 36 lb uplift at joint 12.
14) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

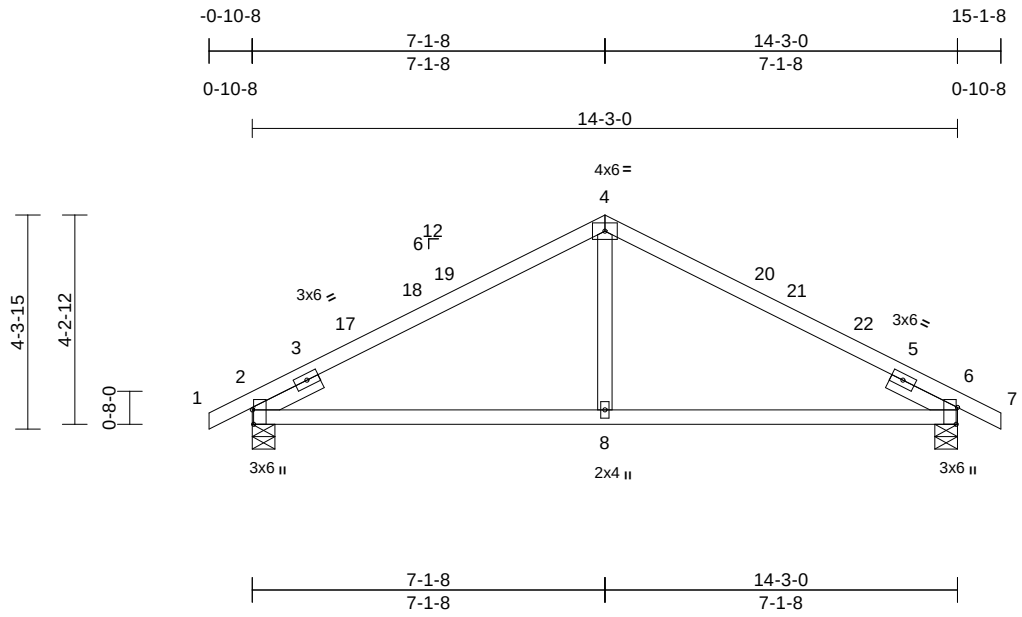
LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-7=-29, 7-13=-29
Trapezoidal Loads (lb/ft)
Vert: 21=-20-to-23=-21 (F=-1), 23=-21 (F=-1)-to-20=-23 (F=-3), 20=-23 (F=-3)-to-19=-25 (F=-5), 19=-25 (F=-5)-to-18=-26 (F=-6), 18=-26 (F=-6)-to-17=-27 (F=-7), 17=-27 (F=-7)-to-16=-29 (F=-9), 16=-29 (F=-9)-to-15=-30 (F=-10), 15=-30 (F=-10)-to-14=-32 (F=-12), 14=-32 (F=-12)-to-27=-34 (F=-14), 27=-34 (F=-14)-to-25=-35 (F=-15)

October 15,2025

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

Job	Truss	Truss Type	Qty	Ply	1060 Serenity **REVISIED 10/10
P04085-27897	B02	Common	2	1	I77066717 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Wed Oct 15 05:42:30 Page: 1
ID:E4xuA3KQSKLFmjvo3cw7vSzOXx4-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:46.6

Plate Offsets (X, Y): [2:0-3-8,Edge], [6:0-4-1,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	0.55	Vert(LL)	-0.07	8-15	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.46	Vert(CT)	-0.12	8-15	>999	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.07	Horz(CT)	0.02	2	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 58 lb	FT = 20%

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

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=0-5-8, 6=0-5-8
Max Horiz 2=50 (LC 16)
Max Uplift 2=-88 (LC 16), 6=-88 (LC 17)
Max Grav 2=575 (LC 2), 6=575 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/21, 2-4=-676/203, 4-6=-676/203, 6-7=0/21
BOT CHORD 2-8=-172/545, 6-8=-173/545
WEBS 4-8=0/303

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 7-1-8, Exterior(2R) 7-1-8 to 10-1-8, Interior (1) 10-1-8 to 15-1-8 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
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 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 1.00 times flat roof load of 7.7 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 88 lb uplift at joint 2 and 88 lb uplift at joint 6.

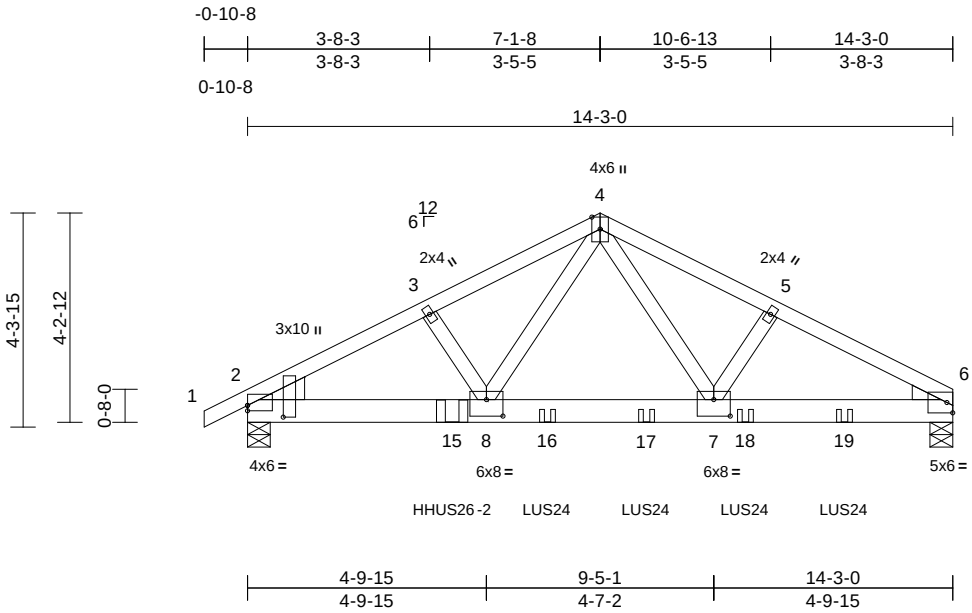
LOAD CASE(S) Standard

October 15,2025

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

Job	Truss	Truss Type	Qty	Ply	1060 Serenity **REVISIED 10/10
P04085-27897	B03G	Common Girder	1	2	I77066718 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Wed Oct 15 05:42:30 Page: 1
ID:g5MsvPDHjF_6UiqnCNjiELzOXue-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:46.6

Plate Offsets (X, Y): [2:Edge,0-1-5], [2:0-2-13,0-8-11], [7:0-4-0,0-4-0], [8:0-4-0,0-4-0]

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	0.36	Vert(LL)	-0.07	7-8	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.80	Vert(CT)	-0.13	7-8	>999	180		
TCDL	7.0	Rep Stress Incr	NO	WB	0.29	Horz(CT)	0.02	6	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 161 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.2
WEDGE Left: 2x6 SP No.2
Right: 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-4-10 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=55 (LC 12)
Max Uplift 2=-512 (LC 12), 6=-436 (LC 13)
Max Grav 2=2740 (LC 2), 6=3031 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/21, 2-3=-4877/903, 3-4=-4811/913, 4-5=-4834/757, 5-6=-4928/749
BOT CHORD 2-8=-809/4285, 7-8=-494/3098, 6-7=-632/4340
WEBS 4-7=-282/2374, 5-7=-70/128, 4-8=-557/2339, 3-8=-56/143

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 0-7-0 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 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; 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 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 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
6) Unbalanced snow loads have been considered for this design.
7) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
8) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 436 lb uplift at joint 6 and 512 lb uplift at joint 2.
12) Use Simpson Strong-Tie HHUS26-2 (14-10d Girder, 4-10d Truss) or equivalent at 4-1-10 from the left end to connect truss(es) to front face of bottom chord.
13) Use Simpson Strong-Tie LUS24 (4-SD9112 Girder, 2-SD9212 Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 6-0-12 from the left end to 12-0-12 to connect truss(es) to front face of bottom chord.
14) Fill all nail holes where hanger is in contact with lumber.

LOAD CASE(S) Standard

1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-4=-29, 4-6=-29, 9-12=-20
Concentrated Loads (lb)
Vert: 15=-1236 (F), 16=-664 (F), 17=-624 (F), 18=-612 (F), 19=-595 (F)

NORTH CAROLINA PROFESSIONAL SEAL 28677 ENGINEER JOHN L. GALINSKI

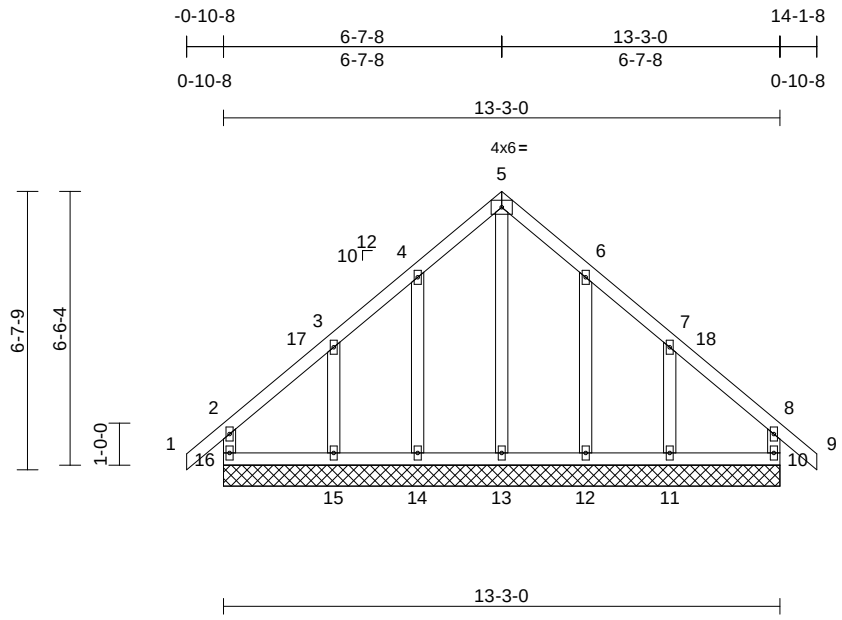
October 15,2025

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

Job	Truss	Truss Type	Qty	Ply	1060 Serenity **REVISIED 10/10
P04085-27897	C01E	Common Supported Gable	1	1	I77066719 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Wed Oct 15 05:42:30 Page: 1

ID:_P4CdlZz1sRamWf3Z6CC5FzOXrc-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:54.9

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	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	n/a	-	n/a	999		
TCDL	7.0	Rep Stress Incr	NO	WB	0.15	Horz(CT)	0.00	10	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 80 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 10-0-0 oc bracing.

REACTIONS (size) 10=13-3-0, 11=13-3-0, 12=13-3-0, 13=13-3-0, 14=13-3-0, 15=13-3-0, 16=13-3-0

Max Horiz 16=136 (LC 13)

Max Uplift 10=-53 (LC 14), 11=-117 (LC 15), 12=-62 (LC 15), 14=-59 (LC 14), 15=-111 (LC 14), 16=-55 (LC 15)

Max Grav 10=182 (LC 26), 11=248 (LC 27), 12=175 (LC 33), 13=183 (LC 29), 14=165 (LC 32), 15=213 (LC 26), 16=169 (LC 27)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	2-16=-137/125, 1-2=0/35, 2-3=-105/81, 3-4=-86/158, 4-5=-122/229, 5-6=-121/229, 6-7=-88/158, 7-8=-94/68, 8-9=0/35, 8-10=-135/124
BOT CHORD	15-16=-57/70, 14-15=-57/70, 13-14=-57/70, 12-13=-57/70, 11-12=-57/70, 10-11=-57/70
WEBS	5-13=-227/80, 4-14=-113/95, 3-15=-142/140, 6-12=-113/95, 7-11=-141/141

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 2-1-8, Exterior(2N) 2-1-8 to 6-7-8, Corner(3R) 6-7-8 to 9-7-8, Exterior(2N) 9-7-8 to 14-1-8 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
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=10.0 psf; Pf=7.7 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) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 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 2-0-0 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 55 lb uplift at joint 16, 53 lb uplift at joint 10, 59 lb uplift at joint 14, 111 lb uplift at joint 15, 62 lb uplift at joint 12 and 117 lb uplift at joint 11.
14) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

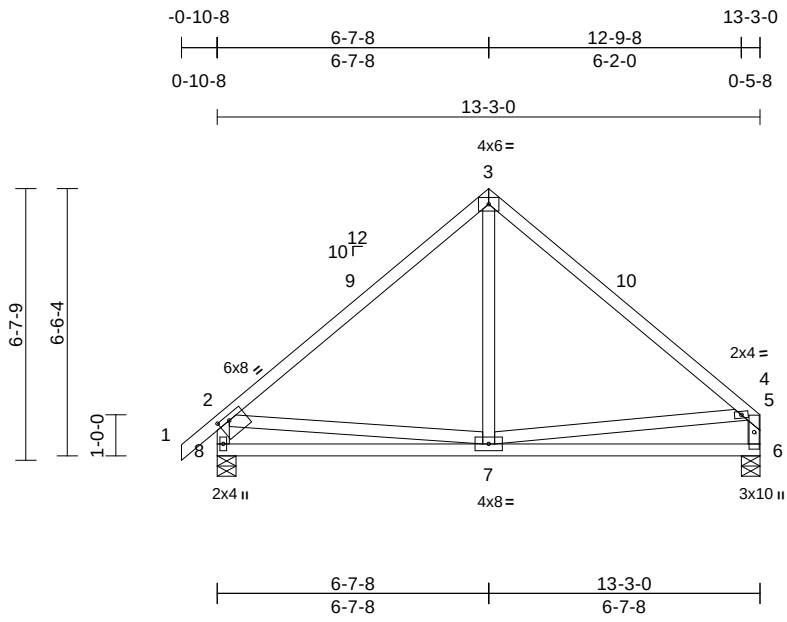
LOAD CASE(S) Standard

1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (lb/ft)
   Vert: 1-2=-29, 2-5=-29, 5-8=-29, 8-9=-29
   Trapezoidal Loads (lb/ft)
   Vert: 16=-20-to-15=-23 (F=-3), 15=-23 (F=-3)-to-14=-25 (F=-5), 14=-25 (F=-5)-to-13=-28 (F=-8), 13=-28 (F=-8)-to-12=-30 (F=-10), 12=-30 (F=-10)-to-11=-32 (F=-12), 11=-32 (F=-12)-to-10=-35 (F=-15)

October 15,2025

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

Job	Truss	Truss Type	Qty	Ply	1060 Serenity **REVISIED 10/10
P04085-27897	C02	Common	1	1	I77066720 Job Reference (optional)



Scale = 1:56.2

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

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	0.48	Vert(LL)	-0.04	6-7	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.38	Vert(CT)	-0.07	7-8	>999	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.01	6	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 77 lb	FT = 20%

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

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=0-5-8, 8=0-5-8
Max Horiz 8=131 (LC 13)
Max Uplift 6=-55 (LC 15), 8=-72 (LC 14)
Max Grav 6=477 (LC 2), 8=537 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/35, 2-3=-485/119, 3-4=-481/120, 4-5=-495/200, 2-8=-480/149, 5-6=-420/114
BOT CHORD 7-8=-227/368, 6-7=-164/304
WEBS 3-7=0/276, 2-7=-106/226, 4-7=-113/212

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 6-7-8, Exterior(2R) 6-7-8 to 9-7-8, Interior (1) 9-7-8 to 13-1-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 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) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 72 lb uplift at joint 8 and 55 lb uplift at joint 6.

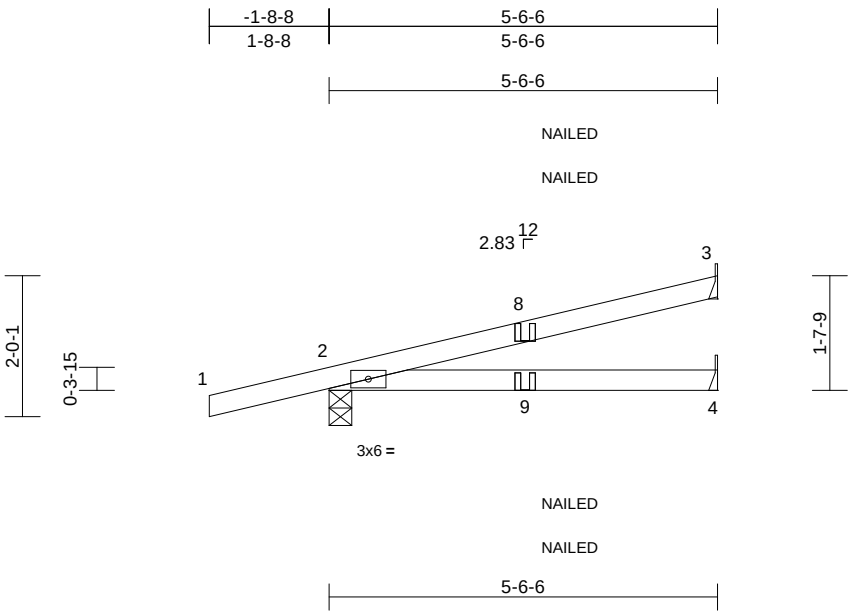
LOAD CASE(S) Standard

October 15,2025

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

Job	Truss	Truss Type	Qty	Ply	1060 Serenity **REVISIED 10/10
P04085-27897	CJ01	Diagonal Hip Girder	2	1	I77066721 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Wed Oct 15 05:42:31 Page: 1
ID:3ADYCqGrXf6sacn7RkZMhIyxCzP-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:32.8

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	0.41	Vert(LL)	-0.04	4-7	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.33	Vert(CT)	-0.08	4-7	>845	180		
TCDL	7.0	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 19 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-6-6 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-14, 3= Mechanical, 4= Mechanical
Max Horiz 2=52 (LC 8)
Max Uplift 2=-94 (LC 8), 3=-43 (LC 12)
Max Grav 2=312 (LC 2), 3=123 (LC 2), 4=95 (LC 7)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/21, 2-3=-103/23
BOT CHORD 2-4=-7/91

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; 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
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 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 1.00 times flat roof load of 7.7 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 43 lb uplift at joint 3 and 94 lb uplift at joint 2.
10) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidlines.
11) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

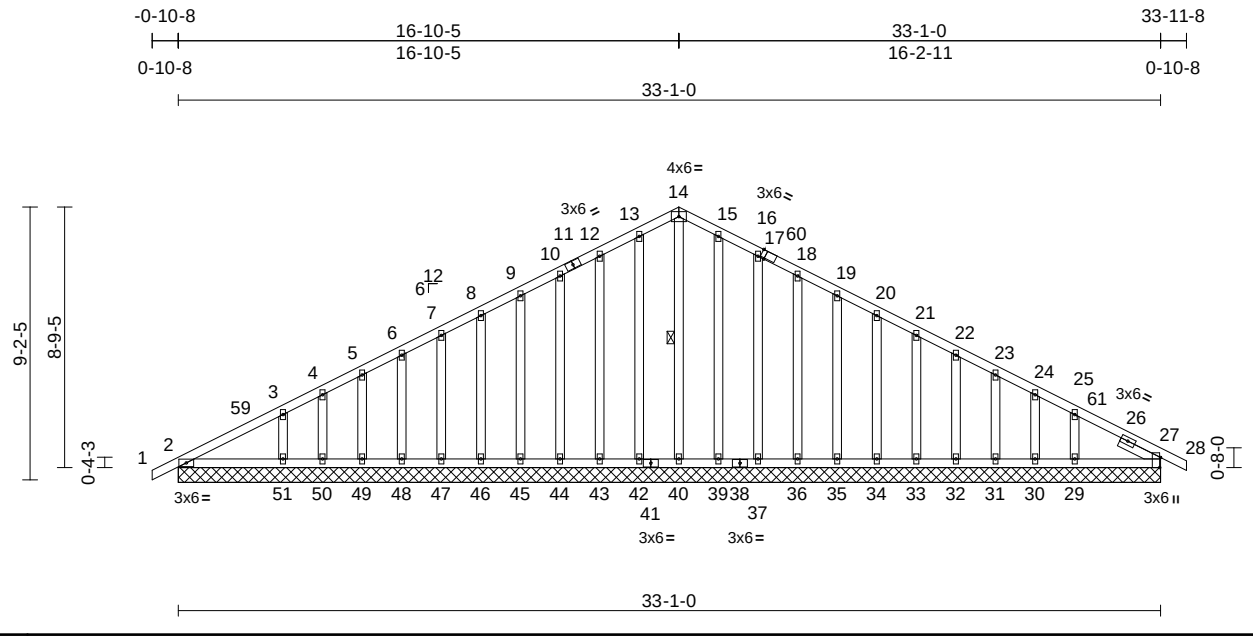
LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-29, 4-5=-20
Concentrated Loads (lb)
Vert: 9=-4 (F=-2, B=-2)

October 15,2025

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

Job	Truss	Truss Type	Qty	Ply	1060 Serenity **REVISIED 10/10
P04085-27897	G01E	Common Supported Gable	1	1	I77066722 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Wed Oct 15 05:42:31 Page: 1
ID:qfYA92SObbl4euKHvfXY5szOXqS-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:77.6

Plate Offsets (X, Y): [2:0-0-4,Edge], [17:0-1-12,Edge], [27:0-4-1,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	0.12	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.10	Vert(CT)	n/a	-	n/a	999		
TCDL	7.0	Rep Stress Incr	NO	WB	0.08	Horz(CT)	0.01	27	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 258 lb	FT = 20%

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

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.
WEBS 1 Row at midpt 14-40

REACTIONS (size) 2=33-1-0, 27=33-1-0, 29=33-1-0, 30=33-1-0, 31=33-1-0, 32=33-1-0, 33=33-1-0, 34=33-1-0, 35=33-1-0, 36=33-1-0, 37=33-1-0, 39=33-1-0, 40=33-1-0, 42=33-1-0, 43=33-1-0, 44=33-1-0, 45=33-1-0, 46=33-1-0, 47=33-1-0, 48=33-1-0, 49=33-1-0, 50=33-1-0, 51=33-1-0
Max Horiz 2=115 (LC 16)
Max Uplift 2=-20 (LC 17), 29=-93 (LC 17), 30=-8 (LC 17), 31=-39 (LC 17), 32=-32 (LC 17), 33=-33 (LC 17), 34=-33 (LC 17), 35=-32 (LC 17), 36=-32 (LC 17), 37=-38 (LC 17), 39=-17 (LC 17), 42=-21 (LC 16), 43=-35 (LC 16), 44=-31 (LC 16), 45=-31 (LC 16), 46=-30 (LC 16), 47=-30 (LC 16), 48=-29 (LC 16), 49=-34 (LC 16), 50=-6 (LC 16), 51=-78 (LC 16)
Max Grav 2=172 (LC 2), 27=183 (LC 2), 29=260 (LC 37), 30=68 (LC 2), 31=136 (LC 37), 32=120 (LC 2), 33=122 (LC 37), 34=120 (LC 37), 35=119 (LC 2), 36=117 (LC 2), 37=118 (LC 37), 39=117 (LC 37), 40=132 (LC 33), 42=115 (LC 36), 43=113 (LC 36), 44=110 (LC 2), 45=109 (LC 2), 46=108 (LC 36), 47=107 (LC 36), 48=102 (LC 2), 49=122 (LC 36), 50=24 (LC 2), 51=266 (LC 36)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/21, 2-3=-125/56, 3-4=-96/59, 4-5=-73/68, 5-6=-65/81, 6-7=-55/93, 7-8=-50/105, 8-9=-59/117, 9-10=-71/140, 10-12=-84/164, 12-13=-97/190, 13-14=-105/205, 14-15=-105/205, 15-16=-97/190, 16-18=-84/164, 18-19=-71/140, 19-20=-59/117, 20-21=-47/93, 21-22=-38/69, 22-23=-38/46, 23-24=-39/20, 24-25=-56/10, 25-27=-85/30, 27-28=0/21
BOT CHORD 2-51=-40/100, 50-51=-40/100, 49-50=-40/100, 48-49=-40/100, 47-48=-40/100, 46-47=-40/100, 45-46=-40/100, 44-45=-40/100, 43-44=-40/100, 42-43=-40/100, 40-42=-40/100, 39-40=-40/100, 37-39=-40/100, 36-37=-40/100, 35-36=-40/100, 34-35=-40/100, 33-34=-40/100, 32-33=-40/100, 31-32=-40/100, 30-31=-40/100, 29-30=-40/100, 27-29=-40/100
WEBS 14-40=-130/50, 13-42=-74/27, 12-43=-73/49, 10-44=-72/41, 9-45=-72/41, 8-46=-72/42, 7-47=-72/42, 6-48=-71/41, 5-49=-80/47, 4-50=-30/22, 3-51=-168/106, 15-39=-73/23, 16-37=-73/49, 18-36=-72/41, 19-35=-72/41, 20-34=-72/42, 21-33=-72/42, 22-32=-71/41, 23-31=-77/46, 24-30=-45/24, 25-29=-141/107

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 2-5-3, Exterior(2N) 2-5-3 to 16-10-5, Corner(3R) 16-10-5 to 20-2-1, Exterior(2N) 20-2-1 to 33-11-8 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

October 15,2025

Continued on page 2

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

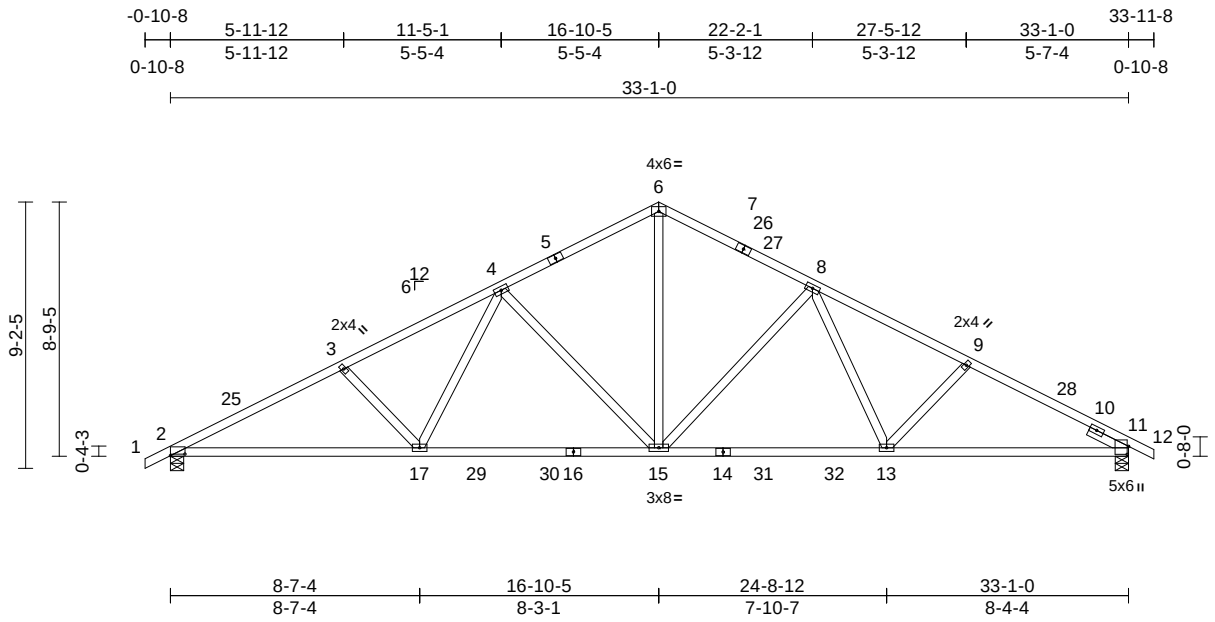
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 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 1.00 times flat roof load of 7.7 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.
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 20 lb uplift at joint 2, 21 lb uplift at joint 42, 35 lb uplift at joint 43, 31 lb uplift at joint 44, 31 lb uplift at joint 45, 30 lb uplift at joint 46, 30 lb uplift at joint 47, 29 lb uplift at joint 48, 34 lb uplift at joint 49, 6 lb uplift at joint 50, 78 lb uplift at joint 51, 17 lb uplift at joint 39, 38 lb uplift at joint 37, 32 lb uplift at joint 36, 32 lb uplift at joint 35, 33 lb uplift at joint 34, 33 lb uplift at joint 33, 32 lb uplift at joint 32, 39 lb uplift at joint 31, 8 lb uplift at joint 30, 93 lb uplift at joint 29 and 20 lb uplift at joint 2.
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: 1-14=-29, 14-28=-29
   Trapezoidal Loads (lb/ft)
   Vert: 52=-20-to-54=-20 (F=0), 54=-20 (F=0)-to-51=-22 (F=-2), 51=-22 (F=-2)-to-50=-22 (F=-2), 50=-22 (F=-2)-to-49=-23 (F=-3), 49=-23 (F=-3)-to-48=-23 (F=-3), 48=-23 (F=-3)-to-47=-24 (F=-4), 47=-24 (F=-4)-to-46=-25 (F=-5), 46=-25 (F=-5)-to-45=-25 (F=-5), 45=-25 (F=-5)-to-44=-26 (F=-6), 44=-26 (F=-6)-to-43=-26 (F=-6), 43=-26 (F=-6)-to-42=-27 (F=-7), 42=-27 (F=-7)-to-41=-27 (F=-7), 41=-27 (F=-7)-to-40=-28 (F=-8), 40=-28 (F=-8)-to-39=-28 (F=-8), 39=-28 (F=-8)-to-38=-29 (F=-9), 38=-29 (F=-9)-to-37=-29 (F=-9), 37=-29 (F=-9)-to-36=-29 (F=-9), 36=-29 (F=-9)-to-35=-30 (F=-10), 35=-30 (F=-10)-to-34=-31 (F=-11), 34=-31 (F=-11)-to-33=-31 (F=-11), 33=-31 (F=-11)-to-32=-32 (F=-12), 32=-32 (F=-12)-to-31=-32 (F=-12), 31=-32 (F=-12)-to-30=-33 (F=-13), 30=-33 (F=-13)-to-29=-34 (F=-14), 29=-34 (F=-14)-to-57=-35 (F=-15), 57=-35 (F=-15)-to-55=-35 (F=-15)

Job	Truss	Truss Type	Qty	Ply	1060 Serenity **REVISIED 10/10	
P04085-27897	G02	Common	3	1	Job Reference (optional)	I77066723

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Wed Oct 15 05:42:31 Page: 1
ID:cdn1y5PNh32ESd7EqzwJ6pzOXnx-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:79.6

Plate Offsets (X, Y): [2:0-6-0,0-0-10], [11:0-3-5,0-0-9]

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	0.70	Vert(LL)	-0.22	13-15	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.97	Vert(CT)	-0.37	13-15	>999	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.67	Horz(CT)	0.10	11	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 174 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 2-16:2x4 SP No.1
WEBS 2x4 SP No.2
SLIDER Right 2x4 SP No.2 -- 1-6-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-8-6 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
2-2-0 oc bracing: 11-13.

REACTIONS (size) 2=0-5-8, 11=0-5-8
Max Horiz 2=115 (LC 16)
Max Uplift 2=-188 (LC 16), 11=-184 (LC 17)
Max Grav 2=1382 (LC 3), 11=1383 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/21, 2-3=-2492/329, 3-4=-2326/311, 4-6=-1577/268, 6-8=-1577/271, 8-9=-2136/293, 9-11=-2271/301, 11-12=0/21
BOT CHORD 2-17=-346/2205, 15-17=-221/1772, 13-15=-141/1714, 11-13=-205/1975
WEBS 3-17=-303/142, 4-17=-65/588, 4-15=-607/193, 6-15=-139/1144, 8-15=-540/181, 8-13=-46/432, 9-13=-207/124

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-5-3, Interior (1) 2-5-3 to 16-10-5, Exterior(2R) 16-10-5 to 20-2-1, Interior (1) 20-2-1 to 33-11-8 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
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 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 1.00 times flat roof load of 7.7 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 3x6 (=) MT20 unless otherwise indicated.
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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 188 lb uplift at joint 2 and 184 lb uplift at joint 11.

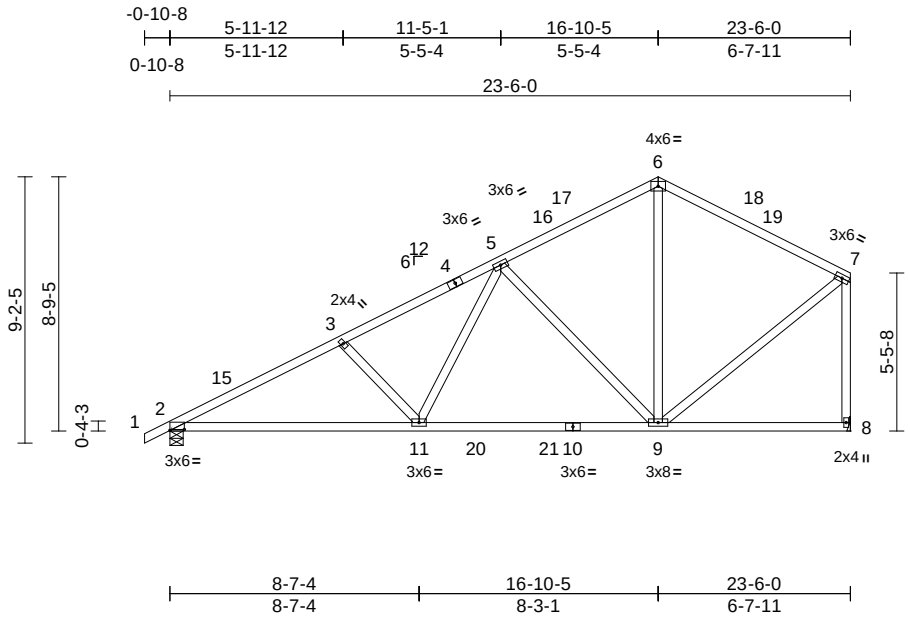
LOAD CASE(S) Standard

October 15,2025

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

Job	Truss	Truss Type	Qty	Ply	1060 Serenity **REVISIED 10/10	
P04085-27897	G03	Common	2	1	Job Reference (optional)	I77066724

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Wed Oct 15 05:42:32 Page: 1
ID:gnj8g2oS8u4iIYaNihUpPZzOXnR-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



8-7-4 | 16-10-5 | 23-6-0
8-7-4 | 8-3-1 | 6-7-11

Scale = 1:79.6

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.59	Vert(LL)	-0.14	9-11	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.88	Vert(CT)	-0.25	11-14	>999	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.67	Horz(CT)	0.03	8	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 133 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 3-11-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 9-8-3 oc bracing.

REACTIONS (size) 2=0-5-8, 8= Mechanical
Max Horiz 2=188 (LC 15)
Max Uplift 2=-150 (LC 16), 8=-118 (LC 16)
Max Grav 2=980 (LC 3), 8=941 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/21, 2-3=-1611/268, 3-5=-1442/255, 5-6=-679/196, 6-7=-686/182, 7-8=-851/186
BOT CHORD 2-11=-367/1435, 9-11=-265/988, 8-9=-58/70
WEBS 3-11=-312/144, 5-11=-66/604, 5-9=-613/191, 6-9=-45/342, 7-9=-128/697

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 16-10-5, Exterior(2R) 16-10-5 to 19-10-5, Interior (1) 19-10-5 to 23-4-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 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 1.00 times flat roof load of 7.7 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) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 150 lb uplift at joint 2 and 118 lb uplift at joint 8.

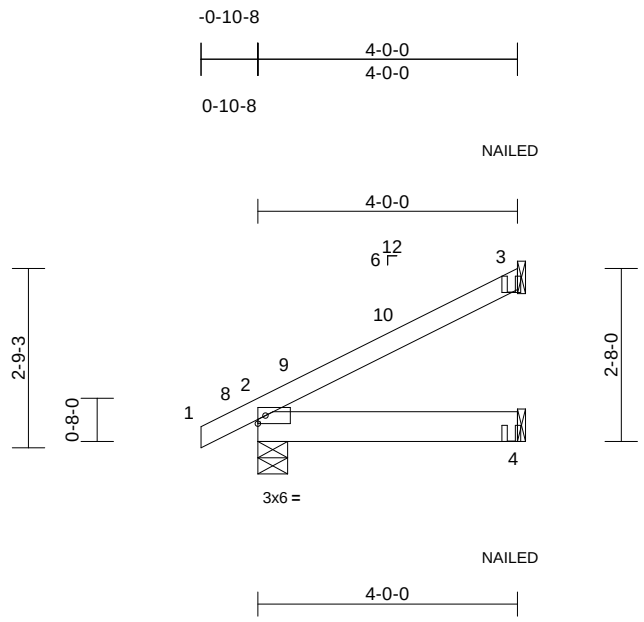
LOAD CASE(S) Standard

October 15,2025

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

Job	Truss	Truss Type	Qty	Ply	1060 Serenity **REVISIED 10/10
P04085-27897	J01	Jack-Open	7	1	I77066725 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Wed Oct 15 05:42:32 Page: 1
ID:COx2NhZimNHpoGFswXkx_TzOaA4-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:35.5

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	0.16	Vert(LL)	0.01	4-7	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.09	Vert(CT)	-0.01	4-7	>999	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 18 lb	FT = 20%

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

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

REACTIONS (size) 2=0-5-8, 3= Mechanical, 4= Mechanical
Max Horiz 2=67 (LC 16)
Max Uplift 2=-26 (LC 16), 3=-60 (LC 16)
Max Grav 2=198 (LC 2), 3=100 (LC 2), 4=103 (LC 7)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/21, 2-3=-145/109
BOT CHORD 2-4=-132/71

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 3-11-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 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 1.00 times flat roof load of 7.7 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 60 lb uplift at joint 3 and 26 lb uplift at joint 2.
10) "NAILED" indicates 2-12d (0.148"x3.25") toe-nails per NDS guidlines.
11) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

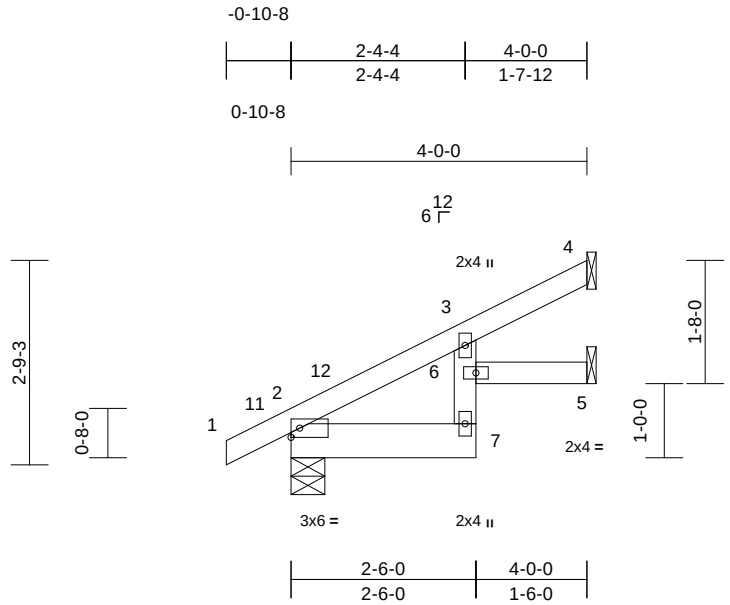
LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-29, 4-5=-20
Concentrated Loads (lb)
Vert: 3=-40 (F), 4=-14 (F)

October 15,2025

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

Job	Truss	Truss Type	Qty	Ply	1060 Serenity **REVISIED 10/10
P04085-27897	J02	Jack-Open	4	1	I77066726 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Wed Oct 15 05:42:32 Page: 1
ID:COx2NhZimNHpoGFswXkx_TzOaA4-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:31.1

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	0.11	Vert(LL)	0.01	5-6	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.18	Vert(CT)	-0.01	5-6	>999	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.01	5	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 18 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 2-7:2x6 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-0-0 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=-26 (LC 16), 4=-30 (LC 16), 5=-15 (LC 16)
Max Grav 2=198 (LC 2), 4=73 (LC 2), 5=68 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/21, 2-3=-153/33, 3-4=-33/28
BOT CHORD 2-7=-95/106, 6-7=-20/55, 3-6=-12/41, 5-6=0/0

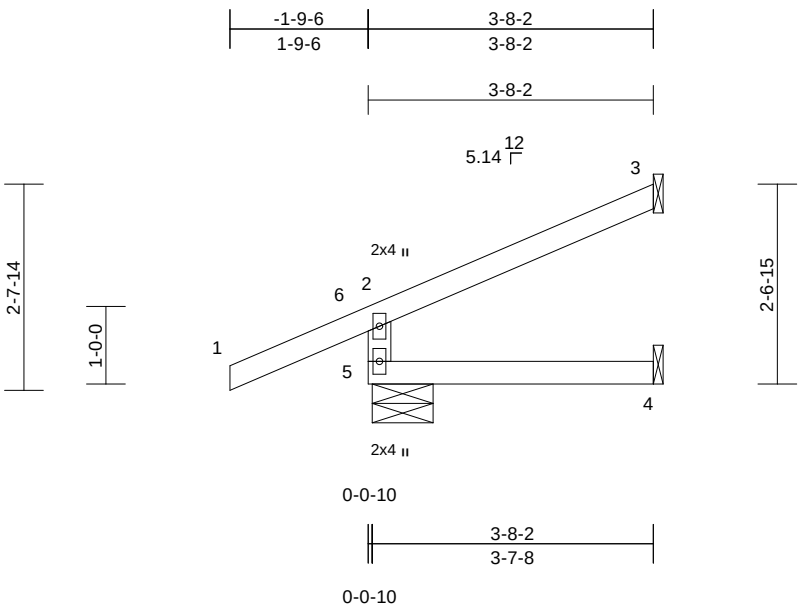
NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-3-7, Interior (1) 2-3-7 to 3-11-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 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 1.00 times flat roof load of 7.7 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 30 lb uplift at joint 4, 26 lb uplift at joint 2 and 15 lb uplift at joint 5.

LOAD CASE(S) Standard

October 15,2025

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

Job	Truss	Truss Type	Qty	Ply	1060 Serenity **REVISIED 10/10
P04085-27897	J03	Jack-Open	1	1	I77066727 Job Reference (optional)



Scale = 1:29.7

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.23	Vert(LL)	-0.01	4-5	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.11	Vert(CT)	-0.01	4-5	>999	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.01	3	n/a	n/a		
BCLL	0.0*	Code	IRC2021/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 3-8-2 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=56 (LC 16)
Max Uplift 3=-39 (LC 16), 5=-45 (LC 16)
Max Grav 3=70 (LC 2), 4=63 (LC 7), 5=261 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-221/198, 1-2=0/41, 2-3=-47/24
BOT CHORD 4-5=0/0

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; 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(2R) 2-5-9 to 3-7-6 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 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 1.00 times flat roof load of 7.7 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 45 lb uplift at joint 5 and 39 lb uplift at joint 3.

LOAD CASE(S) Standard

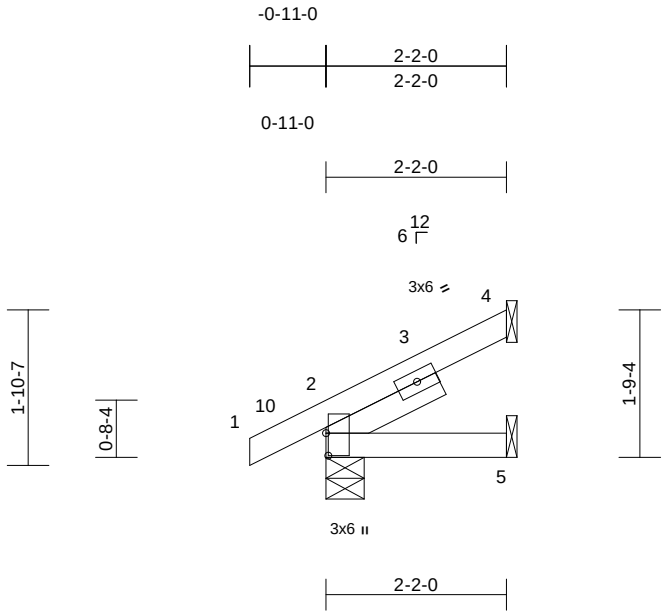
October 15,2025

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

Job	Truss	Truss Type	Qty	Ply	1060 Serenity **REVISIED 10/10
P04085-27897	J05	Jack-Open	5	1	I77066728 Job Reference (optional)

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

Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Wed Oct 15 05:42:32 Page: 1
ID:XleogjXtUkWpa_q4Hx?TzXzOa_W-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:27.7

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

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	0.05	Vert(LL)	0.00	5-8	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	0.00	5-8	>999	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 11 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 2-2-0 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=41 (LC 16)
Max Uplift 2=-19 (LC 16), 4=-24 (LC 16), 5=-2 (LC 16)
Max Grav 2=138 (LC 2), 4=44 (LC 2), 5=34 (LC 7)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/22, 2-4=-48/17
BOT CHORD 2-5=-39/28

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone 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
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 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 1.00 times flat roof load of 7.7 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 24 lb uplift at joint 4, 19 lb uplift at joint 2 and 2 lb uplift at joint 5.

LOAD CASE(S) Standard

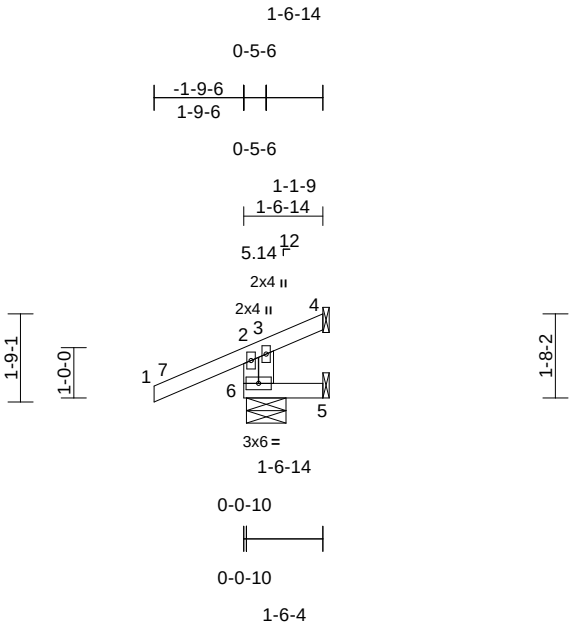
October 15,2025

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

Job	Truss	Truss Type	Qty	Ply	1060 Serenity **REVISIED 10/10
P04085-27897	J06	Jack-Open	1	1	I77066729 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Wed Oct 15 05:42:32 Page: 1

ID:CDblkKJieC9pKj8Wy0fBzkzOZyC-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:45.8

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	0.24	Vert(LL)	0.00	5-6	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	0.00	5-6	>999	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.02	Horz(CT)	-0.01	4	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 10 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 1-6-14 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 4= Mechanical, 5= Mechanical, 6=0-9-7
Max Horiz 6=34 (LC 15)
Max Uplift 4=-61 (LC 36), 6=-57 (LC 12)
Max Grav 4=8 (LC 12), 5=28 (LC 7), 6=227 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-6=-213/433, 1-2=0/41, 2-3=-43/168, 3-4=-37/14
BOT CHORD 5-6=0/0
WEBS 3-6=-244/48

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 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 1.00 times flat roof load of 7.7 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 61 lb uplift at joint 4 and 57 lb uplift at joint 6.

LOAD CASE(S) Standard

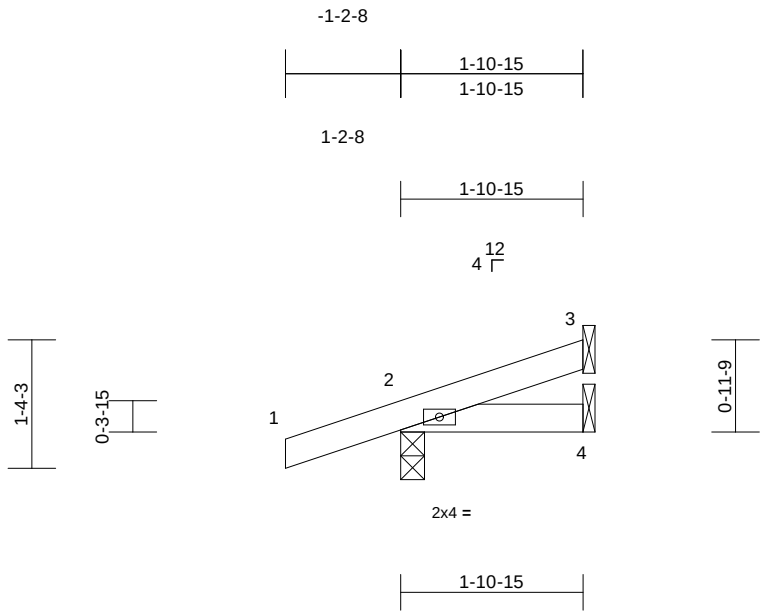
October 15,2025

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

Job	Truss	Truss Type	Qty	Ply	1060 Serenity **REVISIED 10/10
P04085-27897	J07	Jack-Open	4	1	I77066730 Job Reference (optional)

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

Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Wed Oct 15 05:42:33 ID:wQcWfeekd_ne2GhQEgATOXyxD0o-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:24.2

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.09	Vert(LL)	0.00	7	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	0.00	7	>999	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 8 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 1-10-15 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-0, 3= Mechanical, 4= Mechanical
Max Horiz 2=34 (LC 12)
Max Uplift 2=-59 (LC 12), 3=-11 (LC 16)
Max Grav 2=156 (LC 2), 3=32 (LC 2), 4=29 (LC 7)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/21, 2-3=-29/11
BOT CHORD 2-4=-10/27

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone 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
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 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 1.00 times flat roof load of 7.7 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 59 lb uplift at joint 2 and 11 lb uplift at joint 3.

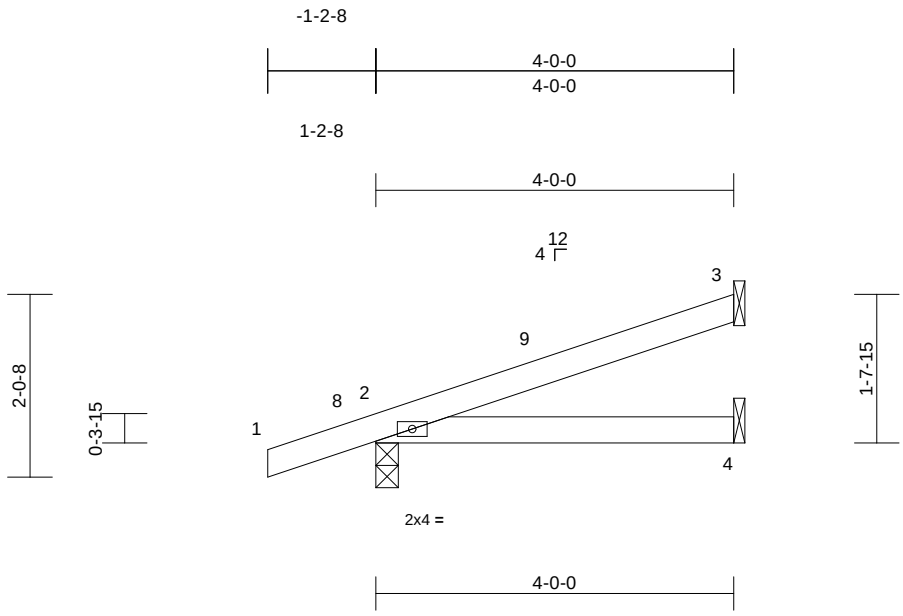
LOAD CASE(S) Standard

October 15,2025

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

Job	Truss	Truss Type	Qty	Ply	1060 Serenity **REVISIED 10/10
P04085-27897	J09	Jack-Open	3	1	I77066731 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Wed Oct 15 05:42:33 Page: 1
ID:tET6BeWy7clf841DpjSpADyxD_N-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:25.8

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	0.17	Vert(LL)	0.01	4-7	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.14	Vert(CT)	-0.02	4-7	>999	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 14 lb	FT = 20%

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

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

REACTIONS (size) 2=0-3-0, 3= Mechanical, 4= Mechanical
Max Horiz 2=53 (LC 12)
Max Uplift 2=-64 (LC 12), 3=-33 (LC 16)
Max Grav 2=221 (LC 2), 3=88 (LC 2), 4=68 (LC 7)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/21, 2-3=-58/22
BOT CHORD 2-4=-40/65

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-2-8 to 1-9-8, Interior (1) 1-9-8 to 3-11-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 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 1.00 times flat roof load of 7.7 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 33 lb uplift at joint 3 and 64 lb uplift at joint 2.

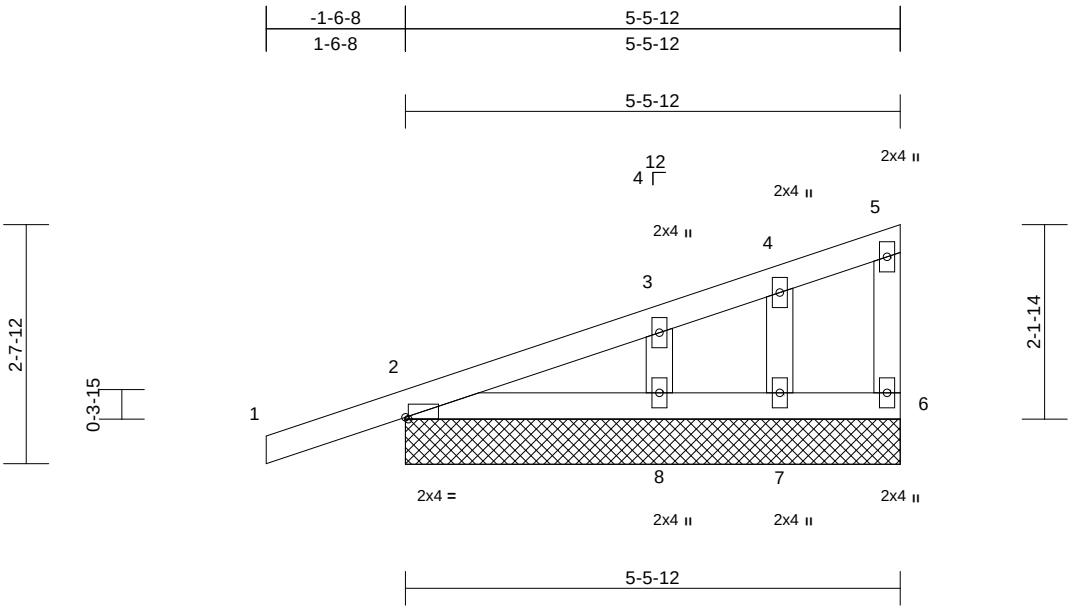
LOAD CASE(S) Standard

October 15,2025

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

Job	Truss	Truss Type	Qty	Ply	1060 Serenity **REVISIED 10/10
P04085-27897	P01E	Monopitch Supported Gable	1	1	I77066732 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Wed Oct 15 05:42:33 Page: 1
ID:5Xu6jJnYhtyQuZ2qA?L5WlzOZxc-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:25.5

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.17	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	n/a	-	n/a	999		
TCDL	7.0	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.00	6	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 24 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 5-5-12 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=5-5-12, 6=5-5-12, 7=5-5-12, 8=5-5-12
Max Horiz 2=64 (LC 15)
Max Uplift 2=-73 (LC 12), 6=-8 (LC 13), 7=-31 (LC 12), 8=-39 (LC 16)
Max Grav 2=202 (LC 2), 6=49 (LC 2), 7=100 (LC 2), 8=186 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/26, 2-3=-111/62, 3-4=-63/37, 4-5=-32/33, 5-6=-29/41
BOT CHORD 2-8=-26/81, 7-8=-24/33, 6-7=-24/33
WEBS 4-7=-60/91, 3-8=-113/133

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -1-6-8 to 1-5-8, Exterior(2N) 1-5-8 to 5-4-0 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=10.0 psf; Pf=7.7 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 1.00 times flat roof load of 7.7 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 73 lb uplift at joint 2, 8 lb uplift at joint 6, 31 lb uplift at joint 7, 39 lb uplift at joint 8 and 73 lb uplift at joint 2.
13) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

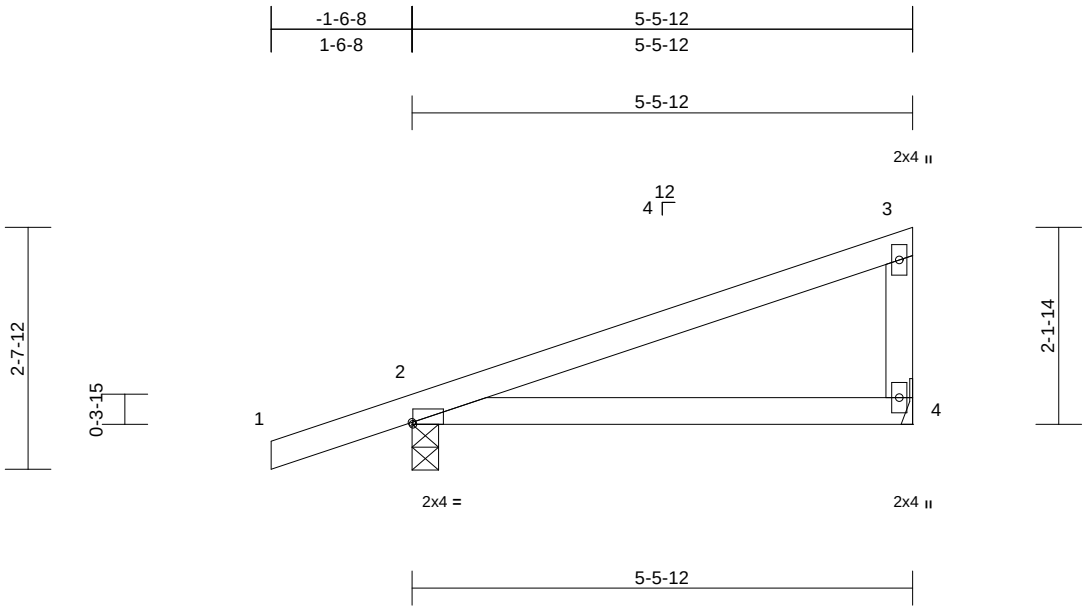
LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-5=-29
Trapezoidal Loads (lb/ft)
Vert: 9=-20-to-11=-22 (F=-2), 11=-22 (F=-2)-to-8=-28 (F=-8), 8=-28 (F=-8)-to-7=-32 (F=-12), 7=-32 (F=-12)-to-6=-35 (F=-15)

October 15,2025

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

Job	Truss	Truss Type	Qty	Ply	1060 Serenity **REVISIED 10/10
P04085-27897	P02	Monopitch	5	1	I77066733 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Wed Oct 15 05:42:33 Page: 1
ID:_af27V1jkKbRvo9svvD0sAzOZxH-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:25.2

Plate Offsets (X, Y): [2:0-0-2,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	0.35	Vert(LL)	0.05	4-7	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.27	Vert(CT)	-0.07	4-7	>916	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 22 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 5-5-12 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-8, 4= Mechanical
Max Horiz 2=64 (LC 15)
Max Uplift 2=-124 (LC 12), 4=-71 (LC 12)
Max Grav 2=293 (LC 2), 4=185 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/26, 2-3=-74/44, 3-4=-121/112
BOT CHORD 2-4=-54/79

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-6-8 to 1-5-8, Interior (1) 1-5-8 to 5-4-0 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=10.0 psf; Pf=7.7 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 1.00 times flat roof load of 7.7 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 71 lb uplift at joint 4 and 124 lb uplift at joint 2.

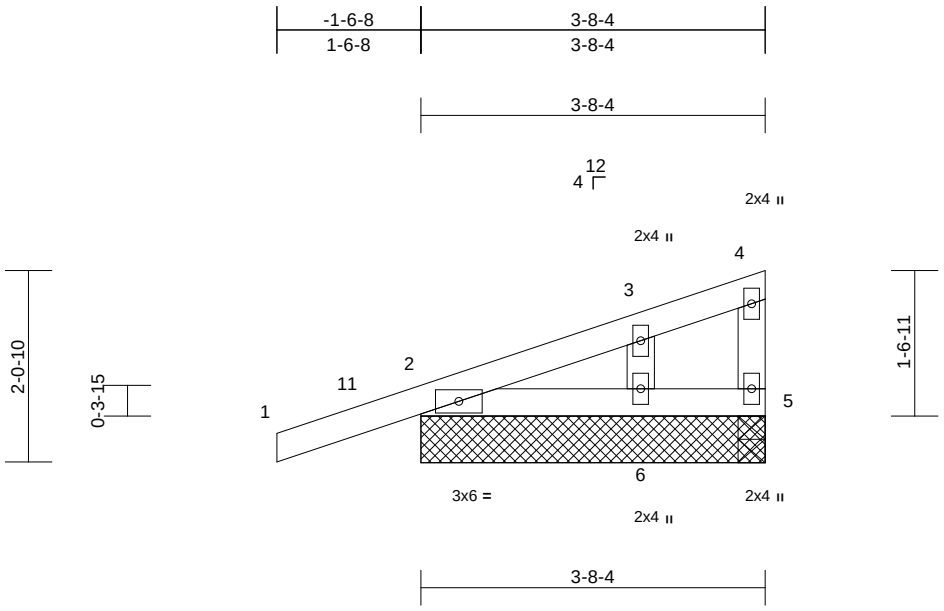
LOAD CASE(S) Standard

October 15,2025

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

Job	Truss	Truss Type	Qty	Ply	1060 Serenity **REVISIED 10/10
P04085-27897	P03E	Monopitch Supported Gable	1	1	I77066734 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Wed Oct 15 05:42:33 Page: 1
ID:DrlJ8CYhcY0LZPx7wRU66FzOZwc-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:24.7

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.16	Vert(LL)	-0.01	10	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.22	Vert(CT)	-0.02	10	>999	180		
TCDL	7.0	Rep Stress Incr	NO	WB	0.01	Horz(CT)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 16 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 3-8-4 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=3-8-4, 5=3-8-4, 6=3-8-4
Max Horiz 2=45 (LC 15)
Max Uplift 2=-76 (LC 12), 5=-6 (LC 12), 6=-28 (LC 16)
Max Grav 2=194 (LC 2), 5=105 (LC 7), 6=198 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/26, 2-3=-54/45, 3-4=-25/12, 4-5=-12/24
BOT CHORD 2-6=-31/50, 5-6=-16/18
WEBS 3-6=-122/74

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-6-8 to 1-5-8, Interior (1) 1-5-8 to 3-6-8 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
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=10.0 psf; Pf=7.7 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 1.00 times flat roof load of 7.7 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 studs spaced at 1-4-0 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 76 lb uplift at joint 2, 6 lb uplift at joint 5, 28 lb uplift at joint 6 and 76 lb uplift at joint 2.
12) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

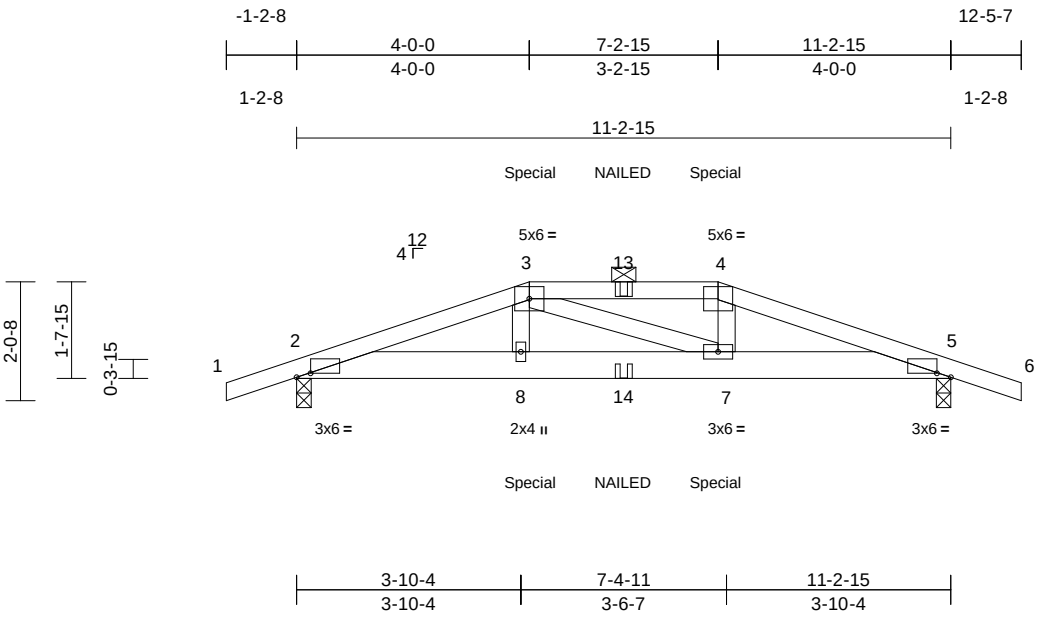
LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-4=-29
Trapezoidal Loads (lb/ft)
Vert: 7=-20-to-9=-23 (F=-3), 9=-23 (F=-3)-to-10=-36 (F=-16), 10=36 (F=16)-to-6=30 (F=10), 6=-30 (F=-10)-to-5=-35 (F=-15)

October 15,2025

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

Job	Truss	Truss Type	Qty	Ply	1060 Serenity **REVISIED 10/10
P04085-27897	P04G	Hip Girder	1	1	I77066735
					Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Wed Oct 15 05:42:34 Page: 1
ID:vlKfZCBa4W8I92QhGdwedqyxCww-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:39.6

Plate Offsets (X, Y): [2:0-2-14,0-0-13], [5:0-2-14,0-0-13]

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	0.27	Vert(LL)	-0.03	7-8	>999	240	MT20	244/190
Snow (Pf/Pg)	12.7/10.0	Lumber DOL	1.15	BC	0.38	Vert(CT)	-0.06	7-8	>999	180		
TCDL	7.0	Rep Stress Incr	NO	WB	0.05	Horz(CT)	0.01	5	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 55 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 4-11-0 oc purlins, except 2-0-0 oc purlins (4-11-9 max.): 3-4.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-0, 5=0-3-0
Max Horiz 2=22 (LC 8)
Max Uplift 2=-133 (LC 8), 5=-133 (LC 9)
Max Grav 2=657 (LC 2), 5=657 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-3=-1396/202, 3-4=-1271/202, 4-5=-1378/199, 5-6=0/23
BOT CHORD 2-8=-175/1303, 7-8=-178/1283, 5-7=-157/1290
WEBS 3-8=0/237, 3-7=-52/28, 4-7=0/232

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; 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 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=12.7 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 1.00 times flat roof load of 7.7 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) Provide adequate drainage to prevent water ponding.
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) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 5.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 133 lb uplift at joint 2 and 133 lb uplift at joint 5.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
13) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.
14) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 135 lb down and 82 lb up at 4-0-0, and 135 lb down and 82 lb up at 7-2-15 on top chord, and 71 lb down at 4-0-0, and 71 lb down at 7-2-4 on bottom chord. The design/ selection of such connection device(s) is the responsibility of others.
15) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

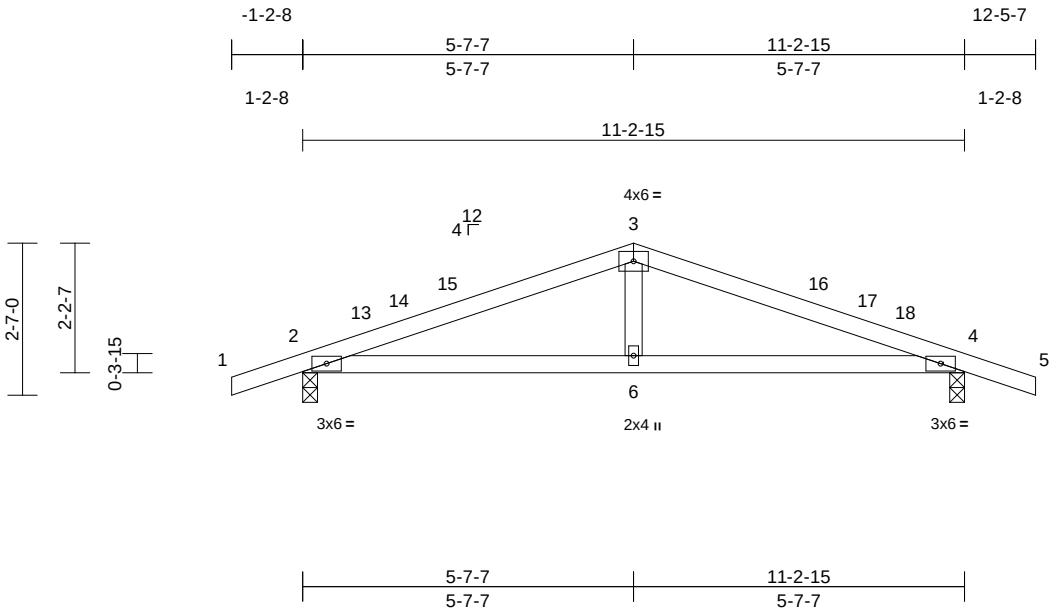
LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-29, 3-4=-39, 4-6=-29, 2-5=-20
Concentrated Loads (lb)
Vert: 4=-96 (F), 8=-64 (F), 7=-64 (F), 3=-96 (F), 13=-37 (F), 14=-27 (F)

October 15,2025

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

Job	Truss	Truss Type	Qty	Ply	1060 Serenity **REVISIED 10/10
P04085-27897	P05	Common	2	1	I77066736 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Wed Oct 15 05:42:34 Page: 1
ID:Joyx3cp8O_EhxHZkxdsNtIyxCxP-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:39.1

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.33	Vert(LL)	0.04	6-9	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.39	Vert(CT)	-0.07	6-9	>999	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.01	4	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 41 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.
BOT CHORD Rigid ceiling directly applied or 8-11-11 oc bracing.

REACTIONS (size) 2=0-3-0, 4=0-3-0
Max Horiz 2=28 (LC 16)
Max Uplift 2=-181 (LC 12), 4=-181 (LC 13)
Max Grav 2=481 (LC 2), 4=481 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/21, 2-3=-764/489, 3-4=-764/489, 4-5=0/21
BOT CHORD 2-6=-399/690, 4-6=-399/690
WEBS 3-6=-122/250

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-2-8 to 1-9-8, Interior (1) 1-9-8 to 5-7-7, Exterior(2R) 5-7-7 to 8-7-7, Interior (1) 8-7-7 to 12-5-7 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=10.0 psf; Pf=7.7 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 1.00 times flat roof load of 7.7 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 at joint(s) 4.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 181 lb uplift at joint 2 and 181 lb uplift at joint 4.

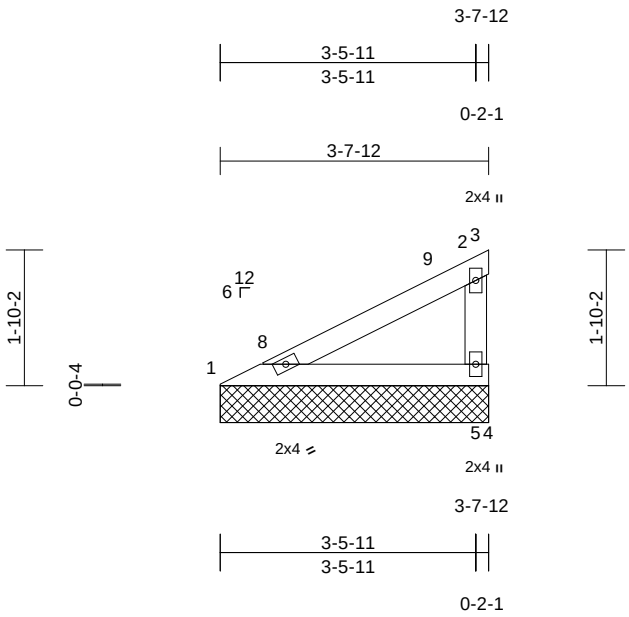
LOAD CASE(S) Standard

October 15,2025

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

Job	Truss	Truss Type	Qty	Ply	1060 Serenity **REVISIED 10/10
P04085-27897	V01	Valley	1	1	I77066737 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Wed Oct 15 05:42:34 Page: 1
ID:fglZb_3Xs85zvDGvYQie?uzOZtN-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:31.3

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	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.13	Vert(TL)	n/a	-	n/a	999		
TCDL	7.0	Rep Stress Incr	YES	WB	0.04	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 12 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-7-12 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=3-7-12, 3=3-7-12, 4=3-7-12, 5=3-7-12
Max Horiz 1=48 (LC 16)
Max Uplift 1=-7 (LC 16), 3=-199 (LC 2), 4=-302 (LC 2), 5=-166 (LC 16)
Max Grav 1=103 (LC 2), 3=67 (LC 16), 4=54 (LC 16), 5=667 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-151/38, 2-3=-93/64
BOT CHORD 1-5=-92/130, 4-5=0/0
WEBS 2-5=-293/226

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-8 to 3-0-8, Interior (1) 3-0-8 to 3-8-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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=10.0 psf; Pf=7.7 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) 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) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Bearing at joint(s) 3 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 302 lb uplift at joint 4, 7 lb uplift at joint 1, 199 lb uplift at joint 3 and 166 lb uplift at joint 5.

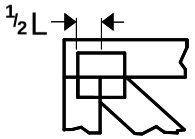
LOAD CASE(S) Standard

October 15,2025

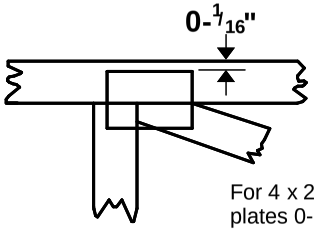
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

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.

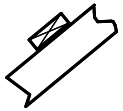
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

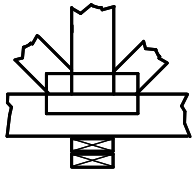
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

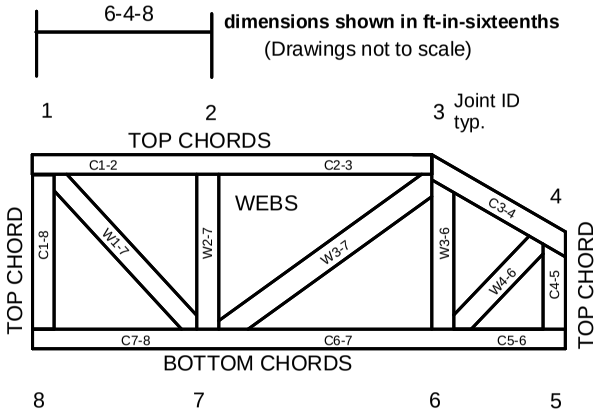


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

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.