ENGINEERING BY
TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: P02678-25595
916 Serenity

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

Pages or sheets covered by this seal: I73556585 thru I73556613

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

North Carolina COA: C-0844

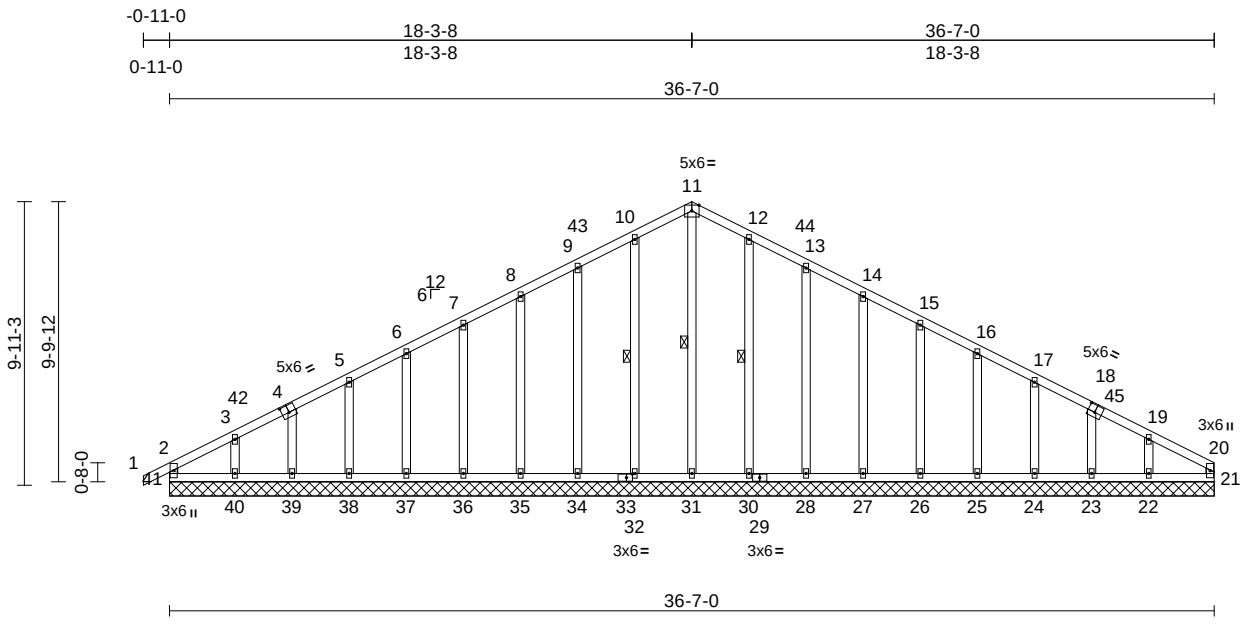
May 19,2025

Gilbert, Eric

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

Job	Truss	Truss Type	Qty	Ply	916 Serenity	
P02678-25595	A01E	Common Supported Gable	1	1	Job Reference (optional)	I73556585

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Fri May 16 10:00:25 Page: 1
ID:42o7L4wgzg0E82bFJvYJ3PzxaUP-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:80.7

Plate Offsets (X, Y): [4:0-3-0,0-3-0], [18:0-3-0,0-3-0], [33:0-2-8,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.25	BC	0.05	Vert(CT)	n/a	-	n/a	999		
TCDL	7.0	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.01	21	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 245 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.
WEBS 1 Row at midpt 11-31, 10-32, 12-30

REACTIONS (size) 21=36-7-0, 22=36-7-0, 23=36-7-0, 24=36-7-0, 25=36-7-0, 26=36-7-0, 27=36-7-0, 28=36-7-0, 30=36-7-0, 31=36-7-0, 32=36-7-0, 34=36-7-0, 35=36-7-0, 36=36-7-0, 37=36-7-0, 38=36-7-0, 39=36-7-0, 40=36-7-0, 41=36-7-0
Max Horiz 41=121 (LC 20)
Max Uplift 21=-2 (LC 16), 22=-89 (LC 17), 23=-43 (LC 17), 24=-59 (LC 17), 25=-52 (LC 17), 26=-53 (LC 17), 27=-52 (LC 17), 28=-55 (LC 17), 30=-47 (LC 17), 32=-47 (LC 16), 34=-52 (LC 16), 35=-49 (LC 16), 36=-49 (LC 16), 37=-47 (LC 16), 38=-54 (LC 16), 39=-36 (LC 16), 40=-86 (LC 16), 41=-32 (LC 12)
Max Grav 21=104 (LC 33), 22=207 (LC 35), 23=171 (LC 2), 24=189 (LC 35), 25=176 (LC 2), 26=176 (LC 35), 27=174 (LC 2), 28=171 (LC 35), 30=190 (LC 24), 31=188 (LC 33), 32=184 (LC 23), 34=162 (LC 2), 35=161 (LC 2), 36=159 (LC 34), 37=155 (LC 2), 38=162 (LC 34), 39=149 (LC 2), 40=144 (LC 34), 41=153 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-41=-131/80, 1-2=0/26, 2-3=-134/57, 3-5=-95/79, 5-6=-60/99, 6-7=-51/124, 7-8=-60/161, 8-9=-73/198, 9-10=-87/238, 10-11=-99/271, 11-12=-99/269, 12-13=-87/236, 13-14=-73/197, 14-15=-60/160, 15-16=-47/122, 16-17=-35/85, 17-19=-67/47, 19-20=-93/24, 20-21=-63/6
BOT CHORD 40-41=-22/88, 39-40=-22/88, 38-39=-26/91, 37-38=-26/91, 36-37=-26/91, 35-36=-26/91, 34-35=-26/91, 32-34=-26/91, 31-32=-26/91, 30-31=-26/91, 28-30=-26/91, 27-28=-26/91, 26-27=-26/91, 25-26=-26/91, 24-25=-26/91, 23-24=-26/91, 22-23=-22/87, 21-22=-22/87
WEBS 11-31=-159/31, 10-32=-131/111, 9-34=-107/88, 8-35=-108/66, 7-36=-108/67, 6-37=-106/66, 5-38=-115/71, 4-39=-106/61, 3-40=-99/110, 12-30=-133/111, 13-28=-107/88, 14-27=-108/66, 15-26=-108/67, 16-25=-106/66, 17-24=-116/71, 18-23=-101/72, 19-22=-117/139

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) -0-11-0 to 2-8-14, Exterior (2) 2-8-14 to 18-3-8, Corner (3) 18-3-8 to 21-11-6, Exterior (2) 21-11-6 to 36-5-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.25 Plate DOL=1.25); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
7) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
8) All plates are 2x4 (||) MT20 unless otherwise indicated.
9) Gable requires continuous bottom chord bearing.
10) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
11) Gable studs spaced at 2-0-0 oc.

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12) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
13) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
14) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 32 lb uplift at joint 41, 2 lb uplift at joint 21, 47 lb uplift at joint 32, 52 lb uplift at joint 34, 49 lb uplift at joint 35, 49 lb uplift at joint 36, 47 lb uplift at joint 37, 54 lb uplift at joint 38, 36 lb uplift at joint 39, 86 lb uplift at joint 40, 47 lb uplift at joint 30, 55 lb uplift at joint 28, 52 lb uplift at joint 27, 53 lb uplift at joint 26, 52 lb uplift at joint 25, 59 lb uplift at joint 24, 43 lb uplift at joint 23 and 89 lb uplift at joint 22.
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: 1-2=-37, 2-11=-37, 11-20=-37
   Trapezoidal Loads (lb/ft)
   Vert: 41=-20-to-40=-21 (F=-1), 40=-21 (F=-1)-to-39=-22 (F=-2), 39=-22 (F=-2)-to-38=-23 (F=-3), 38=-23 (F=-3)-to-37=-23 (F=-3), 37=-23 (F=-3)-to-36=-24 (F=-4), 36=-24 (F=-4)-to-35=-25 (F=-5), 35=-25 (F=-5)-to-34=-26 (F=-6), 34=-26 (F=-6)-to-33=-27 (F=-7), 33=-27 (F=-7)-to-32=-27 (F=-7), 32=-27 (F=-7)-to-31=-27 (F=-7), 31=-27 (F=-7)-to-30=-28 (F=-8), 30=-28 (F=-8)-to-29=-28 (F=-8), 29=-28 (F=-8)-to-28=-29 (F=-9), 28=-29 (F=-9)-to-27=-30 (F=-10), 27=-30 (F=-10)-to-26=-31 (F=-11), 26=-31 (F=-11)-to-25=-32 (F=-12), 25=-32 (F=-12)-to-24=-32 (F=-12), 24=-32 (F=-12)-to-23=-33 (F=-13), 23=-33 (F=-13)-to-22=-34 (F=-14), 22=-34 (F=-14)-to-21=-35 (F=-15)

May 19,2025

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

Job	Truss	Truss Type	Qty	Ply	916 Serenity	
P02678-25595	A02	Common	1	1	Job Reference (optional)	I73556586

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Fri May 16 10:00:27 Page: 1
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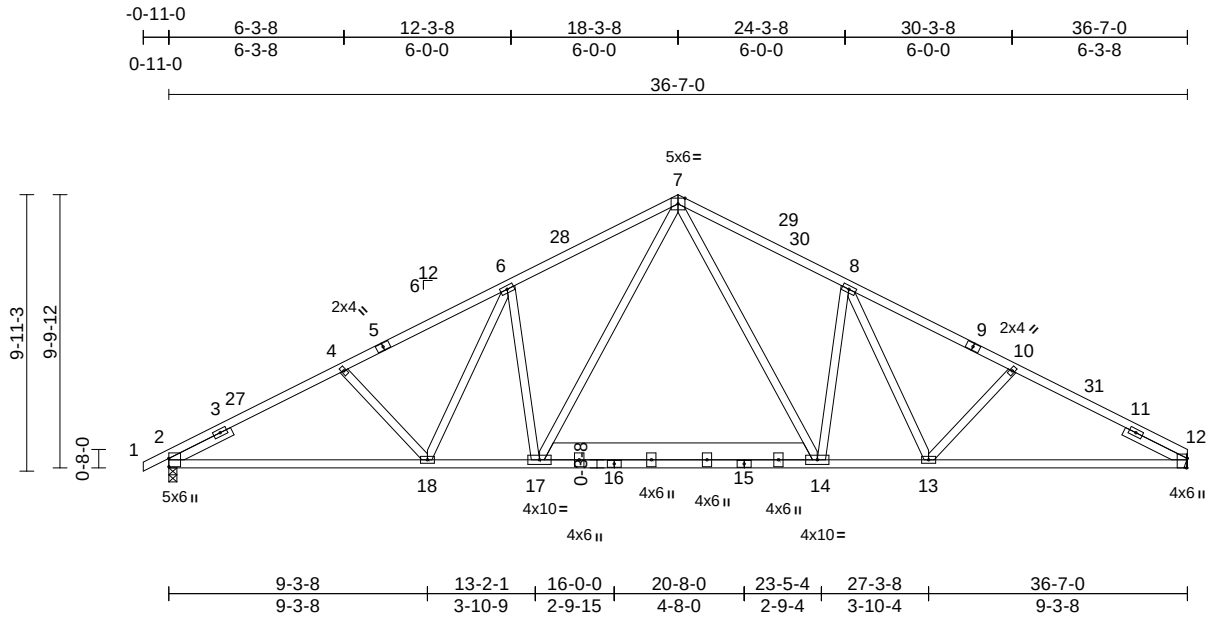

Scale = 1:82.7

Plate Offsets (X, Y): [2:0-3-9,0-0-1], [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	1.25	TC	0.46	Vert(LL)	-0.16	14-17	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.25	BC	0.87	Vert(CT)	-0.30	14-17	>999	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.46	Horz(CT)	0.09	12	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 237 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 17-14:2x8 SP DSS
WEBS 2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 2-6-0, Right 2x4 SP No.2 -- 2-6-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-4-1 oc purlins.
BOT CHORD Rigid ceiling directly applied or 9-4-1 oc bracing.

REACTIONS (size) 2=0-3-8, 12= Mechanical
Max Horiz 2=131 (LC 16)
Max Uplift 2=-230 (LC 16), 12=-214 (LC 17)
Max Grav 2=1404 (LC 2), 12=1353 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/22, 2-4=-2304/381, 4-6=-2143/371, 6-7=-1931/415, 7-8=-1934/420, 8-10=-2146/384, 10-12=-2308/392
BOT CHORD 2-18=-397/2011, 17-18=-268/1731, 14-17=-132/1289, 13-14=-189/1732, 12-13=-284/2016
WEBS 8-14=-570/234, 8-13=-75/344, 10-13=-249/149, 6-17=-567/233, 6-18=-73/343, 4-18=-246/148, 7-17=-221/790, 7-14=-222/793

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-8-14, Interior (1) 2-8-14 to 18-3-8, Exterior (2) 18-3-8 to 21-11-6, Interior (1) 21-11-6 to 36-7-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.25 Plate DOL=1.25); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) 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) Refer to girder(s) for truss to truss connections.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 230 lb uplift at joint 2 and 214 lb uplift at joint 12.

LOAD CASE(S) Standard

May 19,2025

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

Job	Truss	Truss Type	Qty	Ply	916 Serenity	
P02678-25595	A03	Roof Special	3	1	Job Reference (optional)	I73556587

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Fri May 16 10:00:27
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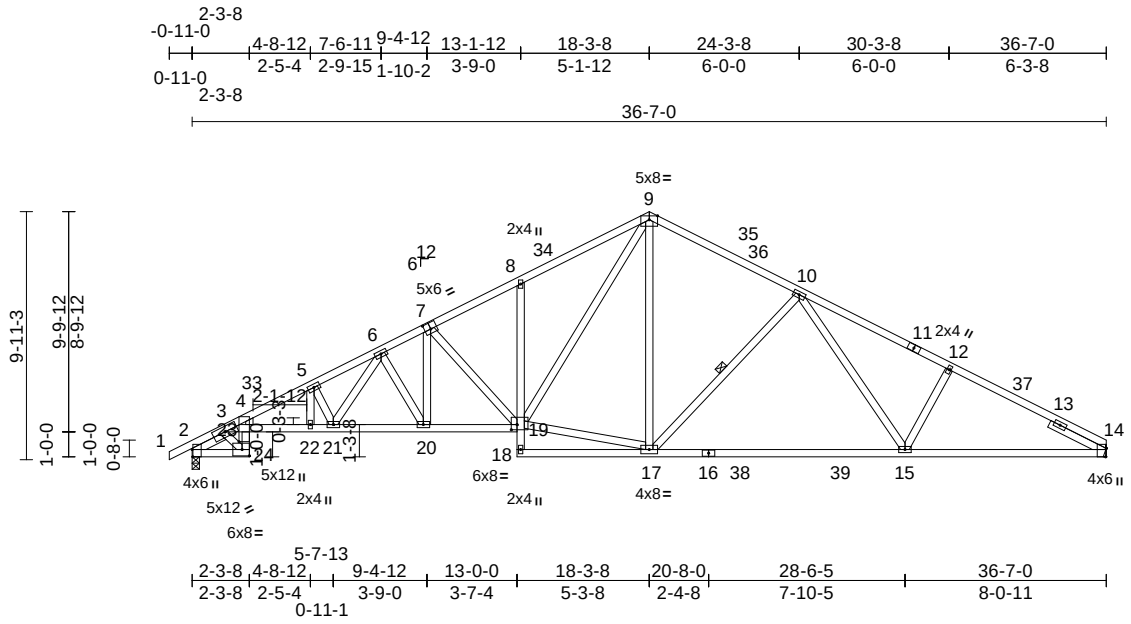

Scale = 1:92.2

Plate Offsets (X, Y): [2:0-3-8,Edge], [7:0-3-0,0-3-0], [14:0-4-1,Edge], [19:0-2-12,0-2-8], [23:0-4-12,0-6-11]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.84	Vert(LL)	-0.38	15-17	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.25	BC	0.90	Vert(CT)	-0.72	15-17	>610	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.51	Horz(CT)	0.25	14	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 230 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2 *Except* 1-7:2x4 SP No.1
BOT CHORD	2x4 SP No.1 *Except* 2-24,8-18:2x4 SP No.2, 3-19:2x4 SP DSS
WEBS	2x4 SP No.2
SLIDER	Left 2x4 SP No.1 -- 1-4-11, Right 2x4 SP No.2 -- 2-6-0

BRACING

TOP CHORD	Structural wood sheathing directly applied or 2-1-15 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 7-11-14 oc bracing.
WEBS	1 Row at midpt 10-17

REACTIONS (size) 2=0-3-8, 14= Mechanical
Max Horiz 2=131 (LC 16)
Max Uplift 2=-231 (LC 16), 14=-214 (LC 17)
Max Grav 2=1402 (LC 2), 14=1353 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/22, 2-3=-879/147, 3-4=-4232/741, 4-5=-3796/671, 5-6=-3368/598, 6-8=-2621/447, 8-9=-2214/458, 9-10=-1570/334, 10-12=-2231/402, 12-14=-2337/382
BOT CHORD	2-24=-365/1636, 23-24=-460/2093, 3-23=-621/3188, 22-23=-686/3468, 21-22=-686/3468, 20-21=-459/2561, 19-20=-388/2329, 18-19=-8/51, 8-19=-269/147, 17-18=-14/79, 15-17=-194/1710, 14-15=-277/2037
WEBS	17-19=-106/1271, 9-19=-313/1150, 9-17=-116/479, 10-17=-579/228, 10-15=-91/475, 12-15=-226/149, 3-24=-2299/512, 7-19=-597/161, 5-22=-165/759, 5-21=-1086/286, 6-21=-178/762, 6-20=-436/136, 7-20=-98/488, 4-23=-140/733

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-8-14, Interior (1) 2-8-14 to 18-3-8, Exterior (2) 18-3-8 to 21-11-6, Interior (1) 21-11-6 to 36-7-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.25 Plate DOL=1.25); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) 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) Refer to girder(s) for truss to truss connections.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 231 lb uplift at joint 2 and 214 lb uplift at joint 14.

LOAD CASE(S) Standard

May 19,2025

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A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	916 Serenity	
P02678-25595	A04	Roof Special	1	1	Job Reference (optional)	I73556588

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Fri May 16 10:00:27
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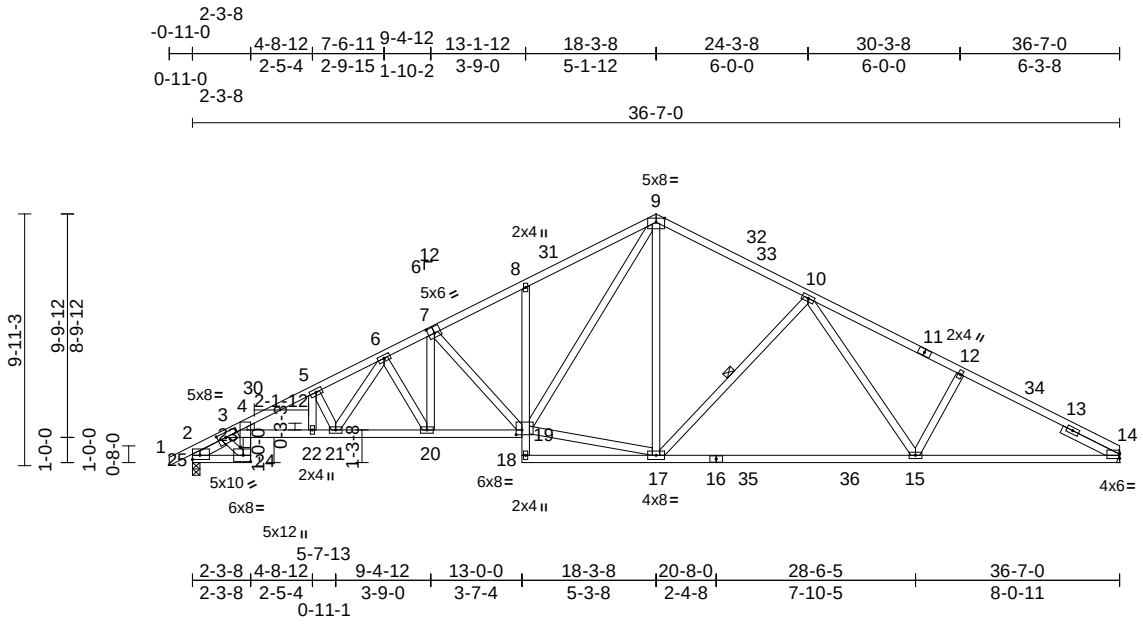

Scale = 1:90.9

Plate Offsets (X, Y): [2:Edge,0-2-0], [3:0-4-0,0-2-4], [7:0-3-0,0-3-0], [14:Edge,0-2-1], [19:0-2-12,0-2-4], [23:0-4-12,0-6-11]

Loading	(psf)	Spacing	2-3-8	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.86	Vert(LL)	-0.43	15-17	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.25	BC	0.98	Vert(CT)	-0.80	15-17	>546	180		
TCDL	7.0	Rep Stress Incr	NO	WB	0.58	Horz(CT)	0.26	14	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 229 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2 *Except* 1-7:2x4 SP DSS
BOT CHORD	2x4 SP No.1 *Except* 25-24,8-18:2x4 SP No.2, 3-19:2x4 SP DSS
WEBS	2x4 SP No.2
SLIDER	Right 2x4 SP No.2 -- 2-6-0

BRACING

TOP CHORD	Structural wood sheathing directly applied or 2-6-14 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS	1 Row at midpt 10-17

REACTIONS (size) 14= Mechanical, 25=0-3-8
Max Horiz 25=145 (LC 16)
Max Uplift 14=-245 (LC 17), 25=-266 (LC 16)
Max Grav 14=1544 (LC 2), 25=1610 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/29, 2-3=-524/93, 3-4=-4660/821, 4-5=-4179/738, 5-6=-3760/669, 6-8=-2954/504, 8-9=-2509/520, 9-10=-1785/381, 10-12=-2543/459, 12-14=-2665/436, 2-25=-541/148
BOT CHORD	24-25=-380/1645, 23-24=-507/2228, 3-23=-704/3582, 22-23=-760/3819, 21-22=-760/3819, 20-21=-516/2876, 19-20=-438/2626, 18-19=-10/58, 8-19=-308/169, 17-18=-16/89, 15-17=-220/1947, 14-15=-316/2322
WEBS	17-19=-120/1445, 9-19=-354/1293, 9-17=-133/550, 10-17=-663/261, 10-15=-104/545, 12-15=-259/170, 3-24=-2460/570, 7-19=-658/180, 5-22=-160/718, 5-21=-1102/303, 6-21=-195/815, 6-20=-470/150, 7-20=-107/530, 4-23=-164/811, 3-25=-1667/255

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-8-14, Interior (1) 2-8-14 to 18-3-8, Exterior (2) 18-3-8 to 21-11-6, Interior (1) 21-11-6 to 36-7-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.25 Plate DOL=1.25); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) 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) Refer to girder(s) for truss to truss connections.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 245 lb uplift at joint 14 and 266 lb uplift at joint 25.

LOAD CASE(S) Standard

May 19,2025

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

Job	Truss	Truss Type	Qty	Ply	916 Serenity	
P02678-25595	A05	Common	1	1	Job Reference (optional)	I73556589

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Fri May 16 10:00:28
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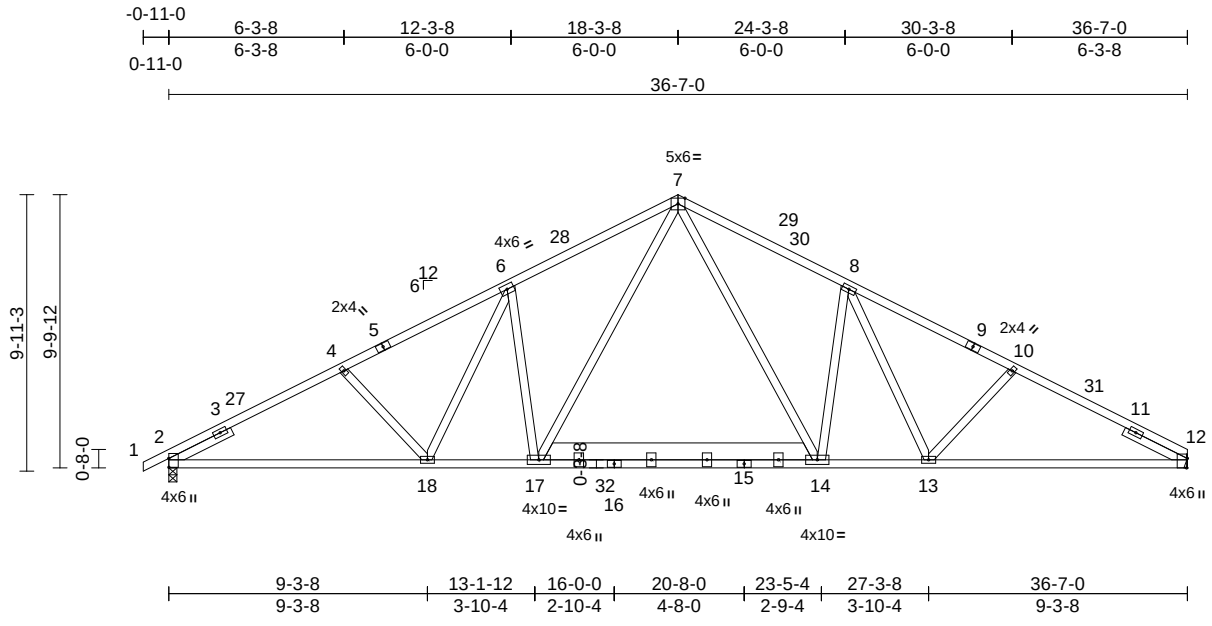

Scale = 1:82.7

Plate Offsets (X, Y): [2:0-3-13,0-0-1], [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	1.25	TC	0.47	Vert(LL)	-0.16	14-17	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.25	BC	0.87	Vert(CT)	-0.33	18-21	>999	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.45	Horz(CT)	0.09	12	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 238 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 17-14:2x8 SP DSS
WEBS 2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 2-6-0, Right 2x4 SP No.2 -- 2-6-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-4-6 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-8, 12= Mechanical
Max Horiz 2=131 (LC 16)
Max Uplift 2=-117 (LC 16), 12=-207 (LC 17)
Max Grav 2=1517 (LC 2), 12=1360 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/22, 2-4=-2366/319, 4-6=-2195/319, 6-7=-1954/394, 7-8=-1948/406, 8-10=-2160/370, 10-12=-2322/378
BOT CHORD 2-18=-329/2079, 17-18=-245/1754, 14-17=-119/1301, 13-14=-177/1745, 12-13=-272/2028
WEBS 8-14=-569/235, 8-13=-77/342, 10-13=-248/150, 6-17=-590/210, 6-18=-25/391, 4-18=-284/110, 7-17=-206/807, 7-14=-221/794

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-8-14, Interior (1) 2-8-14 to 18-3-8, Exterior (2) 18-3-8 to 21-11-6, Interior (1) 21-11-6 to 36-7-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.25 Plate DOL=1.25); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) 120.0lb AC unit load placed on the top chord, 2-0-0 from left end, supported at two points, 0-0-0 apart.
8) All plates are 3x6 (=) MT20 unless otherwise indicated.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
11) Refer to girder(s) for truss to truss connections.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 117 lb uplift at joint 2 and 207 lb uplift at joint 12.

LOAD CASE(S) Standard

May 19,2025

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

Job	Truss	Truss Type	Qty	Ply	916 Serenity	
P02678-25595	A06	Common	3	1	Job Reference (optional)	I73556590

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Fri May 16 10:00:28 Page: 1

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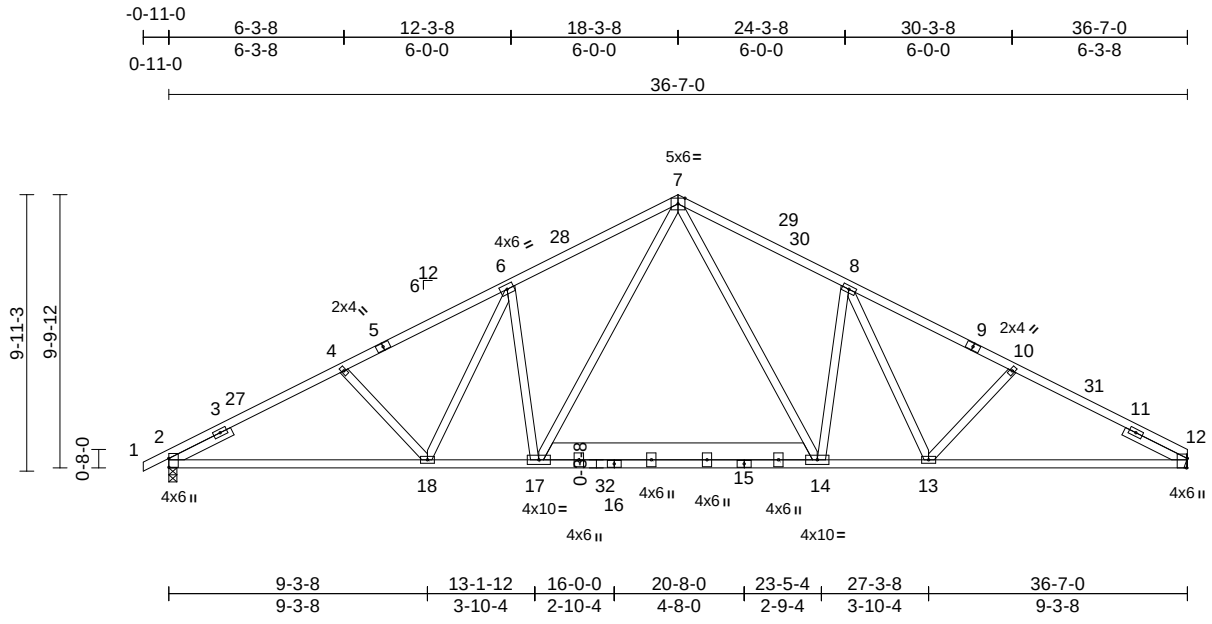

Scale = 1:82.7

Plate Offsets (X, Y): [2:0-3-13,0-0-1], [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	1.25	TC	0.47	Vert(LL)	-0.16	14-17	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.25	BC	0.87	Vert(CT)	-0.33	18-21	>999	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.45	Horz(CT)	0.09	12	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 238 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 17-14:2x8 SP DSS
WEBS 2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 2-6-0, Right 2x4 SP No.2 -- 2-6-0

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-4-6 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-8, 12= Mechanical
Max Horiz 2=131 (LC 16)
Max Uplift 2=-117 (LC 16), 12=-207 (LC 17)
Max Grav 2=1517 (LC 2), 12=1360 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/22, 2-4=-2366/319, 4-6=-2195/319, 6-7=-1954/394, 7-8=-1948/406, 8-10=-2160/370, 10-12=-2322/378
BOT CHORD 2-18=-329/2079, 17-18=-245/1754, 14-17=-119/1301, 13-14=-177/1745, 12-13=-272/2028
WEBS 8-14=-569/235, 8-13=-77/342, 10-13=-248/150, 6-17=-590/210, 6-18=-25/391, 4-18=-284/110, 7-17=-206/807, 7-14=-221/794

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-8-14, Interior (1) 2-8-14 to 18-3-8, Exterior (2) 18-3-8 to 21-11-6, Interior (1) 21-11-6 to 36-7-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.25 Plate DOL=1.25); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) 120.0lb AC unit load placed on the top chord, 2-0-0 from left end, supported at two points, 0-0-0 apart.
8) All plates are 3x6 (=) MT20 unless otherwise indicated.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
11) Refer to girder(s) for truss to truss connections.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 117 lb uplift at joint 2 and 207 lb uplift at joint 12.

LOAD CASE(S) Standard

May 19,2025

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

Job	Truss	Truss Type	Qty	Ply	916 Serenity	
P02678-25595	A07	Common	1	1	Job Reference (optional)	I73556591

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Fri May 16 10:00:29 Page: 1
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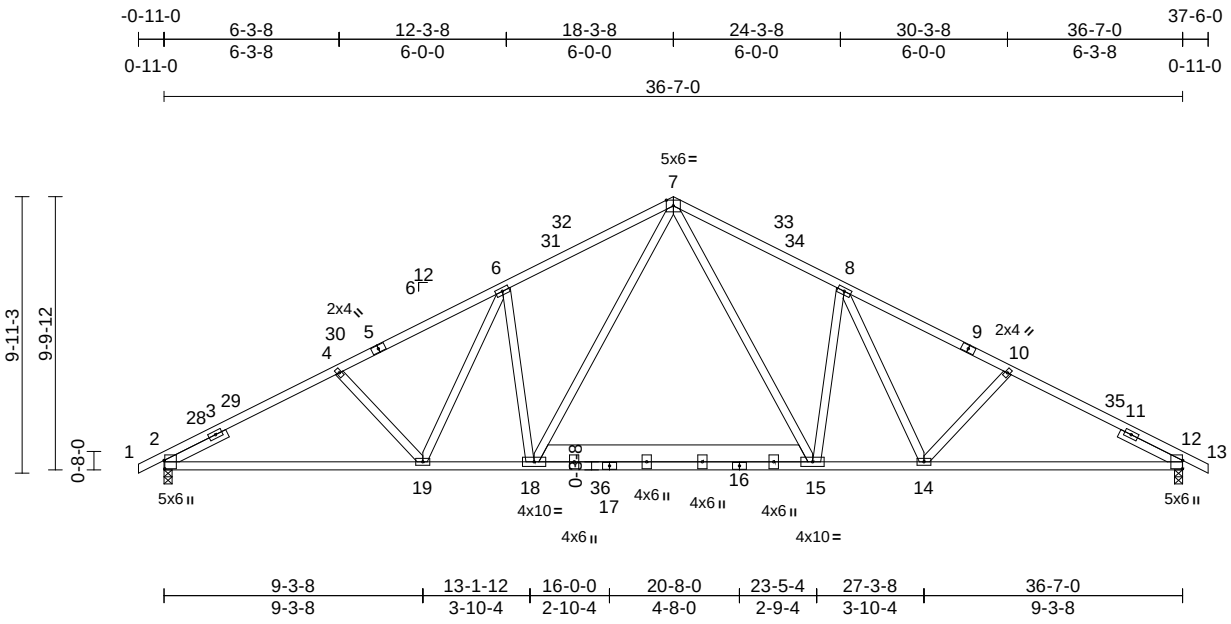

Scale = 1:82.7

Plate Offsets (X, Y): [2:0-3-9,0-0-5], [12:0-3-9,0-0-1]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.46	Vert(LL)	-0.16	15-18	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.25	BC	0.88	Vert(CT)	-0.31	19-22	>999	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.46	Horz(CT)	0.09	12	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 239 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 18-15:2x8 SP DSS
WEBS 2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 2-6-0, Right 2x4 SP No.2 -- 2-6-0

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

REACTIONS (size) 2=0-3-8, 12=0-3-8
Max Horiz 2=125 (LC 16)
Max Uplift 2=-123 (LC 16), 12=-217 (LC 17)
Max Grav 2=1510 (LC 2), 12=1416 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/22, 2-4=-2427/257, 4-6=-2249/290, 6-7=-1981/363, 7-8=-1960/384, 8-10=-2168/344, 10-12=-2329/355, 12-13=0/22
BOT CHORD 2-19=-277/2124, 18-19=-213/1779, 15-18=-101/1313, 14-15=-155/1755, 12-14=-243/2033
WEBS 8-15=-567/235, 8-14=-77/340, 10-14=-244/150, 6-18=-605/196, 6-19=-18/397, 4-19=-309/85, 7-18=-182/832, 7-15=-222/792

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-8-14, Interior (1) 2-8-14 to 18-3-8, Exterior (2) 18-3-8 to 21-11-6, Interior (1) 21-11-6 to 37-6-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.25 Plate DOL=1.25); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) 120.0lb AC unit load placed on the top chord, 4-0-0 from left end, supported at two points, 5-0-0 apart.
8) All plates are 3x6 (=) MT20 unless otherwise indicated.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 123 lb uplift at joint 2 and 217 lb uplift at joint 12.

LOAD CASE(S) Standard

May 19,2025

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

Job	Truss	Truss Type	Qty	Ply	916 Serenity	
P02678-25595	A08	Common	4	1	Job Reference (optional)	I73556592

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Fri May 16 10:00:29
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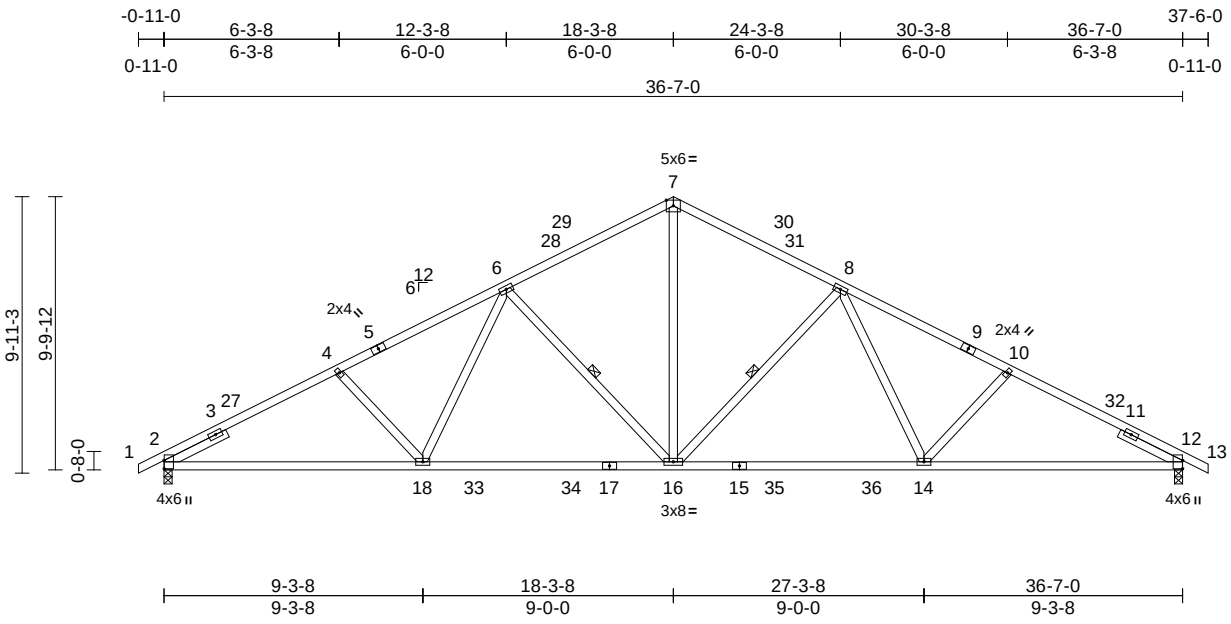

Scale = 1:82.7

Plate Offsets (X, Y): [2:0-3-9,0-0-1], [12:0-3-9,0-0-1]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.54	Vert(LL)	-0.27	14-16	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.25	BC	0.92	Vert(CT)	-0.47	14-16	>941	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.27	Horz(CT)	0.11	12	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 199 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 -- 2-6-0, Right 2x4 SP No.2 -- 2-6-0

BRACING

TOP CHORD	Structural wood sheathing directly applied or 3-2-6 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS	1 Row at midpt 6-16, 8-16

REACTIONS (size) 2=0-3-8, 12=0-3-8
Max Horiz 2=125 (LC 16)
Max Uplift 2=-230 (LC 16), 12=-230 (LC 17)
Max Grav 2=1403 (LC 2), 12=1403 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/22, 2-4=-2312/379, 4-6=-2152/369, 6-7=-1562/328, 7-8=-1562/328, 8-10=-2152/369, 10-12=-2311/380, 12-13=0/22
BOT CHORD	2-18=-390/2016, 16-18=-264/1716, 14-16=-182/1716, 12-14=-265/2016
WEBS	10-14=-241/150, 7-16=-172/1071, 6-16=-594/223, 6-18=-63/427, 4-18=-241/150, 8-14=-63/427, 8-16=-594/223

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-8-14, Interior (1) 2-8-14 to 18-3-8, Exterior (2) 18-3-8 to 21-11-6, Interior (1) 21-11-6 to 37-6-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.25 Plate DOL=1.25); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) 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 230 lb uplift at joint 2 and 230 lb uplift at joint 12.

LOAD CASE(S) Standard

May 19,2025

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

Job	Truss	Truss Type	Qty	Ply	916 Serenity
P02678-25595	A09E	Common Supported Gable	1	1	I73556593 Job Reference (optional)

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

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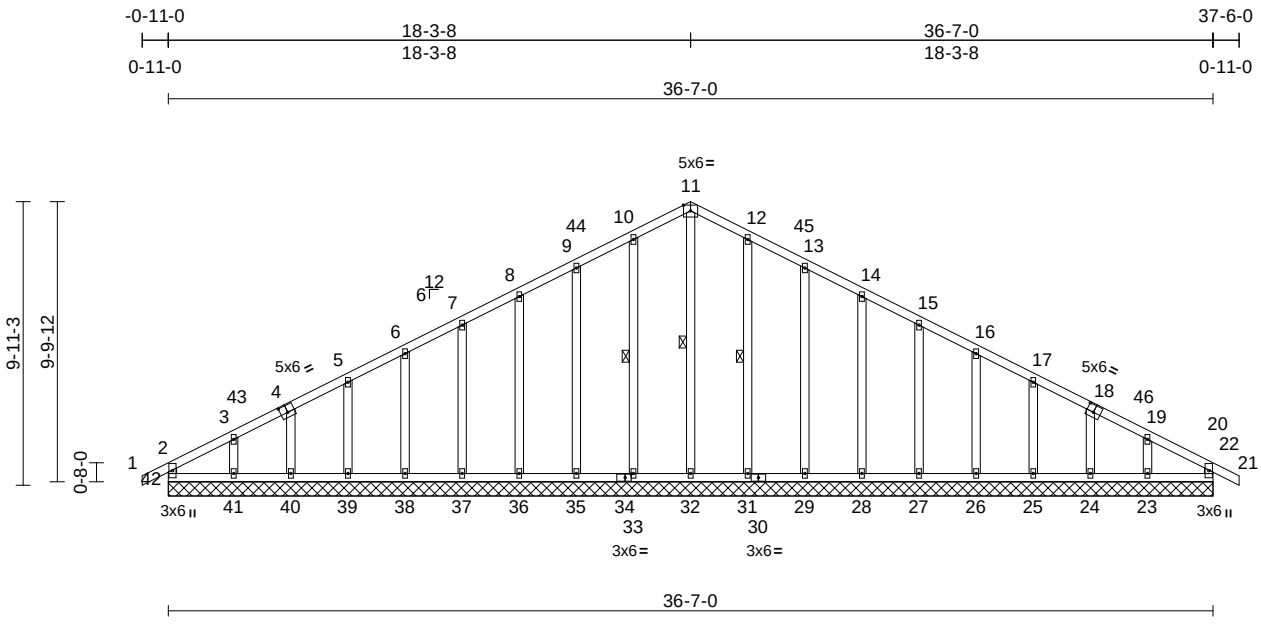

Scale = 1:80.7

Plate Offsets (X, Y): [4:0-3-0,0-3-0], [18:0-3-0,0-3-0], [34:0-2-8,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.25	BC	0.05	Vert(CT)	n/a	-	n/a	999		
TCDL	7.0	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.01	22	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 246 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 11-32, 10-33, 12-31

REACTIONS (size) 22=36-7-0, 23=36-7-0, 24=36-7-0, 25=36-7-0, 26=36-7-0, 27=36-7-0, 28=36-7-0, 29=36-7-0, 31=36-7-0, 32=36-7-0, 33=36-7-0, 35=36-7-0, 36=36-7-0, 37=36-7-0, 38=36-7-0, 39=36-7-0, 40=36-7-0, 41=36-7-0, 42=36-7-0
Max Horiz 42=115 (LC 16)
Max Uplift 22=-11 (LC 13), 23=-74 (LC 17), 24=-38 (LC 17), 25=-52 (LC 17), 26=-46 (LC 17), 27=-47 (LC 17), 28=-46 (LC 17), 29=-50 (LC 17), 31=-42 (LC 17), 33=-44 (LC 16), 35=-49 (LC 16), 36=-46 (LC 16), 37=-47 (LC 16), 38=-46 (LC 16), 39=-52 (LC 16), 40=-35 (LC 16), 41=-85 (LC 16), 42=-32 (LC 12)
Max Grav 22=148 (LC 2), 23=142 (LC 35), 24=144 (LC 2), 25=155 (LC 35), 26=146 (LC 2), 27=148 (LC 35), 28=148 (LC 2), 29=147 (LC 35), 31=173 (LC 24), 32=175 (LC 33), 33=173 (LC 23), 35=147 (LC 34), 36=148 (LC 2), 37=148 (LC 34), 38=146 (LC 2), 39=155 (LC 34), 40=144 (LC 2), 41=142 (LC 34), 42=148 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-42=-127/80, 1-2=0/26, 2-3=-132/59, 3-5=-91/79, 5-6=-53/99, 6-7=-44/124, 7-8=-57/162, 8-9=-70/198, 9-10=-84/238, 10-11=-96/271, 11-12=-96/268, 12-13=-84/235, 13-14=-70/195, 14-15=-57/158, 15-16=-44/121, 16-17=-32/84, 17-19=-60/45, 19-20=-92/27, 20-21=0/26, 20-22=-127/79
BOT CHORD 41-42=-28/102, 40-41=-28/102, 39-40=-32/106, 38-39=-32/106, 37-38=-32/106, 36-37=-32/106, 35-36=-32/106, 33-35=-32/106, 32-33=-32/106, 31-32=-32/106, 29-31=-32/106, 28-29=-32/106, 27-28=-32/106, 26-27=-32/106, 25-26=-32/106, 24-25=-32/106, 23-24=-28/102, 22-23=-28/102
WEBS 11-32=-159/29, 10-33=-133/111, 9-35=-107/88, 8-36=-108/66, 7-37=-108/67, 6-38=-106/66, 5-39=-115/71, 4-40=-106/61, 3-41=-99/110, 12-31=-133/111, 13-29=-107/88, 14-28=-108/66, 15-27=-108/67, 16-26=-106/66, 17-25=-115/71, 18-24=-106/61, 19-23=-99/111

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) -0-11-0 to 2-8-14, Exterior (2) 2-8-14 to 18-3-8, Corner (3) 18-3-8 to 21-11-6, Exterior (2) 21-11-6 to 37-6-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.25 Plate DOL=1.25); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.

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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) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
11) Gable studs spaced at 2-0-0 oc.
12) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
13) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
14) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 32 lb uplift at joint 42, 11 lb uplift at joint 22, 44 lb uplift at joint 33, 49 lb uplift at joint 35, 46 lb uplift at joint 36, 47 lb uplift at joint 37, 46 lb uplift at joint 38, 52 lb uplift at joint 39, 35 lb uplift at joint 40, 85 lb uplift at joint 41, 42 lb uplift at joint 31, 50 lb uplift at joint 29, 46 lb uplift at joint 28, 47 lb uplift at joint 27, 46 lb uplift at joint 26, 52 lb uplift at joint 25, 38 lb uplift at joint 24 and 74 lb uplift at joint 23.

LOAD CASE(S) Standard

May 19,2025

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Job	Truss	Truss Type	Qty	Ply	916 Serenity	
P02678-25595	B01E	Common Supported Gable	1	1	Job Reference (optional)	I73556594

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Fri May 16 10:00:30 Page: 1
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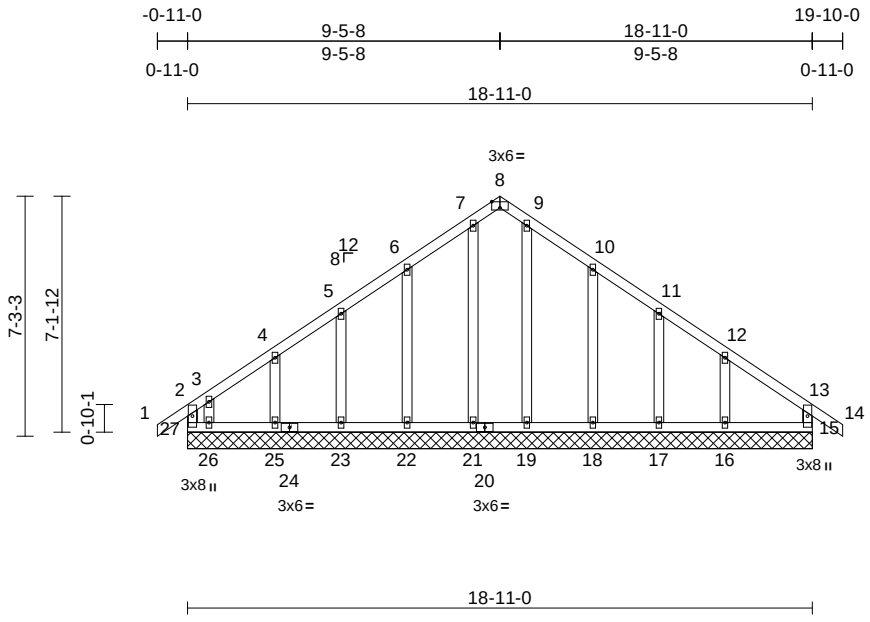


Scale = 1:69.8

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.09	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.25	BC	0.07	Vert(CT)	n/a	-	n/a	999		
TCDL	7.0	Rep Stress Incr	NO	WB	0.07	Horz(CT)	0.00	15	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 116 lb	FT = 20%

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

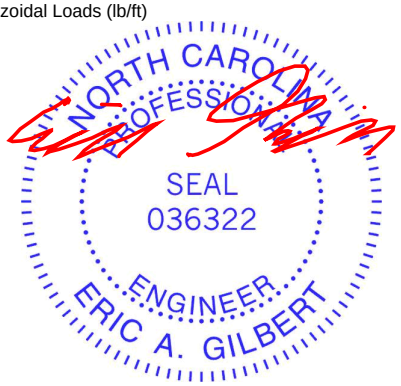
BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 15=18-11-0, 16=18-11-0, 17=18-11-0, 18=18-11-0, 19=18-11-0, 21=18-11-0, 22=18-11-0, 23=18-11-0, 25=18-11-0, 26=18-11-0, 27=18-11-0
Max Horiz 27=-151 (LC 12)
Max Uplift 15=-6 (LC 11), 16=-113 (LC 15), 17=-47 (LC 15), 18=-85 (LC 15), 21=-7 (LC 11), 22=-76 (LC 14), 23=-58 (LC 14), 25=-59 (LC 14), 26=-162 (LC 14), 27=-142 (LC 10)
Max Grav 15=175 (LC 2), 16=239 (LC 27), 17=165 (LC 2), 18=189 (LC 27), 19=144 (LC 2), 21=151 (LC 26), 22=169 (LC 26), 23=159 (LC 26), 25=160 (LC 26), 26=179 (LC 12), 27=204 (LC 27)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-27=-151/93, 1-2=0/32, 2-3=-151/121, 3-4=-100/90, 4-5=-89/81, 5-6=-78/93, 6-7=-119/129, 7-8=-101/109, 8-9=-101/109, 9-10=-119/129, 10-11=-70/73, 11-12=-49/39, 12-13=-77/52, 13-14=0/32, 13-15=-132/36
BOT CHORD 26-27=-61/82, 25-26=-61/82, 23-25=-61/82, 22-23=-61/82, 21-22=-61/82, 19-21=-61/82, 18-19=-61/82, 17-18=-61/82, 16-17=-61/82, 15-16=-61/82
WEBS 7-21=-100/19, 9-19=-90/4, 6-22=-114/85, 5-23=-110/67, 4-25=-115/73, 3-26=-102/101, 10-18=-120/91, 11-17=-103/58, 12-16=-138/102

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) -0-11-0 to 2-1-0, Exterior (2) 2-1-0 to 9-5-8, Corner (3) 9-5-8 to 12-3-4, Exterior (2) 12-3-4 to 19-10-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.25 Plate DOL=1.25); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) All plates are 2x4 (||) MT20 unless otherwise indicated.
8) Gable requires continuous bottom chord bearing.
9) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
10) Gable studs spaced at 2-0-0 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 142 lb uplift at joint 27, 6 lb uplift at joint 15, 7 lb uplift at joint 21, 76 lb uplift at joint 22, 58 lb uplift at joint 23, 59 lb uplift at joint 25, 162 lb uplift at joint 26, 85 lb uplift at joint 18, 47 lb uplift at joint 17 and 113 lb uplift at joint 16.
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=-37, 2-8=-37, 8-13=-37, 13-14=-37
Trapezoidal Loads (lb/ft)



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Vert: 27=-20-to-26=-20 (F=0), 26=-20 (F=0)-to-25=-22 (F=-2), 25=-22 (F=-2)-to-24=-22 (F=-2), 24=-22 (F=-2)-to-23=-24 (F=-4), 23=-24 (F=-4)-to-22=-25 (F=-5), 22=-25 (F=-5)-to-21=-27 (F=-7), 21=-27 (F=-7)-to-20=-27 (F=-7), 20=-27 (F=-7)-to-19=-28 (F=-8), 19=-28 (F=-8)-to-18=-30 (F=-10), 18=-30 (F=-10)-to-17=-31 (F=-11), 17=-31 (F=-11)-to-16=-33 (F=-13), 16=-33 (F=-13)-to-15=-35 (F=-15)

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818 Soundside Road
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Job	Truss	Truss Type	Qty	Ply	916 Serenity	
P02678-25595	B02G	Common Girder	1	**2**	Job Reference (optional)	I73556595

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

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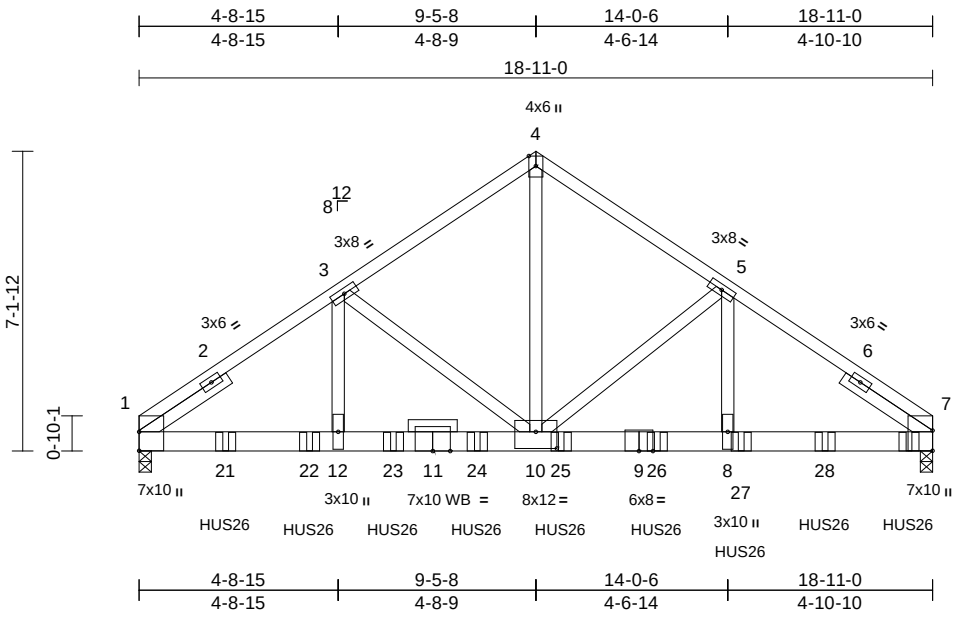

Scale = 1:54.9

Plate Offsets (X, Y): [10:0-6-0,0-4-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.80	Vert(LL)	-0.12	10-12	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.25	BC	0.53	Vert(CT)	-0.21	10-12	>999	180		
TCDL	7.0	Rep Stress Incr	NO	WB	0.73	Horz(CT)	0.05	7	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 247 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x6 SP DSS
WEBS	2x4 SP No.2
OTHERS	2x4 SP No.2
SLIDER	Left 2x4 SP No.2 -- 2-6-0, Right 2x4 SP No.2 -- 2-6-0

BRACING

TOP CHORD	Structural wood sheathing directly applied or 3-2-6 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=0-3-8, 7=0-3-8, (req. 0-4-5)
Max Horiz 1=122 (LC 9)
Max Uplift 1=-1025 (LC 10), 7=-1165 (LC 11)
Max Grav 1=6320 (LC 2), 7=7295 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-3=-8520/1397, 3-4=-6200/1053, 4-5=-6200/1054, 5-7=-8467/1374
BOT CHORD	1-12=-1174/6986, 10-12=-1174/6986, 8-10=-1078/6954, 7-8=-1078/6954
WEBS	3-12=-416/2652, 3-10=-2351/483, 5-8=-399/2654, 5-10=-2359/468, 4-10=-1070/6495

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 7-10; 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.25 Plate DOL=1.25); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
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) Bearing capacity is increased by the plate at joint(s) 1. Plate must be within 1/4 in of bearing surface.
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) WARNING: Required bearing size at joint(s) 7 greater than input bearing size.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1025 lb uplift at joint 1 and 1165 lb uplift at joint 7.
12) Use Simpson Strong-Tie HUS26 (14-10d Girder, 4-10d Truss) or equivalent spaced at 2-3-8 oc max. starting at 2-0-12 from the left end to 18-4-4 to connect truss(es) to back face of bottom chord.
13) 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=-37, 4-7=-37, 13-17=-20
Concentrated Loads (lb)
Vert: 19=-1035 (B), 21=-1024 (B), 22=-1024 (B), 23=-1024 (B), 24=-1024 (B), 25=-1168 (B), 26=-1031 (B), 27=-1031 (B), 28=-1031 (B)

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Job	Truss	Truss Type	Qty	Ply	916 Serenity	
P02678-25595	CJ01	Jack-Open	2	1	Job Reference (optional)	I73556596

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Fri May 16 10:00:30 Page: 1
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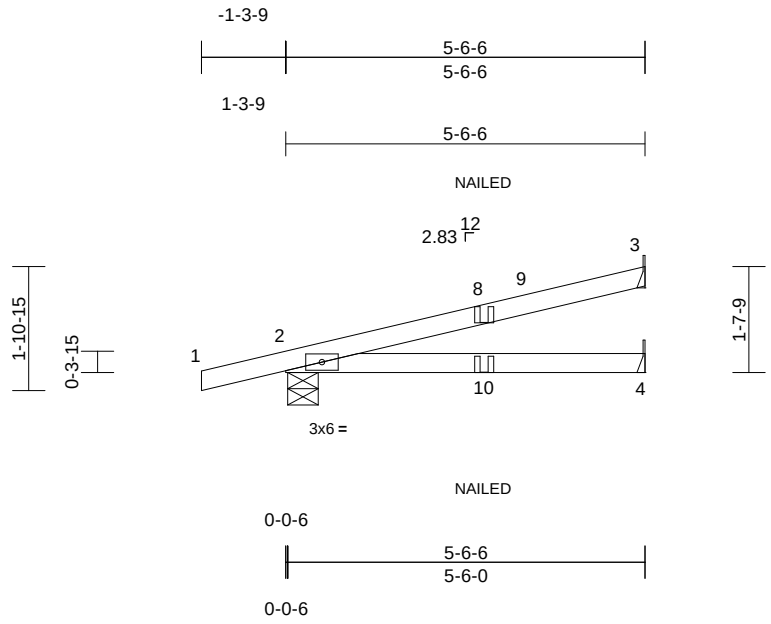

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.34	Vert(LL)	-0.04	4-7	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.25	BC	0.30	Vert(CT)	-0.08	4-7	>772	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2015/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=0-5-10, 3= Mechanical, 4= Mechanical
Max Horiz 2=51 (LC 12)
Max Uplift 2=-88 (LC 12), 3=-48 (LC 16), 4=-1 (LC 16)
Max Grav 2=284 (LC 2), 3=126 (LC 2), 4=95 (LC 7)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/16, 2-3=-115/23
BOT CHORD 2-4=-44/101

NOTES
1) Wind: ASCE 7-10; 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) -1-3-9 to 2-11-6, Exterior (2) 2-11-6 to 5-5-10 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.25 Plate DOL=1.25); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 48 lb uplift at joint 3, 88 lb uplift at joint 2 and 1 lb uplift at joint 4.
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=-37, 4-5=-20
Concentrated Loads (lb)
Vert: 10=-4 (F)

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Job	Truss	Truss Type	Qty	Ply	916 Serenity	
P02678-25595	G01E	Roof Special Supported Gable	1	1	Job Reference (optional)	I73556597

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Fri May 16 10:00:30 Page: 1
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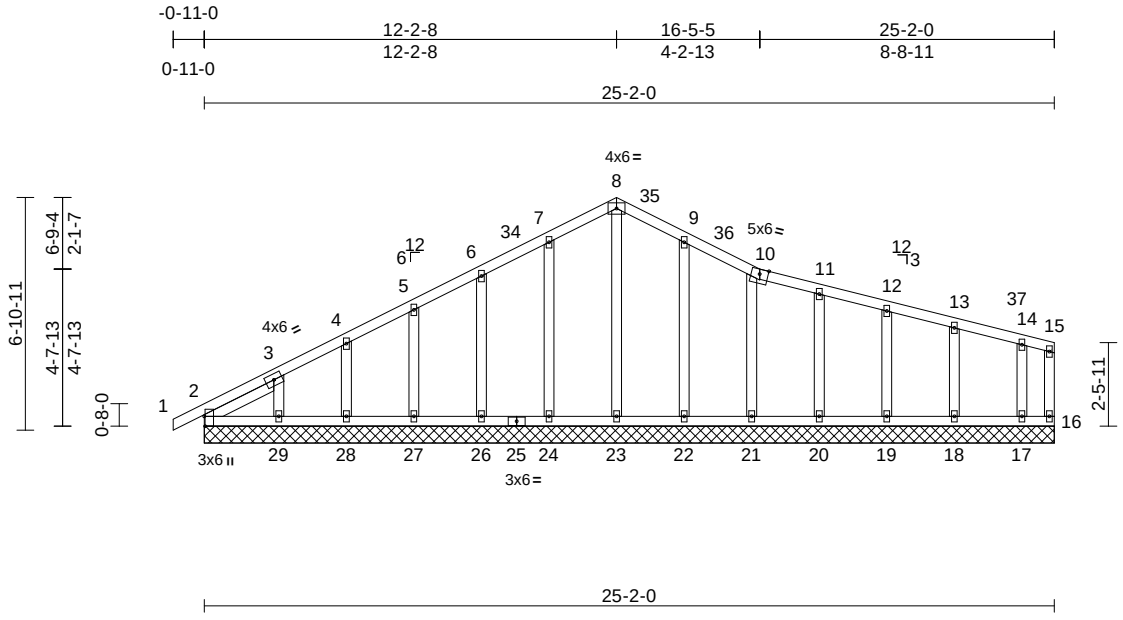

Scale = 1:68.2

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.06	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.25	BC	0.03	Vert(CT)	n/a	-	n/a	999		
TCDL	7.0	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.00	16	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 151 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
SLIDER	Left 2x4 SP No.2 -- 2-3-15

BRACING

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

REACTIONS (size) 2=25-2-0, 16=25-2-0, 17=25-2-0, 18=25-2-0, 19=25-2-0, 20=25-2-0, 21=25-2-0, 22=25-2-0, 23=25-2-0, 24=25-2-0, 26=25-2-0, 27=25-2-0, 28=25-2-0, 29=25-2-0
Max Horiz 2=94 (LC 20)
Max Uplift 2=-34 (LC 12), 16=-1 (LC 16), 17=-41 (LC 17), 18=-37 (LC 13), 19=-36 (LC 17), 20=-36 (LC 13), 21=-49 (LC 17), 22=-55 (LC 17), 24=-48 (LC 16), 26=-47 (LC 16), 27=-47 (LC 16), 28=-44 (LC 16), 29=-70 (LC 16)
Max Grav 2=129 (LC 42), 16=20 (LC 33), 17=117 (LC 43), 18=154 (LC 2), 19=147 (LC 43), 20=145 (LC 2), 21=135 (LC 2), 22=171 (LC 43), 23=146 (LC 30), 24=156 (LC 42), 26=146 (LC 2), 27=149 (LC 42), 28=146 (LC 42), 29=160 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/22, 2-3=-51/37, 3-4=-67/62, 4-5=-45/85, 5-6=-52/123, 6-7=-65/161, 7-8=-79/197, 8-9=-79/188, 9-10=-64/127, 10-11=-51/93, 11-12=-46/78, 12-13=-40/60, 13-14=-33/43, 14-15=-27/28, 15-16=-17/10
BOT CHORD	2-29=-30/39, 28-29=-30/39, 27-28=-30/39, 26-27=-30/39, 24-26=-30/39, 23-24=-30/39, 22-23=-30/39, 21-22=-30/39, 20-21=-27/35, 19-20=-27/35, 18-19=-27/35, 17-18=-27/35, 16-17=-27/35
WEBS	8-23=-106/17, 7-24=-116/111, 6-26=-107/69, 5-27=-108/67, 4-28=-108/66, 3-29=-114/96, 9-22=-131/121, 10-21=-96/82, 11-20=-105/52, 12-19=-108/54, 13-18=-112/78, 14-17=-85/88

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) -0-11-0 to 2-2-8, Exterior (2) 2-2-8 to 12-2-8, Corner (3) 12-2-8 to 15-2-8, Exterior (2) 15-2-8 to 25-0-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.25 Plate DOL=1.25); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
7) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
8) All plates are 2x4 (||) MT20 unless otherwise indicated.
9) Gable requires continuous bottom chord bearing.
10) Gable studs spaced at 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.

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Continued on page 2

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

13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 34 lb uplift at joint 2, 1 lb uplift at joint 16, 48 lb uplift at joint 24, 47 lb uplift at joint 26, 47 lb uplift at joint 27, 44 lb uplift at joint 28, 70 lb uplift at joint 29, 55 lb uplift at joint 22, 49 lb uplift at joint 21, 36 lb uplift at joint 20, 36 lb uplift at joint 19, 37 lb uplift at joint 18, 41 lb uplift at joint 17 and 34 lb uplift at joint 2.

LOAD CASE(S) Standard

May 19,2025

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

Job	Truss	Truss Type	Qty	Ply	916 Serenity	
P02678-25595	G02	Roof Special	5	1	Job Reference (optional)	I73556598

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Fri May 16 10:00:31
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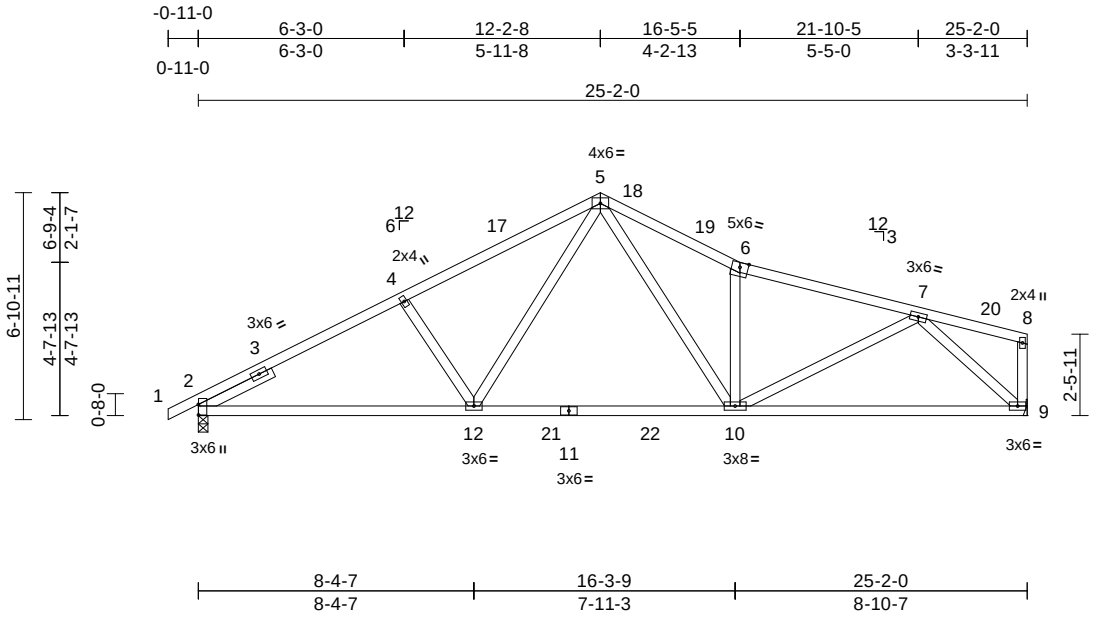


Scale = 1:69.9

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.42	Vert(LL)	-0.17	10-12	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.25	BC	0.70	Vert(CT)	-0.31	9-10	>961	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.38	Horz(CT)	0.04	9	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 135 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 -- 2-6-0

BRACING

TOP CHORD	Structural wood sheathing directly applied or 4-4-10 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-8, 9= Mechanical
Max Horiz 2=94 (LC 20)
Max Uplift 2=-161 (LC 16), 9=-152 (LC 17)
Max Grav 2=976 (LC 2), 9=925 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/22, 2-4=-1381/253, 4-5=-1338/263, 5-6=-1415/285, 6-7=-1319/221, 7-8=-66/32, 8-9=-60/24
BOT CHORD	2-12=-249/1278, 10-12=-147/899, 9-10=-180/861
WEBS	4-12=-298/168, 5-12=-114/470, 5-10=-143/625, 6-10=-540/171, 7-10=-28/441, 7-9=-1140/235

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 12-2-8, Exterior (2) 12-2-8 to 15-2-8, Interior (1) 15-2-8 to 25-0-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.25 Plate DOL=1.25); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
9) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 161 lb uplift at joint 2 and 152 lb uplift at joint 9.

LOAD CASE(S) Standard

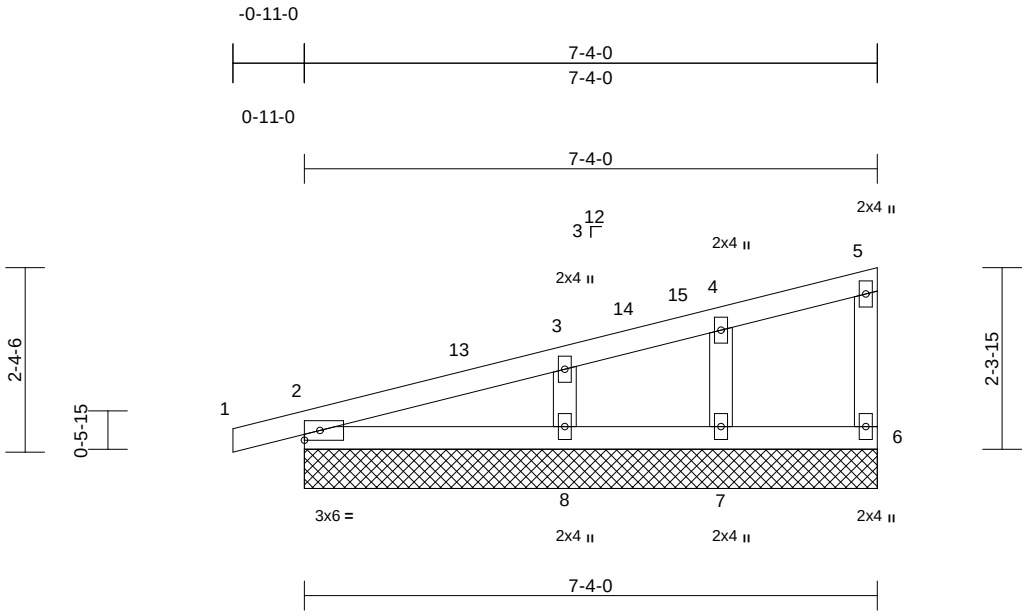
May 19,2025

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

Job	Truss	Truss Type	Qty	Ply	916 Serenity
P02678-25595	G03E	Monopitch Supported Gable	1	1	I73556599 Job Reference (optional)

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Fri May 16 10:00:31 ID:b7wcSFmGZ98wOr27L93bQfzxaCX-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:29.5

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.09	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.25	BC	0.07	Vert(CT)	n/a	-	n/a	999		
TCDL	7.0	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 29 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) 2=7-4-0, 6=7-4-0, 7=7-4-0, 8=7-4-0
Max Horiz 2=65 (LC 15)
Max Uplift 2=-46 (LC 12), 6=-11 (LC 16), 7=-30 (LC 12), 8=-60 (LC 16)
Max Grav 2=159 (LC 2), 6=60 (LC 2), 7=126 (LC 2), 8=236 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/12, 2-3=-98/57, 3-4=-66/40, 4-5=-34/33, 5-6=-43/50
BOT CHORD	2-8=-62/48, 7-8=-27/36, 6-7=-27/36
WEBS	4-7=-97/113, 3-8=-160/118

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) -0-11-0 to 2-1-0, Exterior (2) 2-1-0 to 7-2-4 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) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.25 Plate DOL=1.25); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
7) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
8) Gable requires continuous bottom chord bearing.
9) Gable studs spaced at 2-0-0 oc.
10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
11) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 46 lb uplift at joint 2, 11 lb uplift at joint 6, 30 lb uplift at joint 7, 60 lb uplift at joint 8 and 46 lb uplift at joint 2.

LOAD CASE(S) Standard

May 19,2025

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

Job	Truss	Truss Type	Qty	Ply	916 Serenity	
P02678-25595	G04	Monopitch	10	1	Job Reference (optional)	I73556600

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

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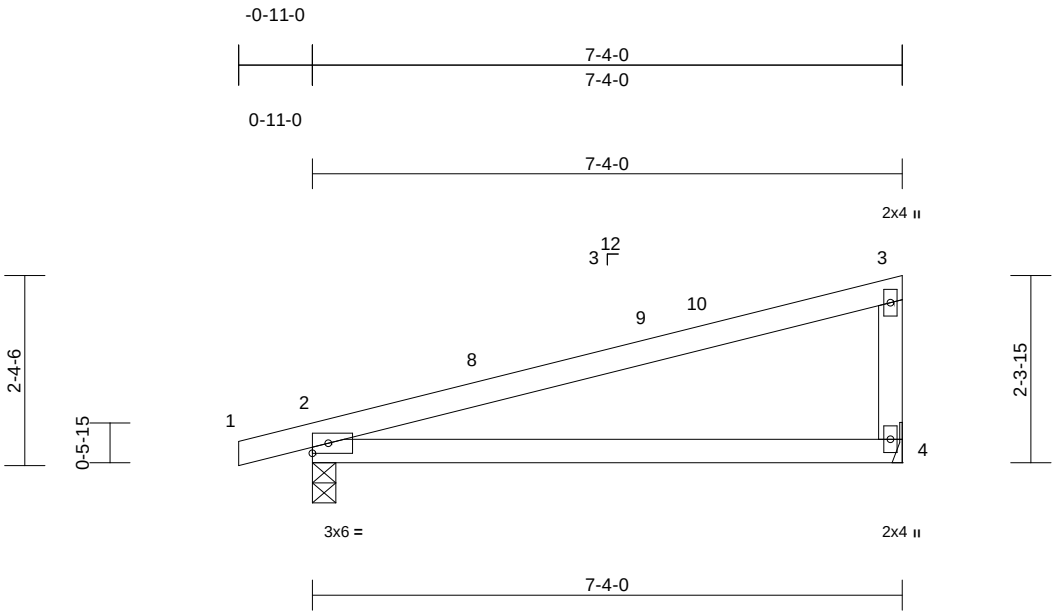

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.71	Vert(LL)	-0.11	4-7	>806	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.25	BC	0.56	Vert(CT)	-0.25	4-7	>346	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.02	2	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 26 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) 2=0-3-8, 4= Mechanical
Max Horiz 2=65 (LC 15)
Max Uplift 2=-84 (LC 12), 4=-60 (LC 16)
Max Grav 2=319 (LC 2), 4=263 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/12, 2-3=-105/44, 3-4=-174/99
BOT CHORD 2-4=-87/87

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 7-2-4 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.25 Plate DOL=1.25); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 60 lb uplift at joint 4 and 84 lb uplift at joint 2.

LOAD CASE(S) Standard

May 19,2025

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

Job	Truss	Truss Type	Qty	Ply	916 Serenity	
P02678-25595	J01	Jack-Open	1	1	Job Reference (optional)	I73556601

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

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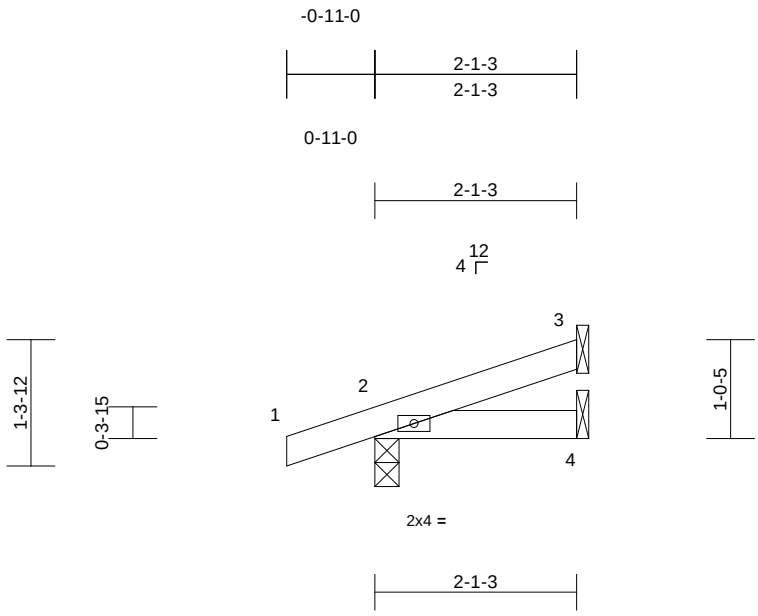

Scale = 1:24

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.05	Vert(LL)	0.00	7	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.25	BC	0.03	Vert(CT)	0.00	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	IRC2015/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 2-1-3 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=33 (LC 12)
Max Uplift 2=-49 (LC 12), 3=-15 (LC 16)
Max Grav 2=136 (LC 2), 3=40 (LC 2), 4=33 (LC 7)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/16, 2-3=-23/11
BOT CHORD 2-4=-4/24

NOTES
1) Wind: ASCE 7-10; 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 (2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.25 Plate DOL=1.25); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 15 lb uplift at joint 3 and 49 lb uplift at joint 2.

LOAD CASE(S) Standard

May 19,2025

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

Job	Truss	Truss Type	Qty	Ply	916 Serenity
P02678-25595	J02	Jack-Open	3	1	I73556602
					Job Reference (optional)

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

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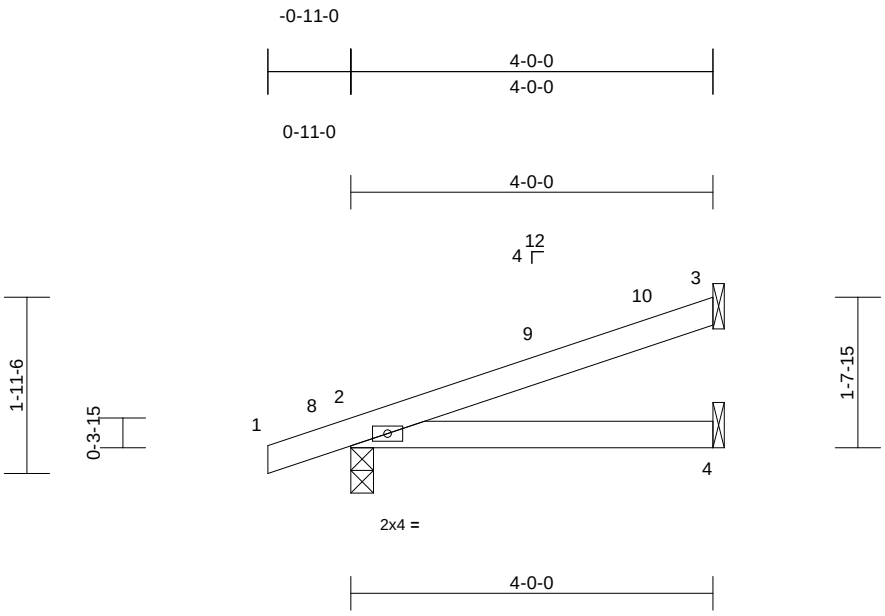

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.17	Vert(LL)	-0.01	4-7	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.25	BC	0.15	Vert(CT)	-0.02	4-7	>999	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2015/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=52 (LC 12)
Max Uplift 2=-57 (LC 12), 3=-36 (LC 16)
Max Grav 2=201 (LC 2), 3=90 (LC 2), 4=68 (LC 7)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/16, 2-3=-63/23
BOT CHORD 2-4=-37/56

NOTES
1) Wind: ASCE 7-10; 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 (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.25 Plate DOL=1.25); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 36 lb uplift at joint 3 and 57 lb uplift at joint 2.

LOAD CASE(S) Standard

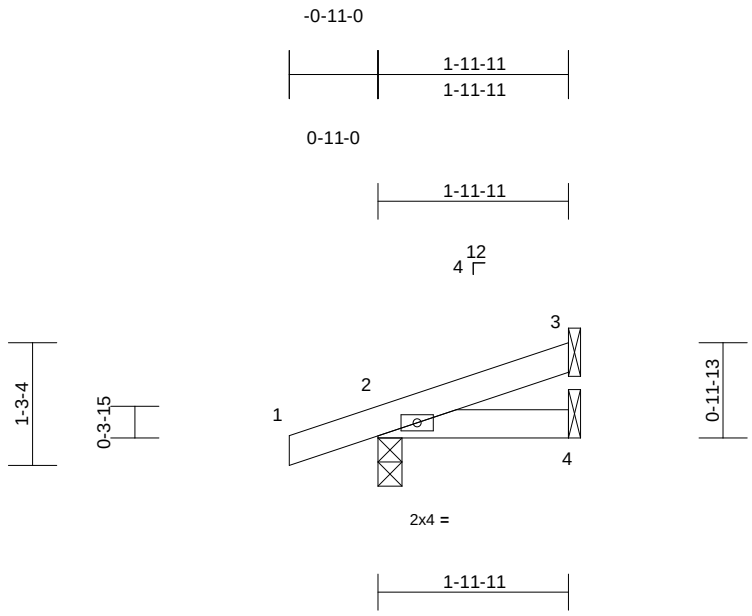
May 19,2025

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

Job	Truss	Truss Type	Qty	Ply	916 Serenity
P02678-25595	J03	Jack-Open	1	1	I73556603
					Job Reference (optional)

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Fri May 16 10:00:32 ID:kryBiS0YDhEExLqt9ipItdzG?vH-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:23.9

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.05	Vert(LL)	0.00	7	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.25	BC	0.03	Vert(CT)	0.00	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	IRC2015/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 1-11-11 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=32 (LC 12)
Max Uplift 2=-49 (LC 12), 3=-14 (LC 16)
Max Grav 2=134 (LC 2), 3=38 (LC 2), 4=31 (LC 7)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/16, 2-3=-22/10
BOT CHORD 2-4=-3/23

NOTES
1) Wind: ASCE 7-10; 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 (2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.25 Plate DOL=1.25); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 49 lb uplift at joint 2 and 14 lb uplift at joint 3.

LOAD CASE(S) Standard

NORTH CAROLINA PROFESSIONAL SEAL 036322 ENGINEER ERIC A. GILBERT

May 19,2025

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

Job	Truss	Truss Type	Qty	Ply	916 Serenity	
P02678-25595	P01E	Monopitch Supported Gable	1	1	Job Reference (optional)	I73556604

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Fri May 16 10:00:32
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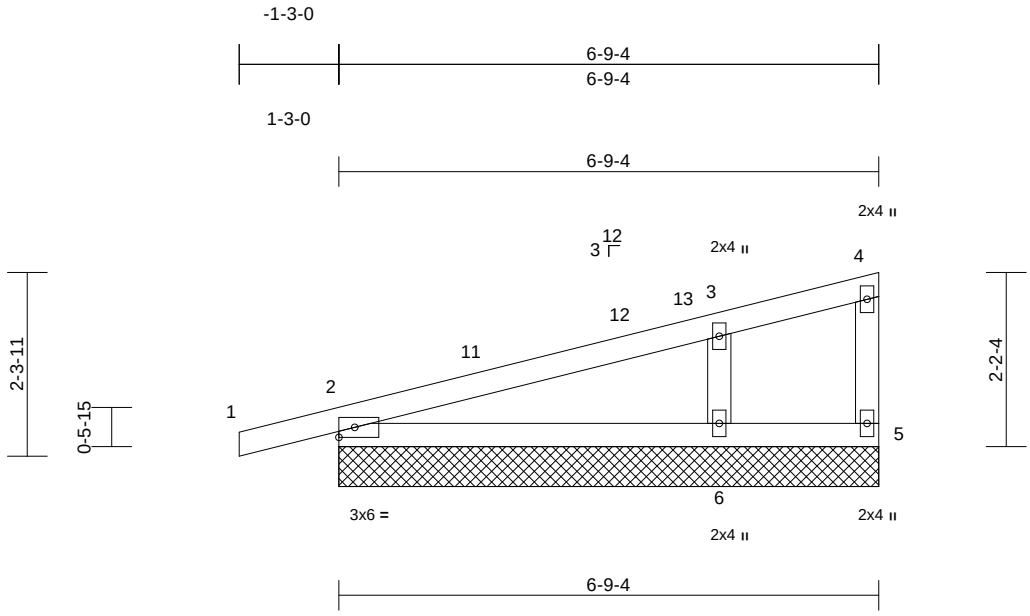

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.22	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.25	BC	0.41	Vert(CT)	n/a	-	n/a	999		
TCDL	7.0	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.01	2	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 27 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) 2=6-9-4, 5=6-9-4, 6=6-9-4
Max Horiz 2=62 (LC 15)
Max Uplift 2=-70 (LC 12), 6=-74 (LC 16)
Max Grav 2=233 (LC 2), 5=114 (LC 7), 6=343 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/16, 2-3=-75/50, 3-4=-37/28, 4-5=-4/21
BOT CHORD	2-6=-47/30, 5-6=-26/28
WEBS	3-6=-253/118

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -1-3-0 to 1-9-0, Interior (1) 1-9-0 to 6-7-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.25 Plate DOL=1.25); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
7) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
8) Gable requires continuous bottom chord bearing.
9) Gable studs spaced at 2-0-0 oc.
10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
11) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 70 lb uplift at joint 2, 74 lb uplift at joint 6 and 70 lb uplift at joint 2.

LOAD CASE(S) Standard

May 19,2025

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

Job	Truss	Truss Type	Qty	Ply	916 Serenity	
P02678-25595	P02	Monopitch	9	1	Job Reference (optional)	I73556605

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Fri May 16 10:00:32 Page: 1
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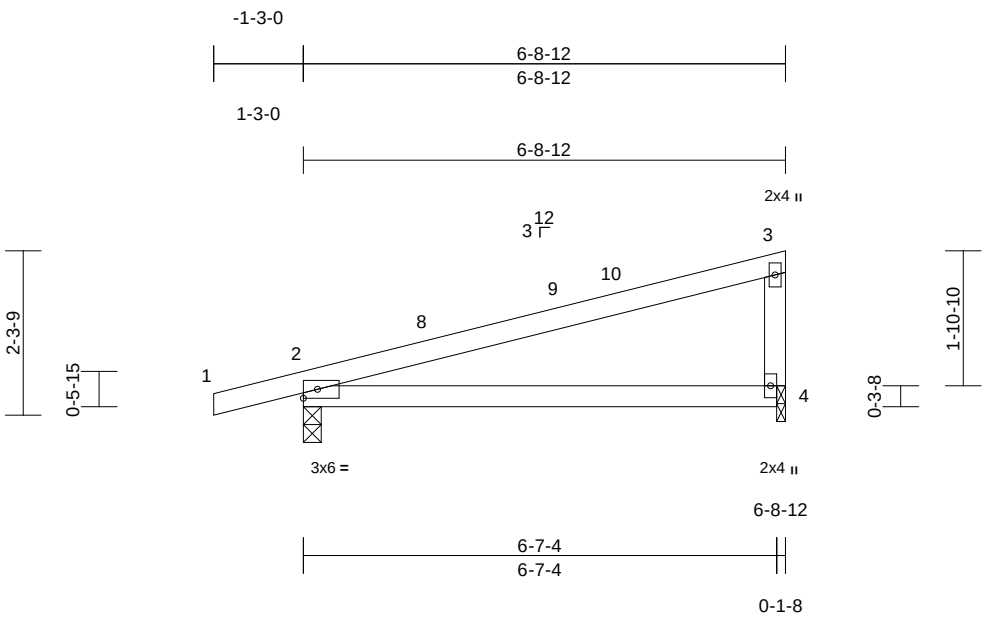

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.57	Vert(LL)	-0.07	4-7	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.25	BC	0.46	Vert(CT)	-0.17	4-7	>456	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.02	2	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 25 lb	FT = 20%

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

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) 2=0-3-0, 4=0-1-8
Max Horiz 2=61 (LC 15)
Max Uplift 2=-92 (LC 12), 4=-54 (LC 16)
Max Grav 2=317 (LC 2), 4=237 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/16, 2-3=-92/59, 3-4=-158/95
BOT CHORD 2-4=-73/65

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -1-3-0 to 1-9-0, Interior (1) 1-9-0 to 6-7-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.25 Plate DOL=1.25); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Bearing at joint(s) 4 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
10) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 4.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 92 lb uplift at joint 2 and 54 lb uplift at joint 4.

LOAD CASE(S) Standard

May 19,2025

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

Job	Truss	Truss Type	Qty	Ply	916 Serenity	
P02678-25595	P03G	Hip Girder	1	2	Job Reference (optional)	I73556606

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Fri May 16 10:00:32 Page: 1
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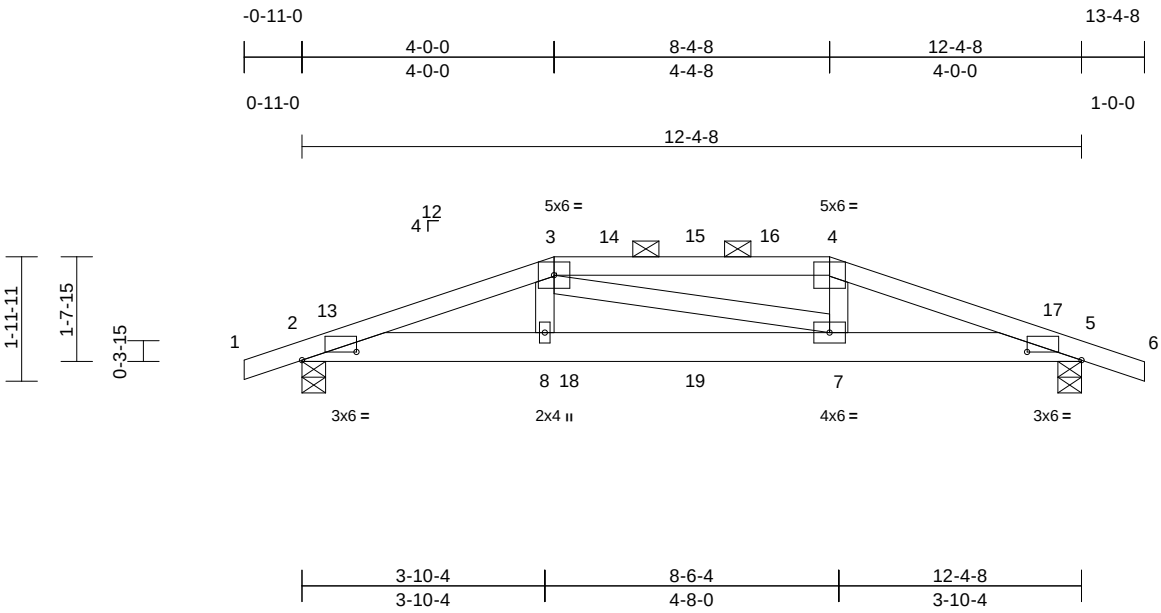

Scale = 1:36.6

Plate Offsets (X, Y): [2:0-10-6,0-1-9], [5:0-10-6,0-1-9]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.20	Vert(LL)	-0.03	7-8	>999	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.25	BC	0.21	Vert(CT)	-0.05	7-8	>999	180		
TCDL	7.0	Rep Stress Incr	NO	WB	0.03	Horz(CT)	0.01	5	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 121 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 3-4.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-4-8, 5=0-4-8
Max Horiz 2=-22 (LC 17)
Max Uplift 2=-164 (LC 8), 5=-166 (LC 9)
Max Grav 2=698 (LC 2), 5=706 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/18, 2-3=-1667/330, 3-4=-1530/320, 4-5=-1651/321, 5-6=0/20
BOT CHORD 2-8=-293/1569, 7-8=-294/1545, 5-7=-274/1553
WEBS 3-8=0/279, 3-7=-68/42, 4-7=0/273

NOTES
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.25 Plate DOL=1.25); Pg=15.0 psf (ground snow); Pf=16.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10, Lu=50-0-0
6) 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 11.5 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) Provide adequate drainage to prevent water ponding.
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 164 lb uplift at joint 2 and 166 lb uplift at joint 5.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
14) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 128 lb down and 63 lb up at 4-0-0, and 44 lb down and 28 lb up at 6-3-0, and 131 lb down and 63 lb up at 8-4-8 on top chord, and 74 lb down and 3 lb up at 4-0-0, and 30 lb down at 6-3-0, and 74 lb down and 3 lb up at 8-3-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-37, 3-4=-47, 4-6=-37, 2-5=-20
Concentrated Loads (lb)
Vert: 4=-67 (F), 8=-38 (F), 7=-63 (F), 3=-66 (F), 15=-18 (F), 18=-25 (F), 19=-25 (F)

May 19,2025

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

Job	Truss	Truss Type	Qty	Ply	916 Serenity	
P02678-25595	P04	Hip	1	1	Job Reference (optional)	I73556607

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

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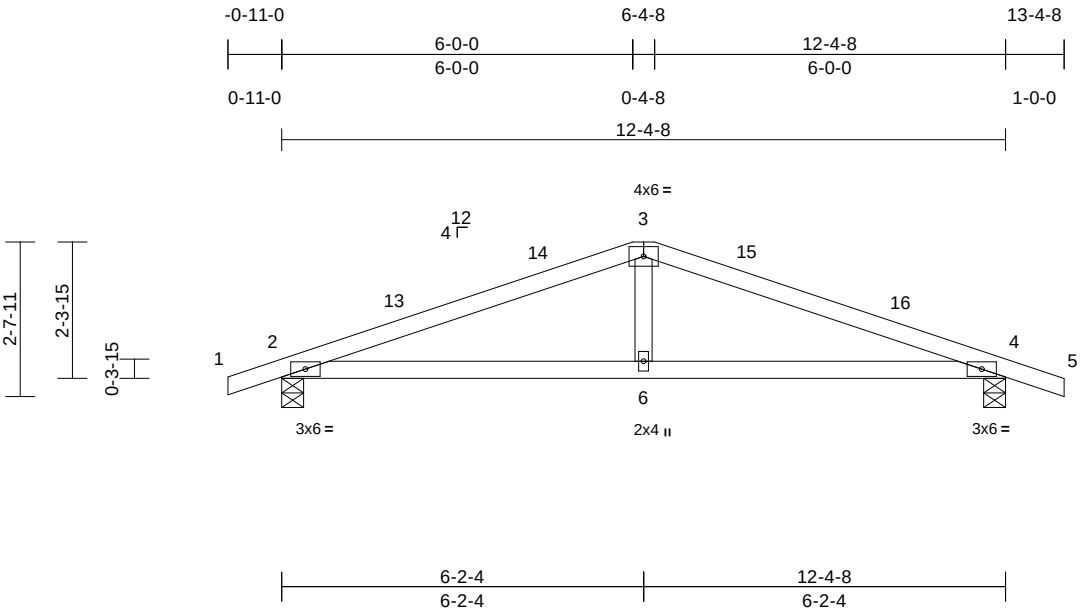

Scale = 1:39.4

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.39	Vert(LL)	-0.06	6-9	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.25	BC	0.45	Vert(CT)	-0.10	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	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 44 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 5-8-7 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-4-8, 4=0-4-8
Max Horiz 2=-31 (LC 17)
Max Uplift 2=-112 (LC 12), 4=-115 (LC 13)
Max Grav 2=507 (LC 2), 4=512 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/16, 2-3=-861/196, 3-4=-861/193, 4-5=0/17
BOT CHORD 2-6=-129/788, 4-6=-129/788
WEBS 3-6=0/278

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 6-2-4, Exterior (2) 6-2-4 to 10-5-3, Interior (1) 10-5-3 to 13-4-8 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.25 Plate DOL=1.25); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 112 lb uplift at joint 2 and 115 lb uplift at joint 4.

LOAD CASE(S) Standard

May 19,2025

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

Job	Truss	Truss Type	Qty	Ply	916 Serenity	
P02678-25595	P05	Common	1	1	Job Reference (optional)	I73556608

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Fri May 16 10:00:33
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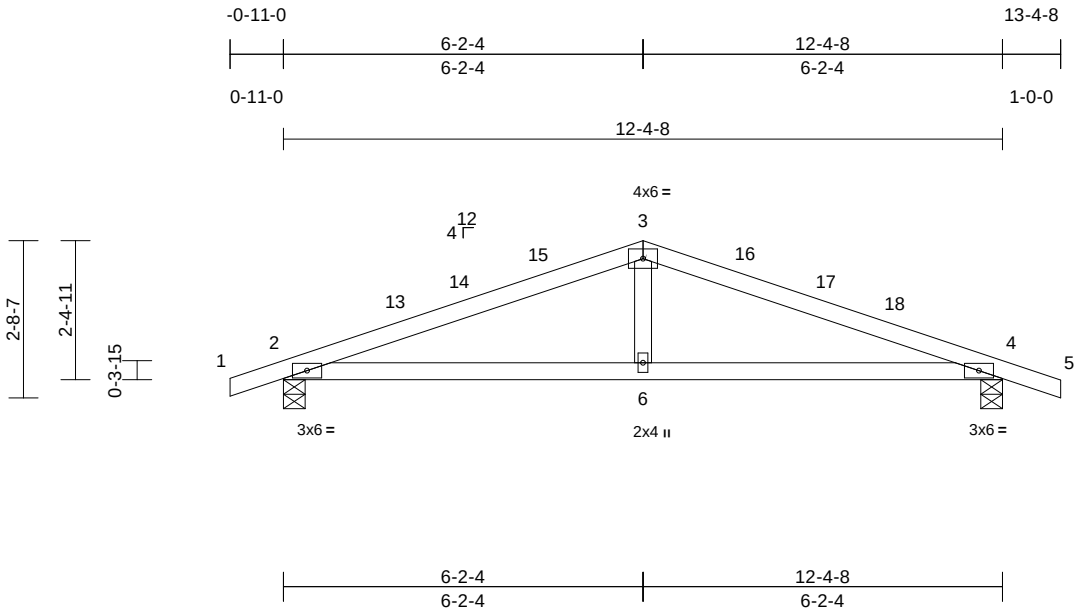

Scale = 1:39.6

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.40	Vert(LL)	-0.06	6-9	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.25	BC	0.45	Vert(CT)	-0.10	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	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 44 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 5-8-14 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-4-8, 4=0-4-8
Max Horiz 2=-32 (LC 17)
Max Uplift 2=-112 (LC 12), 4=-114 (LC 13)
Max Grav 2=507 (LC 2), 4=512 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/16, 2-3=-851/180, 3-4=-851/178, 4-5=0/17
BOT CHORD 2-6=-117/777, 4-6=-117/777
WEBS 3-6=0/279

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 6-2-4, Exterior (2) 6-2-4 to 9-2-4, Interior (1) 9-2-4 to 13-4-8 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.25 Plate DOL=1.25); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 112 lb uplift at joint 2 and 114 lb uplift at joint 4.

LOAD CASE(S) Standard

May 19,2025

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

Job	Truss	Truss Type	Qty	Ply	916 Serenity	
P02678-25595	V01	Valley	1	1	Job Reference (optional)	I73556609

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Fri May 16 10:00:33
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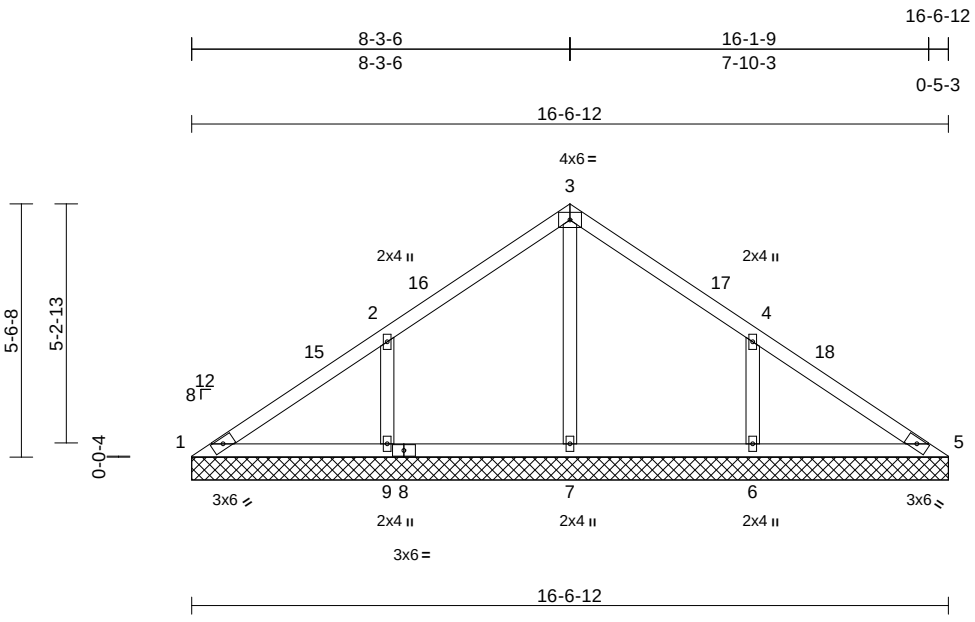

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.26	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.25	BC	0.13	Vert(TL)	n/a	-	n/a	999		
TCDL	7.0	Rep Stress Incr	YES	WB	0.22	Horiz(TL)	-0.01	5	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 67 lb	FT = 20%

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

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

REACTIONS (size) 1=16-6-12, 5=16-6-12, 6=16-6-12, 7=16-6-12, 9=16-6-12
Max Horiz 1=104 (LC 11)
Max Uplift 1=-61 (LC 30), 6=-139 (LC 15), 9=-141 (LC 14)
Max Grav 1=67 (LC 29), 5=0 (LC 5), 6=360 (LC 26), 7=528 (LC 2), 9=358 (LC 29)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-76/322, 2-3=0/302, 3-4=0/301, 4-5=-88/317
BOT CHORD 1-9=-212/80, 7-9=-212/80, 6-7=-212/80, 5-6=-222/86
WEBS 3-7=-463/23, 2-9=-251/153, 4-6=-255/153

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 0-0-6 to 3-0-6, Interior (1) 3-0-6 to 8-3-12, Exterior (2) 8-3-12 to 11-3-12, Interior (1) 11-3-12 to 16-7-2 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.25 Plate DOL=1.25); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
5) 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 61 lb uplift at joint 1, 141 lb uplift at joint 9 and 139 lb uplift at joint 6.

LOAD CASE(S) Standard

May 19,2025

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

Job	Truss	Truss Type	Qty	Ply	916 Serenity
P02678-25595	V02	Valley	1	1	I73556610
					Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Fri May 16 10:00:33 Page: 1
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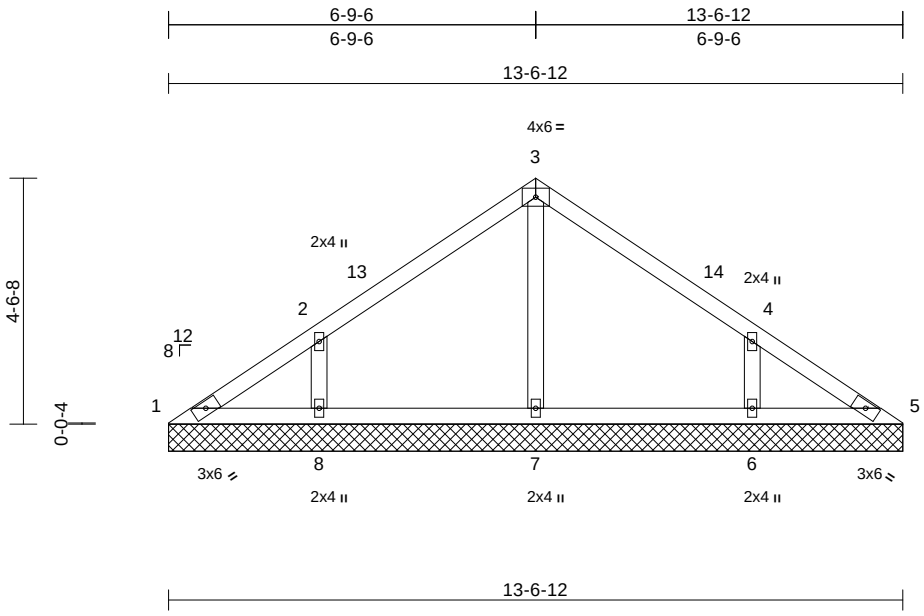

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.17	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.25	BC	0.12	Vert(TL)	n/a	-	n/a	999		
TCDL	7.0	Rep Stress Incr	YES	WB	0.06	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 53 lb	FT = 20%

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

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

REACTIONS (size) 1=13-6-12, 5=13-6-12, 6=13-6-12, 7=13-6-12, 8=13-6-12
Max Horiz 1=85 (LC 13)
Max Uplift 1=-15 (LC 15), 5=-1 (LC 14), 6=-114 (LC 15), 8=-116 (LC 14)
Max Grav 1=82 (LC 26), 5=73 (LC 2), 6=300 (LC 26), 7=271 (LC 2), 8=301 (LC 25)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-108/85, 2-3=-83/79, 3-4=-75/68, 4-5=-87/60
BOT CHORD 1-8=-34/88, 7-8=-34/51, 6-7=-34/51, 5-6=-34/68
WEBS 3-7=-189/15, 2-8=-224/137, 4-6=-223/136

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 0-0-6 to 2-9-12, Interior (1) 2-9-12 to 6-9-12, Exterior (2) 6-9-12 to 9-9-12, Interior (1) 9-9-12 to 13-7-2 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.25 Plate DOL=1.25); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
5) 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 15 lb uplift at joint 1, 1 lb uplift at joint 5, 116 lb uplift at joint 8 and 114 lb uplift at joint 6.

LOAD CASE(S) Standard

May 19,2025

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

Job	Truss	Truss Type	Qty	Ply	916 Serenity	
P02678-25595	V03	Valley	1	1	Job Reference (optional)	I73556611

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Fri May 16 10:00:33 Page: 1
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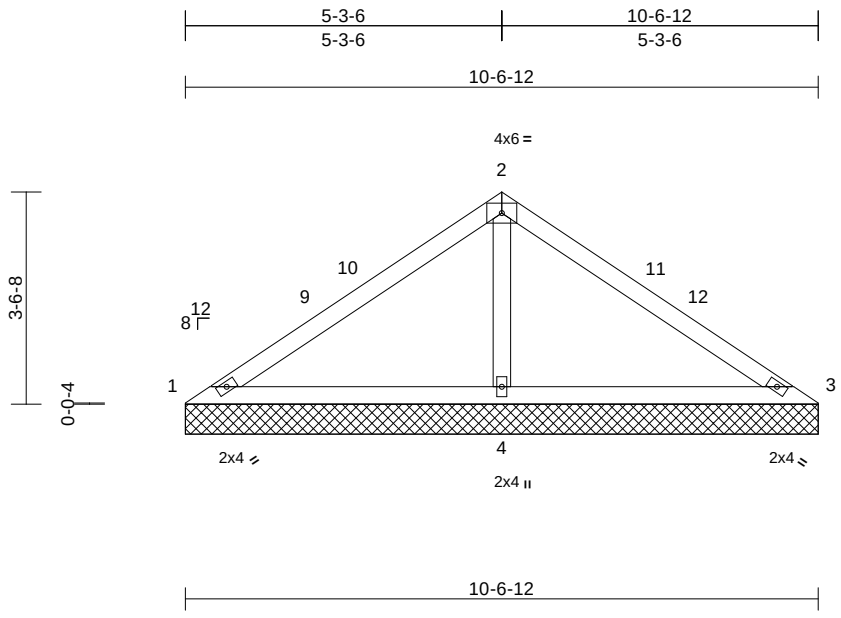

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.28	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.25	BC	0.24	Vert(TL)	n/a	-	n/a	999		
TCDL	7.0	Rep Stress Incr	YES	WB	0.11	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 37 lb	FT = 20%

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

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

REACTIONS (size) 1=10-6-12, 3=10-6-12, 4=10-6-12
Max Horiz 1=-65 (LC 10)
Max Uplift 1=-40 (LC 30), 3=-40 (LC 29), 4=-133 (LC 14)
Max Grav 1=66 (LC 29), 3=66 (LC 30), 4=745 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-90/355, 2-3=-89/355
BOT CHORD 1-4=-248/118, 3-4=-248/118
WEBS 2-4=-573/174

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 0-0-6 to 3-0-6, Interior (1) 3-0-6 to 5-3-12, Exterior (2) 5-3-12 to 8-3-12, Interior (1) 8-3-12 to 10-7-2 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.25 Plate DOL=1.25); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
5) 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 40 lb uplift at joint 1, 40 lb uplift at joint 3 and 133 lb uplift at joint 4.

LOAD CASE(S) Standard

May 19,2025

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

Job	Truss	Truss Type	Qty	Ply	916 Serenity	
P02678-25595	V04	Valley	1	1	Job Reference (optional)	I73556612

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Fri May 16 10:00:34
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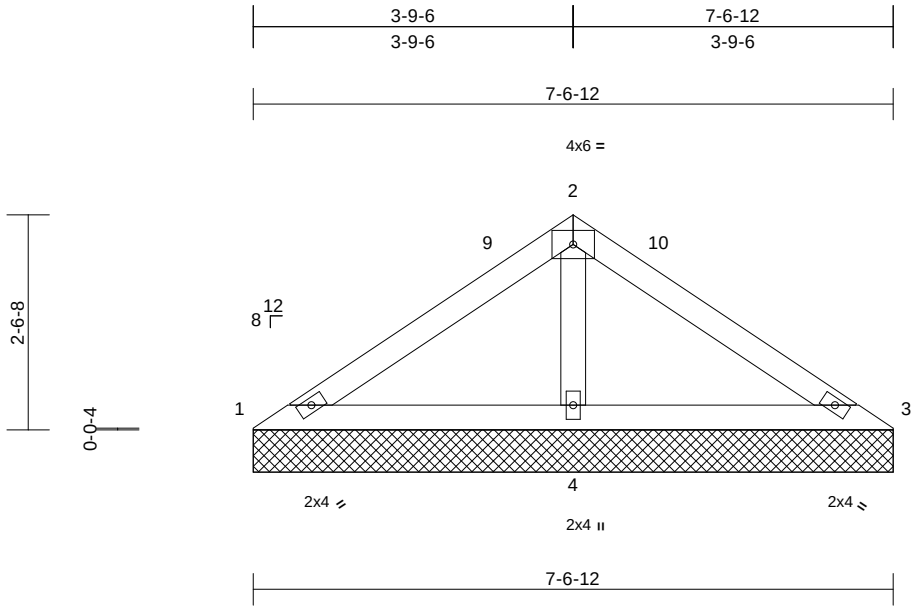

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.15	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.25	BC	0.14	Vert(TL)	n/a	-	n/a	999		
TCDL	7.0	Rep Stress Incr	YES	WB	0.04	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 26 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 7-6-12 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=7-6-12, 3=7-6-12, 4=7-6-12
Max Horiz 1=-46 (LC 10)
Max Uplift 1=-10 (LC 30), 3=-11 (LC 10), 4=-83 (LC 14)
Max Grav 1=65 (LC 29), 3=65 (LC 30), 4=485 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-59/207, 2-3=-59/207
BOT CHORD 1-4=-158/88, 3-4=-158/88
WEBS 2-4=-341/111

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 0-0-6 to 3-0-6, Interior (1) 3-0-6 to 3-9-12, Exterior (2) 3-9-12 to 6-7-15, Interior (1) 6-7-15 to 7-7-2 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.25 Plate DOL=1.25); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
5) 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 10 lb uplift at joint 1, 11 lb uplift at joint 3 and 83 lb uplift at joint 4.

LOAD CASE(S) Standard

May 19,2025

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

Job	Truss	Truss Type	Qty	Ply	916 Serenity
P02678-25595	V05	Valley	1	1	I73556613
					Job Reference (optional)

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Fri May 16 10:00:34
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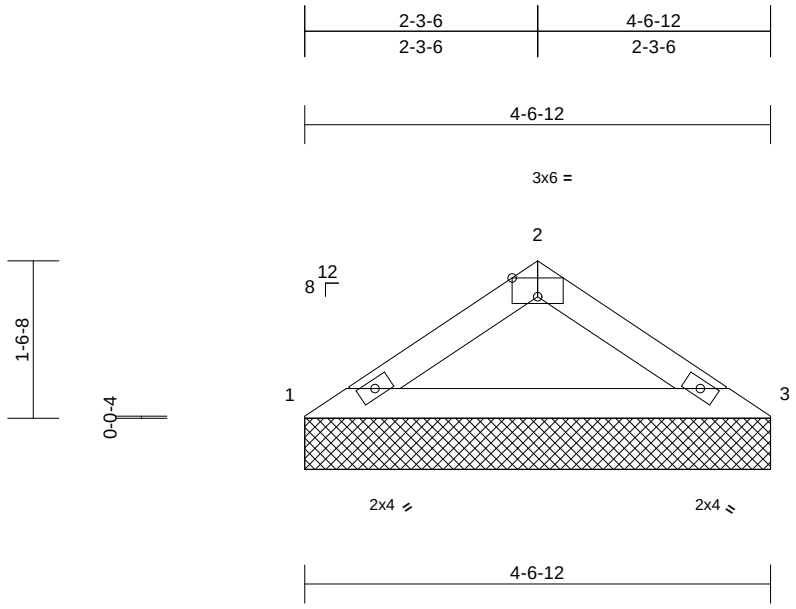

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Plate Offsets (X, Y): [2:0-3-0,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.13	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.25	BC	0.11	Vert(TL)	n/a	-	n/a	999		
TCDL	7.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 13 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 4-6-12 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=4-6-12, 3=4-6-12
Max Horiz 1=-26 (LC 10)
Max Uplift 1=-26 (LC 14), 3=-26 (LC 15)
Max Grav 1=169 (LC 2), 3=169 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-257/64, 2-3=-257/64
BOT CHORD 1-3=-46/207

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.25 Plate DOL=1.25); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
5) 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 26 lb uplift at joint 1 and 26 lb uplift at joint 3.

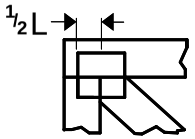
LOAD CASE(S) Standard

May 19,2025

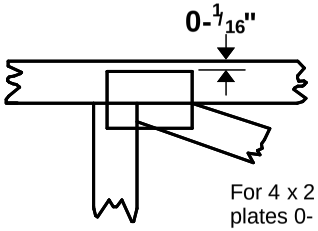
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

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.

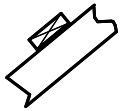
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

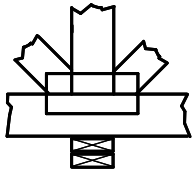
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

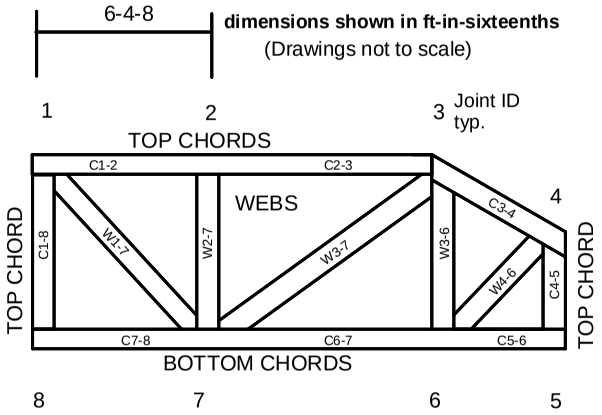


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

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.