

Trenco  
818 Soundside Rd  
Edenton, NC 27932

Re: P04241-28229  
1058 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: I75140139 thru I75140179

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

North Carolina COA: C-0844



July 25, 2025

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Gilbert, Eric

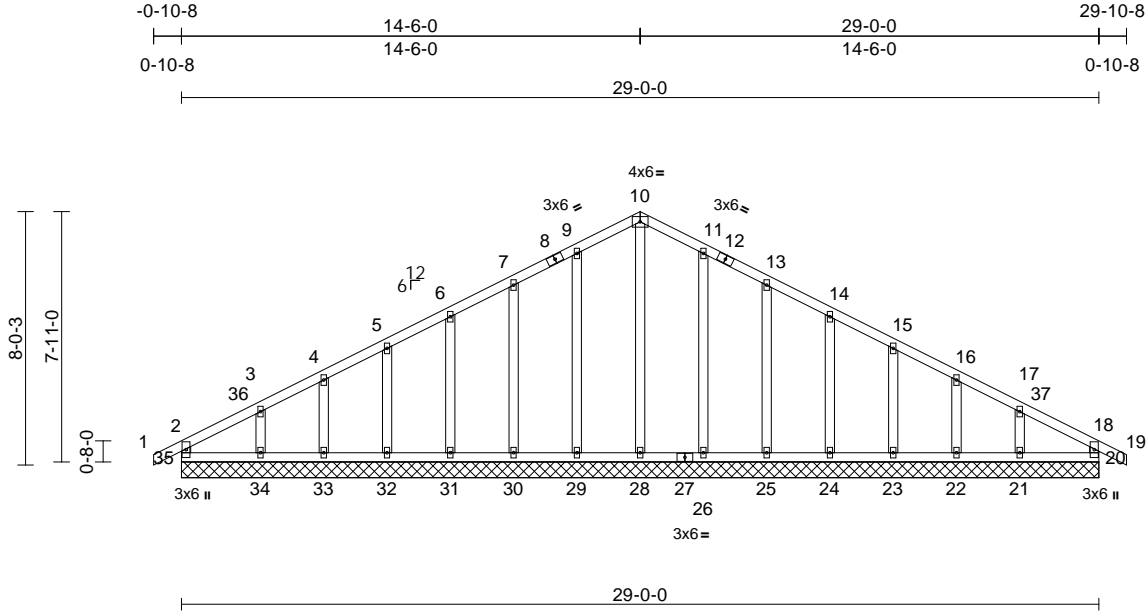
**IMPORTANT NOTE:** The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), 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	1058 Serenity	I75140139
P04241-28229	A01E	Common Supported Gable	1	1	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Thu Jul 24 07:57:42  
ID:UZLKKU058vaMaW4NJKZo55Pzwnwh-RfC?PsB70Hq3NSgPqnL8w3uITxbGKWRCDoi7J4zJC?f

Page: 1



<b>Loading</b>	(psf)	<b>Spacing</b>	2-0-0	<b>CSI</b>		<b>DEFL</b>	in	(loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	NO	WB	0.13	Horz(CT)	0.00	20	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MR								
BCDL	10.0											
Weight: 175 lb FT = 20%												

<b>LUMBER</b>		<b>TOP CHORD</b>	2-35=141/63, 1-2=0/27, 2-3=97/50, 3-4=69/61, 4-5=56/80, 5-6=51/98, 6-7=69/128, 7-9=88/164, 9-10=106/198, 10-11=106/198, 11-13=88/164, 13-14=69/128, 14-15=51/93, 15-16=39/56, 16-17=50/36, 17-18=76/29, 18-19=0/27, 18-20=140/63	5) Unbalanced snow loads have been considered for this design.
<b>BRACING</b>		<b>BOT CHORD</b>	34-35=20/75, 33-34=20/75, 32-33=20/75, 31-32=20/75, 30-31=20/75, 29-30=20/75, 28-29=20/75, 26-28=20/75, 25-26=20/75, 24-25=20/75, 23-24=20/75, 22-23=20/75, 21-22=20/75, 20-21=20/75	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.
<b>REACTIONS</b>	(size)	<b>WEBS</b>	10-28=129/34, 9-29=148/51, 7-30=119/58, 6-31=120/54, 5-32=121/57, 4-33=117/50, 3-34=130/85, 11-26=148/51, 13-25=119/58, 14-24=120/54, 15-23=121/57, 16-22=117/50, 17-21=131/85	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.
<b>NOTES</b>				8) All plates are 2x4 (  ) MT20 unless otherwise indicated.
<b>FORCES</b>	(lb) - Maximum Compression/Maximum Tension			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.



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Continued on page 2

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

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ENGINEERING BY  
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818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1058 Serenity	I75140139
P04241-28229	A01E	Common Supported Gable	1	1	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Thu Jul 24 07:57:42

Page: 2

ID:UZLKU058vaMaW4NjkZo55Pzwnwh-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

- 14) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 18 lb uplift at joint 35, 3 lb uplift at joint 20, 37 lb uplift at joint 29, 39 lb uplift at joint 30, 36 lb uplift at joint 31, 39 lb uplift at joint 32, 26 lb uplift at joint 33, 70 lb uplift at joint 34, 36 lb uplift at joint 26, 41 lb uplift at joint 25, 38 lb uplift at joint 24, 42 lb uplift at joint 23, 32 lb uplift at joint 22 and 68 lb uplift at joint 21.

- 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

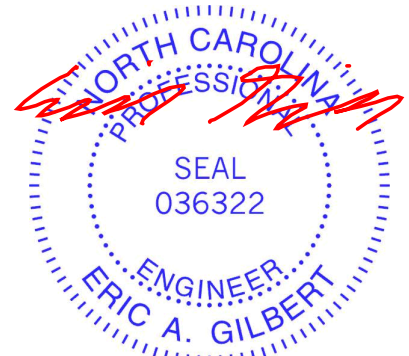
- 1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (lb/ft)

Vert: 1-2=-43, 2-10=-43, 10-18=-43, 18-19=-43

Trapezoidal Loads (lb/ft)

Vert: 35=-20-to-34=-21 (F=-1), 34=-21 (F=-1)-to-33=-22 (F=-2), 33=-22 (F=-2)-to-32=-23 (F=-3), 32=-23 (F=-3)-to-31=-24 (F=-4), 31=-24 (F=-4)-to-30=-25 (F=-5), 30=-25 (F=-5)-to-29=-26 (F=-6), 29=-26 (F=-6)-to-28=-28 (F=-7), 28=-28 (F=-7)-to-27=-28 (F=-8), 27=-28 (F=-8)-to-26=-29 (F=-9), 26=-29 (F=-9)-to-25=-30 (F=-10), 25=-30 (F=-10)-to-24=-31 (F=-11), 24=-31 (F=-11)-to-23=-32 (F=-12), 23=-32 (F=-12)-to-22=-33 (F=-13), 22=-33 (F=-13)-to-21=-34 (F=-14), 21=-34 (F=-14)-to-20=-35 (F=-15)



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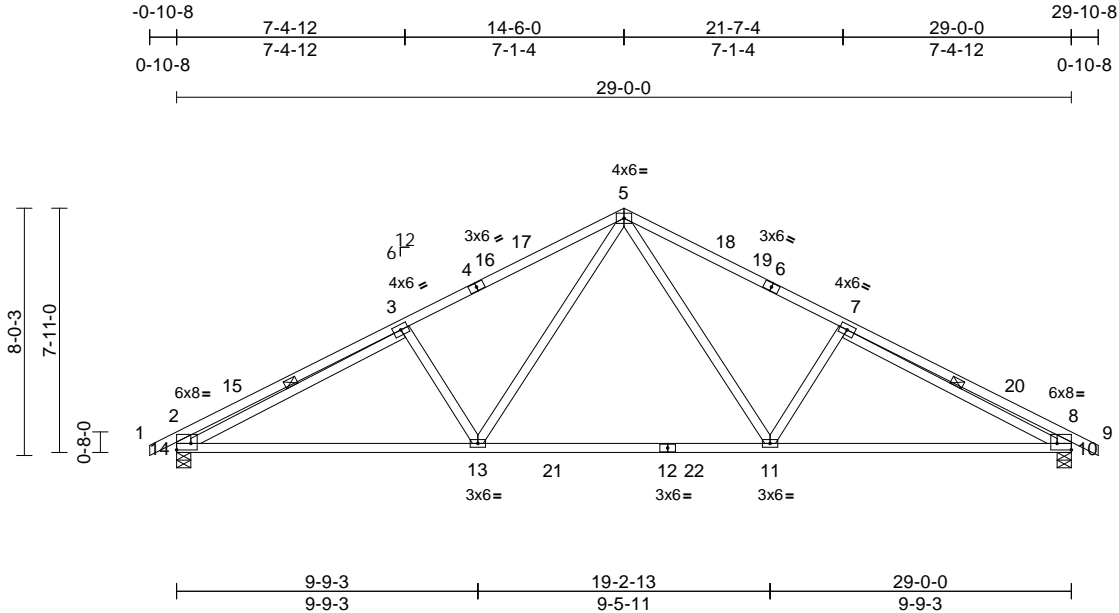
818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1058 Serenity	175140140
P04241-28229	A02	Common	4	1	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Thu Jul 24 07:57:43  
ID:NLbqK08fzps0?hh4zPt1FFzwnwd-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:74.7

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.79	Vert(LL)	-0.25	11-13	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.79	Vert(CT)	-0.38	11-13	>912	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.36	Horz(CT)	0.06	10	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 158 lb	FT = 20%

#### LUMBER

TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.1  
WEBS 2x4 SP No.2 \*Except\* 10-8,14-2:2x6 SP No.2

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
WEBS 1 Row at midpt 7-10, 3-14

#### REACTIONS

(size) 10=0-5-8, 14=0-5-8  
Max Horiz 14=84 (LC 20)  
Max Uplift 10=-110 (LC 17), 14=-110 (LC 16)  
Max Grav 10=1303 (LC 3), 14=1303 (LC 3)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/30, 2-3=-861/173, 3-5=-1839/210, 5-7=-1839/210, 7-8=-861/173, 8-9=0/30, 8-10=-600/137, 2-14=-600/137  
BOT CHORD 13-14=-165/1711, 11-13=-23/1184, 10-11=-84/1711  
WEBS 5-11=-100/745, 7-11=-372/169, 5-13=-100/745, 3-13=-372/169, 7-10=-1162/58, 3-14=-1162/58

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 14-6-0, Exterior(2R) 14-6-0 to 17-6-0, Interior (1) 17-6-0 to 29-10-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
- Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 110 lb uplift at joint 10 and 110 lb uplift at joint 14.

LOAD CASE(S) Standard



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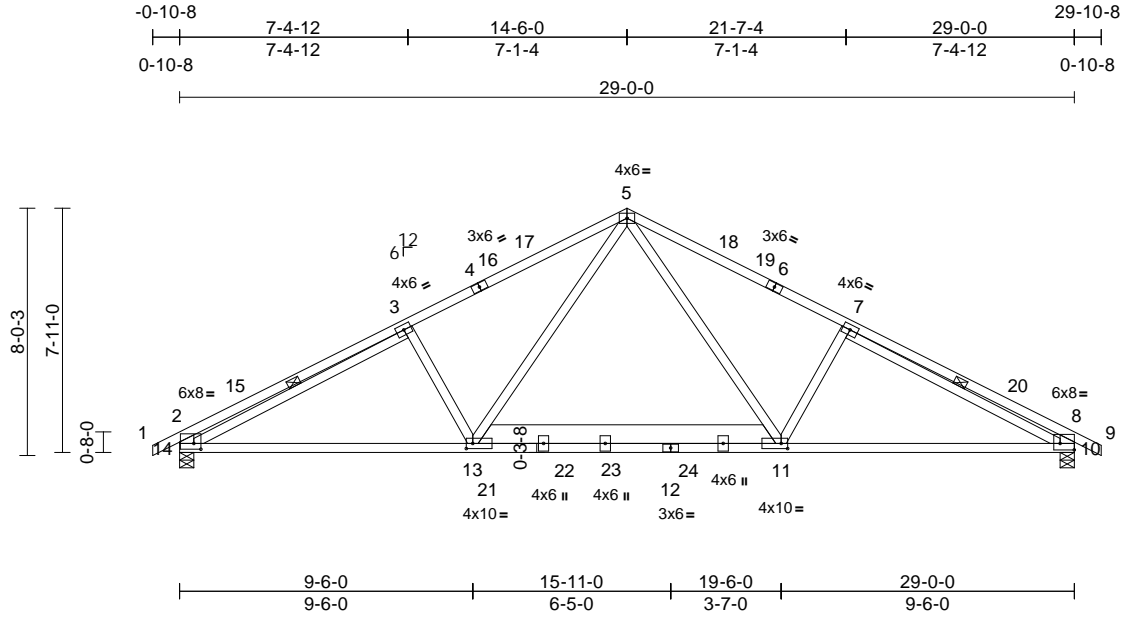
818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1058 Serenity	175140141
P04241-28229	A03	Common	2	1	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Thu Jul 24 07:57:43  
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Page: 1



Scale = 1:74.7

Plate Offsets (X, Y): [2:0-2-12,0-2-4], [8:Edge,0-2-8], [11:0-2-8,0-2-0], [13:0-2-8,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.85	Vert(LL)	-0.14	13-14	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.76	Vert(CT)	-0.29	13-14	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.39	Horz(CT)	0.06	10	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 188 lb	FT = 20%

#### LUMBER

TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.1 \*Except\* 13-11:2x8 SP DSS  
WEBS 2x4 SP No.2 \*Except\* 10-8,14-2:2x6 SP No.2

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 1-7-8 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
WEBS 1 Row at midpt 7-10, 3-14

#### REACTIONS

(size) 10=0-5-8, 14=0-5-8  
Max Horiz 14=84 (LC 21)  
Max Uplift 10=69 (LC 17), 14=51 (LC 16)  
Max Grav 10=1340 (LC 3), 14=1357 (LC 3)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/30, 2-3=-871/161, 3-5=-1968/93,  
5-7=-1933/128, 7-8=-865/167, 8-9=0/30,  
8-10=-601/133, 2-14=-604/130  
BOT CHORD 13-14=-59/1811, 11-13=0/1230,  
10-11=-9/1781  
WEBS 5-11=-79/788, 7-11=-364/174, 5-13=-21/845,  
3-13=-363/176, 7-10=-1239/0, 3-14=-1268/0

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 14-6-0, Exterior(2R) 14-6-0 to 17-6-0, Interior (1) 17-6-0 to 29-10-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
- Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
- 100.0lb AC unit load placed on the bottom chord, 12-0-0 from left end, supported at two points, 4-0-0 apart.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 69 lb uplift at joint 10 and 51 lb uplift at joint 14.

LOAD CASE(S) Standard



July 25,2025

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ENGINEERING BY  
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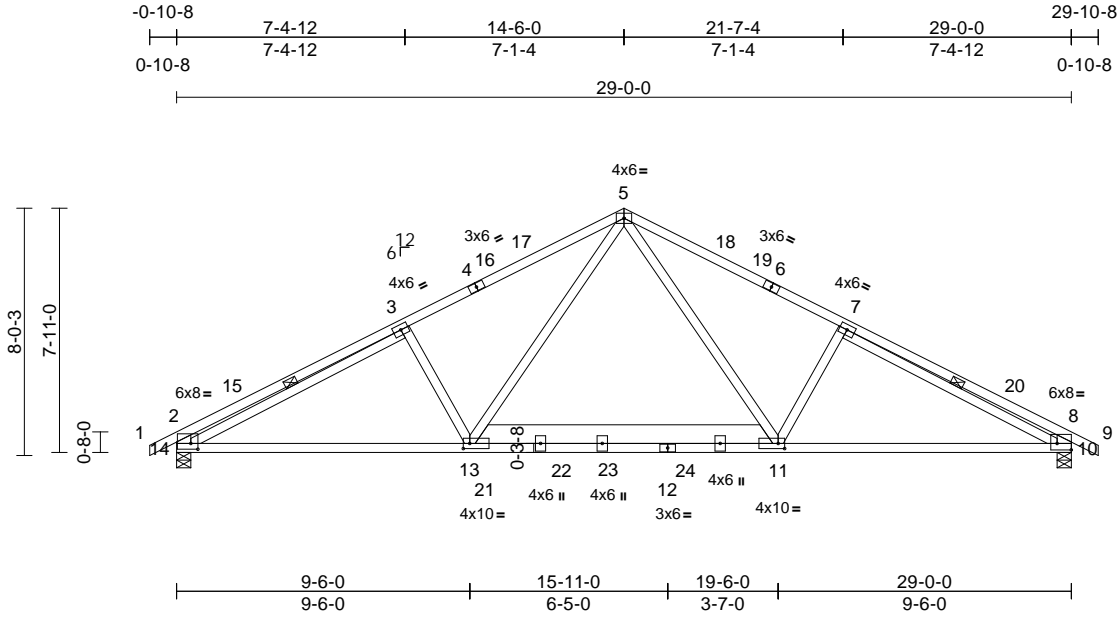


Job	Truss	Truss Type	Qty	Ply	1058 Serenity	175140142
P04241-28229	A04	Common	3	1	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Thu Jul 24 07:57:43  
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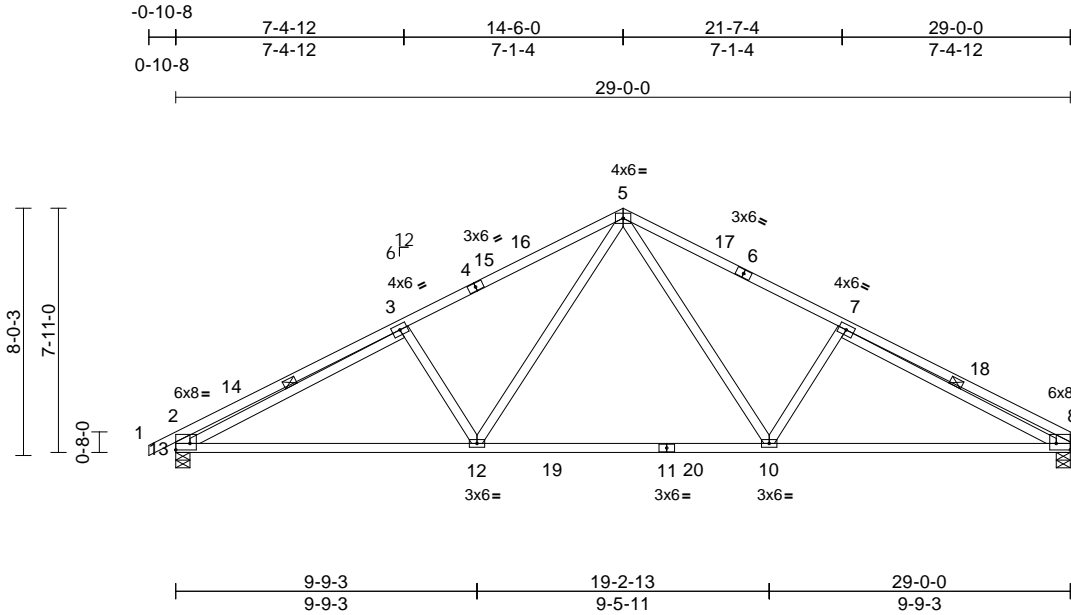


Job	Truss	Truss Type	Qty	Ply	1058 Serenity	I75140143
P04241-28229	A05	Common	1	1	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Thu Jul 24 07:57:44  
ID:F6qLAIBA12MSTJ\_rCFyzP5zwnwZ-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWRcDoi7J4zJC?i

Page: 1



Scale = 1:74.7

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.80	Vert(LL)	-0.25	10-12	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.79	Vert(CT)	-0.38	10-12	>907	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.41	Horz(CT)	0.06	9	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 157 lb	FT = 20%

#### LUMBER

TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.1  
WEBS 2x4 SP No.2 \*Except\* 9-8,13-2:2x6 SP No.2

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
WEBS 1 Row at midpt 7-9, 3-13

#### REACTIONS

(size) 9=0-5-8, 13=0-5-8  
Max Horiz 13=91 (LC 16)  
Max Uplift 9=96 (LC 17), 13=110 (LC 16)  
Max Grav 9=1246 (LC 3), 13=1304 (LC 3)

#### FORCES

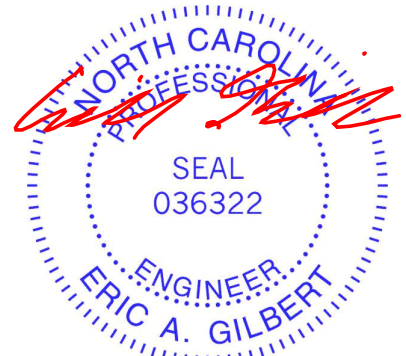
(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/30, 2-3=-860/173, 3-5=-1842/210,  
5-7=-1848/216, 7-8=-730/116, 8-9=-455/93,  
2-13=-600/137  
BOT CHORD 12-13=-172/1713, 10-12=-30/1185,  
9-10=-115/1723  
WEBS 5-10=-102/754, 7-10=-384/172,  
5-12=-100/746, 3-12=-373/169,  
7-9=-1303/92, 3-13=-1166/58

#### NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust)  
Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 14-6-0, Exterior(2R) 14-6-0 to 17-6-0, Interior (1) 17-6-0 to 28-9-4 zone; cantilever left and right exposed; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
- 6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 96 lb uplift at joint 9 and 110 lb uplift at joint 13.

LOAD CASE(S) Standard



July 25,2025

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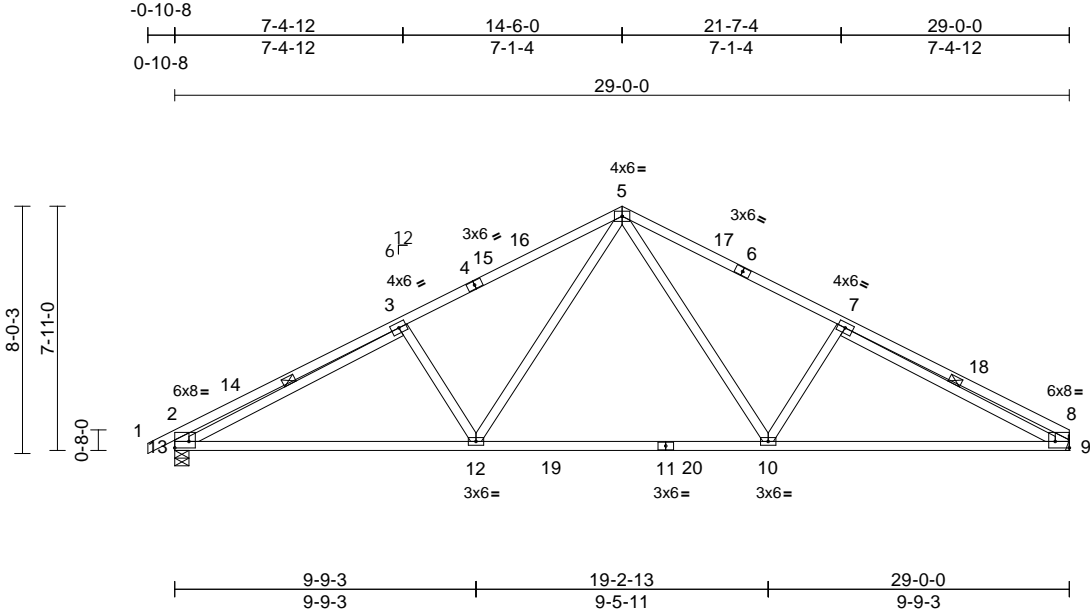
818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1058 Serenity	I75140144
P04241-28229	A06	Common	1	1	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Thu Jul 24 07:57:44  
ID:RD?VTWK3RQlul?KzL3eYMQzwnwO-RfC?PsB70Hq3NSgPqnL8w3uITXbGKwRCDoi7J4zJC?f

Page: 1



Scale = 1:74.7

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.80	Vert(LL)	-0.25	10-12	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.79	Vert(CT)	-0.38	10-12	>907	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.41	Horz(CT)	0.06	9	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 157 lb	FT = 20%

#### LUMBER

TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.1  
WEBS 2x4 SP No.2 \*Except\* 9-8,13-2:2x6 SP No.2

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
WEBS 1 Row at midpt 7-9, 3-13

#### REACTIONS

(size) 9= Mechanical, 13=0-5-8  
Max Horiz 13=91 (LC 16)  
Max Uplift 9=96 (LC 17), 13=110 (LC 16)  
Max Grav 9=1246 (LC 3), 13=1304 (LC 3)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/30, 2-3=-860/173, 3-5=-1842/210,  
5-7=-1848/216, 7-8=-730/116, 8-9=-455/93,  
2-13=-600/137  
BOT CHORD 12-13=-172/1713, 10-12=-30/1185,  
9-10=-115/1723  
WEBS 5-10=-102/754, 7-10=-384/172,  
5-12=-100/746, 3-12=-373/169,  
7-9=-1303/92, 3-13=-1166/58

#### NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust)  
Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 14-6-0, Exterior(2R) 14-6-0 to 17-6-0, Interior (1) 17-6-0 to 28-9-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 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 96 lb uplift at joint 9 and 110 lb uplift at joint 13.

LOAD CASE(S) Standard



July 25, 2025

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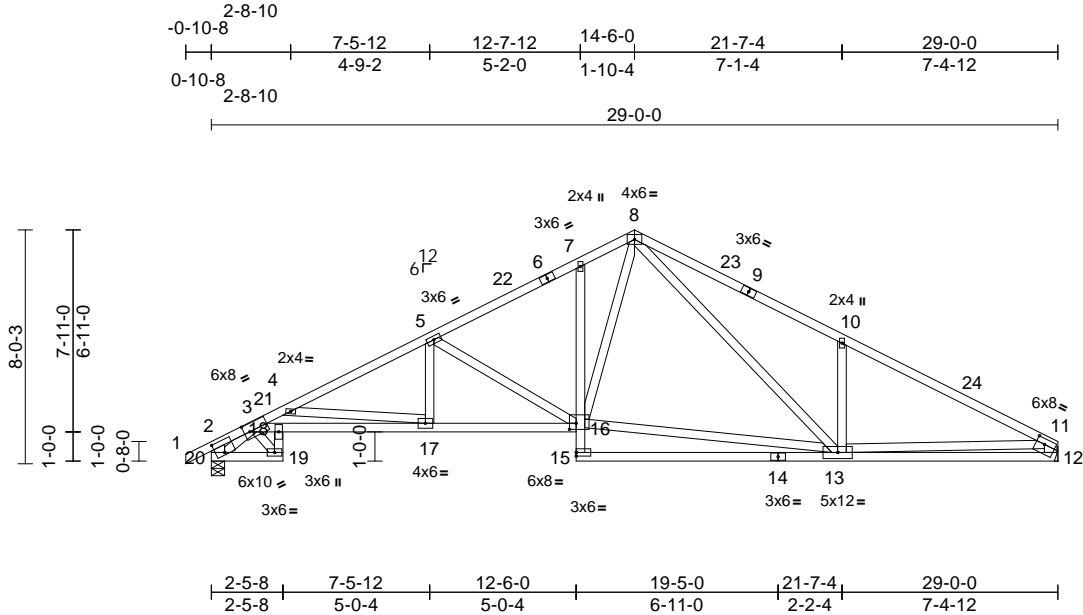


Job	Truss	Truss Type	Qty	Ply	1058 Serenity	I75140145
P04241-28229	A07	Roof Special	2	1	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Thu Jul 24 07:57:44  
ID:4GBcQoGxcu7bBES?YV2NfMzwnwT-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?i

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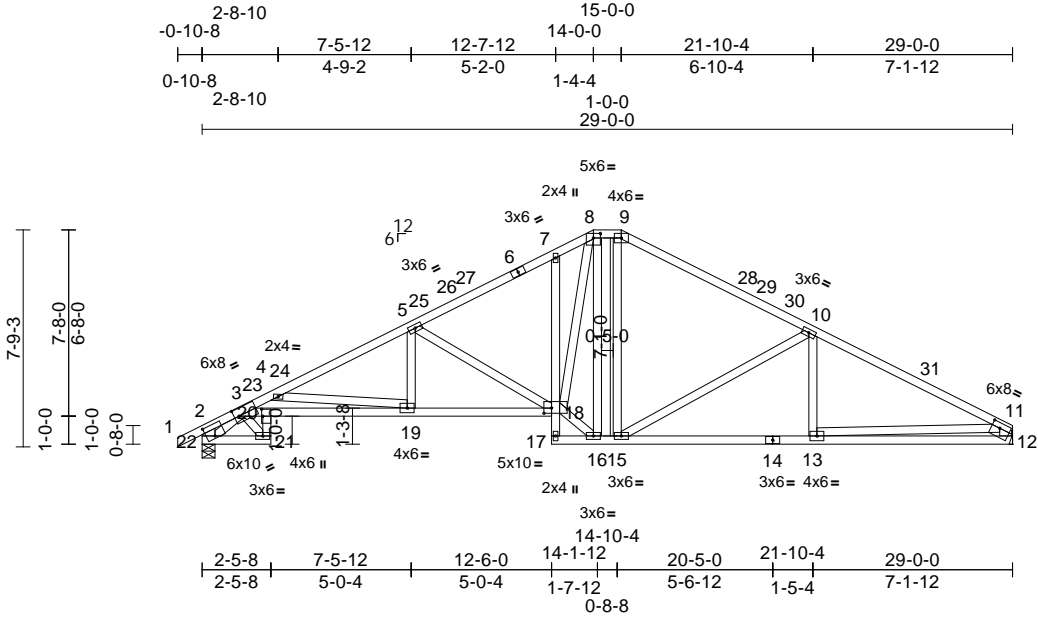


Job	Truss	Truss Type	Qty	Ply	1058 Serenity	I75140146
P04241-28229	A08	Hip	1	1	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Thu Jul 24 07:57:45  
ID:88bHaxRL4V?TVX5ux9qvmXzwnwE-RfC?PsB70Hq3NSgPqnL8w3uITxbGKWrcDoi7J4zJC?f

Page: 1



Scale = 1:82.5

Plate Offsets (X, Y): [2:0-3-8,0-5-0], [3:0-2-0,0-3-4], [8:0-3-0,0-2-0], [11:0-3-8,0-2-4], [18:0-3-4,0-2-4], [20:0-3-0,0-0-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.73	Vert(LL)	-0.20	19-20	>999	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.73	Vert(CT)	-0.38	19-20	>898	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.73	Horz(CT)	0.23	12	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 189 lb	FT = 20%

#### LUMBER

TOP CHORD 2x4 SP No.2 \*Except\* 1-6:2x4 SP DSS  
BOT CHORD 2x4 SP No.2 \*Except\* 3-18:2x4 SP DSS  
WEBS 2x4 SP No.2 \*Except\* 12-11,22-2:2x6 SP No.2

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 2-8-8 oc purlins, except end verticals, and 2-0-0 oc purlins (4-9-9 max.): 8-9.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 12= Mechanical, 22=0-5-8  
Max Horiz 22=88 (LC 16)  
Max Uplift 12=94 (LC 17), 22=108 (LC 16)  
Max Grav 12=1243 (LC 41), 22=1295 (LC 41)

#### FORCES

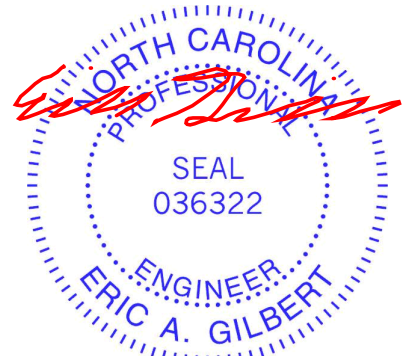
(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/30, 2-3=-617/57, 3-4=-3923/385, 4-5=-2726/209, 5-7=-1903/177, 7-8=-1823/220, 8-9=-1276/171, 9-10=-1552/170, 10-11=-2129/161, 11-12=-1174/113, 2-22=-685/80  
BOT CHORD 21-22=-145/1070, 20-21=-175/1361, 3-20=-426/3783, 19-20=-430/3784, 18-19=-190/2397, 17-18=-100/25, 7-18=-246/98, 16-17=-22/100, 15-16=-18/1276, 13-15=-94/1842, 12-13=-69/433  
WEBS 4-19=-1396/242, 5-19=-8/433, 5-18=-912/153, 16-18=-5/1427, 8-18=-177/1476, 8-16=-553/46, 9-15=-10/336, 10-15=-654/155, 10-13=0/239, 11-13=-43/1412, 3-22=-921/92, 3-21=-1607/216

#### NOTES

1) Unbalanced roof live loads have been considered for this design.

- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 14-0-0, Exterior(2E) 14-0-0 to 15-0-0, Exterior(2R) 15-0-0 to 19-2-15, Interior (1) 19-2-15 to 28-9-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=16.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 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) Provide adequate drainage to prevent water ponding.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 10) Refer to girder(s) for truss to truss connections.
- 11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 94 lb uplift at joint 12 and 108 lb uplift at joint 22.
- 12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard



July 25, 2025

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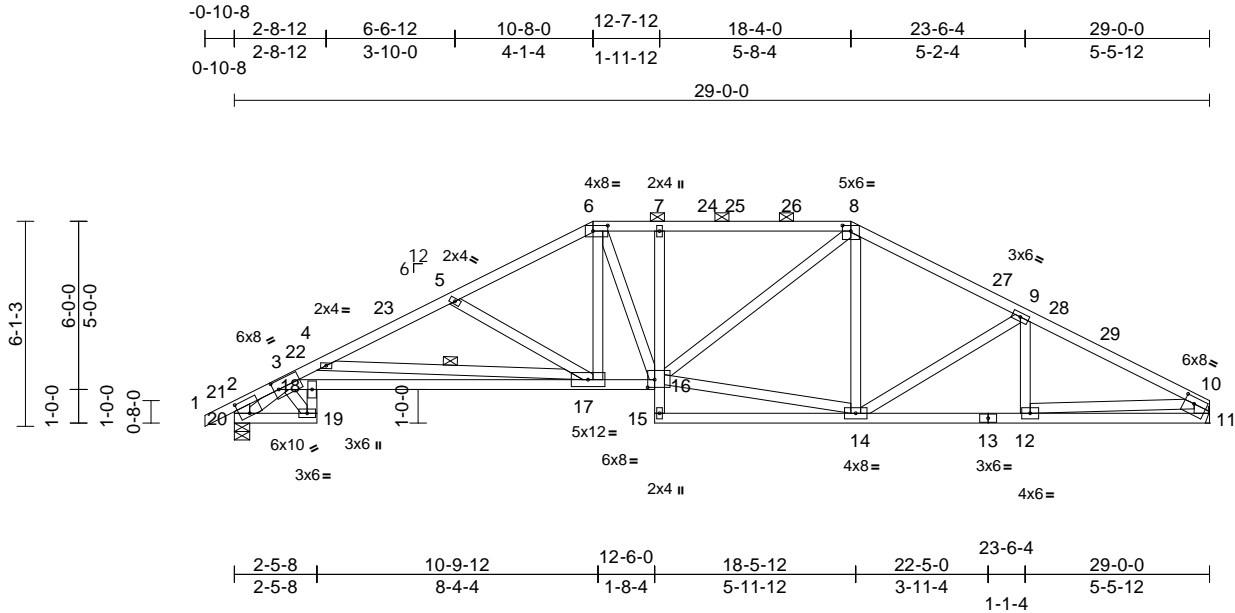
Job	Truss	Truss Type	Qty	Ply	1058 Serenity	175140147
P04241-28229	A09	Hip	1	1	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Thu Jul 24 07:57:45

Page: 1

ID:NQiYbezJyQM98t8yh5\_?bzwvZ-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWRCDoi7J4zJC?f



Scale = 1:68.5

Plate Offsets (X, Y): [2:0-3-8,0-5-0], [3:0-1-12,0-3-0], [6:0-5-4,0-2-0], [8:0-3-0,0-2-0], [10:0-3-8,0-2-4], [16:0-2-8,0-2-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.69	Vert(LL)	-0.23	17-18	>999	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.64	Vert(CT)	-0.52	17-18	>653	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.38	Horz(CT)	0.23	11	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 186 lb	FT = 20%

#### LUMBER

TOP CHORD 2x4 SP No.2 \*Except\* 1-6:2x4 SP DSS  
 BOT CHORD 2x4 SP No.2 \*Except\* 3-16:2x4 SP DSS  
 WEBS 2x4 SP No.2 \*Except\* 11-10,20-2:2x6 SP No.2

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 2-8-8 oc purlins, except end verticals, and 2-0-0 oc purlins (3-11-3 max.): 6-8.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
 WEBS 1 Row at midpt 4-17

#### REACTIONS

(size) 11= Mechanical, 20=0-5-8  
 Max Horiz 20=67 (LC 13)  
 Max Uplift 11=75 (LC 17), 20=89 (LC 16)  
 Max Grav 11=1177 (LC 41), 20=1242 (LC 41)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-2=0/30, 2-3=632/49, 3-4=3403/261, 4-5=2249/227, 5-6=1956/198, 6-7=1701/204, 7-8=1704/206, 8-9=1595/181, 9-10=1913/169, 10-11=1117/110, 2-20=742/64  
 BOT CHORD 19-20=115/936, 18-19=133/1233, 3-18=253/3337, 17-18=261/3293, 16-17=75/1646, 15-16=0/112, 7-16=397/88, 14-15=0/175, 12-14=114/1638, 11-12=45/359  
 WEBS 4-17=1317/125, 5-17=465/126, 6-17=42/667, 6-16=100/260, 14-16=69/1213, 8-16=69/523, 8-14=29/212, 9-14=428/115, 9-12=32/105, 10-12=79/1303, 3-20=750/109, 3-19=1453/166

#### NOTES

1) Unbalanced roof live loads have been considered for this design.

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 10-8-0, Exterior(2R) 10-8-0 to 14-10-15, Interior (1) 14-10-15 to 18-4-0, Exterior(2R) 18-4-0 to 22-6-15, Interior (1) 22-6-15 to 28-9-4 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
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=16.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
- Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 75 lb uplift at joint 11 and 89 lb uplift at joint 20.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



July 25,2025

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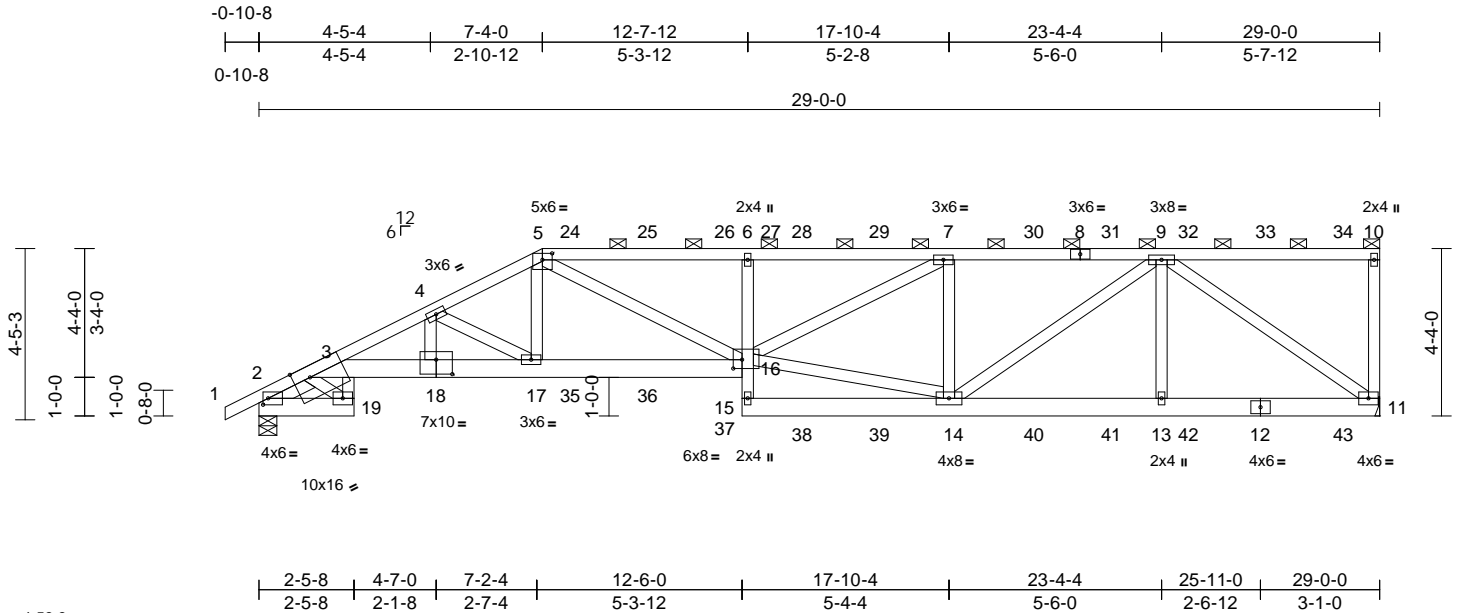
818 Soundside Road  
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1058 Serenity	I75140148
P04241-28229	A10G	Half Hip Girder	1	2	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Thu Jul 24 07:57:46  
ID:Vw\_SK47Tui3WD8NeDwq11LzwnvM-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?i

Page: 1



Scale = 1:59.6									
Plate Offsets (X, Y): [2:0-1-9,0-2-0], [3:0-5-4,Edge], [5:0-3-0,0-2-0], [16:0-2-12,0-2-12], [18:0-5-0,0-4-8]									
<b>Loading</b>	(psf)	<b>Spacing</b>	2-0-0	<b>CSI</b>		<b>DEFL</b>	in (loc)	l/defl	L/d
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.93	Vert(LL)	0.15 16-17	>999	240
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.57	Vert(CT)	-0.26 16-17	>999	180
TCDL	10.0	Rep Stress Incr	NO	WB	0.40	Horz(CT)	0.15 11	n/a	n/a
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS					
BCDL	10.0								
Weight: 389 lb FT = 20%									

**LUMBER**  
TOP CHORD 2x4 SP No.2 \*Except\* 1-5:2x4 SP DSS  
BOT CHORD 2x6 SP No.2 \*Except\* 19-3,6-15:2x4 SP  
No.2, 3-18:2x6 SP DSS  
WEBS 2x4 SP No.2  
SLIDER Left 2x4 SP No.2 -- 1-2-9

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (5-11-9 max.): 5-10.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 2-19.

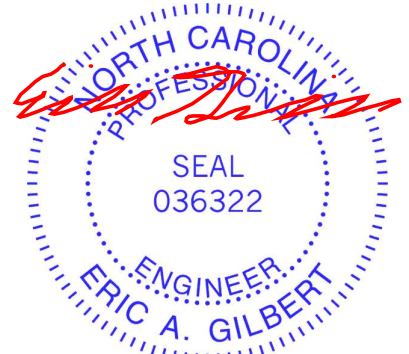
**REACTIONS**  
(size) 2=0-5-8, 11= Mechanical  
Max Horiz 2=120 (LC 11)  
Max Uplift 2=-473 (LC 12), 11=-631 (LC 9)  
Max Grav 2=1689 (LC 2), 11=1657 (LC 33)

**FORCES**  
(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/37, 2-3=-494/154, 3-4=-4619/1477, 4-5=-3699/1276, 5-6=-4028/1482, 6-7=-3975/1465, 7-9=-2873/1061, 9-10=-56/42, 10-11=-203/109  
BOT CHORD 2-19=-170/53, 3-19=-177/537, 3-17=-1412/4149, 16-17=-1179/3220, 15-16=-12/148, 6-16=-460/201, 14-15=-143/402, 13-14=-753/1933, 11-13=-753/1933  
WEBS 7-14=-1032/450, 9-13=-7/333, 5-17=-303/944, 5-16=-436/1033, 14-16=-991/2555, 9-14=-434/1179, 9-11=-2345/881, 7-16=-454/1229, 4-18=-211/763, 4-17=-1004/284

**NOTES**

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.  
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.  
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust)  
Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=16.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
- Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
- Provide adequate drainage to prevent water ponding.
- The Fabrication Tolerance at joint 3 = 4%
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 631 lb uplift at joint 11 and 473 lb uplift at joint 2.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



July 25,2025

Continued on page 2

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

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Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1058 Serenity	I75140148
P04241-28229	A10G	Half Hip Girder	1	2	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Thu Jul 24 07:57:46  
ID:Vw\_SK47Tui3WD8NeDwq11LzwnvM-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 2

16) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 74 lb down and 50 lb up at 8-0-12, 76 lb down and 49 lb up at 10-0-12, 76 lb down and 49 lb up at 12-0-12, 86 lb down and 67 lb up at 14-0-12, 86 lb down and 67 lb up at 16-0-12, 86 lb down and 67 lb up at 18-0-12, 86 lb down and 67 lb up at 20-0-12, 86 lb down and 67 lb up at 22-0-12, 86 lb down and 67 lb up at 24-0-12, and 86 lb down and 67 lb up at 26-0-12, and 84 lb down and 66 lb up at 28-0-12 on top chord, and 275 lb down and 119 lb up at 7-4-0, 50 lb down and 36 lb up at 8-0-12, 50 lb down and 36 lb up at 10-0-12, 50 lb down and 36 lb up at 12-0-12, 40 lb down and 14 lb up at 14-0-12, 40 lb down and 14 lb up at 16-0-12, 40 lb down and 14 lb up at 18-0-12, 40 lb down and 14 lb up at 20-0-12, 40 lb down and 14 lb up at 22-0-12, 40 lb down and 14 lb up at 24-0-12, and 40 lb down and 14 lb up at 26-0-12, and 41 lb down and 13 lb up at 28-0-12 on bottom chord. The design/selection of such connection device (s) is the responsibility of others.

#### LOAD CASE(S) Standard

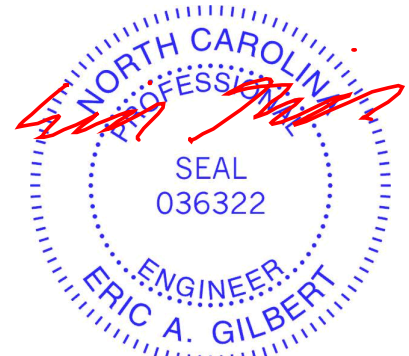
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (lb/ft)

Vert: 1-3=-43, 3-5=-43, 5-10=-53, 19-20=-20, 3-16=-20, 11-15=-20

Concentrated Loads (lb)

Vert: 12=-21 (F), 7=-19 (F), 14=-21 (F), 17=-275 (F), 24=-15 (F), 25=-15 (F), 26=-15 (F), 28=-19 (F), 29=-19 (F), 30=-19 (F), 31=-19 (F), 32=-19 (F), 33=-19 (F), 34=-25 (F), 35=-31 (F), 36=-31 (F), 37=-31 (F), 38=-21 (F), 39=-21 (F), 40=-21 (F), 41=-21 (F), 42=-21 (F), 43=-23 (F)



July 25, 2025

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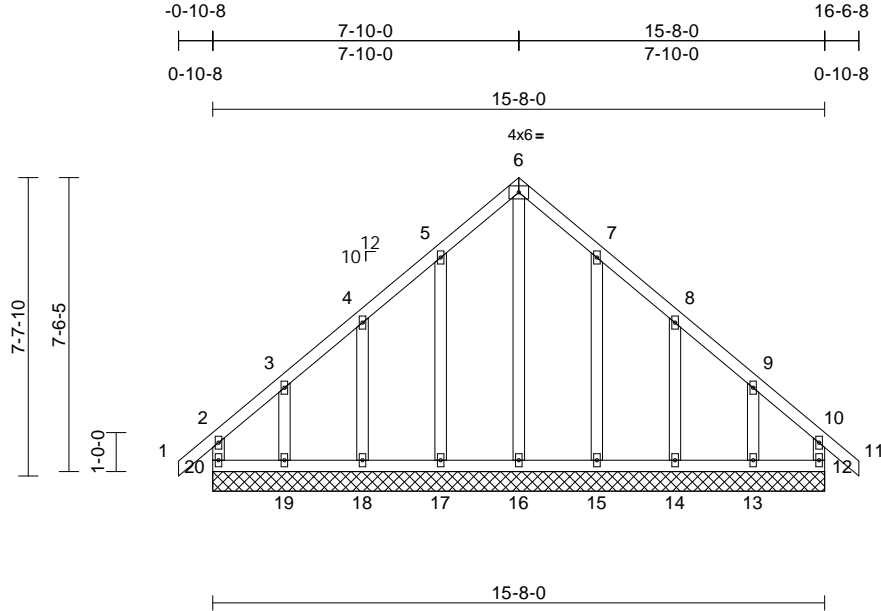
Job	Truss	Truss Type	Qty	Ply	1058 Serenity	175140149
P04241-28229	B01E	Common Supported Gable	1	1	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Thu Jul 24 07:57:47

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Scale = 1:59

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.08	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.06	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	NO	WB	0.21	Horz(CT)	0.00	12	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MR							
BCDL	10.0										
										Weight: 102 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)  
12=15-8-0, 13=15-8-0, 14=15-8-0,  
15=15-8-0, 16=15-8-0, 17=15-8-0,  
18=15-8-0, 19=15-8-0, 20=15-8-0  
Max Horiz 20=154 (LC 12)  
Max Uplift 12=48 (LC 11), 13=103 (LC 15),  
14=60 (LC 15), 15=64 (LC 15),  
17=64 (LC 14), 18=56 (LC 14),  
19=104 (LC 14), 20=66 (LC 10)  
Max Grav 12=167 (LC 26), 13=212 (LC 27),  
14=192 (LC 2), 15=198 (LC 27),  
16=212 (LC 29), 17=191 (LC 26),  
18=173 (LC 2), 19=189 (LC 26),  
20=169 (LC 27)

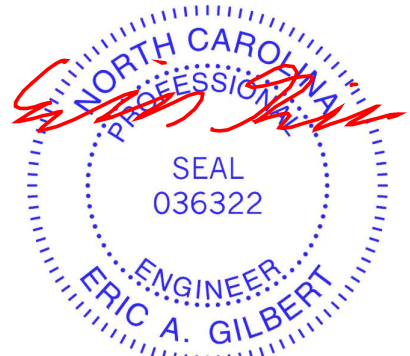
**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 2-20=-138/61, 1-2=0/39, 2-3=-106/99,  
3-4=-76/86, 4-5=-79/156, 5-6=-114/226,  
6-7=-114/226, 7-8=-79/156, 8-9=-63/81,  
9-10=-85/78, 10-11=0/39, 10-12=-126/59  
BOT CHORD 19-20=-71/80, 18-19=-71/80, 17-18=-71/80,  
16-17=-71/80, 15-16=-71/80, 14-15=-71/80,  
13-14=-71/80, 12-13=-71/80  
WEBS 6-16=-232/70, 5-17=-135/85, 4-18=-124/94,  
3-19=-129/99, 7-15=-134/85, 8-14=-125/94,  
9-13=-126/99

#### NOTES

- Unbalanced roof live loads have been considered for this design.

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 1-10-0, Exterior(2N) 1-10-0 to 7-10-0, Corner(3R) 7-10-0 to 10-10-0, Exterior (2N) 10-10-0 to 16-6-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 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.
- Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
- All plates are 2x4 (||) MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.

- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 66 lb uplift at joint 20, 48 lb uplift at joint 12, 64 lb uplift at joint 17, 56 lb uplift at joint 18, 104 lb uplift at joint 19, 64 lb uplift at joint 15, 60 lb uplift at joint 14 and 103 lb uplift at joint 13.
  - In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).
- LOAD CASE(S) Standard**
- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 1-2=-43, 2-6=-43, 6-10=-43, 10-11=-43  
Trapezoidal Loads (lb/ft)  
Vert: 20=-20-to-19=-22 (F=-2), 19=-22 (F=-2)-to-18=-24 (F=-4), 18=-24 (F=-4)-to-17=-26 (F=-6), 17=-26 (F=-6)-to-16=-27 (F=-7), 16=-27 (F=-7)-to-15=-29 (F=-9), 15=-29 (F=-9)-to-14=-31 (F=-11), 14=-31 (F=-11)-to-13=-33 (F=-13), 13=-33 (F=-13)-to-12=-35 (F=-15)



July 25, 2025

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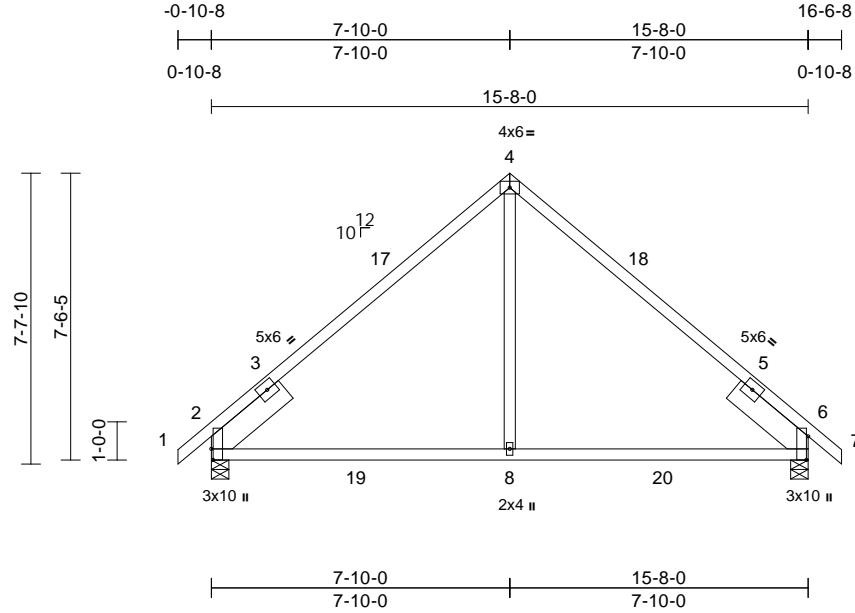
Job	Truss	Truss Type	Qty	Ply	1058 Serenity	I75140150
P04241-28229	B02	Common	1	1	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Thu Jul 24 07:57:47

Page: 1

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Scale = 1:60.5

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.75	Vert(LL)	-0.14	8-15	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.80	Vert(CT)	-0.21	8-15	>904	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.07	2	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 83 lb	FT = 20%

#### LUMBER

TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x4 SP No.2  
 WEBS 2x4 SP No.2  
 SLIDER Left 2x8 SP DSS -- 2-6-0, Right 2x8 SP DSS -- 2-6-0

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 5-4-14 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS

(size) 2=0-5-8, 6=0-5-8  
 Max Horiz 2=-133 (LC 12)  
 Max Uplift 2=-50 (LC 14), 6=-50 (LC 15)  
 Max Grav 2=785 (LC 26), 6=785 (LC 27)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/34, 2-4=-651/122, 4-6=-651/122, 6-7=0/34  
 BOT CHORD 2-8=-210/528, 6-8=-127/528  
 WEBS 4-8=-11/470

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 7-10-0, Exterior(2R) 7-10-0 to 10-10-0, Interior (1) 10-10-0 to 16-6-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10

- 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.
- Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 50 lb uplift at joint 2 and 50 lb uplift at joint 6.

LOAD CASE(S) Standard



July 25, 2025

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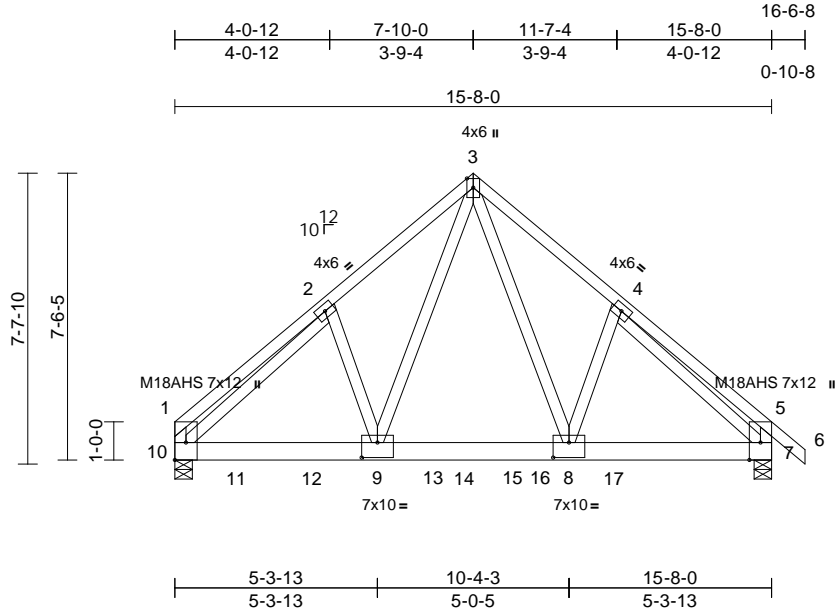
818 Soundside Road  
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1058 Serenity	175140151
P04241-28229	B03G	Common Girder	1	2	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Thu Jul 24 07:57:47  
ID:XFQHP5P4rGKwrxAw82ip3izwnr6-RfC?PsB70Hq3NSgPqnL8w3uITXbGKwRCDoi7J4zJC7f

Page: 1



Scale = 1:60.5

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.77	Vert(LL)	-0.06	8-9	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.94	Vert(CT)	-0.11	9-10	>999	180	M18AHS	186/179
TCDL	10.0	Rep Stress Incr	NO	WB	0.43	Horz(CT)	0.03	7	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 236 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 5-7-9 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS

(size) 7=0-5-8, 10=0-5-8  
Max Horiz 10=147 (LC 8)  
Max Uplift 7=688 (LC 11), 10=526 (LC 10)  
Max Grav 7=3855 (LC 2), 10=4670 (LC 2)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-1519/226, 2-3=-4743/656,  
3-4=-4600/855, 4-5=-1126/335, 5-6=0/39,  
1-10=-1057/163, 5-7=-885/251  
BOT CHORD 9-10=-441/3529, 8-9=-336/2555,  
7-8=-533/3401  
WEBS 3-8=-748/2947, 4-8=-119/403,  
3-9=-286/3167, 2-9=-102/349,  
2-10=-3476/406, 4-7=-3747/510

#### NOTES

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.  
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-6-0 oc.  
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust)  
Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 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.
- Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
- All plates are MT20 plates unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 526 lb uplift at joint 10 and 688 lb uplift at joint 7.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1211 lb down and 102 lb up at 1-7-4, 1120 lb down and 102 lb up at 3-7-4, 1120 lb down and 102 lb up at 5-7-4, 1223 lb down and 100 lb up at 7-7-4, and 1157 lb down and 81 lb up at 9-7-4, and 1683 lb down and 637 lb up at 11-6-6 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

#### LOAD CASE(S) Standard

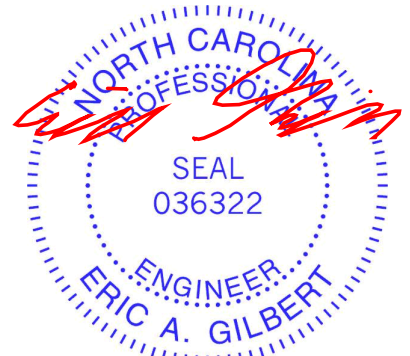
- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15

#### Uniform Loads (lb/ft)

Vert: 1-3=-43, 3-5=-43, 5-6=-43, 7-10=-20

#### Concentrated Loads (lb)

Vert: 9=-880 (F), 11=-880 (F), 12=-880 (F), 14=-1223 (F), 16=-1157 (F), 17=-1637 (F)



July 25, 2025

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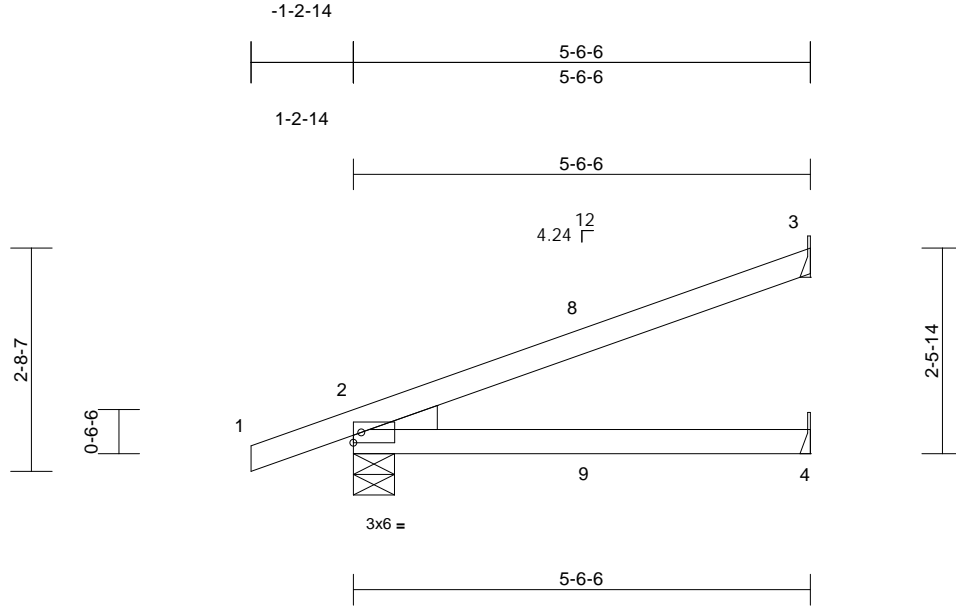
818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1058 Serenity	
P04241-28229	CJ01	Diagonal Hip Girder	2	1	Job Reference (optional)	I75140152

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Thu Jul 24 07:57:48  
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Page: 1



Scale = 1:27.9

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.57	Vert(LL)	0.05	4-7	>999	240	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.36	Vert(CT)	-0.09	4-7	>733	180	
TCDL	10.0	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.01	2	n/a	n/a	
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP							
BCDL	10.0										
										Weight: 20 lb	FT = 20%

#### LUMBER

TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEDGE Left: 2x4 SP No.3

#### 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=0-6-0, 3= Mechanical, 4= Mechanical  
Max Horiz 2=72 (LC 8)  
Max Uplift 2=-92 (LC 8), 3=-50 (LC 8), 4=-26 (LC 8)  
Max Grav 2=303 (LC 2), 3=156 (LC 19), 4=102 (LC 7)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/25, 2-3=-84/147  
BOT CHORD 2-4=-80/81

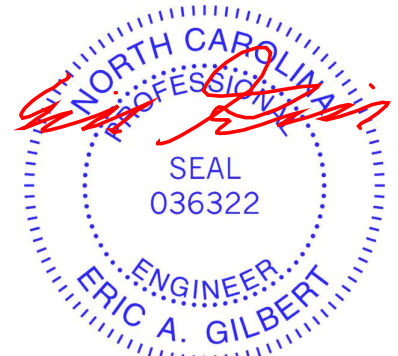
#### NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; porch left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 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 50 lb uplift at joint 3, 92 lb uplift at joint 2 and 26 lb uplift at joint 4.
- 10) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 19 lb down and 27 lb up at 2-9-8, and 19 lb down and 27 lb up at 2-9-8 on top chord, and 10 lb down and 14 lb up at 2-9-8, and 10 lb down and 14 lb up at 2-9-8 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- 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=-43, 4-5=-20  
Concentrated Loads (lb)  
Vert: 9=-4 (F=-2, B=-2)



July 25,2025

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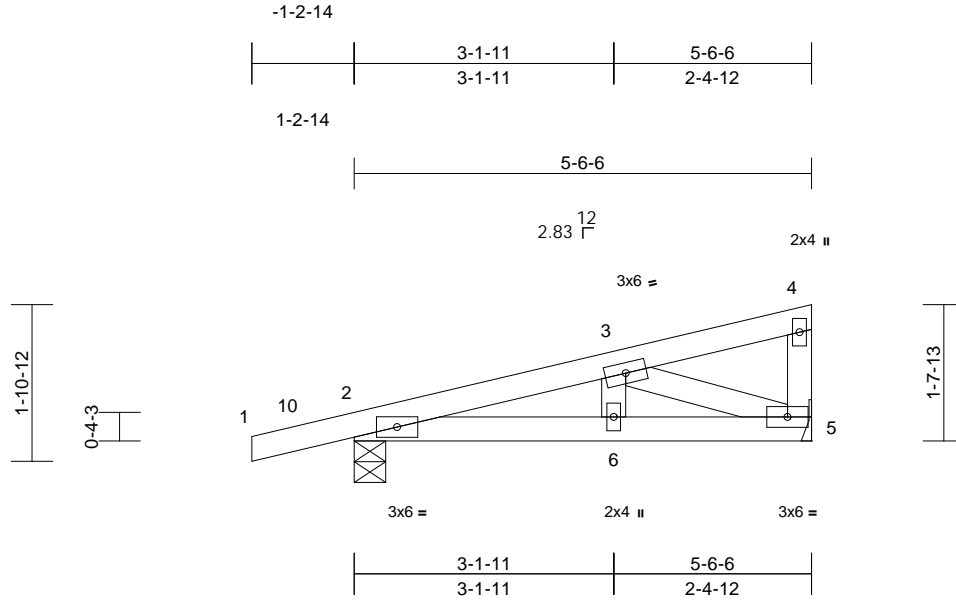
Job	Truss	Truss Type	Qty	Ply	1058 Serenity	175140153
P04241-28229	CJ02	Diagonal Hip Girder	1	1	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Thu Jul 24 07:57:48

Page: 1

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<b>Loading</b>	(psf)	<b>Spacing</b>	2-0-0	<b>CSI</b>		<b>DEFL</b>	in	(loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.11	Vert(LL)	-0.01	6-9	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.16	Vert(CT)	-0.01	6-9	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.06	Horz(CT)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 24 lb	FT = 20%

#### LUMBER

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

#### BRACING

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

#### REACTIONS

(size) 2=0-4-9, 5= Mechanical  
Max Horiz 2=43 (LC 11)  
Max Uplift 2=-63 (LC 8), 5=-29 (LC 12)  
Max Grav 2=301 (LC 2), 5=213 (LC 19)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/17, 2-3=-401/46, 3-4=-27/10, 4-5=-57/15  
BOT CHORD 2-6=-46/383, 5-6=-46/383  
WEBS 3-6=0/109, 3-5=-406/59

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.

- Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 63 lb uplift at joint 2 and 29 lb uplift at joint 5.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 27 lb down and 21 lb up at 3-1-1 on top chord, and 9 lb down and 2 lb up at 3-1-1 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- 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

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 1-4=-43, 5-7=-20  
Concentrated Loads (lb)  
Vert: 6=-7 (B)



July 25, 2025

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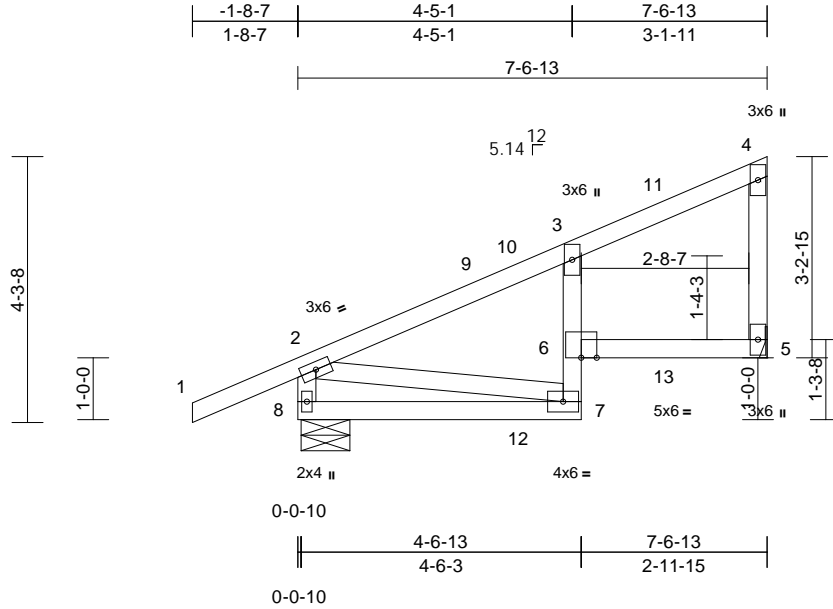


Job	Truss	Truss Type	Qty	Ply	1058 Serenity	175140154
P04241-28229	CJ03	Diagonal Hip Girder	1	1	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Thu Jul 24 07:57:48  
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Scale = 1:37.2

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.50	Vert(LL)	0.09	7	>975	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.60	Vert(CT)	-0.15	7	>583	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.03	Horz(CT)	0.04	5	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 41 lb	FT = 20%

#### LUMBER

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

#### BRACING

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

#### REACTIONS (size) 5= Mechanical, 8=0-9-7

Max Horiz	8=115 (LC 9)
Max Uplift	5=-108 (LC 9), 8=-76 (LC 8)
Max Grav	5=314 (LC 19), 8=425 (LC 2)

#### FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	2-8=-387/88, 1-2=0/44, 2-3=-296/67, 3-4=-104/30, 4-5=-163/49
BOT CHORD	7-8=-131/87, 6-7=-10/77, 3-6=-39/61, 5-6=-46/79
WEBS	2-7=-30/154

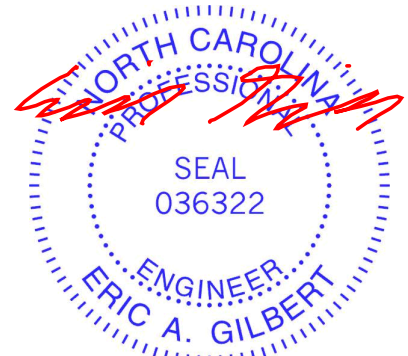
#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.

- Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 76 lb uplift at joint 8 and 108 lb uplift at joint 5.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 62 lb down and 57 lb up at 4-4-13, and 53 lb down and 40 lb up at 4-5-1, and 52 lb down and 29 lb up at 6-9-0 on top chord, and 25 lb down and 1 lb up at 4-4-13, and 16 lb down and 14 lb up at 4-5-1, and 50 lb down and 51 lb up at 6-9-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- 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

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 1-2=-43, 2-4=-43, 7-8=-20, 5-6=-20  
Concentrated Loads (lb)  
Vert: 10=-29 (B), 12=-7 (F=1, B=-8), 13=-24 (F)



July 25, 2025

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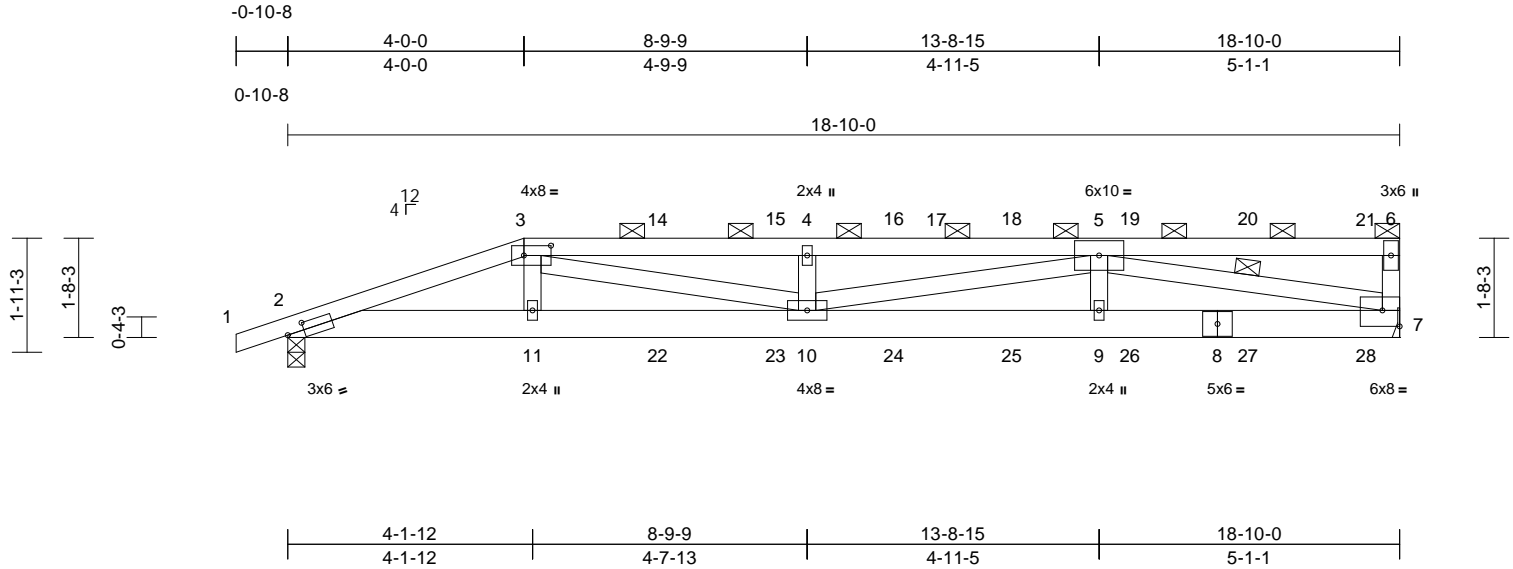
Job	Truss	Truss Type	Qty	Ply	1058 Serenity	I75140155
P04241-28229	G01G	Half Hip Girder	1	1	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Thu Jul 24 07:57:49

Page: 1

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Scale = 1:39

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.88	Vert(LL)	-0.23	9-10	>988	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.89	Vert(CT)	-0.44	9-10	>513	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.51	Horz(CT)	0.06	7	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS								
BCDL	10.0											
Weight: 100 lb												FT = 20%

#### LUMBER

TOP CHORD 2x4 SP No.2 \*Except\* 3-6:2x4 SP No.1  
BOT CHORD 2x6 SP No.2  
WEBS 2x4 SP No.2

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 3-2-4 oc purlins, except end verticals, and 2-0-0 oc purlins (2-3-13 max.): 3-6.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

WEBS 1 Row at midpt 5-7

**REACTIONS** (size) 2=0-3-8, 7= Mechanical  
Max Horiz 2=46 (LC 9)  
Max Uplift 2=-168 (LC 8), 7=-133 (LC 8)  
Max Grav 2=1172 (LC 2), 7=1212 (LC 33)

**FORCES** (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/19, 2-3=-3111/397, 3-4=-4185/496, 4-5=-4185/496, 5-6=-187/34, 6-7=-238/60  
BOT CHORD 2-11=-366/2943, 10-11=-368/2985, 9-10=-371/3315, 7-9=-371/3315  
WEBS 3-11=-14/405, 3-10=-125/1244, 4-10=-429/115, 5-10=-118/899, 5-9=0/272, 5-7=-3235/360

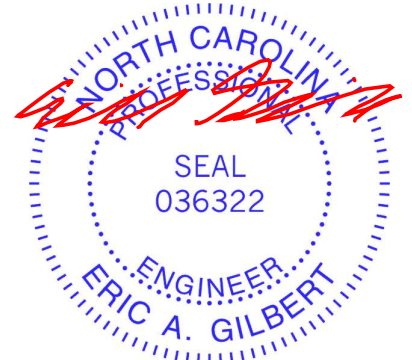
#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=16.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0

- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
- Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 133 lb uplift at joint 7 and 168 lb uplift at joint 2.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 65 lb down and 34 lb up at 4-0-0, 77 lb down and 34 lb up at 6-3-4, 77 lb down and 34 lb up at 8-3-4, 77 lb down and 34 lb up at 10-3-4, 77 lb down and 34 lb up at 12-3-4, 77 lb down and 34 lb up at 14-3-4, and 77 lb down and 34 lb up at 16-3-4, and 84 lb down and 30 lb up at 18-3-4 on top chord, and 185 lb down and 39 lb up at 4-0-0, 33 lb down at 4-3-4, 33 lb down at 6-3-4, 33 lb down at 8-3-4, 33 lb down at 10-3-4, 33 lb down at 12-3-4, 33 lb down at 14-3-4, and 33 lb down at 16-3-4, and 42 lb down at 18-3-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- 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

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 1-3=-43, 3-6=-53, 2-7=-20  
Concentrated Loads (lb)  
Vert: 3=-54 (B), 11=-218 (B), 14=-50 (B), 15=-50 (B), 16=-50 (B), 18=-50 (B), 19=-50 (B), 20=-50 (B), 21=-66 (B), 22=-33 (B), 23=-33 (B), 24=-33 (B), 25=-33 (B), 26=-33 (B), 27=-33 (B), 28=-39 (B)



July 25, 2025

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818 Soundside Road  
Edenton, NC 27932

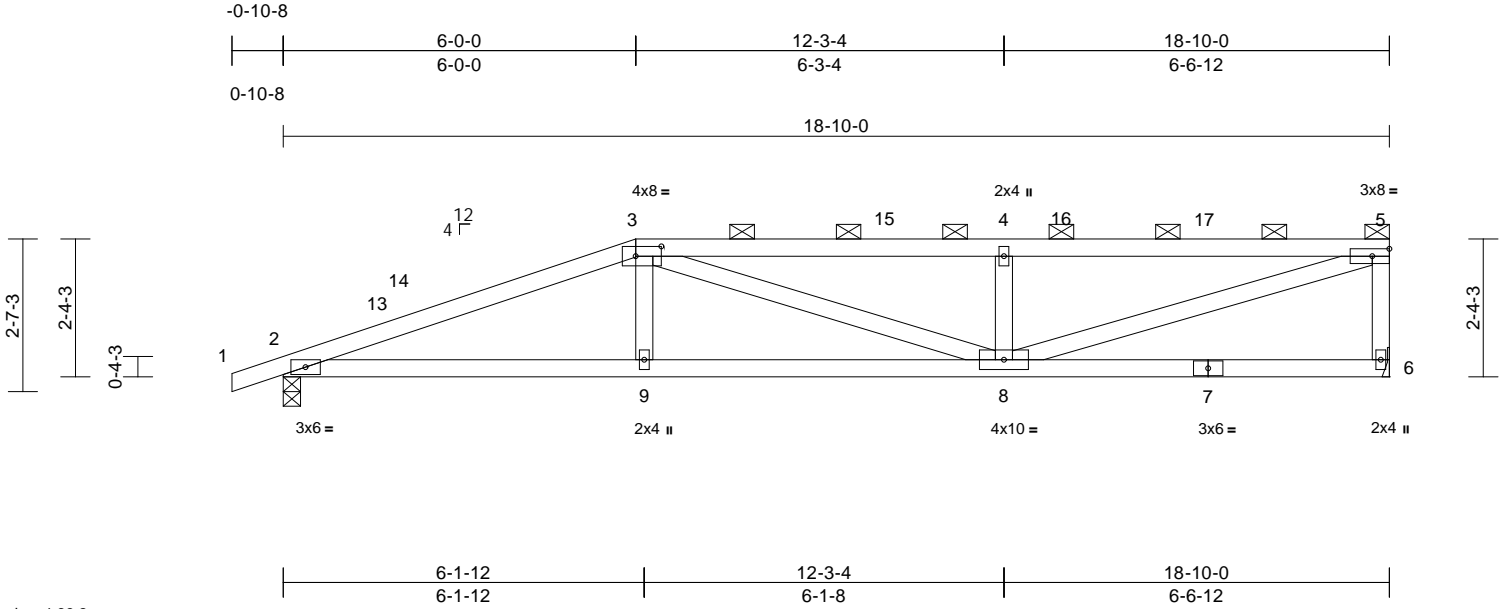
Job	Truss	Truss Type	Qty	Ply	1058 Serenity	175140156
P04241-28229	G02	Half Hip	1	1	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Thu Jul 24 07:57:49

Page: 1

ID:wB0tikkkWdGWhtSrQOM9rrBzwno6-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:39.2

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.63	Vert(LL)	-0.09	8-9	>999	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.63	Vert(CT)	-0.18	8-9	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.43	Horz(CT)	0.03	6	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 84 lb	FT = 20%

#### LUMBER

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

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 3-9-14 oc purlins, except end verticals, and 2-0-0 oc purlins (3-7-4 max.): 3-5.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS

(size) 2=0-3-8, 6= Mechanical  
Max Horiz 2=68 (LC 15)  
Max Uplift 2=-122 (LC 12), 6=-101 (LC 12)  
Max Grav 2=801 (LC 2), 6=796 (LC 37)

#### FORCES

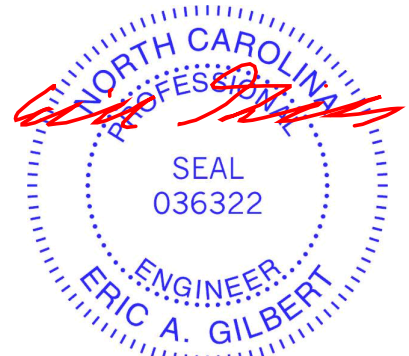
(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/19, 2-3=-1675/290, 3-4=-1741/292, 4-5=-1741/292, 5-6=-731/134  
BOT CHORD 2-9=-307/1554, 8-9=-305/1565, 6-8=-32/78  
WEBS 3-9=0/254, 3-8=-123/281, 4-8=-499/127, 5-8=-267/1747

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 6-0-0, Exterior(2R) 6-0-0 to 10-2-15, Interior (1) 10-2-15 to 18-8-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=16.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0

- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
- Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 101 lb uplift at joint 6 and 122 lb uplift at joint 2.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



July 25, 2025

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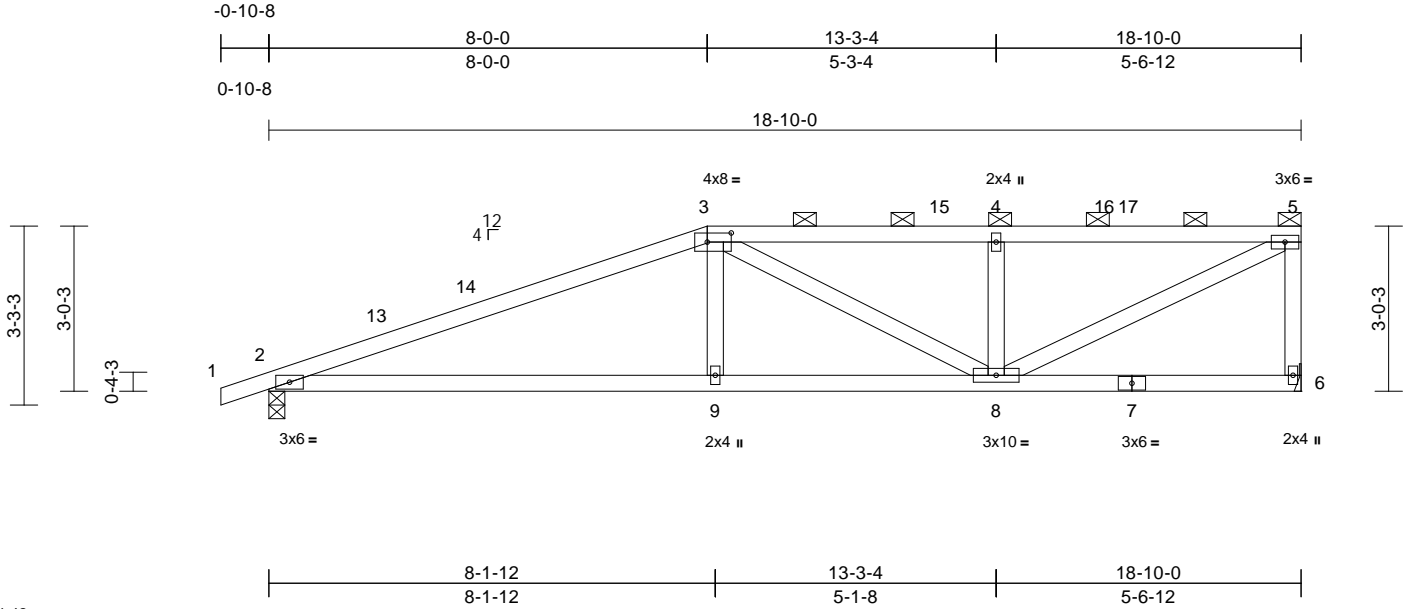
818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1058 Serenity	I75140157
P04241-28229	G03	Half Hip	1	1	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Thu Jul 24 07:57:49  
ID:GQLBKg?JR0IZWqX2h\_Y?kqzwnnm-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWRCDoi7J4zJC?i

Page: 1



Scale = 1:42

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.88	Vert(LL)	-0.16	9-12	>999	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.91	Vert(CT)	-0.33	9-12	>688	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.30	Horz(CT)	0.03	6	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 85 lb	FT = 20%

#### LUMBER

TOP CHORD 2x4 SP No.1 \*Except\* 3-5:2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.2

#### BRACING

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

#### REACTIONS

(size) 2=0-3-8, 6= Mechanical  
Max Horiz 2=89 (LC 15)  
Max Uplift 2=-121 (LC 12), 6=-102 (LC 12)  
Max Grav 2=801 (LC 2), 6=764 (LC 37)

#### FORCES

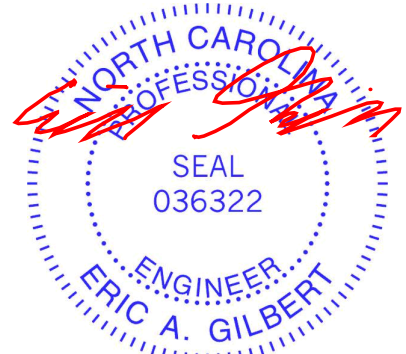
(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/19, 2-3=-1481/255, 3-4=-1116/223, 4-5=-1116/223, 5-6=-707/141  
BOT CHORD 2-9=-295/1356, 8-9=-294/1367, 6-8=-32/53  
WEBS 3-9=0/302, 3-8=-407/93, 4-8=-415/108, 5-8=-201/1206

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 8-0-0, Exterior(2R) 8-0-0 to 12-2-15, Interior (1) 12-2-15 to 18-8-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=16.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0

- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
- Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 102 lb uplift at joint 6 and 121 lb uplift at joint 2.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



July 25, 2025

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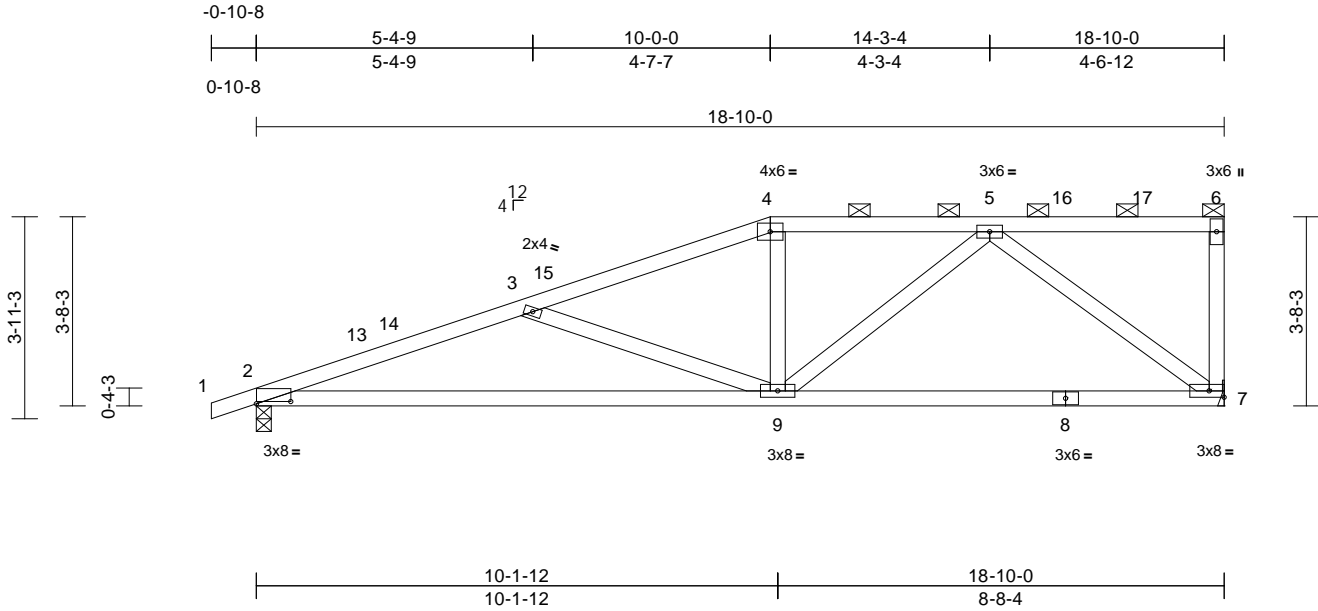


Job	Truss	Truss Type	Qty	Ply	1058 Serenity	175140158
P04241-28229	G04	Half Hip	1	1	Job Reference (optional)	

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

Run: 9.13 E 8.83 Feb 1 2025 Print: 8.830 E Feb 1 2025 MiTek Industries, Inc. Thu Jul 24 16:20:23  
ID:h?1JyH2Ckxg8NfDM65iLSzwnnj-vBla53PYU7VOfdOifq4eZj3gn49Fn??svPXgGyuodc

Page: 1



Scale = 1:44.8

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.52	Vert(LL)	-0.17	9-12	>999	240	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.94	Vert(CT)	-0.37	9-12	>601	180	
TCDL	10.0	Rep Stress Incr	YES	WB	0.50	Horz(CT)	0.04	7	n/a	n/a	
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS							
BCDL	10.0										
										Weight: 90 lb	FT = 20%

#### LUMBER

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

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 3-11-13 oc purlins, except end verticals, and 2-0-0 oc purlins (5-6-0 max.): 4-6.  
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.

**REACTIONS** (lb/size) 2=648/0-3-8, 7=655/ Mechanical  
Max Horiz 2=110 (LC 15)  
Max Uplift 2=119 (LC 12), 7=104 (LC 12)  
Max Grav 2=814 (LC 38), 7=746 (LC 2)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/19, 2-13=-1693/273, 13-14=-1675/279, 3-14=-1664/288, 3-15=-1186/188, 4-15=-1133/204, 4-5=-1080/205, 5-16=-66/49, 16-17=-66/49, 6-17=-66/49, 6-7=-132/40  
BOT CHORD 2-9=-400/1591, 8-9=-188/754, 7-8=-188/754  
WEBS 3-9=-639/173, 4-9=0/222, 5-9=-62/481, 5-7=-920/197

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 10-0-0, Exterior(2R) 10-0-0 to 14-3-4, Interior (1) 14-3-4 to 18-8-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=16.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0; Min. flat roof snow load governs. Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
- Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 119 lb uplift at joint 2 and 104 lb uplift at joint 7.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard



July 25, 2025

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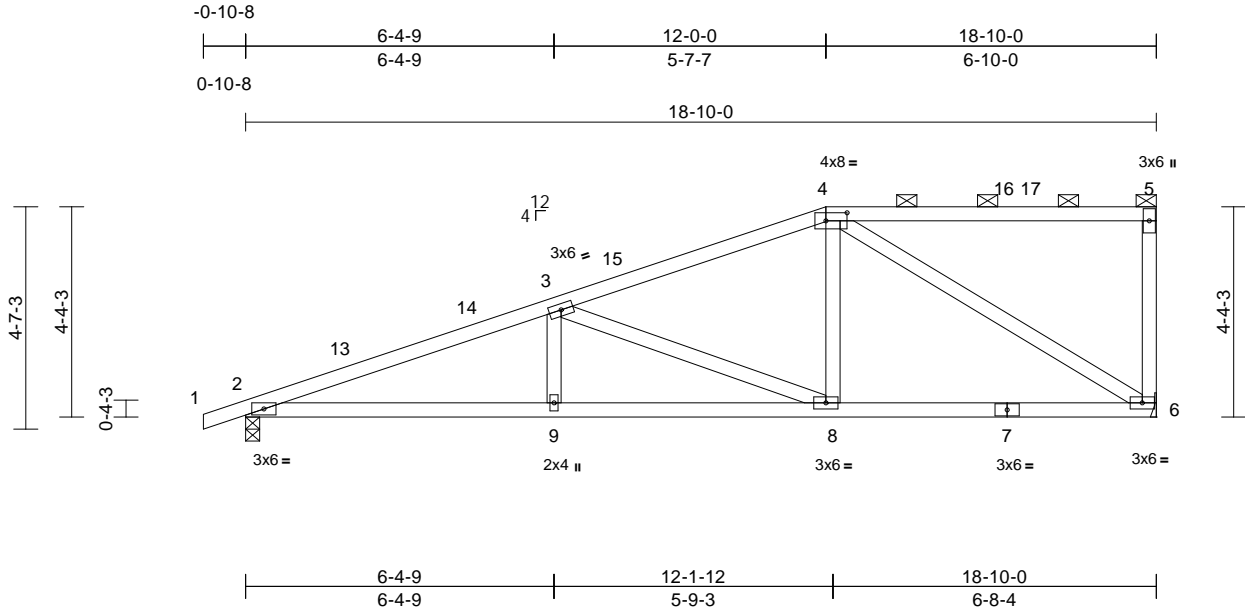


Job	Truss	Truss Type	Qty	Ply	1058 Serenity	175140159
P04241-28229	G05	Half Hip	1	1	Job Reference (optional)	

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

Run: 9.13 E 8.83 Feb 1 2025 Print: 8.830 E Feb 1 2025 MiTek Industries, Inc. Thu Jul 24 16:20:45  
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Page: 1



Scale = 1:47.6

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.78	Vert(LL)	-0.08	9-12	>999	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.66	Vert(CT)	-0.16	9-12	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.95	Horz(CT)	0.04	6	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 92 lb	FT = 20%

#### LUMBER

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

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 3-11-5 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-5.  
BOT CHORD Rigid ceiling directly applied or 9-9-0 oc bracing.

**REACTIONS** (lb/size) 2=640/0-3-8, 6=644/ Mechanical  
Max Horiz 2=131 (LC 15)  
Max Uplift 2=-118 (LC 12), 6=-105 (LC 12)  
Max Grav 2=849 (LC 38), 6=746 (LC 2)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/19, 2-13=-1722/230, 13-14=-1684/234, 3-14=-1623/246, 3-15=-925/162, 4-15=-868/182, 4-16=-77/68, 16-17=-77/68, 5-17=-77/68, 5-6=-234/66  
BOT CHORD 2-9=-365/1598, 8-9=-365/1598, 7-8=-216/838, 6-7=-216/838  
WEBS 3-9=0/241, 3-8=-900/159, 4-8=-13/469, 4-6=-938/201

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 12-0-0, Exterior(2R) 12-0-0 to 16-2-15, Interior (1) 16-2-15 to 18-8-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=16.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0; Min. flat roof snow load governs. Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
- Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 118 lb uplift at joint 2 and 105 lb uplift at joint 6.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard



July 25, 2025

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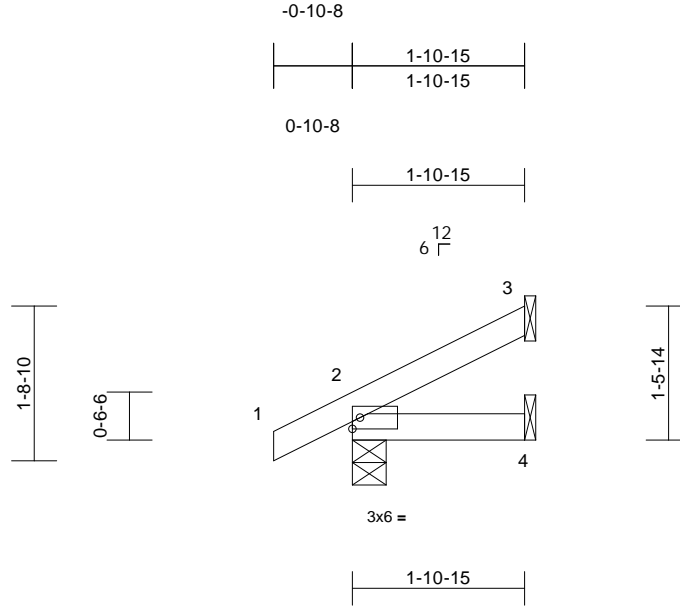
Job	Truss	Truss Type	Qty	Ply	1058 Serenity	I75140160
P04241-28229	J01	Jack-Open	4	1	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Thu Jul 24 07:57:50

Page: 1

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Scale = 1:25.6

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.05	Vert(LL)	0.00	4-7	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	0.00	4-7	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 8 lb	FT = 20%

#### LUMBER

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

#### BRACING

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

**REACTIONS** (size) 2=0-4-8, 3= Mechanical, 4= Mechanical  
Max Horiz 2=38 (LC 16)  
Max Uplift 2=-14 (LC 16), 3=-19 (LC 16), 4=-9 (LC 13)  
Max Grav 2=143 (LC 23), 3=46 (LC 23), 4=34 (LC 7)

**FORCES** (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/24, 2-3=-45/44  
BOT CHORD 2-4=-37/24

#### NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left and right exposed; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 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 14 lb uplift at joint 2, 9 lb uplift at joint 4 and 19 lb uplift at joint 3.
- LOAD CASE(S)** Standard



July 25, 2025

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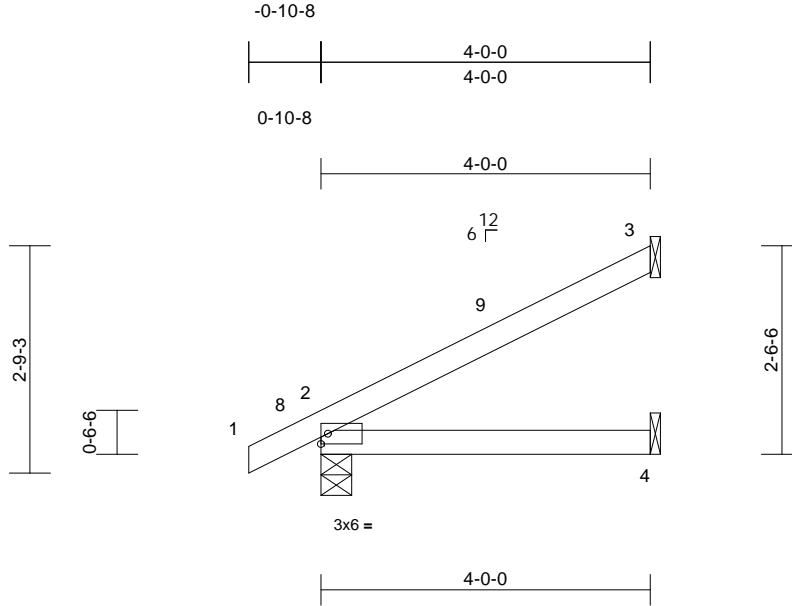
818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1058 Serenity	I75140161
P04241-28229	J02	Jack-Open	5	1	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Thu Jul 24 07:57:50  
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Page: 1



Scale = 1:28

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.25	Vert(LL)	0.02	4-7	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.17	Vert(CT)	-0.02	4-7	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.01	2	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0											
											Weight: 14 lb	FT = 20%

#### LUMBER

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

#### BRACING

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

**REACTIONS** (size) 2=0-4-8, 3= Mechanical, 4= Mechanical  
Max Horiz 2=67 (LC 16)  
Max Uplift 2=-17 (LC 13), 3=-40 (LC 16), 4=-17 (LC 13)  
Max Grav 2=216 (LC 2), 3=116 (LC 23), 4=73 (LC 7)

**FORCES** (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/23, 2-3=-73/73  
BOT CHORD 2-4=-113/82

#### NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 3-11-4 zone; cantilever left and right exposed ; end vertical left and right exposed; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 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 40 lb uplift at joint 3, 17 lb uplift at joint 2 and 17 lb uplift at joint 4.
- LOAD CASE(S)** Standard



July 25,2025

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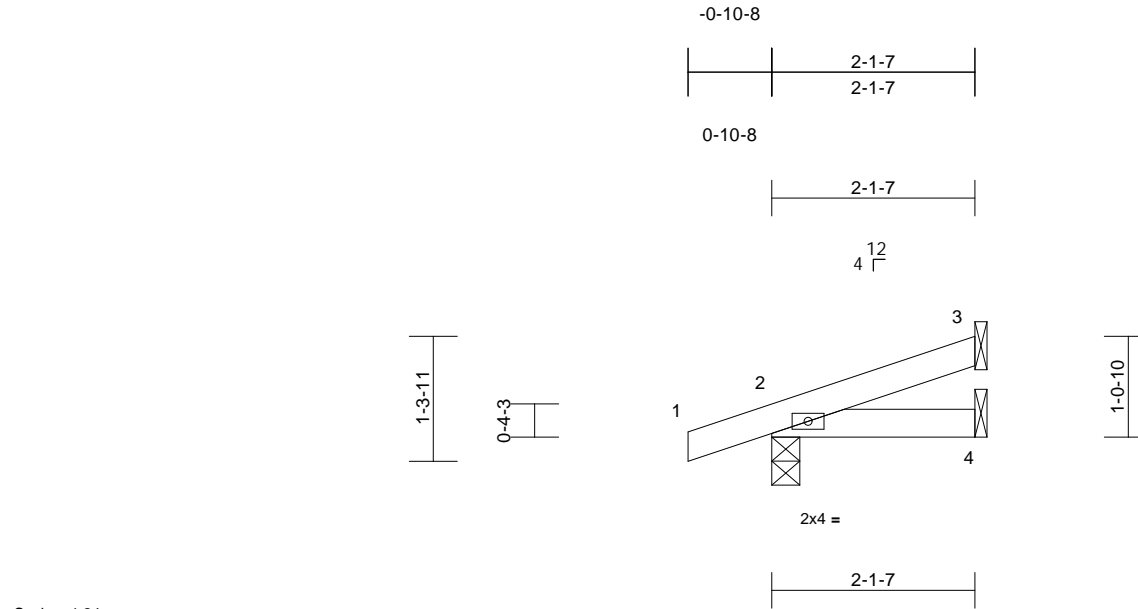
818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1058 Serenity	I75140162
P04241-28229	J03	Jack-Open	1	1	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Thu Jul 24 07:57:50  
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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	1.15	TC	0.05	Vert(LL)	0.00	7	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	0.00	4-7	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
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 2-1-7 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS

(size) 2=0-3-8, 3= Mechanical, 4= Mechanical  
Max Horiz 2=31 (LC 12)  
Max Uplift 2=-36 (LC 12), 3=-13 (LC 16)  
Max Grav 2=146 (LC 2), 3=45 (LC 2), 4=34 (LC 7)

#### FORCES

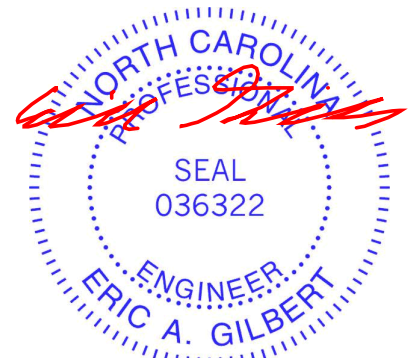
(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/17, 2-3=-27/12  
BOT CHORD 2-4=-6/29

#### NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)  
Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 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 13 lb uplift at joint 3 and 36 lb uplift at joint 2.
- LOAD CASE(S)** Standard



July 25, 2025

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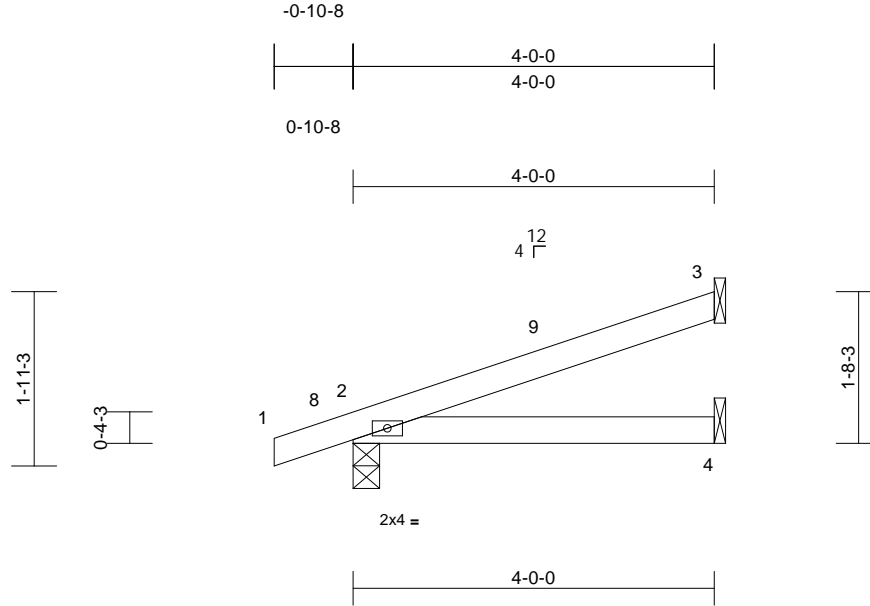
Job	Truss	Truss Type	Qty	Ply	1058 Serenity	I75140163
P04241-28229	J04	Jack-Open	8	1	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Thu Jul 24 07:57:51

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<b>Loading</b>	(psf)	<b>Spacing</b>	2-0-0	<b>CSI</b>		<b>DEFL</b>	in	(loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.21	Vert(LL)	0.01	4-7	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.18	Vert(CT)	-0.02	4-7	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
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=0-3-8, 3= Mechanical, 4= Mechanical  
Max Horiz 2=49 (LC 12)  
Max Uplift 2=-40 (LC 12), 3=-29 (LC 16)  
Max Grav 2=224 (LC 23), 3=104 (LC 23), 4=71 (LC 7)

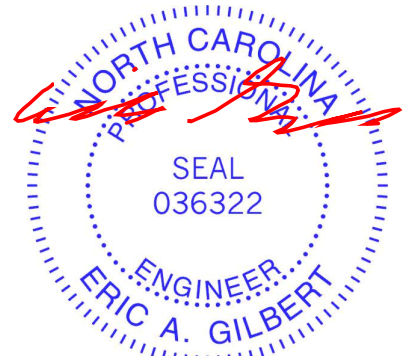
**FORCES** (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/17, 2-3=-65/26  
BOT CHORD 2-4=-48/65

#### NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)  
Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 3-11-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 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 29 lb uplift at joint 3 and 40 lb uplift at joint 2.
- LOAD CASE(S)** Standard



July 25,2025

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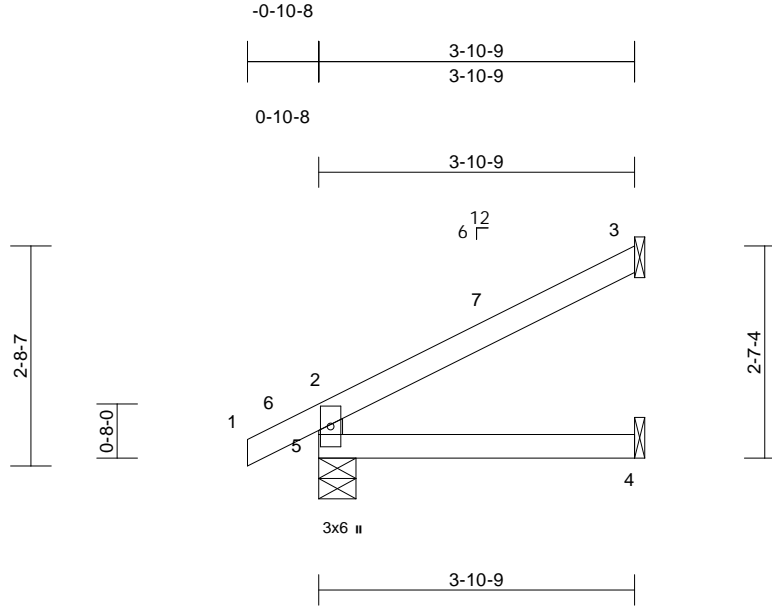
Job	Truss	Truss Type	Qty	Ply	1058 Serenity	I75140164
P04241-28229	J05	Jack-Open	1	1	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Thu Jul 24 07:57:51

Page: 1

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Scale = 1:28.3

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.22	Vert(LL)	0.01	4-5	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.14	Vert(CT)	-0.02	4-5	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.01	3	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MR								
BCDL	10.0											
											Weight: 14 lb	FT = 20%

#### LUMBER

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

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 3-10-9 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 3= Mechanical, 4= Mechanical,  
5=0-5-8  
Max Horiz 5=61 (LC 16)  
Max Uplift 3=40 (LC 16), 5=-15 (LC 16)  
Max Grav 3=109 (LC 23), 4=69 (LC 7), 5=224 (LC 23)

**FORCES** (lb) - Maximum Compression/Maximum Tension

TOP CHORD 2-5=-194/101, 1-2=0/27, 2-3=-61/38  
BOT CHORD 4-5=0/0

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 3-9-13 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.

- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
- Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 15 lb uplift at joint 5 and 40 lb uplift at joint 3.

**LOAD CASE(S)** Standard



July 25,2025

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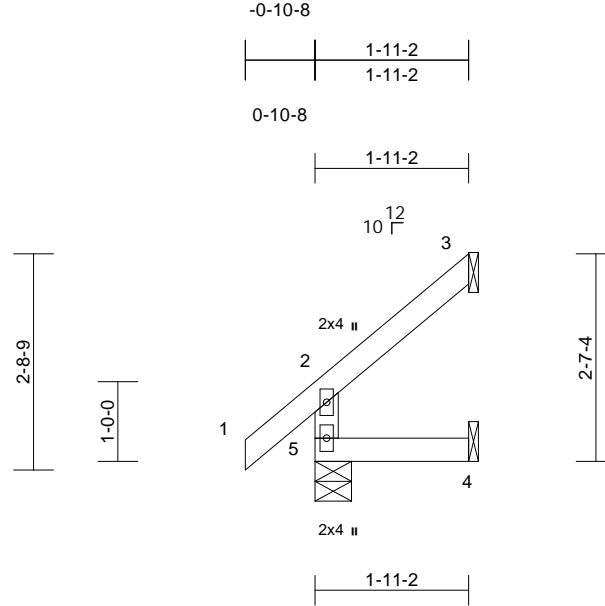
Job	Truss	Truss Type	Qty	Ply	1058 Serenity	I75140165
P04241-28229	J06	Jack-Open	1	1	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Thu Jul 24 07:57:51

Page: 1

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Scale = 1:28.9

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.10	0.00	4-5	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.09	0.00	4-5	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.01	3	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MR							
BCDL	10.0									Weight: 9 lb	FT = 20%

#### LUMBER

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

#### BRACING

TOP CHORD	Structural wood sheathing directly applied or 1-11-2 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS

(size)	3= Mechanical, 4= Mechanical,
	5=0-5-8
Max Horiz	5=55 (LC 14)
Max Uplift	3=-36 (LC 14), 4=-9 (LC 14)
Max Grav	3=45 (LC 26), 4=32 (LC 5), 5=150 (LC 2)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD	2-5=-129/61, 1-2=0/39, 2-3=-63/33
BOT CHORD	4-5=0/0

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 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.

- Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 9 lb uplift at joint 4 and 36 lb uplift at joint 3.

**LOAD CASE(S)** Standard



July 25, 2025

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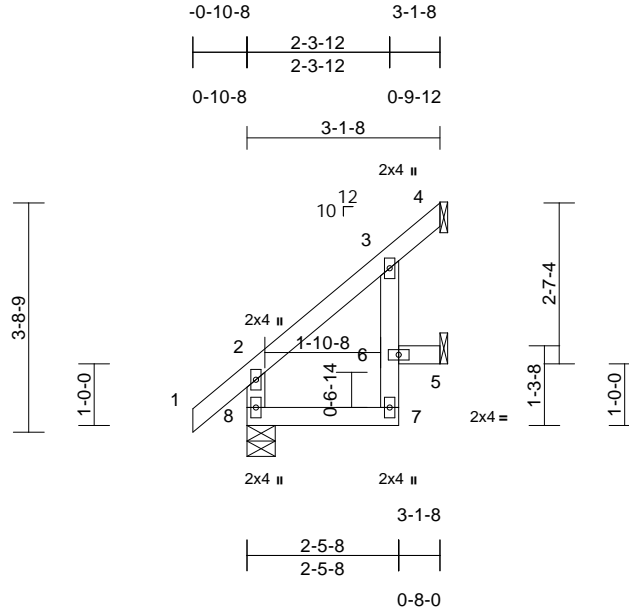
Job	Truss	Truss Type	Qty	Ply	1058 Serenity	I75140166
P04241-28229	J07	Jack-Open	1	1	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Thu Jul 24 07:57:51

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Scale = 1:37.3

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.09	Vert(LL)	0.00	7	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.12	Vert(CT)	0.00	7	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.01	4	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MR								
BCDL	10.0											
											Weight: 17 lb	FT = 20%

#### LUMBER

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

#### BRACING

TOP CHORD	Structural wood sheathing directly applied or 3-1-8 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS	(size)	4= Mechanical, 5= Mechanical,
		8=0-5-8
	Max Horiz	8=83 (LC 14)
	Max Uplift	4=-19 (LC 14), 5=-44 (LC 14)
	Max Grav	4=50 (LC 26), 5=69 (LC 26), 8=189 (LC 2)

FORCES	(lb) - Maximum Compression/Maximum Tension
--------	--

TOP CHORD	2-8=-164/57, 1-2=0/39, 2-3=-84/11, 3-4=-35/29
-----------	---

BOT CHORD	7-8=-60/40, 6-7=-23/42, 3-6=-37/84, 5-6=0/0
-----------	---

#### NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-2-10, Interior (1) 2-2-10 to 3-0-12 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 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 19 lb uplift at joint 4 and 44 lb uplift at joint 5.

LOAD CASE(S) Standard



July 25, 2025

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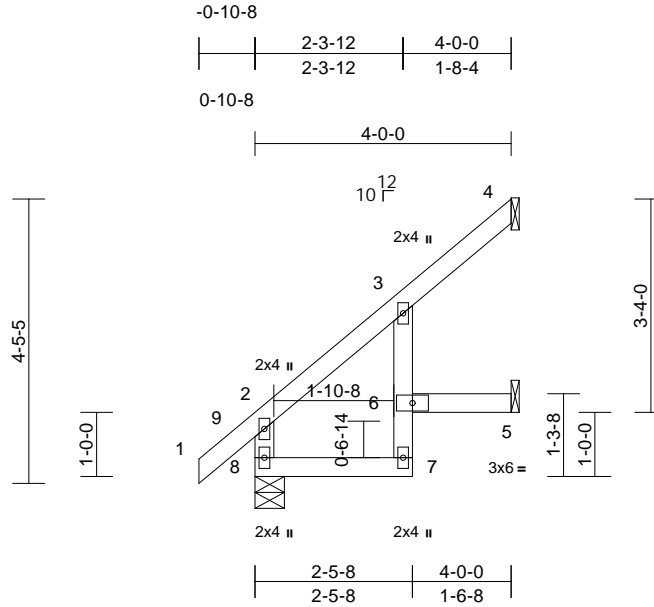
Job	Truss	Truss Type	Qty	Ply	1058 Serenity	I75140167
P04241-28229	J08	Jack-Open	3	1	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Thu Jul 24 07:57:51

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Scale = 1:36

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.13	0.02	7	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.19	-0.02	7	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	-0.01	4	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MR							
BCDL	10.0									Weight: 20 lb	FT = 20%

#### LUMBER

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

#### BRACING

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

<b>REACTIONS</b>	(size)	4= Mechanical, 5= Mechanical, 8=0-5-8
	Max Horiz	8=104 (LC 14)
	Max Uplift	4=-47 (LC 14), 5=-30 (LC 14)
	Max Grav	4=89 (LC 26), 5=68 (LC 26), 8=221 (LC 2)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD	2-8=-195/56, 1-2=0/39, 2-3=-118/0, 3-4=-76/51
BOT CHORD	7-8=-89/63, 6-7=-28/41, 3-6=-20/56, 5-6=0/0

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-2-10, Interior (1) 2-2-10 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
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 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.

- Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
  - Refer to girder(s) for truss to truss connections.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 47 lb uplift at joint 4 and 30 lb uplift at joint 5.
- LOAD CASE(S)** Standard



July 25, 2025

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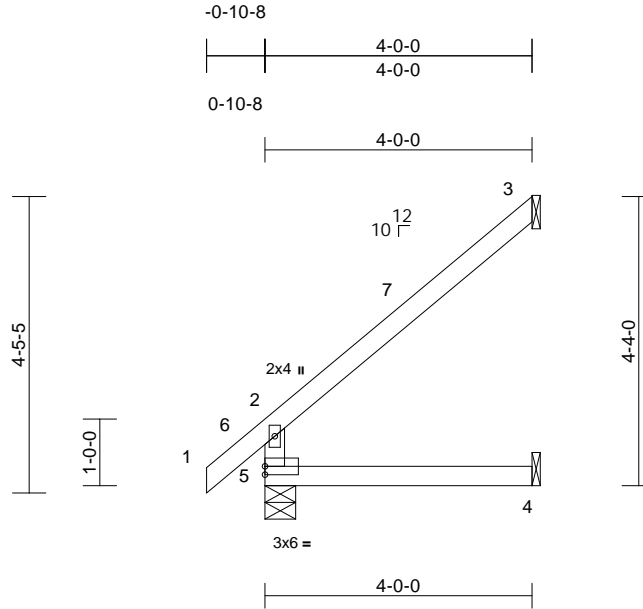
Job	Truss	Truss Type	Qty	Ply	1058 Serenity	I75140168
P04241-28229	J09	Jack-Open	8	1	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Thu Jul 24 07:57:52

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Scale = 1:34.5

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.26	Vert(LL)	0.02	4-5	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.27	Vert(CT)	-0.02	4-5	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.03	3	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MR								
BCDL	10.0											
											Weight: 17 lb	FT = 20%

#### LUMBER

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

#### BRACING

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

#### REACTIONS

(size)	3= Mechanical, 4= Mechanical, 5=0-5-8
Max Horiz	5=104 (LC 14)
Max Uplift	3=-69 (LC 14), 4=-8 (LC 14)
Max Grav	3=108 (LC 26), 4=72 (LC 5), 5=221 (LC 2)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD	2-5=-189/63, 1-2=0/39, 2-3=-117/59
BOT CHORD	4-5=0/0

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 3-11-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 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.

- Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3'-06"-00 tall by 2'-00"-00 wide will fit between the bottom chord and any other members.
  - Refer to girder(s) for truss to truss connections.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 69 lb uplift at joint 3 and 8 lb uplift at joint 4.
- LOAD CASE(S)** Standard



July 25,2025

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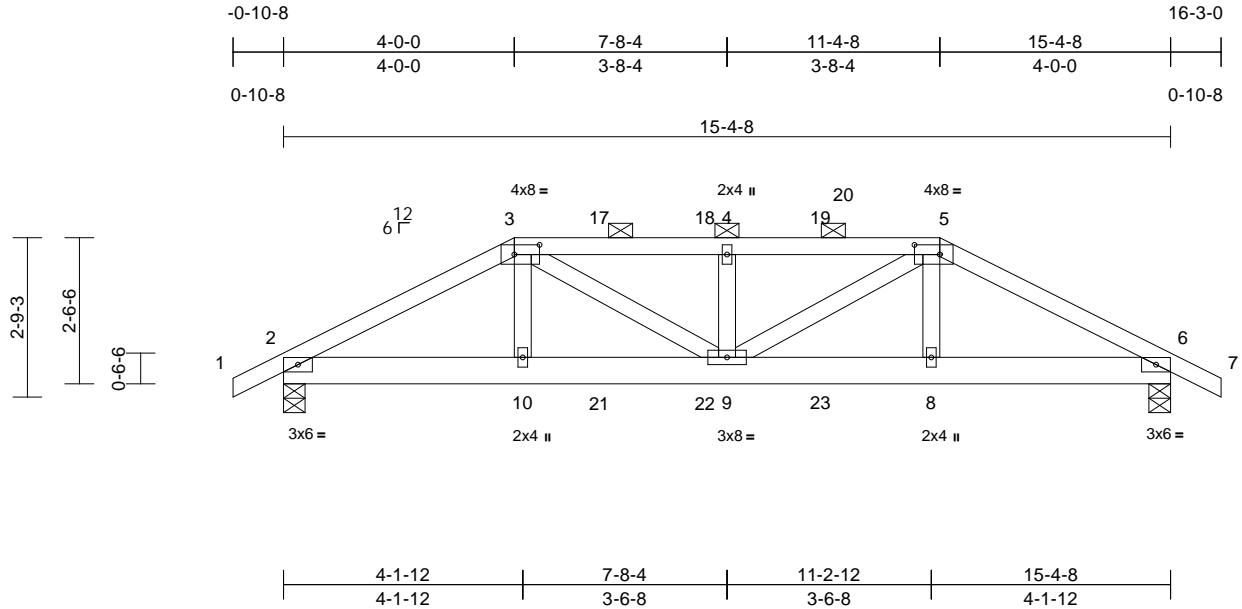


Job	Truss	Truss Type	Qty	Ply	1058 Serenity	175140169
P04241-28229	P01G	Hip Girder	1	1	Job Reference (optional)	

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

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Page: 1



Scale = 1:39.9

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.36	Vert(LL)	-0.05	9	>999	240	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.37	Vert(CT)	-0.09	9	>999	180	
TCDL	10.0	Rep Stress Incr	NO	WB	0.13	Horz(CT)	0.02	6	n/a	n/a	
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS							
BCDL	10.0										
Weight: 82 lb FT = 20%											

#### LUMBER

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

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 4-5-2 oc purlins, except 2-0-0 oc purlins (3-11-12 max.): 3-5.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 2=0-4-8, 6=0-4-8  
Max Horiz 2=30 (LC 58)  
Max Uplift 2=-279 (LC 9), 6=-275 (LC 8)  
Max Grav 2=1032 (LC 37), 6=1017 (LC 37)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/30, 2-3=-1668/534, 3-4=-1893/617, 4-5=-1893/617, 5-6=-1635/526, 6-7=0/30  
BOT CHORD 2-10=-458/1434, 9-10=-462/1444, 8-9=-437/1422, 6-8=-435/1414  
WEBS 3-10=-48/233, 3-9=-170/524, 4-9=-406/120, 5-9=-180/546, 5-8=-47/224

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; porch left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=16.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
- Unbalanced snow loads have been considered for this design.

- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
- Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 279 lb uplift at joint 2 and 275 lb uplift at joint 6.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 207 lb down and 104 lb up at 4-0-0, 89 lb down and 43 lb up at 5-5-12, 89 lb down and 43 lb up at 7-3-12, and 89 lb down and 43 lb up at 9-3-12, and 207 lb down and 104 lb up at 11-4-8 on top chord, and 83 lb down and 58 lb up at 4-0-0, 35 lb down and 23 lb up at 5-5-12, 35 lb down and 23 lb up at 7-3-12, and 35 lb down and 23 lb up at 9-3-12, and 83 lb down and 58 lb up at 11-3-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- 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

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 1-3=-43, 3-5=-53, 5-7=-43, 11-14=-20  
Concentrated Loads (lb)

Vert: 3=-155 (F), 5=-155 (F), 10=-73 (F), 8=-73 (F), 17=-63 (F), 18=-63 (F), 19=-63 (F), 21=-31 (F), 22=-31 (F), 23=-31 (F)



July 25, 2025

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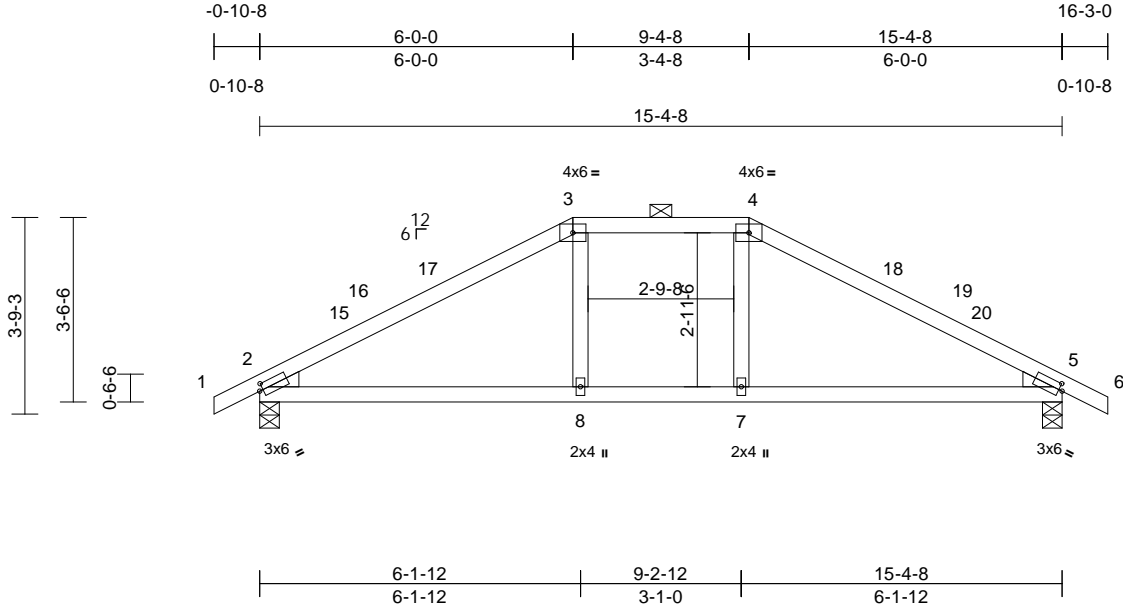
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Job	Truss	Truss Type	Qty	Ply	1058 Serenity	175140170
P04241-28229	P02	Hip	1	1	Job Reference (optional)	

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

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Scale = 1:44.1

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.58	Vert(LL)	-0.10	8-11	>999	240	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.43	Vert(CT)	-0.14	8-11	>999	180	
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.02	5	n/a	n/a	
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS							
BCDL	10.0										
										Weight: 62 lb	FT = 20%

#### LUMBER

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

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 5-0-2 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=-43 (LC 21)  
Max Uplift 2=-108 (LC 13), 5=-108 (LC 12)  
Max Grav 2=719 (LC 41), 5=719 (LC 41)

#### FORCES

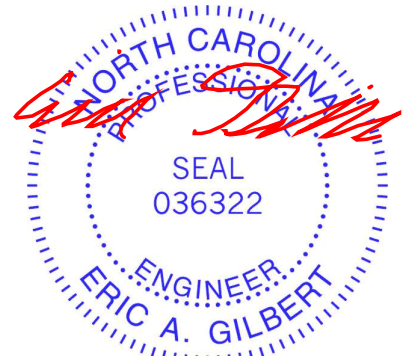
(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/30, 2-3=-904/362, 3-4=-728/349, 4-5=-904/362, 5-6=0/30  
BOT CHORD 2-8=-242/724, 7-8=-246/728, 5-7=-243/724  
WEBS 3-8=-81/183, 4-7=-81/183

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 6-0-0, Exterior(2E) 6-0-0 to 9-4-8, Exterior(2R) 9-4-8 to 13-7-6, Interior (1) 13-7-6 to 16-3-0 zone; cantilever left and right exposed; end vertical left and right exposed; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=16.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
- Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 108 lb uplift at joint 2 and 108 lb uplift at joint 5.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



July 25, 2025

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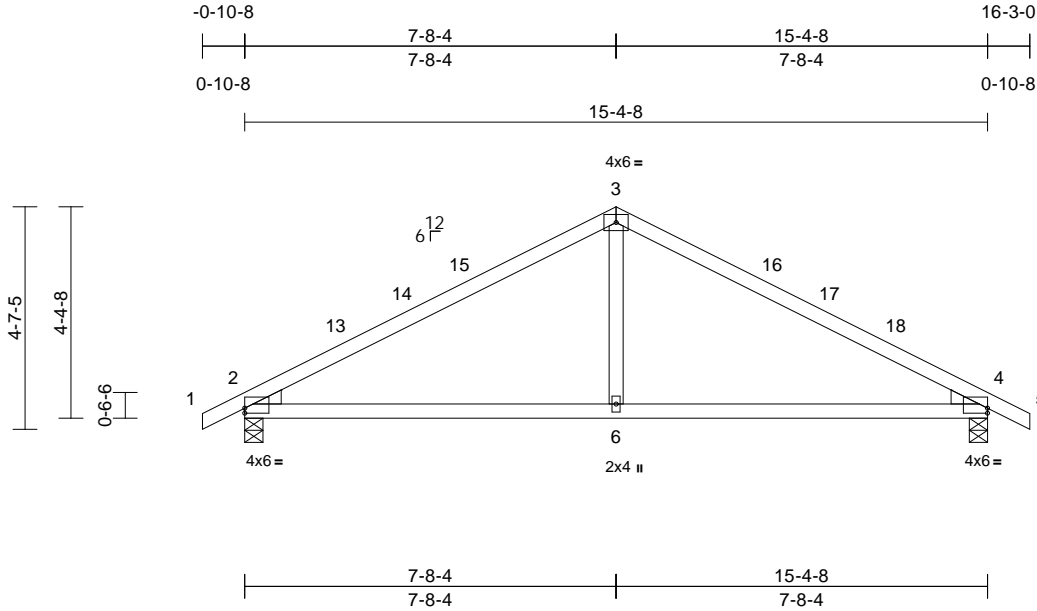
818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1058 Serenity	I75140171
P04241-28229	P03	Common	1	1	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Thu Jul 24 07:57:52  
ID:tPbMoSQFNiRgAZlOK9vvdvAu8-RfC?PsB70Hq3NSgPqnL8w3uITxbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:47.7

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.84	Vert(LL)	-0.09	6-9	>999	240	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.60	Vert(CT)	-0.17	6-9	>999	180	
TCDL	10.0	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.02	2	n/a	n/a	
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS							
BCDL	10.0										
										Weight: 59 lb	FT = 20%

#### LUMBER

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

#### BRACING

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

#### REACTIONS

(size) 2=0-4-8, 4=0-4-8  
Max Horiz 2=53 (LC 16)  
Max Uplift 2=81 (LC 13), 4=81 (LC 12)  
Max Grav 2=667 (LC 2), 4=667 (LC 2)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

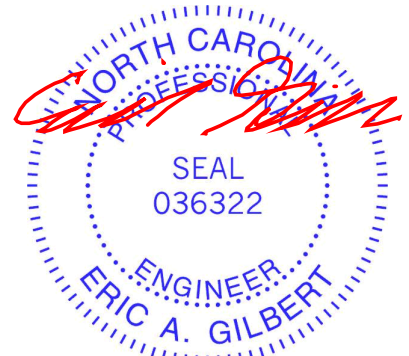
TOP CHORD 1-2=0/23, 2-3=-847/365, 3-4=-847/365, 4-5=0/23  
BOT CHORD 2-6=-226/666, 4-6=-226/666  
WEBS 3-6=-142/349

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 7-8-4, Exterior(2R) 7-8-4 to 10-8-4, Interior (1) 10-8-4 to 16-3-0 zone; cantilever left and right exposed ; end vertical left and right exposed; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
- Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 81 lb uplift at joint 2 and 81 lb uplift at joint 4.

LOAD CASE(S) Standard



July 25,2025

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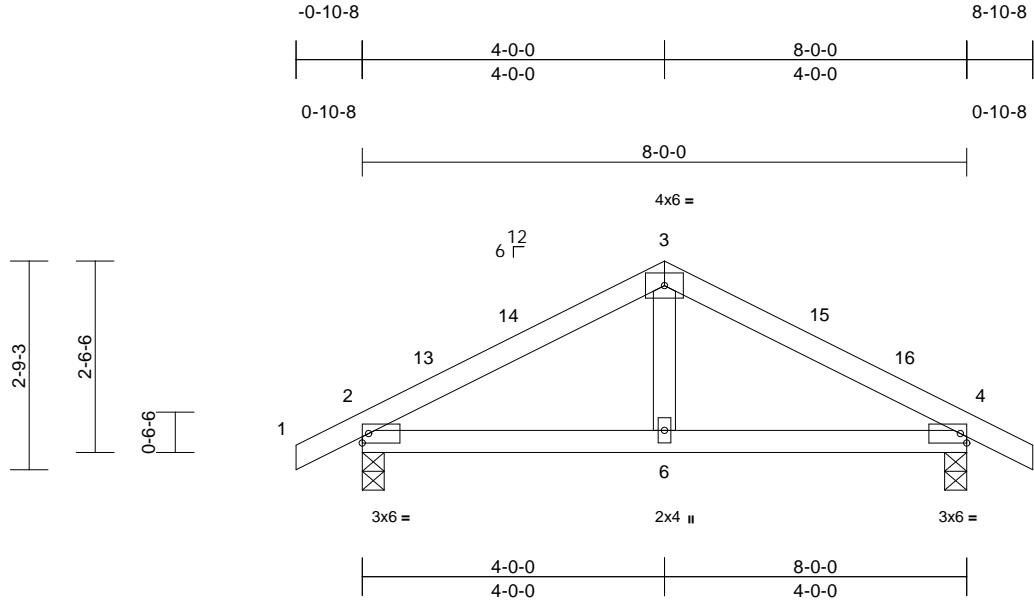
818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1058 Serenity	175140172
P04241-28229	P04E	Common Structural Gable	1	1	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Thu Jul 24 07:57:53  
ID:2Vu38dWfYwacZHk78plrRhzwnn6-RfC?PsB70Hq3NSgPqnL8w3uITxbGKWrcD0i7J4zJC?f

Page: 1



Scale = 1:30.5

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.23	0.01	6-9	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.16	-0.01	6-12	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP							
BCDL	10.0										
										Weight: 31 lb	FT = 20%

#### LUMBER

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

#### BRACING

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

#### REACTIONS (size)

2=0-3-8, 4=0-3-8
Max Horiz 2=-30 (LC 17)
Max Uplift 2=-42 (LC 13), 4=-42 (LC 12)
Max Grav 2=373 (LC 2), 4=373 (LC 2)

#### FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/23, 2-3=-392/243, 3-4=-392/243, 4-5=0/23
BOT CHORD	2-6=-136/296, 4-6=-136/296
WEBS	3-6=-95/171

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 4-0-0, Exterior(2R) 4-0-0 to 7-0-0, Interior (1) 7-0-0 to 8-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
- Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
- Gable studs spaced at 2'-0" oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3'-0" tall by 2'-0" wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 42 lb uplift at joint 2 and 42 lb uplift at joint 4.

**LOAD CASE(S)** Standard



July 25,2025

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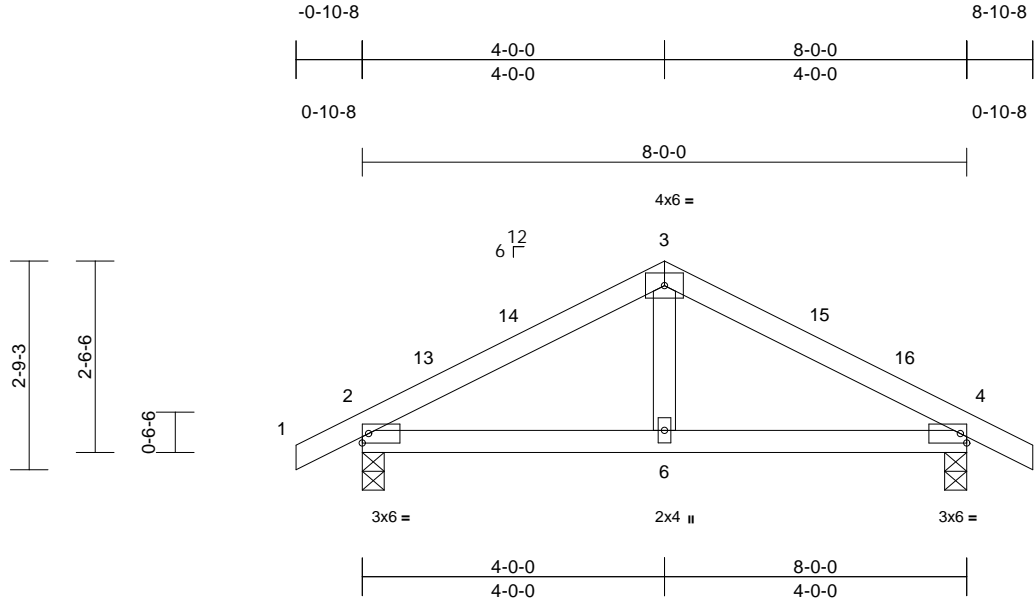
818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1058 Serenity	
P04241-28229	P05	Common	2	1	Job Reference (optional)	I75140173

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Thu Jul 24 07:57:53  
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Page: 1



Scale = 1:30.5

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.23	Vert(LL)	0.01	6-9	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.16	Vert(CT)	-0.01	6-12	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0											
											Weight: 31 lb	FT = 20%

#### LUMBER

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

#### BRACING

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

#### REACTIONS (size) 2=0-3-8, 4=0-3-8

Max Horiz	2=30 (LC 20)
Max Uplift	2=-42 (LC 13), 4=-42 (LC 12)
Max Grav	2=373 (LC 2), 4=373 (LC 2)

#### FORCES (lb) - Maximum Compression/Maximum Tension

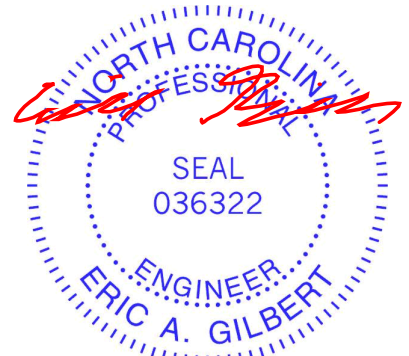
TOP CHORD	1-2=0/23, 2-3=-392/243, 3-4=-392/243, 4-5=0/23
BOT CHORD	2-6=-136/296, 4-6=-136/296
WEBS	3-6=-95/171

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 4-0-0, Exterior(2R) 4-0-0 to 7-0-0, Interior (1) 7-0-0 to 8-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.

- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
- Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3'-06"-00 tall by 2'-00"-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 42 lb uplift at joint 2 and 42 lb uplift at joint 4.

LOAD CASE(S) Standard



July 25,2025

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Edenton, NC 27932



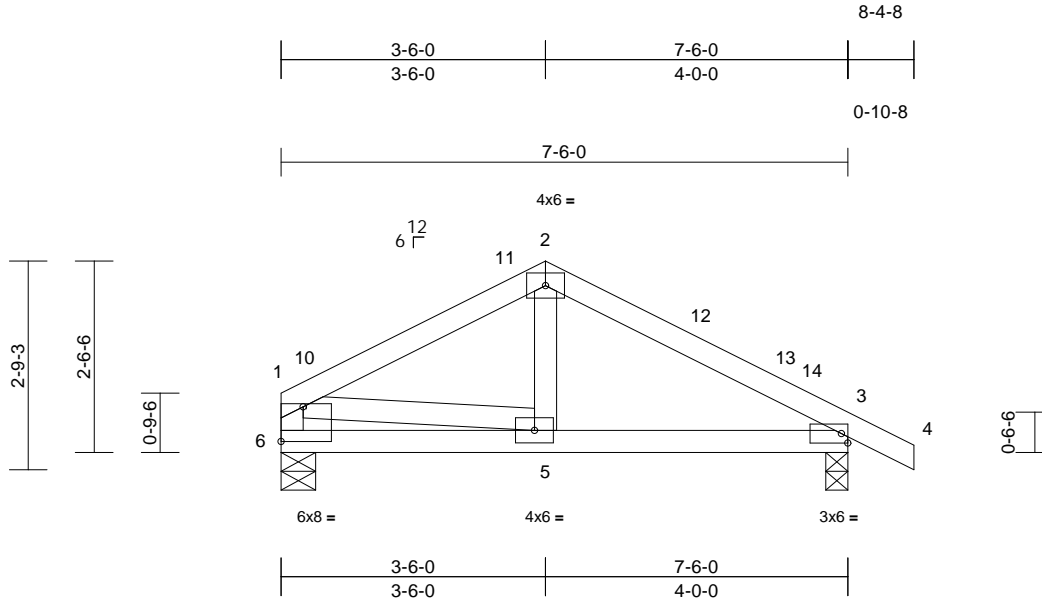
Job	Truss	Truss Type	Qty	Ply	1058 Serenity	I75140174
P04241-28229	P06	Common	3	1	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Thu Jul 24 07:57:53

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Scale = 1:30.5

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.24	Vert(LL)	0.01	5-9	>999	240	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.15	Vert(CT)	-0.01	5-9	>999	180	
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	3	n/a	n/a	
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP							
BCDL	10.0										
										Weight: 33 lb	FT = 20%

#### LUMBER

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

#### BRACING

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

#### REACTIONS

(size) 3=0-3-8, 6=0-5-8  
Max Horiz 6=-35 (LC 21)  
Max Uplift 3=-40 (LC 12), 6=-35 (LC 13)  
Max Grav 3=350 (LC 2), 6=291 (LC 2)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-318/218, 2-3=-342/211, 3-4=0/23, 1-6=-268/175  
BOT CHORD 5-6=-15/47, 3-5=-109/252

#### WEBS

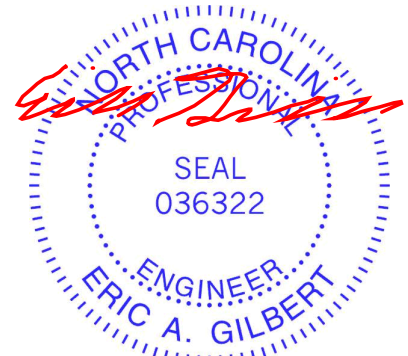
2-5=-61/137, 1-5=-158/255

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-7-12 to 3-7-12, Interior (1) 3-7-12 to 4-0-0, Exterior(2R) 4-0-0 to 7-0-0, Interior (1) 7-0-0 to 8-10-8 zone; cantilever left and right exposed; end vertical left and right exposed; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10

- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
- Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3'-06"-00 tall by 2'-00"-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 35 lb uplift at joint 6 and 40 lb uplift at joint 3.

LOAD CASE(S) Standard



July 25, 2025

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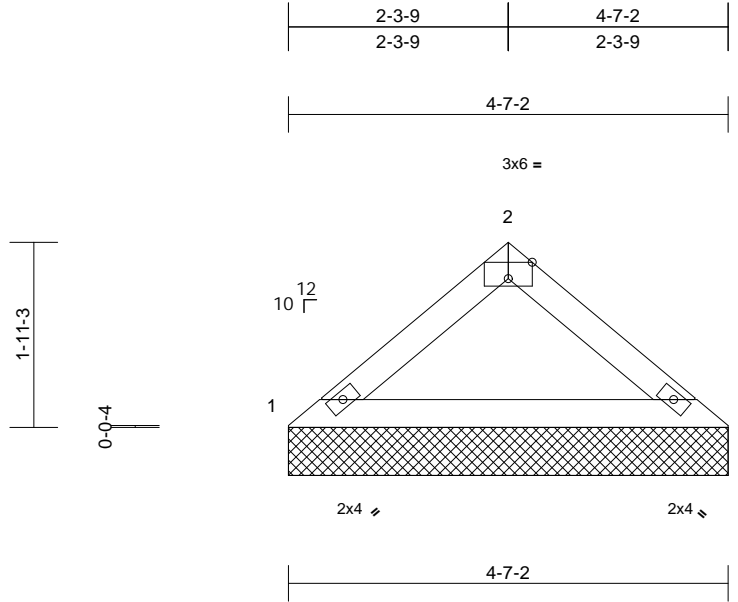
818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1058 Serenity	I75140175
P04241-28229	V01	Valley	1	1	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Thu Jul 24 07:57:53  
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Page: 1



Scale = 1:24.1

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		1.15	TC		0.15	Vert(LL)		n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)		11.5/15.0	Lumber DOL		1.15	BC		0.13	Vert(TL)		n/a	-	n/a	999		
TCDL		10.0	Rep Stress Incr		YES	WB		0.00	Horiz(TL)		0.00	3	n/a	n/a		
BCLL		0.0*	Code		IRC2021/TPI2014	Matrix-MP										
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 4-7-2 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS

(size) 1=4-7-2, 3=4-7-2  
Max Horiz 1=-32 (LC 12)  
Max Uplift 1=-13 (LC 14), 3=-13 (LC 15)  
Max Grav 1=184 (LC 2), 3=184 (LC 2)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

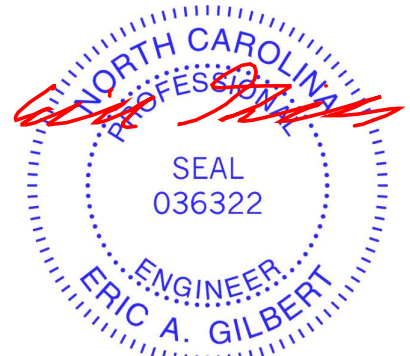
TOP CHORD 1-2=-250/89, 2-3=-250/88  
BOT CHORD 1-3=-65/187

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.

- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 13 lb uplift at joint 1 and 13 lb uplift at joint 3.

**LOAD CASE(S)** Standard



July 25, 2025

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818 Soundside Road  
Edenton, NC 27932

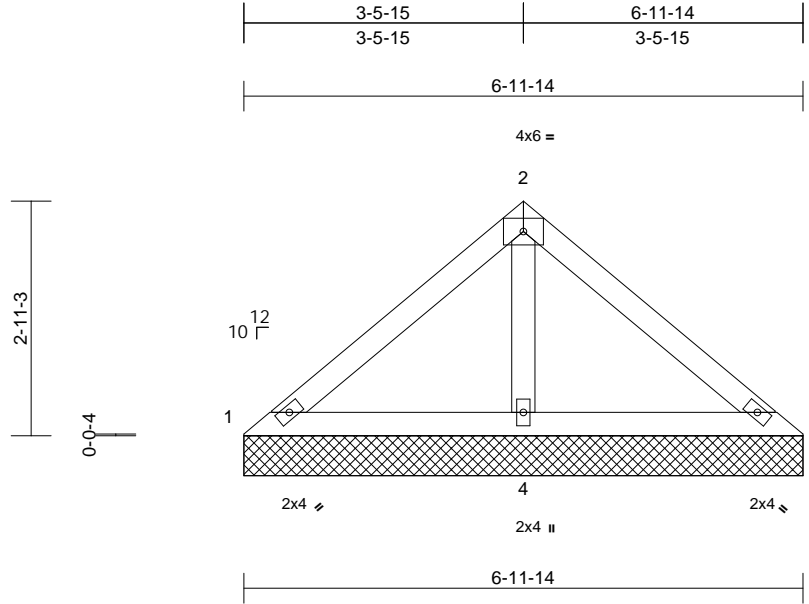
Job	Truss	Truss Type	Qty	Ply	1058 Serenity	I75140176
P04241-28229	V02	Valley	1	1	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Thu Jul 24 07:57:53

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Scale = 1:28.8

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.15	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.15	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.05	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2021/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 6-11-14 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.

#### REACTIONS

(size)	1=6-11-14, 3=6-11-14, 4=6-11-14
Max Horiz	1=50 (LC 11)
Max Uplift	1=-5 (LC 32), 3=-5 (LC 31), 4=-59 (LC 14)
Max Grav	1=65 (LC 31), 3=65 (LC 32), 4=478 (LC 2)

#### FORCES

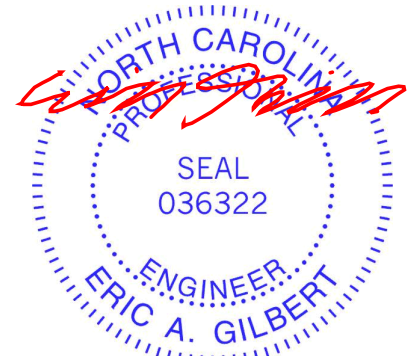
	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=-78/182, 2-3=-75/182
BOT CHORD	1-4=-132/125, 3-4=-132/125
WEBS	2-4=-336/155

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-5 to 3-0-5, Interior (1) 3-0-5 to 3-6-4, Exterior(2R) 3-6-4 to 6-2-13, Interior (1) 6-2-13 to 7-0-3 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 5 lb uplift at joint 1, 5 lb uplift at joint 3 and 59 lb uplift at joint 4.

LOAD CASE(S) Standard



July 25,2025

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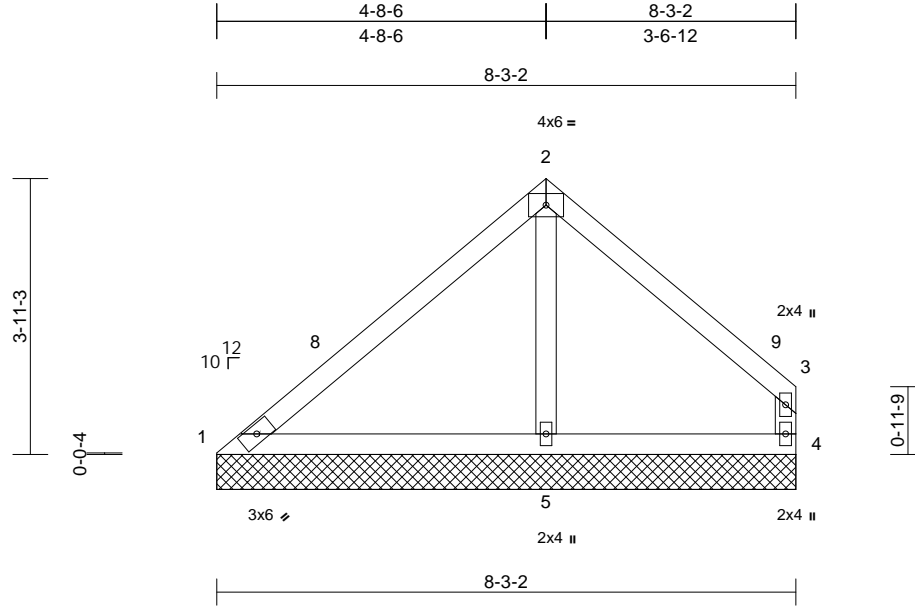
Job	Truss	Truss Type	Qty	Ply	1058 Serenity	I75140177
P04241-28229	V03	Valley	1	1	Job Reference (optional)	

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

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Scale = 1:32.9

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.28	Vert(LL)	n/a	-	999	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.32	Vert(TL)	n/a	-	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.05	Horiz(TL)	0.01	4	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP							
BCDL	10.0									Weight: 34 lb	FT = 20%

#### LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.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)	1=8-3-2, 4=8-3-2, 5=8-3-2
Max Horiz	1=76 (LC 11)
Max Uplift	1=-34 (LC 15), 4=-49 (LC 15), 5=-6 (LC 14)
Max Grav	1=171 (LC 31), 4=127 (LC 26), 5=368 (LC 25)

#### FORCES

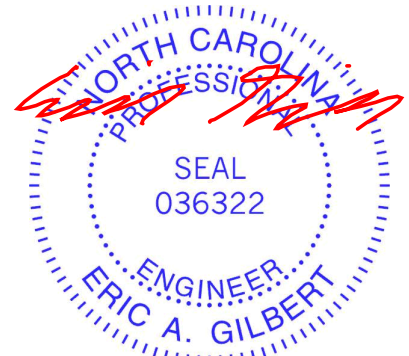
(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-208/105, 2-3=-71/100, 3-4=-113/106
BOT CHORD	1-5=-103/165, 4-5=-10/11
WEBS	2-5=-219/26

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-5 to 3-0-5, Interior (1) 3-0-5 to 4-8-10, Exterior(2R) 4-8-10 to 7-8-10, Interior (1) 7-8-10 to 8-1-10 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
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 49 lb uplift at joint 4, 34 lb uplift at joint 1 and 6 lb uplift at joint 5.

LOAD CASE(S) Standard



July 25,2025

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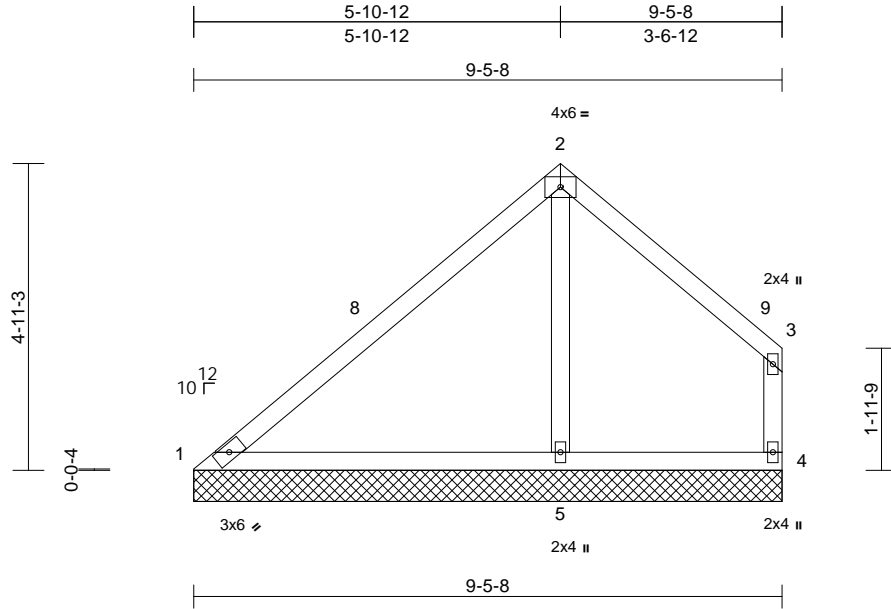
Job	Truss	Truss Type	Qty	Ply	1058 Serenity	175140178
P04241-28229	V04	Valley	1	1	Job Reference (optional)	

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

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<b>Loading</b>	(psf)	<b>Spacing</b>	2-0-0	<b>CSI</b>		<b>DEFL</b>	in	(loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.40	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.42	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.12	Horiz(TL)	0.01	5	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 41 lb	FT = 20%

#### LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.2
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)	1=9-5-8, 4=9-5-8, 5=9-5-8
Max Horiz	1=104 (LC 11)
Max Uplift	1=-22 (LC 15), 4=-53 (LC 10), 5=-53 (LC 14)
Max Grav	1=200 (LC 26), 4=113 (LC 32), 5=506 (LC 25)

#### FORCES

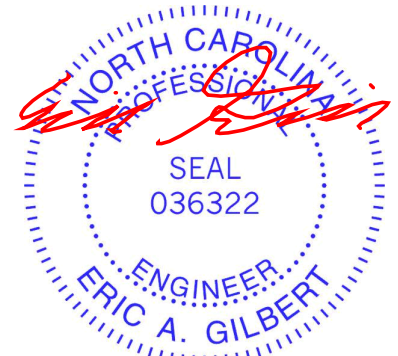
(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-245/158, 2-3=-74/108, 3-4=-102/92
BOT CHORD	1-5=-112/187, 4-5=-34/30
WEBS	2-5=-327/104

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-5 to 3-0-5, Interior (1) 3-0-5 to 5-11-1, Exterior(2R) 5-11-1 to 8-11-1, Interior (1) 8-11-1 to 9-4-1 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 53 lb uplift at joint 4, 22 lb uplift at joint 1 and 53 lb uplift at joint 5.

**LOAD CASE(S)** Standard



July 25, 2025

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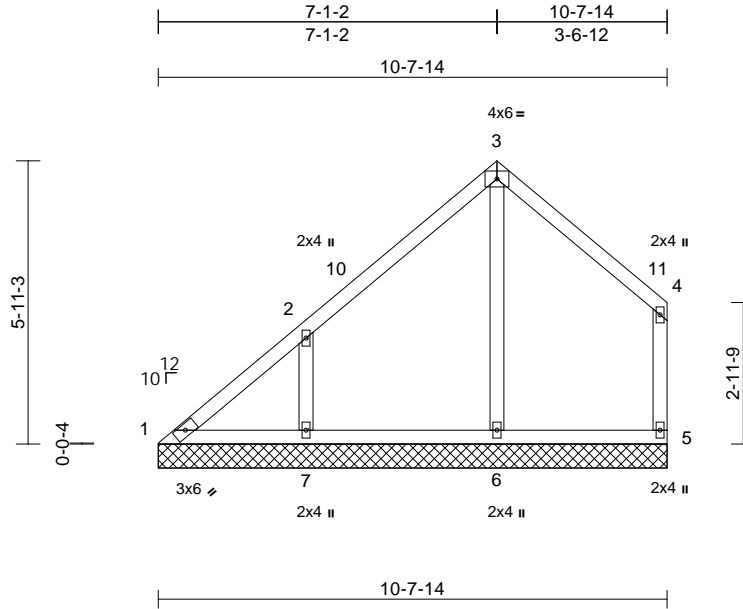
Job	Truss	Truss Type	Qty	Ply	1058 Serenity	I75140179
P04241-28229	V05	Valley	1	1	Job Reference (optional)	

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

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<b>Loading</b>	(psf)	<b>Spacing</b>	2-0-0	<b>CSI</b>		<b>DEFL</b>	in	(loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.19	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.11	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.11	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 51 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) 1=10-7-14, 5=10-7-14, 6=10-7-14, 7=10-7-14  
Max Horiz 1=132 (LC 11)  
Max Uplift 1=-40 (LC 10), 5=-47 (LC 15), 6=-18 (LC 11), 7=123 (LC 14)  
Max Grav 1=136 (LC 26), 5=160 (LC 26), 6=292 (LC 25), 7=344 (LC 25)

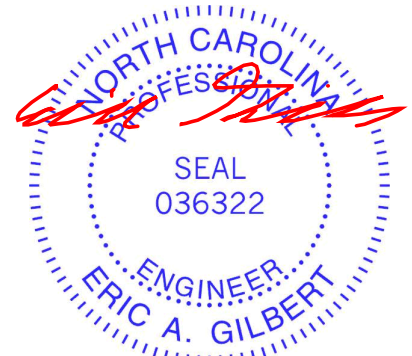
**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-174/129, 2-3=-151/142, 3-4=-116/137, 4-5=-133/117  
BOT CHORD 1-7=-69/108, 6-7=-32/40, 5-6=-32/40  
WEBS 3-6=-214/52, 2-7=-257/176

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-5 to 3-1-7, Interior (1) 3-1-7 to 7-1-7, Exterior(2R) 7-1-7 to 10-1-7, Interior (1) 10-1-7 to 10-6-7 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 47 lb uplift at joint 5, 40 lb uplift at joint 1, 18 lb uplift at joint 6 and 123 lb uplift at joint 7.

**LOAD CASE(S)** Standard



July 25, 2025

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

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

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**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932

# Symbols

## PLATE LOCATION AND ORIENTATION



\* 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.

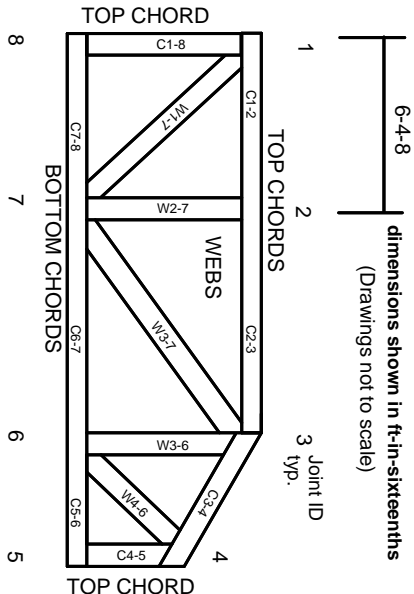
## BEARING



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/TP1: National Design Specification for Metal Plate Connected Wood Truss Construction.  
DSB-22: 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/TP1 section 6.3. These truss designs rely on lumber values established by others.

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# General Safety Notes

**Failure to Follow Could Cause Property Damage or Personal Injury**

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/TP1 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TP1 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/TP1 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.

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