

Trenco

818 Soundside Rd
Edenton, NC 27932

Re: P05396-30387
912 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: I76656601 thru I76656641

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

North Carolina COA: C-0844



September 26, 2025

Gilbert, Eric

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

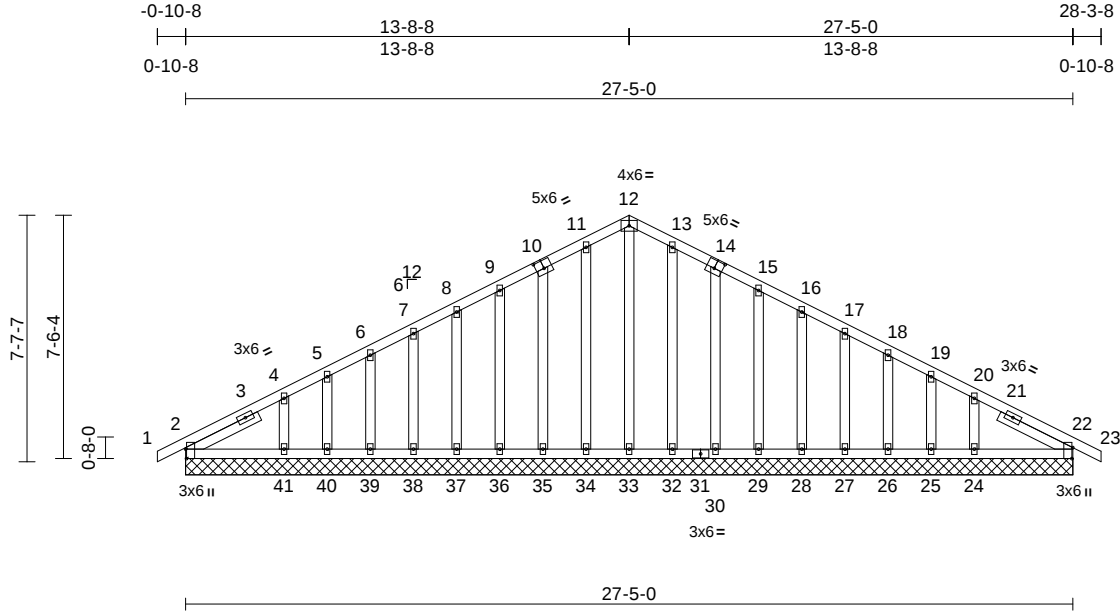
Job	Truss	Truss Type	Qty	Ply	912 Serenity	176656601
P05396-30387	A01E	Common Supported Gable	1	1	Job Reference (optional)	

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

Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Fri Sep 26 10:43:15

Page: 1

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Plate Offsets (X, Y): [2:0-3-8,Edge], [10:0-3-0,0-3-0], [14:0-3-0,0-3-0], [22:0-4-1,Edge]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.09	Vert(LL)	n/a	-	n/a	999	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.08	Vert(CT)	n/a	-	n/a	999	
TCDL	7.0	Rep Stress Incr	NO	WB	0.12	Horz(CT)	0.01	22	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS							
BCDL	10.0										
Weight: 202 lb FT = 20%											

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

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

REACTIONS (size)
2=27-5-0, 22=27-5-0, 24=27-5-0, 25=27-5-0, 26=27-5-0, 27=27-5-0, 28=27-5-0, 29=27-5-0, 30=27-5-0, 32=27-5-0, 33=27-5-0, 34=27-5-0, 35=27-5-0, 36=27-5-0, 37=27-5-0, 38=27-5-0, 39=27-5-0, 40=27-5-0, 41=27-5-0
Max Horiz 2=116 (LC 16)
Max Uplift 2=-36 (LC 17), 22=-15 (LC 16), 24=-126 (LC 17), 25=-16 (LC 17), 26=-55 (LC 17), 27=-47 (LC 17), 28=-48 (LC 17), 29=-46 (LC 17), 30=-53 (LC 17), 32=-33 (LC 17), 34=-36 (LC 16), 35=-49 (LC 16), 36=-43 (LC 16), 37=-45 (LC 16), 38=-43 (LC 16), 39=-50 (LC 16), 40=-11 (LC 16), 41=-121 (LC 16)
Max Grav 2=165 (LC 2), 22=189 (LC 2), 24=262 (LC 37), 25=62 (LC 2), 26=132 (LC 37), 27=115 (LC 2), 28=117 (LC 37), 29=114 (LC 2), 30=124 (LC 24), 32=125 (LC 24), 33=129 (LC 33), 34=123 (LC 23), 35=120 (LC 23), 36=107 (LC 2), 37=107 (LC 36), 38=103 (LC 2), 39=114 (LC 36), 40=57 (LC 2), 41=212 (LC 36)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/21, 2-4=-117/64, 4-5=-87/73, 5-6=-70/86, 6-7=-59/102, 7-8=-52/117, 8-9=-59/141, 9-11=-85/203, 11-12=-94/226, 12-13=-94/226, 13-15=-85/203, 15-16=-59/141, 16-17=-48/111, 17-18=-43/81, 18-19=-41/49, 19-20=-54/32, 20-22=-121/70, 22-23=0/21
BOT CHORD 2-41=-30/106, 40-41=-30/106, 39-40=-30/106, 38-39=-30/106, 37-38=-30/106, 36-37=-30/106, 35-36=-30/106, 34-35=-30/107, 33-34=-30/107, 32-33=-30/107, 30-32=-30/107, 29-30=-30/106, 28-29=-30/106, 27-28=-30/106, 26-27=-30/106, 25-26=-30/106, 24-25=-30/106, 22-24=-30/106
WEBS 11-34=-87/41, 10-35=-85/64, 9-36=-71/55, 8-37=-72/56, 7-38=-71/56, 6-39=-77/62, 5-40=-46/35, 4-41=-141/135, 13-32=-87/39, 14-30=-85/64, 15-29=-71/55, 16-28=-72/56, 17-27=-71/56, 18-26=-77/62, 19-25=-42/32, 20-24=-151/139, 12-33=-138/42

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 2-1-8, Exterior(2N) 2-1-8 to 13-8-8, Corner(3R) 13-8-8 to 16-8-8, Exterior(2N) 16-8-8 to 28-3-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- 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.
- All plates are 2x4 (||) MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 1-4-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.



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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.

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) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacompnents.com)

ENGINEERING BY
TRENCO
A MiTek Affiliate

818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	912 Serenity
P05396-30387	A01E	Common Supported Gable	1	1	I76656601
			Job Reference (optional)		

- 12) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 36 lb uplift at joint 2, 15 lb uplift at joint 22, 36 lb uplift at joint 34, 49 lb uplift at joint 35, 43 lb uplift at joint 36, 45 lb uplift at joint 37, 43 lb uplift at joint 38, 50 lb uplift at joint 39, 11 lb uplift at joint 40, 121 lb uplift at joint 41, 33 lb uplift at joint 32, 53 lb uplift at joint 30, 46 lb uplift at joint 29, 48 lb uplift at joint 28, 47 lb uplift at joint 27, 55 lb uplift at joint 26, 16 lb uplift at joint 25, 126 lb uplift at joint 24, 36 lb uplift at joint 2 and 15 lb uplift at joint 22.
- 14) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 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: 1-12=-37, 12-23=-37
- Trapezoidal Loads (lb/ft)
- Vert: 42=-20-to-44=-20 (F=0), 44=-20 (F=0)-to-41=-22 (F=-2), 41=-22 (F=-2)-to-40=-22 (F=-2), 40=-22 (F=-2)-to-39=-23 (F=-3), 39=-23 (F=-3)-to-38=-24 (F=-4), 38=-24 (F=-4)-to-37=-25 (F=-5), 37=-25 (F=-5)-to-36=-25 (F=-5), 36=-25 (F=-5)-to-35=-26 (F=-6), 35=-26 (F=-6)-to-34=-27 (F=-7), 34=-27 (F=-7)-to-33=-28 (F=-7), 33=-28 (F=-7)-to-32=-28 (F=-8), 32=-28 (F=-8)-to-31=-29 (F=-9), 31=-29 (F=-9)-to-30=-29 (F=-9), 30=-29 (F=-9)-to-29=-30 (F=-10), 29=-30 (F=-10)-to-28=-30 (F=-10), 28=-30 (F=-10)-to-27=-31 (F=-11), 27=-31 (F=-11)-to-26=-32 (F=-12), 26=-32 (F=-12)-to-25=-33 (F=-13), 25=-33 (F=-13)-to-24=-33 (F=-13), 24=-33 (F=-13)-to-48=-35 (F=-15), 48=-35 (F=-15)-to-46=-35 (F=-15)

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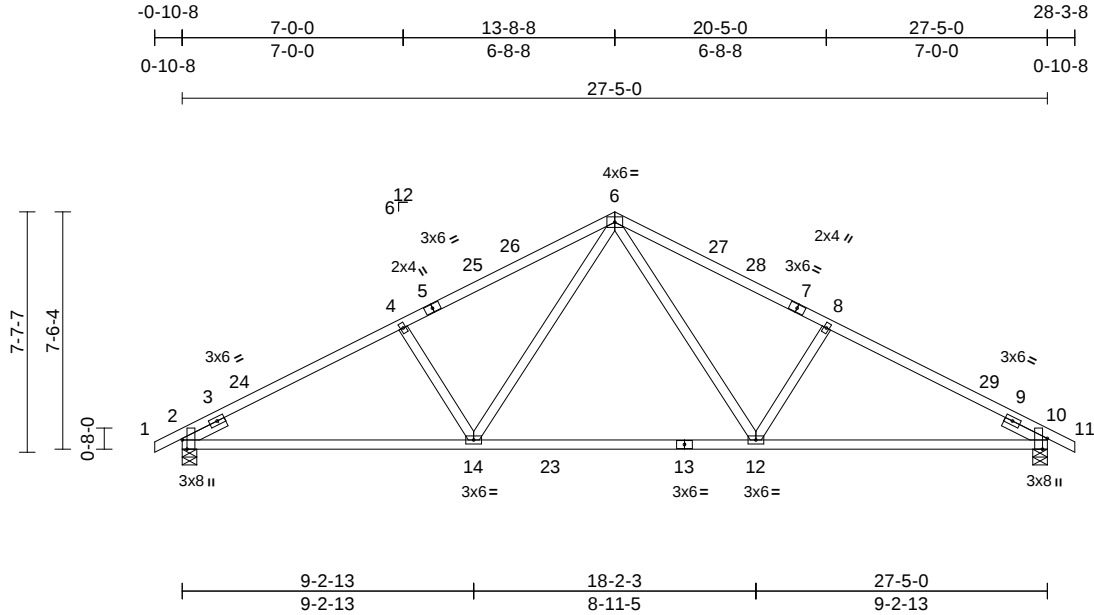
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	912 Serenity	176656602
P05396-30387	A02	Common	9	1	Job Reference (optional)	

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

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Page: 1



Scale = 1:73

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.68	Vert(LL)	-0.27	12-14	>999	240	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.92	Vert(CT)	-0.41	12-14	>793	180	
TCDL	7.0	Rep Stress Incr	YES	WB	0.24	Horz(CT)	0.06	10	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS							
BCDL	10.0										
Weight: 131 lb FT = 20%											

LUMBER

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

BRACING

TOP CHORD	Structural wood sheathing directly applied or 3-8-8 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 2-2-0 oc bracing.

REACTIONS

(size)	2=0-5-8, 10=0-5-8
Max Horiz	2=116 (LC 16)
Max Uplift	2=-256 (LC 16), 10=-256 (LC 17)
Max Grav	2=1153 (LC 3), 10=1153 (LC 3)

FORCES

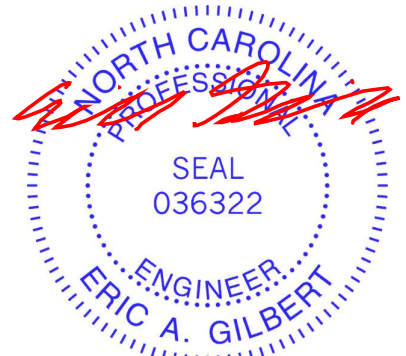
(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/21, 2-4=-1794/417, 4-6=-1659/428, 6-8=-1660/428, 8-10=-1795/417, 10-11=0/21
BOT CHORD	2-14=-374/1556, 12-14=-151/1070, 10-12=-292/1557
WEBS	6-12=-185/690, 8-12=-343/242, 6-14=-185/688, 4-14=-343/242

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 13-8-8, Exterior(2R) 13-8-8 to 16-8-8, Interior (1) 16-8-8 to 28-3-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- 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 256 lb uplift at joint 2 and 256 lb uplift at joint 10.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



September 26,2025

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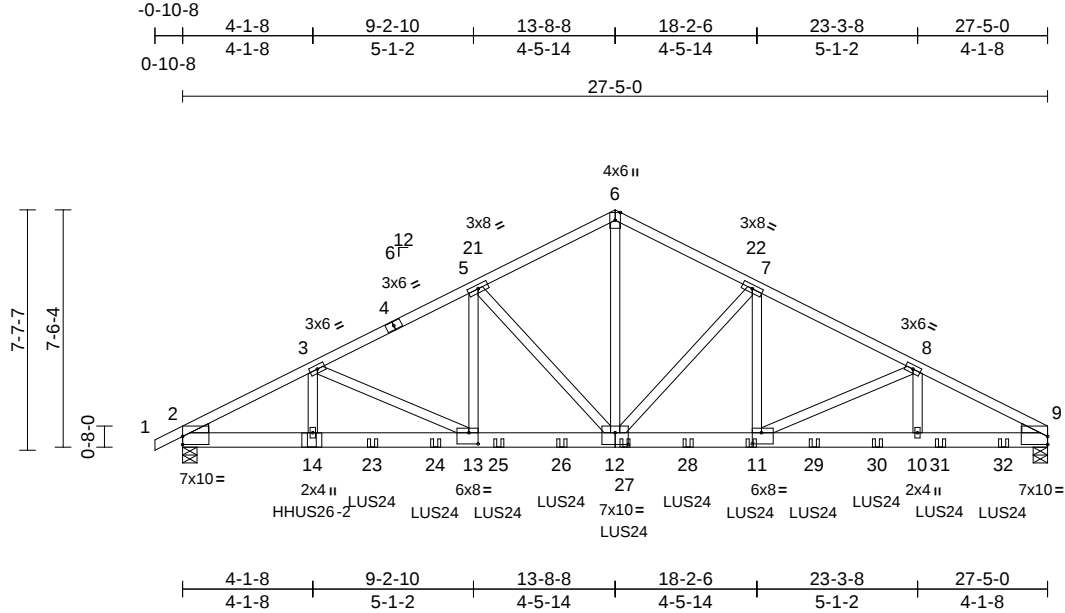
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	912 Serenity	176656603
P05396-30387	A03G	Common Girder	1	2	Job Reference (optional)	

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

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Page: 1



Scale = 1:73

Plate Offsets (X, Y): [2:Edge,0-3-1], [9:Edge,0-3-1], [11:0-3-8,0-4-4], [12:0-5-0,0-4-8], [13:0-3-8,0-4-4]

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)	-0.18	13-14	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.64	Vert(CT)	-0.33	10-11	>999	180		
TCDL	7.0	Rep Stress Incr	NO	WB	0.63	Horz(CT)	0.08	9	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 354 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP DSS
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 2-9-12 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(size) 2=0-5-8, 9=0-5-8
Max Horiz 2=122 (LC 39)
Max Uplift 2=-1128 (LC 12), 9=-977 (LC 13)
Max Grav 2=4813 (LC 2), 9=5539 (LC 2)

FORCES

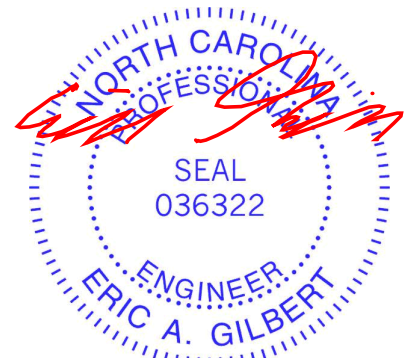
(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/21, 2-3=-8901/2055, 3-5=-7896/1693,
5-6=-6076/1309, 6-7=-6076/1308,
7-8=-8072/1610, 8-9=-9478/1710
BOT CHORD 2-14=-1891/7869, 13-14=-1891/7869,
11-13=-1497/7190, 10-11=-1479/8394,
9-10=-1479/8394
WEBS 8-10=-31/1335, 3-14=-267/791,
5-13=-516/2320, 3-13=-951/434,
5-12=-2452/671, 6-12=-1077/5162,
7-12=-2682/558, 7-11=-400/2614,
8-11=-1587/183

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.
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=130mph (3-second gust) Vasd=103mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 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 977 lb uplift at joint 9 and 1128 lb uplift at joint 2.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

- Use Simpson Strong-Tie HHUS26-2 (14-10d Girder, 4-10d Truss) or equivalent at 4-1-2 from the left end to connect truss(es) to front face of bottom chord.
 - Use Simpson Strong-Tie LUS24 (4-10d Girder, 2-10d Truss) or equivalent spaced at 2-0-0 oc max. starting at 6-0-4 from the left end to 26-0-4 to connect truss(es) to front face of bottom chord.
 - Fill all nail holes where hanger is in contact with lumber.
- LOAD CASE(S)** Standard
- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-6=-37, 6-9=-37, 15-18=-20
Concentrated Loads (lb)
Vert: 14=-896 (F), 11=-526 (F), 23=-546 (F), 24=-534 (F), 25=-522 (F), 26=-510 (F), 27=-499 (F), 28=-526 (F), 29=-553 (F), 30=-553 (F), 31=-553 (F), 32=-553 (F)



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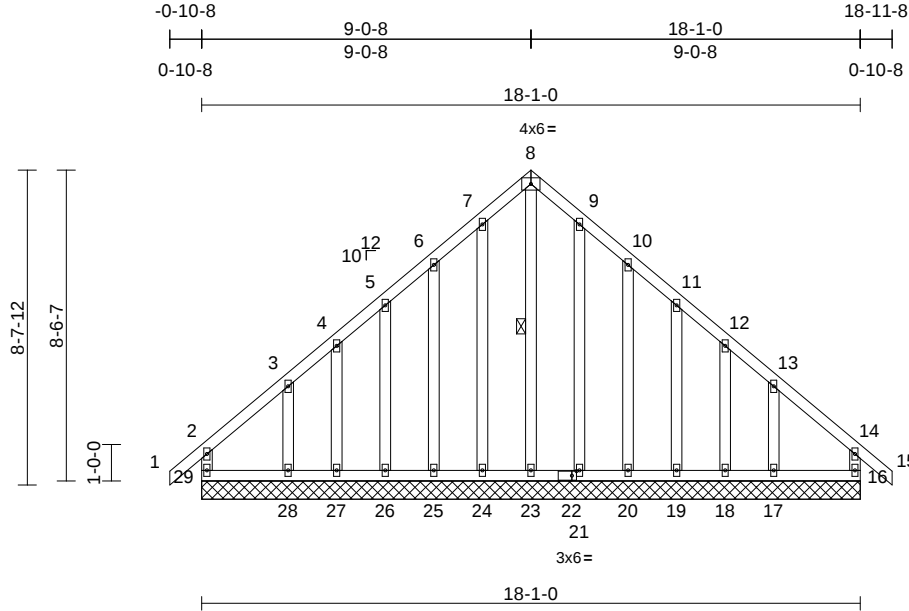
Job	Truss	Truss Type	Qty	Ply	912 Serenity	176656604
P05396-30387	B01E	Common Supported Gable	1	1	Job Reference (optional)	

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

Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Fri Sep 26 10:43:18

Page: 1

ID:SebGcinkMpmIElOH_num3zLpNq-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?I



Scale = 1:63.3

Plate Offsets (X, Y): [22:0-1-8,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.10	Vert(LL)	n/a	-	n/a	999	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.09	Vert(CT)	n/a	-	n/a	999	
TCDL	7.0	Rep Stress Incr	NO	WB	0.10	Horz(CT)	0.00	16	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MR							
BCDL	10.0										
Weight: 149 lb FT = 20%											

LUMBER

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

BRACING

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS	1 Row at midpt 8-23

REACTIONS

(size)	16=18-1-0, 17=18-1-0, 18=18-1-0, 19=18-1-0, 20=18-1-0, 21=18-1-0, 23=18-1-0, 24=18-1-0, 25=18-1-0, 26=18-1-0, 27=18-1-0, 28=18-1-0, 29=221 (LC 13)
Max Horiz	29=221 (LC 13)
Max Uplift	16=79 (LC 11), 17=167 (LC 15), 18=34 (LC 15), 19=75 (LC 15), 20=79 (LC 15), 21=40 (LC 15), 24=41 (LC 14), 25=76 (LC 14), 26=72 (LC 14), 27=32 (LC 15), 28=163 (LC 14), 29=100 (LC 10)
Max Grav	16=196 (LC 26), 17=241 (LC 27), 18=100 (LC 2), 19=135 (LC 27), 20=124 (LC 27), 21=123 (LC 27), 23=235 (LC 15), 24=123 (LC 26), 25=117 (LC 26), 26=124 (LC 26), 27=91 (LC 2), 28=216 (LC 26), 29=197 (LC 27)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD	2-29=-158/104, 14-16=-141/102, 1-2=0/35, 2-3=-148/135, 3-4=-99/121, 4-5=-93/159, 5-6=-110/218, 6-7=-143/286, 7-8=-159/319, 8-9=-159/319, 9-10=-143/286, 10-11=-110/218, 11-12=-80/159, 12-13=-75/112, 13-14=-119/107, 14-15=0/35
BOT CHORD	28-29=-98/114, 27-28=-98/114, 26-27=-98/114, 25-26=-98/114, 24-25=-98/114, 23-24=-98/114, 21-23=-98/114, 20-21=-98/114, 19-20=-98/114, 18-19=-98/114, 17-18=-98/114, 16-17=-98/114
WEBS	6-25=-81/96, 5-26=-84/82, 4-27=-65/62, 3-28=-141/142, 10-20=-82/96, 11-19=-84/82, 12-18=-65/62, 13-17=-137/143, 8-23=-329/137, 7-24=-84/45, 9-21=-81/44

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 2-4-8, Exterior(2N) 2-4-8 to 9-0-8, Corner(3R) 9-0-8 to 12-0-8, Exterior(2N) 12-0-8 to 18-11-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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 1-4-0 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.



September 26, 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.

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) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

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Job	Truss	Truss Type	Qty	Ply	912 Serenity
P05396-30387	B01E	Common Supported Gable	1	1	Job Reference (optional)

I76656604

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

Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Fri Sep 26 10:43:18
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Page: 2

- 13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 79 lb uplift at joint 16, 100 lb uplift at joint 29, 76 lb uplift at joint 25, 72 lb uplift at joint 26, 32 lb uplift at joint 27, 163 lb uplift at joint 28, 79 lb uplift at joint 20, 75 lb uplift at joint 19, 34 lb uplift at joint 18, 167 lb uplift at joint 17, 41 lb uplift at joint 24 and 40 lb uplift at joint 21.
- 14) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 15) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard

- 1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
- Uniform Loads (lb/ft)
- Vert: 1-2=-37, 2-8=-37, 8-14=-37, 14-15=-37
- Trapezoidal Loads (lb/ft)
- Vert: 29=-20-to-28=-22 (F=-2), 28=-22 (F=-2)-to-27=-23 (F=-3), 27=-23 (F=-3)-to-26=-24 (F=-4), 26=-24 (F=-4)-to-25=-25 (F=-5), 25=-25 (F=-5)-to-24=-26 (F=-6), 24=-26 (F=-6)-to-23=-28 (F=-7), 23=-28 (F=-7)-to-22=-28 (F=-8), 22=-28 (F=-8)-to-21=-29 (F=-9), 21=-29 (F=-9)-to-20=-30 (F=-10), 20=-30 (F=-10)-to-19=-31 (F=-11), 19=-31 (F=-11)-to-18=-32 (F=-12), 18=-32 (F=-12)-to-17=-33 (F=-13), 17=-33 (F=-13)-to-16=-35 (F=-15)

 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) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



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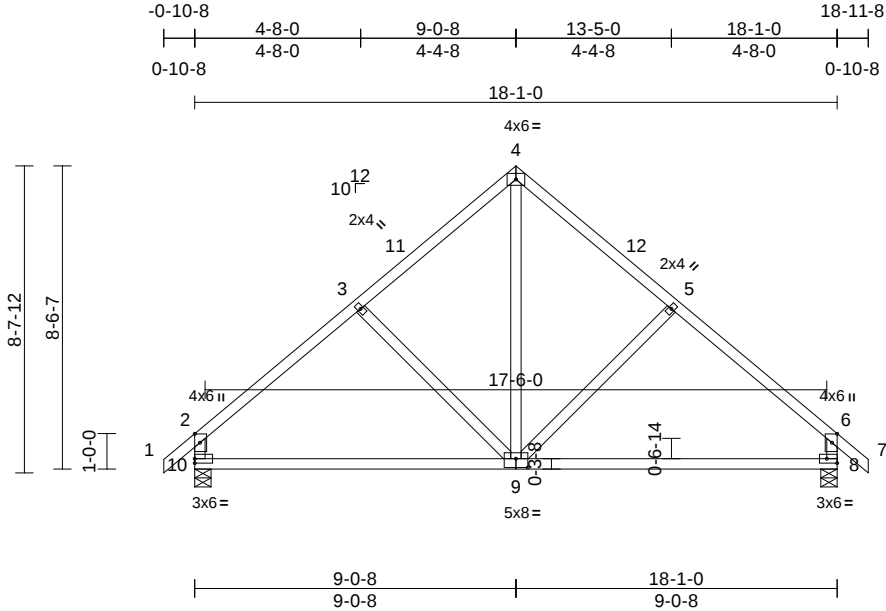
Job P05396-30387	Truss B02	Truss Type Common	Qty 6	Ply 1	912 Serenity Job Reference (optional)	176656605
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84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Fri Sep 26 10:43:18

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ID:TXIFaODNLNIs02dGmUPo49zLpLz-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:64.9												
Plate Offsets (X, Y): [2:0-3-0,0-1-12], [6:0-3-0,0-1-12], [8:Edge,0-1-8], [9:0-4-0,0-3-0]												
Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.55	Vert(LL)	-0.12	9-10	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.70	Vert(CT)	-0.25	8-9	>862	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.17	Horz(CT)	0.01	8	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 97 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 5-10-10 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
REACTIONS	
(size)	8=0-5-8, 10=0-5-8
Max Horiz	10=221 (LC 13)
Max Uplift	8=-158 (LC 15), 10=-158 (LC 14)
Max Grav	8=713 (LC 2), 10=713 (LC 2)
FORCES	
(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/35, 2-3=-726/192, 3-4=-561/203, 4-5=-561/203, 5-6=-726/192, 6-7=0/35, 2-10=-622/202, 6-8=-622/202
BOT CHORD	8-10=-146/541
WEBS	4-9=-143/424, 5-9=-184/203, 3-9=-184/203

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 9-0-8, Exterior(2R) 9-0-8 to 12-0-8, Interior (1) 12-0-8 to 18-11-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 158 lb uplift at joint 8 and 158 lb uplift at joint 10.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



September 26, 2025

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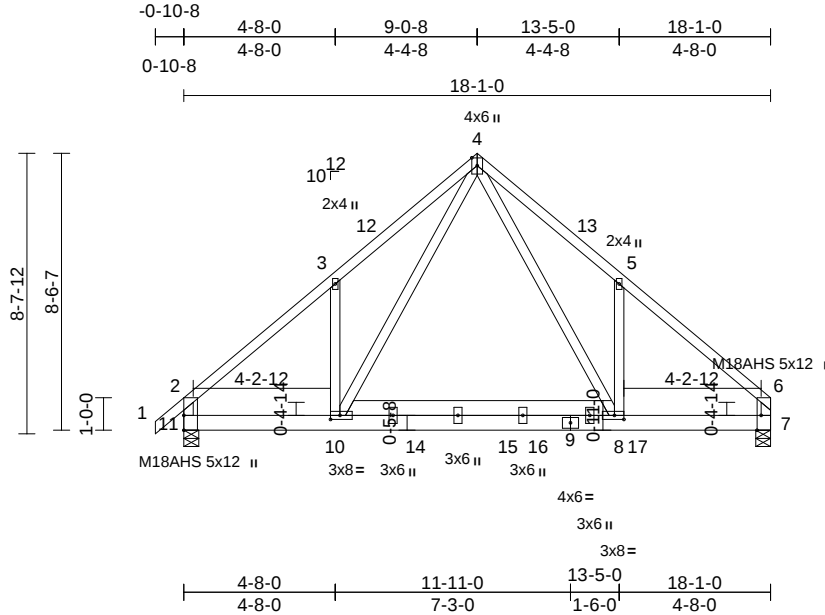
Job	Truss	Truss Type	Qty	Ply	912 Serenity	176656606
P05396-30387	B02H	Common	1	1	Job Reference (optional)	

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

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Scale = 1:71

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.75	Vert(LL)	-0.06	8-10	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.44	Vert(CT)	-0.12	8-10	>999	180	M18AHS	186/179
TCDL	7.0	Rep Stress Incr	NO	WB	0.35	Horz(CT)	0.01	7	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 138 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 5-9-4 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(size) 7=0-5-8, 11=0-5-8
Max Horiz 11=211 (LC 11)
Max Uplift 7=-68 (LC 15), 11=-125 (LC 14)
Max Grav 7=813 (LC 28), 11=833 (LC 27)

FORCES

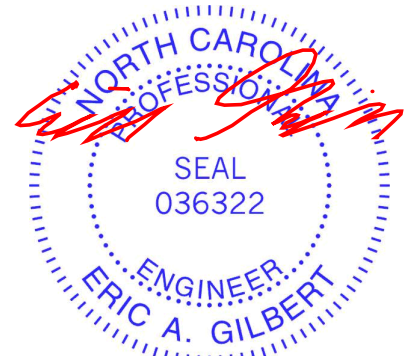
(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/35, 2-3=-879/125, 3-4=-896/301, 4-5=-934/265, 5-6=-902/84, 2-11=-705/155, 6-7=-659/86
BOT CHORD 10-11=-113/720, 8-10=-20/462, 7-8=-24/651
WEBS 4-10=-243/545, 4-8=-182/602, 3-10=-243/269, 5-8=-264/277

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 9-0-8, Exterior(2R) 9-0-8 to 12-0-8, Interior (1) 12-0-8 to 17-11-4 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.
- 100.0lb AC unit load placed on the bottom chord, 12-0-0 from left end, supported at two points, 4-0-0 apart.
- 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 125 lb uplift at joint 11 and 68 lb uplift at joint 7.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Attic room checked for L/360 deflection.

LOAD CASE(S) Standard



September 26, 2025

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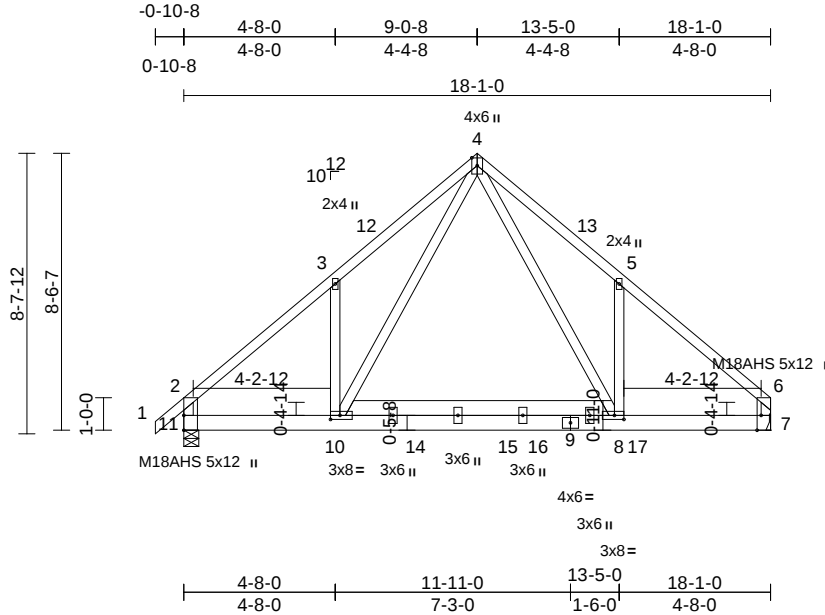
Job	Truss	Truss Type	Qty	Ply	912 Serenity	176656607
P05396-30387	B03	Common	4	1	Job Reference (optional)	

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

Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Fri Sep 26 10:43:19

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Scale = 1:71

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.75	Vert(LL)	-0.06	8-10	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.44	Vert(CT)	-0.12	8-10	>999	180	M18AHS	186/179
TCDL	7.0	Rep Stress Incr	NO	WB	0.35	Horz(CT)	0.01	7	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 138 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 5-9-4 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(size) 7= Mechanical, 11=0-5-8
Max Horiz 11=211 (LC 11)
Max Uplift 7=-68 (LC 15), 11=-125 (LC 14)
Max Grav 7=813 (LC 28), 11=833 (LC 27)

FORCES

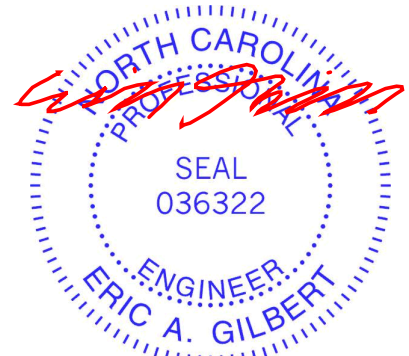
(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/35, 2-3=-879/125, 3-4=-896/301, 4-5=-934/265, 5-6=-902/84, 2-11=-705/155, 6-7=-659/86
BOT CHORD 10-11=-113/720, 8-10=-20/462, 7-8=-24/651
WEBS 4-10=-243/545, 4-8=-182/602, 3-10=-243/269, 5-8=-264/277

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 9-0-8, Exterior(2R) 9-0-8 to 12-0-8, Interior (1) 12-0-8 to 17-11-4 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.
- 100.0lb AC unit load placed on the bottom chord, 12-0-0 from left end, supported at two points, 4-0-0 apart.
- 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.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 125 lb uplift at joint 11 and 68 lb uplift at joint 7.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Attic room checked for L/360 deflection.

LOAD CASE(S) Standard



September 26, 2025

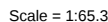
WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

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818 Soundside Road
Edenton, NC 27932

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Fri Sep 26 10:43:19 Page: 1
ID:IEp0Y3iUgqrlApk3RO3jo6zLbT3-RfC?PsB70Hg3NSoPanL8w3ulTXbGKWRCDo7J4zJC?f

[illegible]

September 26, 2025

WARNING – Verify design parameters and READ NOTES ON THIS AND INCLUDED MITER REFERENCE PAGE MIT-17-19 (Rev. 1/2/2025) 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/TP1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

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Edenton, NC 27932

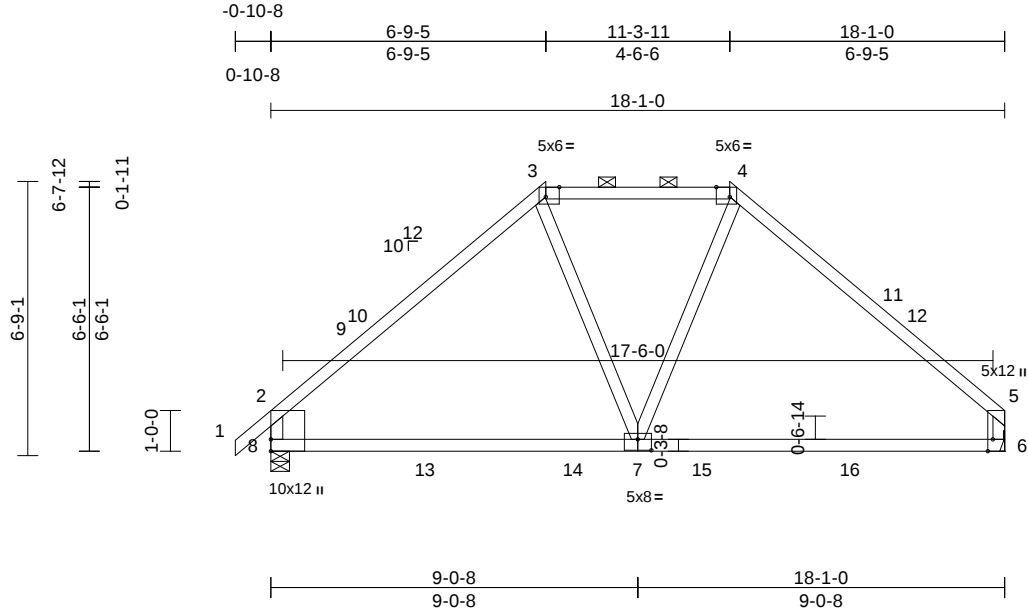
Job P05396-30387	Truss B05	Truss Type Hip	Qty 1	Ply 1	912 Serenity Job Reference (optional)	176656609
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84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Fri Sep 26 10:43:19

Page: 1

ID:LvL?bIUcPnqhOVizOYgBUzLYxy-RfC?PsB70Hq3NSgPqnL8w3uITxbGKWrCDoi7J4zJC?f



Scale = 1:56.8

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

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	0.58	Vert(LL)	-0.19	7-8	>999	240	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.91	Vert(CT)	-0.33	7-8	>656	180	
TCDL	7.0	Rep Stress Incr	YES	WB	0.07	Horz(CT)	0.01	6	n/a	n/a	
BCLL	0.0*	Code	IRC2018/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

BRACING

TOP CHORD Structural wood sheathing directly applied or 5-10-0 oc purlins, except end verticals, and 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) 6= Mechanical, 8=0-5-8
Max Horiz 8=168 (LC 11)
Max Uplift 6=-126 (LC 15), 8=-150 (LC 14)
Max Grav 6=756 (LC 3), 8=804 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/35, 2-3=-777/188, 3-4=-590/209, 4-5=-776/193, 2-8=-643/209, 5-6=-592/180
BOT CHORD 6-8=-119/542
WEBS 3-7=-43/283, 4-7=-43/275

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 6-9-5, Exterior(2E) 6-9-5 to 11-3-11, Exterior(2R) 11-3-11 to 15-6-10, Interior (1) 15-6-10 to 17-11-4 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=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

- 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, with BCDL = 10.0psf.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 150 lb uplift at joint 8 and 126 lb uplift at joint 6.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 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



September 26, 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) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

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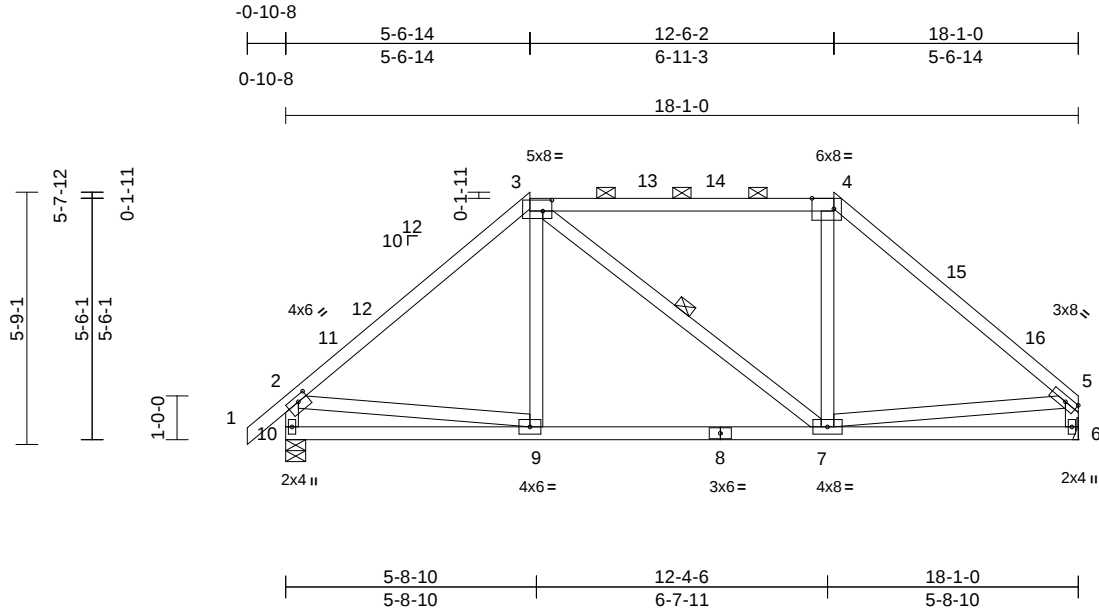
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	912 Serenity	176656610
P05396-30387	B06	Hip	1	1	Job Reference (optional)	

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

Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Fri Sep 26 10:43:19
ID:bvvg2eoWHSf8pOUIVr?nFzzLYxY-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:52.6

Plate Offsets (X, Y): [2:0-2-12,0-1-8], [3:0-2-8,0-3-0], [4:0-6-0,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	0.70	Vert(LL)	-0.03	7-9	>999	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.35	Vert(CT)	-0.07	7-9	>999	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.09	Horz(CT)	0.01	6	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 105 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (5-10-6 max.): 3-4.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 3-7

REACTIONS

(size) 6= Mechanical, 10=0-5-8
Max Horiz 10=145 (LC 11)
Max Uplift 6=-119 (LC 15), 10=-142 (LC 14)
Max Grav 6=657 (LC 2), 10=715 (LC 2)

FORCES

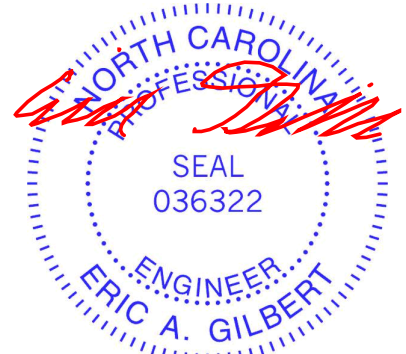
(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/35, 2-3=-746/189, 3-4=-511/205, 4-5=-744/186, 2-10=-666/204, 5-6=-606/166
BOT CHORD 9-10=-214/293, 7-9=-145/506, 6-7=-101/147
WEBS 3-9=0/218, 4-7=0/218, 3-7=-68/73, 2-9=-147/383, 5-7=-131/380

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 5-6-14, Exterior(2R) 5-6-14 to 9-9-13, Interior (1) 9-9-13 to 12-6-2, Exterior(2R) 12-6-2 to 16-9-0, Interior (1) 16-9-0 to 17-11-4 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=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
- 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 142 lb uplift at joint 10 and 119 lb uplift at joint 6.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 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



September 26, 2025

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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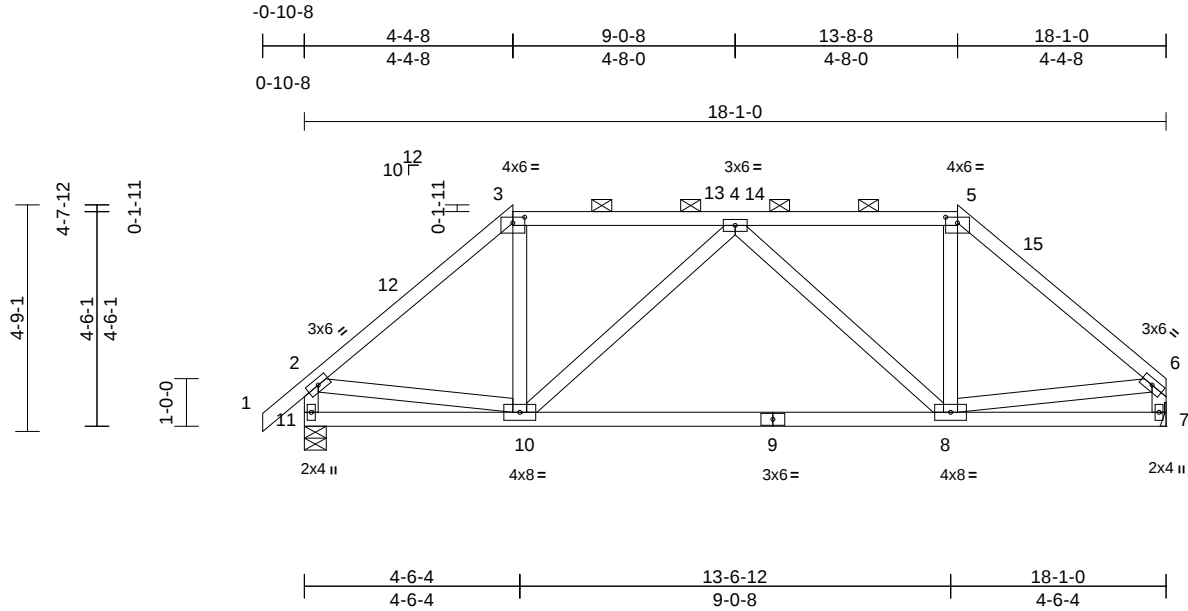
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	912 Serenity	176656611
P05396-30387	B07	Hip	1	1	Job Reference (optional)	

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

Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Fri Sep 26 10:43:20
ID:QwtKG8dULIEqmbEOyxqPxZLYGV-RfC?PsB70Hq3NSgPqnL8w3uITxbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:48.4

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.27	Vert(LL)	-0.13	8-10	>999	240	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.59	Vert(CT)	-0.26	8-10	>816	180	
TCDL	7.0	Rep Stress Incr	YES	WB	0.16	Horz(CT)	0.01	7	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS							
BCDL	10.0										
Weight: 103 lb FT = 20%											

LUMBER

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

BRACING

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

REACTIONS (size) 7= Mechanical, 11=0-5-8
Max Horiz 11=121 (LC 11)
Max Uplift 7=-109 (LC 15), 11=-133 (LC 14)
Max Grav 7=657 (LC 2), 11=715 (LC 2)

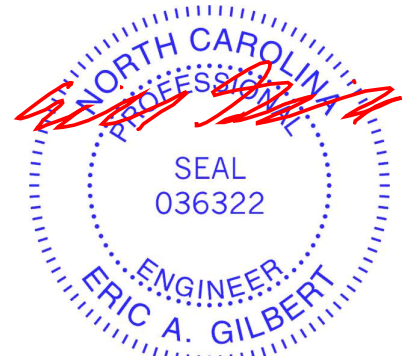
FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/35, 2-3=-765/178, 3-4=-546/185, 4-5=-551/178, 5-6=-765/177, 2-11=-692/189, 6-7=-634/155
BOT CHORD 10-11=-150/173, 8-10=-213/698, 7-8=-69/73
WEBS 3-10=-35/286, 5-8=-37/284, 4-8=-242/150, 4-10=-245/150, 2-10=-117/453, 6-8=-113/470

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 4-4-8, Exterior(2R) 4-4-8 to 8-7-7, Interior (1) 8-7-7 to 13-8-8, Exterior(2E) 13-8-8 to 17-11-4 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=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
- 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 11 and 109 lb uplift at joint 7.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 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



September 26, 2025

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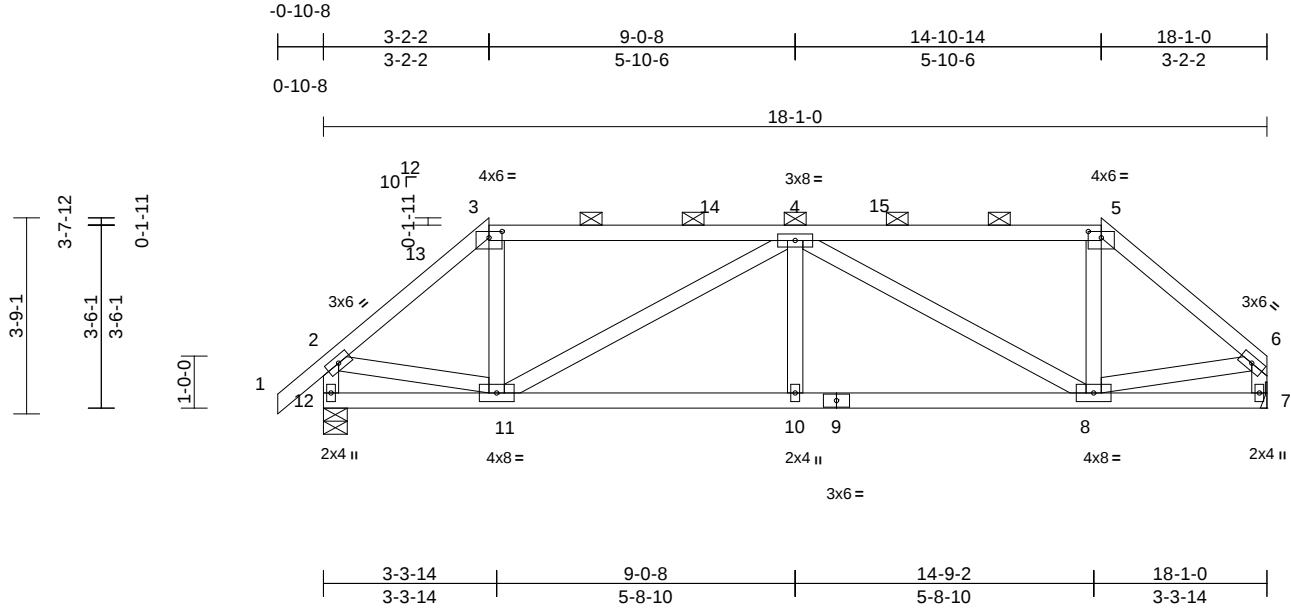
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	912 Serenity	176656612
P05396-30387	B08	Hip	1	1	Job Reference (optional)	

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

Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Fri Sep 26 10:43:20
ID:crdmHsuWtOZRGIK90z2Nw0zLYFX-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCD0i7J4zJC?f

Page: 1



Scale = 1:44.2

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.43	Vert(LL)	-0.03	10	>999	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.36	Vert(CT)	-0.06	8-10	>999	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.37	Horz(CT)	0.02	7	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 101 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS (size) 7= Mechanical, 12=0-5-8
Max Horiz 12=98 (LC 11)
Max Uplift 7=-137 (LC 10), 12=-144 (LC 11)
Max Grav 7=657 (LC 2), 12=715 (LC 2)

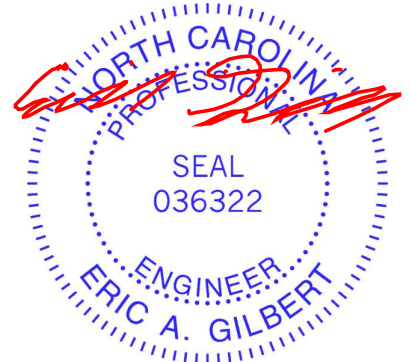
FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/35, 2-3=-743/179, 3-4=-561/172, 4-5=-567/170, 5-6=-746/178, 2-12=-690/191, 6-7=-631/155
BOT CHORD 11-12=-94/112, 10-11=-294/982, 8-10=-294/982, 7-8=-34/42
WEBS 3-11=-31/270, 4-10=0/233, 4-11=-507/186, 5-8=-32/269, 4-8=-503/186, 2-11=-142/524, 6-8=-141/519

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 3-2-2, Exterior(2R) 3-2-2 to 7-5-0, Interior (1) 7-5-0 to 14-10-14, Exterior(2E) 14-10-14 to 17-11-4 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=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
- 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 144 lb uplift at joint 12 and 137 lb uplift at joint 7.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 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



September 26, 2025

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
TRENCO
A MiTek Affiliate

818 Soundside Road
Edenton, NC 27932

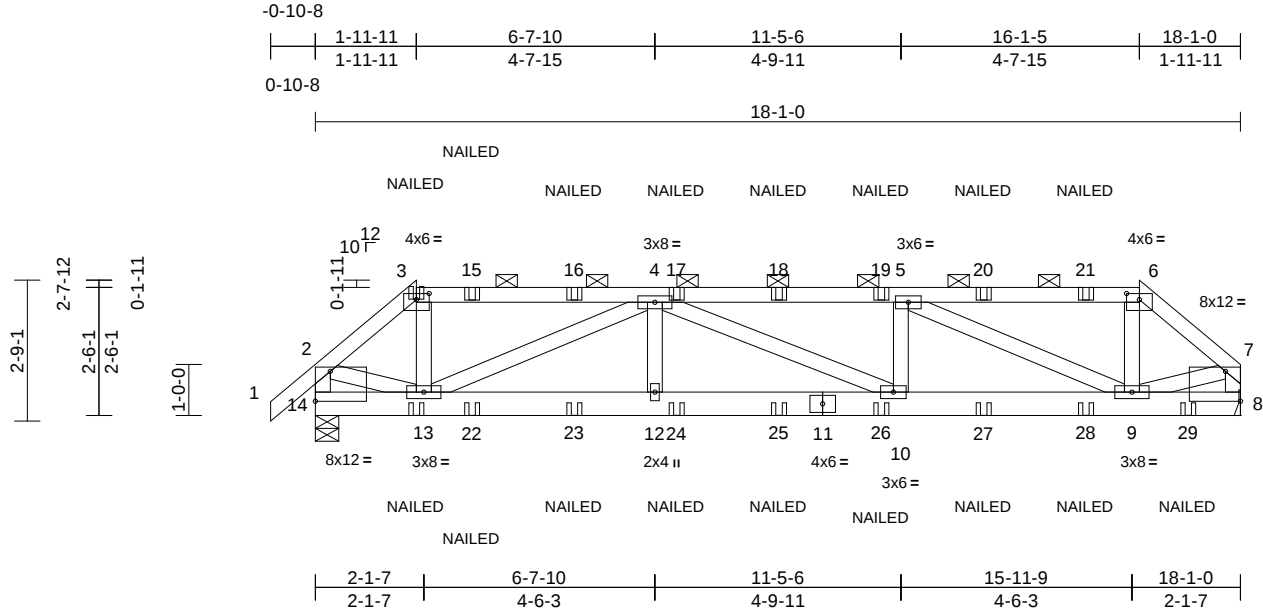
Job	Truss	Truss Type	Qty	Ply	912 Serenity	176656613
P05396-30387	B09G	Hip Girder	1	2	Job Reference (optional)	

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

Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Fri Sep 26 10:43:20

Page: 1

ID:2DhtsGph7RwFgLGTe4tuBrzLYBm-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrcDoi7J4zJC?i



Scale = 1:45

Plate Offsets (X, Y): [3:0-3-0,0-1-7], [6:0-3-0,0-1-7], [7:Edge,0-7-0], [14:Edge,0-7-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.19	Vert(LL)	0.03	10-12	>999	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.24	Vert(CT)	-0.06	10-12	>999	180		
TCDL	7.0	Rep Stress Incr	NO	WB	0.13	Horz(CT)	0.01	8	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 222 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS

(size) 8= Mechanical, 14=0-5-8
Max Horiz 14=72 (LC 7)
Max Uplift 8=-332 (LC 6), 14=-359 (LC 7)
Max Grav 8=916 (LC 1), 14=965 (LC 1)

FORCES

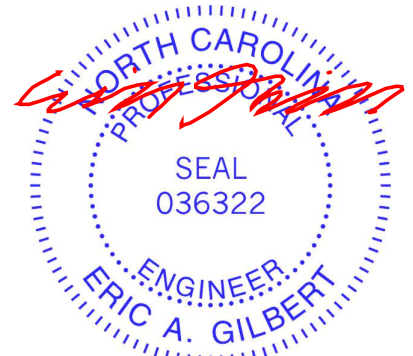
(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/35, 2-3=-1022/407, 3-4=-823/346, 4-5=-1944/781, 5-6=-814/327, 6-7=-1006/381, 2-14=-954/361, 7-8=-893/330
BOT CHORD 13-14=-67/66, 12-13=-805/1960, 10-12=-805/1960, 9-10=-780/1944, 8-9=-25/44
WEBS 3-13=-121/399, 4-13=-1258/515, 4-12=0/248, 4-10=-29/27, 5-10=0/243, 5-9=-1250/525, 6-9=-126/408, 2-13=-334/821, 7-9=-305/792

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.
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=130mph (3-second gust) Vasd=103mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 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
- 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 359 lb uplift at joint 14 and 332 lb uplift at joint 8.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
 - "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidelines.
- LOAD CASE(S)** Standard
- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-37, 2-3=-37, 3-6=-47, 6-7=-37, 8-14=-20
Concentrated Loads (lb)
Vert: 3=-25 (B), 13=-22 (B), 15=-59 (B), 16=-59 (B), 17=-59 (B), 18=-59 (B), 19=-59 (B), 20=-59 (B), 21=-59 (B), 22=-28 (B), 23=-28 (B), 24=-28 (B), 25=-28 (B), 26=-28 (B), 27=-28 (B), 28=-28 (B), 29=-30 (B)



September 26, 2025

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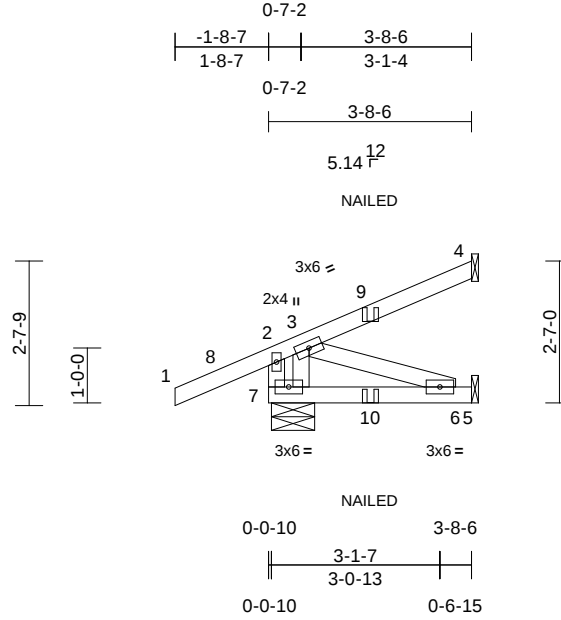
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	912 Serenity
P05396-30387	CJ01	Diagonal Hip Girder	1	1	176656614
Job Reference (optional)					

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

Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Fri Sep 26 10:43:21
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Page: 1



Scale = 1:42

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	6-7	>999	240	MT20
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.16	Vert(CT)	-0.02	6-7	>999	180	244/190
TCDL	7.0	Rep Stress Incr	NO	WB	0.02	Horz(CT)	0.00	4	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP							
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 3-8-6 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS	(size)	4= Mechanical, 5= Mechanical,
		7=0-9-7
	Max Horiz	7=70 (LC 12)
	Max Uplift	4=-43 (LC 12), 5=-13 (LC 12), 7=-70 (LC 12)
	Max Grav	4=74 (LC 19), 5=70 (LC 7), 7=256 (LC 2)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD	2-7=-210/172, 1-2=0/39, 2-3=-48/70, 3-4=-43/22
BOT CHORD	6-7=-65/29, 5-6=0/0
WEBS	3-7=-118/90, 3-6=-31/68

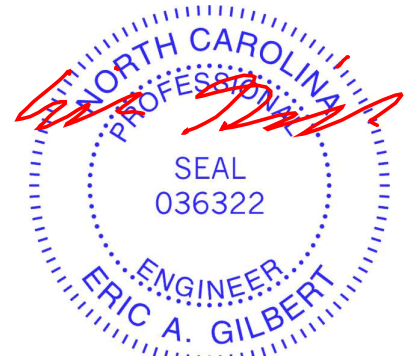
NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 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 43 lb uplift at joint 4, 13 lb uplift at joint 5 and 70 lb uplift at joint 7.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- "NAILED" indicates 2-12d (0.148"x3.25") toe-nails per NDS guidelines.
- 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=-37, 2-4=-37, 5-7=-20
Concentrated Loads (lb)
Vert: 10=-2 (B)



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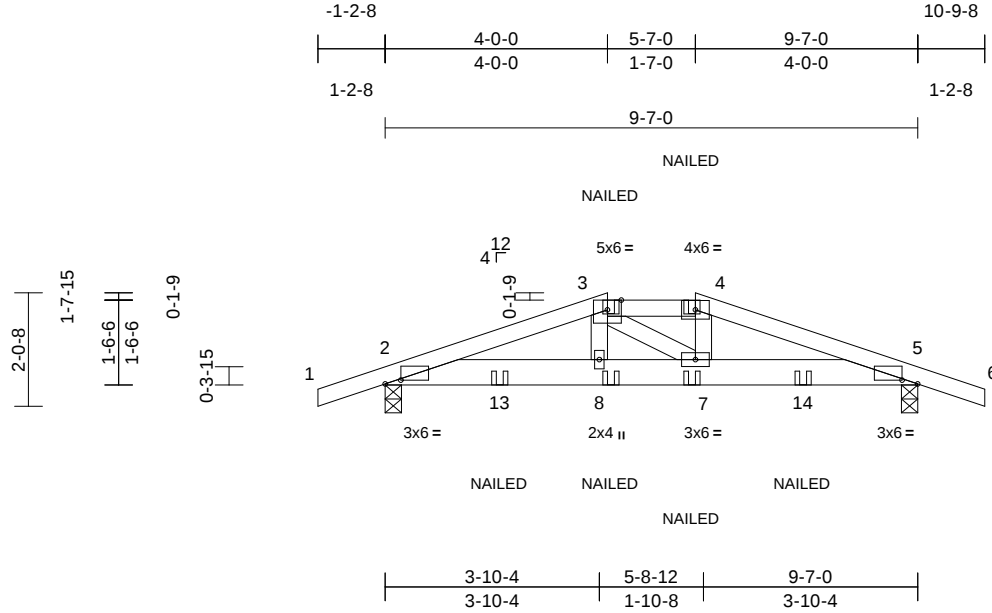
Job	Truss	Truss Type	Qty	Ply	912 Serenity	176656615
P05396-30387	CP1	Hip Girder	1	1	Job Reference (optional)	

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

Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Fri Sep 26 10:43:21

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Scale = 1:41.5

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.16	Vert(LL)	-0.02	7	>999	240	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.37	Vert(CT)	-0.04	7	>999	180	
TCDL	7.0	Rep Stress Incr	NO	WB	0.04	Horz(CT)	0.01	5	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS							
BCDL	10.0										
										Weight: 47 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 5-5-6 oc purlins, except 2-0-0 oc purlins (5-10-8 max.): 3-4.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-8, 5=0-3-8
Max Horiz 2=-27 (LC 9)
Max Uplift 2=-221 (LC 8), 5=-221 (LC 9)
Max Grav 2=640 (LC 37), 5=640 (LC 37)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/27, 2-3=-1109/321, 3-4=-1018/314, 4-5=-1105/319, 5-6=0/27
BOT CHORD 2-8=-279/1041, 7-8=-276/1021, 5-7=-266/1037
WEBS 3-8=-31/173, 3-7=-65/57, 4-7=-28/172

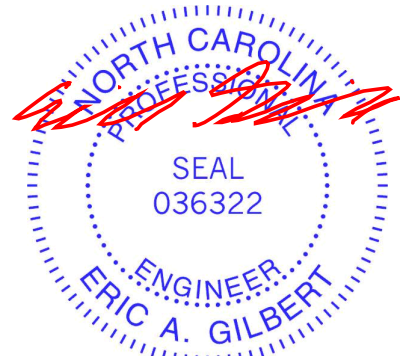
NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 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); ls=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 221 lb uplift at joint 2 and 221 lb uplift at joint 5.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidelines.
- 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=-37, 3-4=-47, 4-6=-37, 2-5=-20
Concentrated Loads (lb)
Vert: 3=-50 (F), 4=-50 (F), 8=-29 (F), 7=-29 (F), 13=-118 (F), 14=-118 (F)



September 26, 2025

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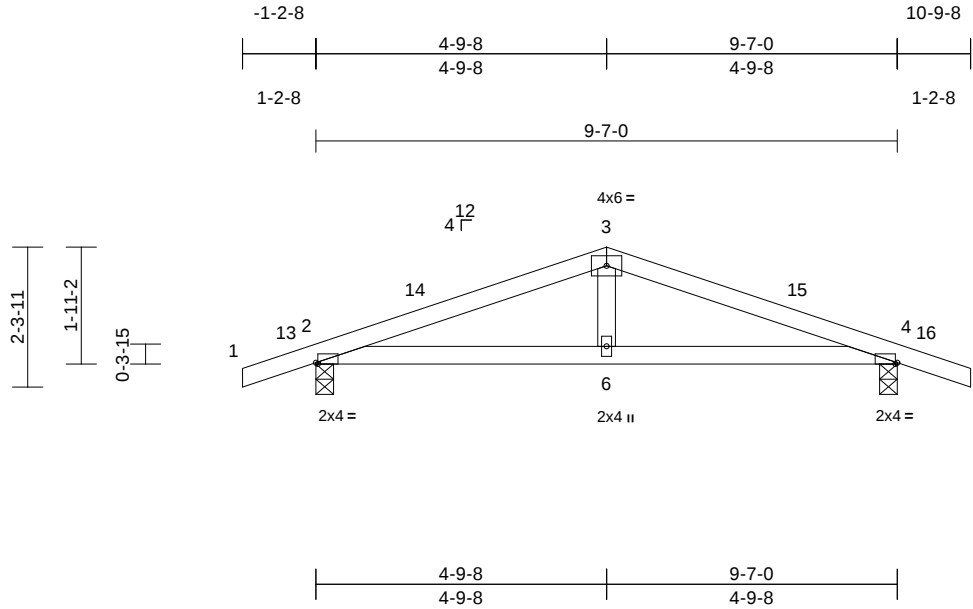
Job	Truss	Truss Type	Qty	Ply	912 Serenity	176656616
P05396-30387	CP2	Common	3	1	Job Reference (optional)	

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

Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Fri Sep 26 10:43:21

Page: 1

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Scale = 1:38

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.24	Vert(LL)	0.02	6-9	>999	240	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.31	Vert(CT)	-0.04	6-12	>999	180	
TCDL	7.0	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.01	4	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS							
BCDL	10.0										
										Weight: 35 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS

(size) 2=0-3-8, 4=0-3-8
Max Horiz 2=32 (LC 16)
Max Uplift 2=-143 (LC 12), 4=-143 (LC 13)
Max Grav 2=420 (LC 2), 4=420 (LC 2)

FORCES

(lb) - Maximum Compression/Maximum Tension

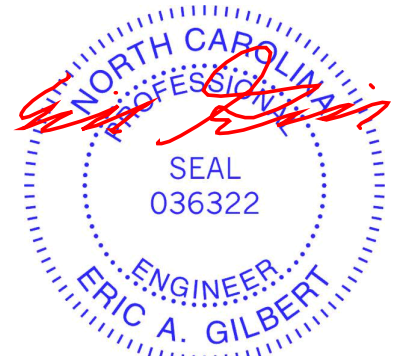
TOP CHORD 1-2=0/21, 2-3=-629/393, 3-4=-629/393, 4-5=0/21
BOT CHORD 2-6=-291/574, 4-6=-291/574
WEBS 3-6=-20/209

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-2-8 to 1-9-8, Interior (1) 1-9-8 to 4-9-8, Exterior(2R) 4-9-8 to 7-9-8, Interior (1) 7-9-8 to 10-9-8 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 143 lb uplift at joint 2 and 143 lb uplift at joint 4.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



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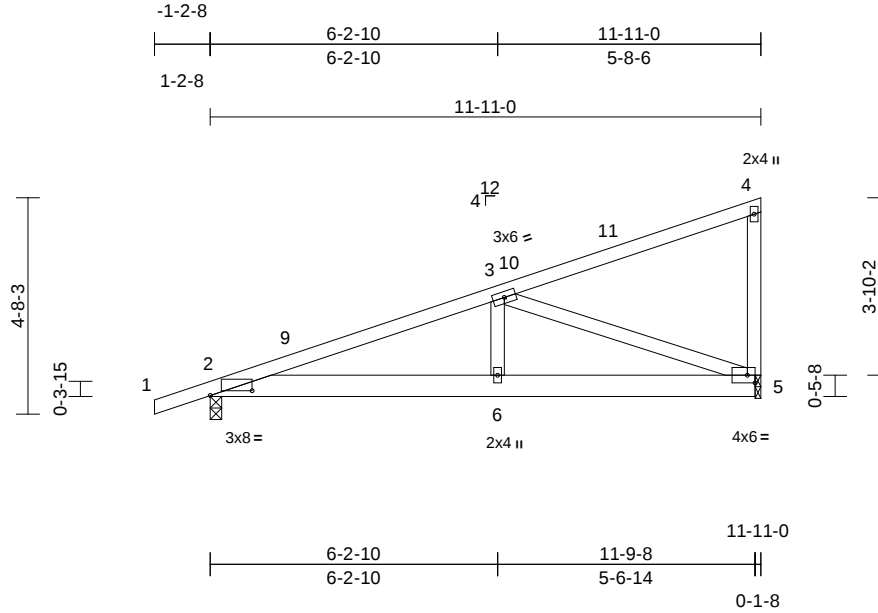
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	912 Serenity	176656617
P05396-30387	E01	Monopitch	3	1	Job Reference (optional)	

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

Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Fri Sep 26 10:43:22
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Page: 1



Scale = 1:49.9

Plate Offsets (X, Y): [2:0-10-14,0-1-4]

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	0.33	Vert(LL)	-0.03	6-8	>999	240	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.31	Vert(CT)	-0.05	6-8	>999	180	
TCDL	7.0	Rep Stress Incr	YES	WB	0.45	Horz(CT)	0.01	5	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS							
BCDL	10.0										
										Weight: 64 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS

(size) 2=0-3-0, 5=0-1-8
Max Horiz 2=164 (LC 13)
Max Uplift 2=-176 (LC 12), 5=-140 (LC 16)
Max Grav 2=507 (LC 2), 5=427 (LC 2)

FORCES

(lb) - Maximum Compression/Maximum Tension

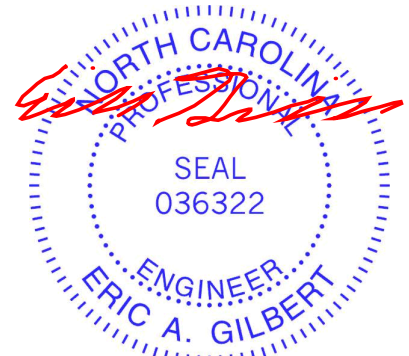
TOP CHORD 1-2=0/23, 2-3=-794/272, 3-4=-101/65,
4-5=-136/120
BOT CHORD 2-6=-357/721, 5-6=-357/721
WEBS 3-6=0/276, 3-5=-748/316

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-2-8 to 1-9-8, Interior (1) 1-9-8 to 11-9-4 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=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.
- Bearing at joint(s) 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate at joint(s) 2, 5.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 176 lb uplift at joint 2 and 140 lb uplift at joint 5.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



September 26, 2025

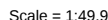
WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

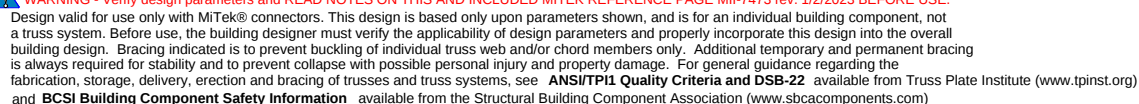
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818 Soundside Road
Edenton, NC 27932

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Fri Sep 26 10:43:22 Page: 1
ID:CFdKmkTbdDVrFGHa3ukM7pzLVkh-RfC?PsB70Hg3NSaPantL8w3ulTXbGKWRCDoj7J4zJC?f



September 26, 2025



818 Soundside Road
Edenton, NC 27932

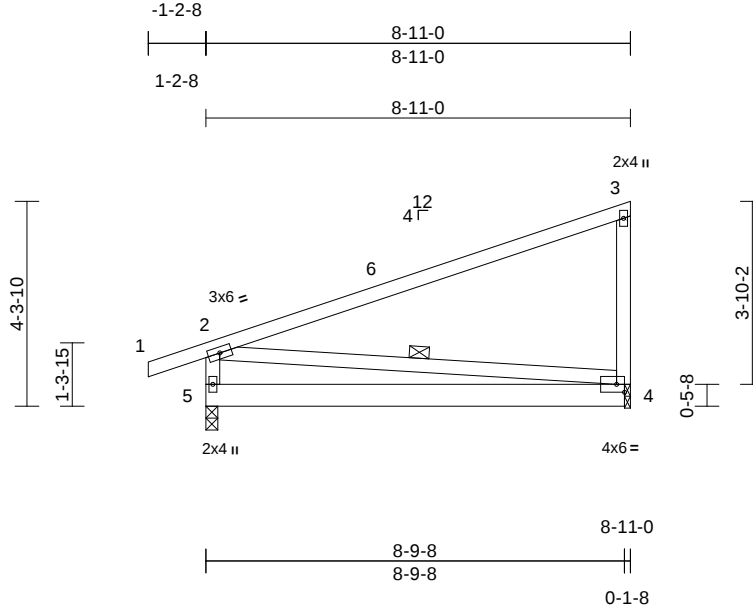
Job	Truss	Truss Type	Qty	Ply	912 Serenity	176656619
P05396-30387	E03	Monopitch	5	1	Job Reference (optional)	

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

Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Fri Sep 26 10:43:22

Page: 1

ID:1gW0bcl0DHOaVoY?vDelZfzLVkK-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:48.4

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	0.56	Vert(LL)	-0.09	4-5	>999	240	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.42	Vert(CT)	-0.17	4-5	>605	180	
TCDL	7.0	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	4	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP							
BCDL	10.0										
										Weight: 55 lb	FT = 20%

LUMBER

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

BRACING

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

WEBS	1 Row at midpt	2-4
------	----------------	-----

REACTIONS	(size)	4=0-1-8, 5=0-3-0
	Max Horiz	5=158 (LC 13)
	Max Uplift	4=-108 (LC 16), 5=-141 (LC 12)
	Max Grav	4=316 (LC 23), 5=398 (LC 2)

FORCES

	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=0/23, 2-3=-142/102, 3-4=-230/244, 2-5=-312/281
BOT CHORD	4-5=-297/175
WEBS	2-4=-123/252

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 1-9-8 to 4-9-8, Interior (1) 4-9-8 to 11-9-4 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=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.
- Bearing at joint(s) 4 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate at joint(s) 4.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 141 lb uplift at joint 5 and 108 lb uplift at joint 4.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



September 26, 2025

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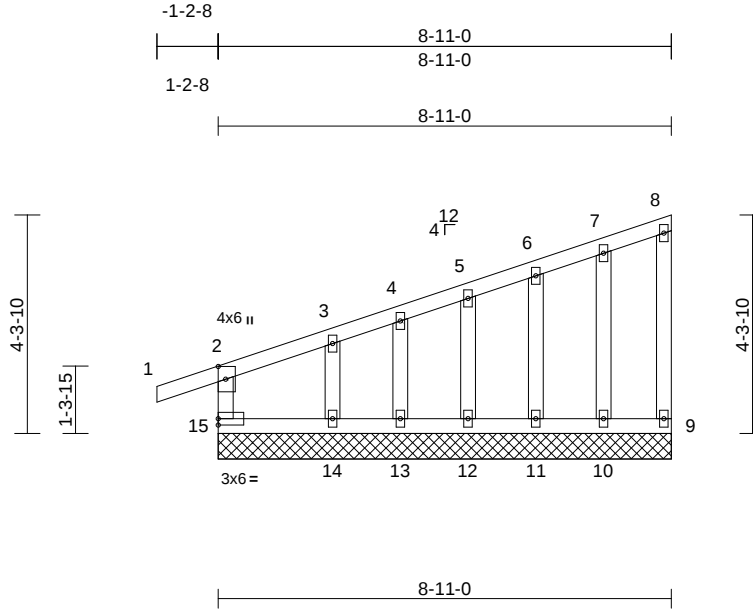
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	912 Serenity
P05396-30387	E05E	Monopitch Supported Gable	1	1	176656620
Job Reference (optional)					

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

Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Fri Sep 26 10:43:22
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Page: 1



Scale = 1:45.3

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.30	Vert(LL)	n/a	-	n/a	999	MT20
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.23	Vert(CT)	n/a	-	n/a	999	244/190
TCDL	7.0	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	9	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MR							
BCDL	10.0										
Weight: 54 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)	9=8-11-0, 10=8-11-0, 11=8-11-0, 12=8-11-0, 13=8-11-0, 14=8-11-0, 15=8-11-0
Max Horiz	15=161 (LC 13)
Max Uplift	9=-37 (LC 13), 10=-32 (LC 12), 11=-41 (LC 16), 12=-45 (LC 16), 13=-16 (LC 12), 14=-132 (LC 13), 15=-30 (LC 12)
Max Grav	9=44 (LC 23), 10=126 (LC 2), 11=117 (LC 23), 12=117 (LC 23), 13=104 (LC 2), 14=122 (LC 2), 15=174 (LC 31)

FORCES

	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=0/23, 2-3=-270/146, 3-4=-177/104, 4-5=-161/105, 5-6=-122/93, 6-7=-87/84, 7-8=-64/77, 8-9=-28/56, 2-15=-146/138
BOT CHORD	14-15=-69/86, 13-14=-69/86, 12-13=-69/86, 11-12=-69/86, 10-11=-69/86, 9-10=-69/86
WEBS	7-10=-78/94, 6-11=-77/108, 5-12=-78/112, 4-13=-72/77, 3-14=-153/276

NOTES

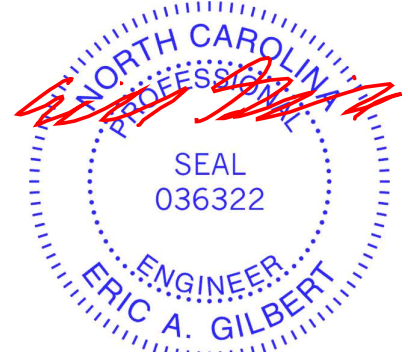
- Unbalanced roof live loads have been considered for this design.

- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 1-9-8 to 4-9-8, Exterior(2N) 4-9-8 to 11-9-4 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
- 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.
- 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 1-4-0 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 37 lb uplift at joint 9, 30 lb uplift at joint 15, 32 lb uplift at joint 10, 41 lb uplift at joint 11, 45 lb uplift at joint 12, 16 lb uplift at joint 13 and 132 lb uplift at joint 14.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 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=-37, 2-8=-37
Trapezoidal Loads (lb/ft)
Vert: 15=-20-to-14=-24 (F=-4), 14=-24 (F=-4)-to-13=-26 (F=-6), 13=-26 (F=-6)-to-12=-28 (F=-8), 12=-28 (F=-8)-to-11=-31 (F=-11), 11=-31 (F=-11)-to-10=-33 (F=-13), 10=-33 (F=-13)-to-9=-35 (F=-15)



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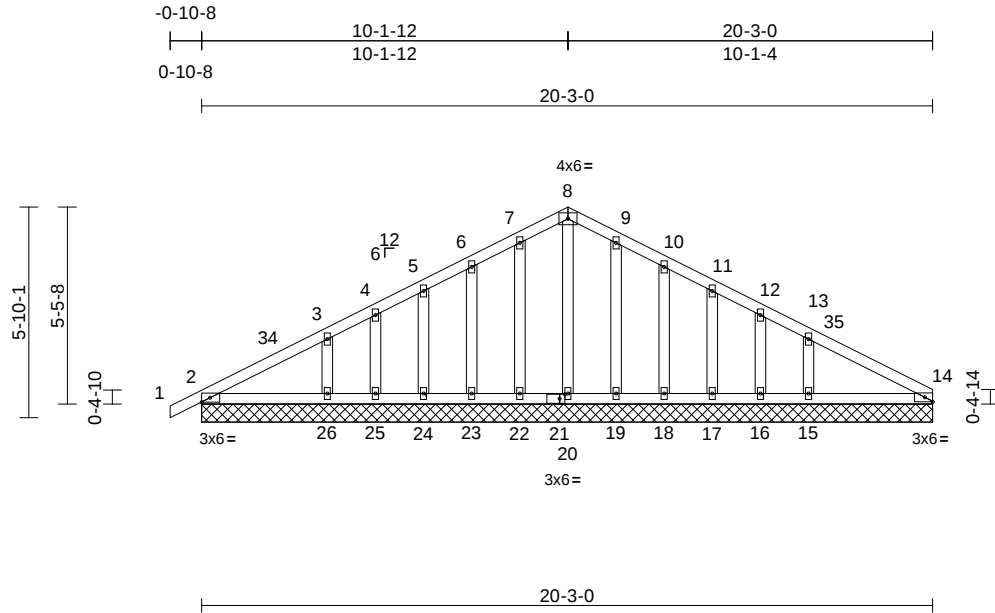
Job	Truss	Truss Type	Qty	Ply	912 Serenity	I76656621
P05396-30387	G01E	Common Supported Gable	1	1	Job Reference (optional)	

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

Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Fri Sep 26 10:43:22

Page: 1

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Scale = 1:63.8

Plate Offsets (X, Y): [21:0-1-12,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.13	Vert(LL)	n/a	-	n/a	999	MT20
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.13	Vert(CT)	n/a	-	n/a	999	244/190
TCDL	7.0	Rep Stress Incr	NO	WB	0.04	Horz(CT)	0.00	14	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS							
BCDL	10.0										
Weight: 116 lb FT = 20%											

LUMBER

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

BRACING

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

REACTIONS (size) 2=20-3-0, 14=20-3-0, 15=20-3-0, 16=20-3-0, 17=20-3-0, 18=20-3-0, 19=20-3-0, 20=20-3-0, 22=20-3-0, 23=20-3-0, 24=20-3-0, 25=20-3-0, 26=20-3-0

Max Horiz 2=95 (LC 16)

Max Uplift 2=-31 (LC 17), 14=-15 (LC 17), 15=-136 (LC 17), 16=-6 (LC 17), 17=-56 (LC 17), 18=-49 (LC 17), 19=-40 (LC 17), 22=-41 (LC 16), 23=-46 (LC 16), 24=-51 (LC 16), 25=-10 (LC 16), 26=-115 (LC 16)
Max Grav 2=174 (LC 2), 14=142 (LC 2), 15=328 (LC 37), 16=18 (LC 2), 17=140 (LC 2), 18=120 (LC 24), 19=125 (LC 24), 20=107 (LC 33), 22=123 (LC 23), 23=116 (LC 23), 24=123 (LC 36), 25=29 (LC 2), 26=263 (LC 36)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/21, 2-3=-91/45, 3-4=-68/68, 4-5=-47/79, 5-6=-49/107, 6-7=-60/140, 7-8=-69/167, 8-9=-69/167, 9-10=-60/140, 10-11=-49/107, 11-12=-37/72, 12-13=-62/63, 13-14=-62/24

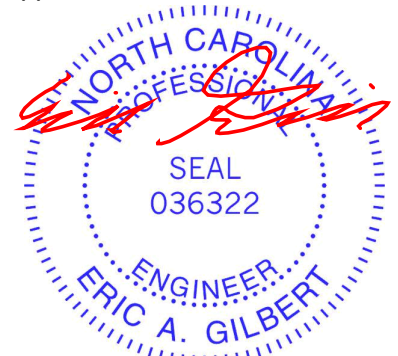
BOT CHORD 2-26=-17/72, 25-26=-17/72, 24-25=-17/72, 23-24=-17/72, 22-23=-17/72, 20-22=-17/72, 19-20=-17/72, 18-19=-17/72, 17-18=-17/72, 16-17=-17/72, 15-16=-17/72, 14-15=-17/72
WEBS 8-20=92/23, 7-22=-86/49, 6-23=-84/62, 5-24=-79/64, 4-25=-31/30, 3-26=-166/140, 9-19=-86/49, 10-18=-84/62, 11-17=-81/67, 12-16=-24/25, 13-15=-179/173

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=4.2psf; BCDL=3.0psf; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 2-1-8, Exterior(2N) 2-1-8 to 10-1-12, Corner(3R) 10-1-12 to 13-1-12, Exterior(2N) 13-1-12 to 20-3-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- All plates are 2x4 (||) MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.

- Gable studs spaced at 1-4-0 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 31 lb uplift at joint 2, 15 lb uplift at joint 14, 41 lb uplift at joint 22, 46 lb uplift at joint 23, 51 lb uplift at joint 24, 10 lb uplift at joint 25, 115 lb uplift at joint 26, 40 lb uplift at joint 19, 49 lb uplift at joint 18, 56 lb uplift at joint 17, 6 lb uplift at joint 16, 136 lb uplift at joint 15, 31 lb uplift at joint 2 and 15 lb uplift at joint 14.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 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



September 26,2025

Continued on page 2

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	912 Serenity
P05396-30387	G01E	Common Supported Gable	1	1	I76656621
					Job Reference (optional)

- 1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-8=-37, 8-14=-37
Trapezoidal Loads (lb/ft)
Vert: 27=-20-to-29=-20 (F=0), 29=-20 (F=0)-to-26=-23 (F=-3), 26=-23 (F=-3)-to-25=-24 (F=-4), 25=-24 (F=-4)-to-24=-25 (F=-5), 24=-25 (F=-5)-to-23=-26 (F=-6), 23=-26 (F=-6)-to-22=-27 (F=-7), 22=-27 (F=-7)-to-21=-27 (F=-7), 21=-27 (F=-7)-to-20=-28 (F=-8), 20=-28 (F=-8)-to-19=-29 (F=-9), 19=-29 (F=-9)-to-18=-29 (F=-9), 18=-29 (F=-9)-to-17=-30 (F=-10), 17=-30 (F=-10)-to-16=-31 (F=-11), 16=-31 (F=-11)-to-15=-32 (F=-12), 15=-32 (F=-12)-to-33=-35 (F=-15), 33=-35 (F=-15)-to-31=-35 (F=-15)

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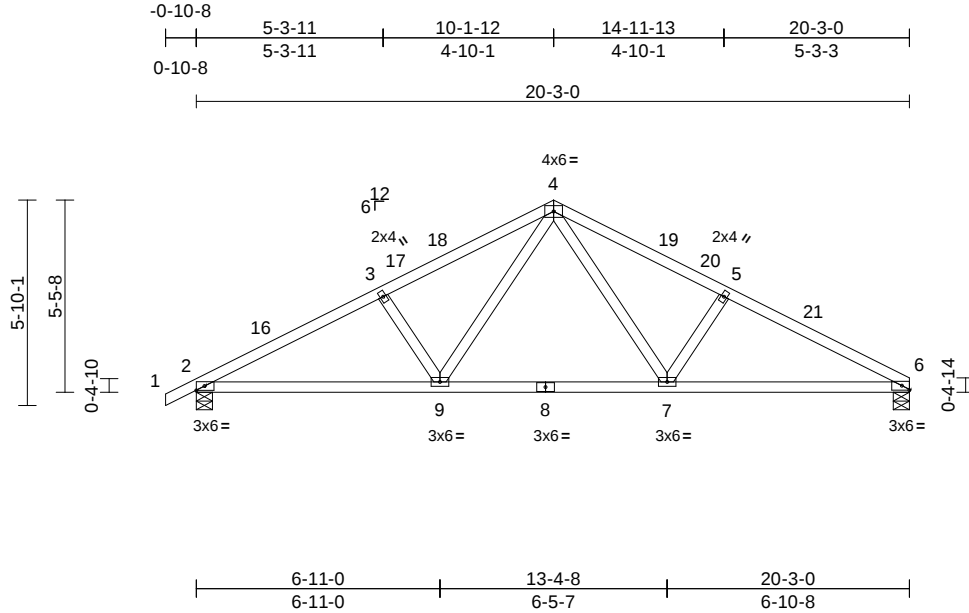
Job	Truss	Truss Type	Qty	Ply	912 Serenity	176656622
P05396-30387	G02	Common	5	1	Job Reference (optional)	

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

Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Fri Sep 26 10:43:23

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.30	Vert(LL)	-0.05	9-15	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.47	Vert(CT)	-0.12	9-15	>999	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.03	6	n/a	n/a		
BCLL	0.0*	Code	IRC2018/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 4-11-2 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=95 (LC 16)	
	Max Uplift 2=-196 (LC 16), 6=-175 (LC 17)	
	Max Grav 2=798 (LC 2), 6=748 (LC 2)	
FORCES	(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/21, 2-3=-1280/399, 3-4=-1150/400, 4-5=-1148/405, 5-6=-1290/403	
BOT CHORD	2-9=-309/1113, 7-9=-145/740, 6-7=-303/1111	
WEBS	4-7=-144/444, 5-7=-277/184, 4-9=-143/446, 3-9=-278/184	

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 10-1-12, Exterior(2R) 10-1-12 to 13-1-12, Interior (1) 13-1-12 to 20-3-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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 175 lb uplift at joint 6 and 196 lb uplift at joint 2.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



September 26, 2025

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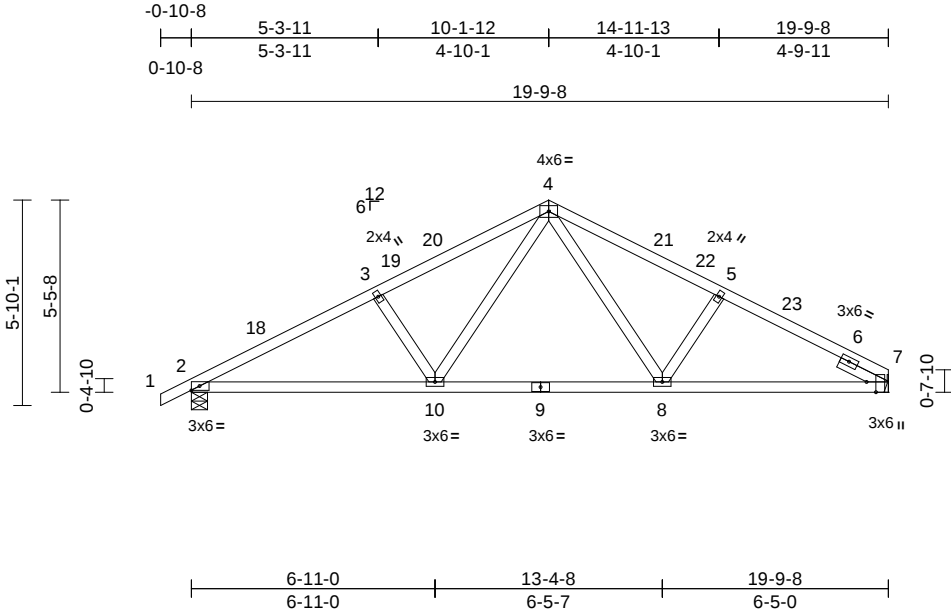
Job	Truss	Truss Type	Qty	Ply	912 Serenity	176656623
P05396-30387	G03	Common	1	1	Job Reference (optional)	

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

Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Fri Sep 26 10:43:23

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Scale = 1:65.4

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.34	Vert(LL)	-0.05	10-17	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.47	Vert(CT)	-0.11	10-17	>999	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.03	7	n/a	n/a		
BCLL	0.0*	Code	IRC2018/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
SLIDER Right 2x4 SP No.2 -- 1-6-0

BRACING

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

REACTIONS (size) 2=0-5-8, 7= Mechanical
Max Horiz 2=99 (LC 16)
Max Uplift 2=-193 (LC 16), 7=-169 (LC 17)
Max Grav 2=781 (LC 2), 7=731 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/21, 2-3=-1245/395, 3-4=-1116/396,
4-5=-1054/384, 5-7=-1161/381

BOT CHORD 2-10=-314/1082, 8-10=-147/706,
7-8=-283/1001

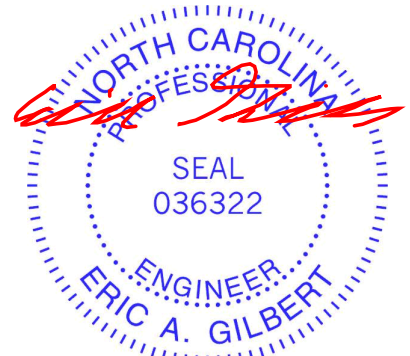
WEBS 4-8=-123/368, 5-8=-230/167, 4-10=-143/450,
3-10=-277/183

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-10-8 to 2-1-8, Interior (1) 2-1-8 to 10-1-12, Exterior(2R) 10-1-12 to 13-1-12, Interior (1) 13-1-12 to 19-9-8 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.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 169 lb uplift at joint 7 and 193 lb uplift at joint 2.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



September 26, 2025

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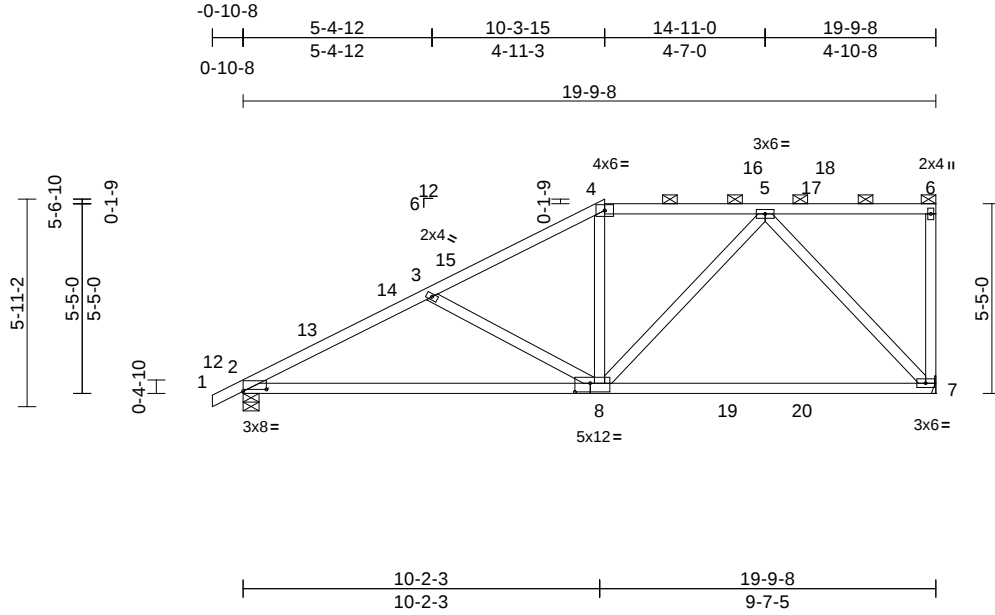
Job	Truss	Truss Type	Qty	Ply	912 Serenity	176656624
P05396-30387	G04	Half Hip	1	1	Job Reference (optional)	

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

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Scale = 1:65.8

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.44	Vert(LL)	-0.27	7-8	>871	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.99	Vert(CT)	-0.45	7-8	>525	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.64	Horz(CT)	0.02	7	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 105 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.1 *Except* 8-7:2x4 SP No.2
WEBS 2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-6-1 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-6.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.

REACTIONS (size) 2=0-5-8, 7= Mechanical
Max Horiz 2=198 (LC 15)
Max Uplift 2=-192 (LC 16), 7=-205 (LC 13)
Max Grav 2=860 (LC 40), 7=816 (LC 39)

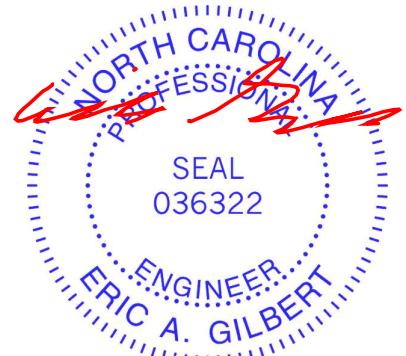
FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-3=-1281/320, 3-4=-990/249, 4-5=-831/249, 5-6=-104/97, 6-7=-138/59
BOT CHORD 2-7=-464/1128
WEBS 3-8=-455/220, 5-8=-92/505, 5-7=-755/262, 4-8=0/257

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 10-3-15, Exterior(2R) 10-3-15 to 14-6-14, Interior (1) 14-6-14 to 19-7-12 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
- 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, with BCDL = 10.0psf.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 205 lb uplift at joint 7 and 192 lb uplift at joint 2.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 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



September 26, 2025

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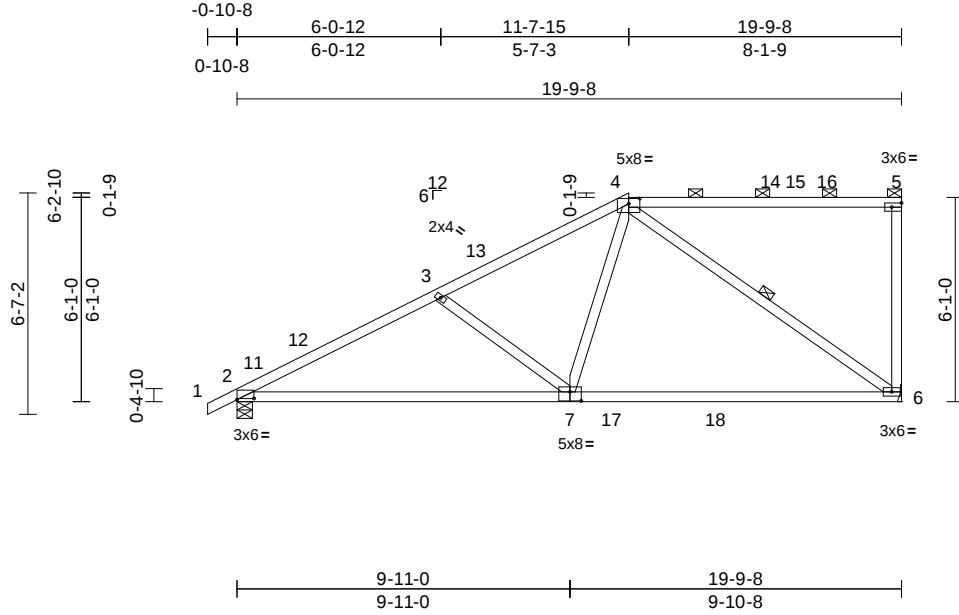
Job	Truss	Truss Type	Qty	Ply	912 Serenity	
P05396-30387	G05	Half Hip	1	1	Job Reference (optional)	I76656625

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

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Scale = 1:68.6

Plate Offsets (X, Y): [2:0-6-0,0-0-6], [4:0-4-0,0-1-15], [5:Edge,0-1-8], [7:0-4-0,0-3-4]

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	0.87	Vert(LL)	-0.28	6-7	>838	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.81	Vert(CT)	-0.46	6-7	>508	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.37	Horz(CT)	0.02	6	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 101 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2 *Except* 4-5:2x4 SP No.1
BOT CHORD 2x4 SP No.1
WEBS 2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-5-2 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-5.
BOT CHORD Rigid ceiling directly applied or 9-3-0 oc bracing.
WEBS 1 Row at midpt 4-6

REACTIONS

(size) 2=0-5-8, 6= Mechanical
Max Horiz 2=223 (LC 15)
Max Uplift 2=-198 (LC 16), 6=-201 (LC 13)
Max Grav 2=858 (LC 40), 6=805 (LC 3)

FORCES

(lb) - Maximum Compression/Maximum Tension

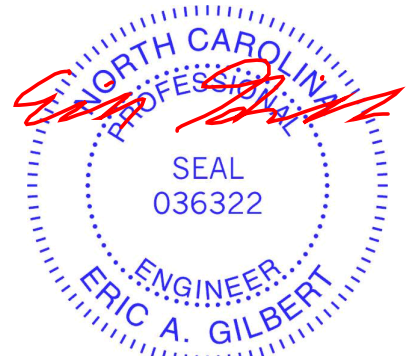
TOP CHORD 1-2=0/21, 2-3=-1327/306, 3-4=-1031/257, 4-5=-121/117, 5-6=-278/115
BOT CHORD 2-6=-456/1154
WEBS 3-7=-456/230, 4-7=-85/700, 4-6=-805/275

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 11-7-15, Exterior(2R) 11-7-15 to 15-10-14, Interior (1) 15-10-14 to 19-7-12 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
- 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, with BCDL = 10.0psf.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 198 lb uplift at joint 2 and 201 lb uplift at joint 6.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 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



September 26, 2025

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818 Soundside Road
Edenton, NC 27932

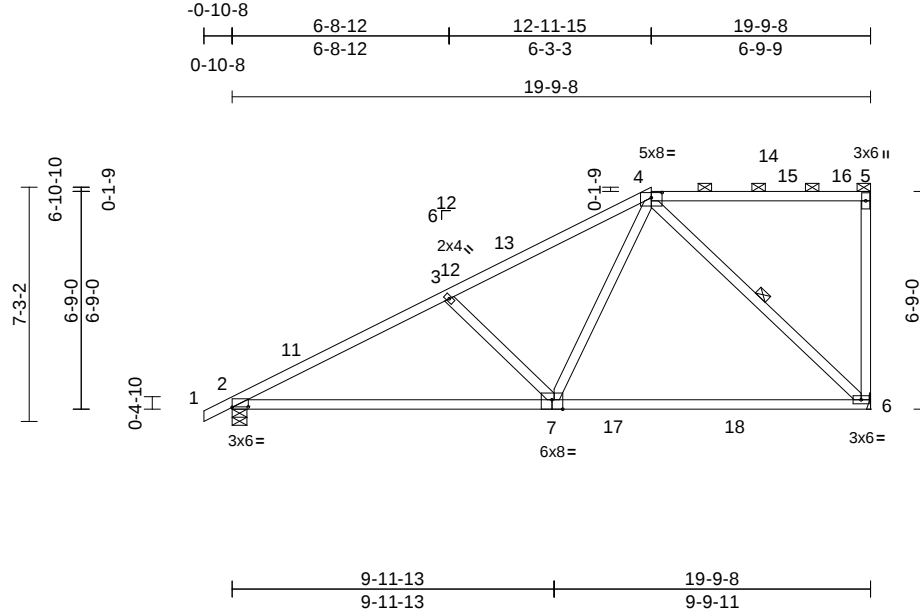
Job	Truss	Truss Type	Qty	Ply	912 Serenity	176656626
P05396-30387	G06	Half Hip	1	1	Job Reference (optional)	

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

Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Fri Sep 26 10:43:24

Page: 1

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Scale = 1:71.4

Plate Offsets (X, Y): [2:0-6-0,0-0-2], [4:0-4-0,0-1-15], [7:0-4-0,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	0.80	Vert(LL)	-0.33	6-7	>711	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.84	Vert(CT)	-0.52	6-7	>458	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.29	Horz(CT)	0.02	6	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 102 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.1
WEBS 2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-5-13 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-5.
BOT CHORD Rigid ceiling directly applied or 9-3-11 oc bracing.

WEBS 1 Row at midpt 4-6

REACTIONS (size) 2=0-5-8, 6= Mechanical
Max Horiz 2=248 (LC 15)
Max Uplift 2=202 (LC 16), 6=197 (LC 13)
Max Grav 2=846 (LC 40), 6=815 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/21, 2-3=-1315/297, 3-4=-1069/267, 4-5=-125/124, 5-6=-231/98

BOT CHORD 2-6=-450/1150

WEBS 3-7=-473/247, 4-7=-135/799, 4-6=-729/279

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 12-11-15, Exterior(2R) 12-11-15 to 17-2-14, Interior (1) 17-2-14 to 19-7-12 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
- 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, with BCDL = 10.0psf.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 202 lb uplift at joint 2 and 197 lb uplift at joint 6.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 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



September 26,2025

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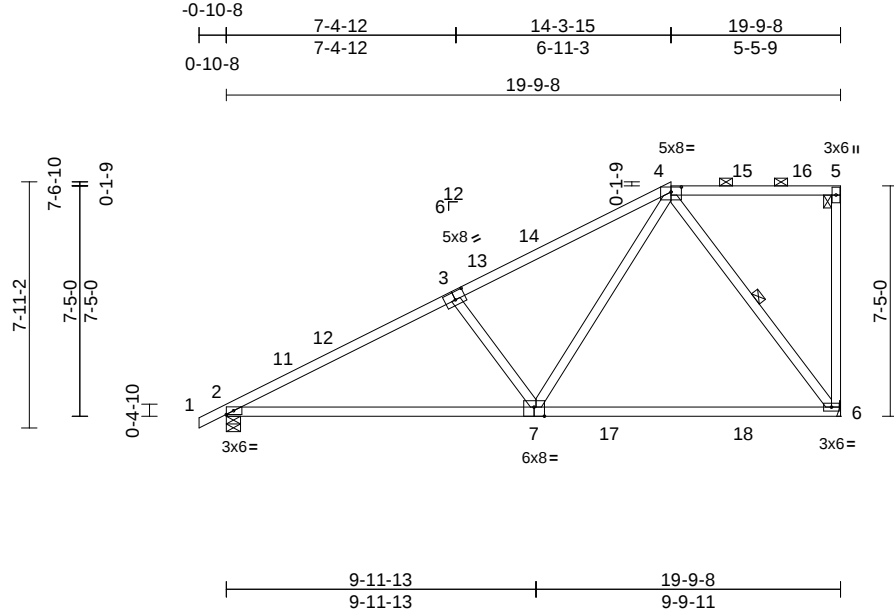
Job	Truss	Truss Type	Qty	Ply	912 Serenity	176656627
P05396-30387	G07	Half Hip	1	1	Job Reference (optional)	

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

Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Fri Sep 26 10:43:24

Page: 1

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Scale = 1:74.2

Plate Offsets (X, Y): [3:0-4-0,0-3-0], [4:0-4-0,0-1-15], [7:0-4-0,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	0.76	Vert(LL)	-0.37	6-7	>644	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.85	Vert(CT)	-0.55	6-7	>429	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.26	Horz(CT)	0.02	6	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 105 lb FT = 20%	

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.1
WEBS 2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-6-8 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-5.
BOT CHORD Rigid ceiling directly applied or 9-4-12 oc bracing.

WEBS 1 Row at midpt 4-6

REACTIONS

(size) 2=0-5-8, 6= Mechanical
Max Horiz 2=273 (LC 15)
Max Uplift 2=204 (LC 16), 6=192 (LC 13)
Max Grav 2=834 (LC 40), 6=823 (LC 3)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/21, 2-4=-1293/289, 4-5=-132/133, 5-6=-183/82

BOT CHORD 2-6=-439/1132

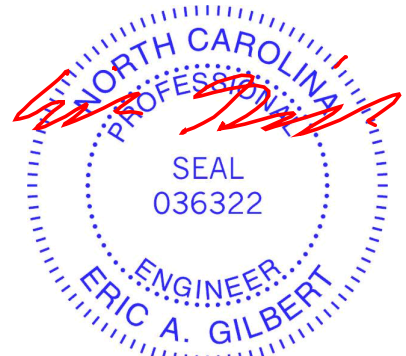
WEBS 3-7=-488/266, 4-7=-195/906, 4-6=-689/290

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 14-3-15, Exterior(2R) 14-3-15 to 18-6-14, Interior (1) 18-6-14 to 19-7-12 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
- 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, with BCDL = 10.0psf.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 204 lb uplift at joint 2 and 192 lb uplift at joint 6.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 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



September 26, 2025

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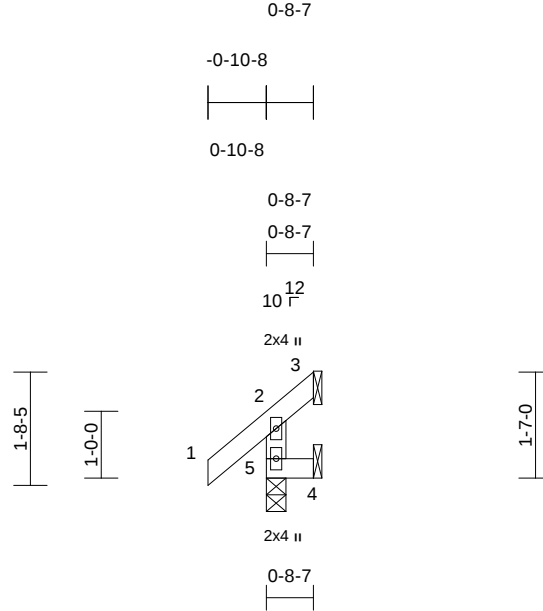
Job	Truss	Truss Type	Qty	Ply	912 Serenity	I76656628
P05396-30387	J01	JACK	1	1	Job Reference (optional)	

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

Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Fri Sep 26 10:43:25

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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	0.12	Vert(LL)	0.00	5	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	0.00	5	>999	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 5 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD	Structural wood sheathing directly applied or 1-6-15 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(size)	3= Mechanical, 4= Mechanical, 5=0-3-8
Max Horiz	5=38 (LC 11)
Max Uplift	3=-25 (LC 2), 4=-20 (LC 11), 5=-10 (LC 14)
Max Grav	3=8 (LC 10), 4=19 (LC 12), 5=127 (LC 2)

FORCES

(lb) - Maximum Compression/Maximum Tension

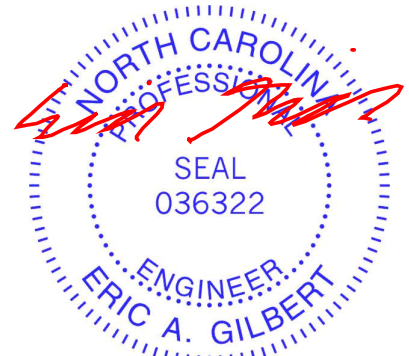
TOP CHORD	1-2=0/35, 2-3=-35/27, 2-5=-110/136
BOT CHORD	4-5=0/0

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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 20 lb uplift at joint 4, 10 lb uplift at joint 5 and 25 lb uplift at joint 3.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



September 26, 2025

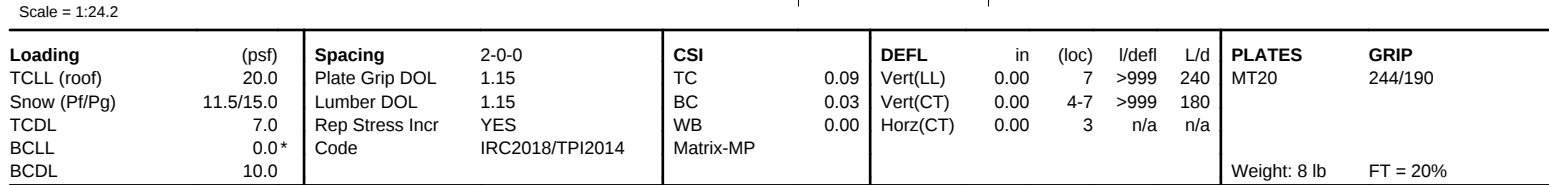
WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Fri Sep 26 10:43:24 Page: 1
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- 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 83 lb uplift at joint 2 and 17 lb uplift at joint 3.
- 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

NOTES

- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust)
Vasd=103mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; and 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=1.0; 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.



September 26, 2025

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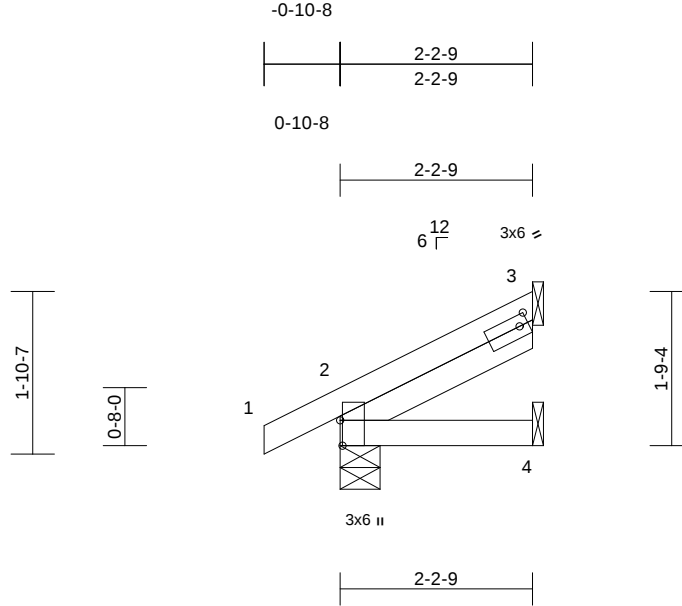
818 Soundside Road
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Job	Truss	Truss Type	Qty	Ply	912 Serenity	176656630
P05396-30387	J02	Jack-Open	1	1	Job Reference (optional)	

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

Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Fri Sep 26 10:43:25
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Page: 1



Scale = 1:26.5

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.05	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	7.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0											
											Weight: 12 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 2-5-15

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-2-9 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(size) 2=0-5-8, 3= Mechanical, 4= Mechanical
Max Horiz 2=53 (LC 16)
Max Uplift 2=-31 (LC 16), 3=-36 (LC 16), 4=-1 (LC 16)
Max Grav 2=141 (LC 23), 3=53 (LC 23), 4=32 (LC 7)

FORCES

(lb) - Maximum Compression/Maximum Tension

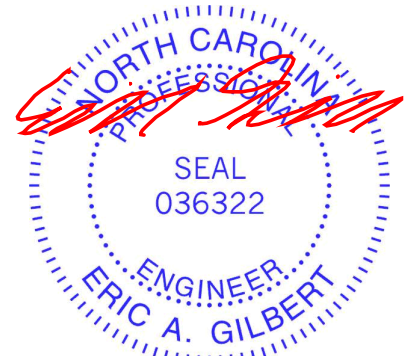
TOP CHORD 1-2=0/22, 2-3=-42/23
BOT CHORD 2-4=-42/30

NOTES

- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust)
Vasd=103mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=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 36 lb uplift at joint 3, 31 lb uplift at joint 2 and 1 lb uplift at joint 4.
- 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



September 26, 2025

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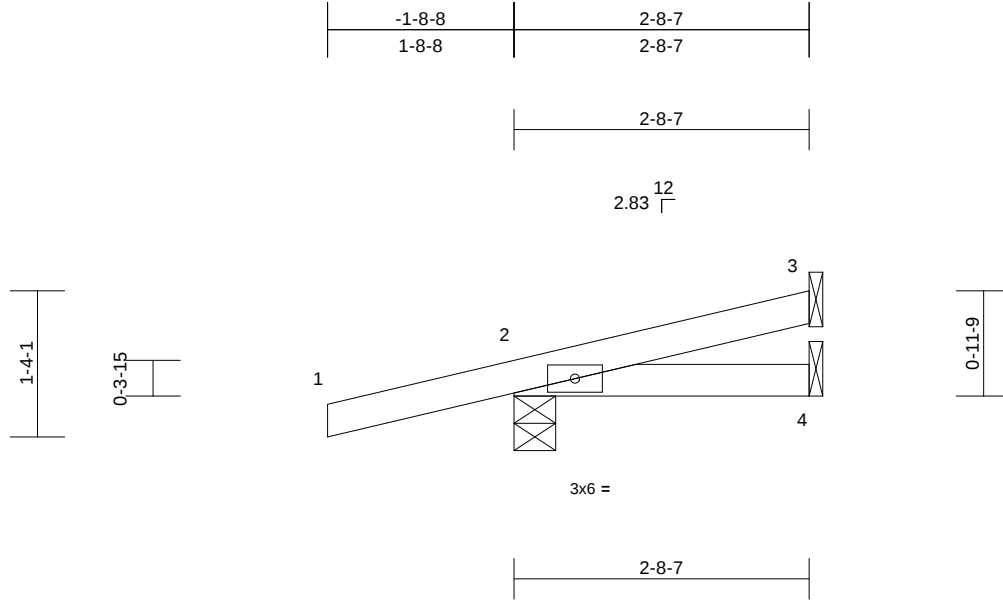
Job	Truss	Truss Type	Qty	Ply	912 Serenity	176656631
P05396-30387	J2	Jack-Open	2	1	Job Reference (optional)	

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

Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Fri Sep 26 10:43:24

Page: 1

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Scale = 1:21.1

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.20	Vert(LL)	0.00	4-7	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	0.00	4-7	>999	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0											
											Weight: 11 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 2-8-7 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-4-9, 3= Mechanical, 4= Mechanical
Max Horiz 2=43 (LC 12)
Max Uplift 2=-119 (LC 12), 3=-20 (LC 16)
Max Grav 2=220 (LC 2), 3=44 (LC 2), 4=39 (LC 7)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/21, 2-3=-96/28
BOT CHORD 2-4=-30/85

NOTES

- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust)
Vasd=103mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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 20 lb uplift at joint 3 and 119 lb uplift at joint 2.
 - 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- LOAD CASE(S)** Standard



September 26, 2025

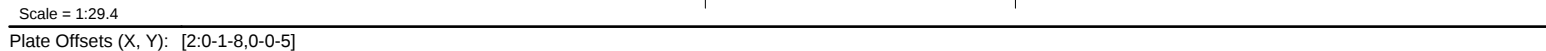
WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

ENGINEERING BY
TRENCO
A MiTek Affiliate

818 Soundside Road
Edenton, NC 27932

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Fri Sep 26 10:43:25 Page: 1
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LUMBER		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 62 lb uplift at joint 4, 41 lb uplift at joint 2 and 4 lb uplift at joint 5. 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
TOP CHORD	2x4 SP No.2	
BOT CHORD	2x4 SP No.2	
SLIDER	Left 2x4 SP No.2 -- 2-6-0	
BRACING		
TOP CHORD	Structural wood sheathing directly applied or 3-11-8 oc purlins.	
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.	
REACTIONS	(size)	2=0-5-8, 4= Mechanical, 5= Mechanical
	Max Horiz	2=85 (LC 16)
	Max Uplift	2=-41 (LC 16), 4=-62 (LC 16), 5=-4 (LC 16)
	Max Grav	2=197 (LC 2), 4=106 (LC 23), 5=66 (LC 7)
FORCES	(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/21, 2-4=-176/87	
BOT CHORD	2-5=-148/78	
LOAD CASE(S)		Standard

-

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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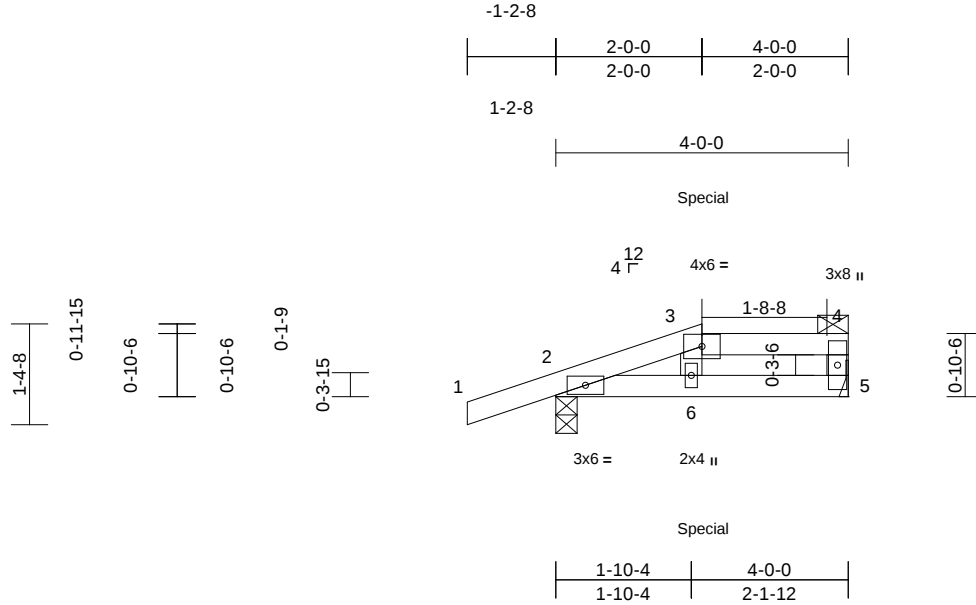
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	912 Serenity	176656633
P05396-30387	J3	Half Hip Girder	2	1	Job Reference (optional)	

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

Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Fri Sep 26 10:43:25
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Page: 1



Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.13	Vert(LL)	-0.02	5-6	>999	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.33	Vert(CT)	-0.04	5-6	>999	180		
TCDL	7.0	Rep Stress Incr	NO	WB	0.02	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 15 lb	FT = 20%

LUMBER	
TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.2
BRACING	
TOP CHORD	Structural wood sheathing directly applied or 4-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins: 3-4.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.
REACTIONS	(size) 2=0-3-8, 5= Mechanical Max Horiz 2=30 (LC 11) Max Uplift 2=-100 (LC 8), 5=-36 (LC 9) Max Grav 2=235 (LC 34), 5=138 (LC 33)
FORCES	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=0/24, 2-3=-55/51, 3-4=-7/7, 4-5=-59/26
BOT CHORD	2-6=-31/43, 5-6=-7/6
WEBS	3-6=-139/52

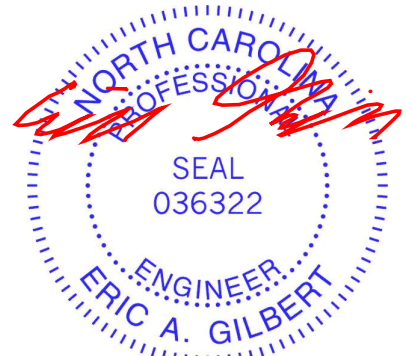
NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust)
Vasd=103mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 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 36 lb uplift at joint 5 and 100 lb uplift at joint 2.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 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) 32 lb down and 45 lb up at 2-0-0 on top chord, and 28 lb down and 11 lb up at 2-0-0 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: 1-3=-37, 3-4=-47, 5-7=-20
Concentrated Loads (lb)
Vert: 6=-6 (F)



September 26, 2025

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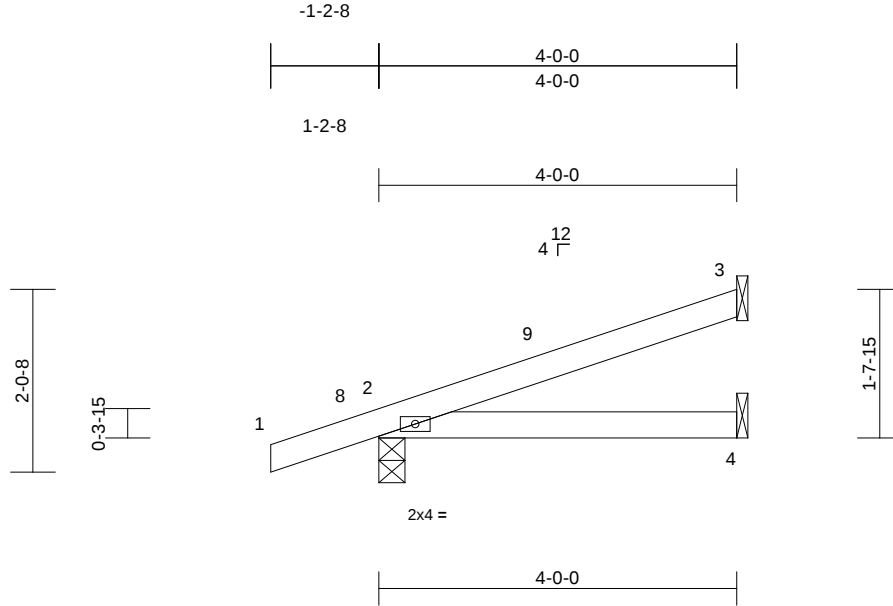
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	912 Serenity	
P05396-30387	J4	Jack-Open	2	1	Job Reference (optional)	I76656634

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

Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Fri Sep 26 10:43:25
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Page: 1



Scale = 1:25.8

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.18	Vert(LL)	0.02	4-7	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.15	Vert(CT)	-0.02	4-7	>999	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2018/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=68 (LC 12)
Max Uplift 2=-93 (LC 12), 3=-46 (LC 16), 4=-1 (LC 16)
Max Grav 2=232 (LC 23), 3=93 (LC 23), 4=68 (LC 7)

FORCES

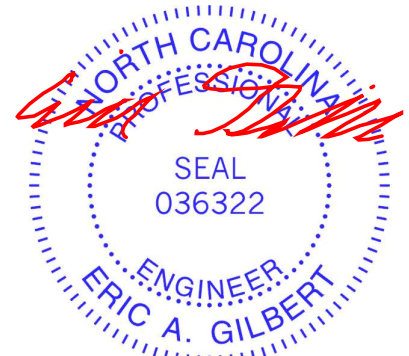
(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/22, 2-3=-66/24
BOT CHORD 2-4=-53/76

NOTES

- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust)
Vasd=103mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-2-8 to 1-9-8, Interior (1) 1-9-8 to 3-11-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=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 46 lb uplift at joint 3, 93 lb uplift at joint 2 and 1 lb uplift at joint 4.
- 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



September 26, 2025

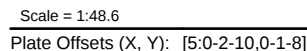
WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Fri Sep 26 10:43:25 Page: 1
ID: YQ2p4SJAol70fbDDeV2WBOzLuXq-RfC?PsB70Hg3NSqPanL8w3uITXbGKWrCDoi7J4zJC?f



LUMBER	
TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
OTHERS	2x4 SP No.2
BRACING	
TOP CHORD	Structural wood sheathing directly applied or 10-0-0 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.
REACTIONS	
(size)	1=19-7-1, 5=19-7-1, 6=19-7-1, 8=19-7-1, 9=19-7-1
Max Horiz	1=82 (LC 16)
Max Uplift	1=-25 (LC 17), 5=-28 (LC 17), 6=-191 (LC 17), 8=-28 (LC 16), 9=-198 (LC 16)
Max Grav	1=125 (LC 2), 5=135 (LC 36), 6=445 (LC 2), 8=323 (LC 2), 9=472 (LC 2)
FORCES	
	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=-187/246, 2-3=-15/193, 3-4=-3/193, 4-5=-82/229
BOT CHORD	1-9=-152/165, 8-9=-152/113, 6-8=-152/113, 5-6=-152/113
WEBS	3-8=-291/62, 2-9=-317/202, 4-6=-303/200

- ## NOTES
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-16; Vult=130mph (3-second gust)
 Vasd=103mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 10-2-5, Exterior(2R) 10-2-5 to 13-2-5, Interior (1) 13-2-5 to 19-8-5 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber
 DOL=1.60 plate grip DOL=1.60

- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) T.C.L.L.: 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
- 5) Unbalanced snow loads have been considered for this design.
- 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) Gable requires continuous bottom chord bearing.
- 8) Gable studs spaced at 4'-0" oc.
- 9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3'-06"-00 tall by 2'-00"-00 wide will fit between the bottom chord and any other members.
- 11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 28 lb uplift at joint 5, 25 lb uplift at joint 1, 28 lb uplift at joint 8, 198 lb uplift at joint 9, 191 lb uplift at joint 6 and 28 lb uplift at joint 5.
- 12) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 5, 1, 10.
- 13) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

September 26, 2025



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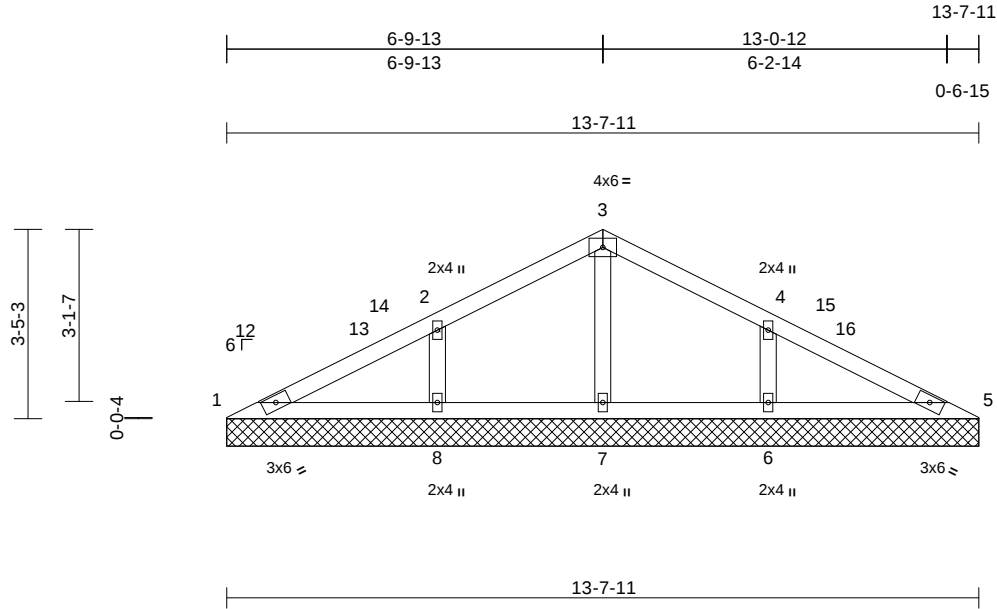
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	912 Serenity	176656636
P05396-30387	V02	Valley	1	1	Job Reference (optional)	

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

Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Fri Sep 26 10:43:26
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Page: 1



Scale = 1:41.8

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	0.16	Vert(LL)	n/a	-	n/a	999	MT20
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.11	Vert(TL)	n/a	-	n/a	999	244/190
TCDL	7.0	Rep Stress Incr	YES	WB	0.04	Horiz(TL)	0.00	8	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS							
BCDL	10.0										
										Weight: 49 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS

(size)	1=13-7-11, 5=13-7-11, 6=13-7-11, 7=13-7-11, 8=13-7-11
Max Horiz	1=52 (LC 16)
Max Uplift	1=-14 (LC 17), 5=-19 (LC 17), 6=-125 (LC 17), 7=-14 (LC 16), 8=-126 (LC 16)
Max Grav	1=88 (LC 35), 5=88 (LC 36), 6=303 (LC 23), 7=253 (LC 2), 8=303 (LC 22)

FORCES

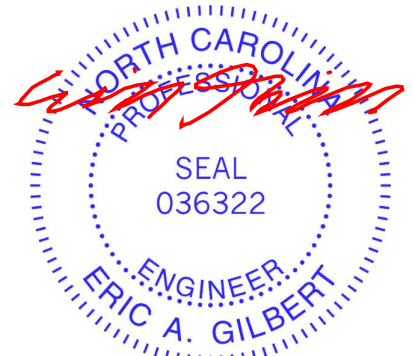
(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-117/140, 2-3=0/123, 3-4=0/123, 4-5=-117/140
BOT CHORD	1-8=-83/99, 7-8=-83/85, 6-7=-83/85, 5-6=-83/99
WEBS	3-7=-215/70, 2-8=-214/171, 4-6=-214/171

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-8 to 3-0-8, Interior (1) 3-0-8 to 6-10-5, Exterior(2R) 6-10-5 to 9-10-5, Interior (1) 9-10-5 to 13-8-3 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
- Unbalanced snow loads have been considered for this design.
- 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 3-0-0 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 14 lb uplift at joint 1, 19 lb uplift at joint 5, 14 lb uplift at joint 7, 126 lb uplift at joint 8 and 125 lb uplift at joint 6.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



September 26, 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) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

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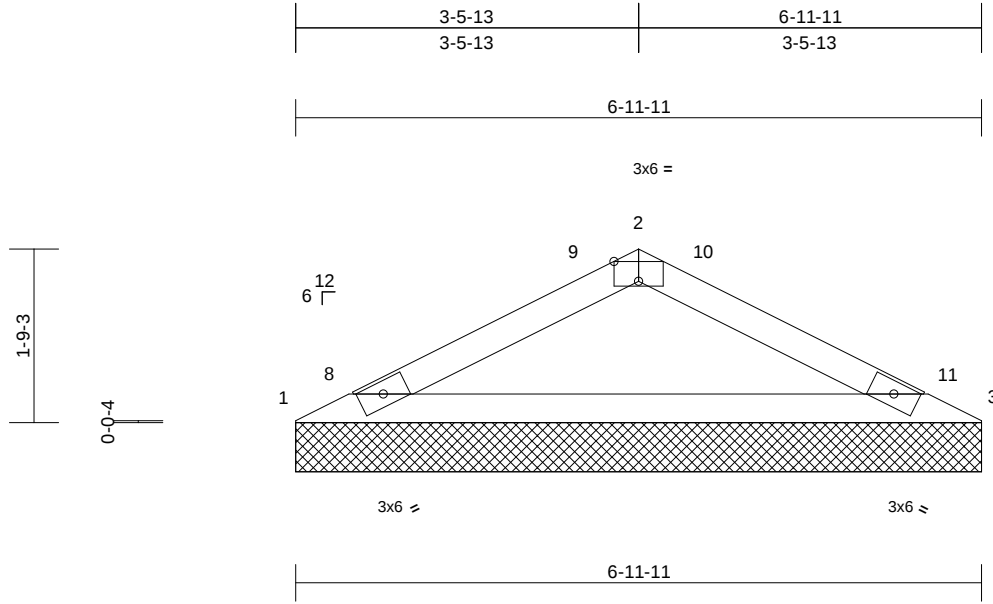
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	912 Serenity	I76656637
P05396-30387	V03	Valley	1	1	Job Reference (optional)	

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

Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Fri Sep 26 10:43:26
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Page: 1



Scale = 1:23.4

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	0.35	Vert(LL)	n/a	-	n/a	999	MT20
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.27	Vert(TL)	n/a	-	n/a	999	244/190
TCDL	7.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.01	3	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP							
BCDL	10.0										
										Weight: 20 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 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=6-11-11, 3=6-11-11

Max Horiz 1=-25 (LC 17)
Max Uplift 1=-61 (LC 16), 3=-61 (LC 17)
Max Grav 1=258 (LC 2), 3=258 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

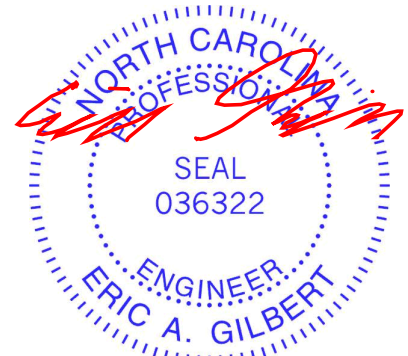
TOP CHORD 1-2=-492/334, 2-3=-492/333
BOT CHORD 1-3=-303/430

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-8 to 3-0-8, Interior (1) 3-0-8 to 3-6-5, Exterior(2R) 3-6-5 to 6-6-5, Interior (1) 6-6-5 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

- Unbalanced snow loads have been considered for this design.
- 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 61 lb uplift at joint 1 and 61 lb uplift at joint 3.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



September 26,2025

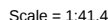
WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

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84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Fri Sep 26 10:43:26 Page: 1
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LOAD CASE(S) Standard

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Edenton, NC 27932

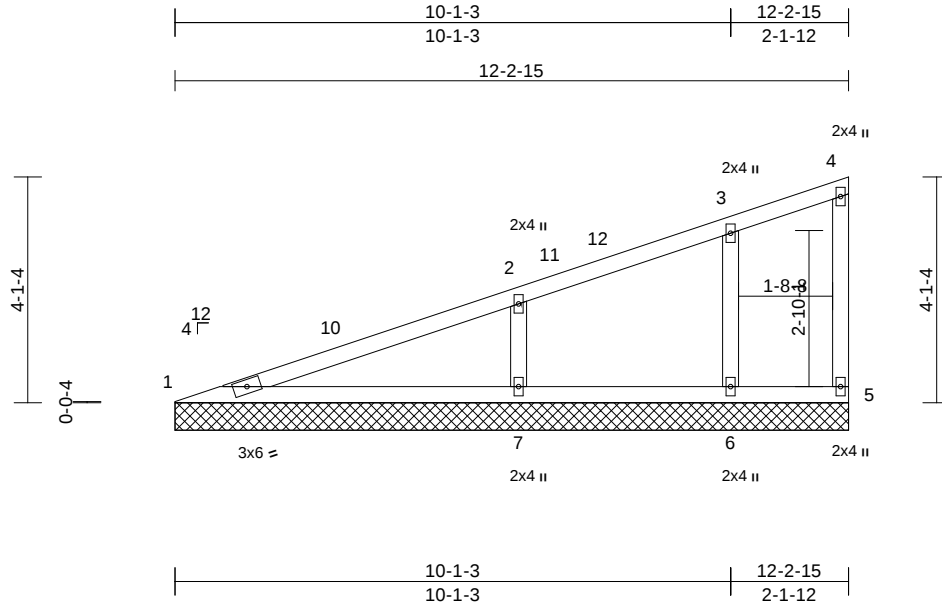
Job	Truss	Truss Type	Qty	Ply	912 Serenity	176656639
P05396-30387	V05	Valley	1	1	Job Reference (optional)	

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

Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Fri Sep 26 10:43:26

Page: 1

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Scale = 1:41.9

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	0.34	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.37	n/a	-	n/a	999		
TCDL	7.0	Rep Stress Incr	YES	WB	0.04	Horiz(TL)	0.01	7	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS							
BCDL	10.0									Weight: 48 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=12-2-15, 5=12-2-15, 6=12-2-15, 7=12-2-15
	Max Horiz	1=154 (LC 13)
	Max Uplift	1=-34 (LC 12), 5=-21 (LC 13), 6=-60 (LC 12), 7=-165 (LC 16)
	Max Grav	1=188 (LC 2), 5=65 (LC 2), 6=199 (LC 22), 7=481 (LC 2)

FORCES

	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=-419/139, 2-3=-127/79, 3-4=-65/62, 4-5=-42/44
BOT CHORD	1-7=-218/392, 6-7=-66/71, 5-6=-66/71
WEBS	3-6=-163/174, 2-7=-312/193

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-12 to 3-0-12, Interior (1) 3-0-12 to 12-1-15 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
- Unbalanced snow loads have been considered for this design.
- 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 21 lb uplift at joint 5, 34 lb uplift at joint 1, 60 lb uplift at joint 6 and 165 lb uplift at joint 7.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



September 26, 2025

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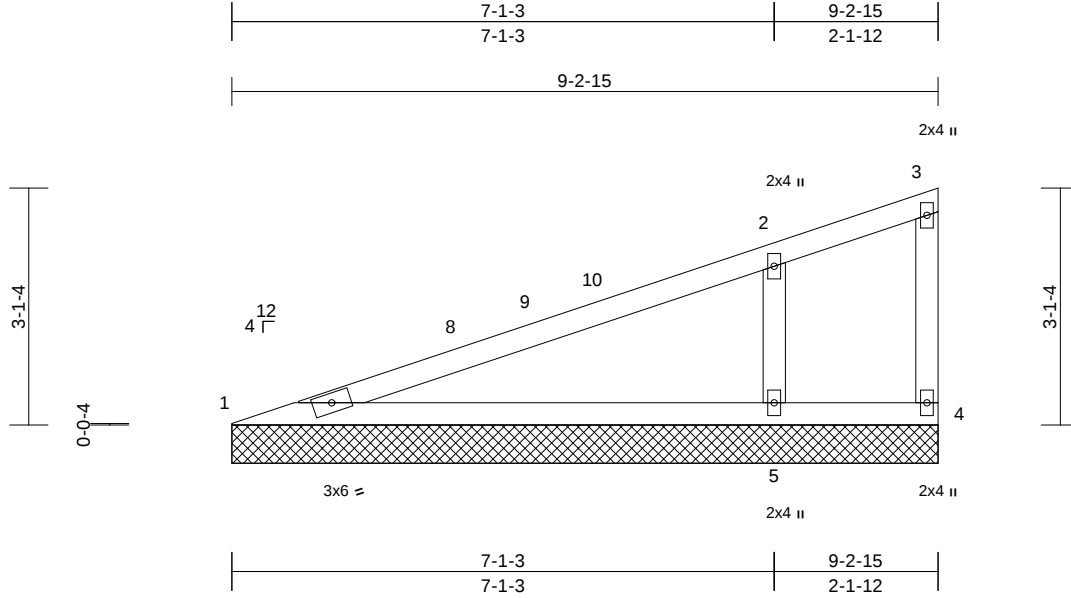
Job	Truss	Truss Type	Qty	Ply	912 Serenity	176656640
P05396-30387	V06	Valley	1	1	Job Reference (optional)	

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

Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Fri Sep 26 10:43:27

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Scale = 1:30.2

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	0.47	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.48	Vert(TL)	n/a	-	n/a	999		
TCDL	7.0	Rep Stress Incr	YES	WB	0.06	Horiz(TL)	0.01	5	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
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 6-0-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS

(size)	1=9-2-15, 4=9-2-15, 5=9-2-15
Max Horiz	1=114 (LC 13)
Max Uplift	1=-48 (LC 12), 4=-136 (LC 2), 5=-209 (LC 16)
Max Grav	1=204 (LC 2), 4=53 (LC 12), 5=606 (LC 2)

FORCES

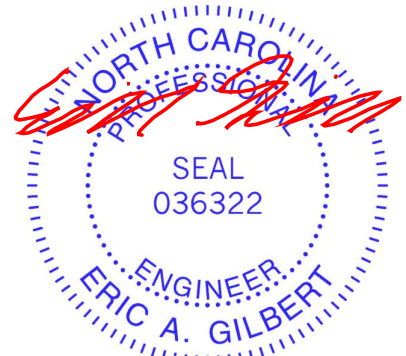
(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-463/193, 2-3=-55/51, 3-4=-42/61
BOT CHORD	1-5=-256/434, 4-5=-66/64
WEBS	2-5=-375/324

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-12 to 3-0-12, Interior (1) 3-0-12 to 9-1-15 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
- Unbalanced snow loads have been considered for this design.
- 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 136 lb uplift at joint 4, 48 lb uplift at joint 1 and 209 lb uplift at joint 5.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



September 26, 2025

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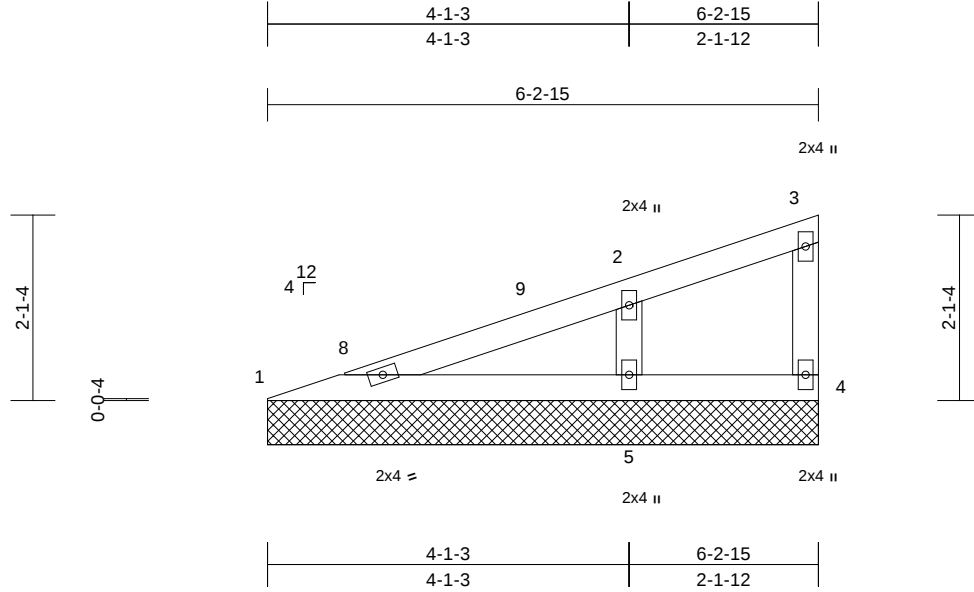
Job	Truss	Truss Type	Qty	Ply	912 Serenity	176656641
P05396-30387	V07	Valley	1	1	Job Reference (optional)	

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

Run: 8.83 S Sep 3 2025 Print: 8.830 S Sep 3 2025 MiTek Industries, Inc. Fri Sep 26 10:43:27

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Scale = 1:26.1

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.14	Vert(LL)	n/a	-	n/a	999	MT20
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.15	Vert(TL)	n/a	-	n/a	999	244/190
TCDL	7.0	Rep Stress Incr	YES	WB	0.04	Horiz(TL)	0.00	4	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP							
BCDL	10.0										
Weight: 21 lb FT = 20%											

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.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=6-2-15, 4=6-2-15, 5=6-2-15
Max Horiz	1=74 (LC 13)
Max Uplift	1=-29 (LC 12), 4=-9 (LC 13), 5=-104 (LC 16)
Max Grav	1=125 (LC 2), 4=22 (LC 22), 5=317 (LC 22)

FORCES

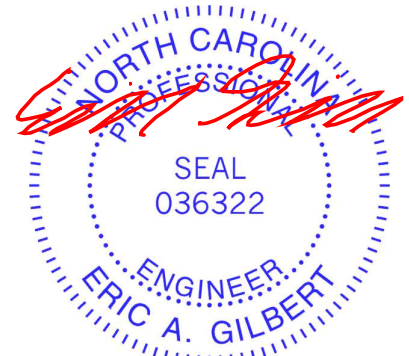
(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-235/113, 2-3=-42/30, 3-4=-26/51
BOT CHORD	1-5=-180/217, 4-5=-30/33
WEBS	2-5=-202/218

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-12 to 3-0-12, Interior (1) 3-0-12 to 6-1-15 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
- Unbalanced snow loads have been considered for this design.
- 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 9 lb uplift at joint 4, 29 lb uplift at joint 1 and 104 lb uplift at joint 5.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



September 26,2025

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

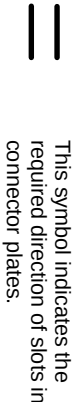
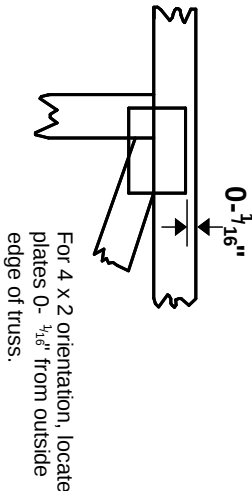
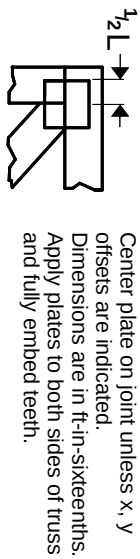
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall 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) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

ENGINEERING BY
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

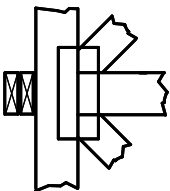
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

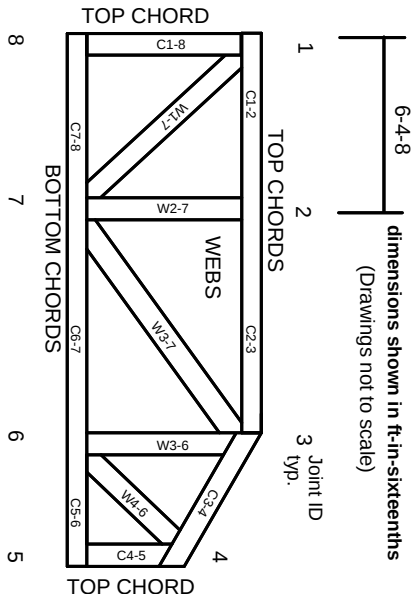


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TP1.1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-22: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



JOINTS ARE GENERALLY NUMBERED/LETTERED C LOCKWISE 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 1 section 6.3. These truss designs rely on lumber values established by others.

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General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

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