

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: P04249-28231
1059 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: I75125675 thru I75125707

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

North Carolina COA: C-0844



July 24, 2025

Gilbert, Eric

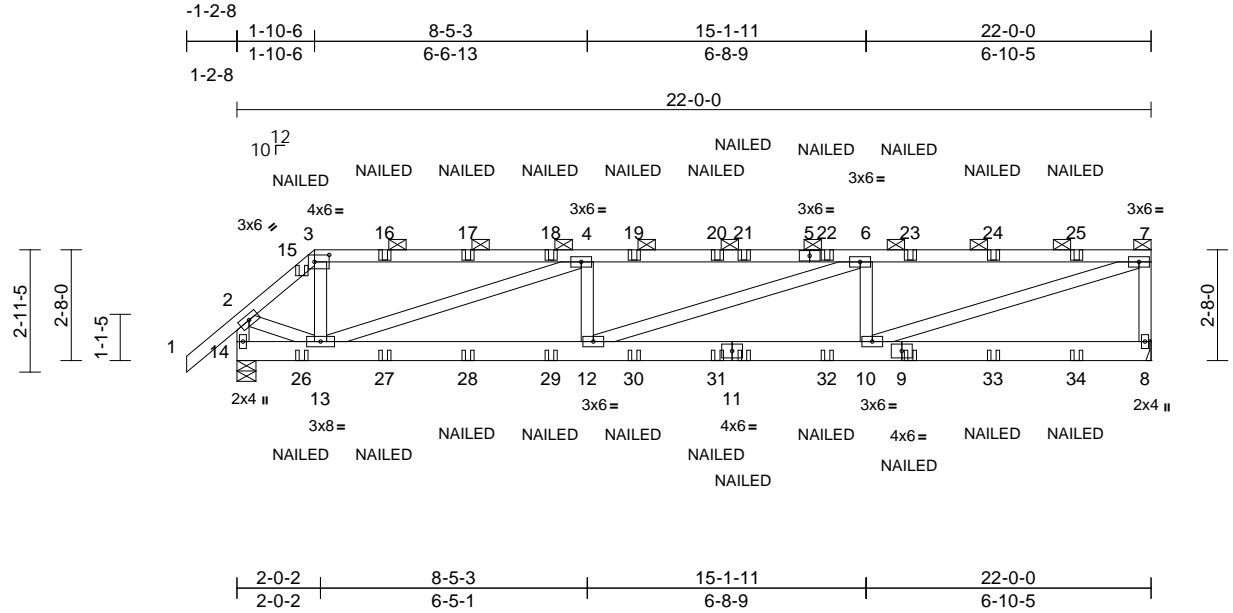
IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which 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	1059 Serenity	I75125675
P04249-28231	A01G	Half Hip Girder	1	2	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Wed Jul 23 14:18:32
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Page: 1



Scale = 1:55.4

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.53	Vert(LL)	-0.07	10-12	>999	240	MT20	244/190
Snow (Pf/Pg)	12.7/10.0	Lumber DOL	1.15	BC	0.34	Vert(CT)	-0.15	10-12	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.34	Horz(CT)	0.02	8	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 263 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.): 3-7.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 13-14.

REACTIONS

(size) 8= Mechanical, 14=0-5-8
Max Horiz 14=62 (LC 35)
Max Uplift 8=-219 (LC 7), 14=-235 (LC 7)
Max Grav 8=1181 (LC 2), 14=1307 (LC 2)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/52, 2-3=-1247/244, 3-4=-988/209, 4-6=-2832/549, 6-7=-2620/497, 2-14=-1322/217
BOT CHORD 13-14=-51/25, 12-13=-549/2832, 10-12=-497/2620, 8-10=0/0
WEBS 7-8=-1094/238, 3-13=-62/523, 2-13=-201/1082, 4-12=0/299, 4-13=-1960/371, 6-10=-671/240, 6-12=-55/224, 7-10=-525/2768

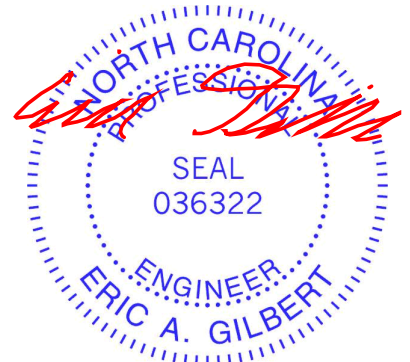
NOTES

- 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=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=12.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
- 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 235 lb uplift at joint 14 and 219 lb uplift at joint 8.
- 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.

LOAD CASE(S) Standard

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-35, 2-3=-35, 3-7=-45, 8-14=-20
Concentrated Loads (lb)
Vert: 11=-22 (B), 9=-22 (B), 16=-46 (B), 17=-46 (B), 18=-46 (B), 19=-46 (B), 20=-46 (B), 21=-46 (B), 22=-46 (B), 23=-46 (B), 24=-46 (B), 25=-46 (B), 26=-95 (B), 27=-22 (B), 28=-22 (B), 29=-22 (B), 30=-22 (B), 31=-22 (B), 32=-22 (B), 33=-22 (B), 34=-22 (B)



July 24,2025

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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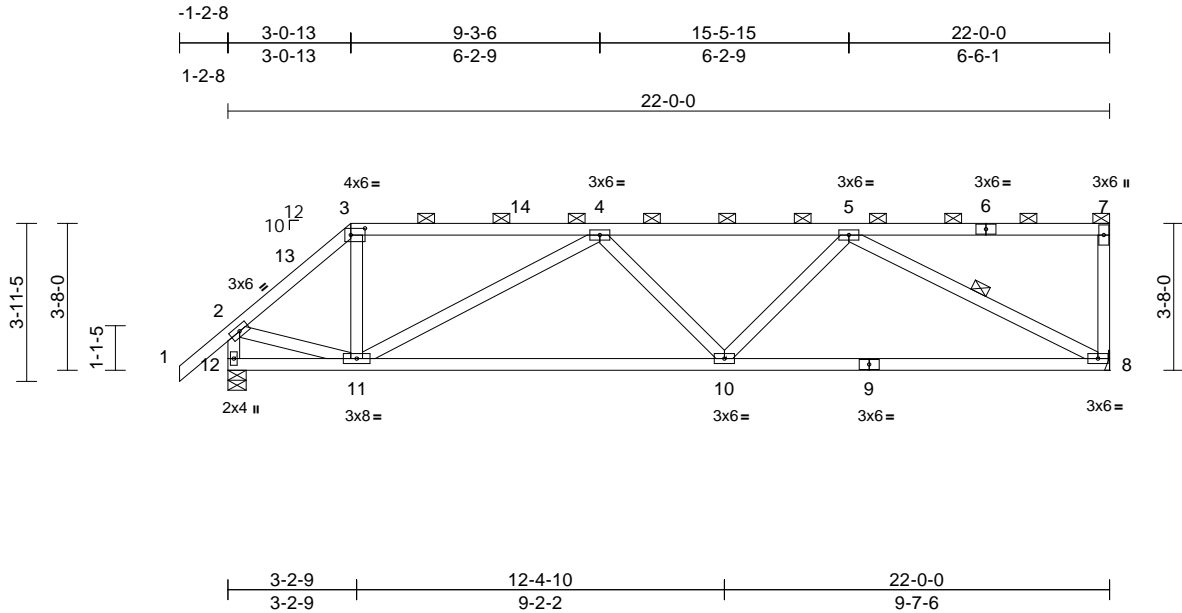
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1059 Serenity	175125676
P04249-28231	A02	Half Hip	1	1	Job Reference (optional)	

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

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Page: 1



Scale = 1:57.5

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.49	Vert(LL)	-0.19	8-10	>999	240	MT20	244/190
Snow (Pf/Pg)	12.7/10.0	Lumber DOL	1.15	BC	0.91	Vert(CT)	-0.40	8-10	>649	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.69	Horz(CT)	0.04	8	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 117 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (4-7-5 max.): 3-7.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 1 Row at midpt 5-8

REACTIONS

(size) 8= Mechanical, 12=0-5-8
Max Horiz 12=107 (LC 11)
Max Uplift 8=-121 (LC 11), 12=-75 (LC 11)
Max Grav 8=866 (LC 2), 12=952 (LC 2)

FORCES

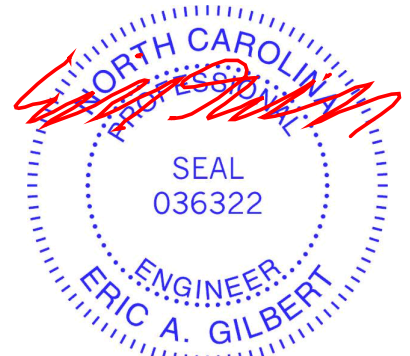
(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/52, 2-3=-958/106, 3-4=-707/95, 4-5=-1391/158, 5-7=-79/48, 7-8=-171/47, 2-12=-953/84
BOT CHORD 11-12=-172/116, 10-11=-241/1399, 8-10=-208/1196
WEBS 3-11=-11/378, 4-11=-806/157, 4-10=-35/160, 5-10=0/402, 5-8=-1303/212, 2-11=-71/740

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-2-8 to 1-9-8, Interior (1) 1-9-8 to 3-0-13, Exterior(2R) 3-0-13 to 7-3-11, Interior (1) 7-3-11 to 21-10-4 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=10.0 psf; Pf=12.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
- 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 121 lb uplift at joint 8 and 75 lb uplift at joint 12.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



July 24, 2025

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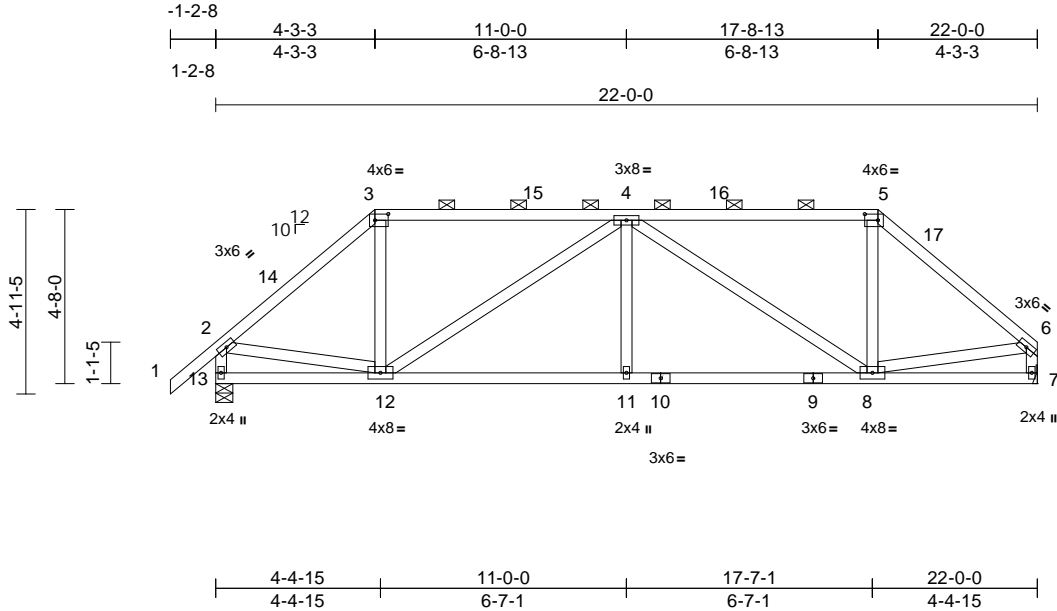
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1059 Serenity	175125677
P04249-28231	A03	Hip	1	1	Job Reference (optional)	

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

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Page: 1



Scale = 1:61.7

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.64	Vert(LL)	-0.04	8-11	>999	240	244/190
Snow (Pf/Pg)	12.7/10.0	Lumber DOL	1.15	BC	0.47	Vert(CT)	-0.10	8-11	>999	180	
TCDL	10.0	Rep Stress Incr	YES	WB	0.61	Horz(CT)	0.03	7	n/a	n/a	
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS							
BCDL	10.0										
Weight: 127 lb FT = 20%											

LUMBER

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

BRACING

TOP CHORD Structural wood sheathing directly applied or 5-8-13 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, 13=0-5-8
Max Horiz 13=102 (LC 13)
Max Uplift 7=50 (LC 10), 13=50 (LC 11)
Max Grav 7=866 (LC 2), 13=952 (LC 2)

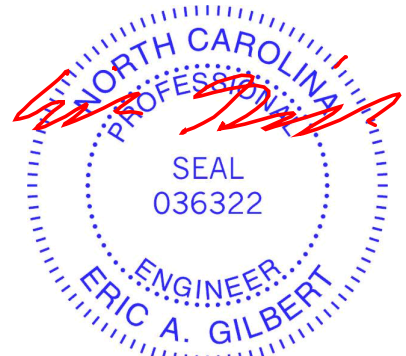
FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/52, 2-3=-981/94, 3-4=-707/93, 4-5=-715/90, 5-6=-986/93, 2-13=-916/93, 6-7=-829/66
BOT CHORD 12-13=-103/138, 11-12=-150/1152, 8-11=-150/1152, 7-8=-38/73
WEBS 3-12=-11/346, 5-8=-13/344, 2-12=-79/645, 6-8=-76/637, 4-11=0/269, 4-8=-561/111, 4-12=-567/110

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-2-8 to 1-9-8, Interior (1) 1-9-8 to 4-3-3, Exterior(2R) 4-3-3 to 8-6-2, Interior (1) 8-6-2 to 17-8-13, Exterior(2E) 17-8-13 to 21-10-4 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=10.0 psf; Pf=12.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
- 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 50 lb uplift at joint 13 and 50 lb uplift at joint 7.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



July 24, 2025

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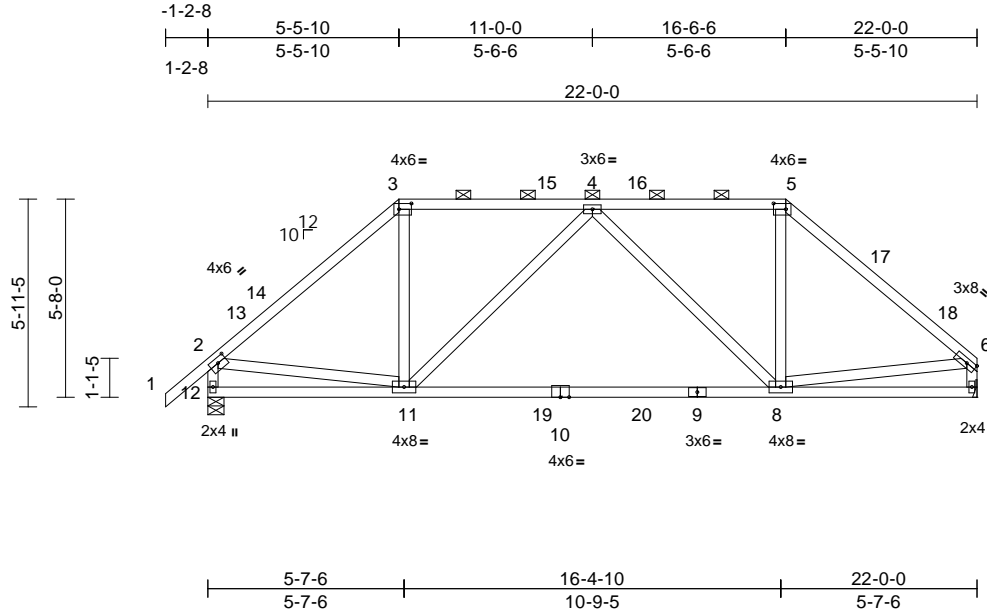
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1059 Serenity	I75125678
P04249-28231	A04	Hip	1	1	Job Reference (optional)	

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

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Page: 1



Scale = 1:65.9

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.42	Vert(LL)	-0.36	8-11	240	MT20	244/190
Snow (Pf/Pg)	12.7/10.0	Lumber DOL	1.15	BC	0.90	Vert(CT)	-0.61	8-11	>426		
TCDL	10.0	Rep Stress Incr	YES	WB	0.31	Horz(CT)	0.02	7	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS							
BCDL	10.0										
										Weight: 128 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.1 *Except* 10-9:2x4 SP No.2
WEBS 2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 5-2-3 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=120 (LC 11)
Max Uplift 7=-32 (LC 15), 12=-49 (LC 14)
Max Grav 7=942 (LC 3), 12=1014 (LC 3)

FORCES

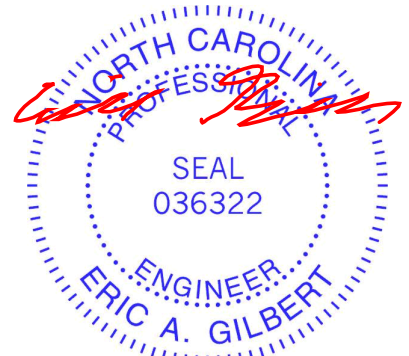
(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/52, 2-3=-1105/87, 3-4=-792/104, 4-5=-799/103, 5-6=-1106/87, 2-12=-973/96, 6-7=-902/65
BOT CHORD 11-12=-144/207, 8-11=-117/946, 7-8=-67/111
WEBS 3-11=-13/432, 5-8=-16/429, 4-11=-307/114, 4-8=-301/115, 2-11=-69/709, 6-8=-59/707

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-2-8 to 1-9-8, Interior (1) 1-9-8 to 5-5-10, Exterior(2R) 5-5-10 to 9-8-8, Interior (1) 9-8-8 to 16-6-6, Exterior(2R) 16-6-6 to 20-9-5, Interior (1) 20-9-5 to 21-10-4 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=10.0 psf; Pf=12.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
- 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 49 lb uplift at joint 12 and 32 lb uplift at joint 7.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



July 24, 2025

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818 Soundside Road
Edenton, NC 27932

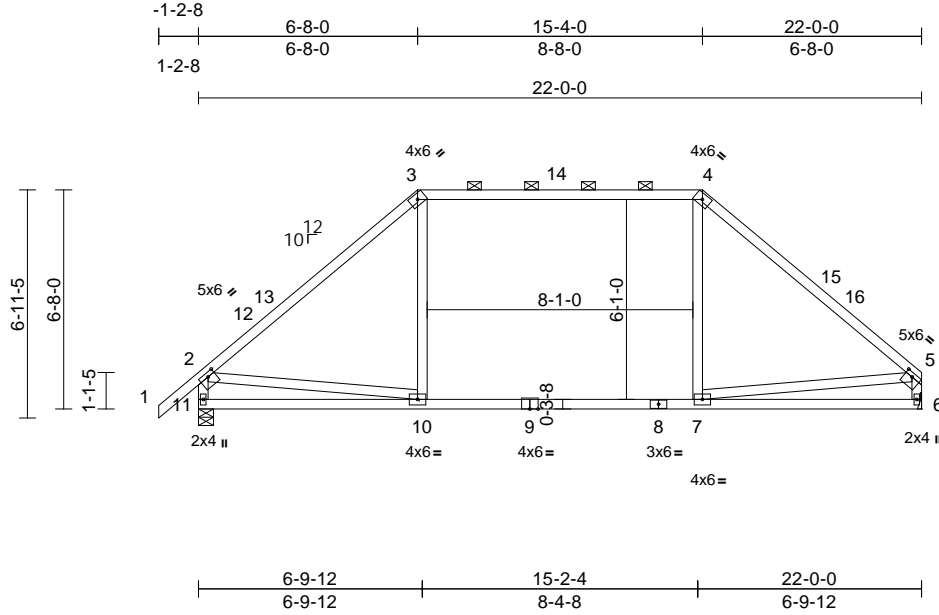
Job	Truss	Truss Type	Qty	Ply	1059 Serenity	175125679
P04249-28231	A05	Hip	1	1	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Wed Jul 23 14:18:35

Page: 1

ID:f1LpS5ZaP26kL3DEVFB7x9zx4hp-RfC?PsB70Hq3NSgPqnL8w3uITxbGKWrcDoi7J4zJC?f



Scale = 1:70.1

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.64	Vert(LL)	-0.28	6-7	>918	240	MT20	244/190
Snow (Pf/Pg)	12.7/10.0	Lumber DOL	1.15	BC	0.95	Vert(CT)	-0.33	7-10	>798	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.17	Horz(CT)	0.01	6	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 114 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2 *Except* 3-4:2x4 SP DSS
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2

BRACING

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

REACTIONS

(size) 6= Mechanical, 11=0-5-8
Max Horiz 11=138 (LC 11)
Max Uplift 6=-40 (LC 15), 11=-57 (LC 14)
Max Grav 6=983 (LC 3), 11=1055 (LC 3)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/52, 2-3=-1129/108, 3-4=-789/119, 4-5=-1122/106, 2-11=-971/111, 5-6=-895/79
BOT CHORD 10-11=-233/381, 7-10=-55/789, 6-7=-120/235
WEBS 3-10=0/358, 4-7=0/352, 2-10=-189/708, 5-7=-158/692

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-2-8 to 1-9-8, Interior (1) 1-9-8 to 6-8-0, Exterior(2R) 6-8-0 to 10-10-15, Interior (1) 10-10-15 to 15-4-0, Exterior(2R) 15-4-0 to 19-6-15, Interior (1) 19-6-15 to 21-10-4 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=10.0 psf; Pf=12.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
- 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 57 lb uplift at joint 11 and 40 lb uplift at joint 6.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



July 24, 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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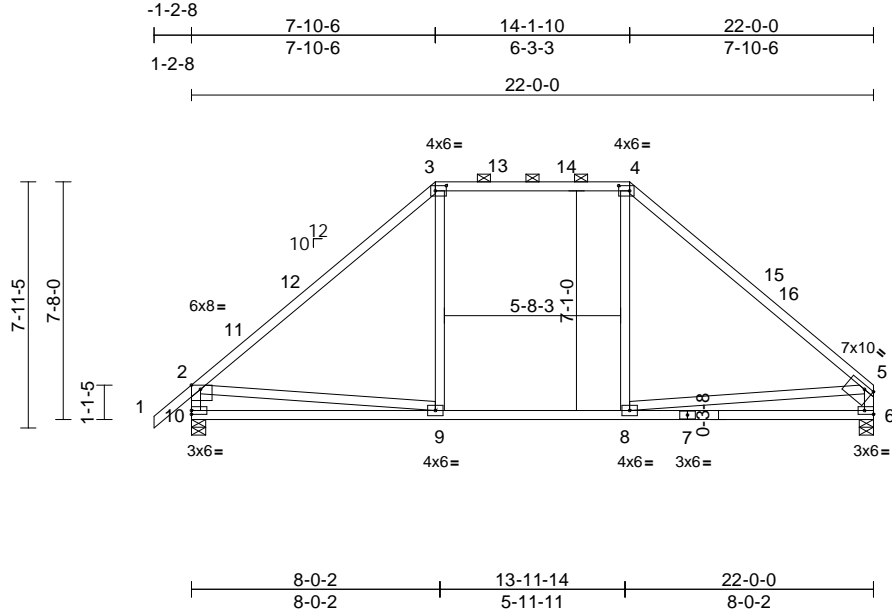
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1059 Serenity	I75125680
P04249-28231	A06	Hip	1	1	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Wed Jul 23 14:18:35
ID:e1LU6aXlwHvontlZ5tu9yHzx3re-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrcDoi7J4zJC?f

Page: 1



Scale = 1:74.3

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.80	Vert(LL)	-0.29	6-8	>905	240	MT20	244/190
Snow (Pf/Pg)	12.7/10.0	Lumber DOL	1.15	BC	0.78	Vert(CT)	-0.37	6-8	>699	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.22	Horz(CT)	0.02	6	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 121 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-9-3 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=0-5-8, 10=0-5-8
Max Horiz 10=157 (LC 11)
Max Uplift 6=-46 (LC 15), 10=-63 (LC 14)
Max Grav 6=965 (LC 3), 10=1037 (LC 3)

FORCES

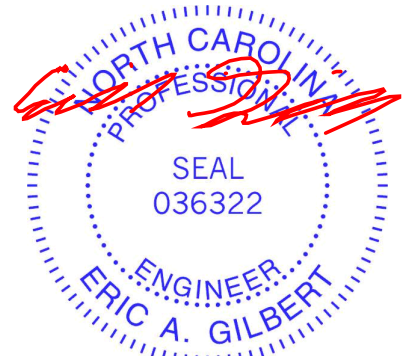
(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/52, 2-3=-1058/117, 3-4=-711/130, 4-5=-1048/114, 2-10=-912/118, 5-6=-836/86
BOT CHORD 9-10=-306/589, 8-9=-40/711, 6-8=-153/374
WEBS 3-9=-6/317, 4-8=0/309, 2-9=-202/511, 5-8=-164/523

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-2-8 to 1-9-8, Interior (1) 1-9-8 to 7-10-6, Exterior(2R) 7-10-6 to 12-1-5, Interior (1) 12-1-5 to 14-1-10, Exterior(2R) 14-1-10 to 18-4-8, Interior (1) 18-4-8 to 21-10-4 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=10.0 psf; Pf=12.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
- 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 63 lb uplift at joint 10 and 46 lb uplift at joint 6.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



July 24, 2025

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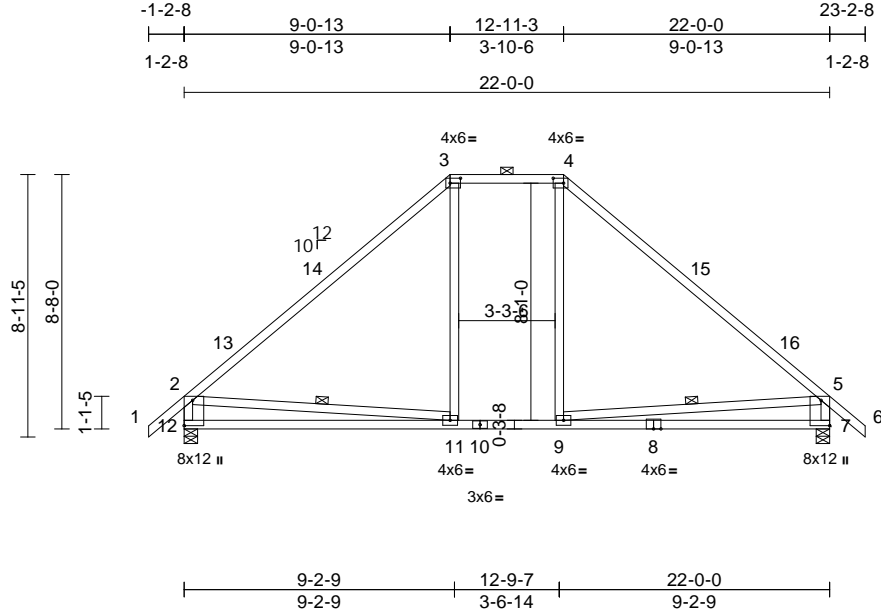
Job	Truss	Truss Type	Qty	Ply	1059 Serenity	
P04249-28231	A07	Hip	1	1	Job Reference (optional)	I75125681

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Wed Jul 23 14:18:35

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ID:GE?nm5KqNHOoIGi8Im_cl1zx4Jb-RfC?PsB70Hq3NSgPqnL8w3uITxbGKWrcDoi7J4zJC?f



Scale = 1:78.5

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.90	Vert(LL)	-0.28	7-9	>919	240	MT20	244/190
Snow (Pf/Pg)	12.7/10.0	Lumber DOL	1.15	BC	0.81	Vert(CT)	-0.47	7-9	>559	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.10	Horz(CT)	0.02	7	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 131 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.1 *Except* 3-4:2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-4-9 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 3-4.
BOT CHORD Rigid ceiling directly applied or 9-5-3 oc bracing.
WEBS 1 Row at midpt 2-11, 5-9

REACTIONS

(size) 7=0-5-8, 12=0-5-8
Max Horiz 12=182 (LC 12)
Max Uplift 7=67 (LC 15), 12=67 (LC 14)
Max Grav 7=1017 (LC 3), 12=1017 (LC 3)

FORCES

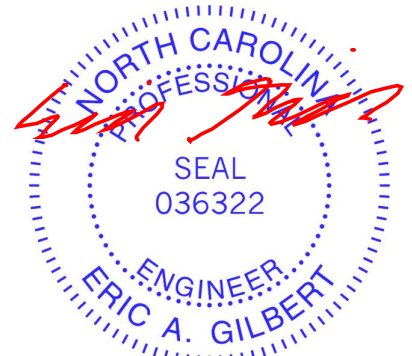
(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/52, 2-3=994/110, 3-4=643/137, 4-5=995/122, 5-6=0/52, 2-12=865/112, 5-7=865/121
BOT CHORD 11-12=363/785, 9-11=-15/680, 7-9=-281/654
WEBS 3-11=-21/292, 4-9=-21/292, 2-11=-249/398, 5-9=-256/401

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-2-8 to 1-9-8, Interior (1) 1-9-8 to 9-0-13, Exterior(2E) 9-0-13 to 12-11-3, Exterior(2R) 12-11-3 to 17-2-2, Interior (1) 17-2-2 to 23-2-8 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=10.0 psf; Pf=12.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
- Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
- Provide adequate drainage to prevent water ponding.
- The Fabrication Tolerance at joint 2 = 12%, joint 5 = 12%
- 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 67 lb uplift at joint 12 and 67 lb uplift at joint 7.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



July 24, 2025

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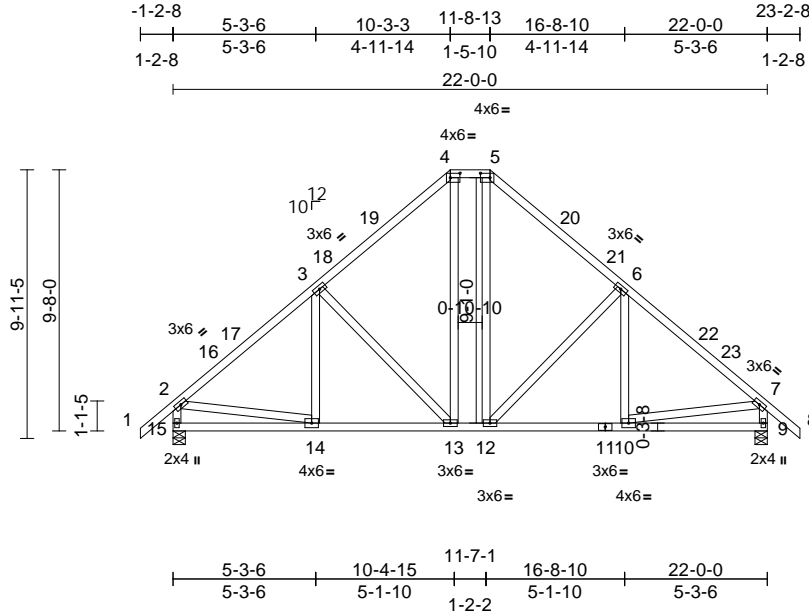
Job	Truss	Truss Type	Qty	Ply	1059 Serenity	I75125682
P04249-28231	A08	Hip	1	1	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Wed Jul 23 14:18:36

Page: 1

ID:M12zTFTEYFk8sjZFHR6kxz3qQ-RfC?PsB70Hq3NSgPqnL8w3uITxbGKWrcDoi7J4zJC?f



Scale = 1:85.3

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.35	Vert(LL)	-0.04	13-14	>999	240	MT20	244/190
Snow (Pf/Pg)	12.7/10.0	Lumber DOL	1.15	BC	0.30	Vert(CT)	-0.07	10-12	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.30	Horz(CT)	0.01	9	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 159 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD Structural wood sheathing directly applied or 5-8-13 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-5.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 9=0-5-8, 15=0-5-8
Max Horiz 15=201 (LC 15)
Max Uplift 9=-71 (LC 17), 15=-71 (LC 16)
Max Grav 9=950 (LC 2), 15=950 (LC 2)

FORCES

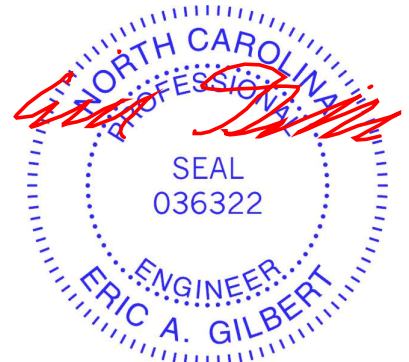
(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/52, 2-3=-1019/85, 3-4=-819/144, 4-5=-533/136, 5-6=-819/145, 6-7=-1019/89, 7-8=0/52, 2-15=-901/94, 7-9=-901/98
BOT CHORD 14-15=-178/256, 13-14=-70/750, 12-13=-1/533, 10-12=0/733, 9-10=-35/106
WEBS 3-14=-4/147, 3-13=-324/150, 4-13=-67/267, 5-12=-67/267, 6-12=-323/150, 6-10=-5/147, 2-14=0/645, 7-10=0/645

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-2-8 to 1-9-8, Interior (1) 1-9-8 to 10-3-3, Exterior(2E) 10-3-3 to 11-8-13, Exterior(2R) 11-8-13 to 15-11-11, Interior (1) 15-11-11 to 23-2-8 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=10.0 psf; Pf=12.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
- 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 7.7 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 71 lb uplift at joint 15 and 71 lb uplift at joint 9.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



July 24, 2025

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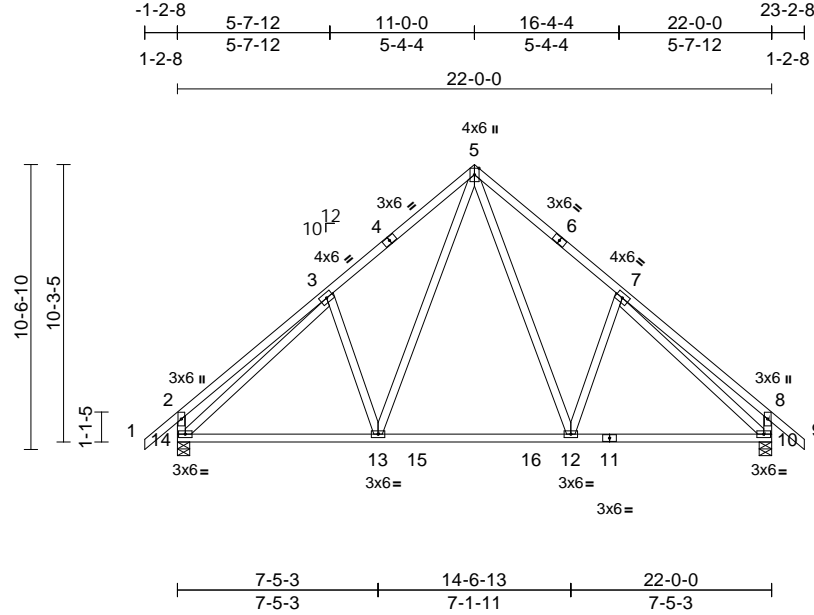
Job	Truss	Truss Type	Qty	Ply	1059 Serenity	I75125683
P04249-28231	A09	Common	2	1	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Wed Jul 23 14:18:36

Page: 1

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Scale = 1:85.3

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.37	Vert(LL)	-0.10	12-13	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.58	Vert(CT)	-0.14	10-12	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.83	Horz(CT)	0.02	10	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 151 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS (size)

10=0-5-8, 14=0-5-8
Max Horiz 14=211 (LC 13)
Max Uplift 10=-72 (LC 15), 14=-72 (LC 14)
Max Grav 10=1044 (LC 28), 14=1044 (LC 27)

FORCES (lb)

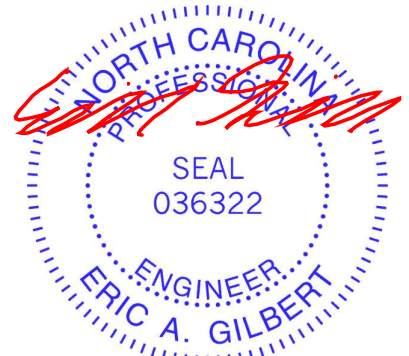
	- Maximum Compression/Maximum Tension
TOP CHORD	1-2=0/52, 2-3=-364/152, 3-5=-1013/192, 5-7=-1013/192, 7-8=-364/152, 8-9=0/52, 2-14=-403/140, 8-10=-403/140
BOT CHORD	13-14=-80/867, 12-13=0/606, 10-12=-1/777
WEBS	5-12=-139/543, 7-12=-230/188, 5-13=-139/543, 3-13=-230/188, 3-14=-849/3, 7-10=-848/2

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-2-8 to 1-9-8, Interior (1) 1-9-8 to 11-0-0, Exterior(2R) 11-0-0 to 14-0-0, Interior (1) 14-0-0 to 23-2-8 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=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10

- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
- 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 72 lb uplift at joint 14 and 72 lb uplift at joint 10.
- Attic room checked for L/360 deflection.

LOAD CASE(S) Standard



July 24,2025

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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Edenton, NC 27932

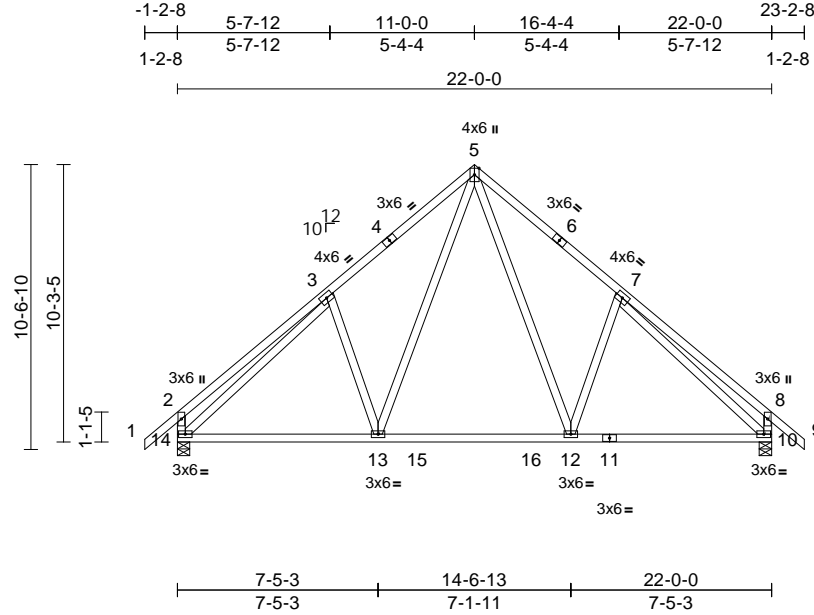
Job	Truss	Truss Type	Qty	Ply	1059 Serenity	I75125684
P04249-28231	A10	Common	1	1	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Wed Jul 23 14:18:36

Page: 1

ID:WjTgiI9?dru51sGLRk8Mnzx3se-RfC?PsB70Hq3NSgPqnL8w3uITxbGKWrcDoi7J4zJC?f



Scale = 1:85.3

Loading	(psf)	Spacing	2-3-8	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.49	Vert(LL)	-0.11	12-13	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.73	Vert(CT)	-0.16	10-12	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.96	Horz(CT)	0.03	10	n/a	n/a		
BCLL	0.0 *	Code	IRC2021/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 151 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD	Structural wood sheathing directly applied or 5-1-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size)

10=0-5-8, 14=0-5-8
Max Horiz 14=242 (LC 13)
Max Uplift 10=-83 (LC 15), 14=-83 (LC 14)
Max Grav 10=1196 (LC 28), 14=1196 (LC 27)

FORCES

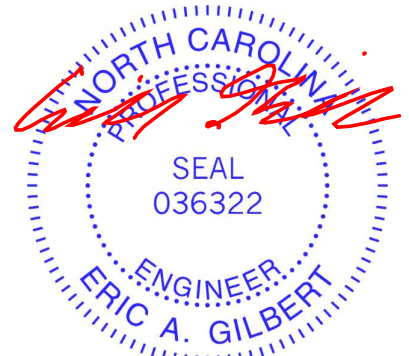
(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/60, 2-3=-417/175, 3-5=-1161/220, 5-7=-1161/220, 7-8=-417/174, 8-9=0/60, 2-14=-462/161, 8-10=-462/161
BOT CHORD 13-14=-92/993, 12-13=0/694, 10-12=-2/891
WEBS 5-12=-160/622, 7-12=-263/215, 5-13=-159/622, 3-13=-263/215, 3-14=-972/3, 7-10=-972/3

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-2-8 to 1-9-8, Interior (1) 1-9-8 to 11-0-0, Exterior(2R) 11-0-0 to 14-0-0, Interior (1) 14-0-0 to 23-2-8 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=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10

- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
- 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 83 lb uplift at joint 10 and 83 lb uplift at joint 14.
- Attic room checked for L/360 deflection.

LOAD CASE(S) Standard



July 24, 2025

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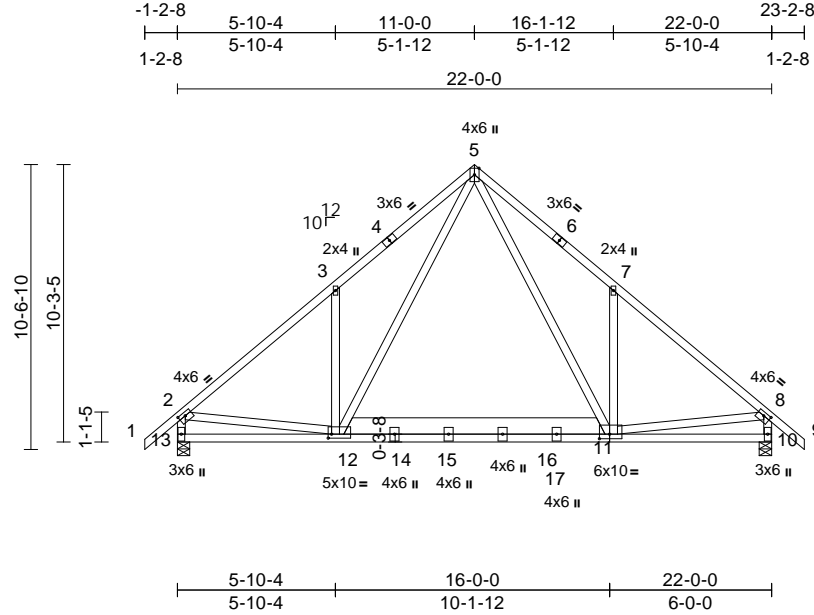
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1059 Serenity	175125685
P04249-28231	A11	Common	1	1	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Wed Jul 23 14:18:37
ID: lanaWx_m6NfMEJgTp2ykpwx4HS-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?i

Page: 1



Scale = 1:85.3

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

Loading	(psf)	Spacing	2-3-8	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.46	Vert(LL)	-0.06	11-12	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.49	Vert(CT)	-0.12	11-12	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.39	Horz(CT)	0.01	10	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 177 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 12-11:2x8 SP DSS
WEBS 2x4 SP No.2

BRACING

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

REACTIONS

(size) 10=0-5-8, 13=0-5-8
Max Horiz 13=242 (LC 13)
Max Uplift 10=-28 (LC 15), 13=-37 (LC 14)
Max Grav 10=1261 (LC 27), 13=1252 (LC 26)

FORCES

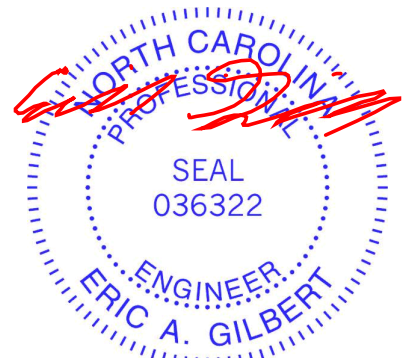
(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/60, 2-3=-1385/49, 3-5=-1397/213,
5-7=-1405/196, 7-8=-1410/39, 8-9=0/60,
2-13=-1164/78, 8-10=-1166/70
BOT CHORD 12-13=-227/387, 10-12=-68/724
WEBS 5-11=-152/851, 5-12=-176/836,
3-12=-389/235, 7-11=-392/237, 2-12=0/836,
8-11=0/863

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-2-8 to 1-9-8, Interior (1) 1-9-8 to 11-0-0, Exterior(2R) 11-0-0 to 14-0-0, Interior (1) 14-0-0 to 23-2-8 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=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
- Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
- 100.0lb AC unit load placed on the bottom chord, 12-0-0 from left end, supported at two points, 4-0-0 apart.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 37 lb uplift at joint 13 and 28 lb uplift at joint 10.

LOAD CASE(S) Standard



July 24, 2025

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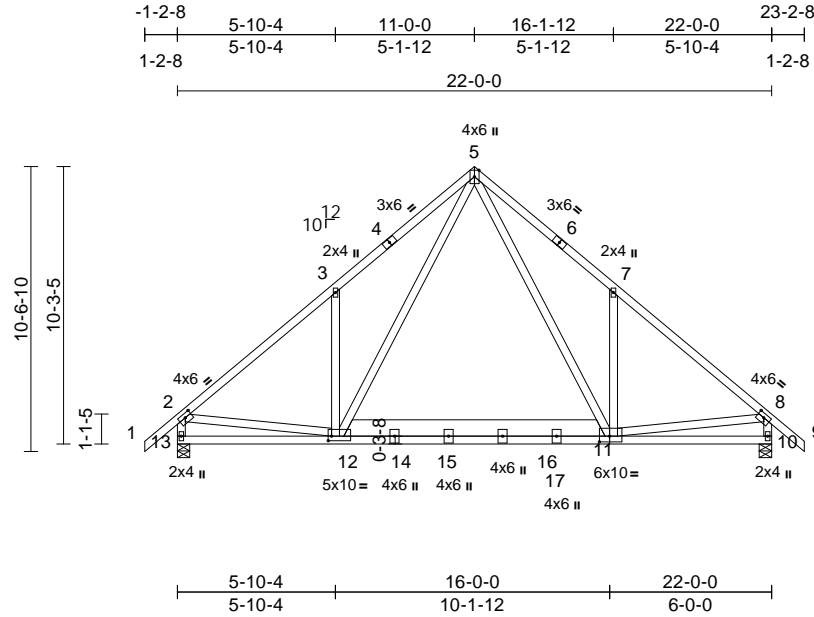
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1059 Serenity	175125686
P04249-28231	A12	Common	4	1	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Wed Jul 23 14:18:37
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Page: 1



Scale = 1:85.3

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.35	Vert(LL)	-0.05	11-12	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.39	Vert(CT)	-0.11	11-12	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.33	Horz(CT)	0.01	10	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 177 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 12-11:2x8 SP DSS
WEBS 2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 5-1-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(size) 10=0-5-8, 13=0-5-8
Max Horiz 13=211 (LC 13)
Max Uplift 10=-18 (LC 15), 13=-27 (LC 14)
Max Grav 10=1107 (LC 27), 13=1098 (LC 26)

FORCES

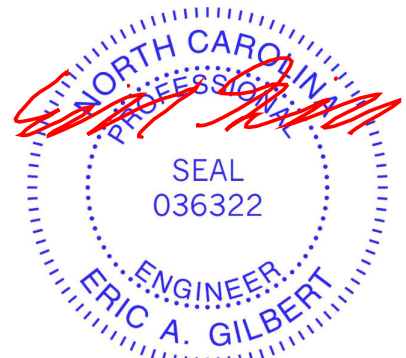
(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/52, 2-3=-1217/34, 3-5=-1228/178, 5-7=-1236/162, 7-8=-1241/24, 8-9=0/52, 2-13=-1022/62, 8-10=-1025/54
BOT CHORD 12-13=-198/337, 10-12=-59/636
WEBS 5-11=-125/751, 5-12=-148/735, 3-12=-339/205, 7-11=-342/207, 2-12=0/736, 8-11=0/761

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-2-8 to 1-9-8, Interior (1) 1-9-8 to 11-0-0, Exterior(2R) 11-0-0 to 14-0-0, Interior (1) 14-0-0 to 23-2-8 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=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
- Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
- 100.0lb AC unit load placed on the bottom chord, 12-0-0 from left end, supported at two points, 4-0-0 apart.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 27 lb uplift at joint 13 and 18 lb uplift at joint 10.

LOAD CASE(S) Standard



July 24, 2025

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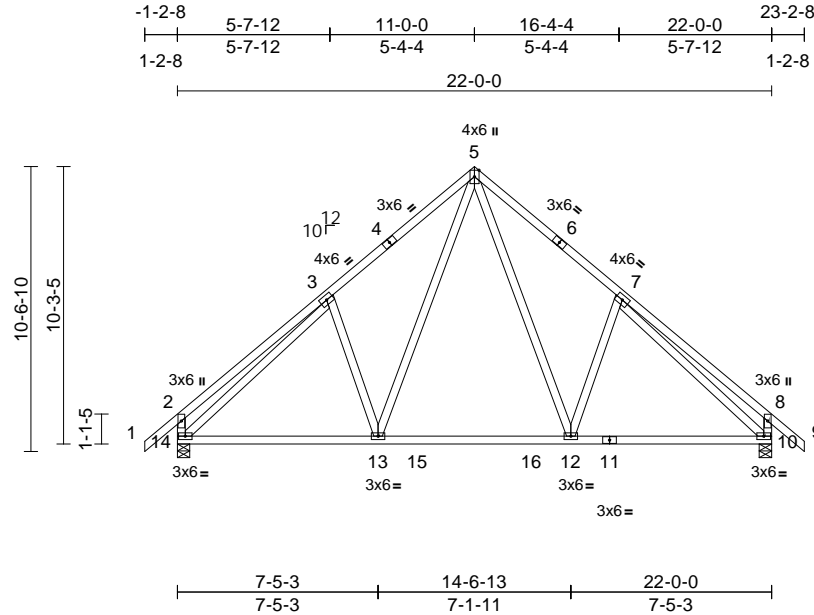
Job	Truss	Truss Type	Qty	Ply	1059 Serenity	I75125687
P04249-28231	A13	Common	3	1	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Wed Jul 23 14:18:37

Page: 1

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Scale = 1:85.3

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.37	Vert(LL)	-0.10	12-13	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.58	Vert(CT)	-0.14	10-12	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.83	Horz(CT)	0.02	10	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 151 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS (size)

10=0-5-8, 14=0-5-8
Max Horiz 14=211 (LC 13)
Max Uplift 10=-72 (LC 15), 14=-72 (LC 14)
Max Grav 10=1044 (LC 27), 14=1044 (LC 26)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/52, 2-3=-364/152, 3-5=-1013/192, 5-7=-1013/192, 7-8=-364/152, 8-9=0/52, 2-14=-403/140, 8-10=-403/140
BOT CHORD 13-14=-80/867, 12-13=0/606, 10-12=-1/777
WEBS 5-12=-139/543, 7-12=-230/188, 5-13=-139/543, 3-13=-230/188, 3-14=-849/3, 7-10=-848/2

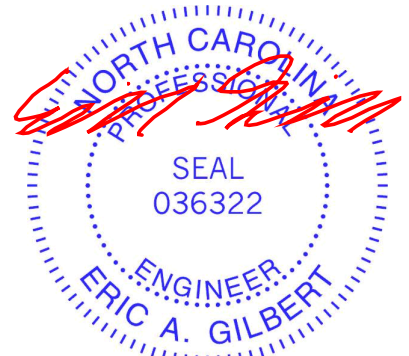
NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-2-8 to 1-9-8, Interior (1) 1-9-8 to 11-0-0, Exterior(2R) 11-0-0 to 14-0-0, Interior (1) 14-0-0 to 23-2-8 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=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10

- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
- 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 72 lb uplift at joint 14 and 72 lb uplift at joint 10.

LOAD CASE(S)

Standard



July 24, 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

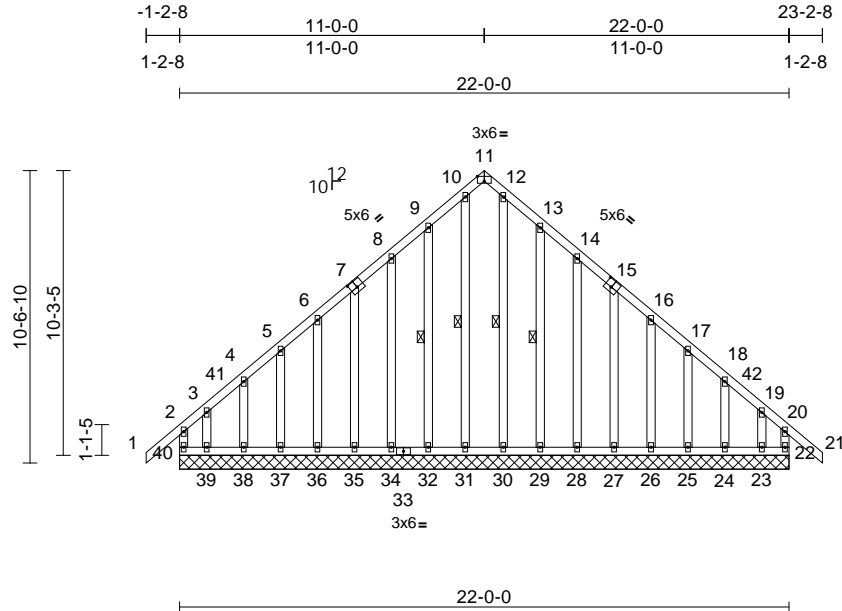
Job	Truss	Truss Type	Qty	Ply	1059 Serenity	I75125688
P04249-28231	A14E	Common Supported Gable	1	1	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Wed Jul 23 14:18:38

Page: 1

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Scale = 1:83.2

Plate Offsets (X, Y): [7:0-3-0,0-3-0], [11:0-3-0,Edge], [15:0-3-0,0-3-0]

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	0.15	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.11	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	NO	WB	0.07	Horz(CT)	0.00	22	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MR								
BCDL	10.0											
											Weight: 208 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 10-31, 12-30, 9-32, 13-29

REACTIONS

(size)	22=22-0-0, 23=22-0-0, 24=22-0-0, 25=22-0-0, 26=22-0-0, 27=22-0-0, 28=22-0-0, 29=22-0-0, 30=22-0-0, 31=22-0-0, 32=22-0-0, 34=22-0-0, 35=22-0-0, 36=22-0-0, 37=22-0-0, 38=22-0-0, 39=22-0-0, 40=22-0-0
Max Horiz	40=-211 (LC 12)
Max Uplift	22=-106 (LC 11), 23=-177 (LC 15), 24=-28 (LC 15), 25=-48 (LC 15), 26=-43 (LC 15), 27=-43 (LC 15), 28=-45 (LC 15), 29=-64 (LC 15), 32=-62 (LC 14), 34=-44 (LC 14), 35=-41 (LC 14), 36=-41 (LC 14), 37=-46 (LC 14), 38=-23 (LC 14), 39=-189 (LC 14), 40=-149 (LC 10)
Max Grav	22=236 (LC 26), 23=171 (LC 13), 24=143 (LC 33), 25=135 (LC 27), 26=133 (LC 27), 27=131 (LC 27), 28=129 (LC 27), 29=129 (LC 27), 30=163 (LC 28), 31=168 (LC 29), 32=122 (LC 26), 34=120 (LC 26), 35=119 (LC 26), 36=117 (LC 26), 37=117 (LC 26), 38=120 (LC 32), 39=187 (LC 12), 40=265 (LC 27)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD	2-40=-203/102, 20-22=-179/72, 1-2=0/52, 2-3=-184/156, 3-4=-116/118, 4-5=-102/104, 5-6=-90/98, 6-8=-78/137, 8-9=-93/181, 9-10=-125/238, 10-11=-85/152, 11-12=-85/152, 12-13=-125/238, 13-14=-93/181, 14-16=-69/137, 16-17=-61/75, 17-18=-73/76, 18-19=-92/90, 19-20=-160/118, 20-21=0/52
BOT CHORD	39-40=-101/123, 38-39=-101/123, 37-38=-101/123, 36-37=-101/123, 35-36=-101/123, 34-35=-101/123, 32-34=-101/123, 31-32=-101/123, 30-31=-101/123, 29-30=-101/123, 28-29=-101/123, 27-28=-101/123, 26-27=-101/123, 25-26=-101/123, 24-25=-101/123, 23-24=-101/123, 22-23=-101/123
WEBS	10-31=-143/47, 12-30=-143/47, 9-32=-84/74, 8-34=-84/51, 7-35=-84/48, 6-36=-84/49, 5-37=-84/49, 4-38=-88/52, 3-39=-87/104, 13-29=-86/74, 14-28=-84/51, 15-27=-84/48, 16-26=-84/49, 17-25=-84/49, 18-24=-88/52, 19-23=-81/97

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 1-2-8 to 1-9-8, Exterior(2N) 1-9-8 to 11-0-0, Corner(3R) 11-0-0 to 14-0-0, Exterior(2N) 14-0-0 to 23-2-8 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=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
- 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.



July 24, 2025

Continued on page 2

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1059 Serenity	I75125688
P04249-28231	A14E	Common Supported Gable	1	1	Job Reference (optional)	

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

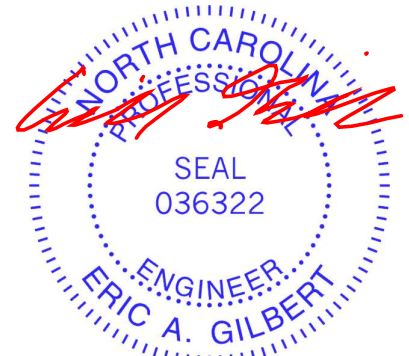
Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Wed Jul 23 14:18:38
ID:I4uusMapPmfQ3CsBXR2?ymzw3a6-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrcDoi7J4zJC?f

Page: 2

- 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 106 lb uplift at joint 22, 149 lb uplift at joint 40, 62 lb uplift at joint 32, 44 lb uplift at joint 34, 41 lb uplift at joint 35, 41 lb uplift at joint 36, 46 lb uplift at joint 37, 23 lb uplift at joint 38, 189 lb uplift at joint 39, 64 lb uplift at joint 29, 45 lb uplift at joint 28, 43 lb uplift at joint 27, 43 lb uplift at joint 26, 48 lb uplift at joint 25, 28 lb uplift at joint 24 and 177 lb uplift at joint 23.
- 14) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard

- 1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-35, 2-11=-35, 11-20=-35, 20-21=-35
Trapezoidal Loads (lb/ft)
Vert: 40=-20-to-39=-21 (F=-1), 39=-21 (F=-1)-to-38=-21 (F=-1), 38=-21 (F=-1)-to-37=-22 (F=-2), 37=-22 (F=-2)-to-36=-23 (F=-3), 36=-23 (F=-3)-to-35=-24 (F=-4), 35=-24 (F=-4)-to-34=-25 (F=-5), 34=-25 (F=-5)-to-33=-25 (F=-5), 33=-25 (F=-5)-to-32=-26 (F=-6), 32=-26 (F=-6)-to-31=-27 (F=-7), 31=-27 (F=-7)-to-30=-28 (F=-8), 30=-28 (F=-8)-to-29=-29 (F=-9), 29=-29 (F=-9)-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=-34 (F=-14), 24=-34 (F=-14)-to-23=-34 (F=-14), 23=-34 (F=-14)-to-22=-35 (F=-15)



July 24, 2025

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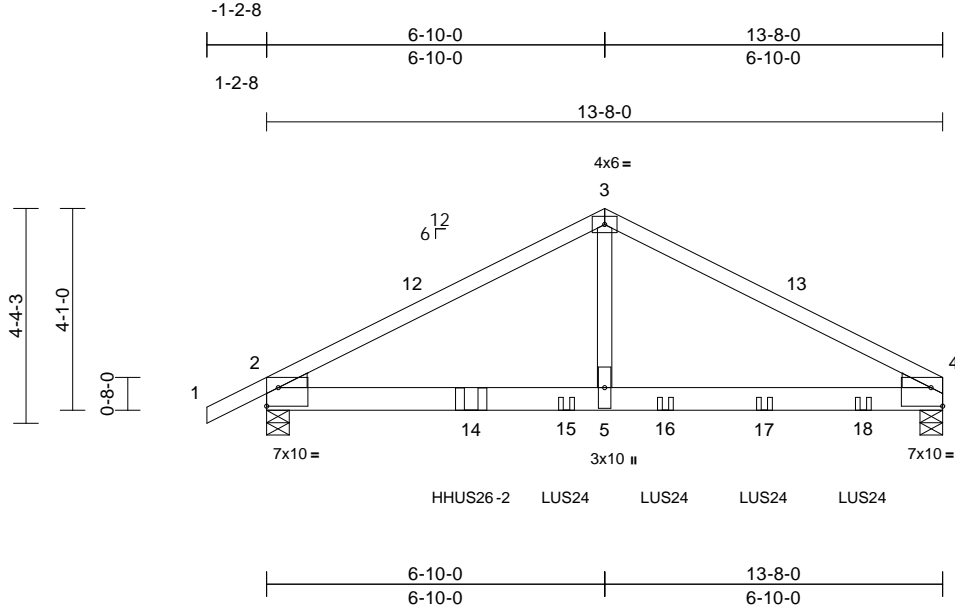
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1059 Serenity	175125689
P04249-28231	B01G	Common Girder	1	2	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Wed Jul 23 14:18:38
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Page: 1



Scale = 1:46.6

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

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	0.60	Vert(LL)	-0.09	5-11	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.52	Vert(CT)	-0.16	5-11	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.40	Horz(CT)	0.01	2	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 127 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.2
Right: 2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 5-3-8 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(size) 2=0-5-8, 4=0-5-8
Max Horiz 2=57 (LC 38)
Max Uplift 2=-328 (LC 12), 4=-272 (LC 13)
Max Grav 2=2572 (LC 2), 4=3138 (LC 2)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/32, 2-3=-4126/471, 3-4=-4099/471
BOT CHORD 2-5=-375/3618, 4-5=-375/3618
WEBS 3-5=-339/3235

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=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 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 7.7 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 328 lb uplift at joint 2 and 272 lb uplift at joint 4.
- Use Simpson Strong-Tie HHUS26-2 (14-10d Girder, 4-10d Truss) or equivalent at 4-1-10 from the left end to connect truss(es) to front face of bottom chord.
- Use Simpson Strong-Tie LUS24 (4-SD9112 Girder, 2-SD9212 Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 6-0-12 from the left end to 12-0-12 to connect truss(es) to front face of bottom chord.
- Fill all nail holes where hanger is in contact with lumber.

LOAD CASE(S) Standard

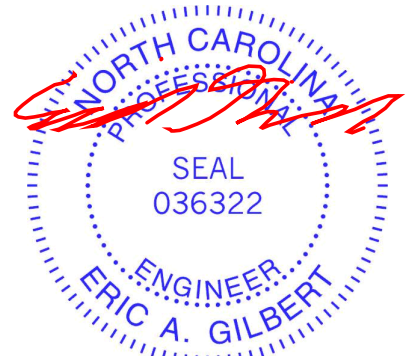
- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (lb/ft)

Vert: 1-3=-35, 3-4=-35, 6-9=-20

Concentrated Loads (lb)

Vert: 14=-1063 (F), 15=-686 (F), 16=-647 (F), 17=-635 (F), 18=-623 (F)



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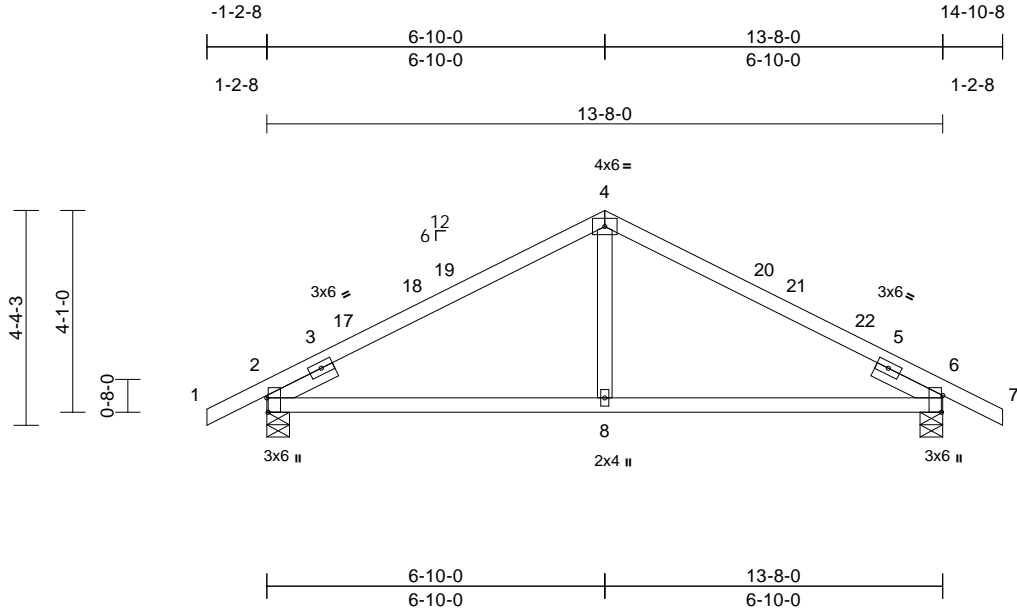
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1059 Serenity	I75125690
P04249-28231	B02	Common	1	1	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Wed Jul 23 14:18:38
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Page: 1



Scale = 1:46.6

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.53	Vert(LL)	-0.06	8-15	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.44	Vert(CT)	-0.10	8-15	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.07	Horz(CT)	0.02	2	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 57 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS

(size)	2=0-5-8, 6=0-5-8
Max Horiz	2=50 (LC 16)
Max Uplift	2=-61 (LC 16), 6=-61 (LC 17)
Max Grav	2=619 (LC 2), 6=619 (LC 2)

FORCES

(lb) - Maximum Compression/Maximum Tension

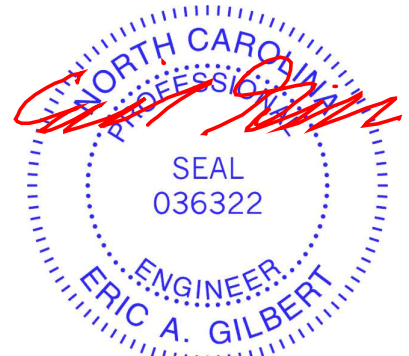
TOP CHORD	1-2=0/32, 2-4=-690/174, 4-6=-690/174, 6-7=0/32
BOT CHORD	2-8=-130/553, 6-8=-133/553
WEBS	4-8=0/293

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-2-8 to 1-9-8, Interior (1) 1-9-8 to 6-10-0, Exterior(2R) 6-10-0 to 9-10-0, Interior (1) 9-10-0 to 14-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10

- 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 7.7 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 61 lb uplift at joint 2 and 61 lb uplift at joint 6.

LOAD CASE(S) Standard



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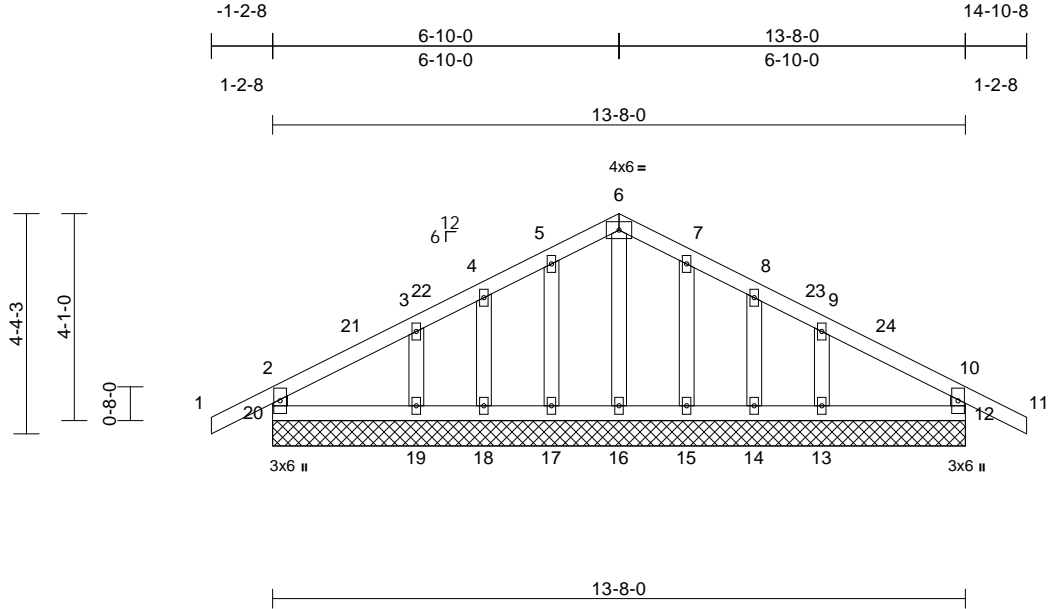
Job	Truss	Truss Type	Qty	Ply	1059 Serenity	175125691
P04249-28231	B03E	Common Supported Gable	1	1	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Wed Jul 23 14:18:39

Page: 1

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Scale = 1:45.5

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	0.14	Vert(LL)	n/a	-	n/a	999	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	n/a	-	n/a	999	
TCDL	10.0	Rep Stress Incr	NO	WB	0.02	Horz(CT)	0.00	12	n/a	n/a	
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MR							
BCDL	10.0										
										Weight: 73 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS	(size)	12=13-8-0, 13=13-8-0, 14=13-8-0, 15=13-8-0, 16=13-8-0, 17=13-8-0, 18=13-8-0, 19=13-8-0, 20=13-8-0
	Max Horiz	20=48 (LC 14)
	Max Uplift	12=30 (LC 17), 13=54 (LC 17), 14=18 (LC 17), 15=25 (LC 17), 17=25 (LC 16), 18=16 (LC 16), 19=51 (LC 16), 20=21 (LC 16)
	Max Grav	12=222 (LC 37), 13=224 (LC 2), 14=90 (LC 37), 15=137 (LC 37), 16=109 (LC 2), 17=129 (LC 36), 18=90 (LC 36), 19=182 (LC 2), 20=201 (LC 36)

FORCES

	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	2-20=-174/114, 1-2=0/36, 2-3=-54/43, 3-4=-47/73, 4-5=-52/100, 5-6=-65/130, 6-7=-65/130, 7-8=-53/100, 8-9=-48/74, 9-10=-46/36, 10-11=0/36, 10-12=-172/112
BOT CHORD	19-20=-7/52, 18-19=-7/52, 17-18=-7/52, 16-17=-7/52, 15-16=-7/52, 14-15=-7/52, 13-14=-7/52, 12-13=-7/52
WEBS	6-16=-71/16, 5-17=-88/50, 4-18=-66/44, 3-19=-124/91, 7-15=-88/50, 8-14=-66/44, 9-13=-127/92

NOTES

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

- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -1-2-8 to 1-9-8, Exterior(2N) 1-9-8 to 6-10-0, Corner(3R) 6-10-0 to 9-10-0, Exterior(2N) 9-10-0 to 14-10-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 5) Unbalanced snow loads have been considered for this design.
- 6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
- 7) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
- 8) All plates are 2x4 (II) MT20 unless otherwise indicated.
- 9) Gable requires continuous bottom chord bearing.
- 10) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 11) Gable studs spaced at 1-4-0 oc.
- 12) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 13) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.

- 14) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 21 lb uplift at joint 20, 30 lb uplift at joint 12, 25 lb uplift at joint 17, 16 lb uplift at joint 18, 51 lb uplift at joint 19, 25 lb uplift at joint 15, 18 lb uplift at joint 14 and 54 lb uplift at joint 13.
- 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=-35, 2-6=-35, 6-10=-35, 10-11=-35
Trapezoidal Loads (lb/ft)
Vert: 20=-20-to-19=-23 (F=-3), 19=-23 (F=-3)-to-18=-25 (F=-5), 18=-25 (F=-5)-to-17=-26 (F=-6), 17=-26 (F=-6)-to-16=-27 (F=-7), 16=-27 (F=-7)-to-15=-29 (F=-9), 15=-29 (F=-9)-to-14=-30 (F=-10), 14=-30 (F=-10)-to-13=-32 (F=-12), 13=-32 (F=-12)-to-12=-35 (F=-15)



July 24, 2025

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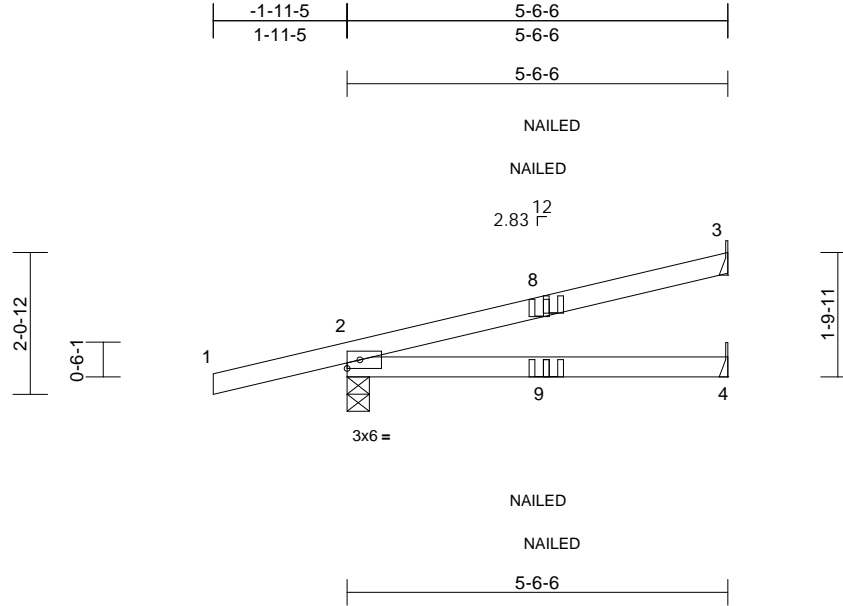
Job	Truss	Truss Type	Qty	Ply	1059 Serenity	I75125692
P04249-28231	CJ01	Diagonal Hip Girder	2	1	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Wed Jul 23 14:18:39

Page: 1

ID:MRjKpIEYt1Nk9p?l_EH?AhvYXno-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWwCDoi7J4zJC?f



Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.47	Vert(LL)	0.04	4-7	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.34	Vert(CT)	-0.08	4-7	>791	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.01	3	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 20 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS

(size) 2=0-3-14, 3= Mechanical, 4= Mechanical
Max Horiz 2=55 (LC 8)
Max Uplift 2=-122 (LC 8), 3=-42 (LC 8), 4=-22 (LC 8)
Max Grav 2=353 (LC 2), 3=137 (LC 2), 4=99 (LC 7)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/27, 2-3=-116/202
BOT CHORD 2-4=-72/29

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; porch left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
- 5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.

- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 8) Refer to girder(s) for truss to truss connections.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 42 lb uplift at joint 3, 122 lb uplift at joint 2 and 22 lb uplift at joint 4.
- 10) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidelines.
- 11) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard

- 1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-35, 4-5=-20
Concentrated Loads (lb)
Vert: 9=1 (F=0, B=0)



July 24, 2025

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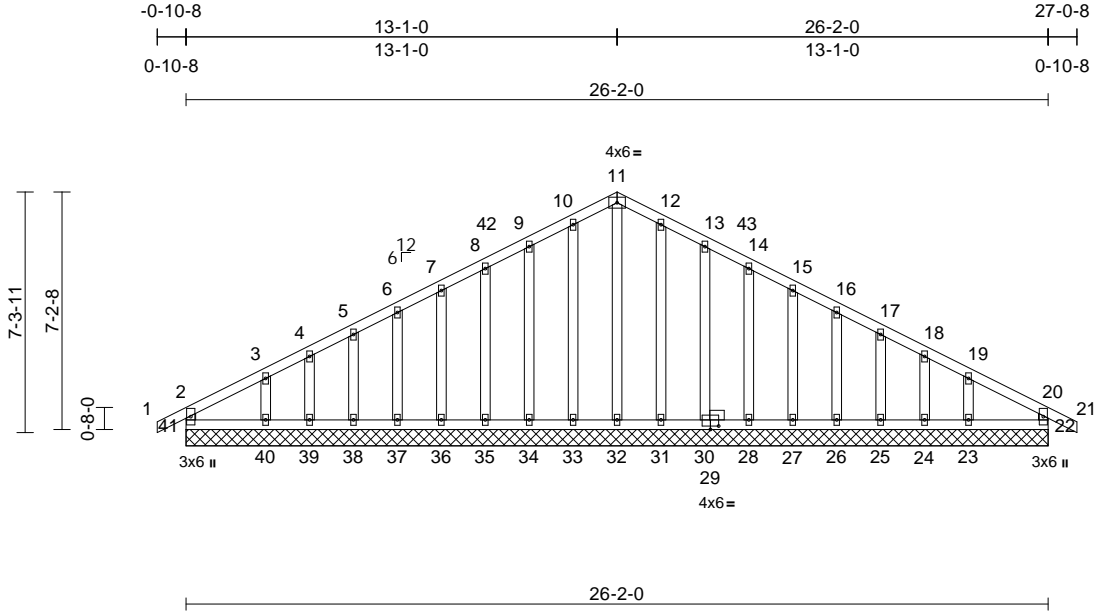
Job	Truss	Truss Type	Qty	Ply	1059 Serenity	175125693
P04249-28231	G01E	Common Supported Gable	1	1	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Wed Jul 23 14:18:39

Page: 1

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Scale = 1:69.9

Plate Offsets (X, Y): [29:0-3-0,0-1-4]

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	0.08	Vert(LL)	n/a	-	999	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	n/a	-	999		
TCDL	10.0	Rep Stress Incr	NO	WB	0.10	Horz(CT)	0.00	22	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MR							
BCDL	10.0										
Weight: 184 lb FT = 20%											

LUMBER

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

BRACING

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

REACTIONS

(size) 22=26-2-0, 23=26-2-0, 24=26-2-0, 25=26-2-0, 26=26-2-0, 27=26-2-0, 28=26-2-0, 30=26-2-0, 31=26-2-0, 32=26-2-0, 33=26-2-0, 34=26-2-0, 35=26-2-0, 36=26-2-0, 37=26-2-0, 38=26-2-0, 39=26-2-0, 40=26-2-0, 41=26-2-0
Max Horiz 41=76 (LC 16)
Max Uplift 22=5 (LC 16), 23=65 (LC 17), 24=13 (LC 17), 25=30 (LC 17), 26=26 (LC 17), 27=27 (LC 17), 28=26 (LC 17), 30=31 (LC 17), 31=15 (LC 17), 33=17 (LC 16), 34=29 (LC 16), 35=25 (LC 16), 36=25 (LC 16), 37=24 (LC 16), 38=28 (LC 16), 39=8 (LC 16), 40=66 (LC 16), 41=17 (LC 17)
Max Grav 22=180 (LC 2), 23=201 (LC 37), 24=107 (LC 2), 25=136 (LC 37), 26=127 (LC 2), 27=127 (LC 37), 28=125 (LC 2), 30=125 (LC 37), 31=126 (LC 37), 32=132 (LC 33), 33=123 (LC 36), 34=119 (LC 36), 35=117 (LC 2), 36=115 (LC 36), 37=113 (LC 2), 38=116 (LC 36), 39=94 (LC 2), 40=157 (LC 36), 41=161 (LC 2)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-41=139/65, 1-2=0/27, 2-3=87/47, 3-4=57/55, 4-5=46/67, 5-6=41/79, 6-7=48/91, 7-8=61/115, 8-9=73/138, 9-10=86/164, 10-11=95/181, 11-12=95/181, 12-13=86/164, 13-14=73/138, 14-15=61/115, 15-16=48/91, 16-17=36/68, 17-18=29/44, 18-19=40/33, 19-20=68/29, 20-21=0/27, 20-22=138/65
BOT CHORD 40-41=18/67, 39-40=18/67, 38-39=18/67, 37-38=18/67, 36-37=18/67, 35-36=18/67, 34-35=18/67, 33-34=18/67, 32-33=18/67, 31-32=18/67, 30-31=18/67, 28-30=18/67, 27-28=18/67, 26-27=18/67, 25-26=18/67, 24-25=18/67, 23-24=18/67, 22-23=18/67, 11-32=117/38, 10-33=83/23, 9-34=81/43, 8-35=80/36, 7-36=80/37, 6-37=80/37, 5-38=82/39, 4-39=70/27, 3-40=111/84, 12-31=83/22, 13-30=81/43, 14-28=80/36, 15-27=80/37, 16-26=80/37, 17-25=82/39, 18-24=69/27, 19-23=113/84
WEBS

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 2-5-0, Exterior(2N) 2-5-0 to 13-1-0, Corner(3R) 13-1-0 to 16-1-0, Exterior(2N) 16-1-0 to 27-0-8 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=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 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 7.7 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.



July 24, 2025

Continued on page 2

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Job	Truss	Truss Type	Qty	Ply	1059 Serenity	I75125693
P04249-28231	G01E	Common Supported Gable	1	1	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Wed Jul 23 14:18:39

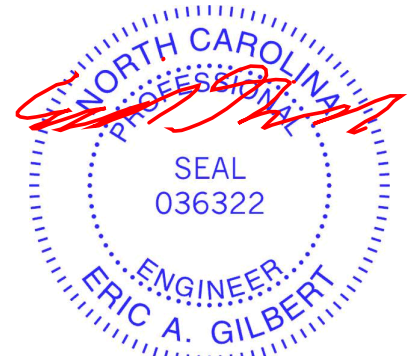
Page: 2

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- 12) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 13) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 14) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 17 lb uplift at joint 41, 5 lb uplift at joint 22, 17 lb uplift at joint 33, 29 lb uplift at joint 34, 25 lb uplift at joint 35, 25 lb uplift at joint 36, 24 lb uplift at joint 37, 28 lb uplift at joint 38, 8 lb uplift at joint 39, 66 lb uplift at joint 40, 15 lb uplift at joint 31, 31 lb uplift at joint 30, 26 lb uplift at joint 28, 27 lb uplift at joint 27, 26 lb uplift at joint 26, 30 lb uplift at joint 25, 13 lb uplift at joint 24 and 65 lb uplift at joint 23.
- 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=-35, 2-11=-35, 11-20=-35, 20-21=-35
- Trapezoidal Loads (lb/ft)
- Vert: 41=-20-to-40=-21 (F=-1), 40=-21 (F=-1)-to-39=-22 (F=-2), 39=-22 (F=-2)-to-38=-23 (F=-3), 38=-23 (F=-3)-to-37=-24 (F=-4), 37=-24 (F=-4)-to-36=-24 (F=-4), 36=-24 (F=-4)-to-35=-25 (F=-5), 35=-25 (F=-5)-to-34=-26 (F=-6), 34=-26 (F=-6)-to-33=-27 (F=-7), 33=-27 (F=-7)-to-32=-27 (F=-7), 32=-27 (F=-7)-to-31=-28 (F=-8), 31=-28 (F=-8)-to-30=-29 (F=-9), 30=-29 (F=-9)-to-29=-29 (F=-9), 29=-29 (F=-9)-to-28=-30 (F=-10), 28=-30 (F=-10)-to-27=-31 (F=-11), 27=-31 (F=-11)-to-26=-31 (F=-11), 26=-31 (F=-11)-to-25=-32 (F=-12), 25=-32 (F=-12)-to-24=-33 (F=-13), 24=-33 (F=-13)-to-23=-34 (F=-14), 23=-34 (F=-14)-to-22=-35 (F=-15)



July 24, 2025

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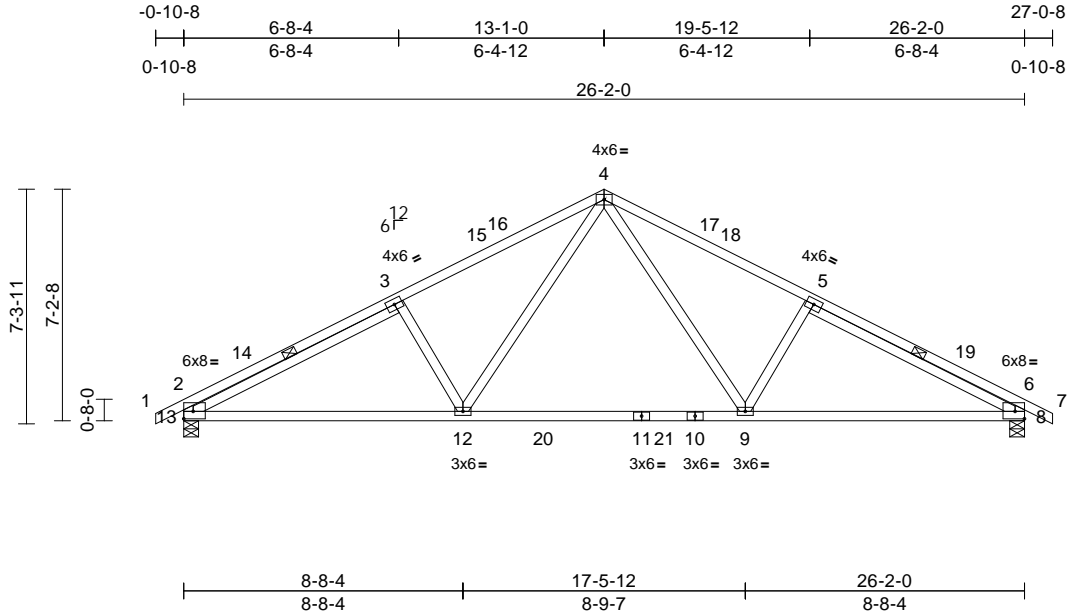
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1059 Serenity	I75125694
P04249-28231	G02	Common	3	1	Job Reference (optional)	

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

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Page: 1



Scale = 1:71.7

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.53	Vert(LL)	-0.21	9-12	>999	240	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.93	Vert(CT)	-0.33	9-12	>955	180	
TCDL	10.0	Rep Stress Incr	YES	WB	0.29	Horz(CT)	0.06	8	n/a	n/a	
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS							
BCDL	10.0										
Weight: 143 lb FT = 20%											

LUMBER

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

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-11-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 1 Row at midpt 5-8, 3-13

REACTIONS

(size) 8=0-5-8, 13=0-5-8
Max Horiz 13=76 (LC 20)
Max Uplift 8=100 (LC 17), 13=100 (LC 16)
Max Grav 8=1179 (LC 3), 13=1179 (LC 3)

FORCES

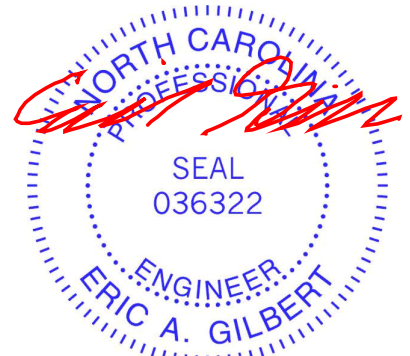
(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/27, 2-3=-761/151, 3-4=-1670/215, 4-5=-1670/215, 5-6=-761/151, 6-7=0/27, 6-8=-538/123, 2-13=-538/123
BOT CHORD 12-13=-148/1546, 9-12=-21/1067, 8-9=-95/1546
WEBS 3-12=-336/154, 4-12=-93/682, 4-9=-93/682, 5-9=-336/154, 5-8=-1070/66, 3-13=-1070/66

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 13-1-0, Exterior(2R) 13-1-0 to 16-1-0, Interior (1) 16-1-0 to 27-0-8 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=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 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 7.7 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.
- The Fabrication Tolerance at joint 6 = 12%, joint 2 = 12%, joint 6 = 12%, joint 2 = 12%
- 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 100 lb uplift at joint 8 and 100 lb uplift at joint 13.

LOAD CASE(S) Standard



July 24, 2025

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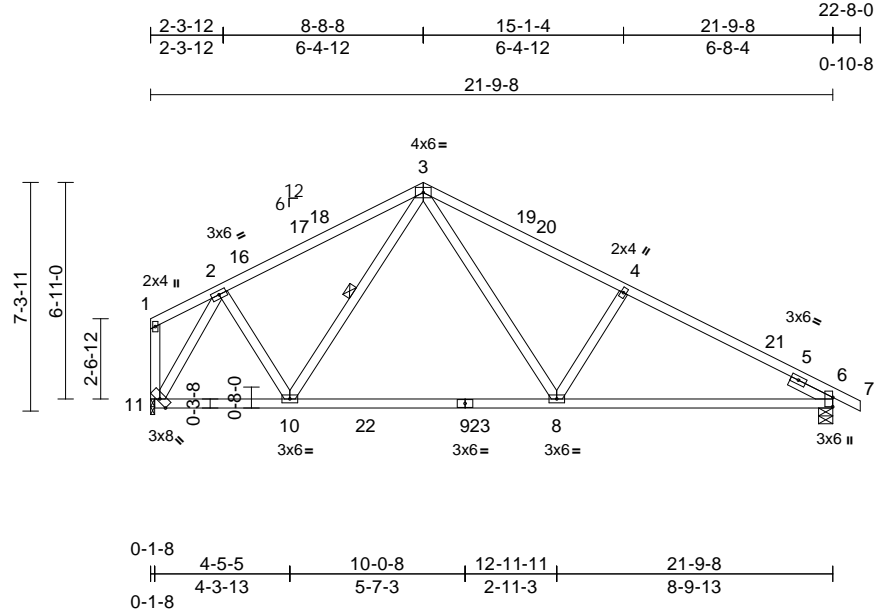
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1059 Serenity	I75125695
P04249-28231	G03	Common	2	1	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Wed Jul 23 14:18:40
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Page: 1



Scale = 1:73.6

Plate Offsets (X, Y): [6:0-3-9,0-0-1]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.51	Vert(LL)	-0.19	8-10	>999	240	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.82	Vert(CT)	-0.31	8-10	>851	180	
TCDL	10.0	Rep Stress Incr	YES	WB	0.33	Horz(CT)	0.02	6	n/a	n/a	
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS							
BCDL	10.0										
Weight: 117 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 4-7-5 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

WEBS 1 Row at midpt 3-10

REACTIONS (size) 6=0-5-8, 11=0-1-8
Max Horiz 11=-118 (LC 14)
Max Uplift 6=-92 (LC 17), 11=-59 (LC 16)
Max Grav 6=986 (LC 3), 11=952 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-35/80, 2-3=-877/173, 3-4=-1286/215, 4-6=-1432/190, 6-7=0/23, 1-11=-28/45
BOT CHORD 10-11=-48/582, 8-10=0/724, 6-8=-88/1234
WEBS 3-8=-93/710, 4-8=-369/151, 3-10=-104/86, 2-10=0/369, 2-11=-1097/167

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 4-6-4 to 7-6-4, Interior (1) 7-6-4 to 13-1-0, Exterior(2R) 13-1-0 to 16-1-0, Interior (1) 16-1-0 to 27-0-8 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=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 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 7.7 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.
- Bearing at joint(s) 11 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate at joint(s) 11.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 92 lb uplift at joint 6 and 59 lb uplift at joint 11.

LOAD CASE(S) Standard



July 24,2025

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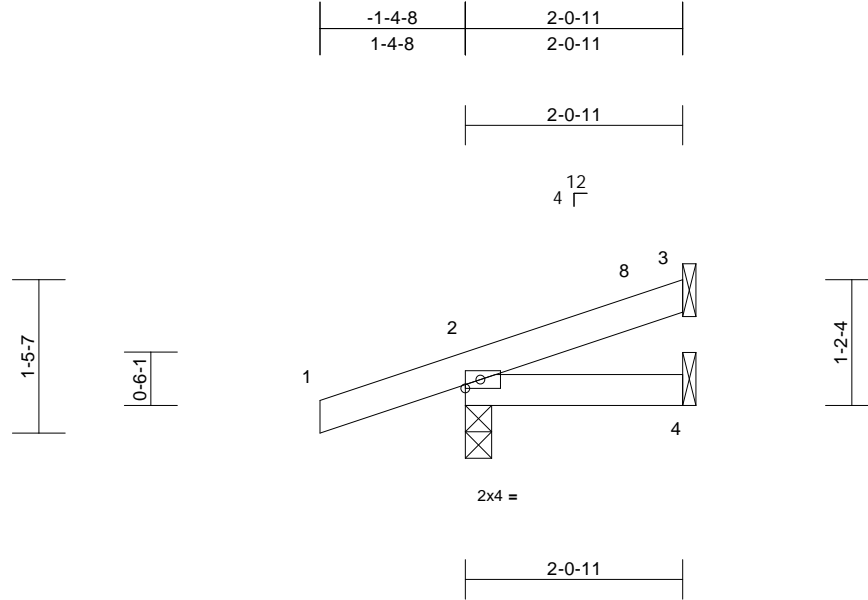
Job	Truss	Truss Type	Qty	Ply	1059 Serenity	I75125696
P04249-28231	J01	Jack-Open	2	1	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Wed Jul 23 14:18:40

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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	0.13	Vert(LL)	0.00	4-7	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	0.00	4-7	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP							Weight: 9 lb	FT = 20%
BCDL	10.0											

LUMBER

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

BRACING

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

REACTIONS

(size) 2=0-3-0, 3= Mechanical, 4= Mechanical
Max Horiz 2=37 (LC 12)
Max Uplift 2=-68 (LC 12), 3=-13 (LC 16), 4=-8 (LC 13)
Max Grav 2=191 (LC 2), 3=39 (LC 2), 4=32 (LC 7)

FORCES

(lb) - Maximum Compression/Maximum Tension

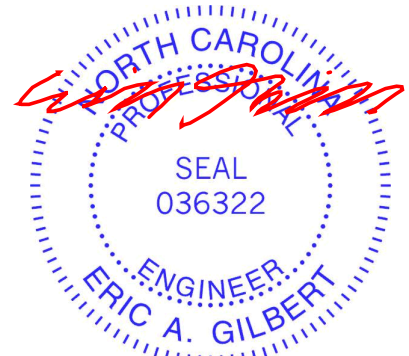
TOP CHORD 1-2=0/26, 2-3=-76/96
BOT CHORD 2-4=-49/20

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-4-8 to 1-7-8, Interior (1) 1-7-8 to 1-11-15 zone; cantilever left and right exposed; end vertical left and right exposed; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.

- 5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 8) Refer to girder(s) for truss to truss connections.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 13 lb uplift at joint 3, 68 lb uplift at joint 2 and 8 lb uplift at joint 4.

LOAD CASE(S) Standard



July 24, 2025

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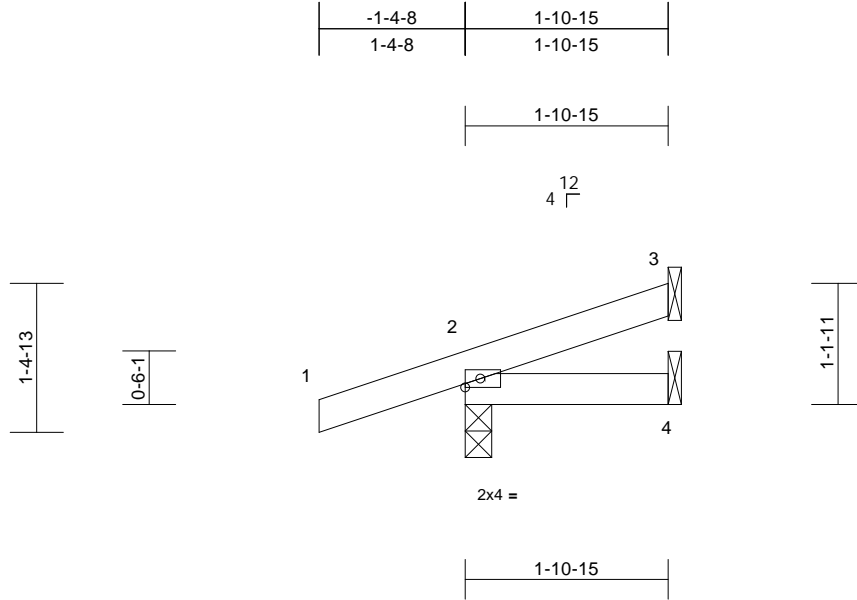
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1059 Serenity	I75125697
P04249-28231	J02	Jack-Open	2	1	Job Reference (optional)	

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

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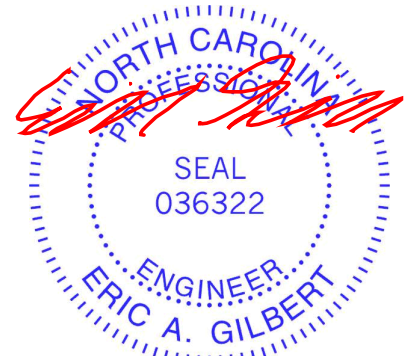


Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.13	Vert(LL)	0.00	4-7	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	0.00	4-7	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 8 lb	FT = 20%

LUMBER	
TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
BRACING	
TOP CHORD	Structural wood sheathing directly applied or 1-10-15 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
REACTIONS	(size) 2=0-3-0, 3= Mechanical, 4= Mechanical
	Max Horiz 2=36 (LC 12)
	Max Uplift 2=-68 (LC 12), 3=-12 (LC 16), 4=-7 (LC 13)
	Max Grav 2=188 (LC 2), 3=36 (LC 2), 4=30 (LC 7)
FORCES	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=0/26, 2-3=-76/96
BOT CHORD	2-4=-50/19

- NOTES**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
 - 3) Unbalanced snow loads have been considered for this design.
 - 4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.

- 5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
 - 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - 7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
 - 8) Refer to girder(s) for truss to truss connections.
 - 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 68 lb uplift at joint 2, 7 lb uplift at joint 4 and 12 lb uplift at joint 3.
- LOAD CASE(S)** Standard



July 24,2025

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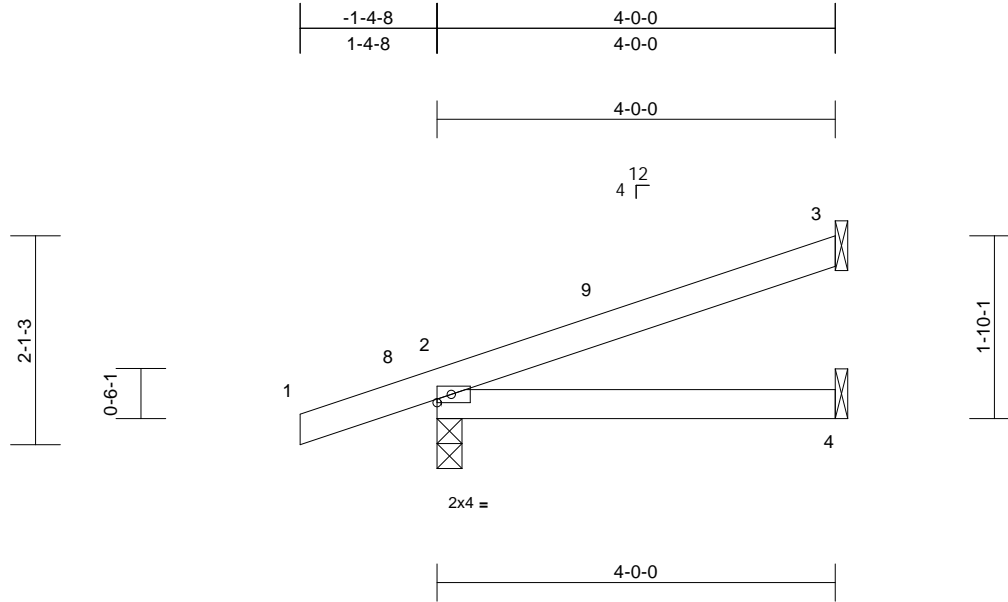
Job	Truss	Truss Type	Qty	Ply	1059 Serenity	I75125698
P04249-28231	J03	Jack-Open	3	1	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Wed Jul 23 14:18:40

Page: 1

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Scale = 1:23.1

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)	0.02	4-7	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.15	Vert(CT)	-0.02	4-7	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0											
											Weight: 15 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2

BOT CHORD 2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-0-0 oc purlins.

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-0, 3= Mechanical, 4= Mechanical
Max Horiz 2=55 (LC 12)
Max Uplift 2=-82 (LC 12), 3=-33 (LC 12), 4=-17 (LC 12)
Max Grav 2=254 (LC 2), 3=99 (LC 2), 4=71 (LC 7)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/26, 2-3=-82/108

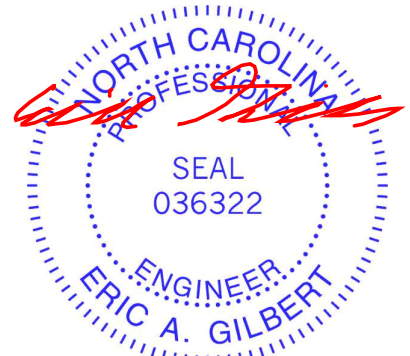
BOT CHORD 2-4=-67/50

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-4-8 to 1-7-8, Interior (1) 1-7-8 to 3-11-4 zone; cantilever left and right exposed ; end vertical left and right exposed; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.

- 5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 8) Refer to girder(s) for truss to truss connections.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 33 lb uplift at joint 3, 82 lb uplift at joint 2 and 17 lb uplift at joint 4.

LOAD CASE(S) Standard



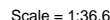
July 24,2025

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Page: 1

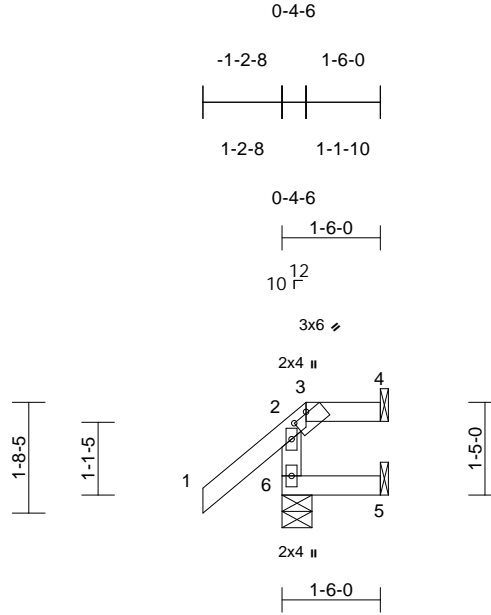
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1059 Serenity	I75125700
P04249-28231	J05	Jack-Open	1	1	Job Reference (optional)	

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

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Scale = 1:35.2

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.16	Vert(LL)	0.00	5-6	>999	240	MT20	244/190
Snow (Pf/Pg)	12.7/10.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	0.00	5-6	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MR								
BCDL	10.0											
											Weight: 8 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 1-6-0 oc purlins, except end verticals, and 2-0-0 oc purlins: 3-4.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 4= Mechanical, 5= Mechanical, 6=0-5-8
Max Horiz 6=30 (LC 13)
Max Uplift 4=22 (LC 42), 5=4 (LC 13), 6=-18 (LC 16)
Max Grav 4=33 (LC 37), 5=22 (LC 7), 6=186 (LC 38)

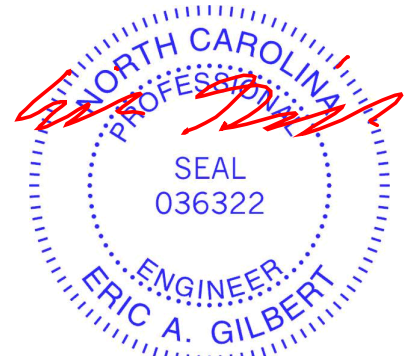
FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-6=-159/136, 1-2=0/62, 2-3=-45/34, 3-4=0/0
BOT CHORD 5-6=0/0

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-2-8 to 1-5-14 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=10.0 psf; Pf=12.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0

- 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 7.7 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 18 lb uplift at joint 6, 22 lb uplift at joint 4 and 4 lb uplift at joint 5.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



July 24, 2025

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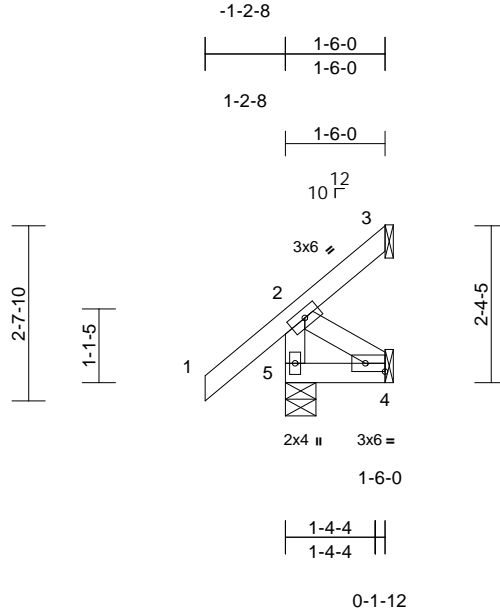
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1059 Serenity	I75125701
P04249-28231	J06	Jack-Open	1	1	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Wed Jul 23 14:18:41
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Page: 1



Scale = 1:34.7

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.16	Vert(LL)	0.00	4-5	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	0.00	4-5	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0											
											Weight: 11 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-5-8
Max Horiz 5=47 (LC 14)
Max Uplift 3=-28 (LC 32), 4=-31 (LC 14)
Max Grav 3=11 (LC 10), 4=28 (LC 12), 5=176 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

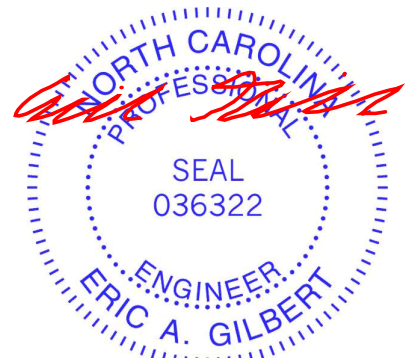
TOP CHORD 2-5=-163/71, 1-2=0/52, 2-3=-52/29
BOT CHORD 4-5=-130/36
WEBS 2-4=-43/156

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.

- 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 31 lb uplift at joint 4 and 28 lb uplift at joint 3.

LOAD CASE(S) Standard



July 24, 2025

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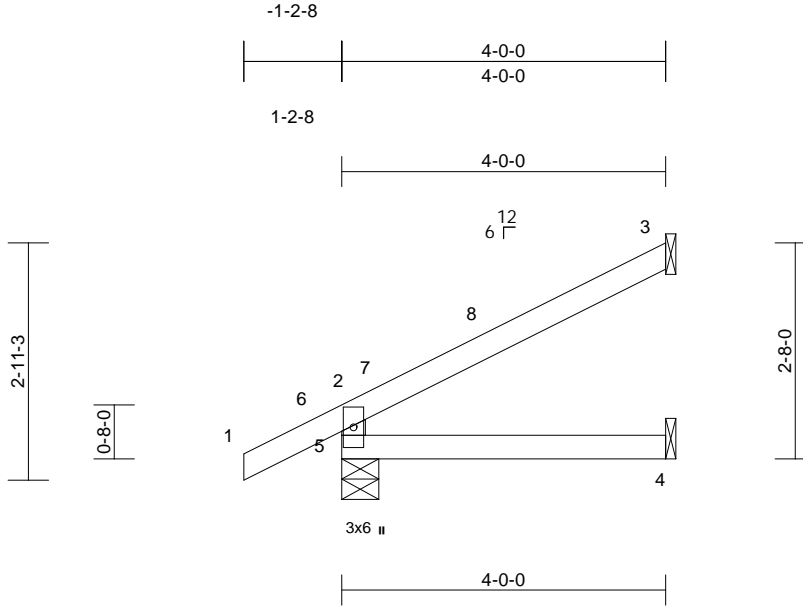
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1059 Serenity	I75125702
P04249-28231	J07	Jack-Open	10	1	Job Reference (optional)	

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

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Page: 1



Scale = 1:28.4

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	0.20	Vert(LL)	-0.01	4-5	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.15	Vert(CT)	-0.02	4-5	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.01	3	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MR								
BCDL	10.0											
											Weight: 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.
BOT CHORD Rigid ceiling directly applied or 10'-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical,
5=0-5-8
Max Horiz 5=67 (LC 16)
Max Uplift 3=40 (LC 16), 5=20 (LC 16)
Max Grav 3=97 (LC 2), 4=70 (LC 7), 5=247 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 2-5=-212/119, 1-2=0/36, 2-3=-62/33
BOT CHORD 4-5=0/0

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -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
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 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 7.7 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 5 and 40 lb uplift at joint 3.

LOAD CASE(S) Standard



July 24, 2025

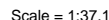
WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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.sbcacompnents.com)

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84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Wed Jul 23 14:18:41 Page: 1
ID:Hpw5JUNL3lAaavceG2iYTvwXlD-RfC?PsB70Ha3NSaPanL8w3ulTXbGKWRcDoi7J4zJC?f



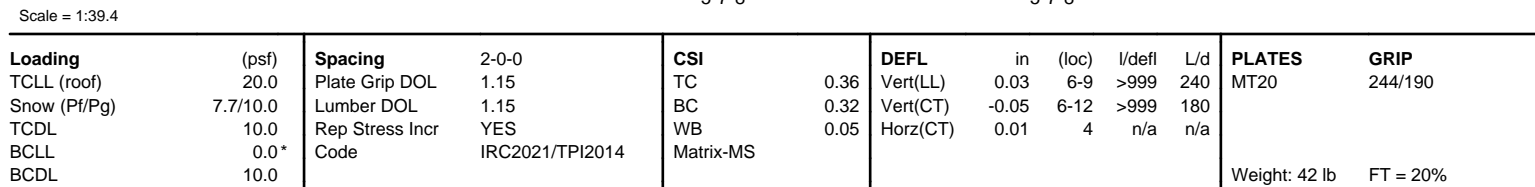
July 24, 2025

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84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Wed Jul 23 14:18:42 Page: 1
ID:XRfUAFKdQkOQ?9VhD89LkTwXhD-RfC?PsB70Hg3NSaPanL8w3uITXbGKWRCDoi7J4zJC?f



- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
- 6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 9) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 4.
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 161 lb uplift at joint 2 and 161 lb uplift at joint 4.

LOAD CASE(S) Standard

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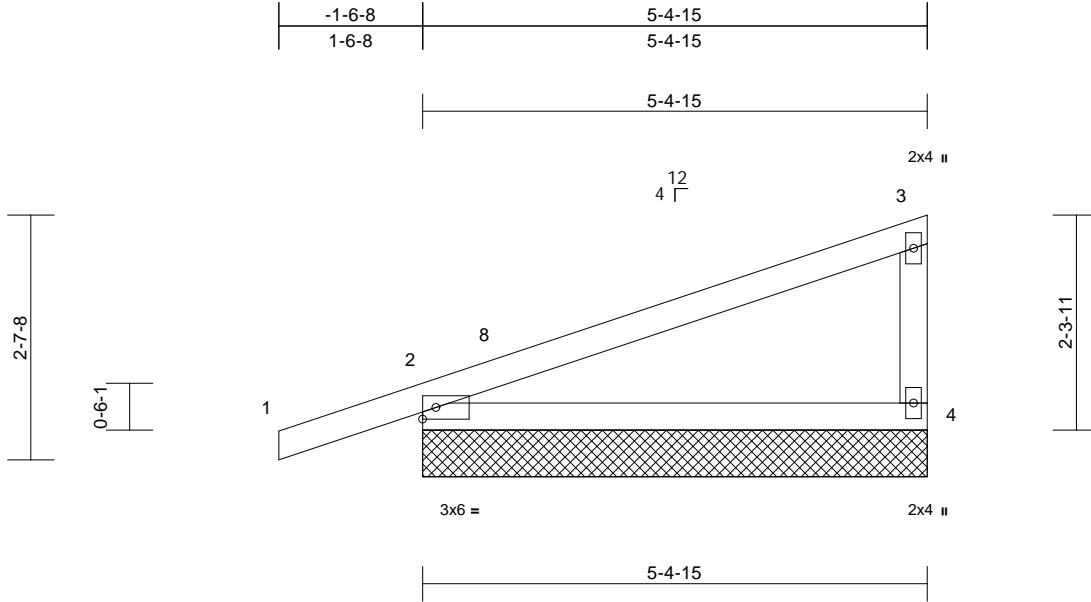
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1059 Serenity	175125705
P04249-28231	P03E	Monopitch Supported Gable	2	1	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Wed Jul 23 14:18:42
ID: AySQk2BhVR9kmXa4lnU1nVzw3bv-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

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	0.49	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.38	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.01	2	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 22 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD Structural wood sheathing directly applied or 5'-4-15 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10'-0-0 oc bracing.

REACTIONS (size)

2=5-4-15, 4=5-4-15
Max Horiz 2=67 (LC 15)
Max Uplift 2=-72 (LC 12), 4=-36 (LC 16)
Max Grav 2=336 (LC 2), 4=235 (LC 2)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 3-4=-139/156, 1-2=0/29, 2-3=-271/132
BOT CHORD 2-4=-111/95

NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -1-6-8 to 1-5-8, Exterior(2N) 1-5-8 to 5-3-3 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 5) Unbalanced snow loads have been considered for this design.

- 6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
- 7) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
- 8) Gable requires continuous bottom chord bearing.
- 9) Gable studs spaced at 1'-4-0 oc.
- 10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 11) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3'-06-00 tall by 2'-00-00 wide will fit between the bottom chord and any other members.
- 12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 72 lb uplift at joint 2, 36 lb uplift at joint 4 and 72 lb uplift at joint 2.
- 13) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard

- 1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-35
Trapezoidal Loads (lb/ft)
Vert: 5=-20-to-7=-21 (F=-1), 7=-21 (F=-1)-to-4=-35 (F=-15)



July 24, 2025

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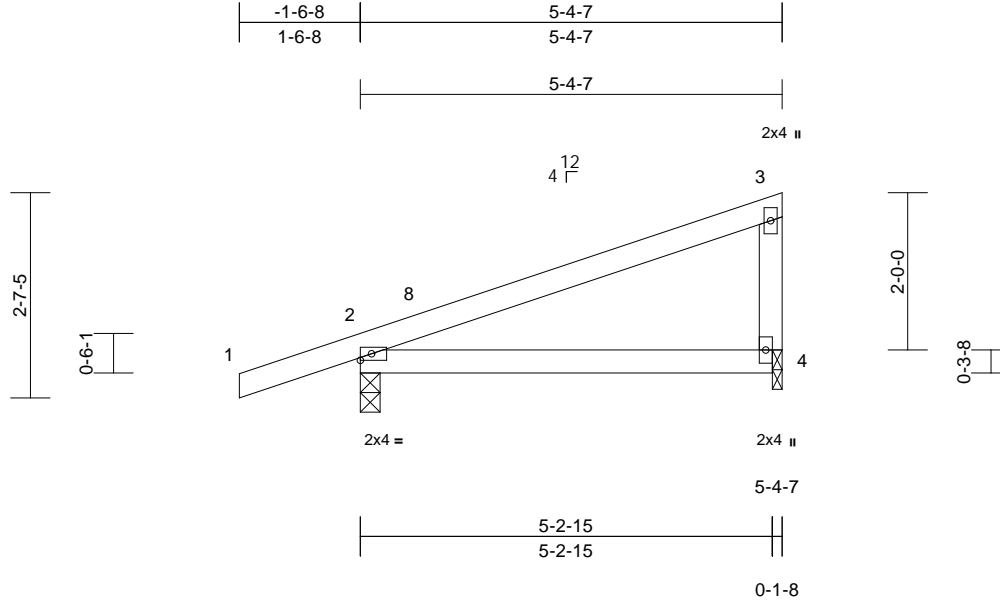
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1059 Serenity	I75125706
P04249-28231	P04	Monopitch	6	1	Job Reference (optional)	

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

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Page: 1



Scale = 1:29.3

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.39	Vert(LL)	0.05	4-7	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.28	Vert(CT)	-0.07	4-7	>886	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.01	2	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0											
											Weight: 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 5-4-7 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(size)	2=0-3-0, 4=0-1-8
Max Horiz	2=67 (LC 15)
Max Uplift	2=-105 (LC 12), 4=-62 (LC 12)
Max Grav	2=315 (LC 2), 4=195 (LC 2)

FORCES

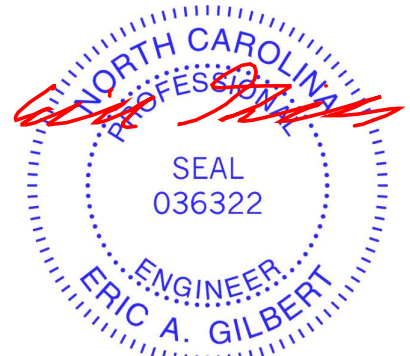
(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/29, 2-3=-124/153, 3-4=-134/108
BOT CHORD	2-4=-76/101

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-6-8 to 1-5-8, Interior (1) 1-5-8 to 5-2-11 zone; cantilever left and right exposed; end vertical left and right exposed; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 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 7.7 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) 2, 4.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 105 lb uplift at joint 2 and 62 lb uplift at joint 4.

LOAD CASE(S) Standard



July 24, 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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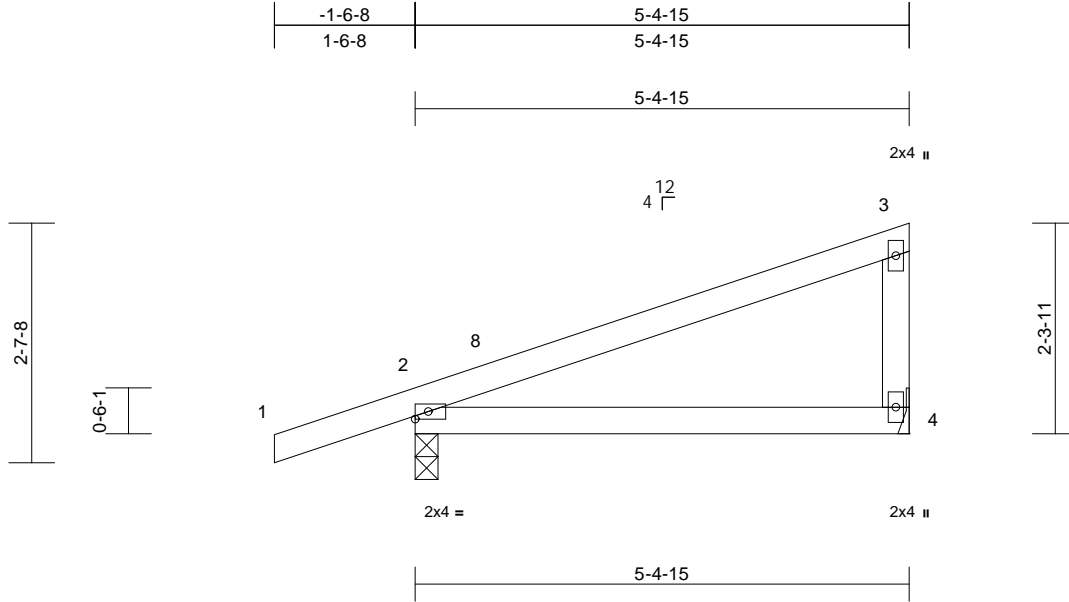
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1059 Serenity	I75125707
P04249-28231	P05	Monopitch	4	1	Job Reference (optional)	

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Wed Jul 23 14:18:42
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Page: 1



Scale = 1:25.2

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	0.40	Vert(LL)	0.05	4-7	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.29	Vert(CT)	-0.07	4-7	>864	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.01	2	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0											
											Weight: 22 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD Structural wood sheathing directly applied or 5'-4-15 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10'-0-0 oc bracing.

REACTIONS

(size) 2=0-3-0, 4= Mechanical
Max Horiz 2=67 (LC 15)
Max Uplift 2=-106 (LC 12), 4=-63 (LC 12)
Max Grav 2=317 (LC 2), 4=197 (LC 2)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/29, 2-3=-124/153, 3-4=-136/109
BOT CHORD 2-4=-78/102

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-6-8 to 1-5-8, Interior (1) 1-5-8 to 5-3-3 zone; cantilever left and right exposed; end vertical left and right exposed; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 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 7.7 psf on overhangs non-concurrent with other live loads.

- Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3'-06-00 tall by 2'-00-00 wide will fit between the bottom chord and any other members.
 - Refer to girder(s) for truss to truss connections.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 63 lb uplift at joint 4 and 106 lb uplift at joint 2.
- LOAD CASE(S)** Standard



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Symbols

PLATE LOCATION AND ORIENTATION



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

PLATE SIZE

4 X 4

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

LATERAL BRACING LOCATION



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

BEARING

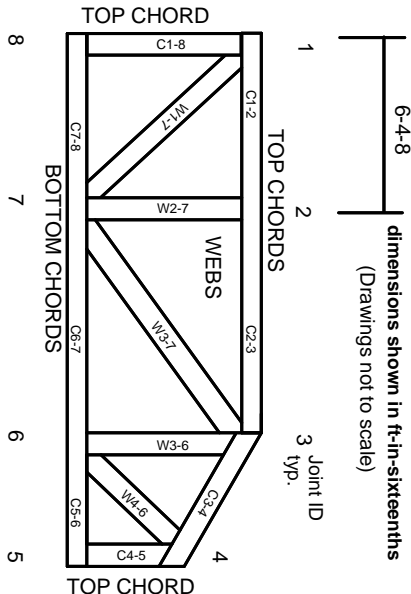


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

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

Numbering System



JOINTS ARE GENERALLY NUMBERED/LETTERED CLOCKWISE AROUND THE TRUSS STARTING AT THE JOINT FARTHEST TO THE LEFT.

CHORDS AND WEBS ARE IDENTIFIED BY END JOINT NUMBERS/LETTERS.

Product Code Approvals

ICC-ES Reports:
ESR-1988, ESR-2362, ESR-2685, ESR-3282
ESR-4722, ESL-1388

Design General Notes

Trusses are designed for wind loads in the plane of the truss unless otherwise shown.
Lumber design values are in accordance with ANSI/TP1 section 6.3. These truss designs rely on lumber values established by others.

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General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TP1 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TP1 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TP1 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.

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