

Trenco  
818 Soundside Rd  
Edenton, NC 27932

Re: 34369-34369A  
59 SERENITY - ROOF

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by 84 Components - #2383.

Pages or sheets covered by this seal: I55168869 thru I55168910

My license renewal date for the state of North Carolina is December 31, 2022.

North Carolina COA: C-0844



November 9, 2022

Gilbert, Eric

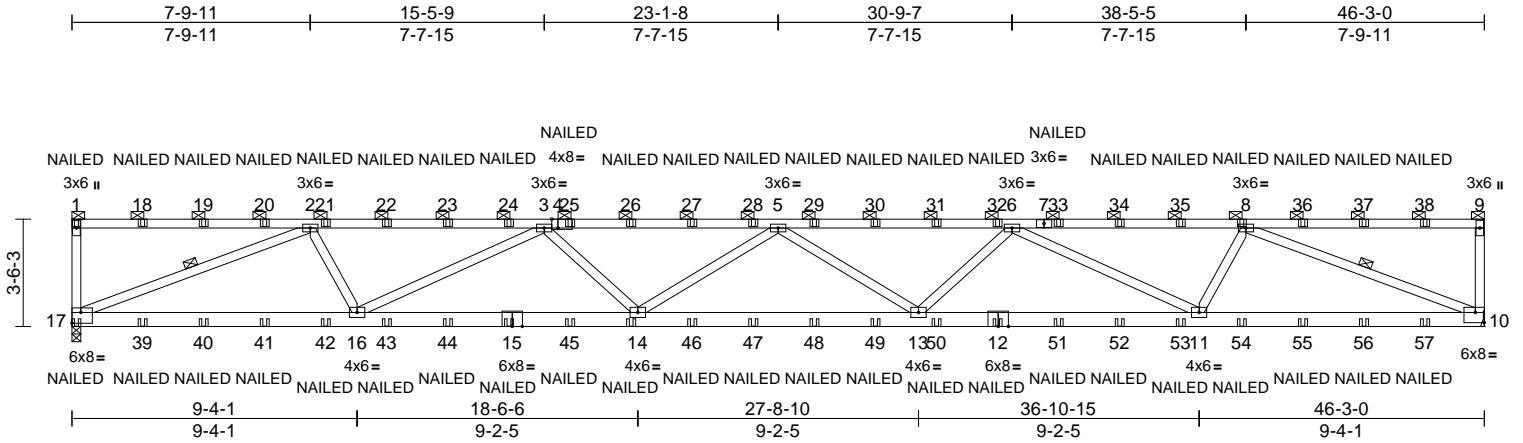
**IMPORTANT NOTE:** The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), 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 34369-34369A	Truss A1	Truss Type Flat Girder	Qty 1	Ply 2	59 SERENITY - ROOF Job Reference (optional)	155168869
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84 Components (Dunn), Dunn, NC - 28334,

Run: 8.88 S 8.62 Oct 26 2022 Print: 8.620 S Oct 26 2022 MiTek Industries, Inc. Tue Nov 08 16:35:14  
ID: BcYS9Ymek5znBnEtGkONdYLcVl-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKwRCDoi7J4zJC?f

Page: 1



Scale = 1:75.5

Plate Offsets (X, Y): [4:0-2-7,Edge], [10:Edge,0-4-0], [17:Edge,0-4-4]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.76	Vert(LL)	0.77	13-14	>717	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.95	Vert(CT)	-0.83	13-14	>664	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.72	Horz(CT)	0.14	10	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 533 lb	FT = 20%

**LUMBER**

TOP CHORD 2x4 SP DSS \*Except\* 7-9:2x4 SP No.2  
 BOT CHORD 2x6 SP DSS \*Except\* 17-15:2x6 SP No.2  
 WEBS 2x4 SP No.3 \*Except\*  
 2-17,3-16,6-11,8-10:2x4 SP No.2

**BRACING**

TOP CHORD 2-0-0 oc purlins (4-4-9 max.): 1-9, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 6-10-12 oc bracing.  
 WEBS 1 Row at midpt 2-17, 8-10

**REACTIONS**

(size) 10= Mechanical, 17=0-3-8  
 Max Uplift 10=-1579 (LC 12), 17=-1656 (LC 12)  
 Max Grav 10=2526 (LC 1), 17=2610 (LC 1)

**FORCES**

(lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-17=-317/300, 1-2=-90/58, 2-3=-6016/3773, 3-5=-8914/5609, 5-6=-8922/5616, 6-8=-6007/3767, 8-9=-95/66, 9-10=-260/230, 16-17=-3406/5292, 14-16=-5366/8338, 13-14=-6039/9366, 11-13=-5371/8342, 10-11=-3402/5285  
 BOT CHORD 2-16=-838/1651, 2-17=-5622/3618, 3-16=-2609/1790, 3-14=-348/862, 5-14=-548/520, 5-13=-539/512, 6-13=-352/865, 6-11=-2624/1802, 8-11=-833/1646, 8-10=-5609/3605

**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.
- Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Provide adequate drainage to prevent water ponding.
- All plates are 3x6 MT20 unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 1-00-00 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 1656 lb uplift at joint 17 and 1579 lb uplift at joint 10.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidelines.

**LOAD CASE(S)** Standard

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
 Uniform Loads (lb/ft)  
 Vert: 1-9=-60, 10-17=-20  
 Concentrated Loads (lb)  
 Vert: 17=-31 (B), 1=-64 (B), 15=-23 (B), 12=-23 (B), 14=-23 (B), 8=-39 (B), 18=-39 (B), 19=-39 (B), 20=-39 (B), 21=-39 (B), 22=-39 (B), 23=-39 (B), 24=-39 (B), 25=-39 (B), 26=-39 (B), 27=-39 (B), 28=-39 (B), 29=-39 (B), 30=-39 (B), 31=-39 (B), 32=-39 (B), 33=-39 (B), 34=-39 (B), 35=-39 (B), 36=-39 (B), 37=-39 (B), 38=-39 (B), 39=-23 (B), 40=-23 (B), 41=-23 (B), 42=-23 (B), 43=-23 (B), 44=-23 (B), 45=-23 (B), 46=-23 (B), 47=-23 (B), 48=-23 (B), 49=-23 (B), 50=-23 (B), 51=-23 (B), 52=-23 (B), 53=-23 (B), 54=-23 (B), 55=-23 (B), 56=-23 (B), 57=-23 (B)



November 9, 2022

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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 ANSITPI Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



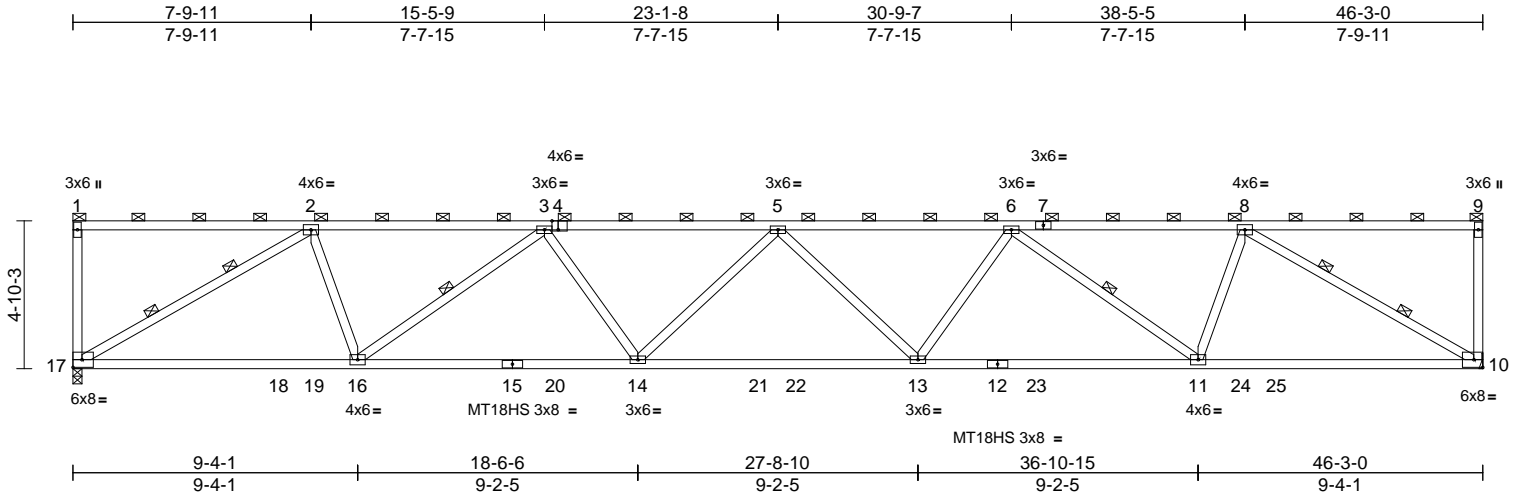
818 Soundside Road  
 Edenton, NC 27932

Job 34369-34369A	Truss A2	Truss Type Flat	Qty 1	Ply 1	59 SERENITY - ROOF Job Reference (optional)	155168870
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84 Components (Dunn), Dunn, NC - 28334,

Run: 8.88 S 8.62 Oct 26 2022 Print: 8.620 S Oct 26 2022 MiTek Industries, Inc. Tue Nov 08 16:35:17  
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Page: 1



Scale = 1:75.6

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in (loc)	l/defl	L/d	PLATES	GRIP		
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.86	Vert(LL)	0.49	13-14	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.95	Vert(CT)	-0.84	13-14	>654	180	MT18HS	244/190
TCDL	10.0	Rep Stress Incr	YES	WB	0.88	Horz(CT)	0.24	10	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0											
										Weight: 246 lb	FT = 20%	

**LUMBER**

TOP CHORD 2x4 SP DSS \*Except\* 7-9:2x4 SP No.2  
 BOT CHORD 2x4 SP No.1  
 WEBS 2x4 SP No.3 \*Except\*  
 2-17,3-16,5-14,5-13,6-11,8-10:2x4 SP No.2

**BRACING**

TOP CHORD 2-0-0 oc purlins (2-2-0 max.): 1-9, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.  
 WEBS 1 Row at midpt 3-16, 6-11  
 WEBS 2 Rows at 1/3 pts 2-17, 8-10

**REACTIONS**

(size) 10= Mechanical, 17=0-3-8  
 Max Uplift 10=631 (LC 12), 17=631 (LC 12)  
 Max Grav 10=1838 (LC 1), 17=1838 (LC 1)

**FORCES**

(lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-17=-200/133, 1-2=-36/8, 2-3=-3007/1047, 3-5=-4444/1555, 5-6=-4446/1556, 6-8=-3007/1047, 8-9=-39/10, 9-10=-201/134  
 BOT CHORD 16-17=-970/2651, 14-16=-1522/4166, 13-14=-1714/4678, 11-13=-1524/4169, 10-11=-969/2651  
 WEBS 2-16=-244/1115, 2-17=-3042/1118, 3-16=-1445/592, 3-14=-60/528, 5-14=-330/224, 5-13=-327/222, 6-13=-59/528, 6-11=-1448/594, 8-11=-245/1117, 8-10=-3039/1115

**NOTES**

1) Wind: ASCE 7-10; Vult=150mph (3-second gust)  
 Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft;  
 Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.
- All plates are 3x6 MT20 unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 1-00-00 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 631 lb uplift at joint 17 and 631 lb uplift at joint 10.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



November 9, 2022

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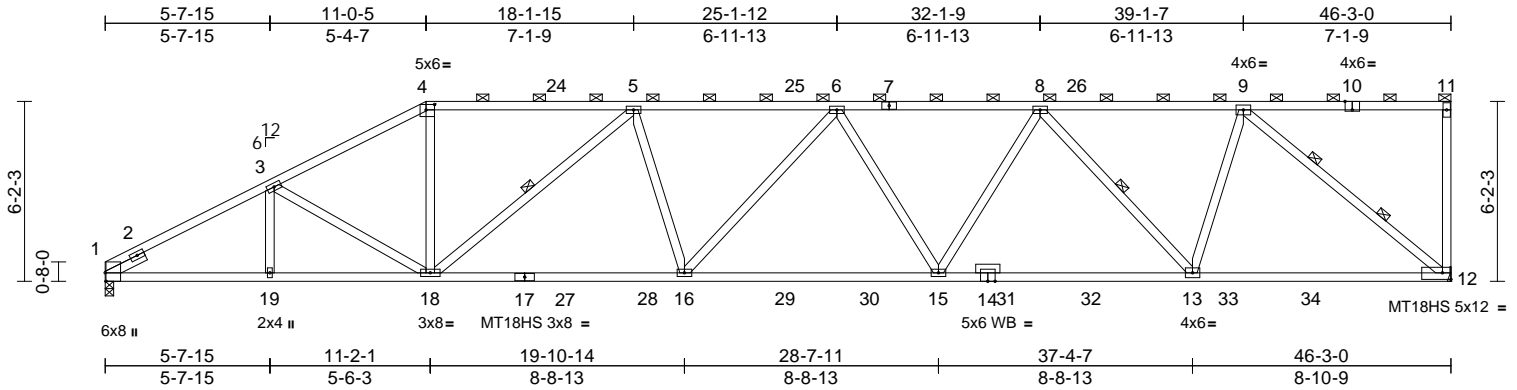
818 Soundside Road  
 Edenton, NC 27932

Job 34369-34369A	Truss A3	Truss Type Flat	Qty 1	Ply 1	59 SERENITY - ROOF Job Reference (optional)	I55168871
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84 Components (Dunn), Dunn, NC - 28334,

Run: 8.88 S 8.62 Oct 26 2022 Print: 8.620 S Oct 26 2022 MiTek Industries, Inc. Tue Nov 08 16:35:17  
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Page: 1



Scale = 1:79.2

Plate Offsets (X, Y): [1:0-3-8,Edge], [4:0-3-8,0-2-4], [10:0-3-0,Edge], [12: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	0.80	Vert(LL)	-0.39	15-16	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.99	Vert(CT)	-0.70	15-16	>789	180	MT18HS	244/190
TCDL	10.0	Rep Stress Incr	YES	WB	0.97	Horz(CT)	0.23	12	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 259 lb	FT = 20%

**LUMBER**

TOP CHORD 2x4 SP DSS \*Except\* 10-11:2x4 SP No.2  
 BOT CHORD 2x4 SP No.1 \*Except\* 1-17:2x4 SP DSS  
 WEBS 2x4 SP No.3 \*Except\*  
 5-18,6-16,6-15,8-15,8-13,9-12:2x4 SP No.2  
 OTHERS 2x4 SP No.3  
 SLIDER Left 2x4 SP No.3 -- 1-6-0

**BRACING**

TOP CHORD Structural wood sheathing directly applied or  
 2-8-13 oc purlins, except end verticals, and  
 2-0-0 oc purlins (2-9-1 max.): 4-11.  
 BOT CHORD Rigid ceiling directly applied or 2-2-0 oc  
 bracing.  
 WEBS 1 Row at midpt 5-18, 8-13  
 WEBS 2 Rows at 1/3 pts 9-12

**REACTIONS**

(size) 1=0-3-8, 12= Mechanical  
 Max Horiz 1=285 (LC 16)  
 Max Uplift 1=-427 (LC 13), 12=-618 (LC 13)  
 Max Grav 1=1972 (LC 34), 12=2458 (LC 34)

**FORCES**

(lb) - Maximum Compression/Maximum  
 Tension  
 TOP CHORD 1-3=-3619/1225, 3-4=-3594/1168,  
 4-5=-3233/1112, 5-6=-4466/1373,  
 6-8=-4228/1269, 8-9=-2880/819, 9-11=-30/5,  
 11-12=-297/119  
 BOT CHORD 1-19=-1301/3163, 18-19=-1301/3163,  
 16-18=-1393/4406, 15-16=-1411/4494,  
 13-15=-1187/3859, 12-13=-730/2499  
 WEBS 3-19=-47/102, 3-18=-528/254,  
 4-18=-268/1156, 5-16=0/359,  
 5-18=-1534/465, 6-16=-141/158,  
 6-15=-521/277, 8-15=-160/735,  
 8-13=-1473/555, 9-13=-310/1377,  
 9-12=-3230/949

**NOTES**

- 1) Wind: ASCE 7-10; Vult=150mph (3-second gust)  
 Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft;  
 Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior  
 zone and C-C Exterior (2) zone;C-C for members and  
 forces & MWFRS for reactions shown; Lumber  
 DOL=1.60 plate grip DOL=1.60
- 2) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber  
 DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (flat roof snow:  
 Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B;  
 Partially Exp.; Ct=1.10
- 3) Unbalanced snow loads have been considered for this  
 design.
- 4) Provide adequate drainage to prevent water ponding.
- 5) All plates are MT20 plates unless otherwise indicated.
- 6) All plates are 3x6 MT20 unless otherwise indicated.
- 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 1-00-00 wide will fit between the bottom  
 chord and any other members, with BCDL = 10.0psf.
- 9) Refer to girder(s) for truss to truss connections.
- 10) Provide mechanical connection (by others) of truss to  
 bearing plate capable of withstanding 427 lb uplift at  
 joint 1 and 618 lb uplift at joint 12.
- 11) This truss is designed in accordance with the 2015  
 International Residential Code sections R502.11.1 and  
 R802.10.2 and referenced standard ANSI/TPI 1.
- 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



November 9, 2022

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**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



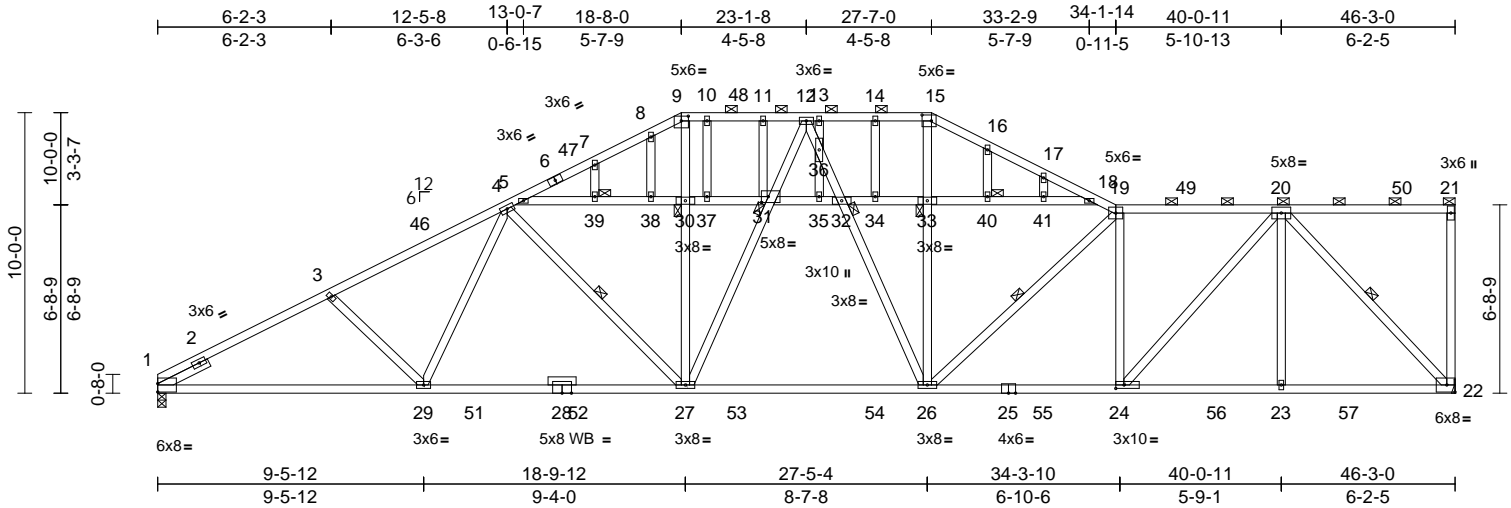
818 Soundside Road  
 Edenton, NC 27932

Job 34369-34369A	Truss A4	Truss Type Roof Special Structural Gable	Qty 1	Ply 1	59 SERENITY - ROOF Job Reference (optional)	155168872
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84 Components (Dunn), Dunn, NC - 28334,

Run: 8.62 E Oct 13 2022 Print: 8.620 E Oct 13 2022 MiTek Industries, Inc. Wed Nov 09 14:29:42  
ID:D6M7wMM601VrTqeSsslbe7yLCXI-fsb17vXXZYNPgDg7WESfNo\_Y4N0xdHcy73MyL3aP

Page: 1



Scale = 1:82.1

Plate Offsets (X, Y): [1:Edge,0-3-9], [9:0-3-0,0-2-0], [15:0-4-0,0-2-8], [24:0-3-8,0-1-8], [31:0-3-0,0-2-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in (loc)	l/defl	L/d	PLATES	GRIP		
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.98	Vert(LL)	-0.34	27-29	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.97	Vert(CT)	-0.60	27-29	>929	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.95	Horz(CT)	0.16	22	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 355 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.2 \*Except\* 1-6:2x4 SP DSS  
BOT CHORD 2x4 SP No.1 \*Except\* 1-28:2x4 SP DSS  
WEBS 2x4 SP No.2 \*Except\*  
3-29,5-30,30-31,31-32,32-33,33-18:2x4 SP No.3  
OTHERS 2x4 SP No.3 \*Except\* 28-28:2x4 SP No.2  
SLIDER Left 2x4 SP No.3 -- 2-0-0

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 2-5-3 oc purlins, except end verticals, and 2-0-0 oc purlins (2-2-0 max.): 9-15, 19-21.  
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.  
WEBS 1 Row at midpt 19-26, 20-22, 4-27  
JOINTS 1 Brace at Jt(s): 21, 30, 31, 32, 33, 39, 40

**REACTIONS** (lb/size) 1=1844/0-3-8, 22=1844/Mechanical  
Max Horiz 1=385 (LC 16)  
Max Uplift 1=416 (LC 16), 22=450 (LC 17)  
Max Grav 1=2147 (LC 41), 22=2230 (LC 40)

**FORCES**  
TOP CHORD (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
1-2=-1587/273, 2-3=-3922/1315, 3-4=-3697/1238, 4-4=-3532/1256, 4-5=-2981/1134, 5-6=-1860/626, 6-47=-1824/637, 7-47=-1810/640, 7-8=-1802/664, 8-9=-1783/674, 9-10=-1636/661, 10-48=-1636/661, 11-48=-1636/661, 11-12=-1636/661, 12-13=-1750/652, 13-14=-1750/652, 14-15=-1750/652, 15-16=-1923/660, 16-17=-1931/633, 17-18=-1973/605, 18-19=-2870/1091, 19-49=-2813/1014, 20-49=-2813/1014, 21-22=-252/102

**BOT CHORD** 1-29=-1401/3425, 29-51=-1157/3028, 28-51=-1157/3028, 28-52=-1157/3028, 27-52=-1157/3028, 27-53=-1044/2717, 53-54=-1044/2717, 26-54=-1044/2717, 25-26=-1026/2834, 25-55=-1026/2834, 24-55=-1026/2834, 24-56=-614/1828, 23-56=-614/1828, 23-57=-614/1828, 22-57=-614/1828  
**WEBS** 27-30=-60/558, 9-30=-80/615, 26-33=-83/642, 15-33=-105/693, 19-26=-455/133, 19-24=-1153/517, 20-24=-600/1705, 20-23=0/293, 20-22=-2643/889, 3-29=-326/292, 4-29=-89/431, 4-27=-415/270, 27-31=-365/232, 12-31=-304/132, 32-36=-266/153, 26-32=-343/167, 5-39=-1251/560, 38-39=-1251/560, 30-38=-1251/560, 30-37=-1233/556, 31-37=-1236/558, 31-35=-1174/546, 32-35=-1171/545, 32-34=-1171/528, 33-34=-1171/528, 33-40=-1194/534, 40-41=-1194/534, 18-41=-1194/534

**NOTES**  
1) Unbalanced roof live loads have been considered for this design.  
2) Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; 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.

- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Provide adequate drainage to prevent water ponding.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 1-00-00 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 450 lb uplift at joint 22 and 416 lb uplift at joint 1.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



November 9, 2022

Continued on page 2

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**

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818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	59 SERENITY - ROOF	I55168872
34369-34369A	A4	Roof Special Structural Gable	1	1	Job Reference (optional)	

84 Components (Dunn), Dunn, NC - 28334,

Run: 8.62 E Oct 13 2022 Print: 8.620 E Oct 13 2022 MiTek Industries, Inc. Wed Nov 09 14:29:42  
 ID:D6M7wMM601VrTqeSsslbe7yLCXI-fsfb17vXXZYNPgDGb7WESfN0\_Y4N0xdtHcy73MyL3aP

Page: 2

14) 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

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**

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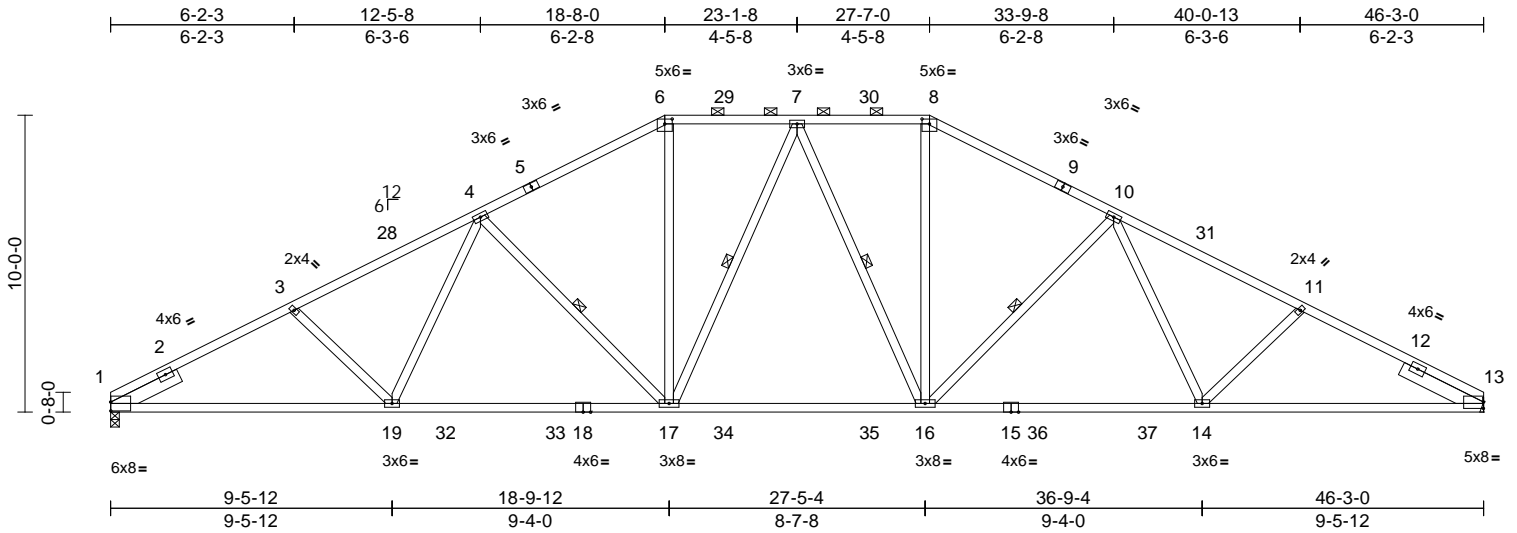
818 Soundside Road  
 Edenton, NC 27932

Job 34369-34369A	Truss A5	Truss Type Common	Qty 3	Ply 1	59 SERENITY - ROOF Job Reference (optional)	155168873
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84 Components (Dunn), Dunn, NC - 28334,

Run: 8.88 S 8.62 Oct 26 2022 Print: 8.620 S Oct 26 2022 MiTek Industries, Inc. Tue Nov 08 16:35:19  
ID:cHMr6Hg2D62MOPfUce7i\_?yLCN0-RIC?PsB70Hq3NSgPqnL8w3uITXbGKWRCoI7J4zJC?f

Page: 1



Scale = 1:77.6

Plate Offsets (X, Y): [1:0-0-1,0-3-9], [6:0-3-0,0-2-0], [8:0-3-0,0-2-0], [13:0-0-1,0-2-9]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.75	Vert(LL)	-0.40	17-19	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.96	Vert(CT)	-0.68	17-19	>812	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.51	Horz(CT)	0.21	13	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 277 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.1 \*Except\* 6-8:2x4 SP No.2, 1-5,9-13:2x4 SP DSS  
BOT CHORD 2x4 SP No.1  
WEBS 2x4 SP No.2 \*Except\* 3-19,11-14:2x4 SP No.3  
SLIDER Left 2x6 SP No.2 -- 2-6-0, Right 2x6 SP No.2 -- 3-0-0

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except 2-0-0 oc purlins (3-5-7 max.): 6-8.  
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.  
WEBS 1 Row at midpt 4-17, 10-16, 7-17, 7-16

**REACTIONS** (size) 1=0-3-8, 13= Mechanical  
Max Horiz 1=-208 (LC 17)  
Max Uplift 1=-429 (LC 16), 13=-429 (LC 17)  
Max Grav 1=2246 (LC 38), 13=2246 (LC 38)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-3=-4104/1381, 3-4=-3877/1329, 4-6=-3030/1167, 6-7=-2573/1110, 7-8=-2573/1110, 8-10=-3030/1167, 10-11=-3881/1330, 11-13=-4095/1381  
BOT CHORD 1-19=-1110/3589, 17-19=-887/3233, 16-17=-618/2595, 14-16=-887/3234, 13-14=-1110/3589  
WEBS 6-17=-307/967, 8-16=-307/966, 3-19=-280/268, 4-19=-79/428, 4-17=-971/451, 10-16=-972/451, 10-14=-81/430, 11-14=-277/268, 7-17=-326/196, 7-16=-327/196

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

- Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- 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 1-00-00 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 429 lb uplift at joint 1 and 429 lb uplift at joint 13.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard



November 9, 2022

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**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



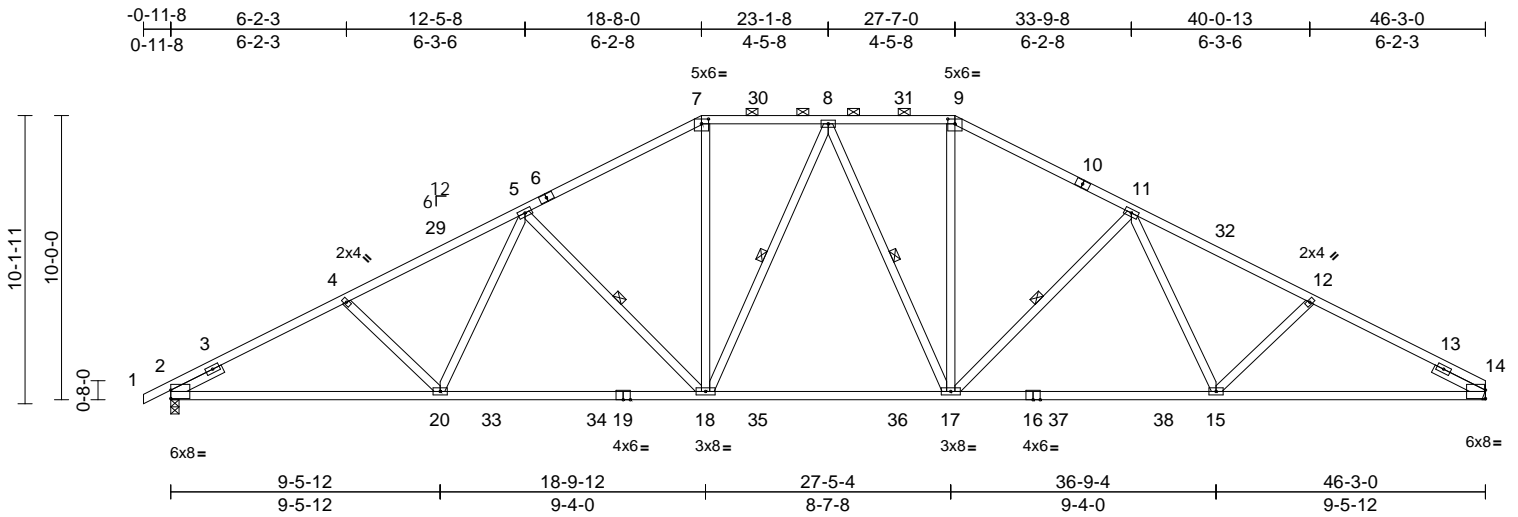
818 Soundside Road  
Edenton, NC 27932

Job 34369-34369A	Truss A6	Truss Type Common	Qty 2	Ply 1	59 SERENITY - ROOF Job Reference (optional)	I55168874
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84 Components (Dunn), Dunn, NC - 28334,

Run: 8.88 S 8.62 Oct 26 2022 Print: 8.620 S Oct 26 2022 MiTek Industries, Inc. Tue Nov 08 16:35:20  
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Page: 1



Scale = 1:81.1

Plate Offsets (X, Y): [2:Edge,0-3-9], [7:0-3-0,0-2-0], [9:0-3-0,0-2-0], [14:Edge,0-3-9]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.77	Vert(LL)	-0.40	18-20	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.98	Vert(CT)	-0.67	18-20	>826	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.51	Horz(CT)	0.20	14	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 271 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.1 \*Except\* 7-9:2x4 SP No.2, 6-1,10-14:2x4 SP DSS  
BOT CHORD 2x4 SP DSS \*Except\* 16-19:2x4 SP No.1  
WEBS 2x4 SP No.2 \*Except\* 4-20,12-15:2x4 SP No.3  
SLIDER Left 2x4 SP No.3 -- 2-0-0, Right 2x4 SP No.3 -- 2-0-0

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except 2-0-0 oc purlins (3-5-7 max.): 7-9.  
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.  
WEBS 1 Row at midpt 8-17, 8-18, 11-17, 5-18

**REACTIONS** (size) 2=0-3-8, 14= Mechanical  
Max Horiz 2=229 (LC 20)  
Max Uplift 2=-460 (LC 16), 14=-429 (LC 17)  
Max Grav 2=2304 (LC 39), 14=2245 (LC 39)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/43, 2-4=-4106/1376, 4-5=-3865/1324, 5-7=-3028/1167, 7-8=-2571/1109, 8-9=-2572/1110, 9-11=-3029/1167, 11-12=-3870/1326, 12-14=-4112/1380  
BOT CHORD 2-20=-1108/3582, 18-20=-884/3227, 17-18=-617/2594, 15-17=-885/3230, 14-15=-1112/3589  
WEBS 7-18=-307/966, 9-17=-307/966, 4-20=-285/274, 5-20=-76/425, 12-15=-288/275, 8-17=-326/196, 8-18=-327/196, 11-17=-968/449, 11-15=-78/426, 5-18=-965/447

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

- Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- All plates are 3x6 MT20 unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 1-00-00 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 429 lb uplift at joint 14 and 460 lb uplift at joint 2.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard



November 9, 2022

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ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932

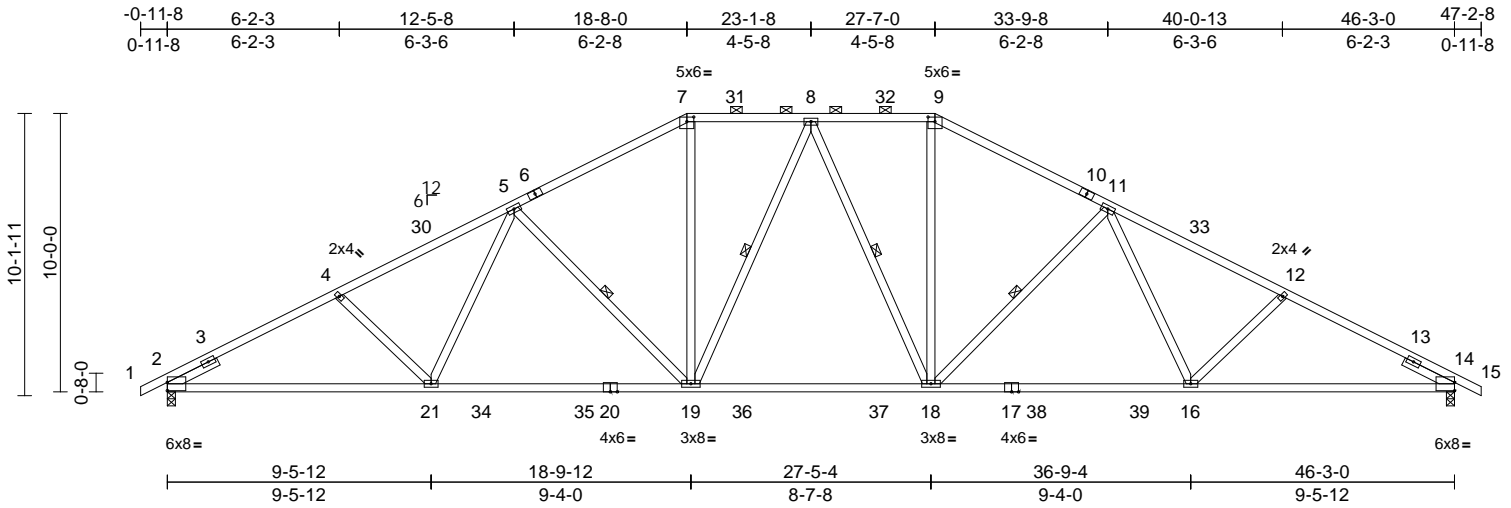


Job 34369-34369A	Truss A7	Truss Type Common	Qty 4	Ply 1	59 SERENITY - ROOF Job Reference (optional)	I55168875
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84 Components (Dunn), Dunn, NC - 28334,

Run: 8.88 S 8.62 Oct 26 2022 Print: 8.620 S Oct 26 2022 MiTek Industries, Inc. Tue Nov 08 16:35:21  
ID:kPpJFb3A8RX2h4yarlhg8FyLCLD-RfC?PsB70Hq3NSgPqnl8w3uTXbGKwRCDoi7J4zJC7f

Page: 1



Scale = 1:82.8

Plate Offsets (X, Y): [2:Edge,0-3-9], [7:0-3-0,0-2-0], [9:0-3-0,0-2-0], [14:Edge,0-3-9]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.77	Vert(LL)	-0.40	16-18	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.98	Vert(CT)	-0.67	16-18	>825	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.51	Horz(CT)	0.21	14	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 273 lb	FT = 20%

**LUMBER**

TOP CHORD 2x4 SP No.1 \*Except\* 7-9:2x4 SP No.2, 6-1,10-15:2x4 SP DSS  
 BOT CHORD 2x4 SP DSS \*Except\* 17-20:2x4 SP No.1  
 WEBS 2x4 SP No.2 \*Except\* 4-21,12-16:2x4 SP No.3  
 SLIDER Left 2x4 SP No.3 -- 2-0-0, Right 2x4 SP No.3 -- 2-0-0

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except 2-0-0 oc purlins (3-5-8 max.): 7-9.  
 BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.  
 WEBS 1 Row at midpt 8-18, 8-19, 11-18, 5-19

**REACTIONS**

(size) 2=0-3-8, 14=0-3-8  
 Max Horiz 2=-218 (LC 21)  
 Max Uplift 2=-460 (LC 16), 14=-460 (LC 17)  
 Max Grav 2=2304 (LC 39), 14=2304 (LC 39)

**FORCES**

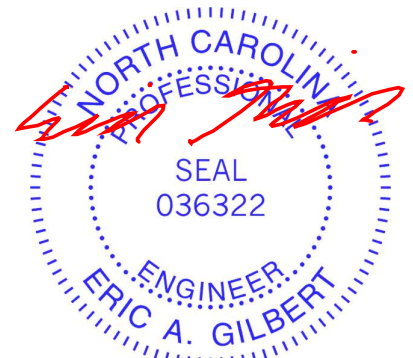
(lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-2=0/43, 2-4=-4105/1375, 4-5=-3864/1322, 5-7=-3027/1165, 7-8=-2570/1108, 8-9=-2570/1108, 9-11=-3027/1165, 11-12=-3864/1322, 12-14=-4105/1375, 14-15=0/43  
 BOT CHORD 2-21=-1079/3581, 19-21=-858/3226, 18-19=-592/2592, 16-18=-859/3226, 14-16=-1083/3581  
 WEBS 7-19=-306/965, 9-18=-306/965, 4-21=-286/274, 5-21=-76/425, 12-16=-286/274, 8-18=-327/196, 8-19=-327/196, 11-18=-965/447, 11-16=-76/425, 5-19=-965/447

**NOTES**

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

- Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- All plates are 3x6 MT20 unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 1-00-00 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 460 lb uplift at joint 14 and 460 lb uplift at joint 2.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard



November 9, 2022

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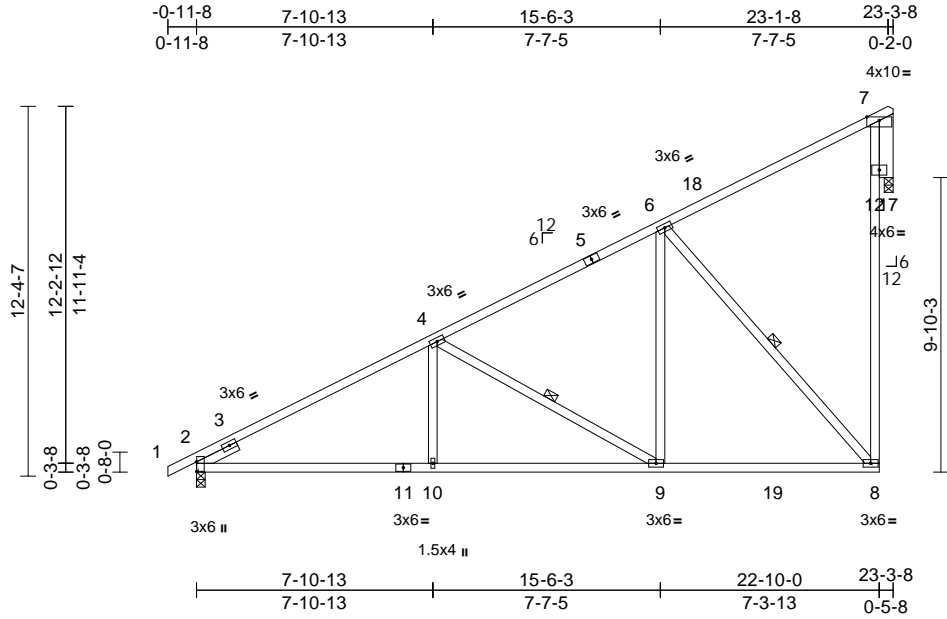
818 Soundside Road  
Edenton, NC 27932

Job 34369-34369A	Truss A8	Truss Type Common	Qty 2	Ply 1	59 SERENITY - ROOF Job Reference (optional)	155168876
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84 Components (Dunn), Dunn, NC - 28334,

Run: 8.88 S 8.62 Oct 26 2022 Print: 8.620 S Oct 26 2022 MiTek Industries, Inc. Tue Nov 08 16:35:21  
ID:uQynMcuY1L0rI2qZYRtYdbyLCHZ-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC7f

Page: 1



Scale = 1:77

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.84	Vert(LL)	-0.15	8-9	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.63	Vert(CT)	-0.28	8-9	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.63	Horz(CT)	0.47	17	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 144 lb	FT = 20%

#### LUMBER

TOP CHORD 2x4 SP No.1 \*Except\* 1-5:2x4 SP No.2  
 BOT CHORD 2x4 SP No.2  
 WEBS 2x4 SP No.2 \*Except\* 4-10:2x4 SP No.3,  
 7-8:2x4 SP DSS  
 OTHERS 2x6 SP No.2  
 SLIDER Left 2x4 SP No.3 -- 1-6-0

#### BRACING

TOP CHORD Structural wood sheathing directly applied or  
 4-0-14 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 6-4-5 oc  
 bracing.  
 WEBS 1 Row at midpt 4-9, 6-8

#### REACTIONS

(size) 2=0-3-8, 17=0-3-8  
 Max Horiz 2=605 (LC 16)  
 Max Uplift 2=-197 (LC 16), 17=-457 (LC 16)  
 Max Grav 2=1015 (LC 23), 17=1072 (LC 23)

#### FORCES

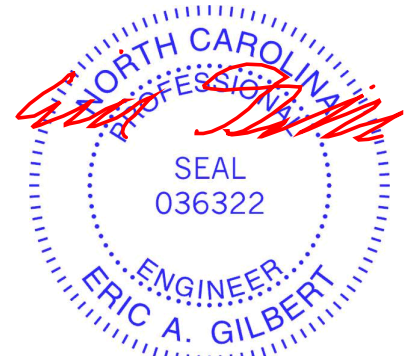
(lb) - Maximum Compression/Maximum  
 Tension  
 TOP CHORD 1-2=0/43, 2-4=-1479/268, 4-6=-883/97,  
 6-7=-210/48  
 BOT CHORD 2-10=-792/1246, 9-10=-754/1246,  
 8-9=-382/710  
 WEBS 4-10=0/301, 4-9=-640/428, 6-9=-103/569,  
 8-12=-376/813, 7-12=-376/813,  
 6-8=-1010/545, 7-17=-1099/546

#### NOTES

1) Wind: ASCE 7-10; Vult=150mph (3-second gust)  
 Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft;  
 Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior  
 zone and C-C Exterior (2) zone; end vertical left  
 exposed; C-C for members and forces & MWFRS for  
 reactions shown; Lumber DOL=1.60 plate grip  
 DOL=1.60

- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load; Lumber DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (flat roof snow; Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- All plates are 3x6 MT20 unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 1-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Bearing at joint(s) 17 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 capable of withstanding 197 lb uplift at joint 2 and 457 lb uplift at joint 17.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



November 9, 2022

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

ENGINEERING BY  
**TRENCO**  
 A MiTek Affiliate

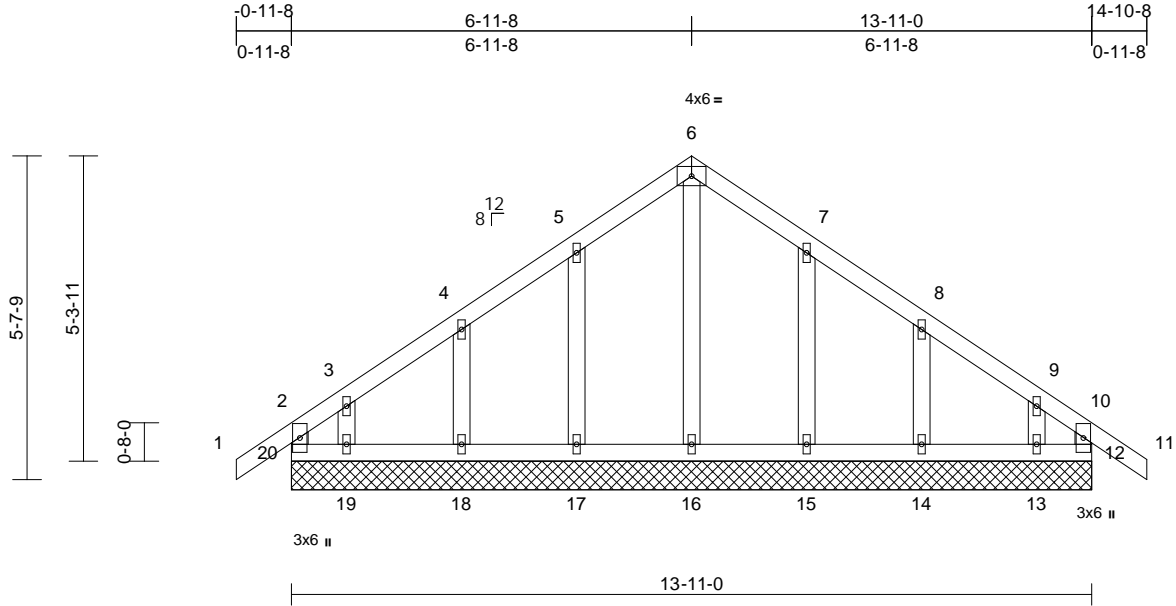
818 Soundside Road  
 Edenton, NC 27932

Job 34369-34369A	Truss B1	Truss Type Common Supported Gable	Qty 1	Ply 1	59 SERENITY - ROOF Job Reference (optional)	155168877
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84 Components (Dunn), Dunn, NC - 28334,

Run: 8.88 S 8.62 Oct 26 2022 Print: 8.620 S Oct 26 2022 MiTek Industries, Inc. Tue Nov 08 16:35:22  
ID:fEzDc9Ce80AIFuFMWBqP8tyLCHA-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWRCDoi7J4zJC?f

Page: 1



Scale = 1:40.1

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.14	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	12	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MR								
BCDL	10.0											
											Weight: 76 lb	FT = 20%

LUMBER	
TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.3

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)	
Max Horiz	20=-195 (LC 12)	
Max Uplift	12=-56 (LC 11), 13=-113 (LC 15), 14=-102 (LC 15), 15=-104 (LC 15), 17=-105 (LC 14), 18=-101 (LC 14), 19=-127 (LC 14), 20=-104 (LC 10)	
Max Grav	12=172 (LC 20), 13=133 (LC 27), 14=181 (LC 23), 15=217 (LC 27), 16=243 (LC 25), 17=219 (LC 22), 18=179 (LC 22), 19=154 (LC 12), 20=172 (LC 20)	

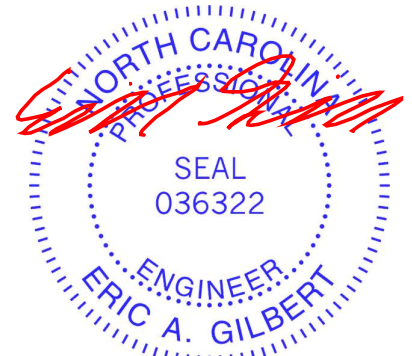
FORCES	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	2-20=-157/81, 1-2=0/61, 2-3=-144/130, 3-4=-102/102, 4-5=-89/114, 5-6=-156/173, 6-7=-156/173, 7-8=-89/93, 8-9=-56/62, 9-10=-102/89, 10-11=0/61, 10-12=-157/72
BOT CHORD	19-20=-84/111, 18-19=-84/111, 17-18=-84/111, 16-17=-84/111, 15-16=-84/111, 14-15=-84/111, 13-14=-84/111, 12-13=-84/111
WEBS	6-16=-134/44, 5-17=-162/128, 4-18=-165/128, 3-19=-154/114, 7-15=-162/127, 8-14=-166/129, 9-13=-160/107

**NOTES**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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 7-10; Pr=20.0 psf (roof live load; Lumber DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (flat roof snow; Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- All plates are 1.5x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 1-00-00 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 104 lb uplift at joint 20, 56 lb uplift at joint 12, 105 lb uplift at joint 17, 101 lb uplift at joint 18, 127 lb uplift at joint 19, 104 lb uplift at joint 15, 102 lb uplift at joint 14 and 113 lb uplift at joint 13.

13) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



November 9, 2022

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



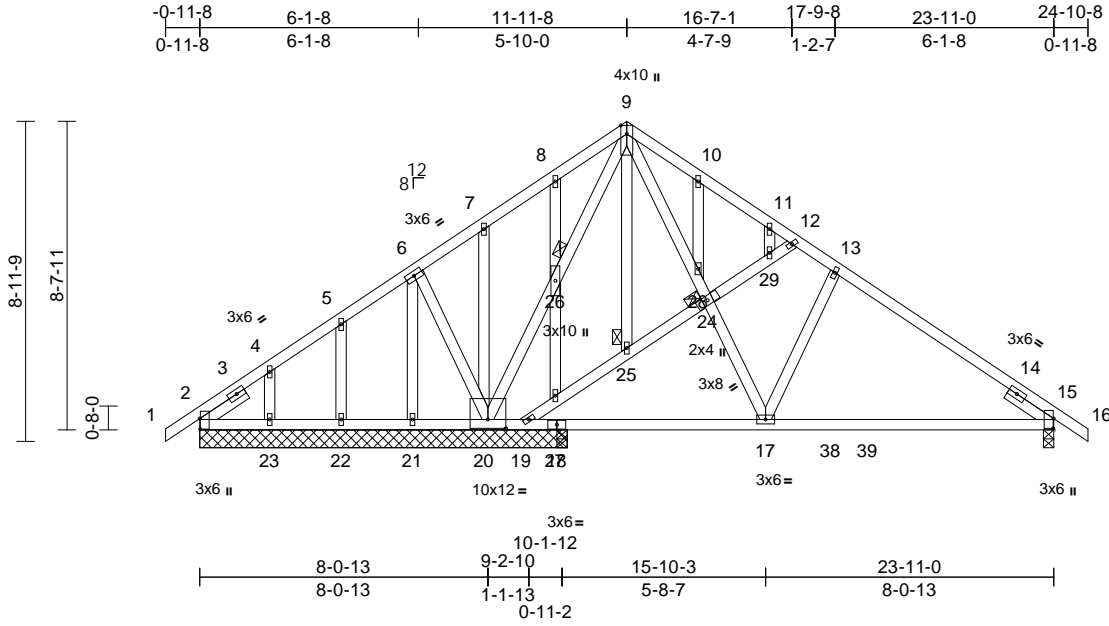
818 Soundside Road  
Edenton, NC 27932

Job 34369-34369A	Truss B2	Truss Type Common Structural Gable	Qty 1	Ply 1	59 SERENITY - ROOF Job Reference (optional)	155168878
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84 Components (Dunn), Dunn, NC - 28334,

Run: 8.88 S 8.62 Oct 26 2022 Print: 8.620 S Oct 26 2022 MiTek Industries, Inc. Tue Nov 08 16:35:22  
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Page: 1



Scale = 1:64.5  
Plate Offsets (X, Y): [2:0-3-9,0-0-3], [15:0-3-5,0-0-3], [20:0-6-0,0-3-0]

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	0.34	Vert(LL)	0.08	17-36	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.51	Vert(CT)	-0.16	17-36	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.16	Horz(CT)	0.02	15	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 183 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.2 \*Except\* 17-13,20-6,12-24:2x4 SP No.3  
OTHERS 2x4 SP No.3  
SLIDER Left 2x4 SP No.3 -- 1-6-0, Right 2x4 SP No.3 -- 1-6-0

**WEBS**  
9-28=-289/631, 24-28=-192/538,  
17-24=-194/550, 13-17=-355/277,  
20-26=-382/0, 9-26=-408/0, 6-20=-76/98,  
24-29=-43/22, 12-29=-32/4, 19-27=-141/92,  
25-27=-91/63, 24-25=-109/73, 9-25=-38/55,  
8-26=-99/90, 26-27=-112/74, 7-20=-194/145,  
6-21=-74/14, 5-22=-164/125, 4-23=-167/145,  
10-28=-105/108, 11-29=-31/37

10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 83 lb uplift at joint 2, 228 lb uplift at joint 20, 227 lb uplift at joint 15, 97 lb uplift at joint 22, 143 lb uplift at joint 23 and 83 lb uplift at joint 2.  
11) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**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.  
JOINTS 1 Brace at Jt(s): 24, 25, 26  
**REACTIONS** (size) 2=10-3-8, 15=0-3-8, 19=10-3-8, 20=10-3-8, 21=10-3-8, 22=10-3-8, 23=10-3-8, 30=10-3-8  
Max Horiz 2=280 (LC 13), 30=280 (LC 13)  
Max Uplift 2=-83 (LC 10), 15=-227 (LC 15), 20=-228 (LC 14), 22=-97 (LC 14), 23=-143 (LC 14), 30=-83 (LC 10)  
Max Grav 2=214 (LC 27), 15=713 (LC 27), 19=313 (LC 5), 20=486 (LC 1), 21=142 (LC 5), 22=181 (LC 22), 23=199 (LC 26), 30=214 (LC 27)  
**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/53, 2-4=-206/165, 4-5=-180/139, 5-6=-166/166, 6-7=-163/192, 7-8=-250/243, 8-9=-280/290, 9-10=-737/407, 10-11=-702/345, 11-12=-696/312, 12-13=-731/325, 13-15=-752/278, 15-16=0/53  
BOT CHORD 2-23=-96/168, 22-23=-96/168, 21-22=-96/168, 20-21=-95/168, 19-20=0/264, 17-19=0/299, 15-17=-181/558

**NOTES**  
1) Unbalanced roof live loads have been considered for this design.  
2) Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60  
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.  
4) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10  
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.  
6) All plates are 1.5x4 MT20 unless otherwise indicated.  
7) Gable studs spaced at 2-0-0 oc.  
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.  
9) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 1-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.

**LOAD CASE(S)** Standard



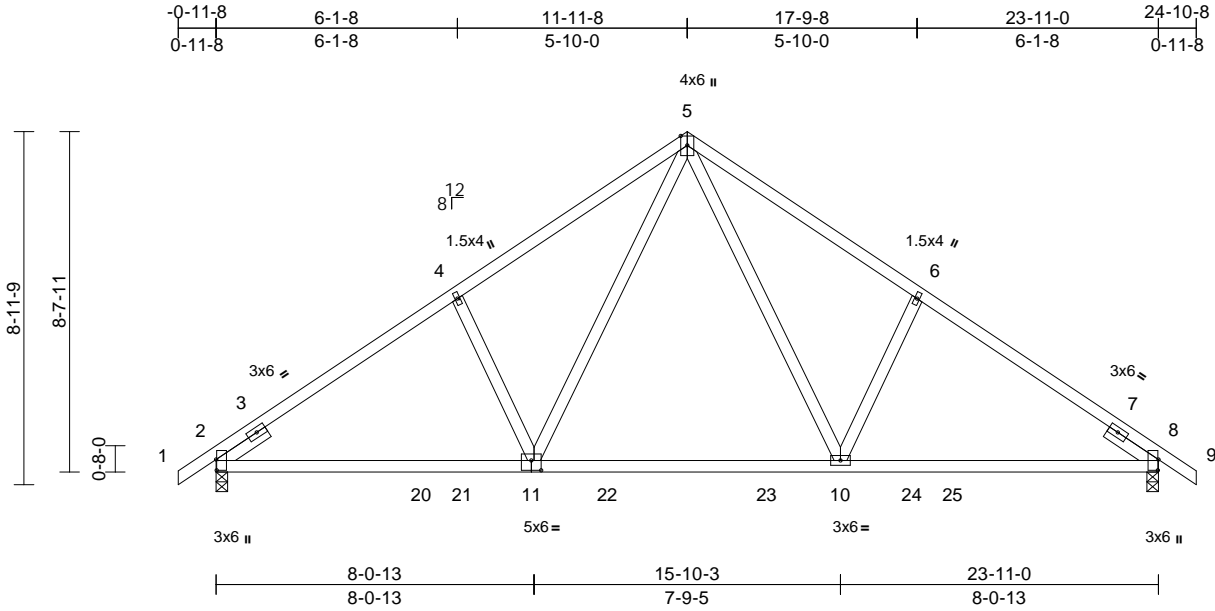
November 9, 2022

Job 34369-34369A	Truss B3	Truss Type Common	Qty 7	Ply 1	59 SERENITY - ROOF Job Reference (optional)	I55168879
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84 Components (Dunn), Dunn, NC - 28334,

Run: 8.88 S 8.62 Oct 26 2022 Print: 8.620 S Oct 26 2022 MiTek Industries, Inc. Tue Nov 08 16:35:23  
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Page: 1



Scale = 1:58.5

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

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	0.43	Vert(LL)	-0.17	10-11	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.61	Vert(CT)	-0.25	10-11	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.37	Horz(CT)	0.03	8	n/a	n/a		
BCLL	0.0*	Code	IRC2015/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 \*Except\* 10-6,11-4:2x4 SP No.3  
SLIDER Left 2x4 SP No.3 -- 1-6-0, Right 2x4 SP No.3 -- 1-6-0

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 4-7-15 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

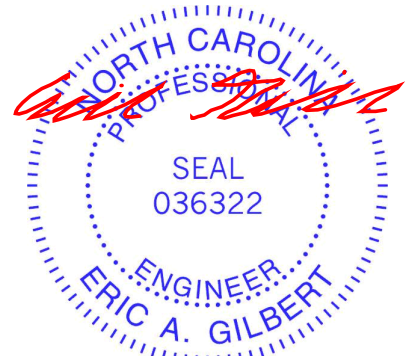
**REACTIONS** (size) 2=0-3-8, 8=0-3-8  
Max Horiz 2=284 (LC 13)  
Max Uplift 2=-261 (LC 14), 8=-261 (LC 15)  
Max Grav 2=1042 (LC 22), 8=1042 (LC 23)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/53, 2-4=-1328/442, 4-5=-1298/534, 5-6=-1292/530, 6-8=-1327/443, 8-9=0/53  
BOT CHORD 2-10=-329/1233, 8-10=-226/1048  
WEBS 5-10=-245/645, 6-10=-411/338, 5-11=-249/647, 4-11=-411/338

**NOTES**  
1) Unbalanced roof live loads have been considered for this design.  
2) Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60  
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10

- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 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 1-00-00 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 261 lb uplift at joint 2 and 261 lb uplift at joint 8.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



November 9, 2022

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



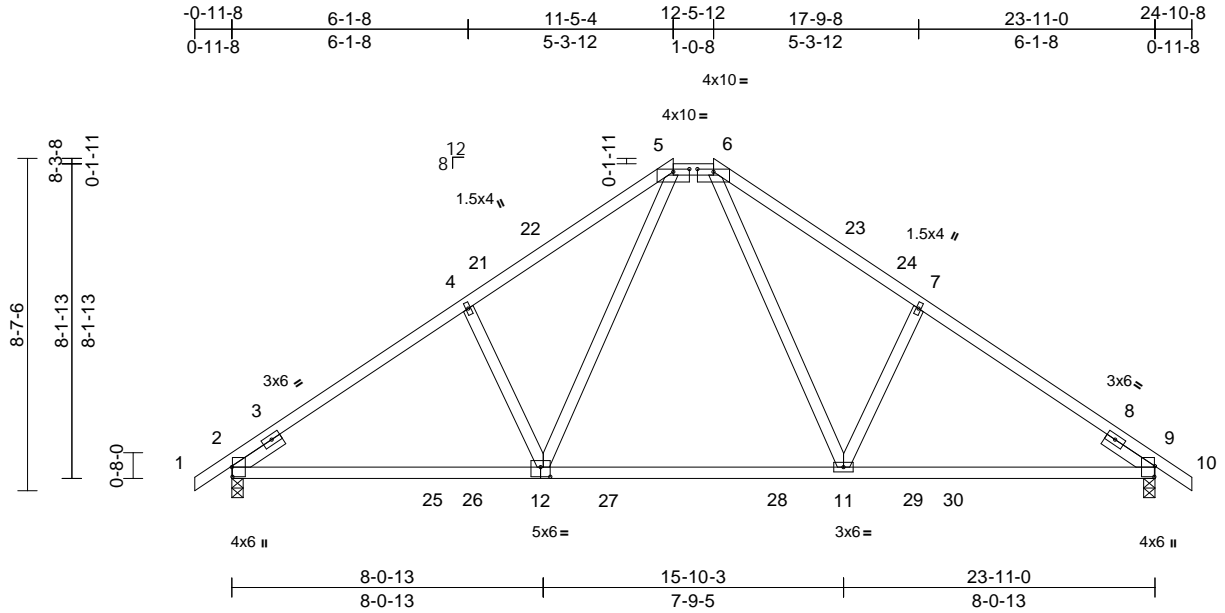
818 Soundside Road  
Edenton, NC 27932

Job 34369-34369A	Truss B4	Truss Type Hip	Qty 1	Ply 1	59 SERENITY - ROOF Job Reference (optional)	155168880
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84 Components (Dunn), Dunn, NC - 28334,

Run: 8.88 S 8.62 Oct 26 2022 Print: 8.620 S Oct 26 2022 MiTek Industries, Inc. Tue Nov 08 16:35:23  
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Page: 1



Scale = 1:59.7  
Plate Offsets (X, Y): [2:0-3-0,0-0-3], [5:0-5-0,0-0-14], [6:0-5-0,0-0-14], [9:0-3-5,0-0-3], [12:0-3-0,0-3-0]

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	0.63	Vert(LL)	-0.20	11-12	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.71	Vert(CT)	-0.28	11-12	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.30	Horz(CT)	0.05	9	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 125 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3 \*Except\* 12-5,11-6:2x4 SP No.2  
SLIDER Left 2x4 SP No.3 -- 1-6-0, Right 2x4 SP No.3 -- 1-6-0

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 3-6-12 oc purlins, except 2-0-0 oc purlins (5-2-0 max.): 5-6.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

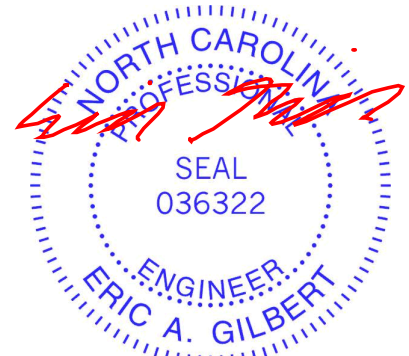
**REACTIONS** (size) 2=0-3-8, 9=0-3-8  
Max Horiz 2=-270 (LC 14)  
Max Uplift 2=-258 (LC 16), 9=-258 (LC 17)  
Max Grav 2=1522 (LC 39), 9=1522 (LC 39)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/53, 2-4=-2028/443, 4-5=-1812/527, 5-6=-1100/426, 6-7=-1804/523, 7-9=-2027/444, 9-10=0/53  
BOT CHORD 2-11=-318/1632, 9-11=-225/1574  
WEBS 7-11=-519/331, 5-12=-235/795, 4-12=-519/332, 6-11=-231/792

**NOTES**  
1) Unbalanced roof live loads have been considered for this design.  
2) Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 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 1-00-00 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 258 lb uplift at joint 2 and 258 lb uplift at joint 9.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard



November 9, 2022

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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 ANSITPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



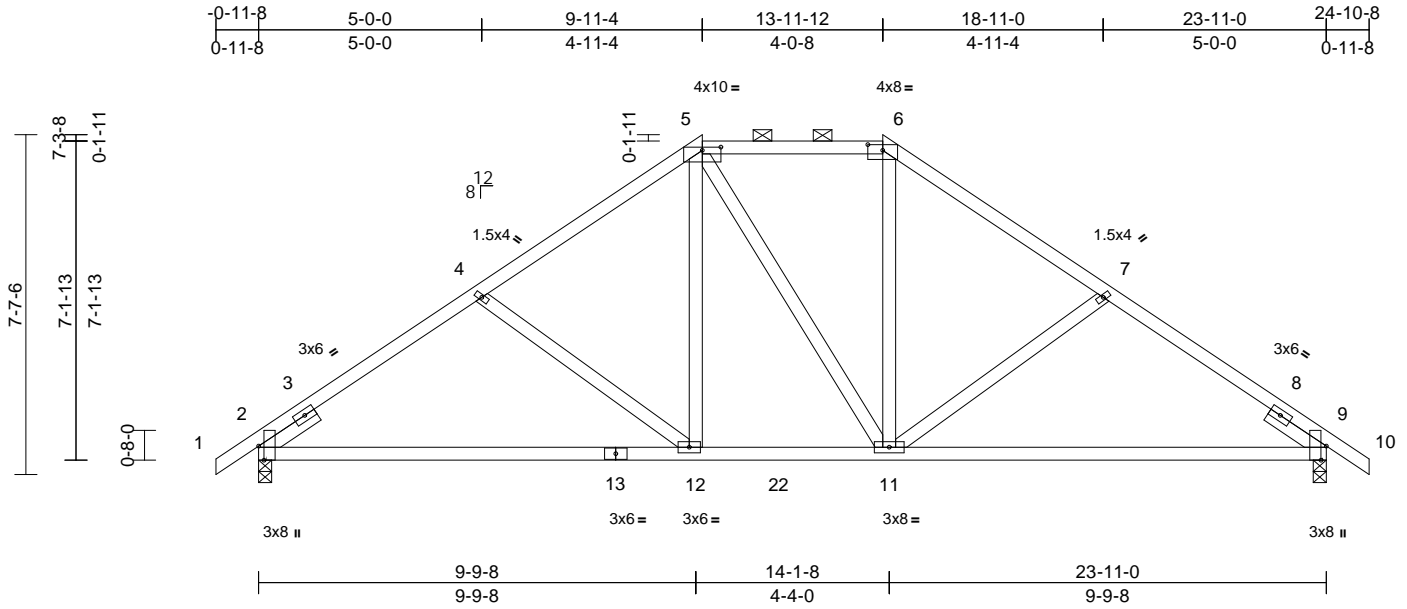
818 Soundside Road  
Edenton, NC 27932

Job 34369-34369A	Truss B5	Truss Type Hip	Qty 1	Ply 1	59 SERENITY - ROOF Job Reference (optional)	155168881
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84 Components (Dunn), Dunn, NC - 28334,

Run: 8.88 S 8.62 Oct 26 2022 Print: 8.620 S Oct 26 2022 MiTek Industries, Inc. Tue Nov 08 16:35:24  
ID:L7bCGenGHy?KXyx9qw?emYLCCk-RfC?PsB70Hq3NSgPqnl8w3uTXbGKWrcDoi7J4zJC?f

Page: 1



Scale = 1:51.6  
Plate Offsets (X, Y): [2:0-3-13,Edge], [5:0-5-0,0-0-14], [6:0-4-0,0-1-9], [9:0-3-13,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	0.29	Vert(LL)	-0.17	12-16	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.74	Vert(CT)	-0.35	12-16	>820	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.25	Horz(CT)	0.03	9	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 134 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.2 \*Except\* 4-12,7-11:2x4 SP No.3  
SLIDER Left 2x4 SP No.3 -- 1-6-0, Right 2x4 SP No.3 -- 1-6-0

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

**REACTIONS** (size) 2=0-3-8, 9=0-3-8  
Max Horiz 2=237 (LC 13)  
Max Uplift 2=-247 (LC 14), 9=-247 (LC 15)  
Max Grav 2=1014 (LC 1), 9=1014 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/53, 2-4=-1181/483, 4-5=-1078/433, 5-6=-897/423, 6-7=-1078/433, 7-9=-1181/483, 9-10=0/53  
BOT CHORD 2-12=-307/1072, 11-12=-86/822, 9-11=-273/1033  
WEBS 5-12=-84/367, 6-11=-60/346, 4-12=-364/273, 7-11=-363/274, 5-11=-130/131

**NOTES**  
1) Unbalanced roof live loads have been considered for this design.  
2) Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 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 1-00-00 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 247 lb uplift at joint 2 and 247 lb uplift at joint 9.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard



November 9, 2022

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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, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



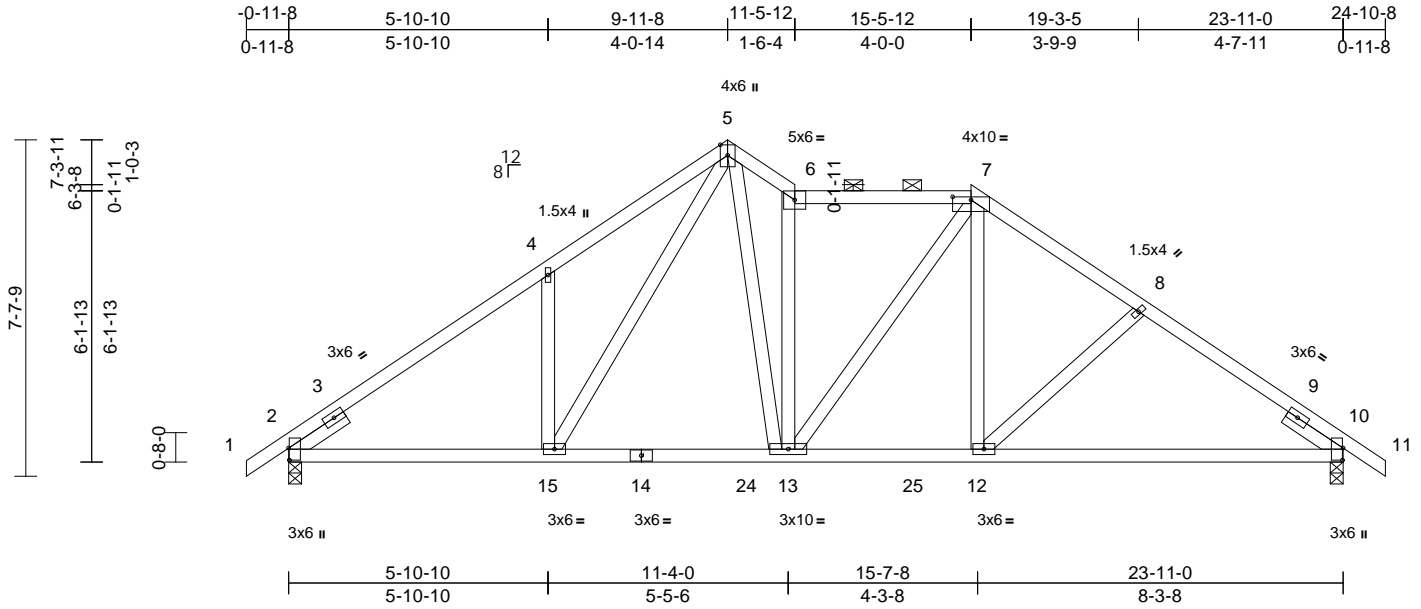
818 Soundside Road  
Edenton, NC 27932

Job 34369-34369A	Truss B6	Truss Type Roof Special	Qty 1	Ply 1	59 SERENITY - ROOF Job Reference (optional)	155168882
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84 Components (Dunn), Dunn, NC - 28334,

Run: 8.88 S 8.62 Oct 26 2022 Print: 8.620 S Oct 26 2022 MiTek Industries, Inc. Tue Nov 08 16:35:24  
ID: \_jv\_s?BeQQITrbTnrUoWSyLCC0-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWRcD0i7J4zJC7f

Page: 1



Scale = 1:52.3

Plate Offsets (X, Y): [2:0-3-5,0-0-3], [7:0-5-0,0-0-14], [10:0-3-5,0-0-3]

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	0.30	Vert(LL)	-0.09	12-22	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.55	Vert(CT)	-0.18	12-22	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.58	Horz(CT)	0.03	10	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 148 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3 \*Except\* 13-7,15-5,13-5:2x4 SP No.2  
SLIDER Left 2x4 SP No.3 -- 1-6-0, Right 2x4 SP No.3 -- 1-6-0

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 4-8-11 oc purlins, except 2-0-0 oc purlins (5-6-15 max.): 6-7.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 2=0-3-8, 10=0-3-8  
Max Horiz 2=240 (LC 13)  
Max Uplift 2=246 (LC 14), 10=291 (LC 15)  
Max Grav 2=1014 (LC 1), 10=1014 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/53, 2-4=-1308/441, 4-5=-1394/635, 5-6=-1225/569, 6-7=-1009/450, 7-8=-1143/450, 8-10=-1303/472, 10-11=0/53  
BOT CHORD 2-15=-304/1142, 13-15=-88/862, 12-13=-129/900, 10-12=-268/1034  
WEBS 4-15=-390/333, 6-13=-805/418, 7-12=-63/309, 7-13=-102/214, 5-15=-333/601, 8-12=-267/209, 5-13=-336/812

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

- Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 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 1-00-00 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 246 lb uplift at joint 2 and 291 lb uplift at joint 10.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard



November 9, 2022

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**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



818 Soundside Road  
Edenton, NC 27932

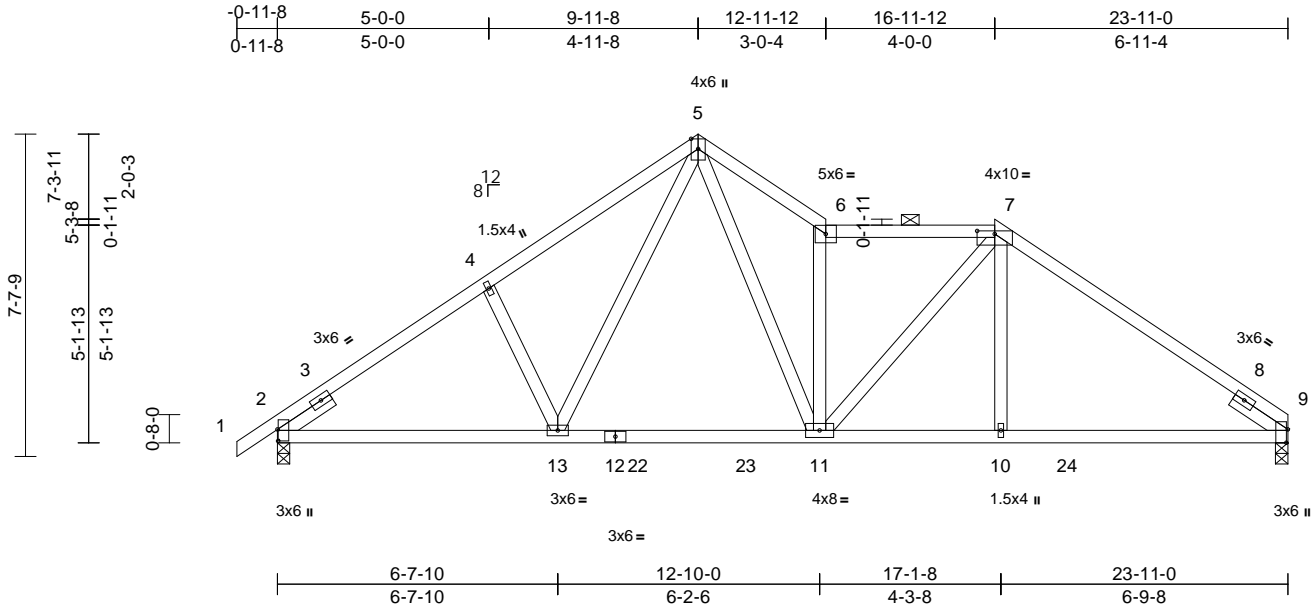


Job 34369-34369A	Truss B7	Truss Type Roof Special	Qty 1	Ply 1	59 SERENITY - ROOF Job Reference (optional)	155168883
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84 Components (Dunn), Dunn, NC - 28334,

Run: 8.88 S 8.62 Oct 26 2022 Print: 8.620 S Oct 26 2022 MiTek Industries, Inc. Tue Nov 08 16:35:25  
ID:A6bZkZXCq0GVcvcAUNFMeMyLCBa-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCdoi7J4zJC?f

Page: 1



Scale = 1:54.5  
Plate Offsets (X, Y): [2:0-3-5,0-0-3], [7:0-5-0,0-0-14], [9:0-3-13,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	0.58	Vert(LL)	0.10	10-16	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.48	Vert(CT)	-0.17	11-13	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.49	Horz(CT)	0.02	9	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 135 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.2 \*Except\* 11-6,10-7,4-13:2x4 SP No.3  
SLIDER Left 2x4 SP No.3 -- 1-6-0, Right 2x4 SP No.3 -- 1-6-0

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 3-11-6 oc purlins, except 2-0-0 oc purlins (5-2-13 max.): 6-7.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

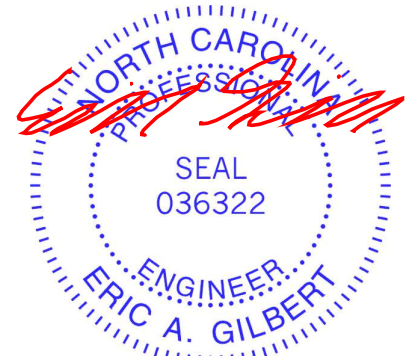
**REACTIONS** (size) 2=0-3-8, 9=0-3-8  
Max Horiz 2=233 (LC 11)  
Max Uplift 2=-246 (LC 14), 9=-259 (LC 15)  
Max Grav 2=1015 (LC 1), 9=956 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/53, 2-4=-1325/460, 4-5=-1270/530, 5-6=-1441/637, 6-7=-1174/486, 7-9=-1290/444  
BOT CHORD 2-13=-308/1161, 11-13=-110/845, 10-11=-230/993, 9-10=-336/997  
WEBS 5-13=-197/471, 6-11=-959/460, 7-10=0/217, 7-11=-87/351, 4-13=-324/276, 5-11=-371/910

**NOTES**  
1) Unbalanced roof live loads have been considered for this design.  
2) Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 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 1-00-00 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 259 lb uplift at joint 9 and 246 lb uplift at joint 2.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard



November 9, 2022

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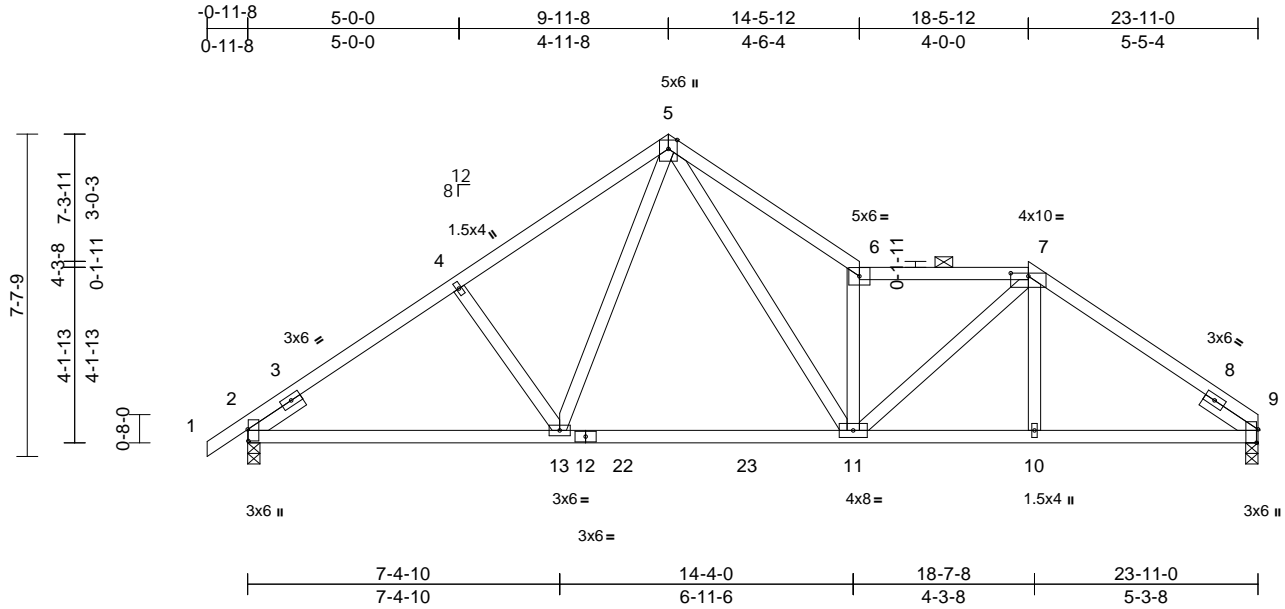
818 Soundside Road  
Edenton, NC 27932

Job 34369-34369A	Truss B8	Truss Type Roof Special	Qty 1	Ply 1	59 SERENITY - ROOF Job Reference (optional)	I55168884
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84 Components (Dunn), Dunn, NC - 28334,

Run: 8.88 S 8.62 Oct 26 2022 Print: 8.620 S Oct 26 2022 MiTek Industries, Inc. Tue Nov 08 16:35:25  
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Page: 1



Scale = 1:54.5

Plate Offsets (X, Y): [2:0-3-5,0-0-3], [7:0-5-0,0-0-14], [9:0-3-13,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	0.36	Vert(LL)	-0.12	11-13	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.54	Vert(CT)	-0.22	11-13	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.52	Horz(CT)	0.03	9	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 132 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3 \*Except\* 13-5,5-11:2x4 SP No.2  
SLIDER Left 2x4 SP No.3 -- 1-6-0, Right 2x4 SP No.3 -- 1-6-0

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 4-0-1 oc purlins, except 2-0-0 oc purlins (4-7-11 max.): 6-7.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

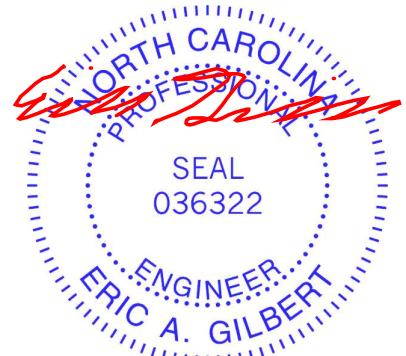
**REACTIONS** (size) 2=0-3-8, 9=0-3-8  
Max Horiz 2=233 (LC 13)  
Max Uplift 2=-246 (LC 14), 9=-259 (LC 15)  
Max Grav 2=1015 (LC 1), 9=956 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/53, 2-4=-1320/462, 4-5=-1222/493, 5-6=-1753/738, 6-7=-1433/546, 7-9=-1328/455  
BOT CHORD 2-13=-311/1150, 11-13=-111/837, 10-11=-268/1044, 9-10=-267/1047  
WEBS 5-13=-149/455, 5-11=-455/1112, 6-11=-1193/563, 7-11=-144/591, 7-10=0/152, 4-13=-319/271

**NOTES**  
1) Unbalanced roof live loads have been considered for this design.  
2) Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 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 1-00-00 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 259 lb uplift at joint 9 and 246 lb uplift at joint 2.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard



November 9, 2022

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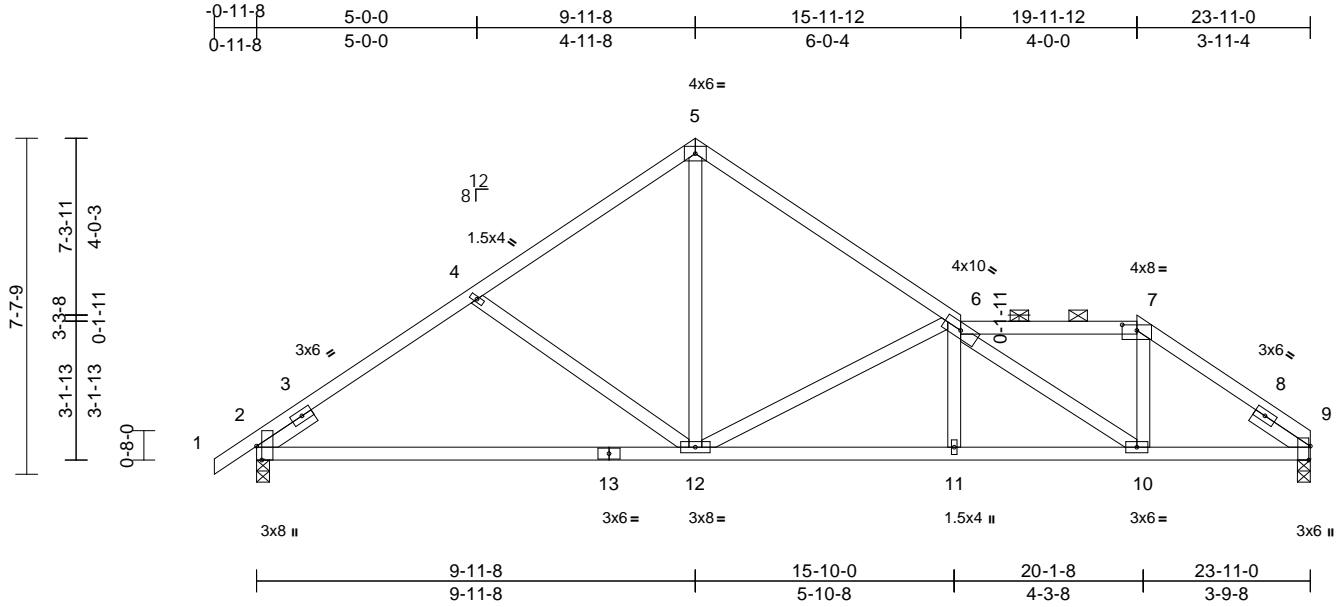
818 Soundside Road  
Edenton, NC 27932

Job 34369-34369A	Truss B9	Truss Type Roof Special	Qty 1	Ply 1	59 SERENITY - ROOF Job Reference (optional)	I55168885
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84 Components (Dunn), Dunn, NC - 28334,

Run: 8.88 S 8.62 Oct 26 2022 Print: 8.620 S Oct 26 2022 MiTek Industries, Inc. Tue Nov 08 16:35:26  
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Page: 1



Scale = 1:52.3  
Plate Offsets (X, Y): [2:0-3-13,Edge], [7:0-4-0,0-1-9], [9:0-3-13,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	0.61	Vert(LL)	-0.18	12-20	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.78	Vert(CT)	-0.36	12-20	>798	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.80	Horz(CT)	0.05	9	n/a	n/a		
BCLL	0.0*	Code	IRC2015/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.3 \*Except\* 12-5,12-6:2x4 SP No.2  
SLIDER Left 2x4 SP No.3 -- 1-6-0, Right 2x4 SP No.3 -- 1-6-0

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 4-1-3 oc purlins, except 2-0-0 oc purlins (5-6-0 max.): 6-7.  
BOT CHORD Rigid ceiling directly applied or 8-0-1 oc bracing.

**REACTIONS** (size) 2=0-3-8, 9=0-3-8  
Max Horiz 2=233 (LC 11)  
Max Uplift 2=-246 (LC 14), 9=-259 (LC 15)  
Max Grav 2=1015 (LC 1), 9=956 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/53, 2-4=-1214/475, 4-5=-1083/425, 5-6=-1098/409, 6-7=-1059/415, 7-9=-1355/456  
BOT CHORD 2-12=-319/1066, 11-12=-524/1784, 10-11=-527/1779, 9-10=-297/1086  
WEBS 5-12=-238/831, 6-12=-1063/471, 6-11=0/171, 6-10=-879/289, 7-10=-123/545, 4-12=-352/274

**NOTES**  
1) Unbalanced roof live loads have been considered for this design.  
2) Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 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 1-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 259 lb uplift at joint 9 and 246 lb uplift at joint 2.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard



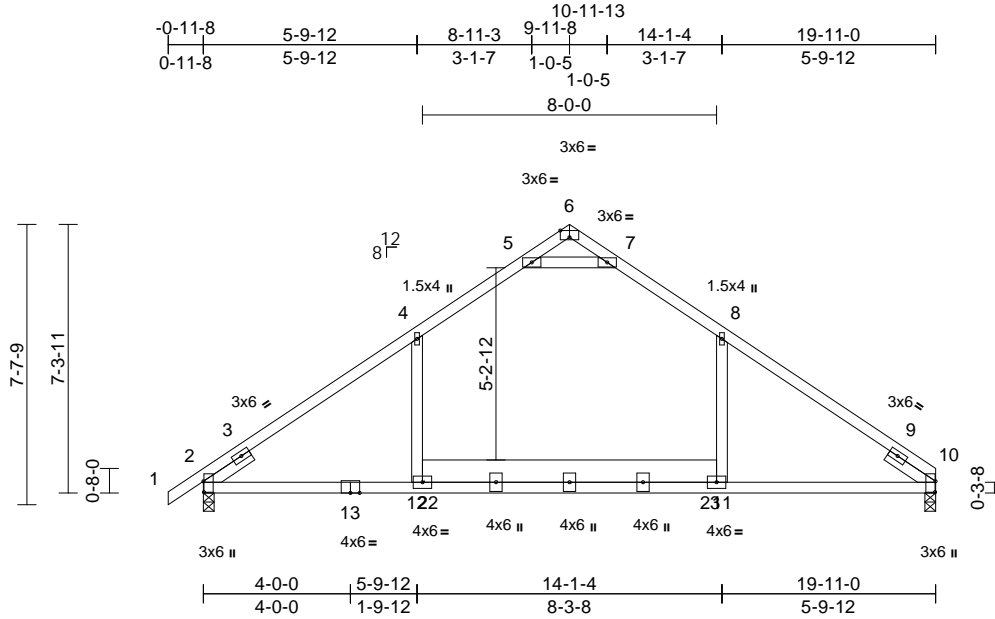
November 9, 2022

Job 34369-34369A	Truss B10	Truss Type Common	Qty 3	Ply 1	59 SERENITY - ROOF Job Reference (optional)	155168886
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84 Components (Dunn), Dunn, NC - 28334,

Run: 8.88 S 8.62 Oct 26 2022 Print: 8.620 S Oct 26 2022 MiTek Industries, Inc. Tue Nov 08 16:35:26  
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Page: 1



Scale = 1:62.7

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

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	0.64	Vert(LL)	0.42	11-16	>574	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.69	Vert(CT)	-0.48	11-16	>498	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.36	Horz(CT)	0.06	2	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 112 lb	FT = 20%

**LUMBER**

TOP CHORD 2x4 SP DSS  
 BOT CHORD 2x4 SP No.2 \*Except\* 11-12:2x8 SP DSS  
 WEBS 2x4 SP No.3  
 SLIDER Left 2x4 SP No.3 -- 1-6-0, Right 2x4 SP No.3 -- 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=0-3-8, 10=0-3-8  
 Max Horiz 2=233 (LC 13)  
 Max Uplift 2=-222 (LC 14), 10=-191 (LC 15)  
 Max Grav 2=916 (LC 22), 10=858 (LC 23)

**FORCES**

(lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-2=0/53, 2-4=-985/305, 4-5=-791/361, 5-6=-316/799, 6-7=-316/799, 7-8=-791/361, 8-10=-982/305  
 BOT CHORD 2-12=-295/838, 11-12=-139/838, 10-11=-258/838  
 WEBS 4-12=-9/338, 8-11=-9/336, 5-7=-1855/814

**NOTES**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10

- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 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 1-00-00 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 191 lb uplift at joint 10 and 222 lb uplift at joint 2.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



November 9, 2022

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



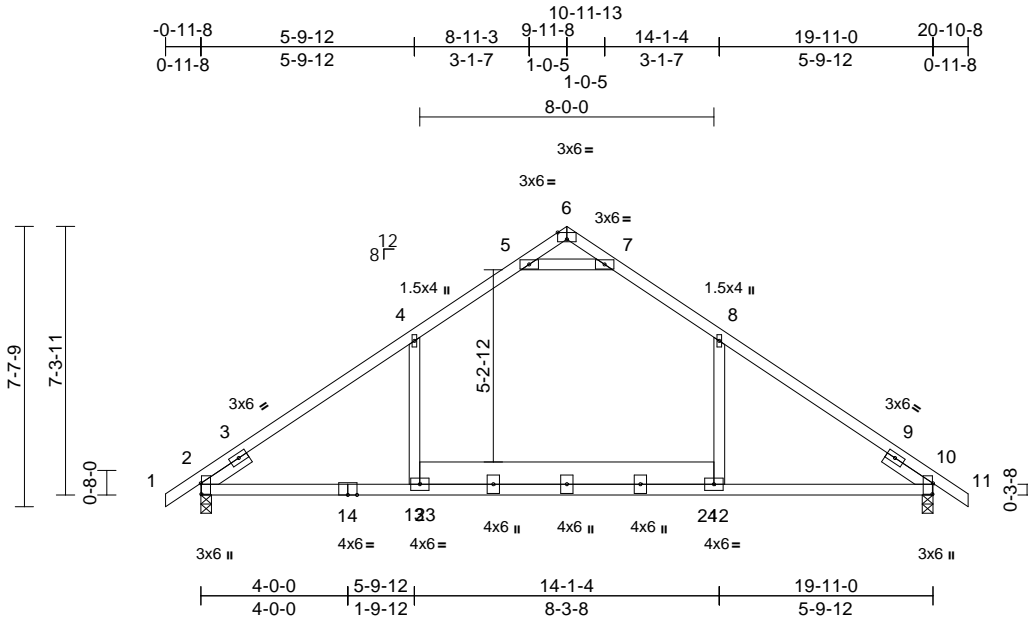
818 Soundside Road  
 Edenton, NC 27932

Job 34369-34369A	Truss B10A	Truss Type Common	Qty 2	Ply 1	59 SERENITY - ROOF	I55168887
Job Reference (optional)						

84 Components (Dunn), Dunn, NC - 28334,

Run: 8.88 S 8.62 Oct 26 2022 Print: 8.620 S Oct 26 2022 MiTek Industries, Inc. Tue Nov 08 16:35:27  
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Page: 1



Scale = 1:62.7

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

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	0.64	Vert(LL)	0.41	13-17	>583	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.66	Vert(CT)	-0.48	13-17	>502	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.35	Horz(CT)	0.06	2	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 114 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP DSS  
BOT CHORD 2x4 SP No.2 \*Except\* 12-13:2x8 SP DSS  
WEBS 2x4 SP No.3  
SLIDER Left 2x4 SP No.3 -- 1-6-0, Right 2x4 SP No.3 -- 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=0-3-8, 10=0-3-8  
Max Horiz 2=240 (LC 13)  
Max Uplift 2=222 (LC 14), 10=222 (LC 15)  
Max Grav 2=915 (LC 26), 10=915 (LC 27)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/53, 2-4=-981/302, 4-5=-789/359, 5-6=-310/794, 6-7=-310/794, 7-8=-789/359, 8-10=-980/302, 10-11=0/53  
BOT CHORD 2-13=-283/847, 12-13=-125/847, 10-12=-224/847  
WEBS 4-13=-9/336, 8-12=-9/336, 5-7=-1846/804

**NOTES**  
1) Unbalanced roof live loads have been considered for this design.  
2) Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60  
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10

- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 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 1-00-00 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 222 lb uplift at joint 2 and 222 lb uplift at joint 10.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



November 9, 2022

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



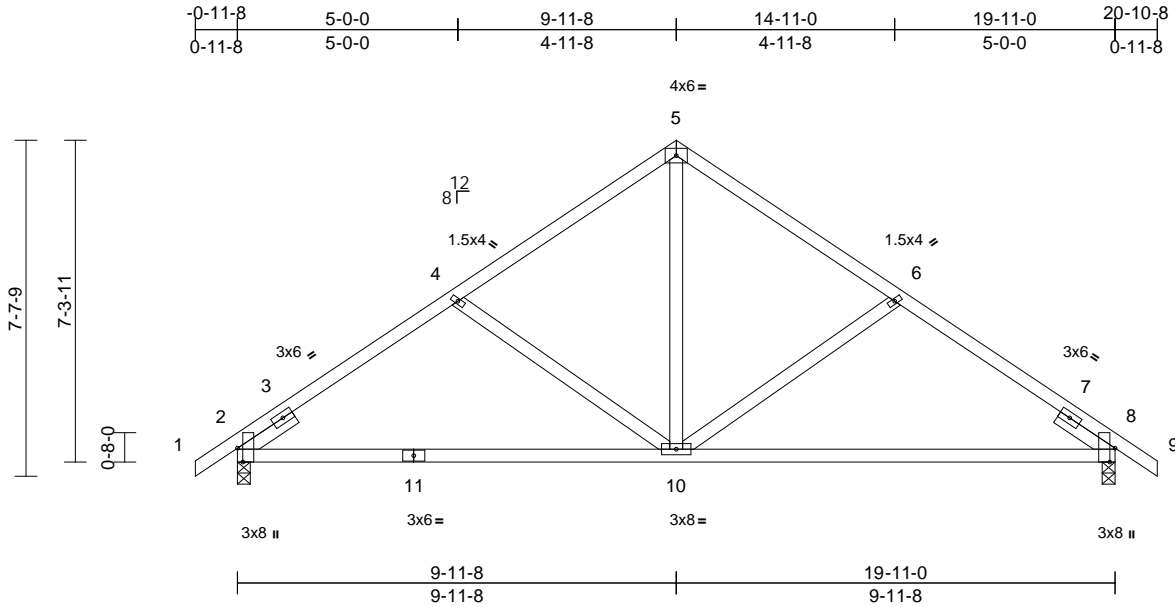
818 Soundside Road  
Edenton, NC 27932

Job 34369-34369A	Truss B11	Truss Type Common	Qty 6	Ply 1	59 SERENITY - ROOF Job Reference (optional)	I55168888
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84 Components (Dunn), Dunn, NC - 28334,

Run: 8.88 S 8.62 Oct 26 2022 Print: 8.620 S Oct 26 2022 MiTek Industries, Inc. Tue Nov 08 16:35:27  
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Page: 1



Scale = 1:52.3

Plate Offsets (X, Y): [2:0-3-13,Edge], [8:0-3-13,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	0.31	Vert(LL)	-0.13	10-18	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.82	Vert(CT)	-0.27	10-18	>883	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.27	Horz(CT)	0.02	8	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 101 lb	FT = 20%

**LUMBER**

TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x4 SP No.2  
 WEBS 2x4 SP No.3 \*Except\* 10-5:2x4 SP No.2  
 SLIDER Left 2x4 SP No.3 -- 1-6-0, Right 2x4 SP No.3 -- 1-6-0

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 5-8-4 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS**

(size) 2=0-3-8, 8=0-3-8  
 Max Horiz 2=240 (LC 13)  
 Max Uplift 2=-222 (LC 14), 8=-222 (LC 15)  
 Max Grav 2=854 (LC 1), 8=854 (LC 1)

**FORCES**

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/53, 2-4=-993/383, 4-5=-854/327, 5-6=-854/327, 6-8=-993/383, 8-9=0/53  
 BOT CHORD 2-10=-280/900, 8-10=-193/820  
 WEBS 5-10=-167/632, 4-10=-374/283, 6-10=-374/283

**NOTES**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10

- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 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 1-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 222 lb uplift at joint 2 and 222 lb uplift at joint 8.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



November 9, 2022

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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, DSB-89 and BCSI Building Component**

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



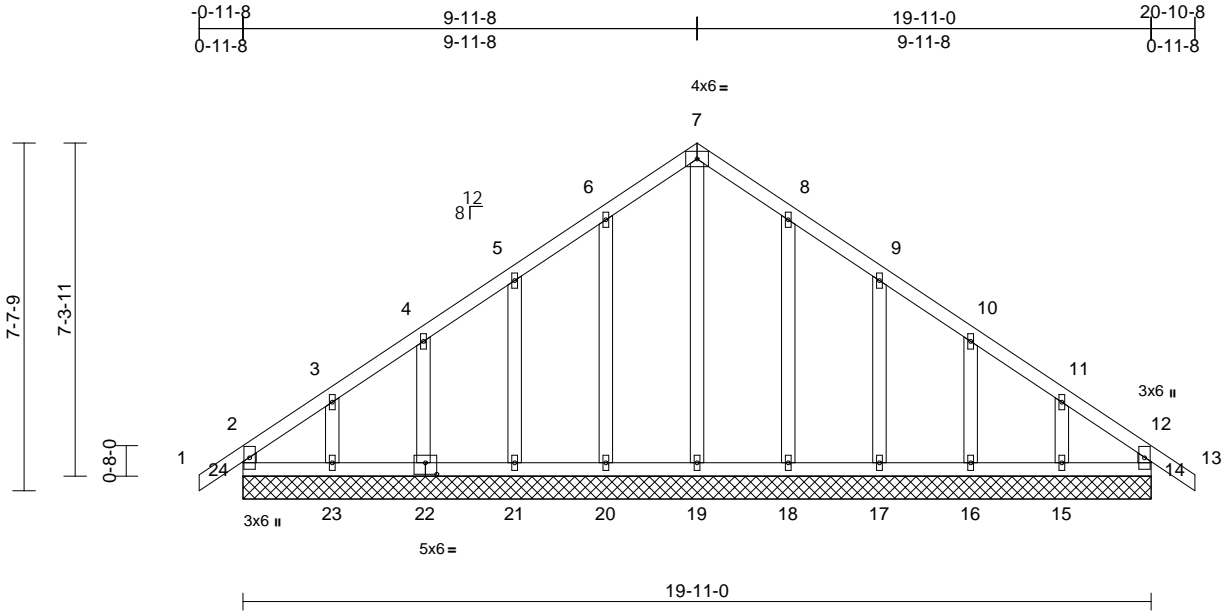
818 Soundside Road  
 Edenton, NC 27932

Job 34369-34369A	Truss B12	Truss Type Common Supported Gable	Qty 1	Ply 1	59 SERENITY - ROOF Job Reference (optional)	155168889
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84 Components (Dunn), Dunn, NC - 28334,

Run: 8.88 S 8.62 Oct 26 2022 Print: 8.620 S Oct 26 2022 MiTek Industries, Inc. Tue Nov 08 16:35:28  
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Page: 1



Scale = 1:50.5

Plate Offsets (X, Y): [22:0-3-0,0-3-0]

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	0.14	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.17	Horz(CT)	0.00	14	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MR								
BCDL	10.0											
											Weight: 121 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3  
OTHERS 2x4 SP No.3 \*Except\* 19-7:2x4 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)  
14=19-11-0, 15=19-11-0,  
16=19-11-0, 17=19-11-0,  
18=19-11-0, 19=19-11-0,  
20=19-11-0, 21=19-11-0,  
22=19-11-0, 23=19-11-0,  
24=19-11-0  
Max Horiz 24=261 (LC 12)  
Max Uplift 14=-41 (LC 11), 15=-138 (LC 15),  
16=-92 (LC 15), 17=-106 (LC 15),  
18=-98 (LC 15), 20=-100 (LC 14),  
21=-106 (LC 14), 22=-89 (LC 14),  
23=-147 (LC 14), 24=-90 (LC 10)  
Max Grav 14=157 (LC 20), 15=188 (LC 23),  
16=175 (LC 27), 17=209 (LC 27),  
18=252 (LC 27), 19=268 (LC 25),  
20=254 (LC 26), 21=209 (LC 22),  
22=171 (LC 26), 23=203 (LC 26),  
24=190 (LC 27)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 2-24=-158/83, 1-2=0/61, 2-3=-186/169,  
3-4=-139/129, 4-5=-118/145, 5-6=-169/194,  
6-7=-233/253, 7-8=-233/253, 8-9=-169/178,  
9-10=-103/109, 10-11=-74/70,  
11-12=-127/100, 12-13=0/61, 12-14=-135/66

**BOT CHORD** 23-24=-104/147, 21-23=-104/148,  
20-21=-104/148, 19-20=-104/148,  
18-19=-104/148, 17-18=-104/148,  
16-17=-104/148, 15-16=-104/148,  
14-15=-104/148  
**WEBS** 7-19=-197/126, 6-20=-156/124,  
5-21=-160/128, 4-22=-154/119,  
3-23=-177/147, 8-18=-155/123,  
9-17=-160/128, 10-16=-156/121,  
11-15=-181/141

- NOTES**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - 4) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
  - 5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
  - 6) All plates are 1.5x4 MT20 unless otherwise indicated.
  - 7) Gable requires continuous bottom chord bearing.
  - 8) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
  - 9) Gable studs spaced at 2-0-0 oc.
  - 10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- 11) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 1-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - 12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 90 lb uplift at joint 24, 41 lb uplift at joint 14, 100 lb uplift at joint 20, 106 lb uplift at joint 21, 89 lb uplift at joint 22, 147 lb uplift at joint 23, 98 lb uplift at joint 18, 106 lb uplift at joint 17, 92 lb uplift at joint 16 and 138 lb uplift at joint 15.
  - 13) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- LOAD CASE(S)** Standard



November 9, 2022

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

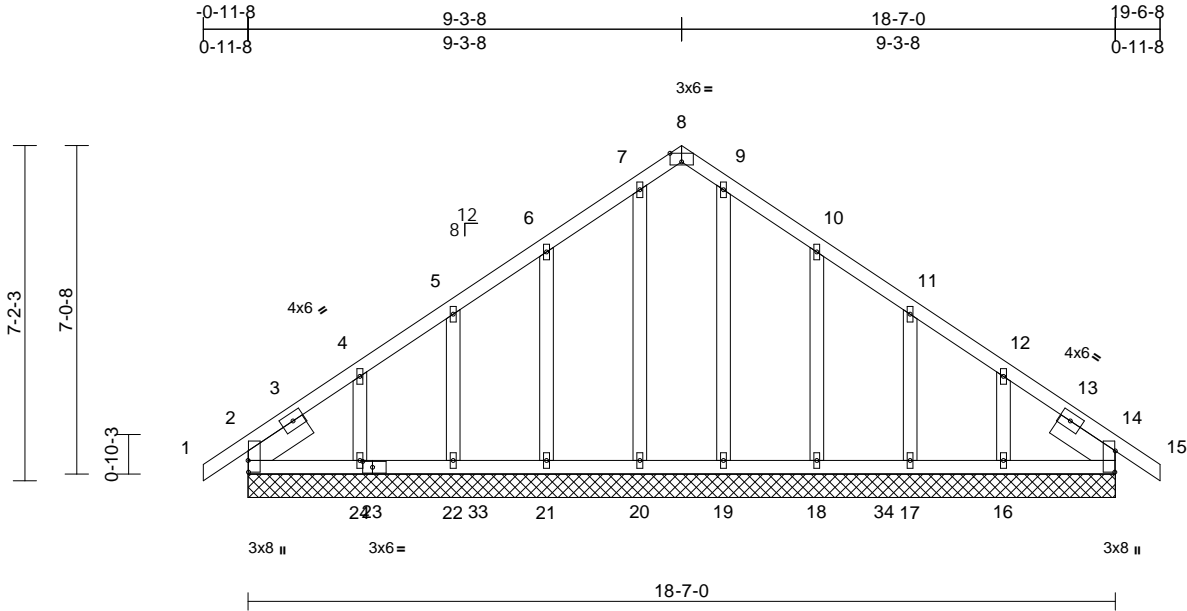
ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate  
818 Soundside Road  
Edenton, NC 27932

Job 34369-34369A	Truss C1	Truss Type Common Supported Gable	Qty 1	Ply 1	59 SERENITY - ROOF Job Reference (optional)	155168890
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84 Components (Dunn), Dunn, NC - 28334,

Run: 8.88 S 8.62 Oct 26 2022 Print: 8.620 S Oct 26 2022 MiTek Industries, Inc. Tue Nov 08 16:35:28  
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Page: 1



Scale = 1:49.4

Plate Offsets (X, Y): [2:0-3-0,0-0-2], [8:0-3-0,Edge], [14:0-5-7,0-0-2], [23:0-2-8,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.11	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.10	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.01	14	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 118 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
OTHERS 2x4 SP No.3  
SLIDER Left 2x6 SP No.2 -- 1-6-0, Right 2x6 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=18-7-0, 14=18-7-0, 16=18-7-0, 17=18-7-0, 18=18-7-0, 19=18-7-0, 20=18-7-0, 21=18-7-0, 22=18-7-0, 24=18-7-0, 25=18-7-0, 29=18-7-0  
Max Horiz 2=225 (LC 12), 25=225 (LC 12)  
Max Uplift 2=49 (LC 10), 14=13 (LC 11), 16=182 (LC 15), 17=73 (LC 15), 18=132 (LC 15), 20=9 (LC 11), 21=128 (LC 14), 22=71 (LC 14), 24=192 (LC 14), 25=49 (LC 10), 29=13 (LC 11)  
Max Grav 2=197 (LC 23), 14=173 (LC 1), 16=226 (LC 23), 17=178 (LC 23), 18=257 (LC 23), 19=185 (LC 23), 20=209 (LC 22), 21=252 (LC 26), 22=176 (LC 26), 24=237 (LC 22), 25=197 (LC 23), 29=173 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/53, 2-4=-202/149, 4-5=-128/98, 5-6=-112/95, 6-7=-150/153, 7-8=-140/141, 8-9=-140/141, 9-10=-150/148, 10-11=-75/62, 11-12=-91/49, 12-14=-166/108, 14-15=0/53

**BOT CHORD** 2-24=-114/196, 22-24=-114/196, 21-22=-114/196, 20-21=-114/196, 19-20=-114/196, 18-19=-114/196, 17-18=-114/196, 16-17=-114/196, 14-16=-114/196  
**WEBS** 7-20=-117/32, 9-19=-93/2, 6-21=-185/149, 5-22=-141/107, 4-24=-204/176, 10-18=-185/153, 11-17=-141/108, 12-16=-206/170

**NOTES**  
1) Unbalanced roof live loads have been considered for this design.  
2) Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60  
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.  
4) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load; Lumber DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (flat roof snow; Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10  
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.  
6) All plates are 1.5x4 MT20 unless otherwise indicated.  
7) Gable requires continuous bottom chord bearing.  
8) Gable studs spaced at 2-0-0 oc.  
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

10) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 1-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.  
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 49 lb uplift at joint 2, 13 lb uplift at joint 14, 9 lb uplift at joint 20, 128 lb uplift at joint 21, 71 lb uplift at joint 22, 192 lb uplift at joint 24, 132 lb uplift at joint 18, 73 lb uplift at joint 17, 182 lb uplift at joint 16, 49 lb uplift at joint 2 and 13 lb uplift at joint 14.  
12) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.  
**LOAD CASE(S)** Standard



November 9, 2022

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



818 Soundside Road  
Edenton, NC 27932

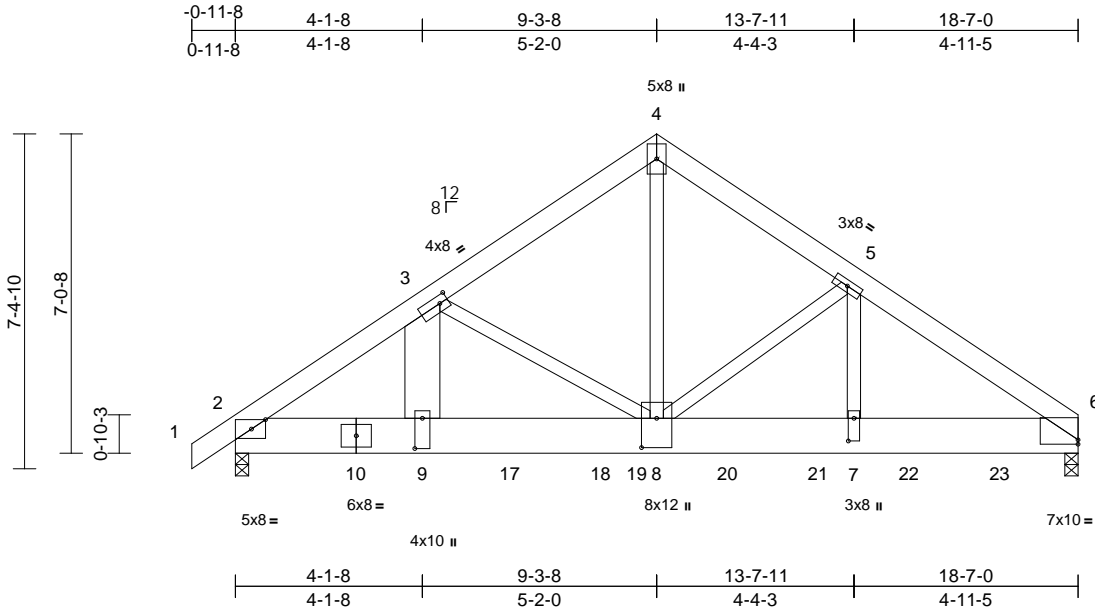


Job 34369-34369A	Truss C2	Truss Type Common Girder	Qty 1	Ply 3	59 SERENITY - ROOF Job Reference (optional)	155168891
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84 Components (Dunn), Dunn, NC - 28334,

Run: 8.88 S 8.62 Oct 26 2022 Print: 8.620 S Oct 26 2022 MiTek Industries, Inc. Tue Nov 08 16:35:29  
ID:BheqTuY0FDLcN1yeSBfN9yLC2W-RfC?PsB70Hq3NSgPqnl8w3uTXbGKwRCDoi7J4zJC?f

Page: 1



Scale = 1:50.8

Plate Offsets (X, Y): [2:0-3-12,Edge], [3:0-2-4,0-2-0], [6:Edge,0-1-2], [7:0-6-0,0-1-8], [8:0-7-12,0-4-0], [9:0-8-0,0-2-0]

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	0.30	Vert(LL)	-0.09	8-9	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.42	Vert(CT)	-0.16	8-9	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.95	Horz(CT)	0.03	6	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 502 lb	FT = 20%

**LUMBER**

TOP CHORD 2x6 SP No.2  
 BOT CHORD 2x10 SP DSS  
 WEBS 2x4 SP No.3 \*Except\* 9-3:2x10 SP DSS, 8-4:2x4 SP No.2

**BRACING**

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

**REACTIONS**

(size) 2=0-3-8, 6=0-3-8, (req. 0-3-9)  
 Max Horiz 2=218 (LC 11)  
 Max Uplift 2=-2928 (LC 14), 6=-2552 (LC 15)  
 Max Grav 2=8776 (LC 1), 6=10644 (LC 1)

**FORCES**

(lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-2=0/53, 2-3=-13949/4678, 3-4=-10931/3092, 4-5=-10928/3107, 5-6=-14257/3611  
 BOT CHORD 2-9=-3845/11452, 8-9=-3845/11452, 7-8=-2896/11781, 6-7=-2896/11781  
 WEBS 3-9=-1642/3042, 3-8=-2766/1669, 4-8=-3200/11573, 5-8=-3438/725, 5-7=-611/3893

**NOTES**

- 3-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
 Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.  
 Bottom chords connected as follows: 2x10 - 4 rows staggered at 0-5-0 oc.  
 Web connected as follows: 2x10 - 3 rows staggered at 0-5-0 oc, 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 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCCL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 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 1-00-00 wide will fit between the bottom chord and any other members.
- WARNING: Required bearing size at joint(s) 6 greater than input bearing size.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 2552 lb uplift at joint 6 and 2928 lb uplift at joint 2.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 2506 lb down and 1591 lb up at 4-1-8, 1818 lb down and 643 lb up at 6-0-12, 2438 lb down and 630 lb up at 8-0-12, 2210 lb down and 462 lb up at 8-10-5, 2226 lb down and 441 lb up at 10-10-5, 2226 lb down and 441 lb up at 12-10-5, and 2226 lb down and 441 lb up at 14-10-5, and 2225 lb down and 441 lb up at 16-10-5 on bottom chord. The design/selection of such connection device (s) is the responsibility of others.

**LOAD CASE(S)** Standard

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
 Uniform Loads (lb/ft)  
 Vert: 1-4=-60, 4-6=-60, 11-14=-20  
 Concentrated Loads (lb)  
 Vert: 9=-2506 (F), 17=-1818 (F), 18=-2438 (F), 19=-2210 (F), 20=-2226 (F), 21=-2226 (F), 22=-2226 (F), 23=-2225 (F)



November 9, 2022

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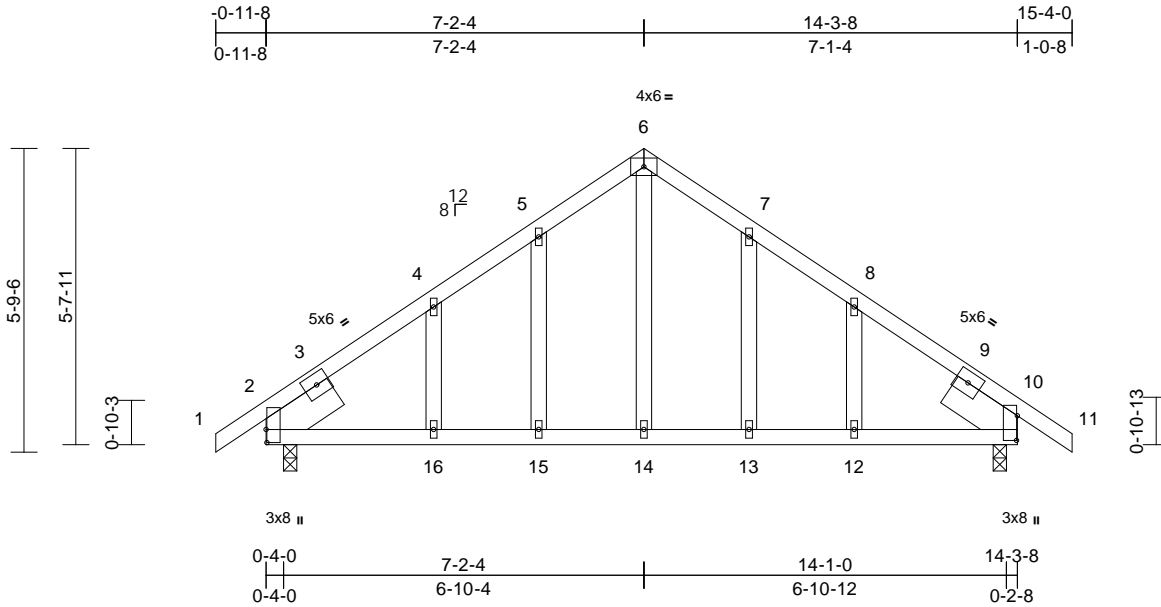
818 Soundside Road  
 Edenton, NC 27932

Job 34369-34369A	Truss C3	Truss Type Common Structural Gable	Qty 1	Ply 1	59 SERENITY - ROOF Job Reference (optional)	155168892
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84 Components (Dunn), Dunn, NC - 28334,

Run: 8.88 S 8.62 Oct 26 2022 Print: 8.620 S Oct 26 2022 MiTek Industries, Inc. Tue Nov 08 16:35:29  
ID:6Ql9guQ1VeK0ZnCOqBliRGyLE8y-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:43.8  
Plate Offsets (X, Y): [2:0-3-0,0-0-3], [10:0-5-10,0-0-3]

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	0.34	Vert(LL)	0.16	15-16	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.70	Vert(CT)	0.13	15-16	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.36	Horz(CT)	0.04	10	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0											
											Weight: 86 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3  
OTHERS 2x4 SP No.3  
SLIDER Left 2x8 SP DSS -- 1-6-0, Right 2x8 SP DSS -- 1-6-0

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 7-5-6 oc bracing.

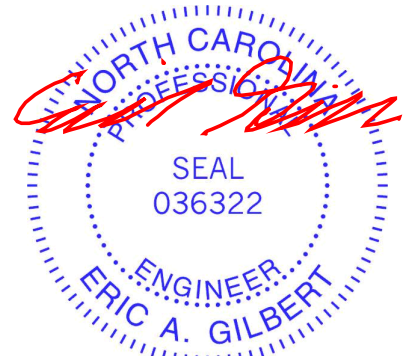
**REACTIONS** (size) 2=0-3-0, 10=0-3-0  
Max Horiz 2=-179 (LC 12)  
Max Uplift 2=-168 (LC 14), 10=-170 (LC 15)  
Max Grav 2=629 (LC 1), 10=635 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/53, 2-4=-558/586, 4-5=-498/583, 5-6=-553/688, 6-7=-554/690, 7-8=-498/584, 8-10=-562/590, 10-11=0/58  
BOT CHORD 2-16=-341/406, 15-16=-341/406, 14-15=-341/406, 13-14=-341/406, 12-13=-341/406, 10-12=-341/406  
WEBS 6-14=-666/476, 5-15=-201/166, 4-16=-63/75, 7-13=-202/168, 8-12=-58/77

**NOTES**  
1) Unbalanced roof live loads have been considered for this design.  
2) Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; cantilever left and right exposed; end vertical left and right exposed; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- All plates are 1.5x4 MT20 unless otherwise indicated.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 1-00-00 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 168 lb uplift at joint 2 and 170 lb uplift at joint 10.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



November 9, 2022

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**

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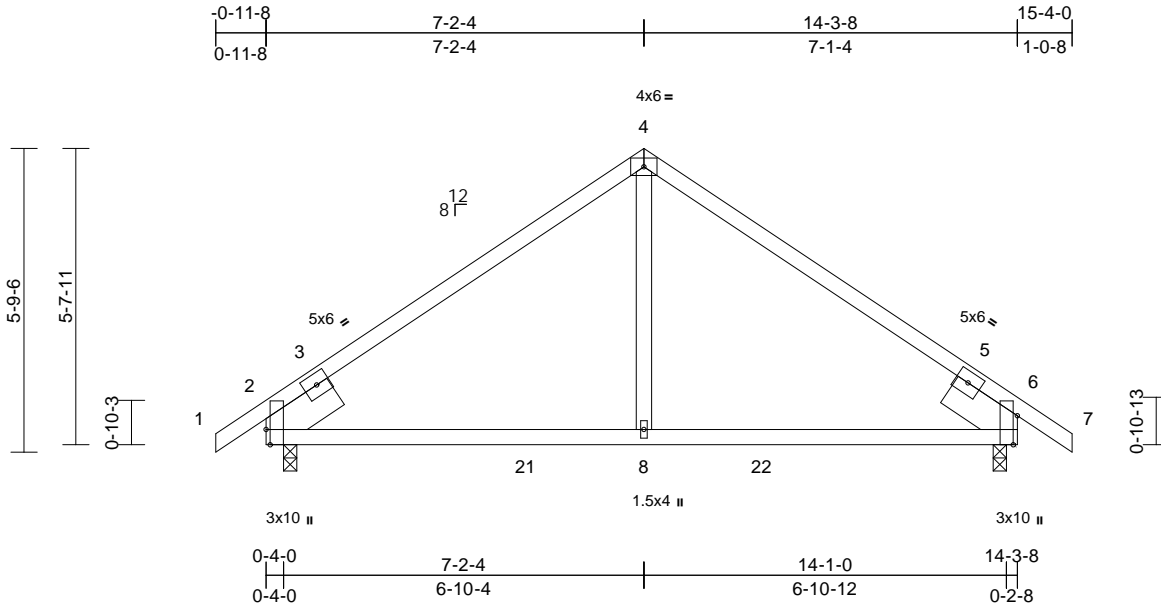
818 Soundside Road  
Edenton, NC 27932

Job 34369-34369A	Truss C4	Truss Type Common Structural Gable	Qty 4	Ply 1	59 SERENITY - ROOF Job Reference (optional)	155168893
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84 Components (Dunn), Dunn, NC - 28334,

Run: 8.88 S 8.62 Oct 26 2022 Print: 8.620 S Oct 26 2022 MiTek Industries, Inc. Tue Nov 08 16:35:30  
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Page: 1



Scale = 1:43.8

Plate Offsets (X, Y): [2:0-3-8,Edge], [6:0-6-10,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	0.65	Vert(LL)	0.13	8-13	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.49	Vert(CT)	0.11	8-13	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.25	Horz(CT)	0.05	6	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0											
											Weight: 68 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3  
SLIDER Left 2x8 SP DSS -- 1-6-0, Right 2x8 SP DSS -- 1-6-0

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 5-9-9 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 9-3-15 oc bracing.

**REACTIONS** (size) 2=0-3-0, 6=0-3-0  
Max Horiz 2=-179 (LC 12)  
Max Uplift 2=-168 (LC 14), 6=-170 (LC 15)  
Max Grav 2=629 (LC 1), 6=635 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/53, 2-4=-579/611, 4-6=-580/613, 6-7=0/58  
BOT CHORD 2-8=-322/410, 6-8=-322/410  
WEBS 4-8=-457/293

- NOTES**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; cantilever left and right exposed; end vertical left and right exposed; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10

- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) \* 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 1-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 168 lb uplift at joint 2 and 170 lb uplift at joint 6.
- 8) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



November 9, 2022

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**

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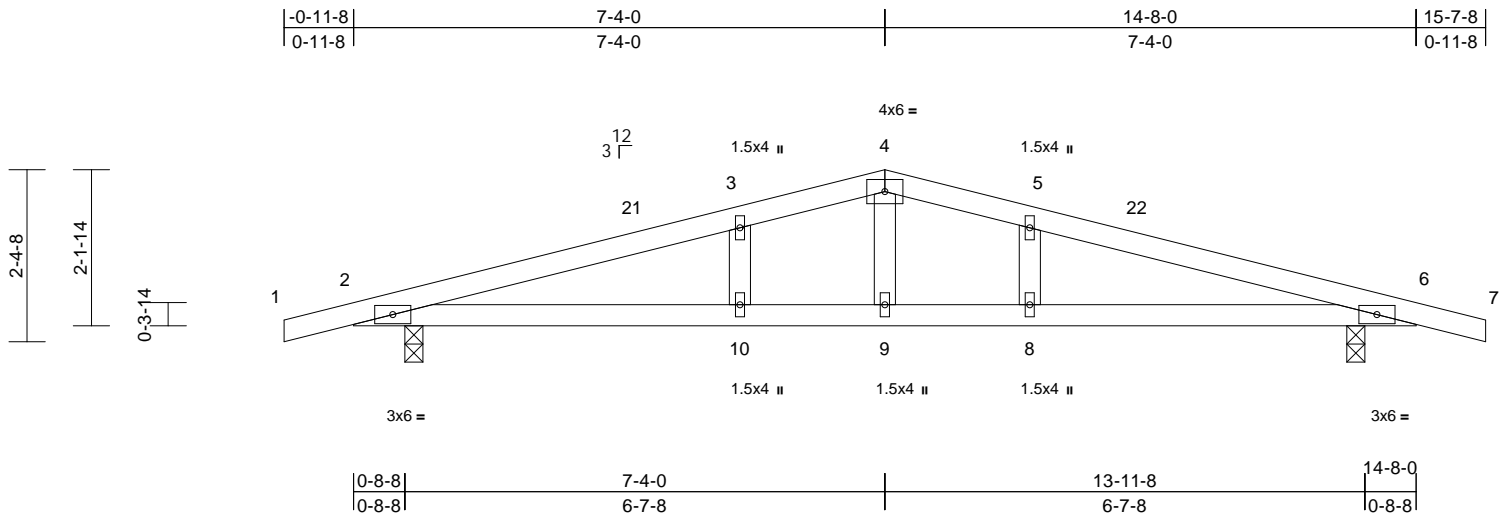
818 Soundside Road  
Edenton, NC 27932

Job 34369-34369A	Truss D1	Truss Type Common Structural Gable	Qty 1	Ply 1	59 SERENITY - ROOF Job Reference (optional)	155168894
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84 Components (Dunn), Dunn, NC - 28334,

Run: 8.88 S 8.62 Oct 26 2022 Print: 8.620 S Oct 26 2022 MiTek Industries, Inc. Tue Nov 08 16:35:30  
ID:OcTOcns6t04JazrDNbUSj3yLEAz-RfC?PsB70Hq3NSgPqnL8w3uTXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:31.8

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	0.44	Vert(LL)	0.14	8-20	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.70	Vert(CT)	-0.14	10-15	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.15	Horz(CT)	-0.02	6	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0											
											Weight: 53 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3  
OTHERS 2x4 SP No.3

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 5-3-13 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 4-7-4 oc bracing.

**REACTIONS** (size) 2=0-3-0, 6=0-3-0  
Max Horiz 2=-46 (LC 21)  
Max Uplift 2=-407 (LC 12), 6=-407 (LC 13)  
Max Grav 2=644 (LC 1), 6=644 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/23, 2-3=-1076/1358, 3-4=-1045/1387, 4-5=-1045/1387, 5-6=-1076/1358, 6-7=0/23  
BOT CHORD 2-10=-1243/1006, 9-10=-1243/1006, 8-9=-1243/1006, 6-8=-1243/1006  
WEBS 4-9=-514/356, 3-10=-145/115, 5-8=-145/116

- NOTES**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; cantilever left and right exposed; end vertical left and right exposed; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- 4) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- 5) Unbalanced snow loads have been considered for this design.
- 6) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 7) Gable studs spaced at 2-0-0 oc.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 1-00-00 wide will fit between the bottom chord and any other members.
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 407 lb uplift at joint 2 and 407 lb uplift at joint 6.
- 11) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



November 9, 2022

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**

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818 Soundside Road  
Edenton, NC 27932

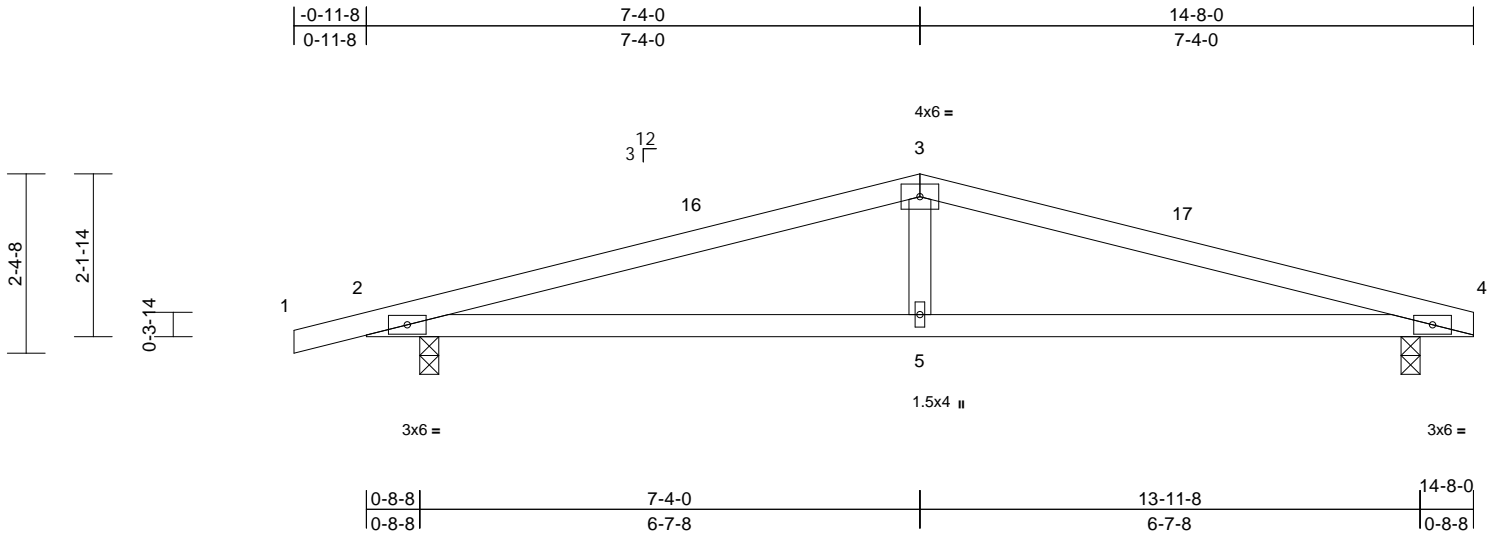
Job 34369-34369A	Truss D2	Truss Type Common	Qty 1	Ply 1	59 SERENITY - ROOF Job Reference (optional)	155168895
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84 Components (Dunn), Dunn, NC - 28334,

Run: 8.88 S 8.62 Oct 26 2022 Print: 8.620 S Oct 26 2022 MiTek Industries, Inc. Tue Nov 08 16:35:30

Page: 1

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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	0.72	0.13	5-15	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.51	Vert(LL)	-0.12	5-15	>999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.11	Vert(CT)	-0.12	5-15	>999		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP		Horz(CT)	-0.02	4	n/a		
BCDL	10.0									Weight: 48 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3

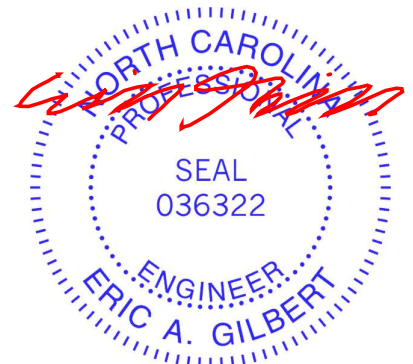
**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 3-11-2 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 4-10-15 oc bracing.

**REACTIONS** (size) 2=0-3-0, 4=0-3-0  
Max Horiz 2=51 (LC 16)  
Max Uplift 2=-408 (LC 12), 4=-347 (LC 13)  
Max Grav 2=649 (LC 1), 4=582 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/23, 2-3=-1060/1369, 3-4=-1059/1368  
BOT CHORD 2-5=-1252/976, 4-5=-1252/976  
WEBS 3-5=-403/277

- 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 1-00-00 wide will fit between the bottom chord and any other members.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 408 lb uplift at joint 2 and 347 lb uplift at joint 4.
  - This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- LOAD CASE(S)** Standard

- NOTES**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; cantilever left and right exposed; end vertical left 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 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.



November 9, 2022

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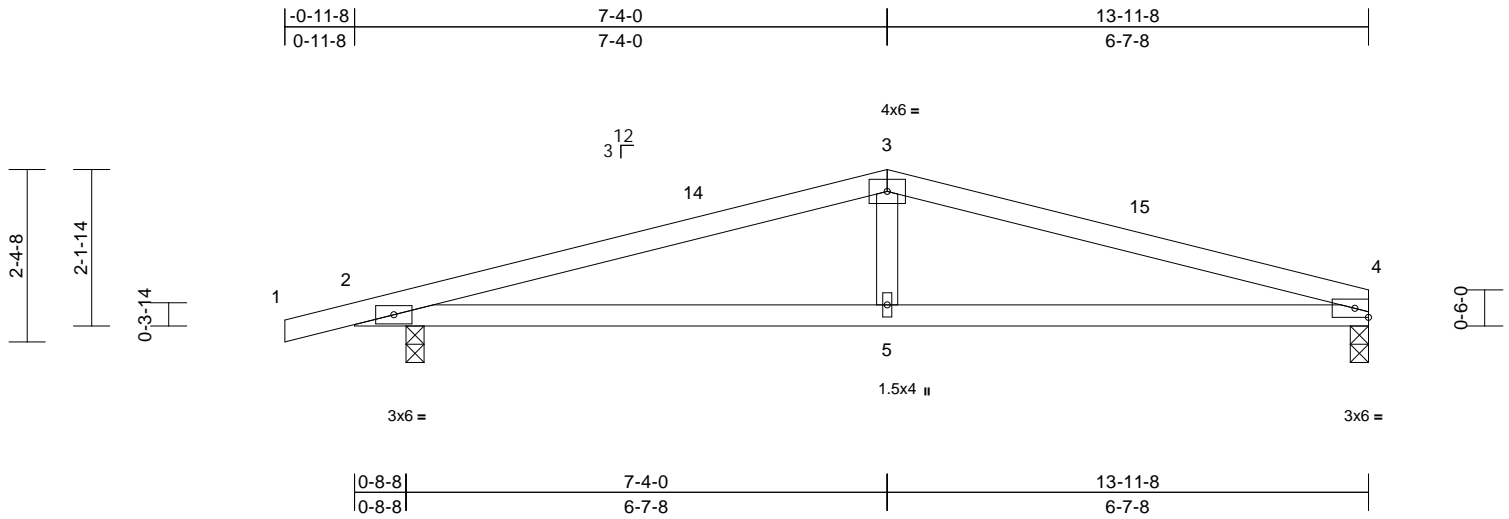
818 Soundside Road  
Edenton, NC 27932

Job 34369-34369A	Truss D3	Truss Type Common	Qty 2	Ply 1	59 SERENITY - ROOF Job Reference (optional)	155168896
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84 Components (Dunn), Dunn, NC - 28334,

Run: 8.88 S 8.62 Oct 26 2022 Print: 8.620 S Oct 26 2022 MiTek Industries, Inc. Tue Nov 08 16:35:31  
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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	0.74	Vert(LL)	0.14	5-8	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.53	Vert(CT)	-0.12	5-8	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.01	4	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 46 lb	FT = 20%

#### LUMBER

TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 3-9-12 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 4-9-14 oc bracing.

#### REACTIONS

(size) 2=0-3-0, 4=0-3-0  
Max Horiz 2=56 (LC 16)  
Max Uplift 2=-408 (LC 12), 4=-310 (LC 13)  
Max Grav 2=651 (LC 1), 4=523 (LC 1)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/23, 2-3=-1067/1391, 3-4=-1065/1390  
BOT CHORD 2-5=-1284/983, 4-5=-1284/983  
WEBS 3-5=-408/279

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=150mph (3-second gust)  
Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft;  
Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; cantilever left exposed; end vertical left 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 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.

- 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 1-00-00 wide will fit between the bottom chord and any other members.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 310 lb uplift at joint 4 and 408 lb uplift at joint 2.
  - This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- LOAD CASE(S)** Standard



November 9, 2022

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ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

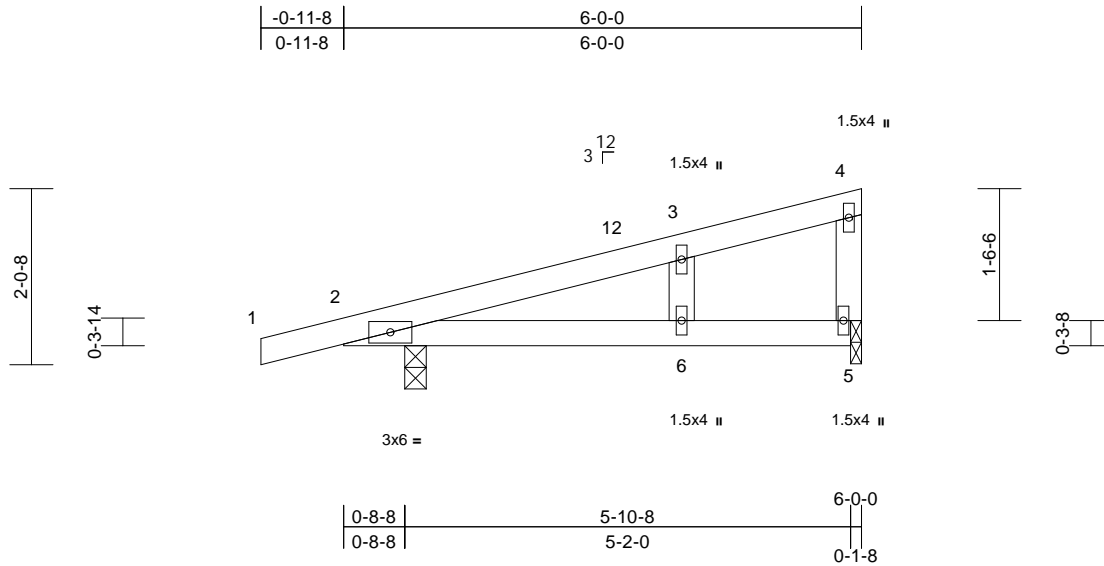
818 Soundside Road  
Edenton, NC 27932

Job 34369-34369A	Truss D4	Truss Type Monopitch Structural Gable	Qty 1	Ply 1	59 SERENITY - ROOF Job Reference (optional)	155168897
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84 Components (Dunn), Dunn, NC - 28334,

Run: 8.88 S 8.62 Oct 26 2022 Print: 8.620 S Oct 26 2022 MiTek Industries, Inc. Tue Nov 08 16:35:31  
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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	0.32	Vert(LL)	0.10	6-11	>707	240	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.34	Vert(CT)	0.08	6-11	>906	180	
TCDL	10.0	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.00	2	n/a	n/a	
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP							
BCDL	10.0										
										Weight: 22 lb	FT = 20%

**LUMBER**

TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
OTHERS 2x4 SP No.3

**BRACING**

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

**REACTIONS**

(size) 2=0-3-0, 5=0-1-8  
Max Horiz 2=92 (LC 12)  
Max Uplift 2=-229 (LC 12), 5=-129 (LC 12)  
Max Grav 2=343 (LC 23), 5=206 (LC 23)

**FORCES**

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/23, 2-3=-218/249, 3-4=-44/26, 4-5=-118/157  
BOT CHORD 2-6=-244/240, 5-6=0/0  
WEBS 3-6=-63/73

**NOTES**

- 1) Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; cantilever left exposed; end vertical left 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) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.

- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 6) Gable studs spaced at 2-0-0 oc.
- 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 1-00-00 wide will fit between the bottom chord and any other members.
- 9) Bearing at joint(s) 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 10) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 5.
- 11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 229 lb uplift at joint 2 and 129 lb uplift at joint 5.
- 12) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



November 9, 2022

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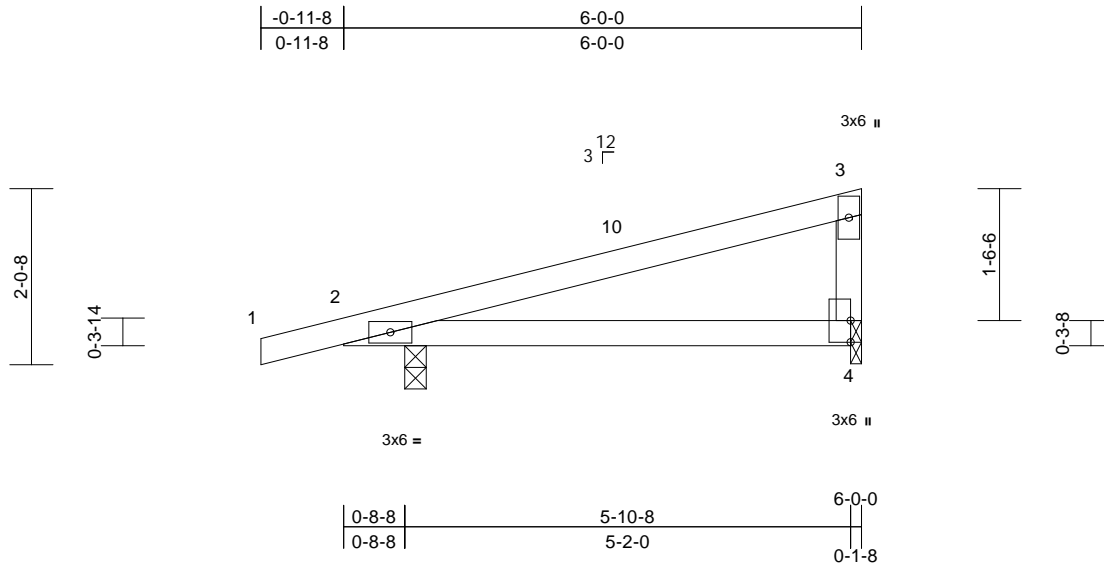
818 Soundside Road  
Edenton, NC 27932

Job 34369-34369A	Truss D5	Truss Type Monopitch	Qty 4	Ply 1	59 SERENITY - ROOF Job Reference (optional)	155168898
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84 Components (Dunn), Dunn, NC - 28334,

Run: 8.88 S 8.62 Oct 26 2022 Print: 8.620 S Oct 26 2022 MiTek Industries, Inc. Tue Nov 08 16:35:32  
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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	0.53	Vert(LL)	0.04	4-9	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.25	Vert(CT)	0.03	4-9	>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	IRC2015/TPI2014	Matrix-MR								
BCDL	10.0											
											Weight: 21 lb	FT = 20%

**LUMBER**

TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
OTHERS 2x4 SP No.3

**BRACING**

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

**REACTIONS**

(size) 2=0-3-0, 4=0-1-8  
Max Horiz 2=95 (LC 13)  
Max Uplift 2=-233 (LC 12), 4=-125 (LC 12)  
Max Grav 2=343 (LC 23), 4=206 (LC 23)

**FORCES**

(lb) - Maximum Compression/Maximum Tension

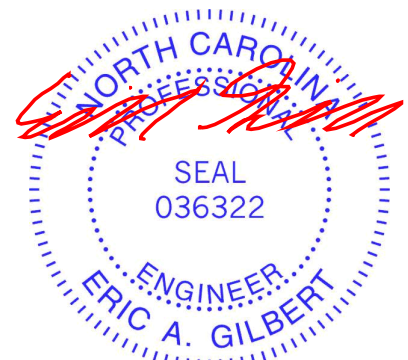
TOP CHORD 1-2=0/23, 2-3=-218/249, 3-4=-138/148  
BOT CHORD 2-4=-256/234

**NOTES**

- 1) Wind: ASCE 7-10; Vult=150mph (3-second gust)  
Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft;  
Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; cantilever left exposed; end vertical left 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 7-10; Pr=20.0 psf (roof live load; Lumber DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (flat roof snow; Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- 6) \* 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 1-00-00 wide will fit between the bottom chord and any other members.
- 7) 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.
- 8) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 4.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 233 lb uplift at joint 2 and 125 lb uplift at joint 4.
- 10) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



November 9, 2022

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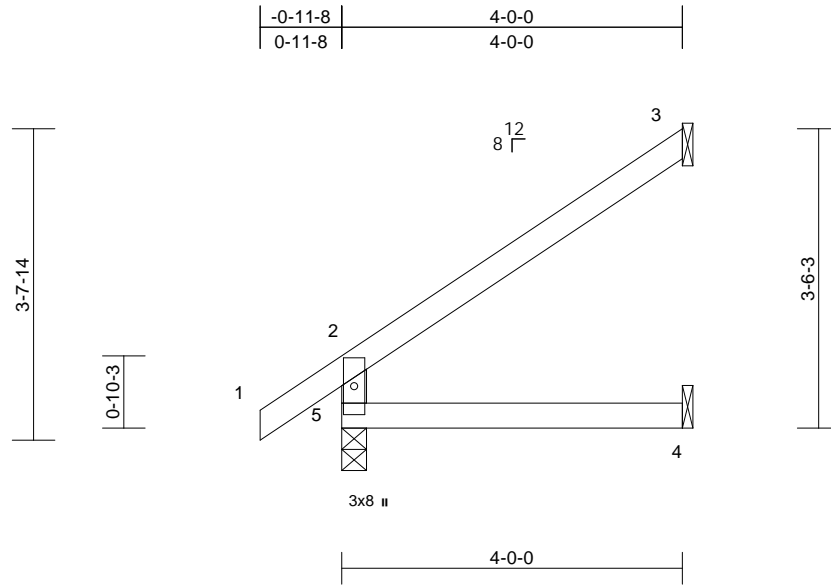


Job 34369-34369A	Truss J1	Truss Type Jack-Open	Qty 23	Ply 1	59 SERENITY - ROOF Job Reference (optional)	155168899
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84 Components (Dunn), Dunn, NC - 28334,

Run: 8.88 S 8.62 Oct 26 2022 Print: 8.620 S Oct 26 2022 MiTek Industries, Inc. Tue Nov 08 16:35:32  
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Page: 1



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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	0.32	Vert(LL)	0.02	4-5	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.21	Vert(CT)	-0.02	4-5	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.02	3	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MR								
BCDL	10.0											
											Weight: 16 lb	FT = 20%

#### LUMBER

TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3

#### 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=0-3-8  
Max Horiz 5=151 (LC 14)  
Max Uplift 3=-110 (LC 14), 4=-3 (LC 14), 5=-27 (LC 14)  
Max Grav 3=120 (LC 22), 4=72 (LC 5), 5=228 (LC 1)

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

TOP CHORD 2-5=-194/126, 1-2=0/61, 2-3=-97/81  
BOT CHORD 4-5=0/0

#### NOTES

- 1) Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; end vertical left exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- 3) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- 5) \* 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 1-00-00 wide will fit between the bottom chord and any other members.
- 6) Refer to girder(s) for truss to truss connections.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 27 lb uplift at joint 5, 110 lb uplift at joint 3 and 3 lb uplift at joint 4.
- 8) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



November 9, 2022

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**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932

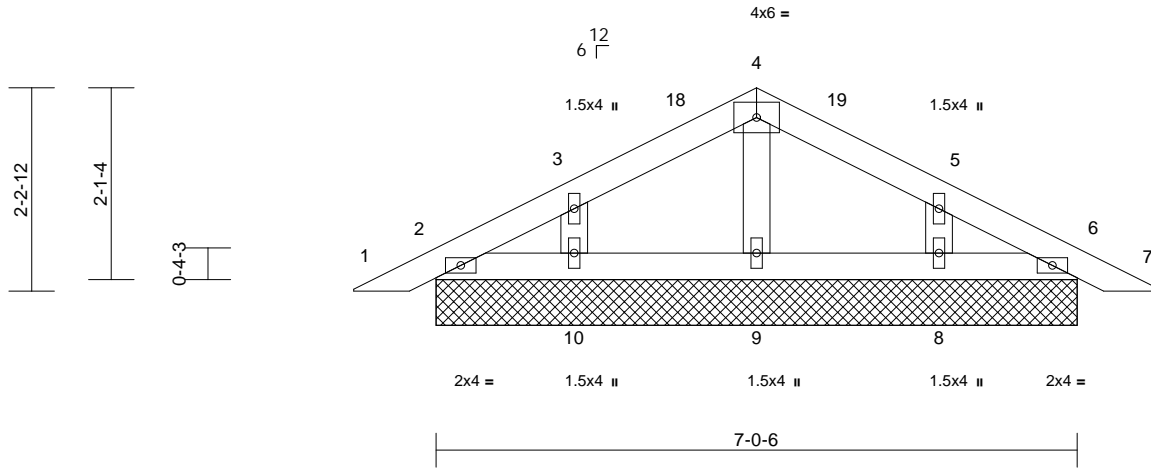
Job 34369-34369A	Truss P1	Truss Type Piggyback	Qty 1	Ply 1	59 SERENITY - ROOF Job Reference (optional)	155168900
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84 Components (Dunn), Dunn, NC - 28334,

Run: 8.88 S 8.62 Oct 26 2022 Print: 8.620 S Oct 26 2022 MiTek Industries, Inc. Tue Nov 08 16:35:32  
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Page: 1

-0-10-13	3-6-3	7-0-6	7-11-3
0-10-13	3-6-3	3-6-3	0-10-13



Scale = 1:25.3

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	0.06	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	15	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0											
										Weight: 29 lb	FT = 20%	

**LUMBER**

- TOP CHORD 2x4 SP No.2
- BOT CHORD 2x4 SP No.2
- OTHERS 2x4 SP No.3

**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=7-0-6, 6=7-0-6, 8=7-0-6, 9=7-0-6, 10=7-0-6, 11=7-0-6, 15=7-0-6
- Max Horiz 2=-46 (LC 17), 11=-46 (LC 17)
- Max Uplift 2=-20 (LC 16), 6=29 (LC 17), 8=-87 (LC 17), 10=-88 (LC 16), 11=-20 (LC 16), 15=-29 (LC 17)
- Max Grav 2=97 (LC 22), 6=97 (LC 22), 8=163 (LC 24), 9=128 (LC 1), 10=163 (LC 23), 11=97 (LC 22), 15=97 (LC 22)

**FORCES**

- (lb) - Maximum Compression/Maximum Tension
- TOP CHORD 1-2=0/27, 2-3=-33/32, 3-4=-44/84, 4-5=-44/84, 5-6=-18/17, 6-7=0/27
- BOT CHORD 2-10=-12/53, 9-10=-12/53, 8-9=-12/53, 6-8=-12/53
- WEBS 4-9=-87/31, 3-10=-127/163, 5-8=-127/163

**NOTES**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- 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 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 1-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 20 lb uplift at joint 2, 29 lb uplift at joint 6, 88 lb uplift at joint 10, 87 lb uplift at joint 8, 20 lb uplift at joint 2 and 29 lb uplift at joint 6.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

**LOAD CASE(S)** Standard



November 9, 2022

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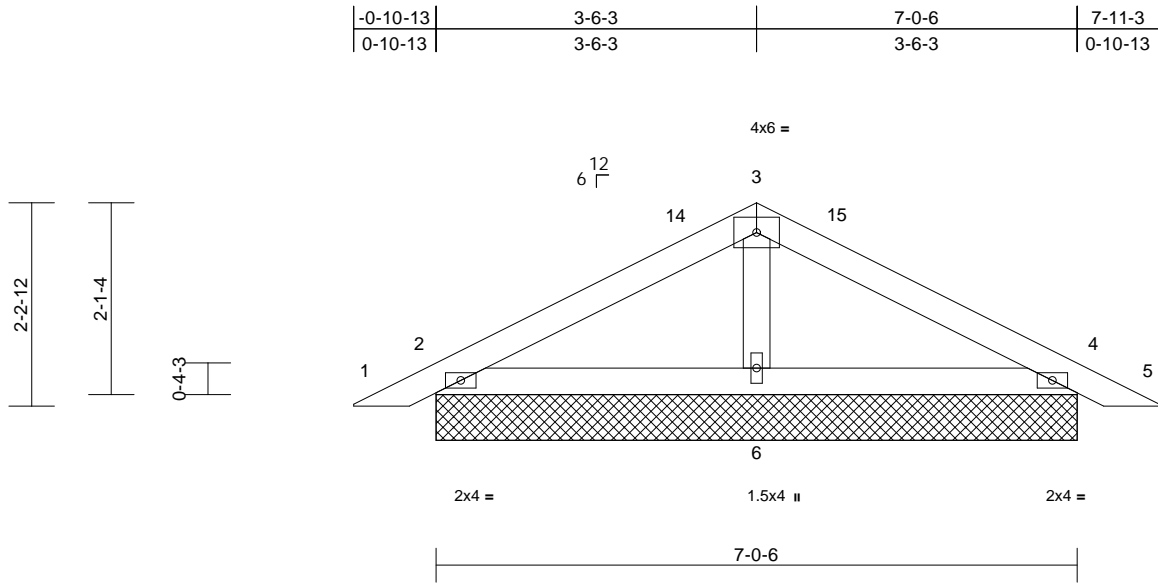
818 Soundside Road  
Edenton, NC 27932

Job 34369-34369A	Truss P2	Truss Type Piggyback	Qty 9	Ply 1	59 SERENITY - ROOF Job Reference (optional)	155168901
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84 Components (Dunn), Dunn, NC - 28334,

Run: 8.88 S 8.62 Oct 26 2022 Print: 8.620 S Oct 26 2022 MiTek Industries, Inc. Tue Nov 08 16:35:33  
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Page: 1



Scale = 1:25.3

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	0.15	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.16	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0											
										Weight: 27 lb	FT = 20%	

#### LUMBER

TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
OTHERS 2x4 SP No.3

#### 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=7-0-6, 4=7-0-6, 6=7-0-6,  
7=7-0-6, 11=7-0-6  
Max Horiz 2=-46 (LC 17), 7=-46 (LC 17)  
Max Uplift 2=-73 (LC 16), 4=-82 (LC 17),  
6=-37 (LC 16), 7=-73 (LC 16),  
11=-82 (LC 17)  
Max Grav 2=184 (LC 1), 4=184 (LC 1), 6=266  
(LC 1), 7=184 (LC 1), 11=184 (LC 1)

#### FORCES

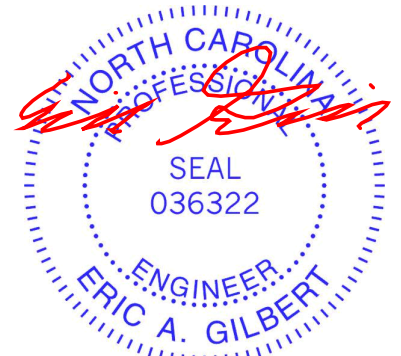
(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/27, 2-3=-90/99, 3-4=-90/99, 4-5=0/27  
BOT CHORD 2-6=-23/51, 4-6=-20/51  
WEBS 3-6=-125/80

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 1-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 73 lb uplift at joint 2, 82 lb uplift at joint 4, 37 lb uplift at joint 6, 73 lb uplift at joint 2 and 82 lb uplift at joint 4.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard



November 9, 2022

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

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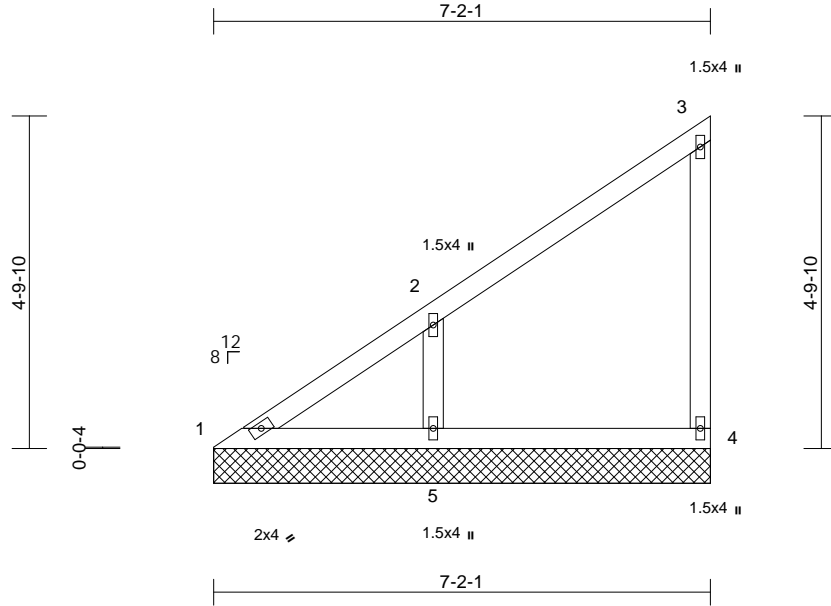
818 Soundside Road  
Edenton, NC 27932

Job 34369-34369A	Truss V1	Truss Type Valley	Qty 1	Ply 1	59 SERENITY - ROOF Job Reference (optional)	155168902
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84 Components (Dunn), Dunn, NC - 28334,

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Page: 1



Scale = 1:33.3

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	0.21	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.12	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.08	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0											
											Weight: 31 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3  
OTHERS 2x4 SP No.3

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

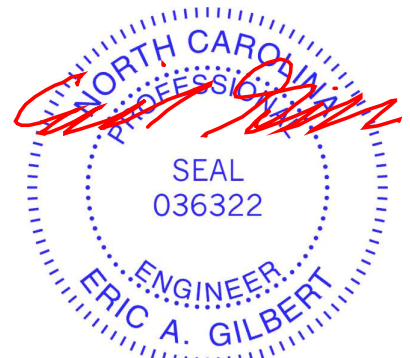
**REACTIONS** (size) 1=7-2-1, 4=7-2-1, 5=7-2-1  
Max Horiz 1=233 (LC 14)  
Max Uplift 4=-79 (LC 14), 5=-206 (LC 14)  
Max Grav 1=111 (LC 23), 4=138 (LC 21), 5=393 (LC 21)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-249/220, 2-3=-99/67, 3-4=-128/105  
BOT CHORD 1-5=-79/122, 4-5=0/0  
WEBS 2-5=-345/273

**NOTES**

- 1) Wind: ASCE 7-10; Vult=150mph (3-second gust)  
Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft;  
Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; end vertical left exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load; Lumber DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (flat roof snow; Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- 4) Gable requires continuous bottom chord bearing.
- 5) Gable studs spaced at 4'-0-0 oc.

- 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 1'-00-00 wide will fit between the bottom chord and any other members.
  - 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 79 lb uplift at joint 4 and 206 lb uplift at joint 5.
  - 9) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- LOAD CASE(S)** Standard



November 9, 2022

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**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



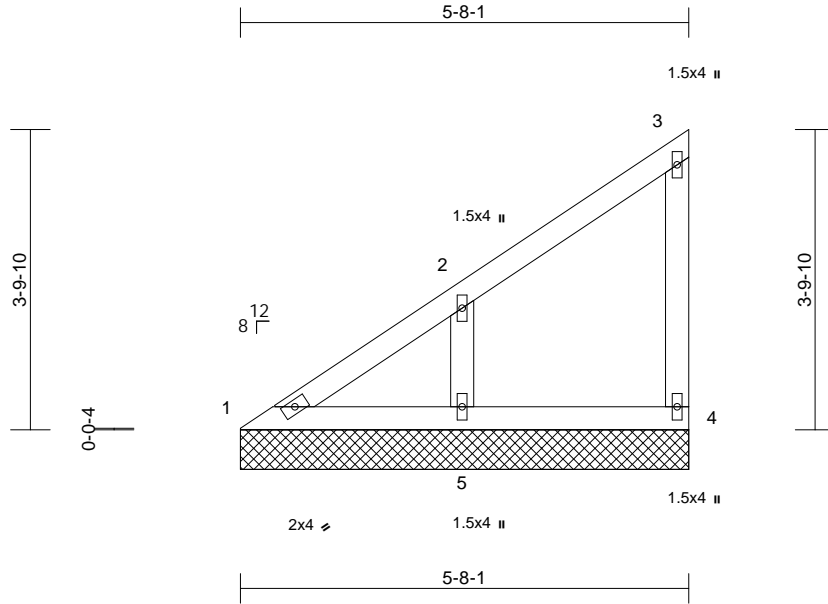
818 Soundside Road  
Edenton, NC 27932

Job 34369-34369A	Truss V2	Truss Type Valley	Qty 1	Ply 1	59 SERENITY - ROOF Job Reference (optional)	155168903
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84 Components (Dunn), Dunn, NC - 28334,

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Page: 1



Scale = 1:29.1

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	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP							
BCDL	10.0									Weight: 24 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3  
OTHERS 2x4 SP No.3

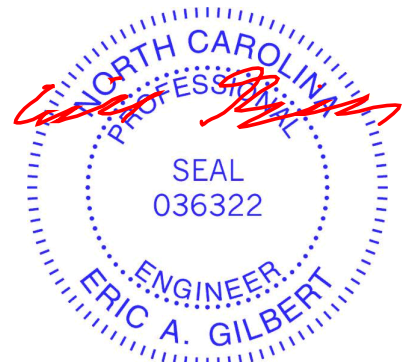
**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 5-8-1 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 1=5-8-1, 4=5-8-1, 5=5-8-1  
Max Horiz 1=182 (LC 14)  
Max Uplift 4=-54 (LC 14), 5=-157 (LC 14)  
Max Grav 1=93 (LC 27), 4=92 (LC 21), 5=305 (LC 21)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-185/164, 2-3=-70/47, 3-4=-90/76  
BOT CHORD 1-5=-76/118, 4-5=0/0  
WEBS 2-5=-260/205

- NOTES**
- 1) Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; end vertical left exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load; Lumber DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (flat roof snow; Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
  - 4) Gable requires continuous bottom chord bearing.
  - 5) Gable studs spaced at 4-0-0 oc.

- 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 1-00-00 wide will fit between the bottom chord and any other members.
  - 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 54 lb uplift at joint 4 and 157 lb uplift at joint 5.
  - 9) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- LOAD CASE(S)** Standard



November 9, 2022

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**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

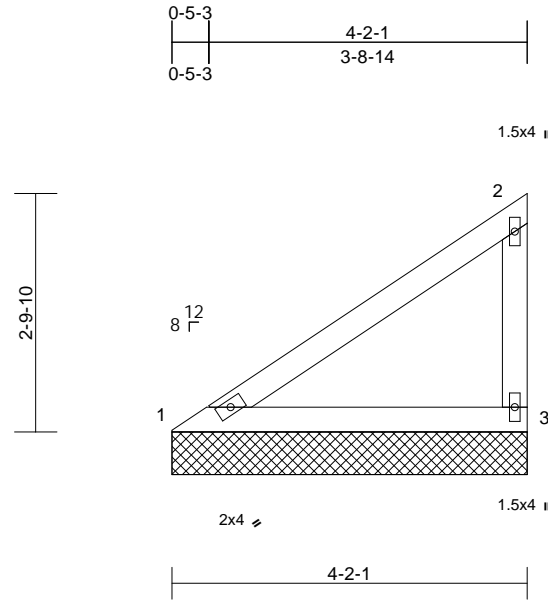
818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	59 SERENITY - ROOF	155168904
34369-34369A	V3	Valley	1	1	Job Reference (optional)	

84 Components (Dunn), Dunn, NC - 28334,

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Page: 1



Scale = 1:27

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	0.21	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.22	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0											
										Weight: 16 lb	FT = 20%	

**LUMBER**

TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x4 SP No.2  
 WEBS 2x4 SP No.3

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 4-2-1 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS**

(size) 1=4-2-1, 3=4-2-1  
 Max Horiz 1=130 (LC 14)  
 Max Uplift 1=-14 (LC 14), 3=-96 (LC 14)  
 Max Grav 1=161 (LC 1), 3=180 (LC 21)

**FORCES**

(lb) - Maximum Compression/Maximum Tension

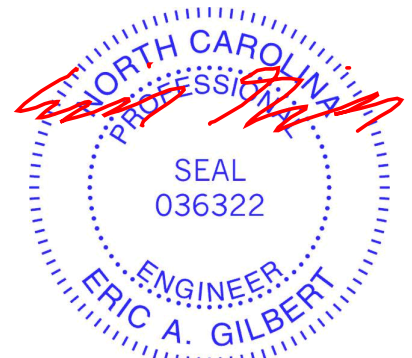
TOP CHORD 1-2=-222/73, 2-3=-137/102  
 BOT CHORD 1-3=-136/239

**NOTES**

- 1) Wind: ASCE 7-10; Vult=150mph (3-second gust)  
 Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft;  
 Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; end vertical left exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load; Lumber DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (flat roof snow; Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- 4) Gable requires continuous bottom chord bearing.
- 5) Gable studs spaced at 4-0-0 oc.
- 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 1-00-00 wide will fit between the bottom chord and any other members.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 96 lb uplift at joint 3 and 14 lb uplift at joint 1.
- 9) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



November 9, 2022

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



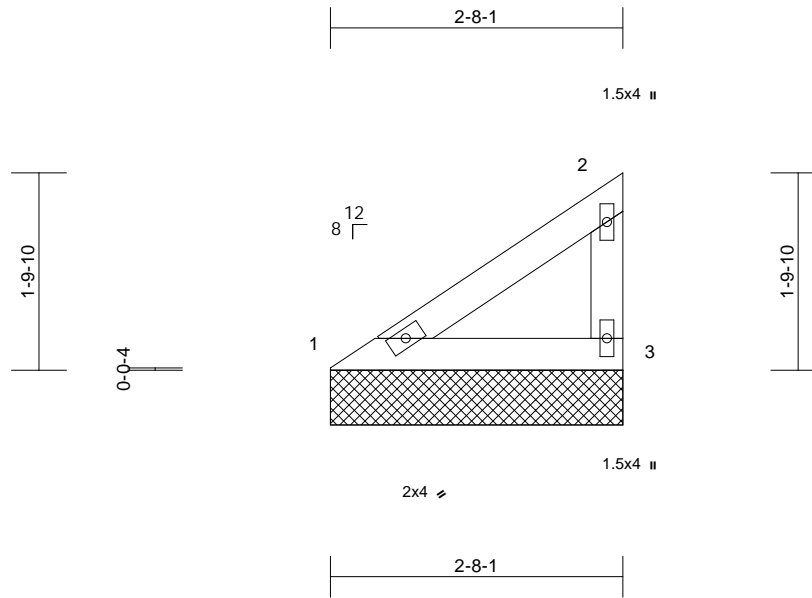
818 Soundside Road  
 Edenton, NC 27932

Job 34369-34369A	Truss V4	Truss Type Valley	Qty 1	Ply 1	59 SERENITY - ROOF Job Reference (optional)	155168905
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84 Components (Dunn), Dunn, NC - 28334,

Run: 8.88 S 8.62 Oct 26 2022 Print: 8.620 S Oct 26 2022 MiTek Industries, Inc. Tue Nov 08 16:35:34  
ID:Eogs09uPFTRm5zsSIDS2bXyLCyA-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWRCDoi7J4zJC?f

Page: 1



Scale = 1:21

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	0.07	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.09	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 10 lb	FT = 20%

**LUMBER**

TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 2-8-1 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 1=2-8-1, 3=2-8-1

Max Horiz 1=79 (LC 14)  
Max Uplift 1=-11 (LC 14), 3=-58 (LC 14)  
Max Grav 1=101 (LC 1), 3=112 (LC 21)

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

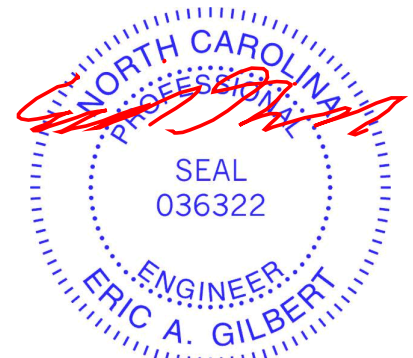
TOP CHORD 1-2=-127/43, 2-3=-80/58  
BOT CHORD 1-3=-77/134

**NOTES**

- 1) Wind: ASCE 7-10; Vult=150mph (3-second gust)  
Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft;  
Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; end vertical left exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load; Lumber DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (flat roof snow; Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- 4) Gable requires continuous bottom chord bearing.
- 5) Gable studs spaced at 2-0-0 oc.
- 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 1-00-00 wide will fit between the bottom chord and any other members.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 58 lb uplift at joint 3 and 11 lb uplift at joint 1.
- 9) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



November 9, 2022

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**

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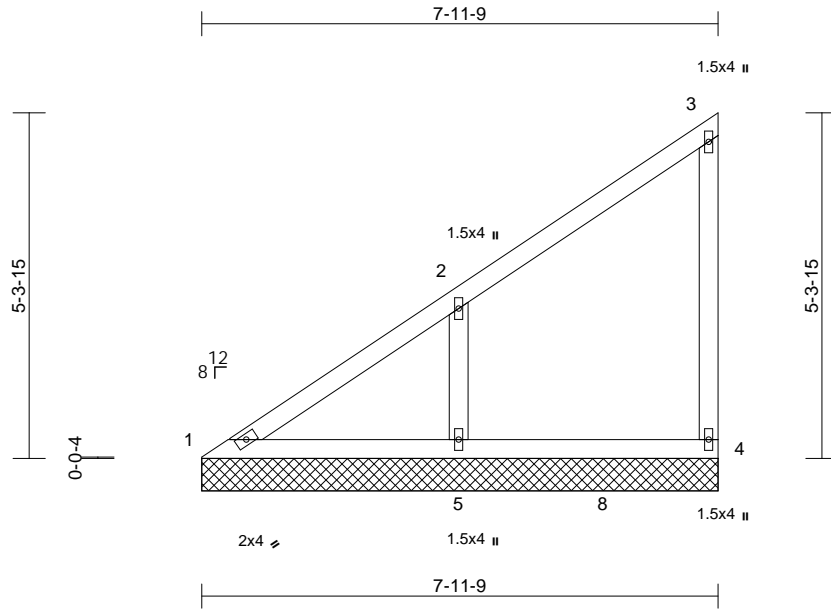
818 Soundside Road  
Edenton, NC 27932

Job 34369-34369A	Truss V5	Truss Type Valley	Qty 1	Ply 1	59 SERENITY - ROOF Job Reference (optional)	155168906
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84 Components (Dunn), Dunn, NC - 28334,

Run: 8.88 S 8.62 Oct 26 2022 Print: 8.620 S Oct 26 2022 MiTek Industries, Inc. Tue Nov 08 16:35:34  
ID:iGmfoJ6i?jDFkEvL?nGKKyLCXu-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWRCDoi7J4zJC?f

Page: 1



Scale = 1:35.5

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP							
BCDL	10.0									Weight: 35 lb	FT = 20%

LUMBER	
TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.3

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

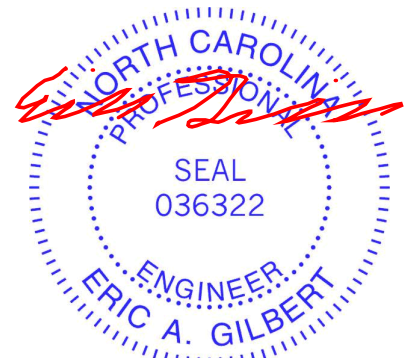
REACTIONS	
(size)	1=7-11-9, 4=7-11-9, 5=7-11-9
Max Horiz	1=260 (LC 14)
Max Uplift	4=-75 (LC 14), 5=-230 (LC 14)
Max Grav	1=132 (LC 23), 4=166 (LC 21), 5=450 (LC 21)

FORCES	
(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-258/230, 2-3=-99/64, 3-4=-124/101
BOT CHORD	1-5=-106/178, 4-5=0/0
WEBS	2-5=-369/285

**NOTES**

- 1) Wind: ASCE 7-10; Vult=150mph (3-second gust)  
Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft;  
Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; end vertical left exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- 4) Gable requires continuous bottom chord bearing.
- 5) Gable studs spaced at 4-0-0 oc.

- 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 1-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 75 lb uplift at joint 4 and 230 lb uplift at joint 5.
  - 9) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- LOAD CASE(S)** Standard



November 9, 2022

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818 Soundside Road  
Edenton, NC 27932

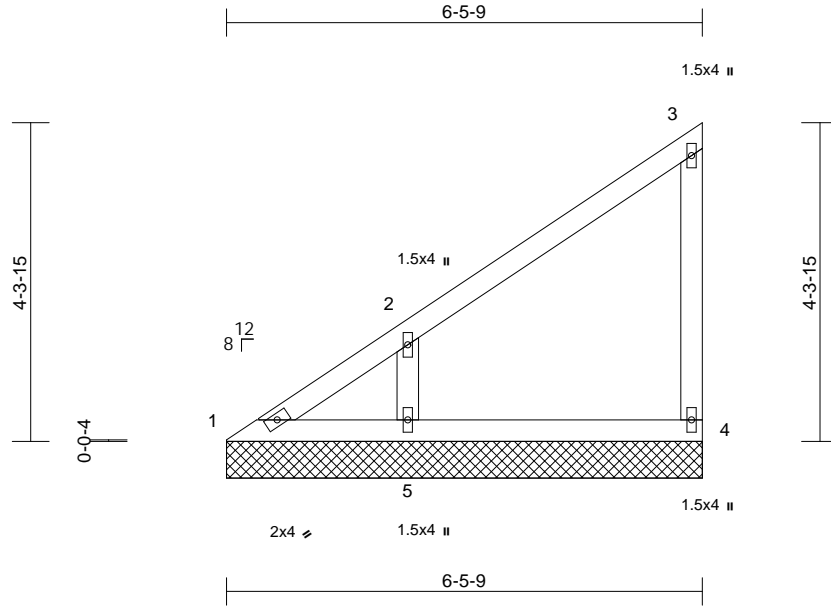


Job 34369-34369A	Truss V6	Truss Type Valley	Qty 1	Ply 1	59 SERENITY - ROOF Job Reference (optional)	155168907
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84 Components (Dunn), Dunn, NC - 28334,

Run: 8.88 S 8.62 Oct 26 2022 Print: 8.620 S Oct 26 2022 MiTek Industries, Inc. Tue Nov 08 16:35:34  
ID:XiI5M7JM?DspoL1Ar3aFWvYLcXd-RfC?PsB70Hq3NSgPqnL8w3uITxbGKWrCDoi7J4zJC?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	0.22	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.12	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.08	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 28 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3  
OTHERS 2x4 SP No.3

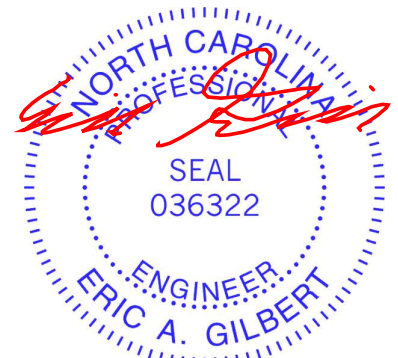
**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 1=6-5-9, 4=6-5-9, 5=6-5-9  
Max Horiz 1=209 (LC 14)  
Max Uplift 1=-3 (LC 12), 4=-80 (LC 14), 5=-189 (LC 14)  
Max Grav 1=96 (LC 14), 4=141 (LC 21), 5=365 (LC 21)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-248/217, 2-3=-98/68, 3-4=-130/107  
BOT CHORD 1-5=-49/65, 4-5=0/0  
WEBS 2-5=-338/276

- NOTES**
- 1) Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; end vertical left exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load); Lumber DOL=1.15 Plate DOL=1.15; Pf=20.0 psf (flat roof snow); Lumber DOL=1.15 Plate DOL=1.15; Category II; Exp B; Partially Exp.; Ct=1.10
  - 4) Gable requires continuous bottom chord bearing.

- 5) Gable studs spaced at 4-0-0 oc.
  - 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 1-00-00 wide will fit between the bottom chord and any other members.
  - 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 80 lb uplift at joint 4, 3 lb uplift at joint 1 and 189 lb uplift at joint 5.
  - 9) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- LOAD CASE(S)** Standard



November 9, 2022

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**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



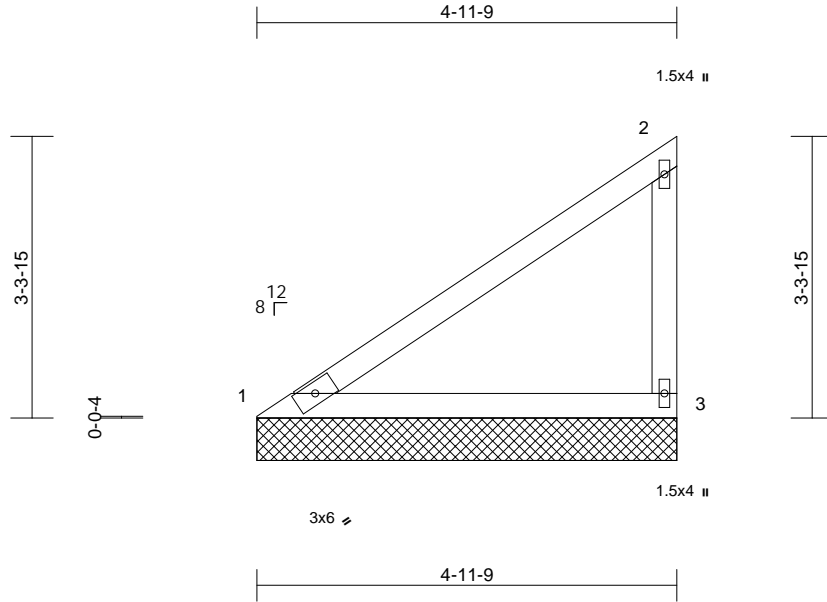
818 Soundside Road  
Edenton, NC 27932

Job 34369-34369A	Truss V7	Truss Type Valley	Qty 1	Ply 1	59 SERENITY - ROOF Job Reference (optional)	155168908
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84 Components (Dunn), Dunn, NC - 28334,

Run: 8.88 S 8.62 Oct 26 2022 Print: 8.620 S Oct 26 2022 MiTek Industries, Inc. Tue Nov 08 16:35:34  
ID:bZ31mlZX3gVqpZ8Da\_SBTlyLCxI-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC7f

Page: 1



Scale = 1:27.2

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	0.32	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.32	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.01	3	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0											
											Weight: 19 lb	FT = 20%

#### LUMBER

TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3

#### BRACING

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

#### REACTIONS (size) 1=4-11-9, 3=4-11-9

Max Horiz 1=157 (LC 14)  
Max Uplift 1=-16 (LC 14), 3=-116 (LC 14)  
Max Grav 1=193 (LC 1), 3=215 (LC 21)

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

TOP CHORD 1-2=-272/88, 2-3=-167/126  
BOT CHORD 1-3=-167/294

#### NOTES

- 1) Wind: ASCE 7-10; Vult=150mph (3-second gust)  
Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft;  
Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; end vertical left exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load; Lumber DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (flat roof snow; Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- 4) Gable requires continuous bottom chord bearing.
- 5) Gable studs spaced at 4-0-0 oc.
- 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 1-00-00 wide will fit between the bottom chord and any other members.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 116 lb uplift at joint 3 and 16 lb uplift at joint 1.
- 9) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



November 9, 2022

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

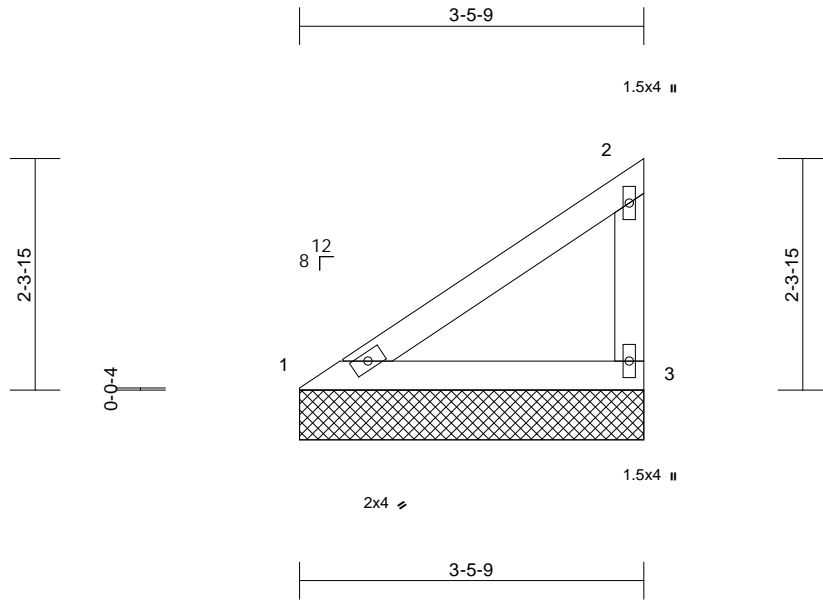
818 Soundside Road  
Edenton, NC 27932

Job 34369-34369A	Truss V8	Truss Type Valley	Qty 1	Ply 1	59 SERENITY - ROOF Job Reference (optional)	155168909
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84 Components (Dunn), Dunn, NC - 28334,

Run: 8.88 S 8.62 Oct 26 2022 Print: 8.620 S Oct 26 2022 MiTek Industries, Inc. Tue Nov 08 16:35:35  
ID:EtnZlPj3EM07FP3WHVg?MtyLCx6-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKwRCDoi7J4zJC?f

Page: 1



Scale = 1:23.2					
<b>Loading</b> (psf)	<b>Spacing</b> 2-0-0	<b>CSI</b>	<b>DEFL</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	Plate Grip DOL 1.15	TC 0.13	Vert(LL) n/a - n/a 999	MT20	244/190
Snow (Pf) 20.0	Lumber DOL 1.15	BC 0.15	Vert(TL) n/a - n/a 999		
TCDL 10.0	Rep Stress Incr YES	WB 0.00	Horiz(TL) 0.00 3 n/a n/a		
BCLL 0.0*	Code IRC2015/TPI2014	Matrix-MP			
BCDL 10.0				Weight: 13 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 3-5-9 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 1=3-5-9, 3=3-5-9  
Max Horiz 1=106 (LC 14)  
Max Uplift 1=-13 (LC 14), 3=-78 (LC 14)  
Max Grav 1=133 (LC 1), 3=148 (LC 21)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-178/59, 2-3=-110/81  
BOT CHORD 1-3=-109/190

- \* 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 1-00-00 wide will fit between the bottom chord and any other members.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 78 lb uplift at joint 3 and 13 lb uplift at joint 1.
  - This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- LOAD CASE(S)** Standard

- NOTES**
- Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; end vertical left 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 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
  - Gable requires continuous bottom chord bearing.
  - Gable studs spaced at 2-0-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.



November 9, 2022

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



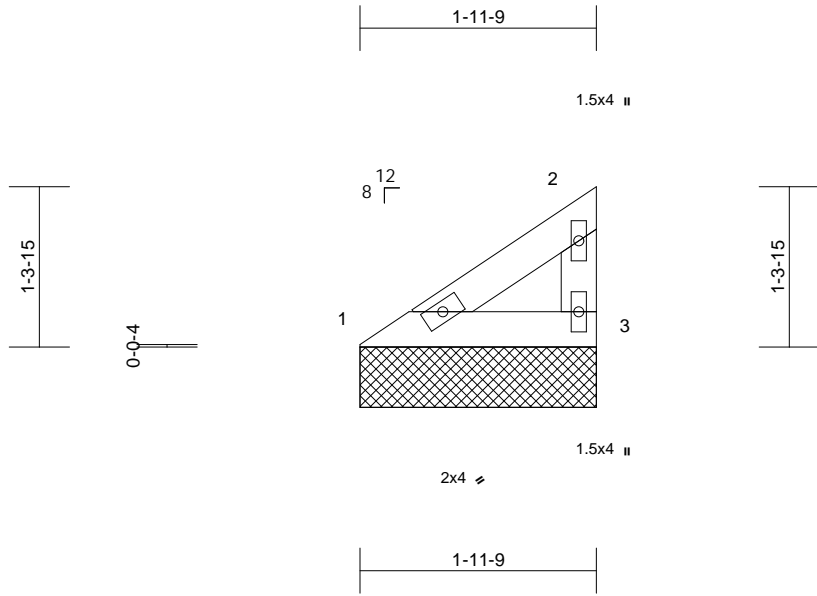
818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	59 SERENITY - ROOF	155168910
34369-34369A	V9	Valley	1	1	Job Reference (optional)	

84 Components (Dunn), Dunn, NC - 28334,

Run: 8.88 S 8.62 Oct 26 2022 Print: 8.620 S Oct 26 2022 MiTek Industries, Inc. Tue Nov 08 16:35:35  
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Page: 1



Scale = 1:19.1

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	0.03	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.04	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 7 lb	FT = 20%

**LUMBER**  
 TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x4 SP No.2  
 WEBS 2x4 SP No.3

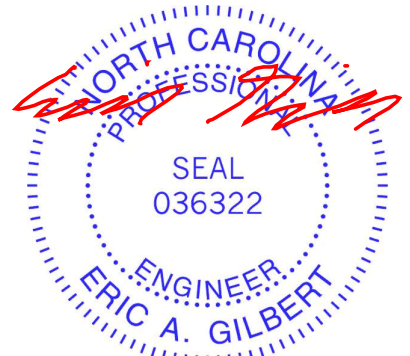
**BRACING**  
 TOP CHORD Structural wood sheathing directly applied or 1-11-15 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 1=1-11-9, 3=1-11-9  
 Max Horiz 1=54 (LC 14)  
 Max Uplift 1=-9 (LC 14), 3=-41 (LC 14)  
 Max Grav 1=73 (LC 1), 3=80 (LC 21)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-2=-81/28, 2-3=-53/36  
 BOT CHORD 1-3=-49/84

- \* 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 1-00-00 wide will fit between the bottom chord and any other members.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 9 lb uplift at joint 1 and 41 lb uplift at joint 3.
  - This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- LOAD CASE(S)** Standard

- NOTES**
- Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; end vertical left 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 7-10; Pr=20.0 psf (roof live load; Lumber DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (flat roof snow; Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
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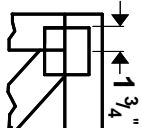
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall 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, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



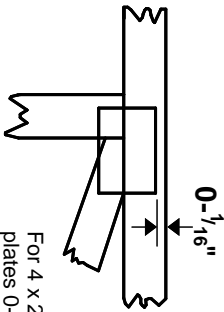
818 Soundside Road  
 Edenton, NC 27932

# Symbols

## PLATE LOCATION AND ORIENTATION



Center plate on joint unless x, y offsets are indicated. Dimensions are in ft-in-sixteenths. Apply plates to both sides of truss and fully embed teeth.



For 4 x 2 orientation, locate plates 0- 1/16" from outside edge of truss.



This symbol indicates the required direction of slots in connector plates.

\* Plate location details available in **MITek 20/20 software** or upon request.

## PLATE SIZE

4 X 4

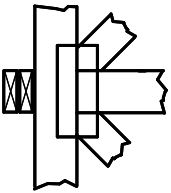
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## 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



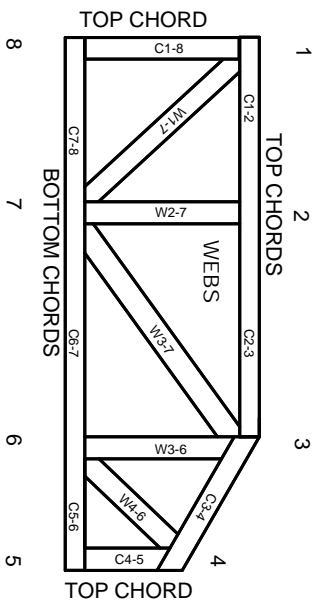
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

### Industry Standards:

ANSI/TP1: National Design Specification for Metal Plate Connected Wood Truss Construction.  
DSB-89: Design Standard for Bracing, Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

# Numbering System

6-4-8  
dimensions shown in ft-in-sixteenths  
(Drawings not to scale)



**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-1311, ESR-1352, ESR1988  
ER-3907, ESR-2362, ESR-1397, ESR-3282

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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MITek Engineering Reference Sheet: Mill-7473 rev. 5/19/2020



# 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.