

Trenco
818 Soundside Rd
Edenton, NC 27932

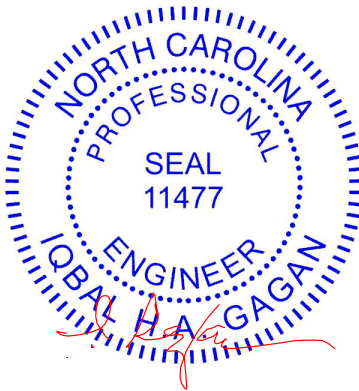
Re: 24080051-01
188 Serenity-Roof-B330 A CP TMB GRH

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Carter Components (Sanford, NC)).

Pages or sheets covered by this seal: I67780995 thru I67781022

My license renewal date for the state of North Carolina is December 31, 2024.

North Carolina COA: C-0844



August 27, 2024

Gagan, Iqbal

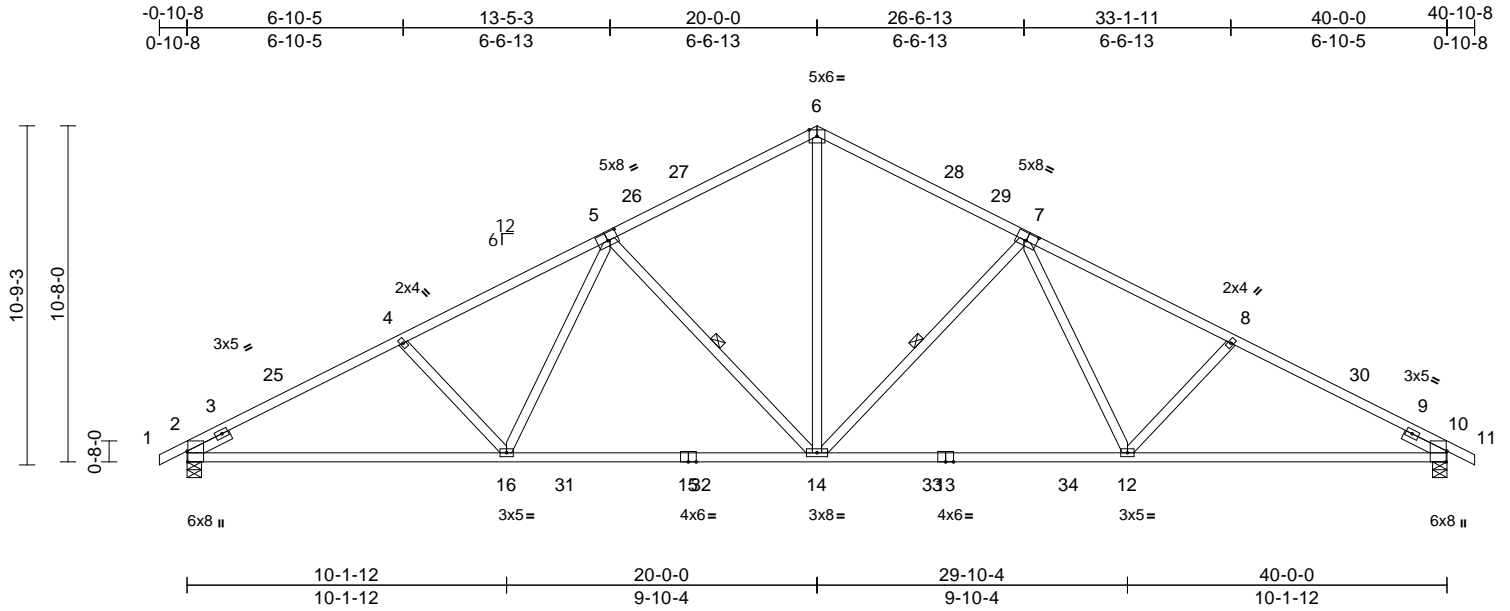
IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which 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 24080051-01	Truss A	Truss Type Common	Qty 4	Ply 1	188 Serenity-Roof-B330 A CP TMB GRH Job Reference (optional)	I67780995
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Aug 15 2024 Print: 8.730 S Aug 15 2024 MiTek Industries, Inc. Fri Aug 23 15:21:48
ID:CttcSzQgwNcSj9X9hY?FsHzF_uO-RfC?PsB70Hq3NSgPqnL8w3uITxbGKWrCdoi7J4zJC?F

Page: 1



Scale = 1:73.1

Plate Offsets (X, Y): [2:0-4-1,Edge], [5:0-4-0,0-3-0], [7:0-4-0,0-3-0], [10:0-4-1,Edge]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.87	Vert(LL)	-0.37	14-16	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	1.00	Vert(CT)	-0.64	14-16	>754	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.41	Horz(CT)	0.15	10	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 213 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.1
WEBS 2x4 SP No.3 *Except* 14-6:2x4 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 2-2-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 1 Row at midpt 7-14, 5-14

REACTIONS (size) 2=0-5-8, 10=0-5-8
Max Horiz 2=-165 (LC 15)
Max Uplift 2=-170 (LC 14), 10=-170 (LC 15)
Max Grav 2=1809 (LC 3), 10=1809 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-4=-3431/321, 4-6=-3226/333, 6-8=-3226/333, 8-10=-3431/321, 10-11=0/23
BOT CHORD 2-16=-330/2978, 14-16=-191/2524, 12-14=-109/2524, 10-12=-185/2978
WEBS 6-14=-114/1658, 7-14=-853/247, 7-12=-25/626, 8-12=-301/191, 5-14=-853/247, 5-16=-25/626, 4-16=-301/191

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

- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 3-1-8, Interior (1) 3-1-8 to 16-0-0, Exterior(2R) 16-0-0 to 24-0-0, Interior (1) 24-0-0 to 36-10-8, Exterior(2E) 36-10-8 to 40-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 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 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 10. This connection is for uplift only and does not consider lateral forces.

LOAD CASE(S) Standard



August 27, 2024

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

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



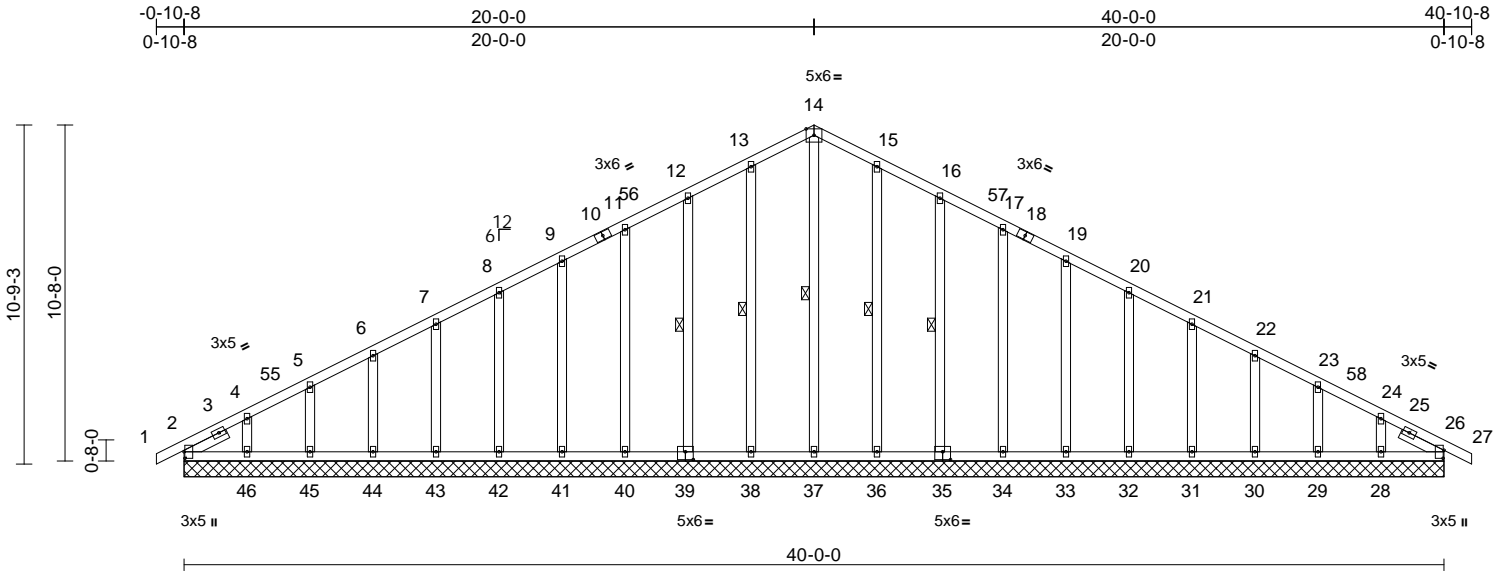
818 Soundside Road
Edenton, NC 27932

Job 24080051-01	Truss AGE	Truss Type Common Supported Gable	Qty 1	Ply 1	188 Serenity-Roof-B330 A CP TMB GRH Job Reference (optional)	167780996
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Aug 15 2024 Print: 8.730 S Aug 15 2024 MiTek Industries, Inc. Fri Aug 23 15:21:49
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Page: 1

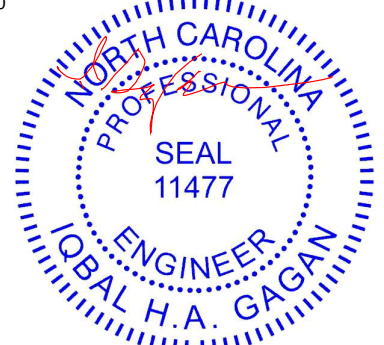


Scale = 1:73.1

Plate Offsets (X, Y): [2:0-2-8,0-0-5], [26:0-3-1,0-0-5], [35:0-3-0,0-3-0], [39:0-3-0,0-3-0]

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	0.08	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	0.15	Horz(CT)	0.01	26	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 286 lb	FT = 20%

LUMBER		Max Grav	2=162 (LC 27), 26=139 (LC 1), 28=161 (LC 37), 29=160 (LC 1), 30=160 (LC 37), 31=160 (LC 1), 32=161 (LC 22), 33=160 (LC 37), 34=179 (LC 22), 35=233 (LC 22), 36=247 (LC 22), 37=200 (LC 28), 38=247 (LC 21), 39=233 (LC 21), 40=179 (LC 21), 41=160 (LC 36), 42=161 (LC 21), 43=160 (LC 1), 44=160 (LC 36), 45=160 (LC 1), 46=161 (LC 36), 47=162 (LC 27), 51=139 (LC 1)	WEBS	14-37=-205/45, 13-38=-205/66, 12-39=-193/83, 11-40=-140/76, 9-41=-126/77, 8-42=-126/77, 7-43=-126/77, 6-44=-127/77, 5-45=-126/80, 4-46=-131/135, 15-36=-205/66, 16-35=-193/83, 17-34=-140/76, 19-33=-126/77, 20-32=-126/77, 21-31=-126/77, 22-30=-127/77, 23-29=-126/80, 24-28=-131/135
TOP CHORD	2x4 SP No.2				
BOT CHORD	2x4 SP No.2				
OTHERS	2x4 SP No.3 *Except* 37-14:2x4 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 6-0-0 oc purlins.				
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.				
WEBS	1 Row at midpt	14-37, 13-38, 12-39, 15-36, 16-35			
REACTIONS (size)	2=40-0-0, 26=40-0-0, 28=40-0-0, 29=40-0-0, 30=40-0-0, 31=40-0-0, 32=40-0-0, 33=40-0-0, 34=40-0-0, 35=40-0-0, 36=40-0-0, 37=40-0-0, 38=40-0-0, 39=40-0-0, 40=40-0-0, 41=40-0-0, 42=40-0-0, 43=40-0-0, 44=40-0-0, 45=40-0-0, 46=40-0-0, 47=40-0-0, 51=40-0-0				
Max Horiz	2=165 (LC 14), 47=165 (LC 14)				
Max Uplift	2=-21 (LC 10), 28=-80 (LC 15), 29=-36 (LC 15), 30=-46 (LC 15), 31=-43 (LC 15), 32=-44 (LC 15), 33=-44 (LC 15), 34=-44 (LC 15), 35=-48 (LC 15), 36=-35 (LC 15), 38=-39 (LC 14), 39=-47 (LC 14), 40=-44 (LC 14), 41=-43 (LC 14), 42=-44 (LC 14), 43=-43 (LC 14), 44=-46 (LC 14), 45=-33 (LC 14), 46=-96 (LC 14), 47=-21 (LC 10)				
FORCES	(lb) - Maximum Compression/Maximum Tension				
TOP CHORD	1-2=0/23, 2-4=-216/79, 4-5=-167/82, 5-6=-129/94, 6-7=-96/108, 7-8=-74/131, 8-9=-62/154, 9-11=-72/178, 11-12=-85/222, 12-13=-104/271, 13-14=-121/311, 14-15=-121/311, 15-16=-104/271, 16-17=-85/222, 17-19=-72/177, 19-20=-60/132, 20-21=-48/86, 21-22=-44/41, 22-23=-66/27, 23-24=-99/35, 24-26=-144/59, 26-27=0/23				
BOT CHORD	2-46=-44/167, 45-46=-44/167, 44-45=-44/167, 43-44=-44/167, 42-43=-44/167, 41-42=-44/167, 40-41=-44/167, 38-40=-44/167, 37-38=-44/166, 36-37=-44/166, 34-36=-44/167, 33-34=-44/167, 32-33=-44/167, 31-32=-44/167, 30-31=-44/167, 29-30=-44/167, 28-29=-44/167, 26-28=-44/167				
NOTES					
1)	Unbalanced roof live loads have been considered for this design.				
2)	Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 3-1-8, Exterior(2N) 3-1-8 to 16-0-0, Corner(3R) 16-0-0 to 24-0-0, Exterior(2N) 24-0-0 to 36-10-8, Corner(3E) 36-10-8 to 40-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60				



August 27, 2024

Continued on page 2

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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/TPH Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	188 Serenity-Roof-B330 A CP TMB GRH	I67780996
24080051-01	AGE	Common Supported Gable	1	1	Job Reference (optional)	

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Aug 15 2024 Print: 8.730 S Aug 15 2024 MiTek Industries, Inc. Fri Aug 23 15:21:49
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Page: 2

- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); ls=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 5) Unbalanced snow loads have been considered for this design.
- 6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 7) All plates are 2x4 MT20 unless otherwise indicated.
- 8) Gable requires continuous bottom chord bearing.
- 9) Gable studs spaced at 2-0-0 oc.
- 10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 11) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 21 lb uplift at joint 2, 39 lb uplift at joint 38, 47 lb uplift at joint 39, 44 lb uplift at joint 40, 43 lb uplift at joint 41, 44 lb uplift at joint 42, 43 lb uplift at joint 43, 46 lb uplift at joint 44, 33 lb uplift at joint 45, 96 lb uplift at joint 46, 35 lb uplift at joint 36, 48 lb uplift at joint 35, 44 lb uplift at joint 34, 44 lb uplift at joint 33, 44 lb uplift at joint 32, 43 lb uplift at joint 31, 46 lb uplift at joint 30, 36 lb uplift at joint 29, 80 lb uplift at joint 28 and 21 lb uplift at joint 2.

LOAD CASE(S) Standard



August 27, 2024

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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 and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



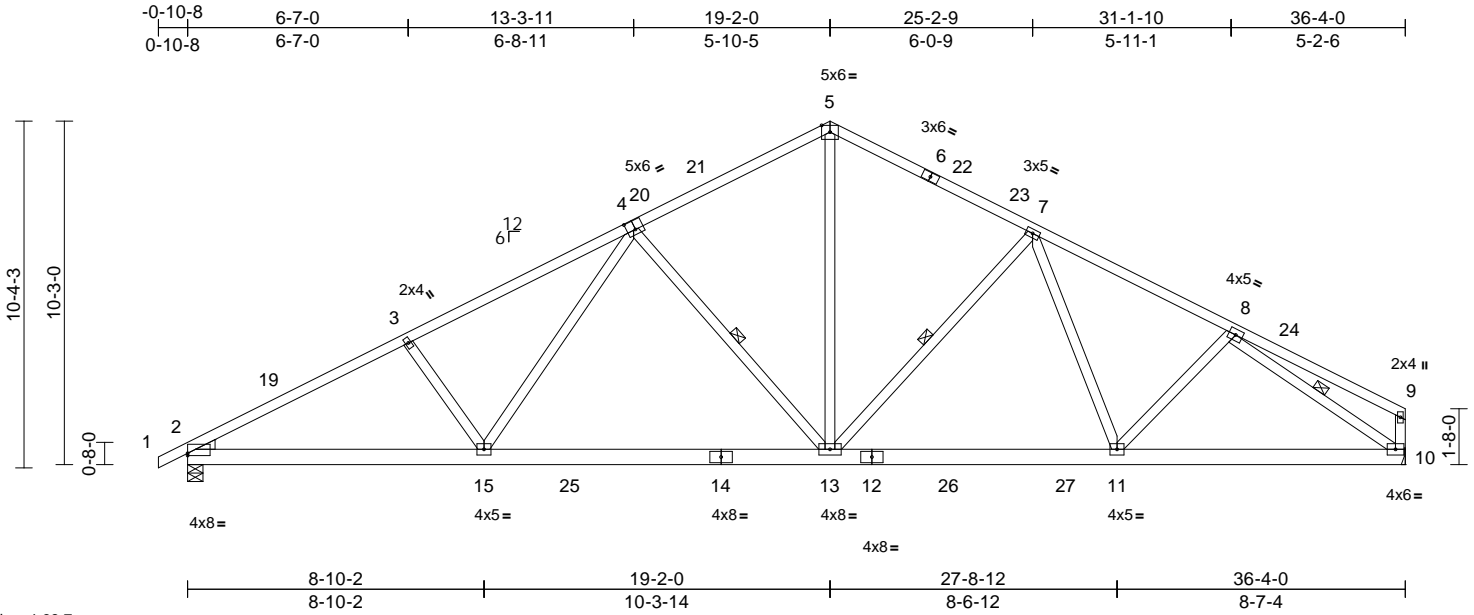
818 Soundside Road
 Edenton, NC 27932

Job 24080051-01	Truss B1	Truss Type Common	Qty 1	Ply 1	188 Serenity-Roof-B330 A CP TMB GRH Job Reference (optional)	167780997
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Carter Components (Sanford, NC), Sanford, NC - 27332,

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Page: 1



Scale = 1:68.7

Plate Offsets (X, Y): [2:Edge,0-0-13], [4:0-3-0,0-3-4]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.76	Vert(LL)	-0.22	13-15	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.76	Vert(CT)	-0.39	13-15	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.56	Horz(CT)	0.08	10	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 234 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
 BOT CHORD 2x6 SP No.2
 WEBS 2x4 SP No.3
 WEDGE Left: 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-10-10 oc purlins, except end verticals.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
 WEBS 1 Row at midpt 4-13, 7-13, 8-10

REACTIONS

(size) 2=0-5-8, 10= Mechanical
 Max Horiz 2=167 (LC 18)
 Max Uplift 2=-162 (LC 14), 10=-129 (LC 15)
 Max Grav 2=1641 (LC 3), 10=1598 (LC 3)

FORCES

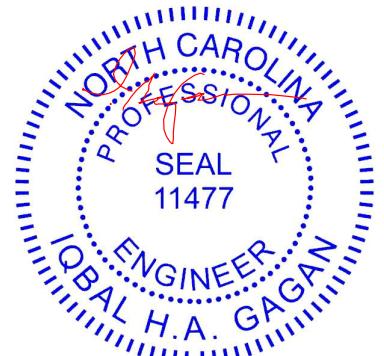
(lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=0/23, 2-3=-3174/283, 3-5=-2991/304, 5-7=-2023/302, 7-8=-2455/274, 8-9=-221/92, 9-10=-214/84
 BOT CHORD 2-15=-317/2791, 13-15=-176/2201, 11-13=-71/2050, 10-11=-147/2026
 WEBS 3-15=-349/201, 4-15=-56/732, 4-13=-783/243, 5-13=-108/1424, 7-13=-537/205, 7-11=0/249, 8-11=0/222, 8-10=-2348/180

NOTES

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

- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-9-2, Interior (1) 2-9-2 to 15-6-6, Exterior(2R) 15-6-6 to 22-9-10, Interior (1) 22-9-10 to 32-6-10, Exterior(2E) 32-6-10 to 36-2-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 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 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 129 lb uplift at joint 10.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.

LOAD CASE(S) Standard



August 27, 2024

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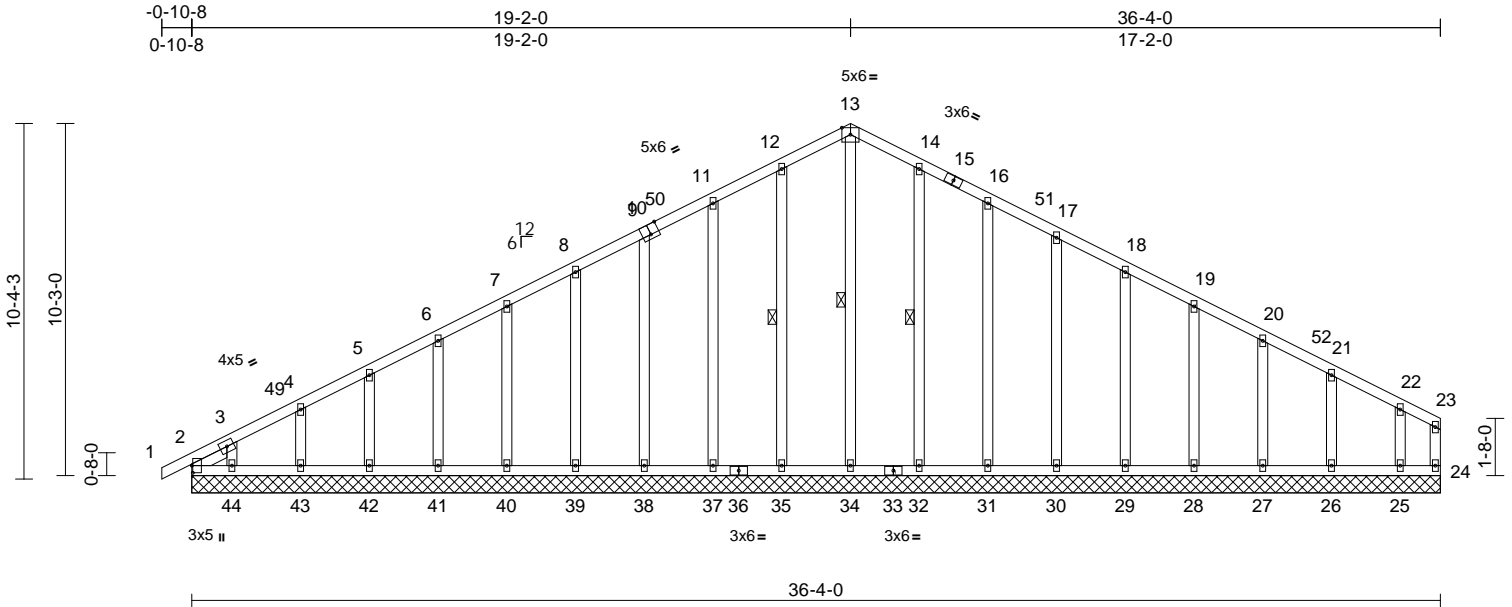
818 Soundside Road
 Edenton, NC 27932

Job 24080051-01	Truss B1GE	Truss Type Common Supported Gable	Qty 1	Ply 1	188 Serenity-Roof-B330 A CP TMB GRH Job Reference (optional)	167780998
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Aug 15 2024 Print: 8.730 S Aug 15 2024 MiTek Industries, Inc. Fri Aug 23 15:21:50
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Page: 1



Scale = 1:67.1

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.10	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	0.23	Horz(CT)	0.00	24	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 259 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 2x4 SP No.3 -- 1-1-15

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 13-34, 12-35, 14-32

REACTIONS (size)
2=36-4-0, 24=36-4-0, 25=36-4-0, 26=36-4-0, 27=36-4-0, 28=36-4-0, 29=36-4-0, 30=36-4-0, 31=36-4-0, 32=36-4-0, 34=36-4-0, 35=36-4-0, 37=36-4-0, 38=36-4-0, 39=36-4-0, 40=36-4-0, 41=36-4-0, 42=36-4-0, 43=36-4-0, 44=36-4-0, 45=36-4-0
Max Horiz 2=166 (LC 18), 45=166 (LC 18)
Max Uplift 2=-67 (LC 10), 25=-111 (LC 15), 26=-38 (LC 15), 27=-45 (LC 15), 28=-43 (LC 15), 29=-44 (LC 15), 30=-43 (LC 15), 31=-49 (LC 15), 32=-34 (LC 15), 35=-39 (LC 14), 37=-47 (LC 14), 38=-43 (LC 14), 39=-44 (LC 14), 40=-44 (LC 14), 41=-44 (LC 14), 42=-44 (LC 14), 43=-44 (LC 14), 44=-88 (LC 14), 45=-67 (LC 10)

Max Grav 2=150 (LC 32), 24=87 (LC 15), 25=131 (LC 37), 26=166 (LC 22), 27=159 (LC 37), 28=161 (LC 22), 29=160 (LC 37), 30=176 (LC 22), 31=228 (LC 22), 32=244 (LC 22), 34=224 (LC 15), 35=244 (LC 21), 37=228 (LC 21), 38=175 (LC 21), 39=160 (LC 36), 40=160 (LC 21), 41=160 (LC 36), 42=159 (LC 21), 43=165 (LC 1), 44=126 (LC 25), 45=150 (LC 32)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-3=-98/66, 3-4=-158/106, 4-5=-128/123, 5-6=-106/146, 6-7=-93/170, 7-8=-80/207, 8-9=-69/252, 9-11=-87/297, 11-12=-107/344, 12-13=-124/384, 13-14=-124/384, 14-16=-107/344, 16-17=-87/297, 17-18=-69/252, 18-19=-51/207, 19-20=-35/161, 20-21=-36/116, 21-22=-43/55, 22-23=-67/47, 23-24=-49/16
BOT CHORD 2-44=-24/81, 43-44=-24/81, 42-43=-24/81, 41-42=-24/81, 40-41=-24/81, 39-40=-24/81, 38-39=-24/81, 37-38=-24/81, 35-37=-24/81, 34-35=-24/81, 32-34=-24/81, 31-32=-24/81, 30-31=-24/81, 29-30=-24/81, 28-29=-24/81, 27-28=-24/81, 26-27=-24/81, 25-26=-24/81, 24-25=-24/81
WEBS 13-34=-267/47, 12-35=-204/63, 11-37=-188/85, 9-38=-135/76, 8-39=-126/77, 7-40=-126/77, 6-41=-127/78, 5-42=-125/74, 4-43=-131/94, 3-44=-105/106, 14-32=-204/62, 16-31=-188/85, 17-30=-136/76, 18-29=-126/77, 19-28=-127/77, 20-27=-126/77, 21-26=-130/112, 22-25=-112/140

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCdL=6.0psf; BCdL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 2-9-2, Exterior(2N) 2-9-2 to 15-6-6, Corner(3R) 15-6-6 to 22-9-10, Exterior(2N) 22-9-10 to 32-6-10, Corner(3E) 32-6-10 to 36-2-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 5) Unbalanced snow loads have been considered for this design.

NOTES



August 27, 2024

Continued on page 2

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

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

Job	Truss	Truss Type	Qty	Ply	188 Serenity-Roof-B330 A CP TMB GRH
24080051-01	B1GE	Common Supported Gable	1	1	I67780998 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Aug 15 2024 Print: 8.730 S Aug 15 2024 MiTek Industries, Inc. Fri Aug 23 15:21:50
ID:va6oJ_bKLZdwDLTYr9P9wpzF_UL-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 2

- 6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 7) All plates are 2x4 MT20 unless otherwise indicated.
- 8) Gable requires continuous bottom chord bearing.
- 9) Gable studs spaced at 2-0-0 oc.
- 10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 11) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 67 lb uplift at joint 2, 39 lb uplift at joint 35, 47 lb uplift at joint 37, 43 lb uplift at joint 38, 44 lb uplift at joint 39, 44 lb uplift at joint 40, 44 lb uplift at joint 41, 44 lb uplift at joint 42, 44 lb uplift at joint 43, 88 lb uplift at joint 44, 34 lb uplift at joint 32, 49 lb uplift at joint 31, 43 lb uplift at joint 30, 44 lb uplift at joint 29, 43 lb uplift at joint 28, 45 lb uplift at joint 27, 38 lb uplift at joint 26, 111 lb uplift at joint 25 and 67 lb uplift at joint 2.

LOAD CASE(S) Standard



August 27, 2024

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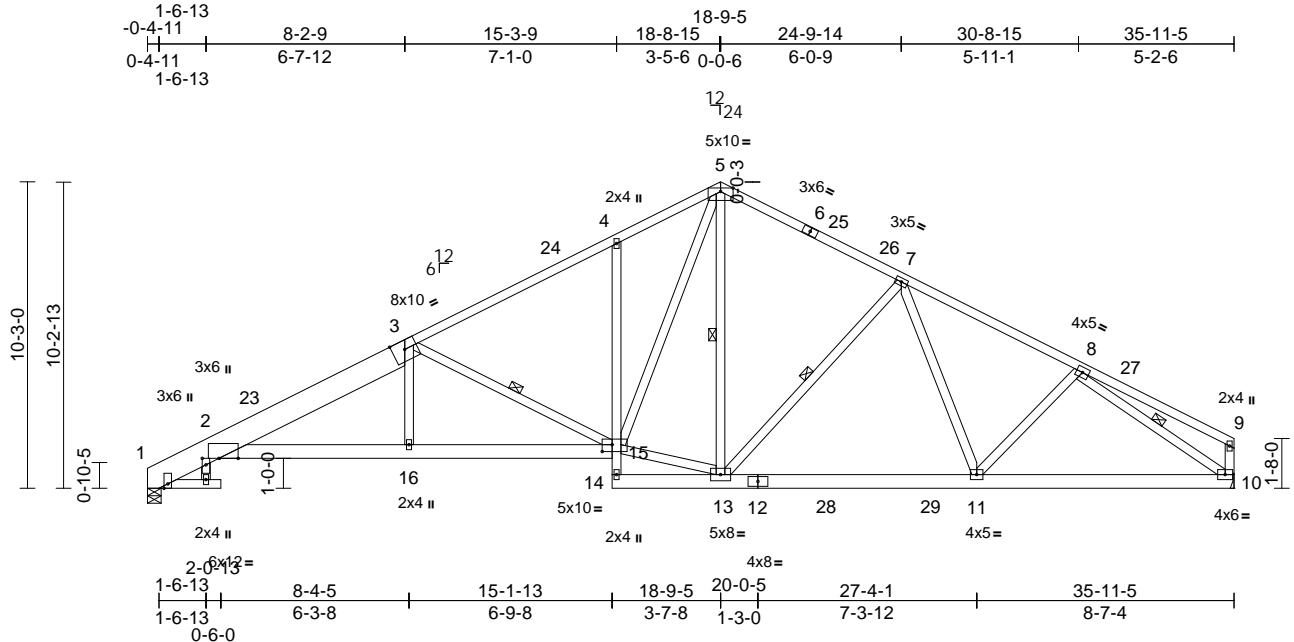
818 Soundside Road
Edenton, NC 27932

Job 24080051-01	Truss B1T	Truss Type Roof Special	Qty 5	Ply 1	188 Serenity-Roof-B330 A CP TMB GRH Job Reference (optional)	167780999
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Aug 15 2024 Print: 8.730 S Aug 15 2024 MiTek Industries, Inc. Fri Aug 23 15:21:50
ID: BHHEAVzmyWkYpZSLPgaLA_ykx5u-RfC?PsB70Hq3NSgPqnL8w3uITXbGKwRCD0i7J4zJC?f

Page: 1



Scale = 1:77

Plate Offsets (X, Y): [2:0-7-12,Edge], [15:0-4-0,0-2-12], [18:0-2-10,0-1-8]

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	0.67	Vert(LL)	-0.18	15-16	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.87	Vert(CT)	-0.34	15-16	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.59	Horz(CT)	0.18	10	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 270 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 1-3:2x10 SP 2400F 2.0E
BOT CHORD 2x6 SP No.2 *Except* 17-19:2x4 SP No.2, 4-14:2x4 SP No.3
WEBS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-2-12 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 3-15, 5-13, 7-13, 8-10

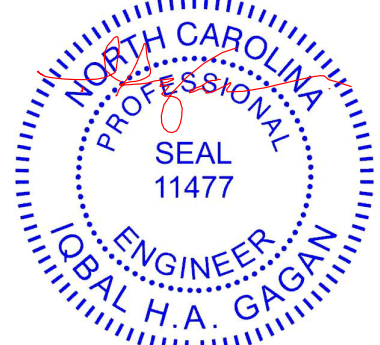
REACTIONS (size) 1=0-5-8, 10= Mechanical
Max Horiz 1=156 (LC 18)
Max Uplift 1=-129 (LC 14), 10=-128 (LC 15)
Max Grav 1=1538 (LC 3), 10=1564 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-729/112, 2-4=-3567/305, 4-5=-2519/383, 5-7=-1943/304, 7-8=-2403/270, 8-9=-214/94, 9-10=-210/85
BOT CHORD 2-16=-329/3291, 15-16=-326/3306, 14-15=0/26, 4-15=-431/185, 13-14=-39/112, 11-13=-70/1990, 10-11=-145/1986
WEBS 3-16=0/367, 3-15=-1254/234, 13-15=0/1575, 5-15=-255/1489, 5-13=-98/333, 7-13=-555/199, 7-11=0/290, 8-11=0/214, 8-10=-2305/174

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

- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-2-12 to 3-10-6, Interior (1) 3-10-6 to 15-6-6, Exterior(2R) 15-6-6 to 22-9-10, Interior (1) 22-9-10 to 32-6-10, Exterior(2E) 32-6-10 to 36-2-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 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 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 7) Refer to girder(s) for truss to truss connections.
- 8) Bearing at joint(s) 1 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 128 lb uplift at joint 10.
- 10) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1. This connection is for uplift only and does not consider lateral forces.

LOAD CASE(S) Standard



August 27, 2024

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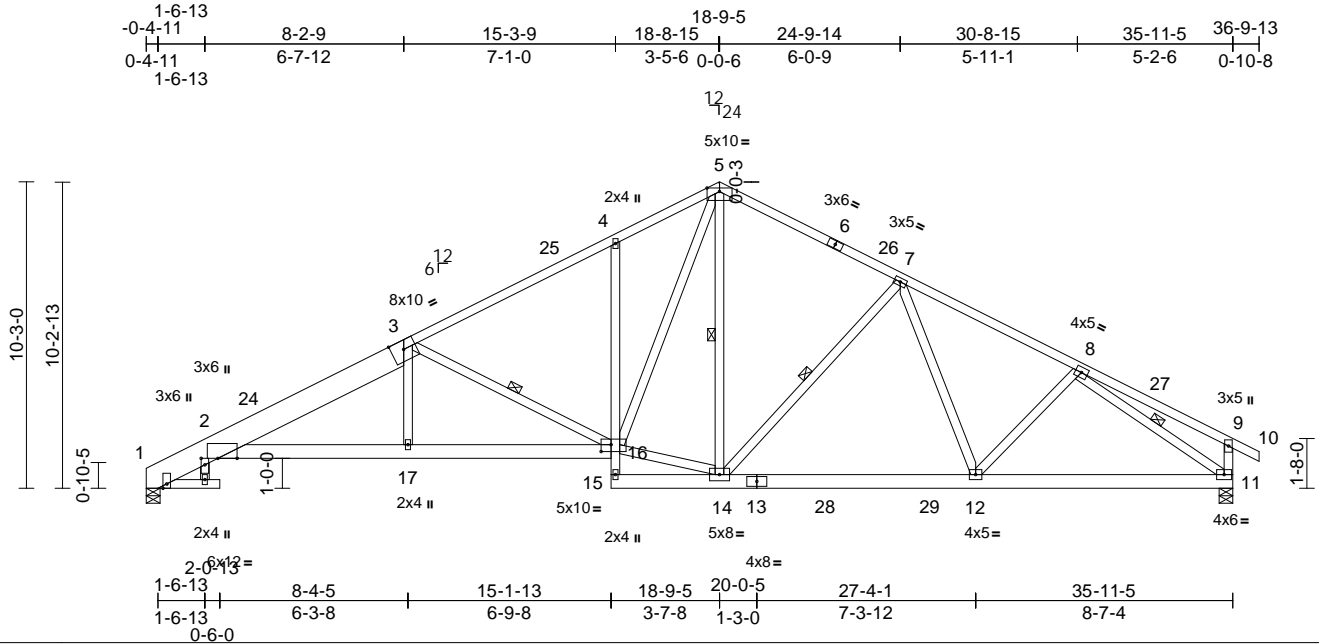
818 Soundside Road
Edenton, NC 27932

Job 24080051-01	Truss B2T	Truss Type Roof Special	Qty 1	Ply 1	188 Serenity-Roof-B330 A CP TMB GRH Job Reference (optional)	167781000
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Aug 15 2024 Print: 8.730 S Aug 15 2024 MiTek Industries, Inc. Fri Aug 23 15:21:50
ID: BHHEAVzmyWkYpZSLPgaLA_ykx5u-RfC?PsB70Hq3NSgPqnL8w3uITXbGKwCD0i7J4zJC?7

Page: 1



Scale = 1:77

Plate Offsets (X, Y): [2:0-7-12,Edge], [16:0-4-0,0-2-12], [19:0-2-10,0-1-8]

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	0.70	Vert(LL)	-0.18	16-17	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.87	Vert(CT)	-0.33	16-17	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.59	Horz(CT)	0.18	11	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 271 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 1-3:2x10 SP 2400F 2.0E
BOT CHORD 2x6 SP No.2 *Except* 18-20:2x4 SP No.2, 4-15:2x4 SP No.3
WEBS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-2-13 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 3-16, 5-14, 7-14, 8-11

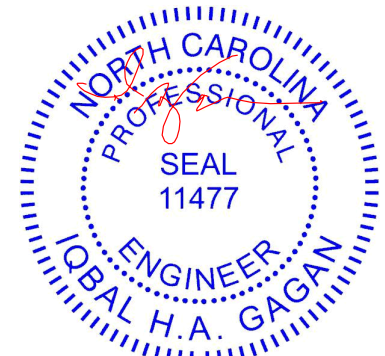
REACTIONS (size) 1=0-5-8, 11=0-5-8
Max Horiz 1=148 (LC 18)
Max Uplift 1=-129 (LC 14), 11=-148 (LC 15)
Max Grav 1=1537 (LC 3), 11=1616 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-726/126, 2-4=-3566/300, 4-5=-2518/381, 5-7=-1942/306, 7-8=-2397/269, 8-9=-244/119, 9-10=0/27, 9-11=-283/147
BOT CHORD 2-17=-319/3294, 16-17=-316/3309, 15-16=0/26, 4-16=-430/185, 14-15=-38/112, 12-14=-44/1991, 11-12=-129/1980
WEBS 3-16=-1255/233, 14-16=0/1577, 5-16=-252/1489, 5-14=-103/332, 7-14=-554/200, 7-12=0/287, 8-12=0/219, 8-11=-2266/145, 3-17=0/367

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

- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-2-12 to 3-10-6, Interior (1) 3-10-6 to 15-6-6, Exterior(2R) 15-6-6 to 22-9-10, Interior (1) 22-9-10 to 33-6-14, Exterior(2E) 33-6-14 to 37-2-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 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 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Bearing at joint(s) 1 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1 and 11. This connection is for uplift only and does not consider lateral forces.

LOAD CASE(S) Standard



August 27, 2024

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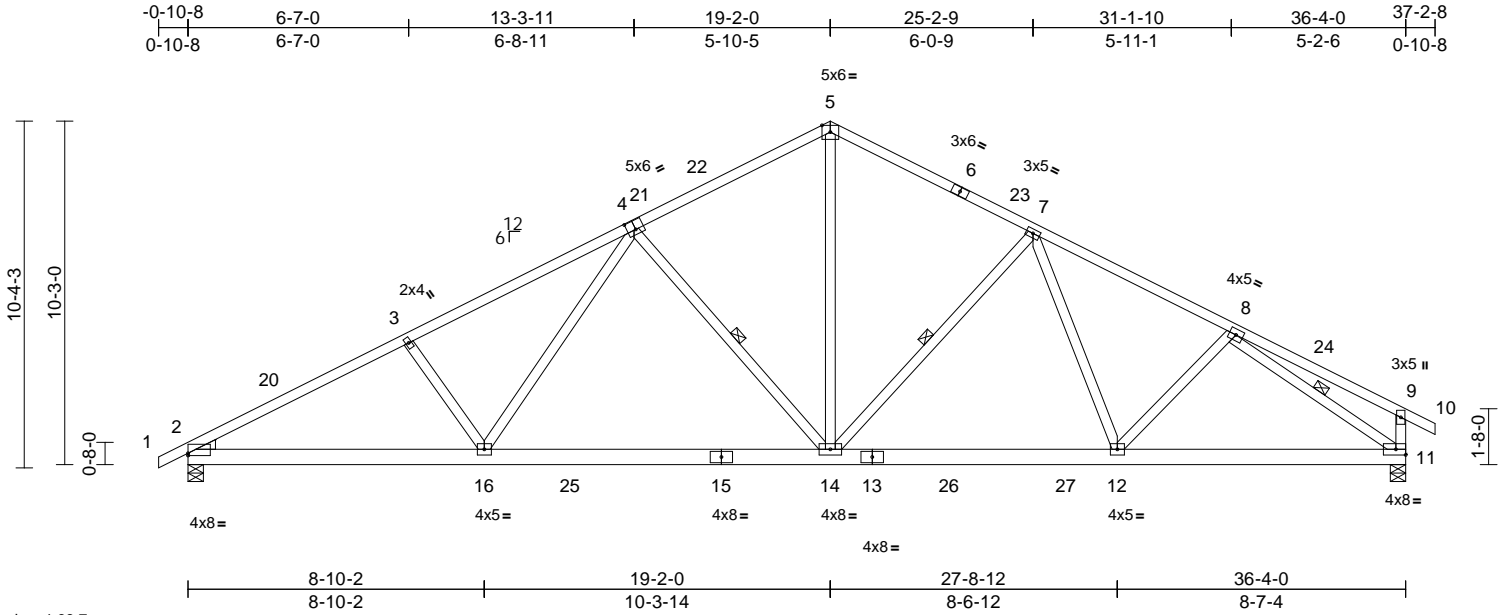
818 Soundside Road
Edenton, NC 27932

Job 24080051-01	Truss B3	Truss Type Common	Qty 5	Ply 1	188 Serenity-Roof-B330 A CP TMB GRH Job Reference (optional)	167781001
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Aug 15 2024 Print: 8.730 S Aug 15 2024 MiTek Industries, Inc. Fri Aug 23 15:21:50
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Page: 1



Scale = 1:68.7

Plate Offsets (X, Y): [2:Edge,0-0-13], [4:0-3-0,0-3-4]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.75	Vert(LL)	-0.22	14-16	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.76	Vert(CT)	-0.39	14-16	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.55	Horz(CT)	0.08	11	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 235 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
 BOT CHORD 2x6 SP No.2
 WEBS 2x4 SP No.3
 WEDGE Left: 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-10-11 oc purlins, except end verticals.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
 WEBS 1 Row at midpt 8-11, 4-14, 7-14

REACTIONS

(size) 2=0-5-8, 11=0-5-8
 Max Horiz 2=159 (LC 18)
 Max Uplift 2=-162 (LC 14), 11=-149 (LC 15)
 Max Grav 2=1641 (LC 3), 11=1650 (LC 3)

FORCES

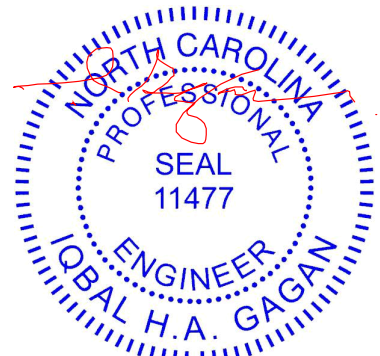
(lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=0/23, 2-3=-3173/285, 3-5=-2990/305, 5-7=-2022/303, 7-8=-2449/273, 8-9=-252/117, 9-10=0/27, 9-11=-285/146
 BOT CHORD 2-16=-309/2793, 14-16=-168/2203, 12-14=-45/2051, 11-12=-131/2020
 WEBS 8-11=-2308/151, 4-16=-56/732, 3-16=-349/201, 4-14=-783/243, 5-14=-109/1423, 7-14=-535/206, 7-12=0/244, 8-12=0/226

NOTES

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

- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-9-2, Interior (1) 2-9-2 to 15-6-6, Exterior(2R) 15-6-6 to 22-9-10, Interior (1) 22-9-10 to 33-6-14, Exterior(2E) 33-6-14 to 37-2-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 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 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 11. This connection is for uplift only and does not consider lateral forces.

LOAD CASE(S) Standard



August 27, 2024

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818 Soundside Road
Edenton, NC 27932

Job 24080051-01	Truss B3GE	Truss Type Common Structural Gable	Qty 1	Ply 1	188 Serenity-Roof-B330 A CP TMB GRH Job Reference (optional)	167781002
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Aug 15 2024 Print: 8.730 S Aug 15 2024 MiTek Industries, Inc. Fri Aug 23 15:21:50
ID: BaxyQtOcXsfz7jilLpE?mykxD5-RfC?PsB70Hq3NSgPqnL8w3uTXbGKWrCDoi7J4zJC7f

Page: 1

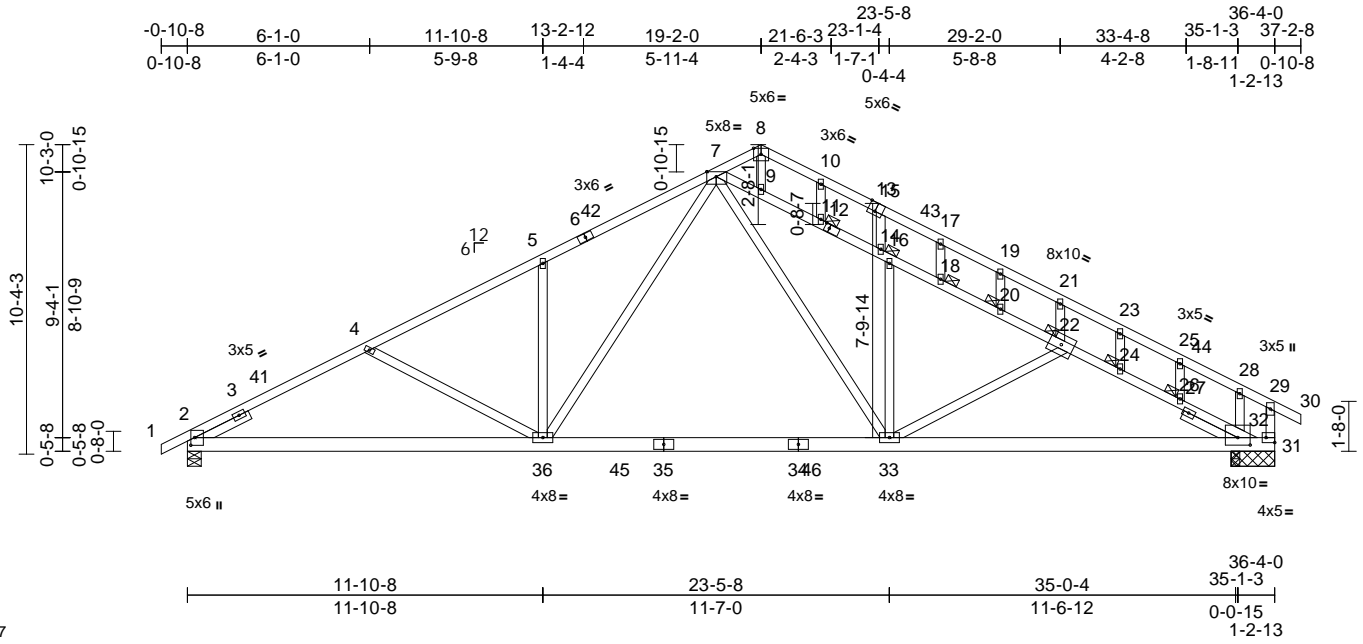


Plate Offsets (X, Y): [2:0-3-1,0-1-8], [7:0-3-12,Edge], [12:0-1-15,0-1-8], [13:0-3-0,Edge], [31:Edge,0-2-0], [32:0-5-0,0-3-0]

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	0.80	Vert(LL)	-0.29	33-36	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.78	Vert(CT)	-0.46	33-36	>911	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.51	Horz(CT)	0.07	31	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 271 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3 *Except* 36-7,7-33:2x4 SP No.2
OTHERS 2x4 SP No.3
SLIDER Left 2x4 SP No.3 -- 2-0-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-11-11 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
JOINTS 1 Brace at Jt(s): 11, 14, 18, 20, 24, 26, 22

REACTIONS (size) 2=0-5-8, 31=1-5-8, 32=1-5-8
Max Horiz 2=159 (LC 18)
Max Uplift 2=-162 (LC 14), 31=-234 (LC 7), 32=-352 (LC 15)
Max Grav 2=1595 (LC 3), 31=196 (LC 15), 32=1691 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/30, 2-4=-2889/570, 4-5=-2625/484, 5-7=-2673/631, 7-8=-355/276, 8-10=-331/273, 10-15=-372/238, 15-17=-303/181, 17-19=-311/146, 19-21=-347/120, 21-23=-320/43, 23-25=-335/17, 25-28=-331/0, 28-29=-362/0, 29-30=0/27, 29-31=-323/0, 7-9=-2309/388, 9-11=-2218/315, 11-14=-2248/340, 14-16=-2344/386, 16-18=-2197/320, 18-20=-2236/342, 20-22=-2263/358, 22-24=-2507/552, 24-26=-2544/566, 26-32=-2619/624
BOT CHORD 2-36=-348/2564, 33-36=-50/1663, 32-33=-309/2496, 31-32=0/272

WEBS 8-9=-153/194, 10-11=-88/55, 14-15=-312/103, 17-18=-101/51, 19-20=-59/36, 21-22=-199/150, 23-24=-82/30, 25-26=-155/113, 28-32=-63/180, 5-36=-429/257, 16-33=-461/148, 4-36=-305/206, 22-33=-304/233, 7-36=-251/1177, 7-33=-146/1107

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 2-9-2, Exterior(2N) 2-9-2 to 15-6-6, Corner(3R) 15-6-6 to 22-9-10, Exterior(2N) 22-9-10 to 33-6-14, Corner(3E) 33-6-14 to 37-2-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 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 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
 - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
 - 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



August 27, 2024

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

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



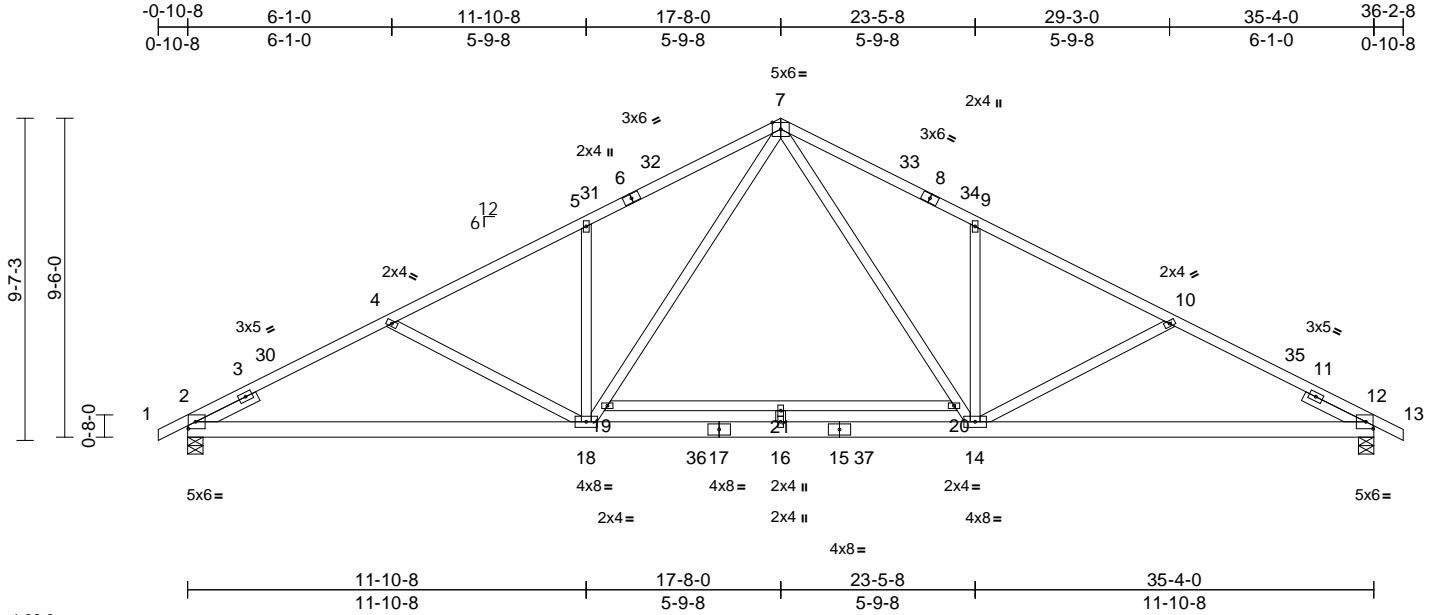
818 Soundside Road
Edenton, NC 27932

Job 24080051-01	Truss C	Truss Type Common	Qty 5	Ply 1	188 Serenity-Roof-B330 A CP TMB GRH Job Reference (optional)	167781003
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Aug 15 2024 Print: 8.730 S Aug 15 2024 MiTek Industries, Inc. Fri Aug 23 15:21:51
ID:VP5mnZE7ejTka?ri?H4b3zEzov-RfC?PsB70Hq3NSgPqnL8w3uTXbGKwRCDoi7J4zJC?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	0.80	Vert(LL)	-0.15	16	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.71	Vert(CT)	-0.49	16	>858	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.37	Horz(CT)	0.08	12	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 234 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3 *Except* 18-7,14-7,19-20:2x4 SP No.2
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.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

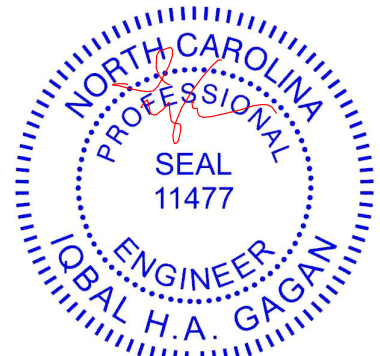
REACTIONS
(size) 2=0-5-8, 12=0-5-8
Max Horiz 2=147 (LC 15)
Max Uplift 2=-55 (LC 14), 12=-55 (LC 15)
Max Grav 2=1561 (LC 1), 12=1561 (LC 1)

FORCES
(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/30, 2-4=-2583/75, 4-5=-2328/27, 5-7=-2380/134, 7-9=-2380/134, 9-10=-2328/27, 10-12=-2583/75, 12-13=0/30
BOT CHORD 2-18=-110/2241, 16-18=0/1447, 14-16=0/1447, 12-14=0/2241
WEBS 5-18=-509/217, 18-19=-89/1115, 7-19=-75/1123, 4-18=-286/206, 7-20=-75/1123, 14-20=-88/1115, 9-14=-509/217, 10-14=-286/206, 19-21=-6/17, 20-21=-6/17, 16-21=0/42

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

- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-7-14, Interior (1) 2-7-14 to 14-1-10, Exterior(2R) 14-1-10 to 21-2-6, Interior (1) 21-2-6 to 32-8-2, Exterior(2E) 32-8-2 to 36-2-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 200.0lb AC unit load placed on the bottom chord, 17-8-0 from left end, supported at two points, 5-0-0 apart.
- All plates are 2x4 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 2-00-00 wide will fit between the bottom chord and any other members.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 12. This connection is for uplift only and does not consider lateral forces.
- Attic room checked for L/360 deflection.

LOAD CASE(S) Standard



August 27, 2024

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TP1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



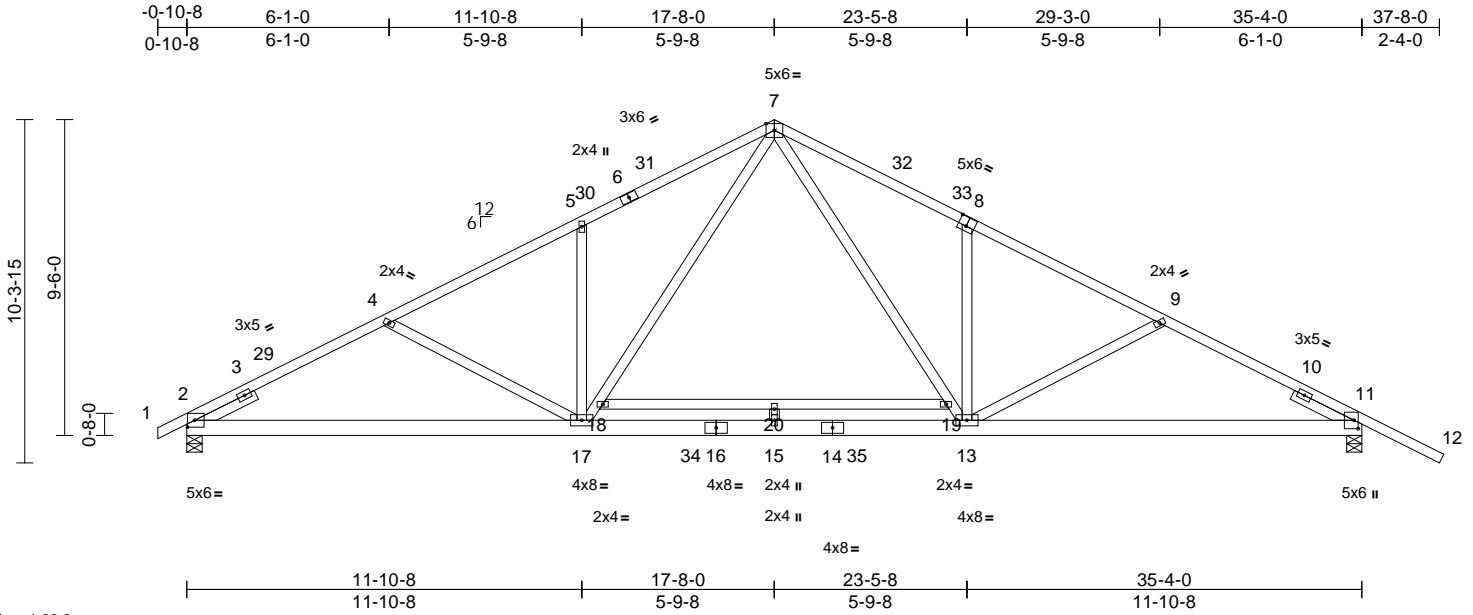
818 Soundside Road
Edenton, NC 27932

Job 24080051-01	Truss C1	Truss Type Common	Qty 4	Ply 1	188 Serenity-Roof-B330 A CP TMB GRH Job Reference (optional)	167781004
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Aug 15 2024 Print: 8.730 S Aug 15 2024 MiTek Industries, Inc. Fri Aug 23 15:21:51
ID:VP5mnZE7ejTka?ri?H4b3zEzov-RfC?PsB70Hq3NSgPqnL8w3uTXbGKwRcDoiJ74zJC?f

Page: 1



Scale = 1:69.3

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.80	Vert(LL)	-0.15	15	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.71	Vert(CT)	-0.49	15	>857	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.38	Horz(CT)	0.08	11	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 237 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2 *Except* 8-12:2x4 SP No.1
 BOT CHORD 2x6 SP No.2
 WEBS 2x4 SP No.3 *Except* 17-7,13-7,18-19:2x4 SP No.2
 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.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(size) 2=0-5-8, 11=0-5-8
 Max Horiz 2=-171 (LC 15)
 Max Uplift 2=-54 (LC 14), 11=-86 (LC 15)
 Max Grav 2=1556 (LC 1), 11=1658 (LC 1)

FORCES

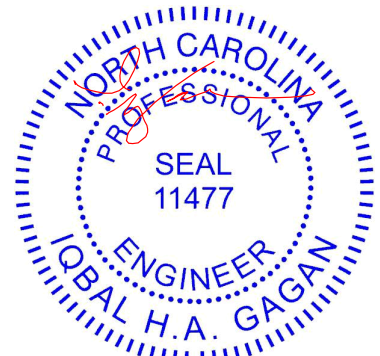
(lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=0/30, 2-4=-2576/65, 4-5=-2321/18, 5-7=-2374/124, 7-9=-2364/109, 9-11=-2554/38, 11-12=0/71
 BOT CHORD 2-17=-97/2241, 15-17=0/1437, 13-15=0/1437, 11-13=0/2214
 WEBS 5-17=-509/217, 17-18=-89/1117, 7-18=-75/1125, 4-17=-287/206, 7-19=-66/1102, 13-19=-78/1094, 8-13=-515/218, 9-13=-265/196, 18-20=-6/17, 19-20=-6/17, 15-20=0/42

NOTES

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

- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-7-14, Interior (1) 2-7-14 to 14-1-10, Exterior(2R) 14-1-10 to 21-2-6, Interior (1) 21-2-6 to 34-2-6, Exterior(2E) 34-2-6 to 37-8-13 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 200.0lb AC unit load placed on the bottom chord, 17-8-0 from left end, supported at two points, 5-0-0 apart.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 11. This connection is for uplift only and does not consider lateral forces.
- Attic room checked for L/360 deflection.

LOAD CASE(S) Standard



August 27, 2024

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

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



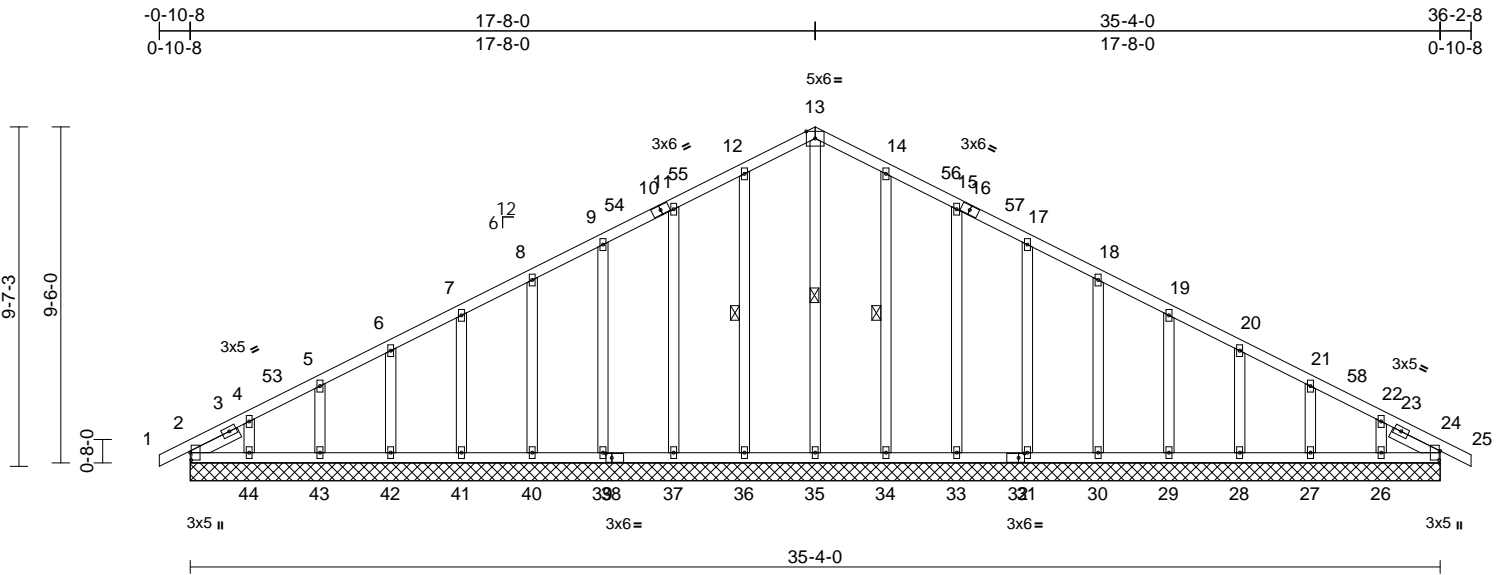
818 Soundside Road
Edenton, NC 27932

Job 24080051-01	Truss CGE	Truss Type Common Supported Gable	Qty 1	Ply 1	188 Serenity-Roof-B330 A CP TMB GRH Job Reference (optional)	167781005
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Aug 15 2024 Print: 8.730 S Aug 15 2024 MiTek Industries, Inc. Fri Aug 23 15:21:51
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Page: 1



Scale = 1:65.1

Plate Offsets (X, Y): [2:0-2-8,0-0-5], [24:0-3-1,0-0-5], [32:0-2-0,0-1-8], [38:0-2-0,0-1-8]

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	0.07	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	0.19	Horz(CT)	0.01	24	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 238 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
OTHERS	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.
WEBS	1 Row at midpt 13-35, 12-36, 14-34

REACTIONS (size)

2=35-4-0, 24=35-4-0, 26=35-4-0, 27=35-4-0, 28=35-4-0, 29=35-4-0, 30=35-4-0, 31=35-4-0, 33=35-4-0, 34=35-4-0, 35=35-4-0, 36=35-4-0, 37=35-4-0, 39=35-4-0, 40=35-4-0, 41=35-4-0, 42=35-4-0, 43=35-4-0, 44=35-4-0, 45=35-4-0, 49=35-4-0
Max Horiz 2=-147 (LC 15), 45=-147 (LC 15)
Max Uplift 2=-21 (LC 10), 26=-74 (LC 15), 27=-40 (LC 15), 28=-45 (LC 15), 29=-43 (LC 15), 30=-44 (LC 15), 31=-43 (LC 15), 33=-47 (LC 15), 34=-38 (LC 15), 36=-41 (LC 14), 37=-46 (LC 14), 39=-43 (LC 14), 40=-44 (LC 14), 41=-43 (LC 14), 42=-45 (LC 14), 43=-38 (LC 14), 44=-89 (LC 14), 45=-21 (LC 10)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/23, 2-4=-196/70, 4-5=-150/73, 5-6=-110/85, 6-7=-83/100, 7-8=-63/124, 8-9=-61/147, 9-11=-73/170, 11-12=-87/194, 12-13=-105/214, 13-14=-105/207, 14-15=-87/168, 15-17=-73/126, 17-18=-61/95, 18-19=-49/63, 19-20=-40/39, 20-21=-59/26, 21-22=-89/33, 22-24=-130/55, 24-25=0/23
BOT CHORD	2-44=-40/138, 43-44=-40/138, 42-43=-40/138, 41-42=-40/138, 40-41=-40/138, 39-40=-40/138, 37-39=-40/138, 36-37=-40/138, 35-36=-40/138, 34-35=-40/138, 33-34=-40/138, 31-33=-40/138, 30-31=-40/138, 29-30=-40/138, 28-29=-40/138, 27-28=-40/138, 26-27=-40/138, 24-26=-40/138
WEBS	13-35=-148/32, 12-36=-204/72, 11-37=-188/70, 9-39=-135/67, 8-40=-126/68, 7-41=-127/68, 6-42=-126/68, 5-43=-129/65, 4-44=-118/96, 14-34=-204/72, 15-33=-188/71, 17-31=-135/67, 18-30=-126/68, 19-29=-127/68, 20-28=-126/68, 21-27=-129/67, 22-26=-118/84

- NOTES**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-10-8 to 2-7-14, Interior (1) 2-7-14 to 14-1-10, Exterior(2R) 14-1-10 to 21-2-6, Interior (1) 21-2-6 to 32-8-2, Exterior(2E) 32-8-2 to 36-2-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
 - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10



August 27, 2024

Continued on page 2

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

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818 Soundside Road
Edenton, NC 27932

Job 24080051-01	Truss CGE	Truss Type Common Supported Gable	Qty 1	Ply 1	188 Serenity-Roof-B330 A CP TMB GRH Job Reference (optional)	I67781005
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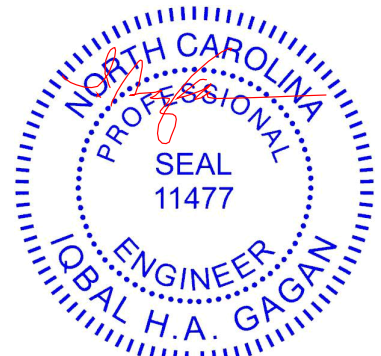
Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Aug 15 2024 Print: 8.730 S Aug 15 2024 MiTek Industries, Inc. Fri Aug 23 15:21:51
ID:HSVLvMXIBUOh6Uln9Dc1gjzEzgn-RfC?PsB70Hq3NSgPqnL8w3uTXbGKWrCDoi7J4zJC?f

Page: 2

- 5) Unbalanced snow loads have been considered for this design.
- 6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 7) All plates are 2x4 MT20 unless otherwise indicated.
- 8) Gable requires continuous bottom chord bearing.
- 9) Gable studs spaced at 2-0-0 oc.
- 10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 11) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 21 lb uplift at joint 2, 41 lb uplift at joint 36, 46 lb uplift at joint 37, 43 lb uplift at joint 39, 44 lb uplift at joint 40, 43 lb uplift at joint 41, 45 lb uplift at joint 42, 38 lb uplift at joint 43, 89 lb uplift at joint 44, 38 lb uplift at joint 34, 47 lb uplift at joint 33, 43 lb uplift at joint 31, 44 lb uplift at joint 30, 43 lb uplift at joint 29, 45 lb uplift at joint 28, 40 lb uplift at joint 27, 74 lb uplift at joint 26 and 21 lb uplift at joint 2.
- 13) Attic room checked for L/360 deflection.

LOAD CASE(S) Standard



August 27, 2024

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TP1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



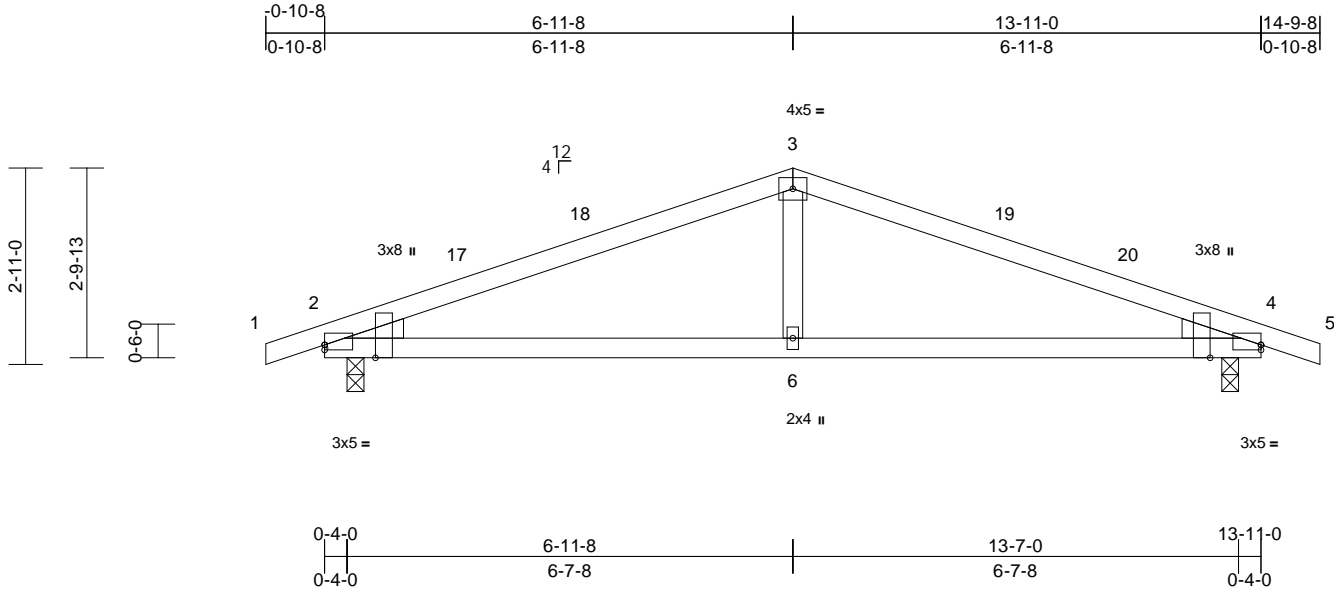
818 Soundside Road
Edenton, NC 27932

Job 24080051-01	Truss D	Truss Type Common	Qty 4	Ply 1	188 Serenity-Roof-B330 A CP TMB GRH Job Reference (optional)	I67781006
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Aug 15 2024 Print: 8.730 S Aug 15 2024 MiTek Industries, Inc. Fri Aug 23 15:21:51
ID:nqLL14Jf5JAmMe82YAnIwAzF_pM-RfC?PsB70Hq3NSgPqnL8w3uTXbGKWrCDoi7J4zJC?F

Page: 1



Scale = 1:34.2
Plate Offsets (X, Y): [2:Edge,0-0-14], [2:0-2-5,Edge], [4:Edge,0-0-14], [4:0-2-5,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	0.72	Vert(LL)	-0.09	6-11	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.56	Vert(CT)	-0.13	6-11	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.10	Horz(CT)	0.02	4	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 51 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-1-1 oc purlins.
BOT CHORD Rigid ceiling directly applied or 8-6-15 oc bracing.

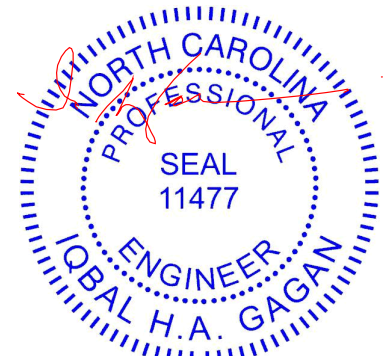
REACTIONS (size) 2=0-3-0, 4=0-3-0
Max Horiz 2=41 (LC 14)
Max Uplift 2=-221 (LC 10), 4=-221 (LC 11)
Max Grav 2=708 (LC 21), 4=708 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-901/594, 3-4=-901/594, 4-5=0/17
BOT CHORD 2-6=-458/775, 4-6=-458/775
WEBS 3-6=-116/268

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 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 2-00-00 wide will fit between the bottom chord and any other members.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 4. This connection is for uplift only and does not consider lateral forces.

LOAD CASE(S) Standard

- NOTES**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 3-11-8, Exterior(2R) 3-11-8 to 9-11-8, Interior (1) 9-11-8 to 11-9-8, Exterior(2E) 11-9-8 to 14-9-8 zone; cantilever left and right exposed; end vertical left and right exposed; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60



August 27, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPH Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



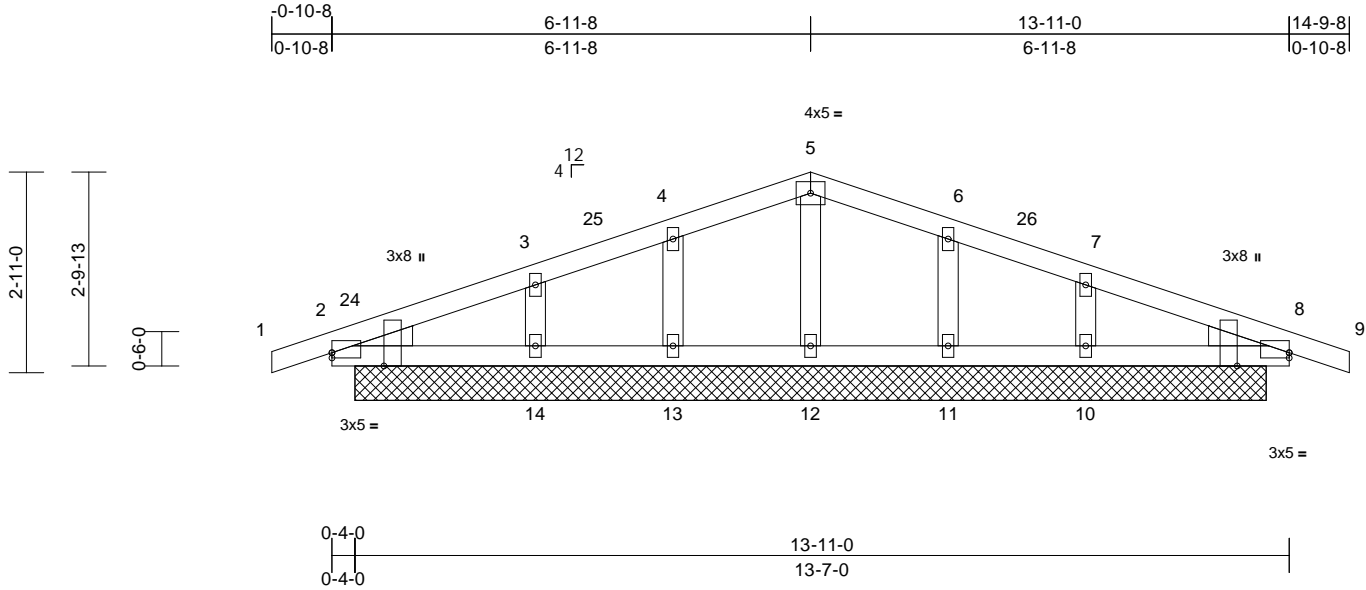
818 Soundside Road
Edenton, NC 27932

Job 24080051-01	Truss DGE	Truss Type Common Supported Gable	Qty 1	Ply 1	188 Serenity-Roof-B330 A CP TMB GRH Job Reference (optional)	167781007
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Aug 15 2024 Print: 8.730 S Aug 15 2024 MiTek Industries, Inc. Fri Aug 23 15:21:51
ID:UUQhZhEGK9Im0a6ieC968izF_pT-RfC?PsB70Hq3NSgPqnL8w3uITxbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:33.5

Plate Offsets (X, Y): [2:Edge,0-0-14], [2:0-2-5,Edge], [8:Edge,0-0-14], [8:0-2-5,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)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.19	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.08	Horz(CT)	-0.01	8	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0											
										Weight: 59 lb	FT = 20%	

LUMBER	
TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
OTHERS	2x4 SP No.3
WEDGE	Left: 2x4 SP No.3 Right: 2x4 SP No.3
BRACING	
TOP CHORD	Structural wood sheathing directly applied or 10-0-0 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.
REACTIONS (size)	
	2=13-3-0, 8=13-3-0, 10=13-3-0, 11=13-3-0, 12=13-3-0, 13=13-3-0, 14=13-3-0, 18=13-3-0, 21=13-3-0
Max Horiz	2=41 (LC 14), 18=41 (LC 14)
Max Uplift	2=-1 (LC 21), 8=-71 (LC 36), 10=-44 (LC 15), 11=-35 (LC 11), 12=-47 (LC 10), 13=-23 (LC 14), 14=-75 (LC 10), 18=-1 (LC 21), 21=-71 (LC 36)
Max Grav	2=0 (LC 10), 8=128 (LC 22), 10=302 (LC 22), 11=205 (LC 22), 12=420 (LC 21), 13=123 (LC 21), 14=437 (LC 21), 18=0 (LC 10), 21=128 (LC 22)
FORCES (lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/17, 2-3=-220/432, 3-4=-165/401, 4-5=-123/411, 5-6=-122/395, 6-7=-170/392, 7-8=-217/405, 8-9=0/17
BOT CHORD	2-14=-365/260, 13-14=-365/260, 12-13=-365/260, 11-12=-365/260, 10-11=-365/260, 8-10=-365/260
WEBS	5-12=-360/181, 4-13=-146/110, 3-14=-275/153, 6-11=-183/128, 7-10=-212/127

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 2-1-8, Exterior(2N) 2-1-8 to 3-11-8, Corner(3R) 3-11-8 to 9-11-8, Exterior(2N) 9-11-8 to 11-9-8, Corner(3E) 11-9-8 to 14-9-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 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 2-00-00 wide will fit between the bottom chord and any other members.

LOAD CASE(S) Standard



August 27, 2024

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

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



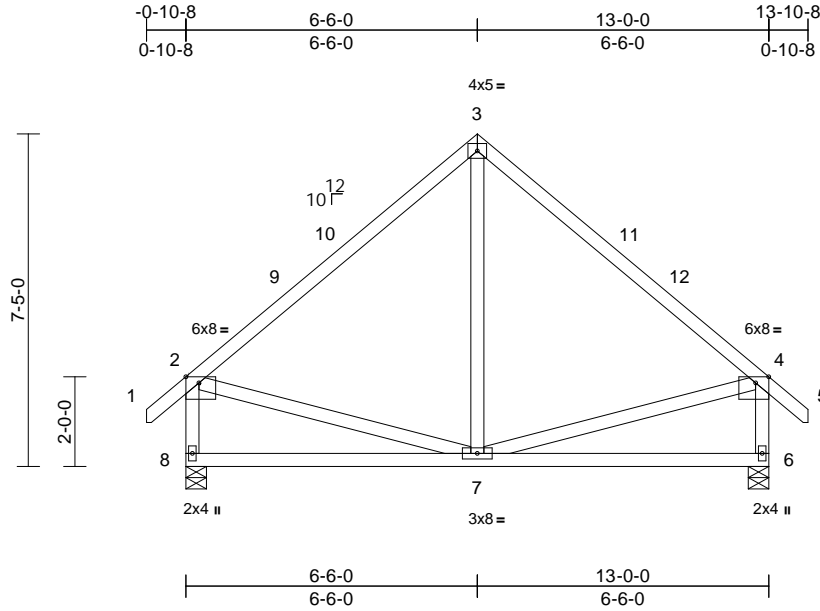
818 Soundside Road
Edenton, NC 27932

Job 24080051-01	Truss E	Truss Type Common	Qty 3	Ply 1	188 Serenity-Roof-B330 A CP TMB GRH Job Reference (optional)	I67781008
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Aug 15 2024 Print: 8.730 S Aug 15 2024 MiTek Industries, Inc. Fri Aug 23 15:21:52
ID:wb1oEU3ot9zDodjclXhweSzF_Yu-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWRCDoi7J4zJC?F

Page: 1



Scale = 1:51.4

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.77	Vert(LL)	-0.03	6-7	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.35	Vert(CT)	-0.07	7-8	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.09	Horz(CT)	0.00	6	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0											
										Weight: 82 lb	FT = 20%	

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 8-2,6-4:2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 5-2-11 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 6=0-5-8, 8=0-5-8
Max Horiz 8=205 (LC 13)
Max Uplift 6=-48 (LC 15), 8=-48 (LC 14)
Max Grav 6=648 (LC 22), 8=648 (LC 21)

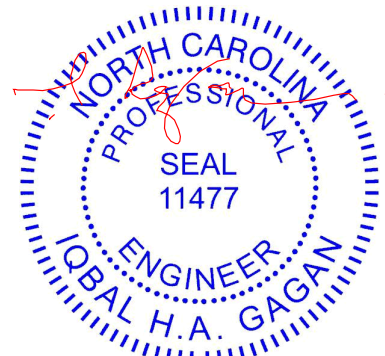
FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/37, 2-3=-532/142, 3-4=-532/142, 4-5=0/37, 2-8=-590/173, 4-6=-590/158
BOT CHORD 7-8=-207/272, 6-7=-86/174
WEBS 3-7=0/214, 2-7=-51/227, 4-7=-53/227

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-9-14 to 2-2-2, Interior (1) 2-2-2 to 3-6-0, Exterior(2R) 3-6-0 to 9-6-0, Interior (1) 9-6-0 to 10-9-14, Exterior(2E) 10-9-14 to 13-9-14 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10

- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 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 2-00-00 wide will fit between the bottom chord and any other members.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 8 and 6. This connection is for uplift only and does not consider lateral forces.

LOAD CASE(S) Standard



August 27, 2024

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

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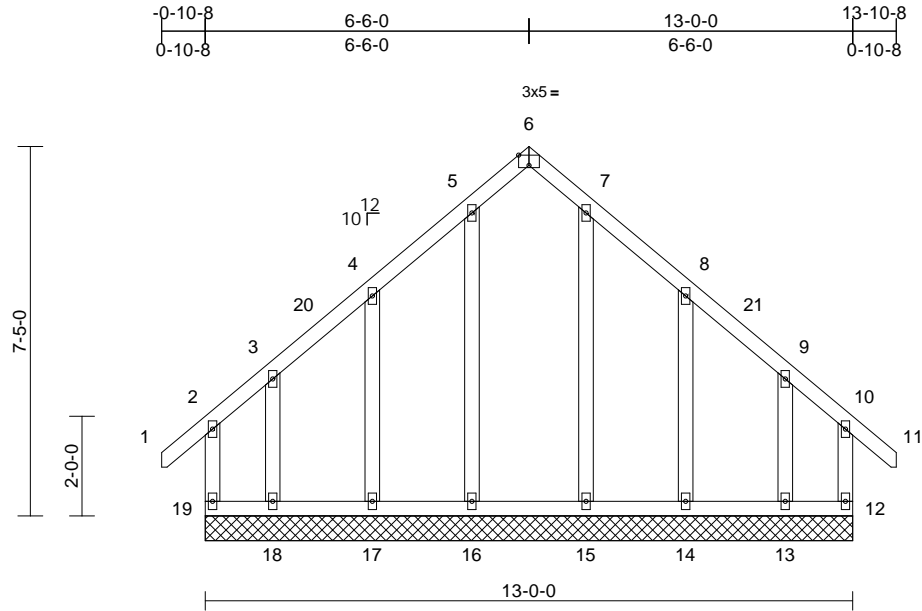
818 Soundside Road
Edenton, NC 27932

Job 24080051-01	Truss EGE	Truss Type Common Supported Gable	Qty 1	Ply 1	188 Serenity-Roof-B330 A CP TMB GRH Job Reference (optional)	167781009
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Aug 15 2024 Print: 8.730 S Aug 15 2024 MiTek Industries, Inc. Fri Aug 23 15:21:52
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Page: 1



Scale = 1:46.3

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.25	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.14	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.15	Horz(CT)	0.00	12	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MR								
BCDL	10.0											
											Weight: 91 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)
12=13-0-0, 13=13-0-0, 14=13-0-0, 15=13-0-0, 16=13-0-0, 17=13-0-0, 18=13-0-0, 19=13-0-0
Max Horiz 19=205 (LC 13)
Max Uplift 12=160 (LC 11), 13=-182 (LC 10), 14=107 (LC 15), 17=-106 (LC 14), 18=-188 (LC 11), 19=-168 (LC 10)
Max Grav 12=230 (LC 25), 13=278 (LC 26), 14=249 (LC 22), 15=266 (LC 6), 16=266 (LC 5), 17=249 (LC 21), 18=283 (LC 25), 19=236 (LC 26)

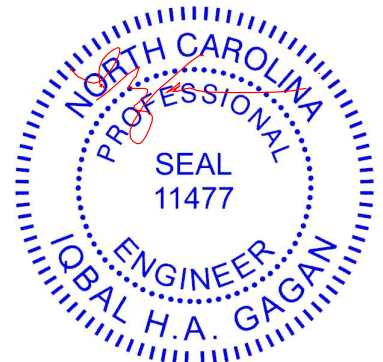
FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-19=-164/127, 1-2=0/37, 2-3=-136/130, 3-4=-71/145, 4-5=-96/300, 5-6=-92/213, 6-7=-92/214, 7-8=-97/299, 8-9=-67/148, 9-10=-130/125, 10-11=0/37, 10-12=-160/103
BOT CHORD 18-19=-109/131, 17-18=-109/131, 16-17=-109/131, 15-16=-109/131, 14-15=-109/131, 13-14=-109/131, 12-13=-109/131
WEBS 5-16=-212/0, 7-15=-212/0, 4-17=-208/219, 3-18=-155/123, 8-14=-208/213, 9-13=-152/159

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

- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-9-14 to 2-2-2, Exterior(2N) 2-2-2 to 3-4-4, Corner(3R) 3-4-4 to 9-7-12, Exterior(2N) 9-7-12 to 10-9-14, Corner(3E) 10-9-14 to 13-9-14 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.

- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 168 lb uplift at joint 19, 160 lb uplift at joint 12, 106 lb uplift at joint 17, 188 lb uplift at joint 18, 107 lb uplift at joint 14 and 182 lb uplift at joint 13.

LOAD CASE(S) Standard



August 27, 2024

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

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



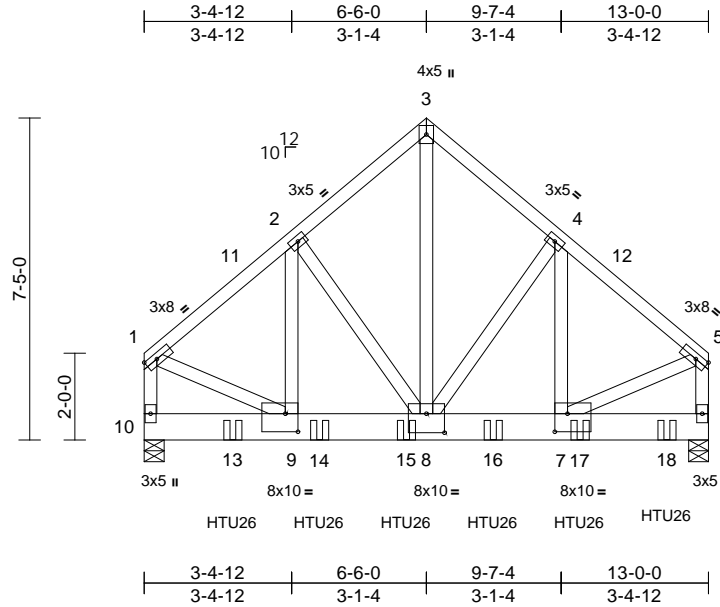
818 Soundside Road
Edenton, NC 27932

Job 24080051-01	Truss EGR	Truss Type Common Girder	Qty 1	Ply 2	188 Serenity-Roof-B330 A CP TMB GRH Job Reference (optional)	I67781010
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Aug 15 2024 Print: 8.730 S Aug 15 2024 MiTek Industries, Inc. Fri Aug 23 15:21:52
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Page: 1



Scale = 1:53.1

Plate Offsets (X, Y): [7:0-3-8,0-5-0], [8:0-5-0,0-5-4], [9:0-3-8,0-5-0]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.49	Vert(LL)	-0.03	7-8	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.17	Vert(CT)	-0.06	7-8	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.84	Horz(CT)	0.01	6	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 230 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x8 SP 2400F 2.0E
WEBS 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) 6=0-5-8, 10=0-5-8
Max Horiz 10=180 (LC 8)
Max Uplift 6=-486 (LC 13), 10=-416 (LC 12)
Max Grav 6=5540 (LC 6), 10=4772 (LC 5)

FORCES
(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-4028/393, 2-3=-3386/394,
3-4=-3386/394, 4-5=-4077/398,
1-10=-4108/376, 5-6=-4150/380
BOT CHORD 9-10=-174/231, 8-9=-317/3046,
7-8=-253/3083, 6-7=-33/128
WEBS 1-9=-265/3281, 5-7=-268/3306, 2-9=-96/944,
2-8=-838/176, 3-8=-429/4037, 4-8=-901/182,
4-7=-105/1028

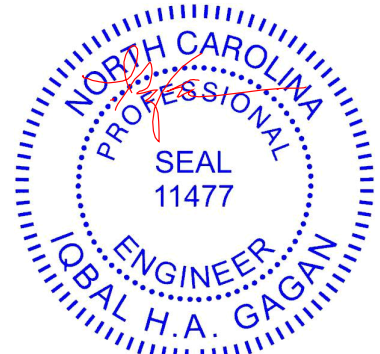
NOTES

- 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: 2x8 - 2 rows staggered at 0-6-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 10 and 6. This connection is for uplift only and does not consider lateral forces.
- Use Simpson Strong-Tie HTU26 (10-16d Girder, 14-10dx1 1/2 Truss) or equivalent spaced at 2-0-0 oc max. starting at 2-0-8 from the left end to 12-0-8 to connect truss(es) to back face of bottom chord.
- Fill all nail holes where hanger is in contact with lumber.

LOAD CASE(S) Standard

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-60, 3-5=-60, 6-10=-20
Concentrated Loads (lb)
Vert: 13=-1427 (B), 14=-1420 (B), 15=-1420 (B),
16=-1420 (B), 17=-1420 (B), 18=-1422 (B)



August 27, 2024

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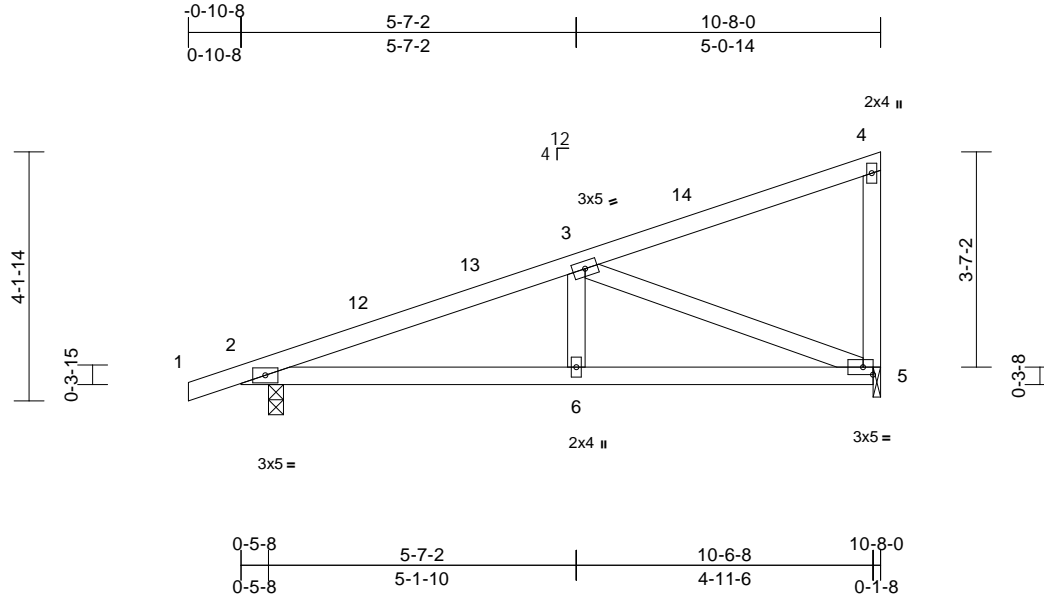
818 Soundside Road
Edenton, NC 27932

Job 24080051-01	Truss F	Truss Type Monopitch	Qty 2	Ply 1	188 Serenity-Roof-B330 A CP TMB GRH Job Reference (optional)	167781011
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Aug 15 2024 Print: 8.730 S Aug 15 2024 MiTek Industries, Inc. Fri Aug 23 15:21:52
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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	0.40	Vert(LL)	0.03	5-6	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.27	Vert(CT)	-0.04	5-6	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.44	Horz(CT)	0.01	5	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 49 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 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 9-2-5 oc bracing.

REACTIONS (size) 2=0-3-0, 5=0-1-8

Max Horiz 2=147 (LC 13)
Max Uplift 2=-190 (LC 10), 5=-159 (LC 10)
Max Grav 2=559 (LC 21), 5=525 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension

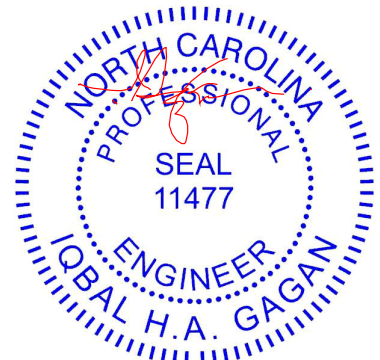
TOP CHORD 1-2=0/17, 2-3=-858/428, 3-4=-104/64, 4-5=-187/105
BOT CHORD 2-6=-404/775, 5-6=-404/775
WEBS 3-6=-80/216, 3-5=-803/487

NOTES

- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust)
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 7-6-4, Exterior(2E) 7-6-4 to 10-6-4 zone; cantilever left and right exposed; end vertical left and right exposed; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 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 2-00-00 wide will fit between the bottom chord and any other members.
- 7) Bearings are assumed to be: , Joint 5 SP No.3 .
- 8) 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.
- 9) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 2, 5.
- 10) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 5. This connection is for uplift only and does not consider lateral forces.

LOAD CASE(S) Standard



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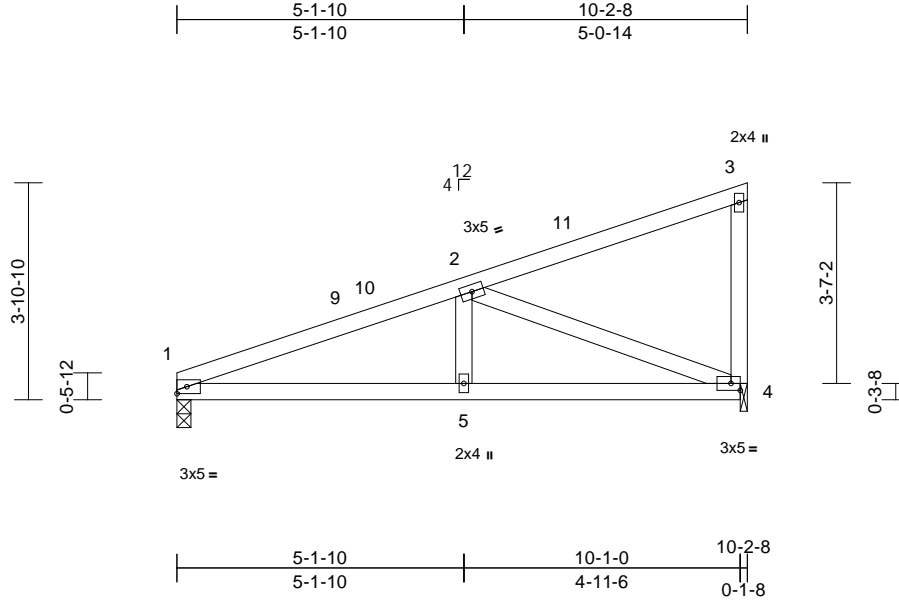
818 Soundside Road
Edenton, NC 27932

Job 24080051-01	Truss F1	Truss Type Monopitch	Qty 4	Ply 1	188 Serenity-Roof-B330 A CP TMB GRH Job Reference (optional)	167781012
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Aug 15 2024 Print: 8.730 S Aug 15 2024 MiTek Industries, Inc. Fri Aug 23 15:21:52
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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	Vert(LL)	0.03	5-8	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	Vert(CT)	-0.04	5-8	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	Horz(CT)	0.01	4	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH							
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

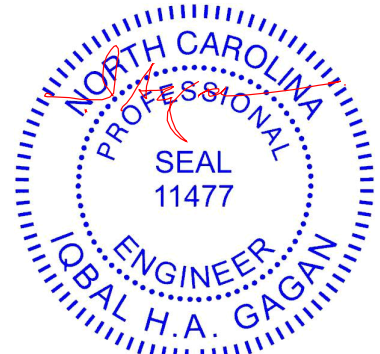
BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 8-6-4 oc bracing.

REACTIONS (size) 1=0-3-0, 4=0-1-8
Max Horiz 1=139 (LC 13)
Max Uplift 1=-141 (LC 10), 4=-162 (LC 10)
Max Grav 1=464 (LC 21), 4=530 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-879/481, 2-3=-103/65, 3-4=-186/104
BOT CHORD 1-5=-463/796, 4-5=-463/796
WEBS 2-5=-94/219, 2-4=-827/552

- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
 - Bearings are assumed to be: , Joint 4 SP No.3 .
 - Bearing at joint(s) 4 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
 - Provide mechanical connection (by others) of truss to bearing plate at joint(s) 4.
 - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1 and 4. This connection is for uplift only and does not consider lateral forces.
- LOAD CASE(S)** Standard

- NOTES**
- Wind: ASCE 7-16; Vult=130mph (3-second gust)
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 7-0-12, Exterior(2E) 7-0-12 to 10-0-12 zone; cantilever left and right exposed ; end vertical left and right exposed; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
 - Unbalanced snow loads have been considered for this design.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.



August 27, 2024

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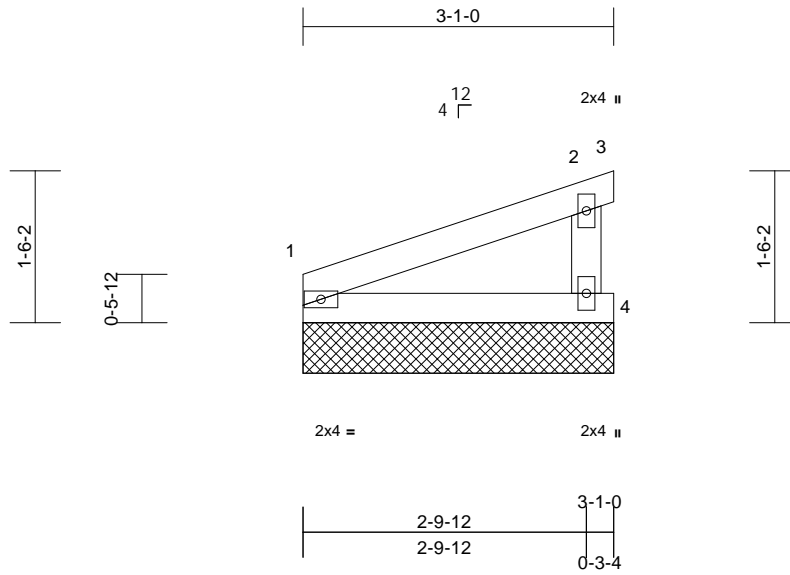
818 Soundside Road
Edenton, NC 27932

Job 24080051-01	Truss F1GE	Truss Type Monopitch Supported Gable	Qty 1	Ply 1	188 Serenity-Roof-B330 A CP TMB GRH Job Reference (optional)	167781013
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Carter Components (Sanford, NC), Sanford, NC - 27332,

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Page: 1



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.12	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.08	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	1	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 11 lb	FT = 20%

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

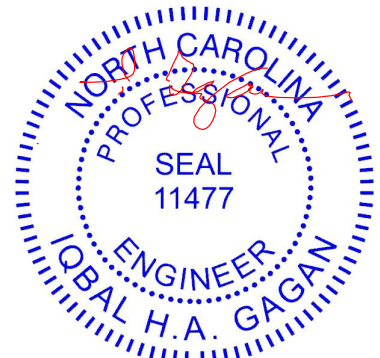
BRACING
TOP CHORD Structural wood sheathing directly applied or 3-1-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=3-1-0, 3=3-1-0, 4=3-1-0, 5=3-1-0
Max Horiz 1=43 (LC 13), 5=43 (LC 13)
Max Uplift 1=8 (LC 10), 3=183 (LC 20), 4=80 (LC 14), 5=8 (LC 10)
Max Grav 1=126 (LC 20), 3=49 (LC 14), 4=375 (LC 20), 5=126 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-31/53, 2-3=-65/56, 2-4=-332/326
BOT CHORD 1-4=-52/58

- Gable studs spaced at 2-0-0 oc.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 8 lb uplift at joint 1, 183 lb uplift at joint 3, 80 lb uplift at joint 4 and 8 lb uplift at joint 1.
- LOAD CASE(S)** Standard

- NOTES**
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
 - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
 - Unbalanced snow loads have been considered for this design.
 - Gable requires continuous bottom chord bearing.



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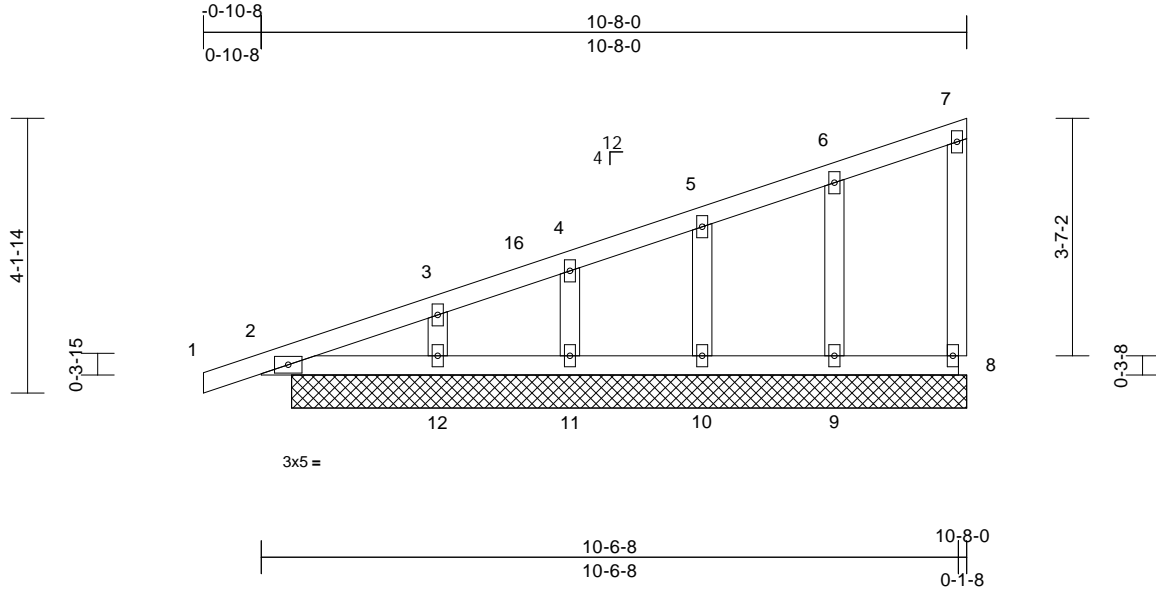
818 Soundside Road
Edenton, NC 27932

Job 24080051-01	Truss FGE	Truss Type Monopitch Supported Gable	Qty 1	Ply 1	188 Serenity-Roof-B330 A CP TMB GRH Job Reference (optional)	I67781014
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Carter Components (Sanford, NC), Sanford, NC - 27332,

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Page: 1



Scale = 1:34.8

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	0.17	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	0.05	Horz(CT)	0.00	8	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 49 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)	2=10-2-8, 8=10-2-8, 9=10-2-8, 10=10-2-8, 11=10-2-8, 12=10-2-8, 15=10-2-8
Max Horiz	2=147 (LC 13), 15=147 (LC 13)
Max Uplift	2=-40 (LC 10), 8=-13 (LC 11), 9=-35 (LC 10), 10=-34 (LC 14), 11=-37 (LC 10), 12=-37 (LC 14), 15=-40 (LC 10)
Max Grav	2=238 (LC 21), 8=83 (LC 21), 9=230 (LC 21), 10=214 (LC 21), 11=223 (LC 21), 12=96 (LC 1), 15=238 (LC 21)

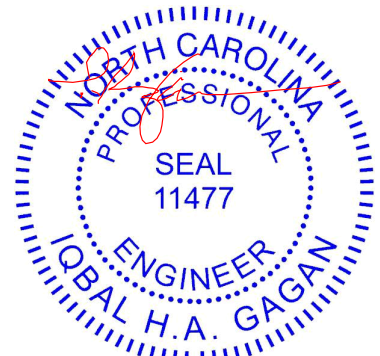
FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/17, 2-3=-125/133, 3-4=-91/117, 4-5=-79/104, 5-6=-69/91, 6-7=-56/70, 7-8=-67/38
BOT CHORD	2-12=-75/115, 11-12=-45/81, 10-11=-45/81, 9-10=-45/81, 8-9=-45/81
WEBS	6-9=-187/116, 5-10=-177/132, 4-11=-175/133, 3-12=-120/109

NOTES

- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 2-1-8, Exterior(2N) 2-1-8 to 7-6-4, Corner(3E) 7-6-4 to 10-6-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) 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 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 6) All plates are 2x4 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 2-00-00 wide will fit between the bottom chord and any other members.
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 40 lb uplift at joint 2 and 40 lb uplift at joint 2.

LOAD CASE(S) Standard



August 27, 2024

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

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



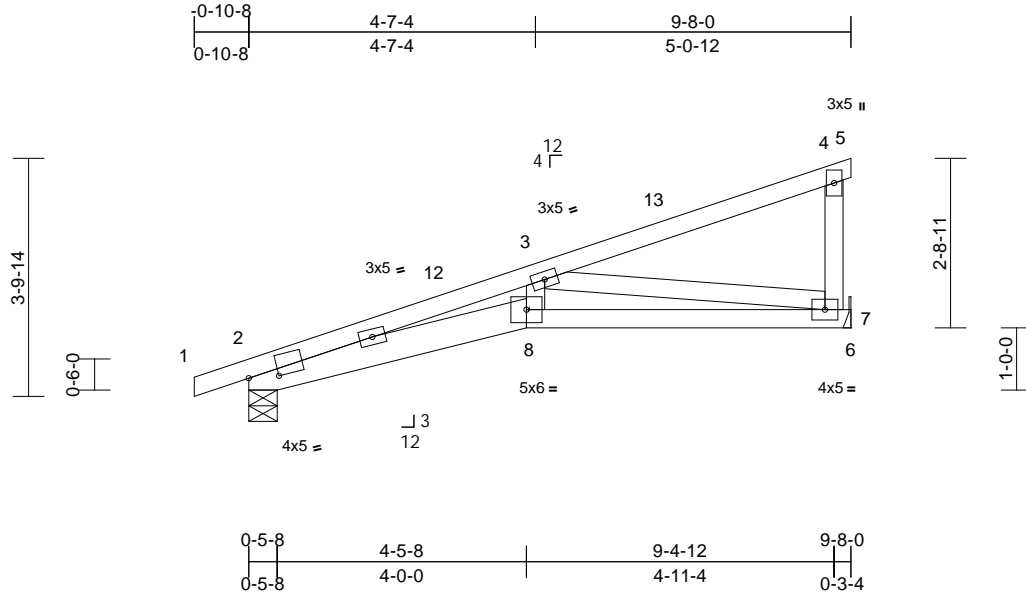
818 Soundside Road
Edenton, NC 27932

Job 24080051-01	Truss G	Truss Type Monopitch	Qty 9	Ply 1	188 Serenity-Roof-B330 A CP TMB GRH Job Reference (optional)	I67781015
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Aug 15 2024 Print: 8.730 S Aug 15 2024 MiTek Industries, Inc. Fri Aug 23 15:21:52
ID:Dy_jJEEkVgAptckEgqDBdczF_tK-RfC?PsB70Hq3NSgPqnL8w3uTXbGKWrCDoi7J4zJC?F

Page: 1



Scale = 1:37

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

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	Vert(LL)	-0.08	8	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	Vert(CT)	-0.13	7-8	>872	180		
TCDL	10.0	Rep Stress Incr	YES	WB	Horz(CT)	0.05	7	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH							
BCDL	10.0									Weight: 46 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2 *Except* 8-6:2x4 SP No.2
WEBS 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-5-5 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 7-11-15 oc bracing.

REACTIONS

(size) 2=0-5-8, 7= Mechanical
Max Horiz 2=121 (LC 11)
Max Uplift 2=-81 (LC 10), 7=-74 (LC 14)
Max Grav 2=491 (LC 21), 7=524 (LC 21)

FORCES

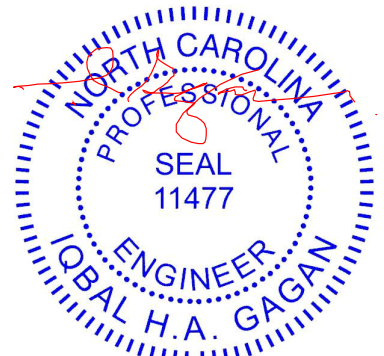
(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-1714/550, 3-4=-154/35, 4-5=-8/0, 4-7=-224/119
BOT CHORD 2-8=-574/1652, 7-8=-544/1531, 6-7=0/0
WEBS 3-8=-70/407, 3-7=-1460/561

NOTES

- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 1-11-13, Interior (1) 1-11-13 to 6-8-0, Exterior(2E) 6-8-0 to 9-8-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.

- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 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 2-00-00 wide will fit between the bottom chord and any other members.
- 7) Refer to girder(s) for truss to truss connections.
- 8) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 74 lb uplift at joint 7.
- 10) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.

LOAD CASE(S) Standard



August 27, 2024

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

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



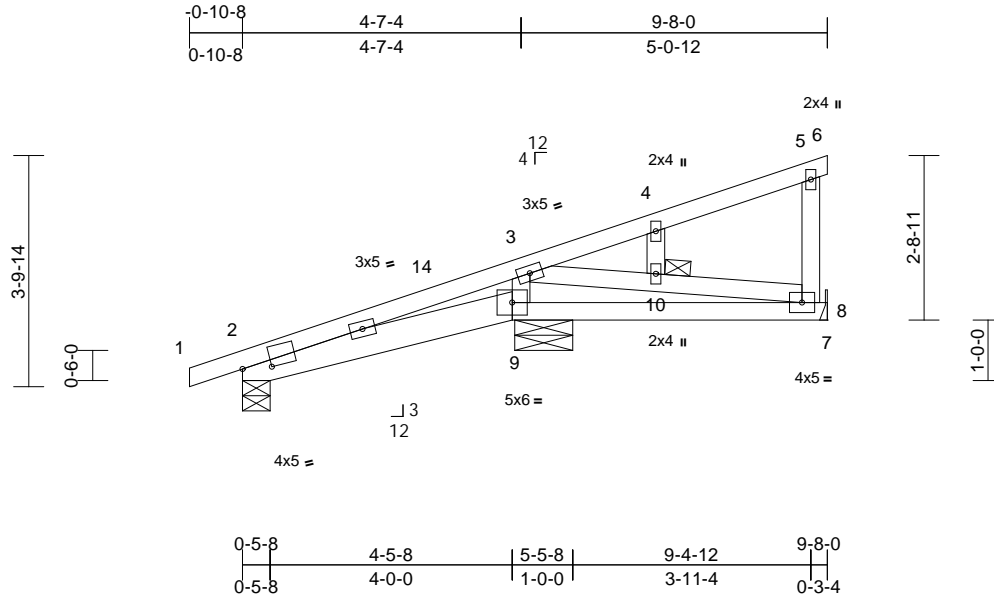
818 Soundside Road
Edenton, NC 27932

Job 24080051-01	Truss GSE	Truss Type Monopitch Structural Gable	Qty 1	Ply 1	188 Serenity-Roof-B330 A CP TMB GRH Job Reference (optional)	I67781016
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Aug 15 2024 Print: 8.730 S Aug 15 2024 MiTek Industries, Inc. Fri Aug 23 15:21:53
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Page: 1



Scale = 1:38.1

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

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	0.31	Vert(LL)	-0.02	8-9	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.18	Vert(CT)	-0.03	8-9	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.35	Horz(CT)	0.00	8	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 47 lb	FT = 20%

LUMBER

- TOP CHORD 2x4 SP No.2
- BOT CHORD 2x6 SP No.2 *Except* 9-7:2x4 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.

JOINTS 1 Brace at Jt(s): 10

- REACTIONS** (size) 2=0-5-8, 8= Mechanical, 9=0-11-8
- Max Horiz 2=121 (LC 11)
 - Max Uplift 2=-43 (LC 10), 8=-39 (LC 14), 9=-73 (LC 14)
 - Max Grav 2=221 (LC 21), 8=281 (LC 21), 9=513 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension

- TOP CHORD 1-2=0/17, 2-3=-144/55, 3-4=-105/24, 4-5=-65/30, 5-6=-8/0, 5-8=-177/93
- BOT CHORD 2-9=-108/202, 8-9=-77/147, 7-8=0/0
- WEBS 3-9=-377/185, 3-10=-101/105, 8-10=-111/112, 4-10=-71/47

NOTES

- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-10-8 to 1-11-13, Interior (1) 1-11-13 to 6-8-0, Exterior(2E) 6-8-0 to 9-8-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Refer to girder(s) for truss to truss connections.
- Bearing at joint(s) 2 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 39 lb uplift at joint 8 and 73 lb uplift at joint 9.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.

LOAD CASE(S) Standard



August 27, 2024

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

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



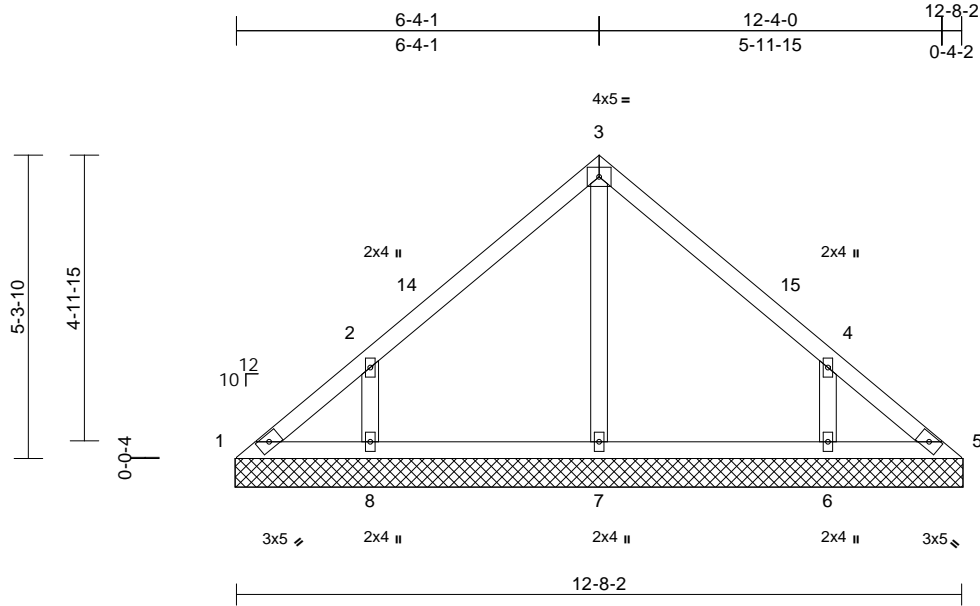
818 Soundside Road
Edenton, NC 27932

Job 24080051-01	Truss V1	Truss Type Valley	Qty 1	Ply 1	188 Serenity-Roof-B330 A CP TMB GRH Job Reference (optional)	I67781017
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Aug 15 2024 Print: 8.730 S Aug 15 2024 MiTek Industries, Inc. Fri Aug 23 15:21:53
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Page: 1



Scale = 1:40.3

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	0.35	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	0.16	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0											
										Weight: 53 lb	FT = 20%	

LUMBER

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

BRACING

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

REACTIONS

(size) 1=12-8-11, 5=12-8-11, 6=12-8-11, 7=12-8-11, 8=12-8-11, 13=12-8-11
Max Horiz 1=-120 (LC 10)
Max Uplift 1=-64 (LC 10), 5=-1 (LC 24), 6=-138 (LC 15), 8=-143 (LC 14), 13=-1 (LC 24)
Max Grav 1=73 (LC 13), 6=438 (LC 21), 7=410 (LC 20), 8=421 (LC 20)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-113/221, 2-3=-95/205, 3-4=-111/183, 4-5=-24/150
BOT CHORD 1-8=-79/34, 7-8=-79/34, 6-7=-79/34, 5-6=-79/34
WEBS 3-7=-327/0, 2-8=-379/206, 4-6=-383/203

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 3-4-6, Exterior(2R) 3-4-6 to 9-4-6, Interior (1) 9-4-6 to 9-8-11, Exterior(2E) 9-8-11 to 12-8-11 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 64 lb uplift at joint 1, 1 lb uplift at joint 5, 143 lb uplift at joint 8, 138 lb uplift at joint 6 and 1 lb uplift at joint 5.
- Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 5, 13.

LOAD CASE(S) Standard



August 27, 2024

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

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



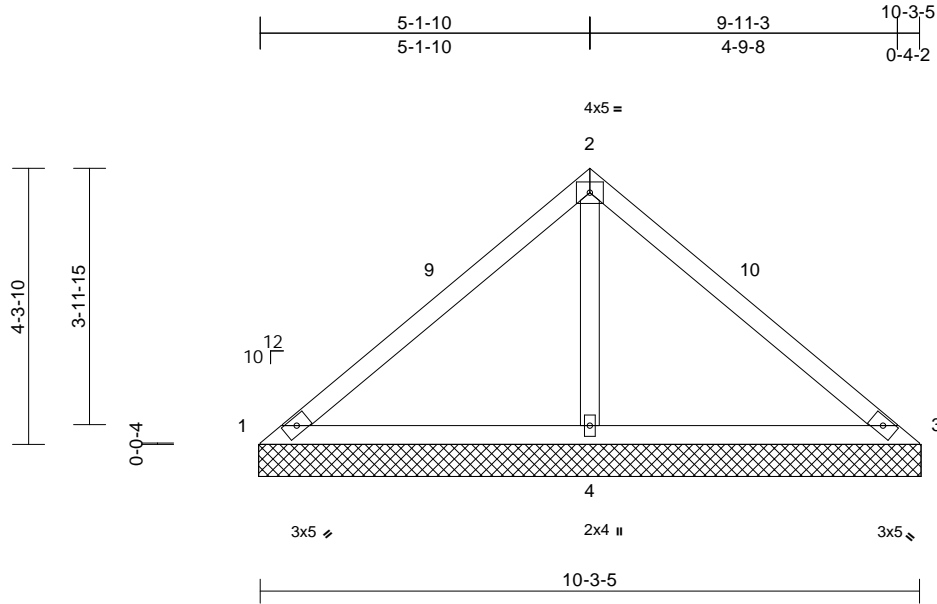
818 Soundside Road
Edenton, NC 27932

Job 24080051-01	Truss V2	Truss Type Valley	Qty 1	Ply 1	188 Serenity-Roof-B330 A CP TMB GRH Job Reference (optional)	167781018
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Aug 15 2024 Print: 8.730 S Aug 15 2024 MiTek Industries, Inc. Fri Aug 23 15:21:53
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Page: 1



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.53	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.48	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.23	Horiz(TL)	0.01	4	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 39 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 10-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=10-3-14, 3=10-3-14, 4=10-3-14
Max Horiz 1=-97 (LC 10)
Max Uplift 1=-73 (LC 21), 3=-73 (LC 20), 4=-126 (LC 14)
Max Grav 1=84 (LC 20), 3=84 (LC 21), 4=870 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-136/435, 2-3=-136/435
BOT CHORD 1-4=-288/191, 3-4=-288/191
WEBS 2-4=-727/301

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Exterior(2R) 3-0-0 to 7-3-14, Exterior(2E) 7-3-14 to 10-3-14 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
 - Unbalanced snow loads have been considered for this design.
 - Gable requires continuous bottom chord bearing.
 - Gable studs spaced at 4-0-0 oc.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 73 lb uplift at joint 1, 73 lb uplift at joint 3 and 126 lb uplift at joint 4.
 - Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 3.
- LOAD CASE(S)** Standard



August 27, 2024

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

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



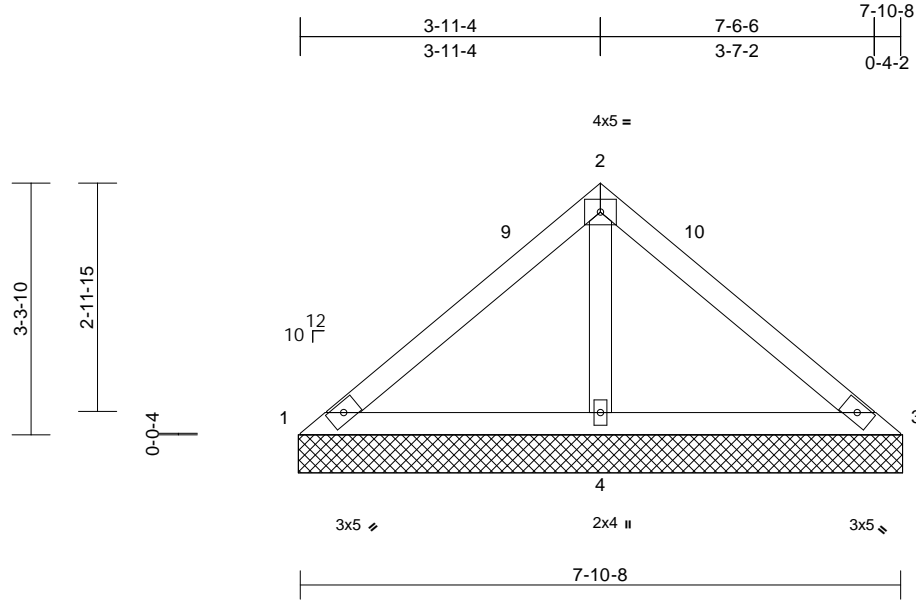
818 Soundside Road
Edenton, NC 27932

Job 24080051-01	Truss V3	Truss Type Valley	Qty 1	Ply 1	188 Serenity-Roof-B330 A CP TMB GRH Job Reference (optional)	167781019
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Aug 15 2024 Print: 8.730 S Aug 15 2024 MiTek Industries, Inc. Fri Aug 23 15:21:53
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Page: 1



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.32	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	0.11	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 30 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 7-10-8 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=7-11-2, 3=7-11-2, 4=7-11-2
Max Horiz 1=-73 (LC 10)
Max Uplift 1=-36 (LC 21), 3=-36 (LC 20), 4=-89 (LC 14)
Max Grav 1=101 (LC 20), 3=101 (LC 21), 4=620 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-111/282, 2-3=-111/282
BOT CHORD 1-4=-219/173, 3-4=-219/173
WEBS 2-4=-500/234

- 4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
 - 5) Unbalanced snow loads have been considered for this design.
 - 6) Gable requires continuous bottom chord bearing.
 - 7) Gable studs spaced at 4-0-0 oc.
 - 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - 9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
 - 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 36 lb uplift at joint 1, 36 lb uplift at joint 3 and 89 lb uplift at joint 4.
 - 11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 3.
- LOAD CASE(S)** Standard

- NOTES**
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Exterior(2R) 3-0-0 to 4-11-2, Exterior(2E) 4-11-2 to 7-11-2 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.



August 27, 2024

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

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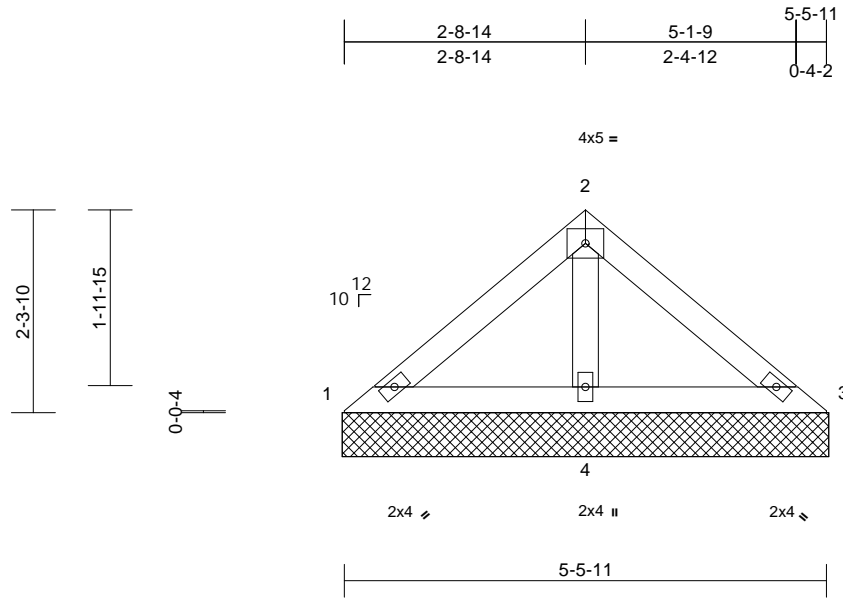
818 Soundside Road
Edenton, NC 27932

Job 24080051-01	Truss V4	Truss Type Valley	Qty 1	Ply 1	188 Serenity-Roof-B330 A CP TMB GRH Job Reference (optional)	I67781020
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Aug 15 2024 Print: 8.730 S Aug 15 2024 MiTek Industries, Inc. Fri Aug 23 15:21:53
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Page: 1



Scale = 1:26.2

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	0.12	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	0.05	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0											
										Weight: 20 lb	FT = 20%	

LUMBER

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

BRACING

TOP CHORD Structural wood sheathing directly applied or 5-5-11 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS

(size) 1=5-6-5, 3=5-6-5, 4=5-6-5
Max Horiz 1=50 (LC 13)
Max Uplift 3=-5 (LC 15), 4=-43 (LC 14)
Max Grav 1=94 (LC 20), 3=94 (LC 21), 4=358 (LC 20)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-85/137, 2-3=-85/137
BOT CHORD 1-4=-111/108, 3-4=-111/108
WEBS 2-4=-269/128

NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10

- 5) Unbalanced snow loads have been considered for this design.
- 6) Gable requires continuous bottom chord bearing.
- 7) Gable studs spaced at 4-0-0 oc.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 5 lb uplift at joint 3 and 43 lb uplift at joint 4.
- 11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 3.

LOAD CASE(S) Standard



August 27, 2024

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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/TPI Quality Criteria and DSB-22 available from Truss Plate Institute (www.tpinst.org) and BCSI Building Component Safety Information available from the Structural Building Component Association (www.sbcacomponents.com)



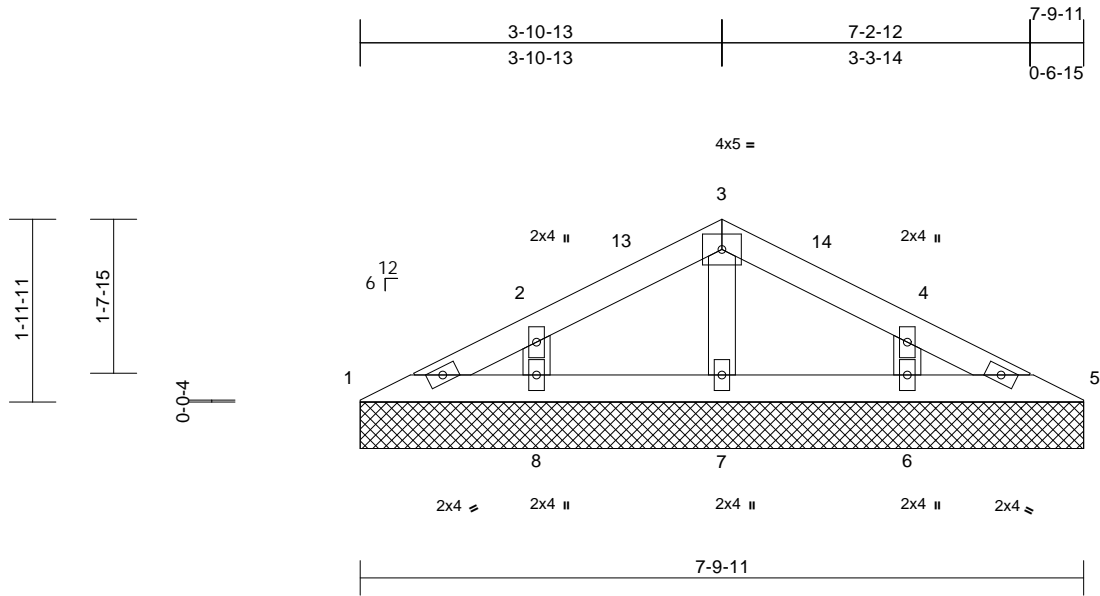
818 Soundside Road
Edenton, NC 27932

Job 24080051-01	Truss V11	Truss Type Valley	Qty 1	Ply 1	188 Serenity-Roof-B330 A CP TMB GRH Job Reference (optional)	167781021
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Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Aug 15 2024 Print: 8.730 S Aug 15 2024 MiTek Industries, Inc. Fri Aug 23 15:21:53
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Page: 1



Scale = 1:24.9

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	0.09	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.03	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0											
										Weight: 26 lb	FT = 20%	

LUMBER

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

BRACING

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

REACTIONS

(size) 1=7-9-11, 5=7-9-11, 6=7-9-11,
7=7-9-11, 8=7-9-11
Max Horiz 1=29 (LC 14)
Max Uplift 1=-3 (LC 15), 5=-5 (LC 15), 6=-50 (LC 15), 8=-51 (LC 14)
Max Grav 1=79 (LC 20), 5=79 (LC 21), 6=263 (LC 21), 7=143 (LC 20), 8=263 (LC 20)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-71/51, 2-3=-41/57, 3-4=-41/57, 4-5=-71/51
BOT CHORD 1-8=-21/55, 7-8=-21/33, 6-7=-21/33, 5-6=-21/55
WEBS 3-7=-106/40, 2-8=-206/131, 4-6=-206/131

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-8 to 3-0-8, Exterior(2R) 3-0-8 to 4-10-3, Exterior(2E) 4-10-3 to 7-10-3 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- 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 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 3 lb uplift at joint 1, 5 lb uplift at joint 5, 51 lb uplift at joint 8 and 50 lb uplift at joint 6.

LOAD CASE(S) Standard



August 27, 2024

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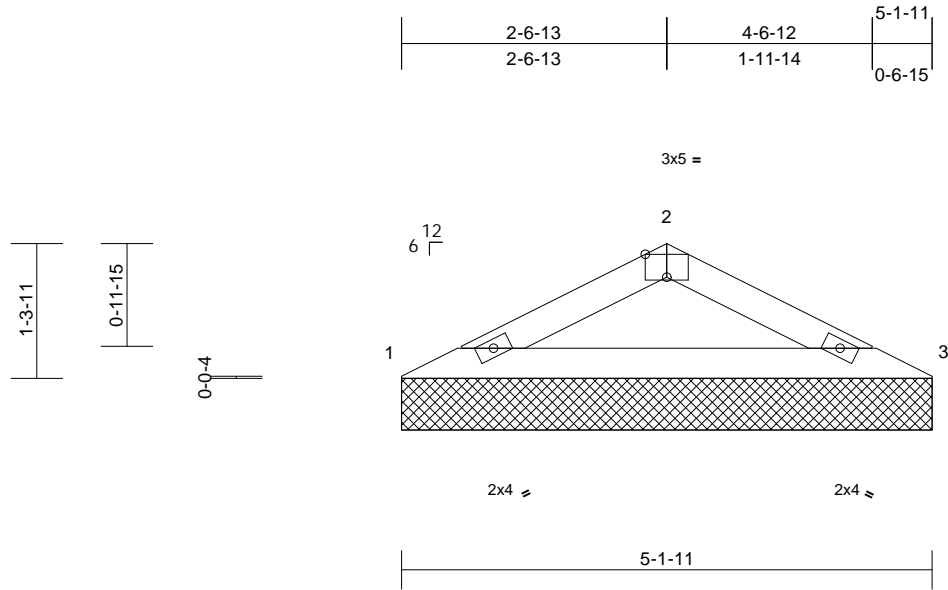
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	188 Serenity-Roof-B330 A CP TMB GRH	I67781022
24080051-01	V12	Valley	1	1	Job Reference (optional)	

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Aug 15 2024 Print: 8.730 S Aug 15 2024 MiTek Industries, Inc. Fri Aug 23 15:21:53
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Page: 1



Scale = 1:22.3

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.22	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.18	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	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 14 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD Structural wood sheathing directly applied or 5-1-11 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(size) 1=5-1-11, 3=5-1-11
Max Horiz 1=18 (LC 14)
Max Uplift 1=20 (LC 14), 3=20 (LC 15)
Max Grav 1=237 (LC 20), 3=237 (LC 21)

FORCES

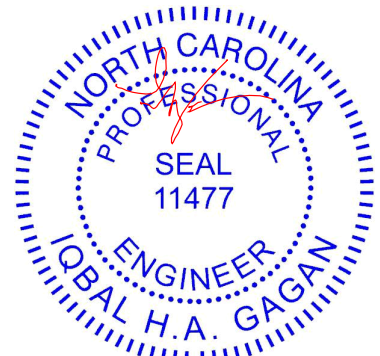
(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-419/183, 2-3=-419/183
BOT CHORD 1-3=-150/364

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Gable requires continuous bottom chord bearing.

- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 20 lb uplift at joint 1 and 20 lb uplift at joint 3.

LOAD CASE(S) Standard



August 27, 2024

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

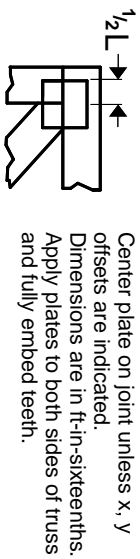
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall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



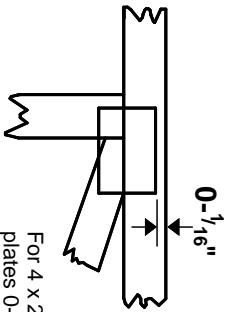
818 Soundside Road
Edenton, NC 27932

Symbols

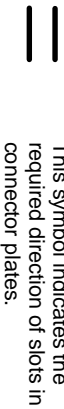
PLATE LOCATION AND ORIENTATION



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



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



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

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

PLATE SIZE

4 X 4

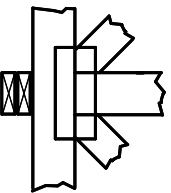
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



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

BEARING



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

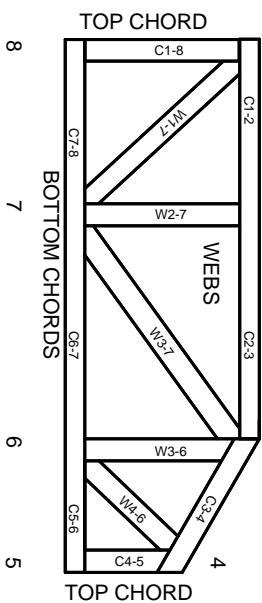
Industry Standards:

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

Numbering System



1 TOP CHORDS
2 JOINT ID TYP.



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

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

Product Code Approvals

ICC-ES Reports:

ESR-1988, ESR-2362, ESR-2685, ESR-3282
ESR-4722, ESL-1388

Design General Notes

Trusses are designed for wind loads in the plane of the truss unless otherwise shown.

Lumber design values are in accordance with ANSI/TP1 section 6.3. These truss designs rely on Lumber values established by others.

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MITek

ENGINEERING BY
TRENGO
A MITek Affiliate

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

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

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