ENGINEERING BY TRENCO
A MiTek Affiliate

RE: 24050019
23 Serenity - B329 B LH CP

Trenco
818 Soundside Rd
Edenton, NC 27932

Site Information:

Customer: David Weekley Homes Project Name: 24050019
Lot/Block: 23 Model:
Address: 35 Welcome Ave Subdivision: Serenity
City: Fuquay-Varina State: NC

General Truss Engineering Criteria & Design Loads (Individual Truss Design Drawings Show Special Loading Conditions):

Design Code: IRC2018/TPI2014 Design Program: MiTek 20/20 8.7
Wind Code: ASCE 7-16 Wind Speed: 130 mph
Roof Load: 40.0 psf Floor Load: N/A psf

This package includes 44 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	I64576253	GGE	4/1/2024	21	I64576273	A	4/1/2024
2	I64576254	BSE	4/1/2024	22	I64576274	C1	4/1/2024
3	I64576255	B	4/1/2024	23	I64576275	A7GR	4/1/2024
4	I64576256	DSE	4/1/2024	24	I64576276	A6	4/1/2024
5	I64576257	D	4/1/2024	25	I64576277	A5	4/1/2024
6	I64576258	D1	4/1/2024	26	I64576278	JGE	4/1/2024
7	I64576259	B1	4/1/2024	27	I64576279	J	4/1/2024
8	I64576260	B2	4/1/2024	28	I64576280	V11	4/1/2024
9	I64576261	B3	4/1/2024	29	I64576281	V12	4/1/2024
10	I64576262	B4	4/1/2024	30	I64576282	V13	4/1/2024
11	I64576263	B5GR	4/1/2024	31	I64576283	V14	4/1/2024
12	I64576264	D1A	4/1/2024	32	I64576284	V1	4/1/2024
13	I64576265	HGE	4/1/2024	33	I64576285	V2	4/1/2024
14	I64576266	H	4/1/2024	34	I64576286	V3	4/1/2024
15	I64576267	EGR	4/1/2024	35	I64576287	V4	4/1/2024
16	I64576268	EGE	4/1/2024	36	I64576288	V5	4/1/2024
17	I64576269	A4SE	4/1/2024	37	I64576289	V6	4/1/2024
18	I64576270	A4	4/1/2024	38	I64576290	PB1	4/1/2024
19	I64576271	A2	4/1/2024	39	I64576291	FGE	4/1/2024
20	I64576272	A1	4/1/2024	40	I64576292	F	4/1/2024

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

Truss Design Engineer's Name: Tony Miller

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

North Carolina COA: C-0844

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 TRENCO. Any project specific information included is for TRENCO customers file reference purpose only, and was not taken into account in the preparation of these designs. 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.

April 01, 2024

Tony Miller

Trenco
818 Soundside Rd
Edenton, NC 27932

RE: 24050019 - 23 Serenity - B329 B LH CP

Site Information:

Project Customer: David Weekley Homes Project Name: 24050019
Lot/Block: 23 Subdivision: Serenity
Address: 35 Welcome Ave
City, County: Fuquay-Varina State: NC

No.	Seal#	Truss Name	Date
41	I64576293	ISE	4/1/2024
42	I64576294	I	4/1/2024
43	I64576295	C	4/1/2024
44	I64576296	KGR	4/1/2024

Job	Truss	Truss Type	Qty	Ply	23 Serenity - B329 B LH CP
24050019	GGE	Common Supported Gable	1	1	I64576253 Job Reference (optional)

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

Run: 9.03 S 8.73 Mar 21 2024 Print: 8.730 S Mar 21 2024 MiTek Industries, Inc. Fri Mar 29 10:41:42 Page: 1
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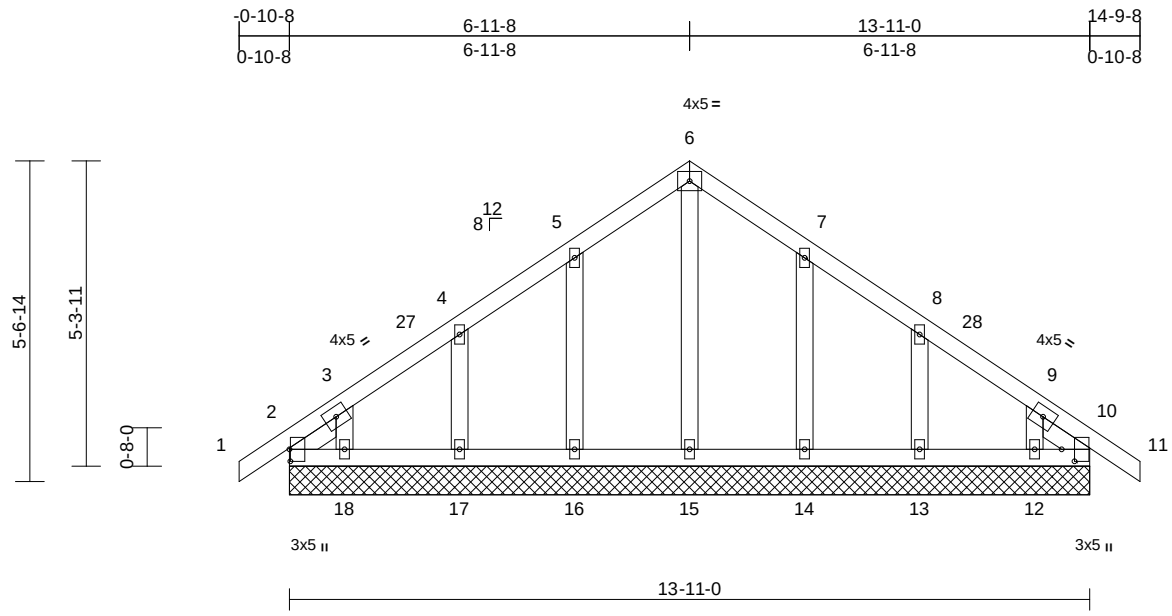

Scale = 1:40.1

Plate Offsets (X, Y): [2:0-2-8,0-0-3], [10:0-2-8,0-2-11]

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	0.03	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.07	Horz(CT)	0.00	10	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 78 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 -- 0-11-14, Right 2x4 SP No.3 -- 0-11-14

BRACING

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

REACTIONS (size) 2=13-11-0, 10=13-11-0, 12=13-11-0, 13=13-11-0, 14=13-11-0, 15=13-11-0, 16=13-11-0, 17=13-11-0, 18=13-11-0, 19=13-11-0, 23=13-11-0
Max Horiz 2=-123 (LC 12), 19=-123 (LC 12)
Max Uplift 2=-47 (LC 10), 10=-13 (LC 11), 12=-68 (LC 15), 13=-60 (LC 15), 14=-60 (LC 15), 16=-61 (LC 14), 17=-59 (LC 14), 18=-77 (LC 14), 19=-47 (LC 10), 23=-13 (LC 11)
Max Grav 2=129 (LC 26), 10=112 (LC 22), 12=126 (LC 26), 13=227 (LC 22), 14=259 (LC 22), 15=146 (LC 33), 16=259 (LC 21), 17=227 (LC 21), 18=136 (LC 25), 19=129 (LC 26), 23=112 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/29, 2-3=-71/76, 3-4=-93/76, 4-5=-82/79, 5-6=-91/152, 6-7=-91/152, 7-8=-75/79, 8-9=-61/34, 9-10=-70/58, 10-11=0/29
BOT CHORD	2-18=-39/117, 17-18=-39/117, 16-17=-39/117, 15-16=-39/117, 14-15=-39/117, 13-14=-39/117, 12-13=-39/117, 10-12=-39/117
WEBS	6-15=-106/0, 5-16=-219/107, 4-17=-186/119, 3-18=-113/116, 7-14=-219/107, 8-13=-186/119, 9-12=-113/116

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 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
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) 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) N/A
13) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 1,2024

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	23 Serenity - B329 B LH CP
24050019	BSE	Common Structural Gable	1	1	I64576254 Job Reference (optional)

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

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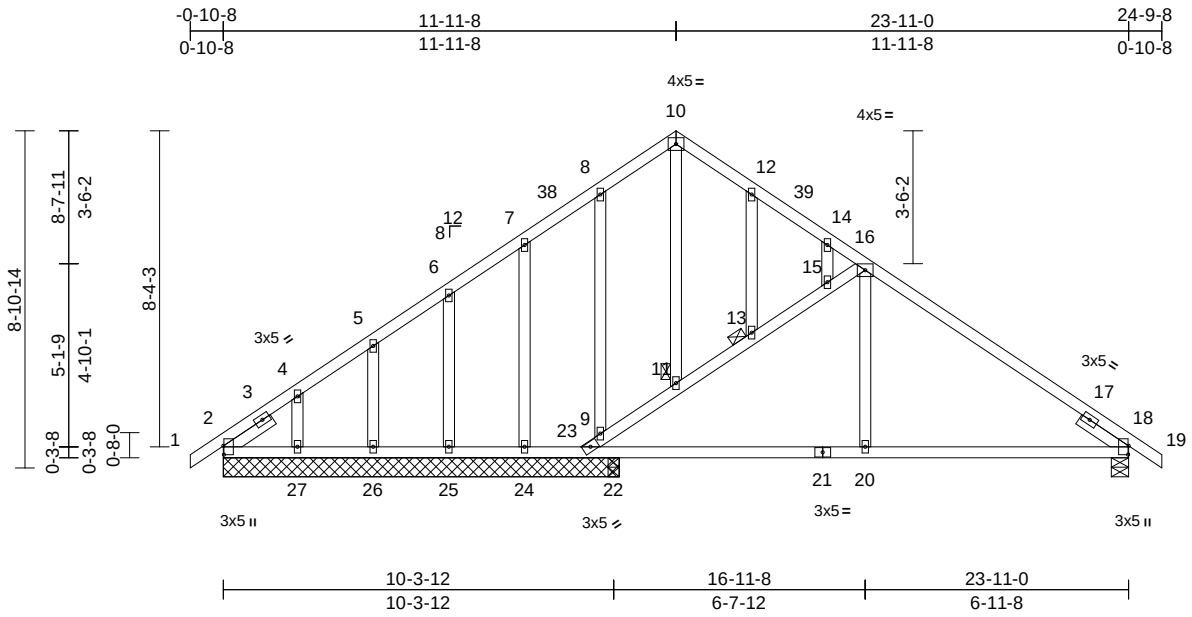

Scale = 1:60.9

Plate Offsets (X, Y): [2:0-2-13,0-0-3], [18:0-2-13,0-0-3]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.49	Vert(LL)	0.07	20-36	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.41	Vert(CT)	-0.10	20-36	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.02	18	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 154 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 -- 1-6-0, 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.
JOINTS	1 Brace at Jt(s): 11, 13

REACTIONS (size) 2=10-5-8, 18=0-5-8, 22=0-3-8, 24=10-5-8, 25=10-5-8, 26=10-5-8, 27=10-5-8, 28=10-5-8, 34=0-5-8
Max Horiz 2=-201 (LC 12), 28=-201 (LC 12)
Max Uplift 2=-27 (LC 10), 18=-80 (LC 15), 24=-123 (LC 14), 25=-42 (LC 14), 26=-51 (LC 14), 27=-112 (LC 14), 28=-27 (LC 10), 34=-80 (LC 15)
Max Grav 2=247 (LC 26), 18=669 (LC 1), 22=417 (LC 7), 24=277 (LC 1), 25=145 (LC 25), 26=175 (LC 1), 27=168 (LC 25), 28=247 (LC 26), 34=669 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/29, 2-4=-251/112, 4-5=-224/82, 5-6=-215/68, 6-7=-199/60, 7-8=-192/100, 8-10=-200/112, 10-12=-185/113, 12-14=-201/73, 14-16=-220/57, 16-18=-730/91, 18-19=0/29, 9-23=-449/647, 9-11=-580/172, 11-13=-596/200, 13-15=-551/171, 15-16=-542/168
BOT CHORD	2-27=-47/201, 26-27=-47/201, 25-26=-47/201, 24-25=-47/201, 23-24=-47/201, 22-23=0/532, 20-22=0/532, 18-20=-125/532
WEBS	10-11=-51/29, 8-9=-134/58, 7-24=-158/99, 6-25=-137/78, 5-26=-146/78, 4-27=-135/113, 12-13=-81/51, 14-15=-15/6, 16-20=0/287

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) -0-10-8 to 1-11-8, Interior (1) 1-11-8 to 8-11-8, Exterior(2R) 8-11-8 to 14-11-8, Interior (1) 14-11-8 to 21-9-8, Exterior(2E) 21-9-8 to 24-9-8 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
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) 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 studs spaced at 2-0-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
11) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at joint 18. This connection is for uplift only and does not consider lateral forces.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
13) 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

April 1,2024

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

Job	Truss	Truss Type	Qty	Ply	23 Serenity - B329 B LH CP
24050019	B	Common	7	1	I64576255 Job Reference (optional)

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

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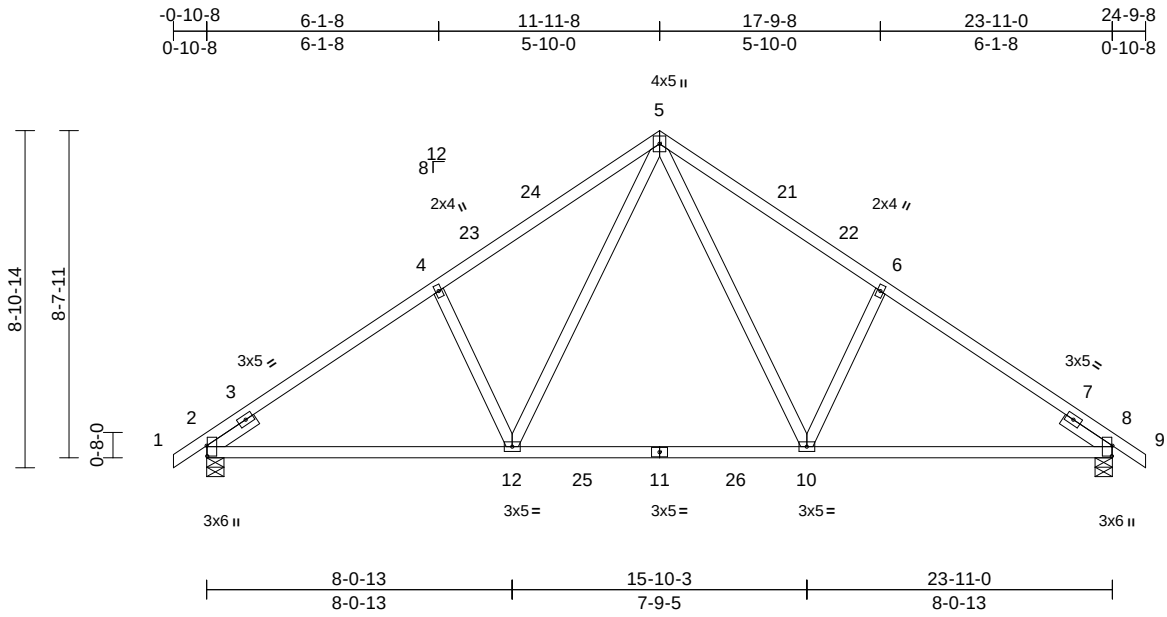

Scale = 1:60.8

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.85	Vert(LL)	-0.16	10-12	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.70	Vert(CT)	-0.23	10-12	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.27	Horz(CT)	-0.03	2	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 126 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS (size) 2=0-5-8, 8=0-5-8
Max Horiz 8=201 (LC 13)
Max Uplift 2=-99 (LC 14), 8=-99 (LC 15)
Max Grav 2=1136 (LC 25), 8=1136 (LC 26)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	5-6=-1566/217, 6-8=-1647/152, 8-9=0/29, 1-2=0/29, 2-4=-1647/152, 4-5=-1566/217
BOT CHORD	2-12=-101/1296, 10-12=0/844, 8-10=-209/1296
WEBS	5-12=-128/709, 4-12=-384/223, 5-10=-128/709, 6-10=-384/223

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) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 8-11-8, Exterior(2R) 8-11-8 to 14-11-8, Interior (1) 14-11-8 to 21-9-8, Exterior(2E) 21-9-8 to 24-9-8 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
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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 8. This connection is for uplift only and does not consider lateral forces.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 1,2024

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

Job	Truss	Truss Type	Qty	Ply	23 Serenity - B329 B LH CP
24050019	DSE	Common Supported Gable	1	1	I64576256 Job Reference (optional)

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

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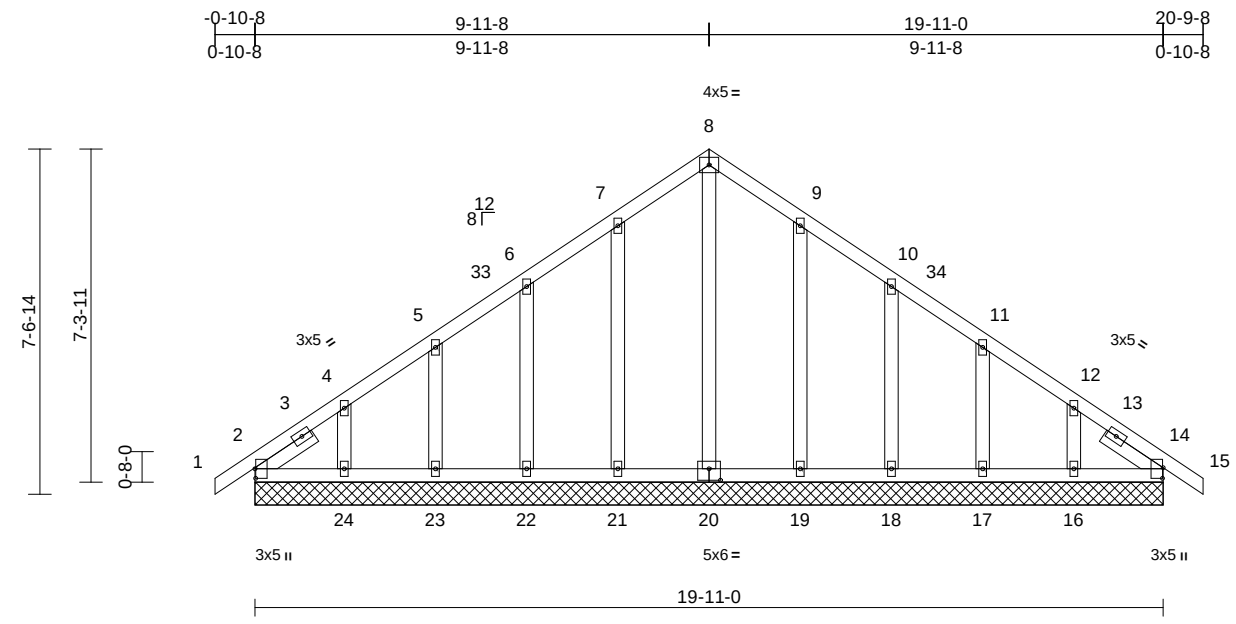


Scale = 1:50.5

Plate Offsets (X, Y): [2:0-2-8,0-0-3], [14:0-2-13,0-0-3], [20:0-3-0,0-3-0]

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	0.04	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.14	Horz(CT)	0.00	14	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 124 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.

REACTIONS (size) 2=19-11-0, 14=19-11-0, 16=19-11-0, 17=19-11-0, 18=19-11-0, 19=19-11-0, 20=19-11-0, 21=19-11-0, 22=19-11-0, 23=19-11-0, 24=19-11-0, 25=19-11-0, 29=19-11-0

Max Horiz 2=170 (LC 13), 25=170 (LC 13)

Max Uplift 2=-43 (LC 10), 14=-3 (LC 11), 16=-86 (LC 15), 17=-52 (LC 15), 18=-62 (LC 15), 19=-56 (LC 15), 21=-58 (LC 14), 22=-61 (LC 14), 23=-50 (LC 14), 24=-94 (LC 14), 25=-43 (LC 10), 29=-3 (LC 11)

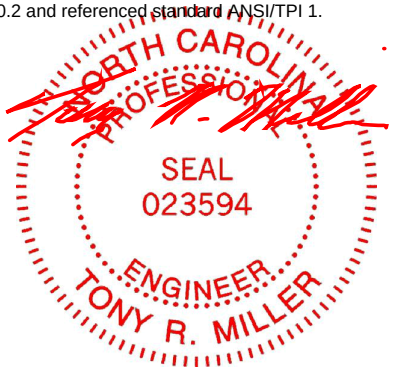
Max Grav 2=167 (LC 26), 14=146 (LC 22), 16=178 (LC 26), 17=166 (LC 26), 18=222 (LC 22), 19=259 (LC 22), 20=167 (LC 28), 21=259 (LC 21), 22=222 (LC 21), 23=165 (LC 25), 24=187 (LC 25), 25=167 (LC 26), 29=146 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/29, 2-4=-145/128, 4-5=-116/97, 5-6=-105/90, 6-7=-92/125, 7-8=-113/184, 8-9=-113/184, 9-10=-87/125, 10-11=-63/61, 11-12=-73/40, 12-14=-103/66, 14-15=0/29
BOT CHORD	2-24=-55/128, 23-24=-55/128, 22-23=-55/128, 21-22=-55/128, 19-21=-55/128, 18-19=-55/128, 17-18=-55/128, 16-17=-55/128, 14-16=-55/128
WEBS	8-20=-141/28, 7-21=-219/84, 6-22=-182/91, 5-23=-143/85, 4-24=-145/103, 9-19=-219/84, 10-18=-182/91, 11-17=-143/85, 12-16=-145/103

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 Corner(3E) -0-10-8 to 1-11-8, Exterior(2N) 1-11-8 to 6-11-8, Corner(3R) 6-11-8 to 12-11-8, Exterior (2N) 12-11-8 to 17-9-8, Corner(3E) 17-9-8 to 20-9-8 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
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) 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) N/A
13) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 14, 29.
14) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



April 1,2024

Continued on page 2

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

Job	Truss	Truss Type	Qty	Ply	23 Serenity - B329 B LH CP
24050019	DSE	Common Supported Gable	1	1	I64576256 Job Reference (optional)

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	23 Serenity - B329 B LH CP	
24050019	D	Common	9	1	Job Reference (optional)	I64576257

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

Run: 9.03 S 8.73 Mar 21 2024 Print: 8.730 S Mar 21 2024 MiTek Industries, Inc. Fri Mar 29 10:41:41 Page: 1
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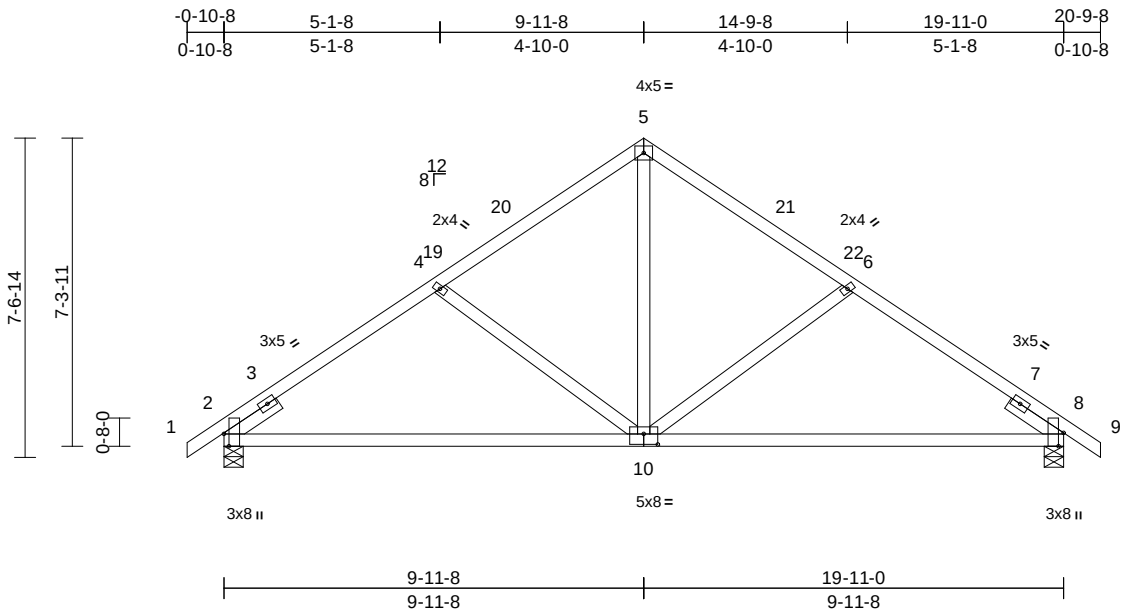


Scale = 1:54.7

Plate Offsets (X, Y): [2:0-3-8,Edge], [8:0-3-13,Edge], [10:0-4-0,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.51	Vert(LL)	-0.13	10-17	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.83	Vert(CT)	-0.27	10-17	>875	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.27	Horz(CT)	0.02	8	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 101 lb	FT = 20%

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

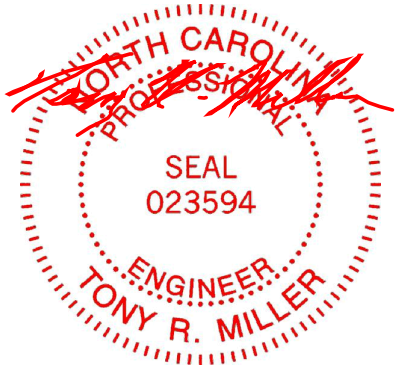
BRACING
TOP CHORD Structural wood sheathing directly applied or 5-4-1 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 8=0-5-8
Max Horiz 2=170 (LC 13)
Max Uplift 2=-85 (LC 14), 8=-85 (LC 15)
Max Grav 2=897 (LC 21), 8=897 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/29, 2-4=-1006/147, 4-5=-875/137, 5-6=-875/137, 6-8=-1006/147, 8-9=0/29
BOT CHORD 2-8=-193/897
WEBS 5-10=-29/593, 6-10=-366/183, 4-10=-366/183

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) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 6-11-8, Exterior(2R) 6-11-8 to 12-11-8, Interior (1) 12-11-8 to 17-9-8, Exterior(2E) 17-9-8 to 20-9-8 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
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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 8. This connection is for uplift only and does not consider lateral forces.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



April 1,2024

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

Job	Truss	Truss Type	Qty	Ply	23 Serenity - B329 B LH CP	
24050019	D1	Common	2	1	Job Reference (optional)	I64576258

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

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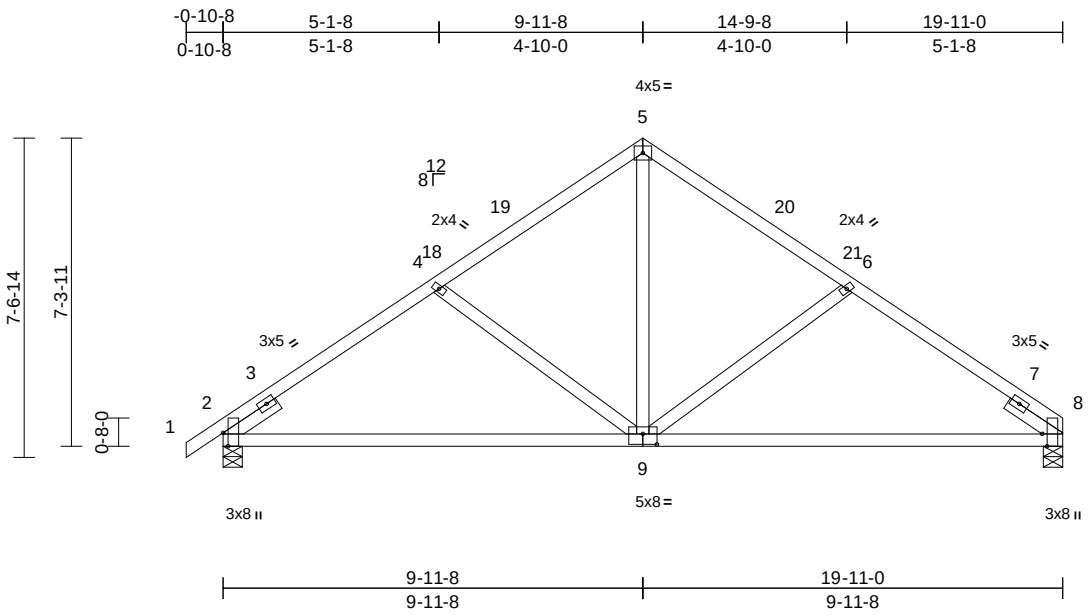

Scale = 1:54.7

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.51	Vert(LL)	-0.13	9-12	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.83	Vert(CT)	-0.28	9-12	>868	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.27	Horz(CT)	0.02	8	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 99 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-4-1 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 8=0-5-8
Max Horiz 2=165 (LC 13)
Max Uplift 2=-85 (LC 14), 8=-67 (LC 15)
Max Grav 2=897 (LC 21), 8=843 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/29, 2-4=-1007/148, 4-5=-876/139, 5-6=-877/139, 6-8=-1010/149
BOT CHORD 2-8=-200/903
WEBS 5-9=-31/595, 6-9=-370/184, 4-9=-366/183

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) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 6-11-8, Exterior(2R) 6-11-8 to 12-11-8, Interior (1) 12-11-8 to 16-11-0, Exterior(2E) 16-11-0 to 19-11-0 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
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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 8 and 2. This connection is for uplift only and does not consider lateral forces.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 1,2024

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

Job	Truss	Truss Type	Qty	Ply	23 Serenity - B329 B LH CP
24050019	B1	Hip	1	1	I64576259 Job Reference (optional)

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

Run: 9.03 S 8.73 Mar 21 2024 Print: 8.730 S Mar 21 2024 MiTek Industries, Inc. Fri Mar 29 10:41:39 Page: 1
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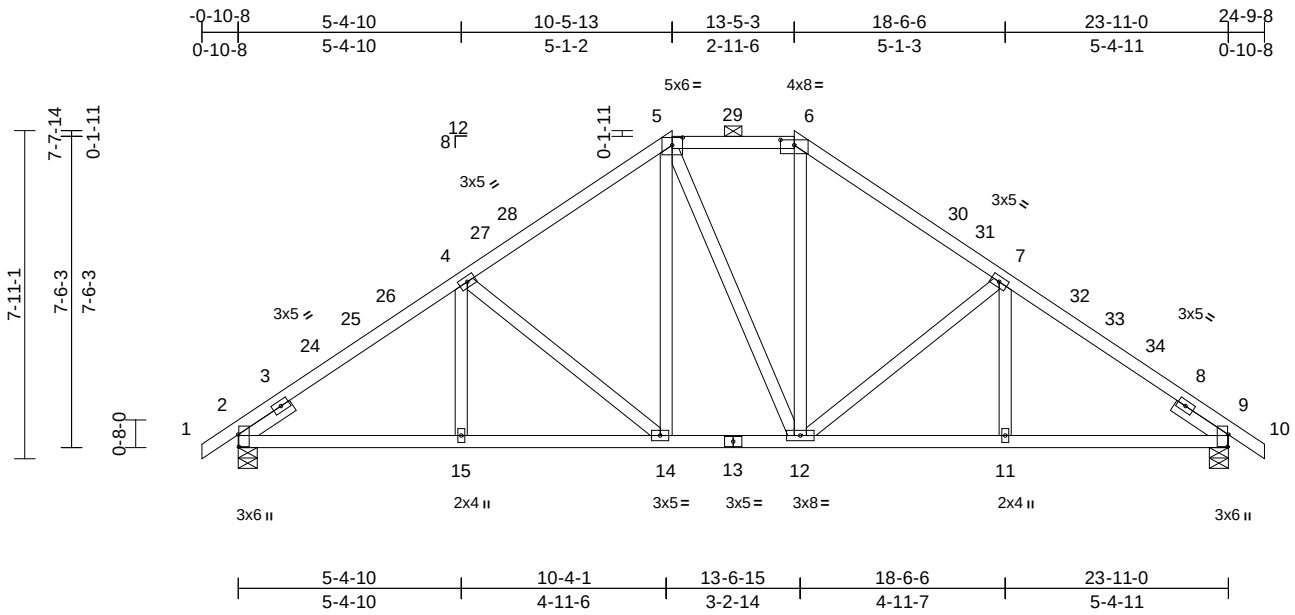

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Plate Offsets (X, Y): [2:0-3-9,0-0-3], [5:0-3-0,0-2-3], [6:0-4-0,0-1-9], [9:0-3-9,0-0-3]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.57	Vert(LL)	-0.06	14-15	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.56	Vert(CT)	-0.12	14-15	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.34	Horz(CT)	0.05	9	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 146 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-1-6 oc purlins, except 2-0-0 oc purlins (5-9-6 max.): 5-6.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 9=0-5-8
Max Horiz 2=176 (LC 13)
Max Uplift 2=-104 (LC 14), 9=-104 (LC 15)
Max Grav 2=1209 (LC 41), 9=1209 (LC 41)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/29, 2-4=-1647/136, 4-5=-1287/169, 5-6=-957/181, 6-7=-1288/169, 7-9=-1646/137, 9-10=0/29
BOT CHORD 2-15=-171/1305, 14-15=-135/1305, 12-14=-10/954, 11-12=-16/1305, 9-11=-76/1305
WEBS 4-15=0/191, 4-14=-452/158, 5-14=-47/363, 5-12=-148/153, 6-12=-38/362, 7-12=-451/158, 7-11=0/190

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) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 6-2-14, Exterior(2R) 6-2-14 to 17-8-2, Interior (1) 17-8-2 to 21-9-8, Exterior(2E) 21-9-8 to 24-9-8 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
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) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 9. This connection is for uplift only and does not consider lateral forces.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) 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

April 1,2024

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

Job	Truss	Truss Type	Qty	Ply	23 Serenity - B329 B LH CP
24050019	B2	Roof Special	1	1	I64576260 Job Reference (optional)

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

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Page: 1

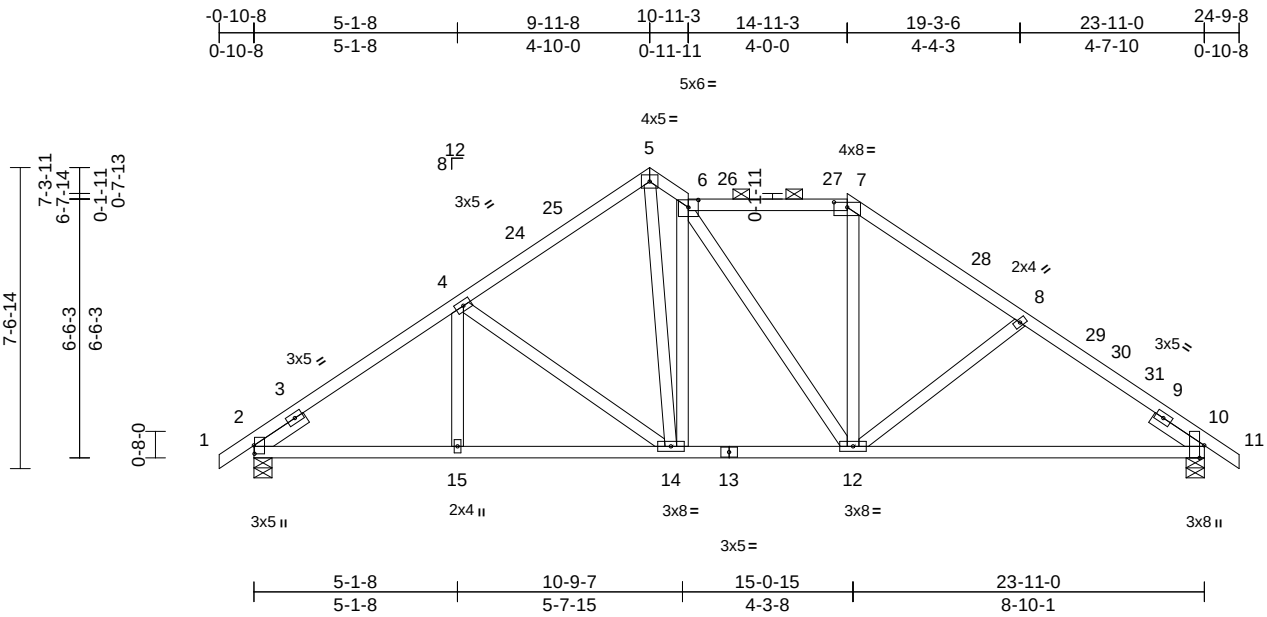

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Plate Offsets (X, Y): [2:0-2-9,0-0-3], [6:0-3-0,0-2-4], [7:0-4-0,0-1-9], [10:0-3-13,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.49	Vert(LL)	-0.11	12-22	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.61	Vert(CT)	-0.23	12-22	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.67	Horz(CT)	0.04	10	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 146 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD	Structural wood sheathing directly applied or 4-8-4 oc purlins, except 2-0-0 oc purlins (5-3-9 max.): 6-7.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 10=0-5-8
Max Horiz 2=170 (LC 13)
Max Uplift 2=-88 (LC 14), 10=-120 (LC 15)
Max Grav 2=1031 (LC 21), 10=1093 (LC 43)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/29, 2-4=-1409/146, 4-5=-1114/180, 5-6=-1154/218, 6-7=-975/182, 7-8=-1229/173, 8-10=-1479/185, 10-11=0/29
BOT CHORD	2-15=-152/1103, 14-15=-111/1103, 12-14=0/949, 10-12=-111/1166
WEBS	4-15=0/198, 4-14=-403/149, 5-14=-155/1031, 6-14=-835/190, 6-12=-176/110, 7-12=0/354, 8-12=-354/152

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) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 6-11-8, Exterior(2R) 6-11-8 to 9-11-8, Exterior(2E) 9-11-8 to 10-11-3, Interior (1) 10-11-3 to 11-11-3, Exterior (2R) 11-11-3 to 17-11-3, Interior (1) 17-11-3 to 21-9-8, Exterior(2E) 21-9-8 to 24-9-8 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
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) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) 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.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) 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

April 1,2024

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

Job	Truss	Truss Type	Qty	Ply	23 Serenity - B329 B LH CP
24050019	B3	Roof Special	1	1	I64576261 Job Reference (optional)

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

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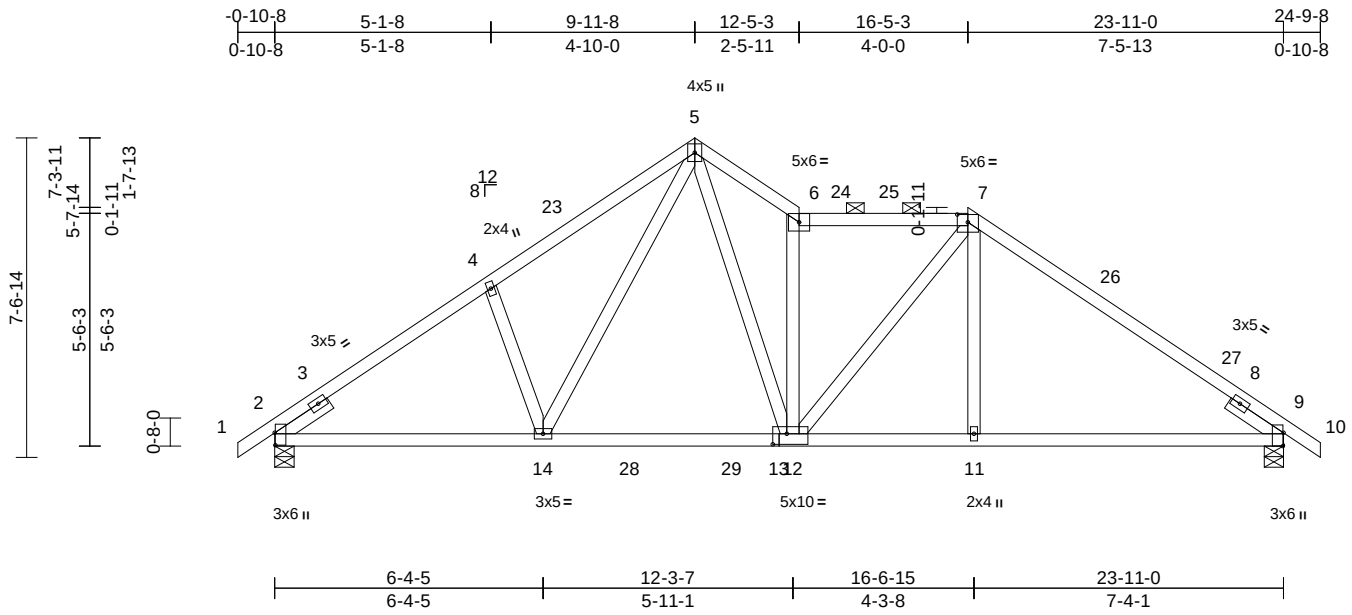

Scale = 1:54.6

Plate Offsets (X, Y): [2:0-3-9,0-0-3], [7:0-3-0,0-2-3], [9:0-3-13,Edge], [13:0-4-0,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.88	Vert(LL)	-0.12	11-21	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.68	Vert(CT)	-0.20	11-21	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.64	Horz(CT)	0.03	9	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 137 lb	FT = 20%

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

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

REACTIONS (size) 2=0-5-8, 9=0-5-8
Max Horiz 2=170 (LC 13)
Max Uplift 2=-88 (LC 14), 9=-120 (LC 15)
Max Grav 2=1116 (LC 25), 9=1164 (LC 51)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/29, 2-4=-1675/151, 4-5=-1634/218, 5-6=-1741/249, 6-7=-1441/184, 7-9=-1639/162, 9-10=0/29
BOT CHORD 2-14=-156/1323, 12-14=0/977, 11-12=-9/1221, 9-11=-196/1228
WEBS 4-14=-334/189, 5-14=-124/555, 5-12=-164/1160, 6-12=-1129/180, 7-12=-57/307, 7-11=0/266

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) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 6-11-8, Exterior(2R) 6-11-8 to 9-11-8, Exterior(2E) 9-11-8 to 12-5-3, Interior (1) 12-5-3 to 13-5-3, Exterior (2R) 13-5-3 to 19-5-3, Interior (1) 19-5-3 to 21-9-8, Exterior(2E) 21-9-8 to 24-9-8 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
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) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
9) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 9. This connection is for uplift only and does not consider lateral forces.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) 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

April 1,2024

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

Job	Truss	Truss Type	Qty	Ply	23 Serenity - B329 B LH CP
24050019	B4	Roof Special	1	1	I64576262 Job Reference (optional)

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

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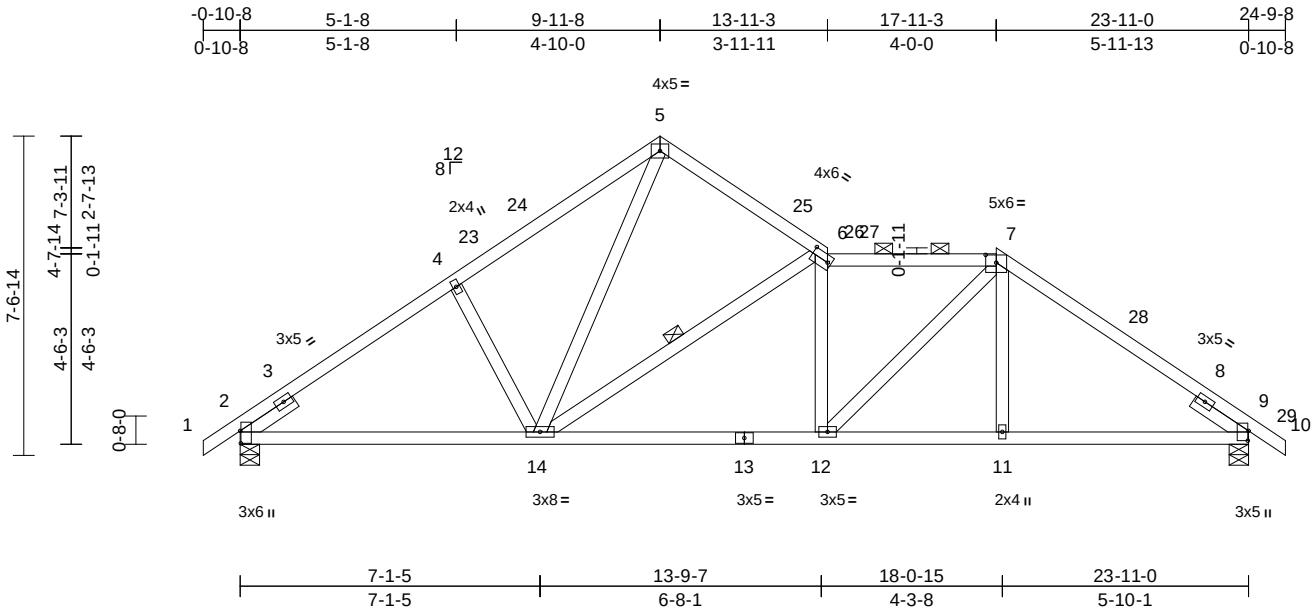

Scale = 1:54.7

Plate Offsets (X, Y): [2:0-3-9,0-0-3], [6:0-5-0,0-2-0], [7:0-3-0,0-2-3], [9:0-2-13,0-0-3]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.60	Vert(LL)	-0.07	12-14	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.52	Vert(CT)	-0.16	12-14	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.37	Horz(CT)	0.05	9	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 134 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD	Structural wood sheathing directly applied or 3-11-11 oc purlins, except 2-0-0 oc purlins (4-4-5 max.): 6-7.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 6-14

REACTIONS (size) 2=0-5-8, 9=0-5-8
Max Horiz 2=170 (LC 13)
Max Uplift 2=-88 (LC 14), 9=-120 (LC 15)
Max Grav 2=1074 (LC 44), 9=1142 (LC 43)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/29, 2-4=-1434/170, 4-5=-1328/214, 5-6=-872/168, 6-7=-1444/202, 7-9=-1388/170, 9-10=0/45
BOT CHORD	2-14=-160/1141, 12-14=-47/1418, 11-12=-33/1084, 9-11=-133/1088
WEBS	4-14=-329/182, 5-14=-108/933, 6-14=-962/160, 6-12=-248/98, 7-12=-38/507, 7-11=0/173

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) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 6-11-8, Exterior(2R) 6-11-8 to 12-11-8, Interior (1) 12-11-8 to 14-11-3, Exterior(2R) 14-11-3 to 20-11-3, Interior (1) 20-11-3 to 21-9-8, Exterior(2E) 21-9-8 to 24-9-8 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
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) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 9. This connection is for uplift only and does not consider lateral forces.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) 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

April 1,2024

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

Job	Truss	Truss Type	Qty	Ply	23 Serenity - B329 B LH CP
24050019	B5GR	Roof Special Girder	1	**2**	I64576263 Job Reference (optional)

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

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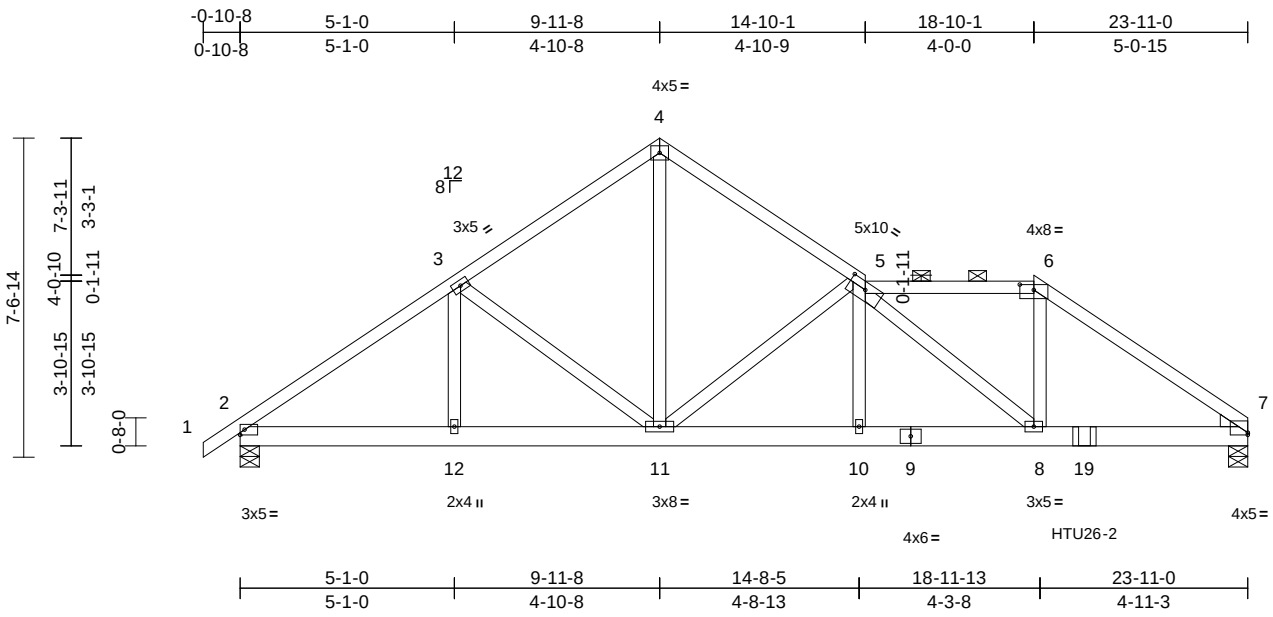

Scale = 1:54.7

Plate Offsets (X, Y): [5:0-5-0,0-2-2], [6:0-4-0,0-1-9], [7:Edge,0-0-10]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.36	Vert(LL)	-0.04	10-11	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.55	Vert(CT)	-0.08	10-11	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.26	Horz(CT)	0.02	7	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 299 lb	FT = 20%

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

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

REACTIONS (size) 2=0-5-8, 7=0-5-8
Max Horiz 2=165 (LC 9)
Max Uplift 2=-114 (LC 12), 7=-231 (LC 13)
Max Grav 2=1271 (LC 40), 7=1936 (LC 39)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/29, 2-3=-1795/150, 3-4=-1509/209, 4-5=-1468/184, 5-6=-2120/319, 6-7=-2684/336
BOT CHORD 2-12=-175/1431, 11-12=-155/1431, 10-11=-161/2325, 8-10=-164/2327, 7-8=-200/2168
WEBS 3-12=0/145, 3-11=-379/166, 4-11=-115/1213, 5-11=-1521/260, 5-10=-54/89, 5-8=-275/260, 6-8=-81/1179

NOTES
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) 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.
3) Unbalanced roof live loads have been considered for this design.
4) 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
5) 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
6) Unbalanced snow loads have been considered for this design.
7) 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.
8) Provide adequate drainage to prevent water ponding.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
11) LGT2 Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 7 and 2. This connection is for uplift only and does not consider lateral forces.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
14) Use Simpson Strong-Tie HTU26-2 (20-10d Girder, 14-10d Truss, Single Ply Girder) or equivalent at 20-0-8 from the left end to connect truss(es) to front face of bottom chord.
15) Fill all nail holes where hanger is in contact with lumber.
16) LGT2 Hurricane ties must have two studs in line below the truss.

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-4=-60, 4-5=-60, 5-6=-60, 6-7=-60, 13-16=-20
Concentrated Loads (lb)
Vert: 19=-1056 (F)

April 1,2024

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

Job	Truss	Truss Type	Qty	Ply	23 Serenity - B329 B LH CP
24050019	D1A	Common	2	1	I64576264 Job Reference (optional)

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

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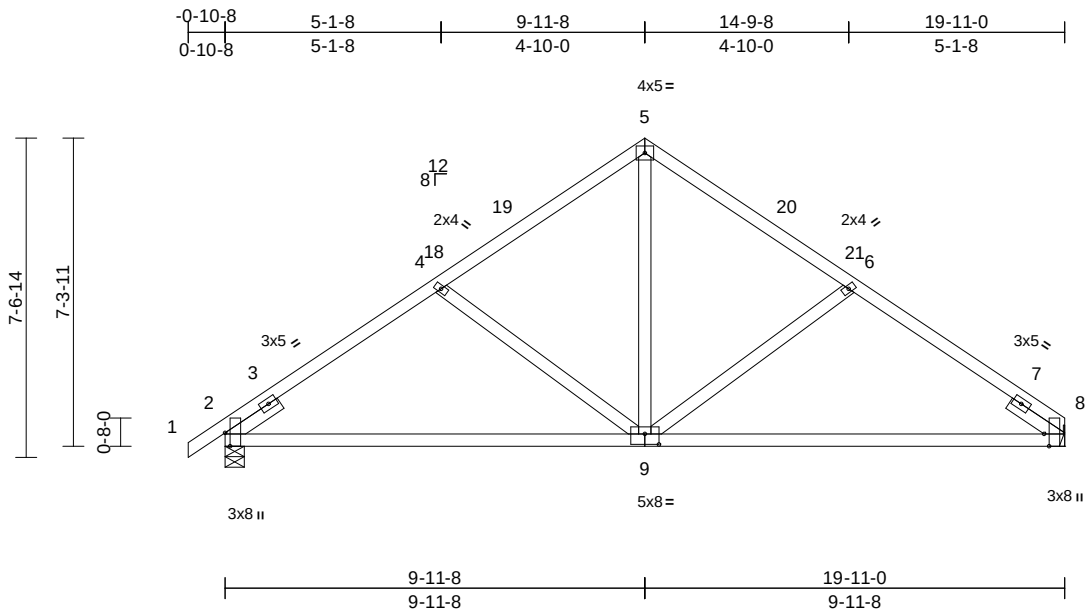

Scale = 1:54.7

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.51	Vert(LL)	-0.13	9-12	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.83	Vert(CT)	-0.28	9-12	>868	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.27	Horz(CT)	0.02	8	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 99 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD	Structural wood sheathing directly applied or 5-4-1 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 8= Mechanical
Max Horiz 2=165 (LC 13)
Max Uplift 2=-85 (LC 14), 8=-67 (LC 15)
Max Grav 2=897 (LC 21), 8=843 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/29, 2-4=-1007/148, 4-5=-876/139, 5-6=-877/139, 6-8=-1010/149
BOT CHORD	2-8=-200/903
WEBS	5-9=-31/595, 6-9=-370/184, 4-9=-366/183

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) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 6-11-8, Exterior(2R) 6-11-8 to 12-11-8, Interior (1) 12-11-8 to 16-11-0, Exterior(2E) 16-11-0 to 19-11-0 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
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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 67 lb uplift at joint 8.
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.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 1,2024

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

Job	Truss	Truss Type	Qty	Ply	23 Serenity - B329 B LH CP
24050019	HGE	Common Supported Gable	1	1	I64576265 Job Reference (optional)

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

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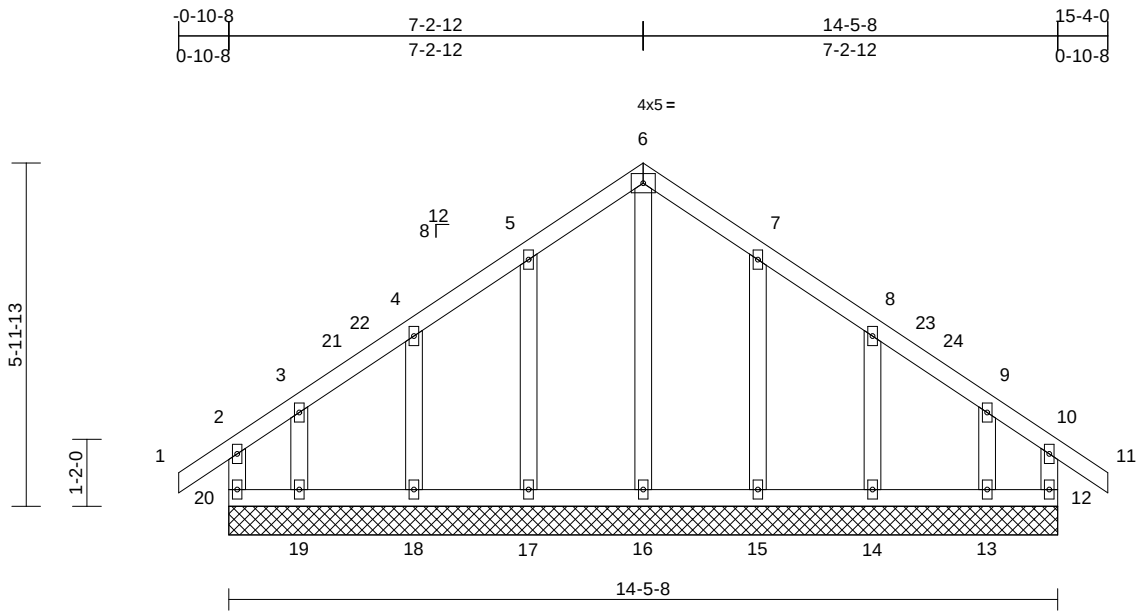

Scale = 1:40.2

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	0.13	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.12	Horz(CT)	0.00	12	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 86 lb	FT = 20%

LUMBER

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

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=14-5-8, 13=14-5-8, 14=14-5-8, 15=14-5-8, 16=14-5-8, 17=14-5-8, 18=14-5-8, 19=14-5-8, 20=14-5-8
Max Horiz 20=-159 (LC 12)
Max Uplift 12=-75 (LC 11), 13=-92 (LC 15), 14=-56 (LC 15), 15=-59 (LC 15), 17=-59 (LC 14), 18=-55 (LC 14), 19=-98 (LC 14), 20=-96 (LC 10)
Max Grav 12=142 (LC 25), 13=171 (LC 26), 14=229 (LC 22), 15=259 (LC 22), 16=180 (LC 28), 17=259 (LC 21), 18=229 (LC 21), 19=182 (LC 25), 20=159 (LC 26)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	2-20=-124/107, 1-2=0/34, 2-3=-97/98, 3-4=-64/94, 4-5=-60/172, 5-6=-96/241, 6-7=-96/241, 7-8=-60/172, 8-9=-52/95, 9-10=-77/80, 10-11=0/34, 10-12=-112/91
BOT CHORD	19-20=-78/90, 18-19=-78/90, 17-18=-78/90, 16-17=-78/90, 15-16=-78/90, 14-15=-78/90, 13-14=-78/90, 12-13=-78/90
WEBS	6-16=-192/16, 5-17=-219/101, 4-18=-188/116, 3-19=-123/89, 7-15=-219/101, 8-14=-188/115, 9-13=-112/100

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 Corner(3E) -0-10-8 to 2-1-8, Exterior(2N) 2-1-8 to 4-2-12, Corner(3R) 4-2-12 to 10-2-12, Exterior(2N) 10-2-12 to 12-4-0, Corner(3E) 12-4-0 to 15-4-0 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
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) 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) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
10) Gable studs spaced at 2-0-0 oc.
11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
12) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 96 lb uplift at joint 20, 75 lb uplift at joint 12, 59 lb uplift at joint 17, 55 lb uplift at joint 18, 98 lb uplift at joint 19, 59 lb uplift at joint 15, 56 lb uplift at joint 14 and 92 lb uplift at joint 13.
14) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 1,2024

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

Job	Truss	Truss Type	Qty	Ply	23 Serenity - B329 B LH CP	
24050019	H	Common	5	1	Job Reference (optional)	I64576266

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

Run: 9.03 S 8.73 Mar 21 2024 Print: 8.730 S Mar 21 2024 MiTek Industries, Inc. Fri Mar 29 10:41:42 Page: 1
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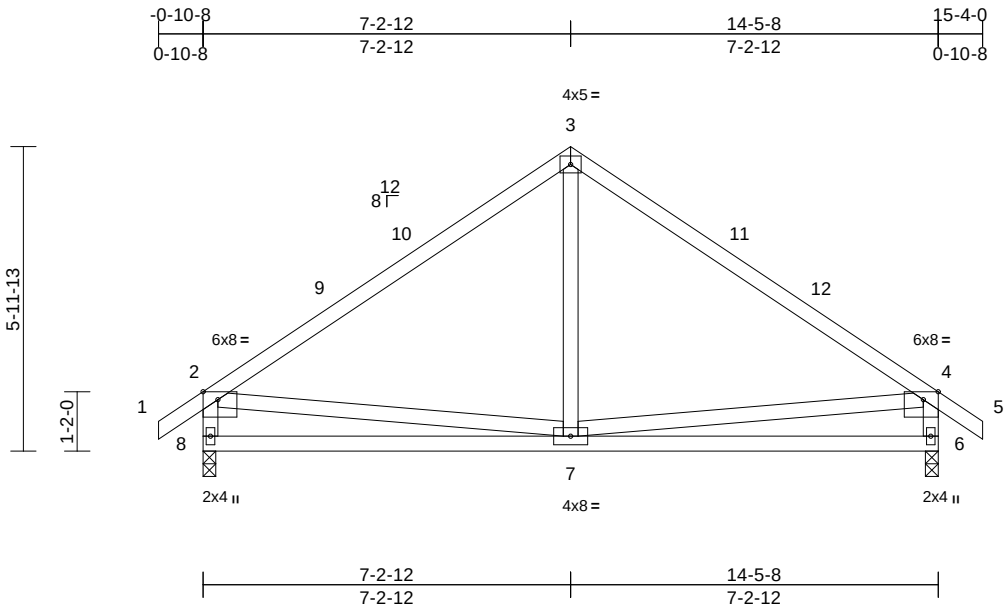


Scale = 1:45.3

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	0.93	Vert(LL)	-0.05	7-8	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.45	Vert(CT)	-0.10	7-8	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.14	Horz(CT)	0.01	6	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 81 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

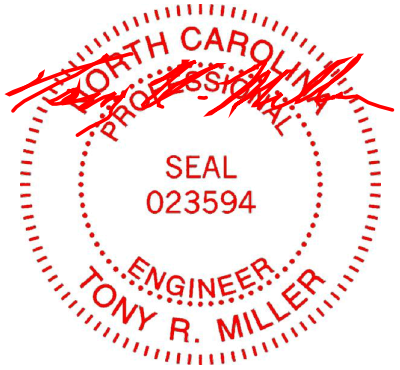
BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 6=0-3-0, 8=0-3-0
Max Horiz 8=-159 (LC 12)
Max Uplift 6=-65 (LC 15), 8=-65 (LC 14)
Max Grav 6=705 (LC 22), 8=705 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/34, 2-3=-666/278, 3-4=-666/278, 4-5=0/34, 2-8=-642/258, 4-6=-642/254
BOT CHORD 7-8=-234/435, 6-7=-157/435
WEBS 3-7=-125/283, 2-7=-138/267, 4-7=-143/267

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) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 4-2-12, Exterior(2R) 4-2-12 to 10-2-12, Interior (1) 10-2-12 to 12-4-0, Exterior(2E) 12-4-0 to 15-4-0 zone; cantilever left and right exposed ; end vertical left and right exposed; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) 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.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



April 1,2024

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

Job	Truss	Truss Type	Qty	Ply	23 Serenity - B329 B LH CP
24050019	EGR	Common Girder	1	2	I64576267 Job Reference (optional)

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

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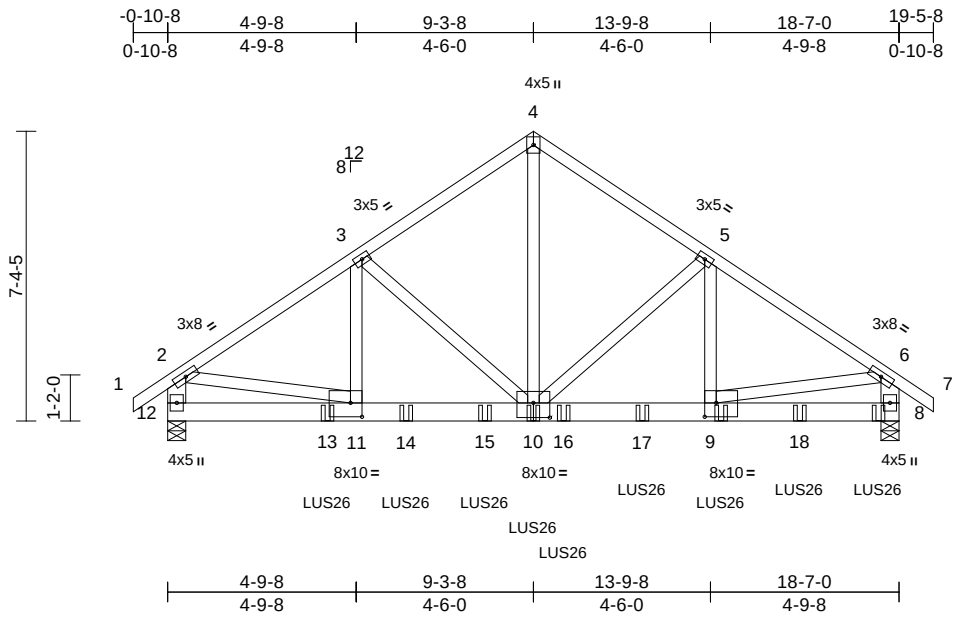

Scale = 1:58.5

Plate Offsets (X, Y): [9:0-3-8,0-4-4], [10:0-5-0,0-4-8], [11:0-3-8,0-4-4]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.38	Vert(LL)	-0.07	10-11	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.75	Vert(CT)	-0.12	10-11	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.78	Horz(CT)	0.02	8	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 266 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3 *Except* 12-2,8-6:2x6 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-7-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 8=0-5-8, 12=0-5-8
Max Horiz 12=191 (LC 11)
Max Uplift 8=-688 (LC 13), 12=-619 (LC 12)
Max Grav 8=4392 (LC 20), 12=3720 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/37, 2-3=-4819/802, 3-4=-3792/665, 4-5=-3792/665, 5-6=-4604/724, 6-7=0/37, 2-12=-3549/612, 6-8=-3370/553
BOT CHORD 11-12=-226/571, 9-11=-666/3940, 8-9=-112/556
WEBS 4-10=-638/3766, 5-10=-999/243, 5-9=-115/918, 3-10=-1185/329, 3-11=-216/1060, 2-11=-520/3585, 6-9=-450/3290

NOTES
1) 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, 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) 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.
3) Unbalanced roof live loads have been considered for this design.
4) 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
5) 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
6) Unbalanced snow loads have been considered for this design.
7) 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.
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) LGT2 Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 12 and 8. This connection is for uplift only and does not consider lateral forces.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Use Simpson Strong-Tie LUS26 (4-10d Girder, 4-10d Truss) or equivalent at 4-0-12 from the left end to connect truss(es) to back face of bottom chord.
13) Use Simpson Strong-Tie LUS26 (4-10d Girder, 3-10d Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 6-0-12 from the left end to 18-0-12 to connect truss(es) to back face of bottom chord.
14) Fill all nail holes where hanger is in contact with lumber.
15) LGT2 Hurricane ties must have two studs in line below the truss.
16) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 657 lb down and 104 lb up at 18-4-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-60, 2-4=-60, 4-6=-60, 6-7=-60, 8-12=-20
Concentrated Loads (lb)
Vert: 10=-630 (B), 9=-628 (B), 8=-638 (B), 13=-1038 (B), 14=-803 (B), 15=-801 (B), 16=-628 (B), 17=-628 (B), 18=-631 (B)

April 1,2024

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

Job	Truss	Truss Type	Qty	Ply	23 Serenity - B329 B LH CP
24050019	EGE	Common Supported Gable	1	1	I64576268 Job Reference (optional)

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

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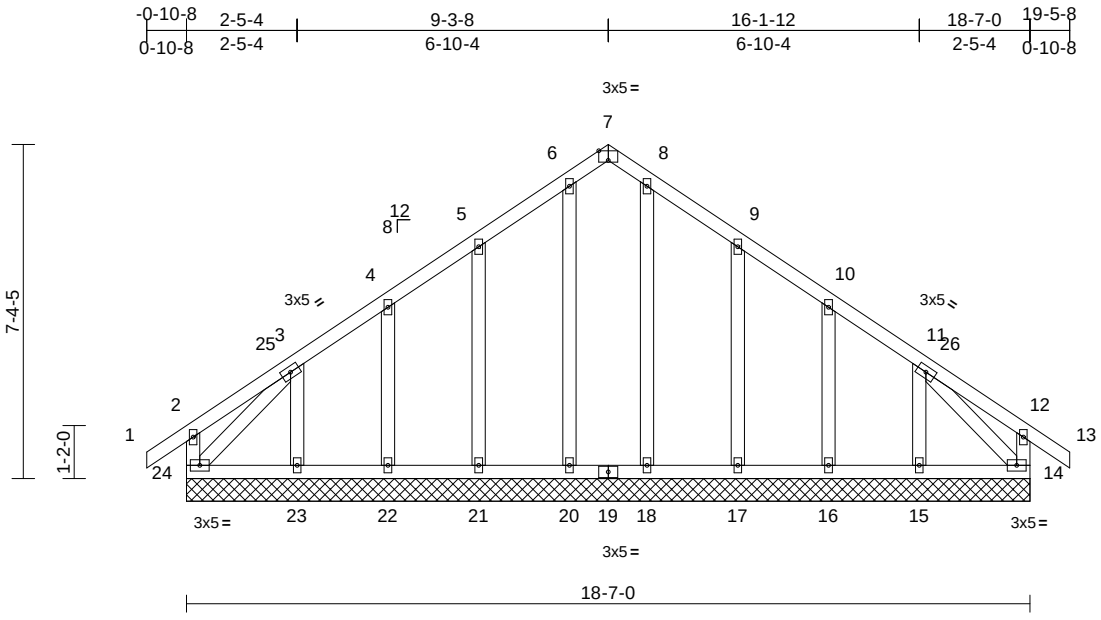

Scale = 1:50.8

Plate Offsets (X, Y): [7:0-2-8,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	0.10	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	0.13	Horz(CT)	0.00	14	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 126 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) 14=18-7-0, 15=18-7-0, 16=18-7-0, 17=18-7-0, 18=18-7-0, 20=18-7-0, 21=18-7-0, 22=18-7-0, 23=18-7-0, 24=18-7-0
Max Horiz 24=191 (LC 13)
Max Uplift 14=-1 (LC 11), 15=-120 (LC 15), 16=-52 (LC 15), 17=-75 (LC 15), 21=-72 (LC 14), 22=-53 (LC 14), 23=-126 (LC 14), 24=-39 (LC 10)
Max Grav 14=172 (LC 22), 15=205 (LC 26), 16=195 (LC 22), 17=257 (LC 22), 18=196 (LC 22), 20=196 (LC 21), 21=257 (LC 21), 22=195 (LC 21), 23=217 (LC 25), 24=195 (LC 26)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	2-24=-137/124, 1-2=0/34, 2-3=-58/59, 3-4=-104/80, 4-5=-90/70, 5-6=-81/137, 6-7=-70/125, 7-8=-70/125, 8-9=-81/137, 9-10=-74/61, 10-11=-75/35, 11-12=-54/94, 12-13=0/34, 12-14=-139/144
BOT CHORD	23-24=-79/191, 22-23=-79/191, 21-22=-79/191, 20-21=-79/191, 18-20=-79/191, 17-18=-79/191, 16-17=-79/191, 15-16=-79/191, 14-15=-79/191
WEBS	6-20=-160/19, 8-18=-160/0, 5-21=-215/115, 4-22=-158/85, 3-23=-180/152, 9-17=-215/115, 10-16=-158/85, 11-15=-170/165, 3-24=-201/145, 11-14=-203/94

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 Corner(3E) -0-10-8 to 2-1-8, Exterior(2N) 2-1-8 to 6-3-8, Corner(3R) 6-3-8 to 12-1-12, Exterior(2N) 12-1-12 to 16-5-8, Corner(3E) 16-5-8 to 19-5-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); 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) 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) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
10) Gable studs spaced at 2-0-0 oc.
11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
12) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
13) N/A
14) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 1,2024

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

Job	Truss	Truss Type	Qty	Ply	23 Serenity - B329 B LH CP
24050019	A4SE	Piggyback Base Structural Gable	1	1	I64576269 Job Reference (optional)

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

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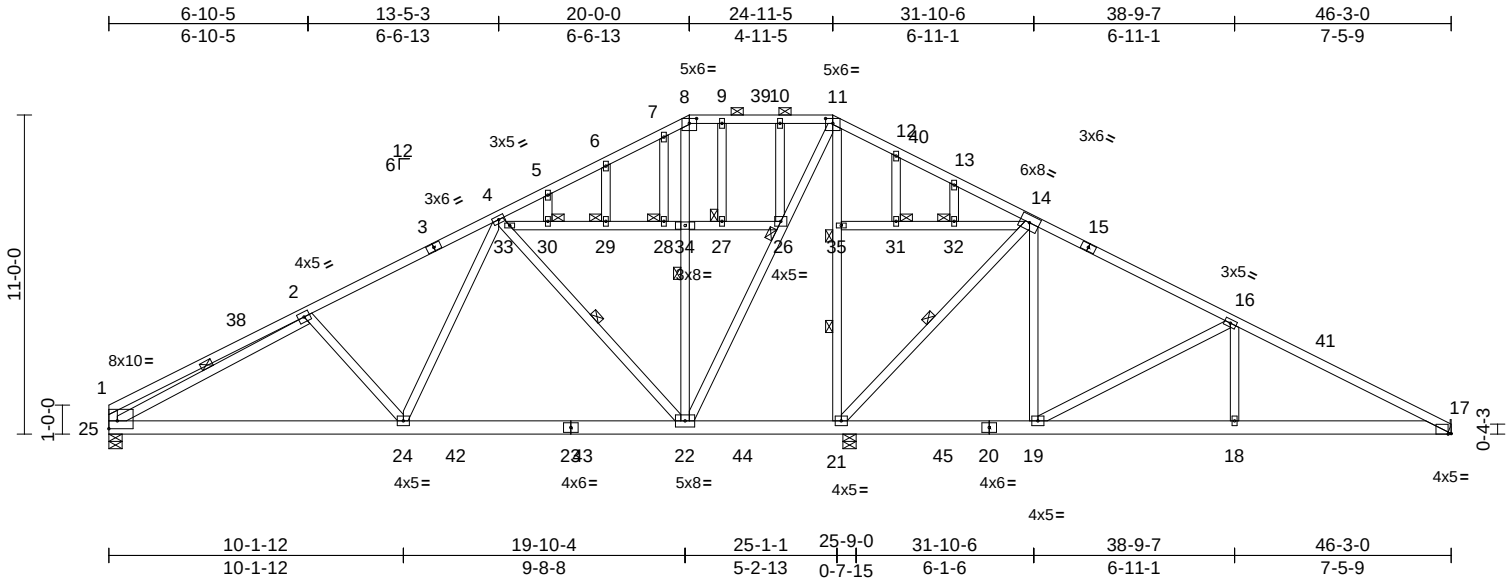

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Plate Offsets (X, Y): [1:Edge,0-3-4], [8:0-3-0,0-2-0], [11:0-3-0,0-2-0], [17:0-1-4,0-0-3]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.86	Vert(LL)	-0.11	22-24	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.53	Vert(CT)	-0.18	22-24	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	1.00	Horz(CT)	0.03	17	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 364 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x6 SP No.2
WEBS	2x4 SP No.3 *Except* 22-8,22-11,21-11:2x4 SP No.2
OTHERS	2x4 SP No.3

BRACING

TOP CHORD	Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 8-11.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS	1 Row at midpt 4-22, 8-22, 21-35, 14-21, 2-25
JOINTS	1 Brace at Jt(s): 26, 27, 28, 29, 30, 31, 32, 35

REACTIONS (size) 17= Mechanical, 21=0-5-8, 25=0-5-8
Max Horiz 25=-171 (LC 15)
Max Uplift 17=-93 (LC 15), 21=-173 (LC 15), 25=-113 (LC 14)
Max Grav 17=669 (LC 38), 21=2815 (LC 46), 25=943 (LC 36)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-535/113, 2-4=-1170/194, 4-5=-309/126, 5-6=-240/162, 6-7=-224/172, 7-8=-163/181, 8-9=-198/173, 9-10=-198/173, 10-11=-192/173, 11-12=0/820, 12-13=0/787, 13-14=0/732, 14-16=-308/110, 16-17=-1020/162, 1-25=-391/114

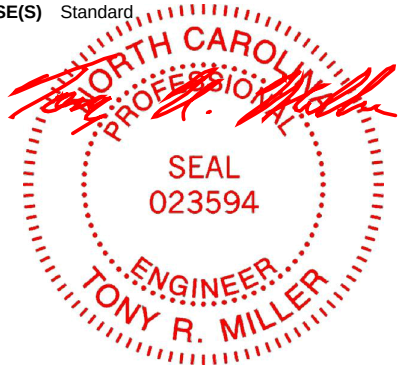
BOT CHORD 24-25=-256/1136, 22-24=-104/704, 21-22=-692/273, 19-21=-58/185, 18-19=-57/835, 17-18=-57/835

WEBS 2-24=-343/214, 4-24=-32/750, 4-33=-953/221, 22-33=-986/235, 22-34=-368/70, 8-34=-300/49, 22-26=-172/1505, 11-26=-183/1498, 21-35=-2048/201, 11-35=-1976/175, 14-21=-1101/228, 14-19=0/653, 16-19=-874/198, 16-18=0/340, 2-25=-894/97, 10-26=-192/51, 9-27=-36/34, 7-28=-39/6, 6-29=-109/43, 5-30=-18/44, 12-31=-100/37, 13-32=-14/8, 30-33=-53/79, 29-30=-53/79, 28-29=-53/79, 28-34=-53/79, 27-34=-49/84, 26-27=-49/84, 31-35=-74/6, 31-32=-74/6, 14-32=-71/6

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) 0-1-12 to 4-9-4, Interior (1) 4-9-4 to 13-5-3, Exterior(2R) 13-5-3 to 31-9-3, Interior (1) 31-9-3 to 41-6-12, Exterior(2E) 41-6-12 to 46-2-4 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.
6) Provide adequate drainage to prevent water ponding.
7) All plates are 2x4 MT20 unless otherwise indicated.
8) Gable studs spaced at 2-0-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
11) Refer to girder(s) for truss to truss connections.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 93 lb uplift at joint 17.
13) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 21 and 25. This connection is for uplift only and does not consider lateral forces.
14) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
15) 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



April 1,2024

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

Job	Truss	Truss Type	Qty	Ply	23 Serenity - B329 B LH CP
24050019	A4	Piggyback Base	3	1	I64576270 Job Reference (optional)

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

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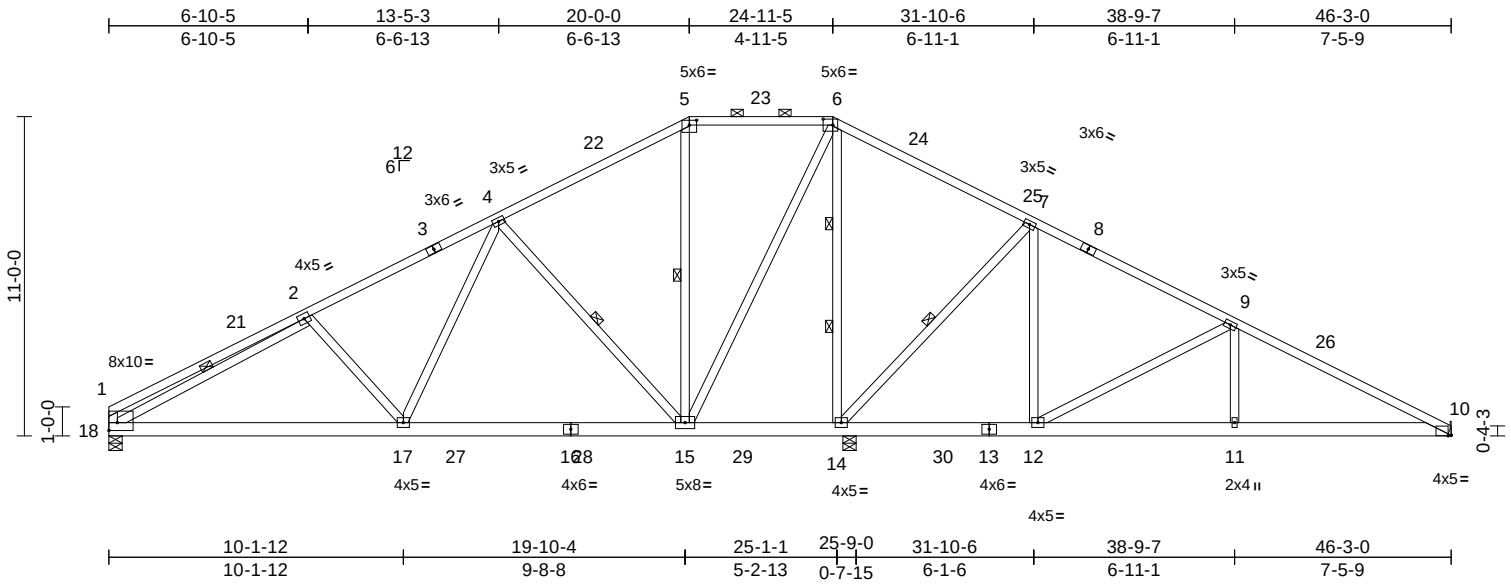

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Plate Offsets (X, Y): [1:Edge,0-3-4], [5:0-3-0,0-2-0], [6:0-4-0,0-2-8], [10:0-1-4,0-0-3]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.95	Vert(LL)	-0.11	15-17	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.53	Vert(CT)	-0.18	15-17	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.99	Horz(CT)	0.03	10	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 316 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3 *Except* 15-5,15-6,14-6:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 5-6.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 4-15, 5-15, 7-14, 2-18
WEBS 2 Rows at 1/3 pts 6-14

REACTIONS (size) 10= Mechanical, 14=0-5-8, 18=0-5-8
Max Horiz 18=-171 (LC 15)
Max Uplift 10=-95 (LC 15), 14=-170 (LC 15), 18=-114 (LC 14)
Max Grav 10=666 (LC 38), 14=2825 (LC 46), 18=940 (LC 36)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-538/115, 2-4=-1161/195, 4-5=-283/183, 5-6=-161/172, 6-7=0/806, 7-9=-310/116, 9-10=-1005/164, 1-18=-395/116
BOT CHORD 17-18=-255/1126, 15-17=-108/700, 14-15=-701/270, 12-14=-53/200, 11-12=-58/819, 10-11=-58/819
WEBS 2-17=-336/209, 4-17=-29/746, 4-15=-1016/240, 5-15=-381/68, 6-15=-173/1502, 6-14=-2026/194, 7-14=-1155/233, 7-12=0/647, 9-12=-862/191, 9-11=0/344, 2-18=-881/95

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) 0-1-12 to 4-9-4, Interior (1) 4-9-4 to 13-5-3, Exterior(2R) 13-5-3 to 31-5-13, Interior (1) 31-5-13 to 41-6-12, Exterior(2E) 41-6-12 to 46-2-4 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) Provide adequate drainage to prevent water ponding.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 95 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) 14 and 18. This connection is for uplift only and does not consider lateral forces.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

April 1,2024

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

Job	Truss	Truss Type	Qty	Ply	23 Serenity - B329 B LH CP
24050019	A2	Piggyback Base	2	1	I64576271 Job Reference (optional)

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

Run: 9.03 S 8.73 Mar 21 2024 Print: 8.730 S Mar 21 2024 MiTek Industries, Inc. Fri Mar 29 10:41:36 Page: 1
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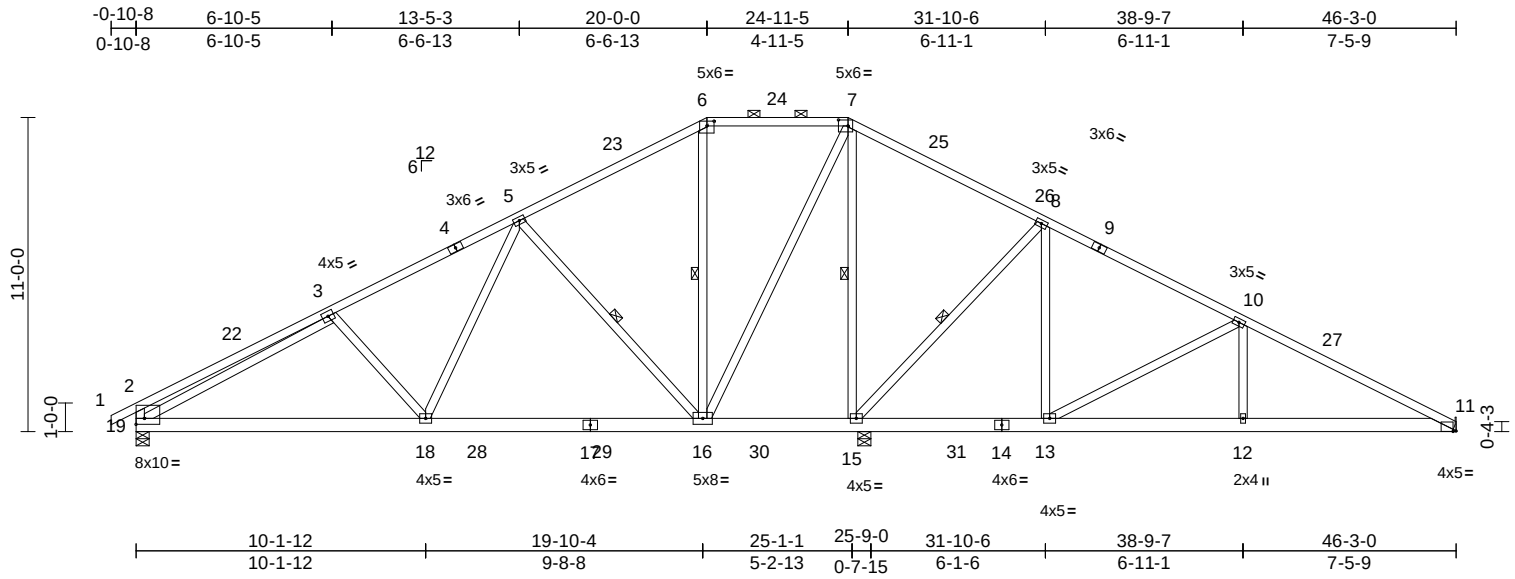

Scale = 1:80.7

Plate Offsets (X, Y): [6:0-3-0,0-2-0], [7:0-4-0,0-2-8], [11:0-1-4,0-0-3], [19:Edge,0-2-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.95	Vert(LL)	-0.11	16-18	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.53	Vert(CT)	-0.18	16-18	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	1.00	Horz(CT)	0.03	11	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 318 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3 *Except* 16-6,15-7,16-7:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 6-7.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 6-16, 7-15, 8-15, 5-16

REACTIONS (size) 11= Mechanical, 15=0-5-8, 19=0-5-8
Max Horiz 19=-163 (LC 15)
Max Uplift 11=-96 (LC 15), 15=-168 (LC 15), 19=-136 (LC 14)
Max Grav 11=669 (LC 39), 15=2817 (LC 47), 19=995 (LC 37)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/27, 2-3=-643/173, 3-5=-1164/198, 5-6=-290/180, 6-7=-167/176, 7-8=0/795, 8-10=-317/119, 10-11=-1016/167, 2-19=-500/172
BOT CHORD 18-19=-255/1123, 16-18=-112/705, 15-16=-692/267, 13-15=-44/206, 12-13=-60/829, 11-12=-60/829
WEBS 3-18=-325/205, 5-18=-26/738, 6-16=-377/65, 7-15=-2016/188, 8-13=0/647, 10-12=0/344, 3-19=-787/38, 7-16=-170/1496, 8-15=-1155/233, 10-13=-862/191, 5-16=-1016/240

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) -0-10-8 to 3-9-0, Interior (1) 3-9-0 to 13-5-3, Exterior(2R) 13-5-3 to 31-5-13, Interior (1) 31-5-13 to 41-6-12, Exterior(2E) 41-6-12 to 46-2-4 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 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) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
9) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 96 lb uplift at joint 11.
11) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 19 and 15. This connection is for uplift only and does not consider lateral forces.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
13) 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

April 1,2024

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

Job	Truss	Truss Type	Qty	Ply	23 Serenity - B329 B LH CP
24050019	A1	Piggyback Base	1	1	I64576272 Job Reference (optional)

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

Run: 9.03 S 8.73 Mar 21 2024 Print: 8.730 S Mar 21 2024 MiTek Industries, Inc. Fri Mar 29 10:41:36 Page: 1
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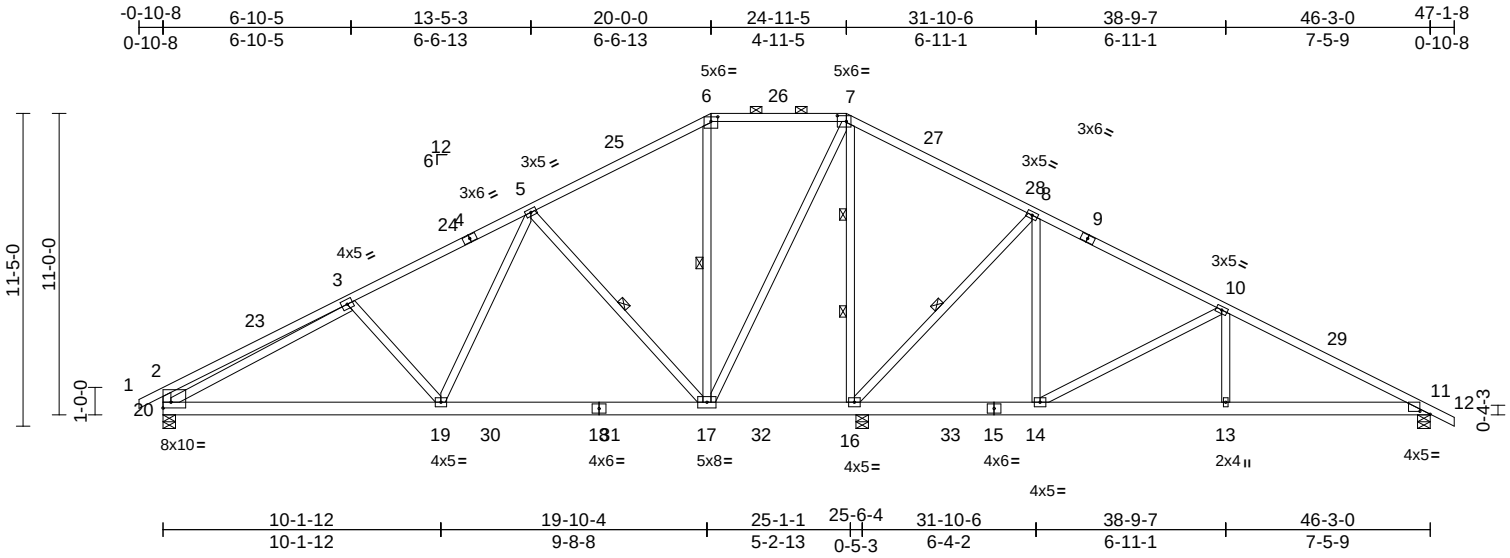

Scale = 1:84.1

Plate Offsets (X, Y): [6:0-3-0,0-2-0], [7:0-4-0,0-2-8], [11:0-4-8,0-1-5], [20:Edge,0-2-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.95	Vert(LL)	-0.11	17-19	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.53	Vert(CT)	-0.18	17-19	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	1.00	Horz(CT)	0.03	11	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 319 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3 *Except* 17-6,16-7,17-7:2x4 SP No.2

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

REACTIONS (size) 11=0-5-8, 16=0-5-8, 20=0-5-8
Max Horiz 20=-178 (LC 15)
Max Uplift 11=-115 (LC 15), 16=-166 (LC 15), 20=-137 (LC 14)
Max Grav 11=707 (LC 39), 16=2835 (LC 47), 20=995 (LC 37)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/27, 2-3=-640/174, 3-5=-1146/200, 5-6=-285/196, 6-7=-163/178, 7-8=0/819, 8-10=-298/121, 10-11=-998/167, 11-12=0/23, 2-20=-499/173
BOT CHORD 19-20=-250/1110, 17-19=-107/709, 16-17=-710/281, 14-16=-54/189, 13-14=-46/817, 11-13=-46/817
WEBS 3-19=-327/205, 5-19=-26/739, 6-17=-386/64, 7-16=-2035/180, 8-14=0/649, 10-13=0/346, 3-20=-796/40, 7-17=-169/1505, 8-16=-1156/232, 10-14=-868/190, 5-17=-1017/240

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) -0-10-8 to 3-9-0, Interior (1) 3-9-0 to 13-5-3, Exterior(2R) 13-5-3 to 31-5-13, Interior (1) 31-5-13 to 42-6-0, Exterior(2E) 42-6-0 to 47-1-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 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) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
9) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 20, 11, and 16. This connection is for uplift only and does not consider lateral forces.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) 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

April 1,2024

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

Job	Truss	Truss Type	Qty	Ply	23 Serenity - B329 B LH CP
24050019	A	Attic	2	1	I64576273 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 9.03 S 8.73 Mar 21 2024 Print: 8.730 S Mar 21 2024 MiTek Industries, Inc. Fri Mar 29 10:41:34 Page: 1

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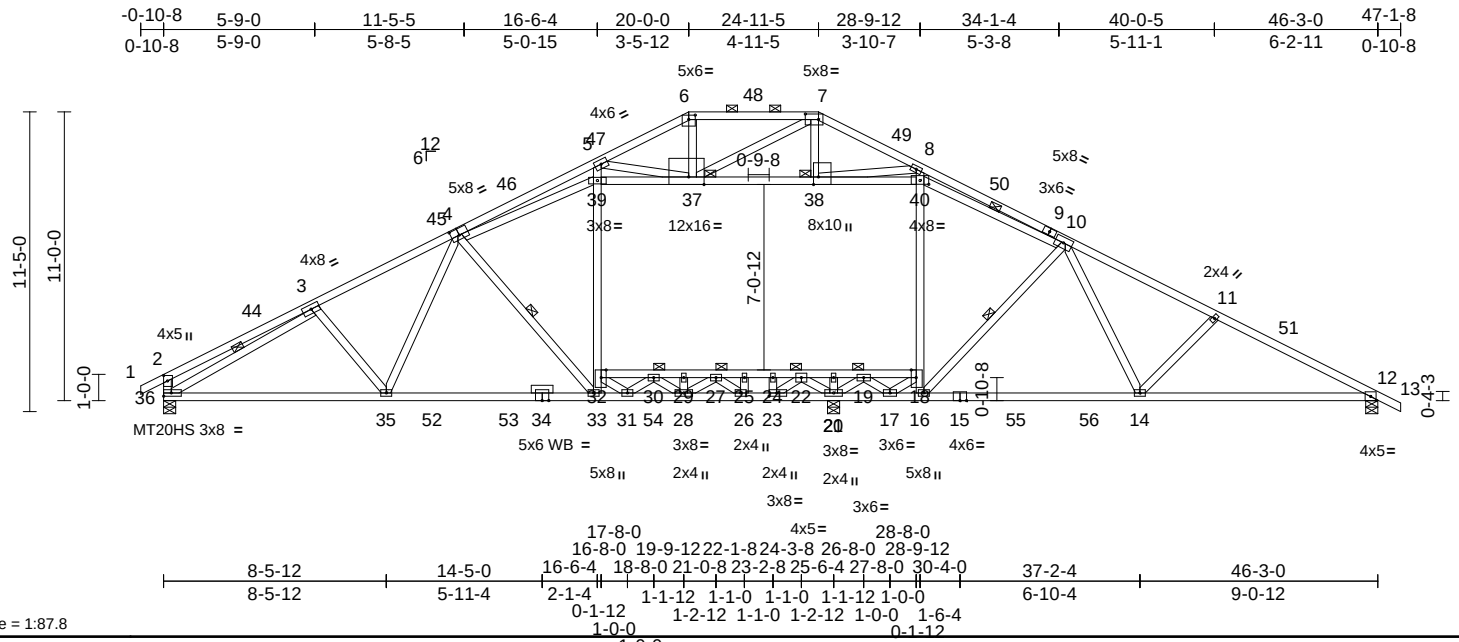

Scale = 1:87.8

Plate Offsets (X, Y): [2:0-2-8,0-1-12], [4:0-3-12,0-3-0], [6:0-3-0,0-2-0], [7:0-6-0,0-2-8], [18:Edge,0-2-4], [23:0-3-8,0-1-8], [32:Edge,0-2-4], [37:0-7-0,0-3-8], [38:0-3-8,0-2-4], [40:0-4-0,0-1-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.82	Vert(LL)	-0.58	33-35	>528	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.96	Vert(CT)	-0.93	33-35	>326	180	MT20HS	187/143
TCDL	10.0	Rep Stress Incr	YES	WB	0.98	Horz(CT)	0.14	12	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH		Attic	-0.35	18-32	>423	360		
BCDL	10.0										Weight: 338 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.1
WEBS 2x4 SP No.3 *Except* 5-33,8-16:2x4 SP No.1, 39-40:2x4 SP No.2
OTHERS 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins (4-3-12 max.): 6-7.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 1 Row at midpt 4-33, 10-16, 3-36, 10-40
JOINTS 1 Brace at Jt(s): 30, 19, 37, 38, 27, 22

REACTIONS (size) 12=0-5-8, 20=0-5-8, 36=0-5-8
Max Horiz 36=-177 (LC 19)
Max Uplift 12=-8 (LC 15), 36=-120 (LC 14)
Max Grav 12=1701 (LC 48), 20=2301 (LC 40), 36=2021 (LC 38)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/27, 2-3=-598/112, 3-5=-3844/226, 5-6=-1345/148, 6-7=-1193/151, 7-8=-899/145, 8-10=-464/324, 10-11=-3214/83, 11-12=-3439/91, 12-13=0/23, 2-36=-471/139
BOT CHORD 35-36=-230/2853, 33-35=-114/2729, 31-33=-13/2608, 28-31=0/2805, 26-28=-253/2293, 23-26=-974/1548, 20-23=-1887/797, 17-20=-1334/531, 16-17=0/1771, 14-16=0/2484, 12-14=0/3035, 30-32=-614/165, 29-30=-793/741, 27-29=-793/741, 25-27=-443/2016, 24-25=-443/2016, 22-24=-443/2016, 21-22=-213/4213, 19-21=-213/4213, 18-19=0/1927
WEBS 3-35=-57/188, 4-35=-27/386, 4-33=-766/205, 32-33=-39/765, 32-39=-7/998, 5-39=0/1443, 16-18=0/920, 18-40=-388/138, 8-40=-951/106, 10-16=-631/254, 10-14=-46/684, 11-14=-392/180, 37-39=-130/1732, 37-38=-1611/118, 38-40=-2906/207, 3-36=-2852/66, 20-21=-440/0, 28-29=-128/0, 31-32=-380/199, 30-31=-345/359, 28-30=-423/125, 17-18=-1950/59, 17-19=-224/1455, 19-20=-1633/191, 6-37=0/293, 7-38=-126/41, 7-37=-74/656, 5-37=-2820/185, 8-38=-92/1359, 27-28=-20/817, 26-27=-1287/0, 25-26=0/522, 20-22=-1439/0, 22-23=0/1903, 23-24=-837/0, 4-39=-168/1254, 10-40=-2400/161

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) -0-10-8 to 3-9-0, Interior (1) 3-9-0 to 13-5-8, Exterior(2R) 13-5-8 to 31-5-13, Interior (1) 31-5-13 to 42-6-0, Exterior(2E) 42-6-0 to 47-1-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 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) Provide adequate drainage to prevent water ponding.
7) All plates are MT20 plates unless otherwise indicated.
8) All plates are 3x5 MT20 unless otherwise indicated.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
11) Ceiling dead load (5.0 psf) on member(s). 37-39, 37-38, 38-40; Wall dead load (5.0psf) on member(s).32-39, 18-40
12) Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 30-32, 29-30, 27-29, 25-27, 24-25, 22-24, 21-22, 19-21, 18-19
13) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 36 and 12. This connection is for uplift only and does not consider lateral forces.
14) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

April 1,2024

Continued on page 2

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

15) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
16) Attic room checked for L/360 deflection.

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	23 Serenity - B329 B LH CP
24050019	C1	Attic	3	1	I64576274 Job Reference (optional)

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

Run: 9.03 S 8.73 Mar 21 2024 Print: 8.730 S Mar 21 2024 MiTek Industries, Inc. Fri Mar 29 10:41:41 Page: 1
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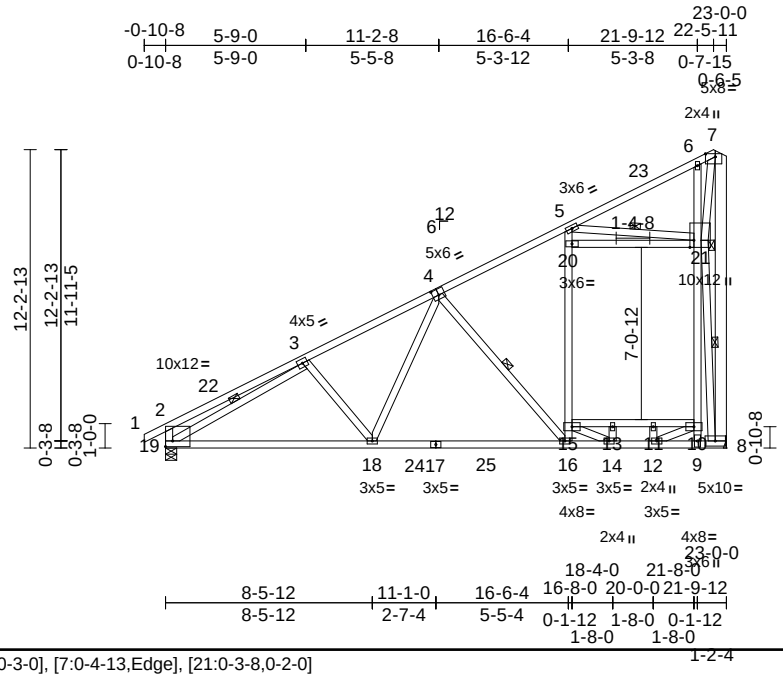

Scale = 1:94.5

Plate Offsets (X, Y): [2:Edge,0-2-12], [4:0-3-0,0-3-0], [7:0-4-13,Edge], [21:0-3-8,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.83	Vert(LL)	-0.41	16-18	>664	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.84	Vert(CT)	-0.73	16-18	>370	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.87	Horz(CT)	0.04	8	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH		Attic	-0.15	10-15	>419	360		
BCDL	10.0										Weight: 215 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.1 *Except* 15-10:2x4 SP No.3, 17-8:2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 5-16,6-9,21-8:2x4 SP 2400F 2.0E, 20-21:2x4 SP No.2, 8-7:2x6 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-5-4 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 4-16, 3-19, 5-21, 8-21
JOINTS 1 Brace at Jt(s): 21

REACTIONS (size) 8= Mechanical, 19=0-5-8
Max Horiz 19=421 (LC 14)
Max Uplift 8=-28 (LC 14), 19=-2 (LC 14)
Max Grav 8=1740 (LC 5), 19=1168 (LC 5)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/27, 2-3=-463/97, 3-5=-1601/0, 5-6=-154/950, 6-7=-42/663, 2-19=-398/134, 7-8=-285/2782
BOT CHORD 18-19=-326/1557, 16-18=-188/1248, 14-16=-110/1395, 12-14=0/883, 9-12=-115/11, 8-9=-34/481, 13-15=-350/0, 11-13=-350/0, 10-11=-350/0
WEBS 3-18=-169/191, 4-18=-47/537, 4-16=-728/203, 15-16=-66/779, 15-20=0/759, 5-20=0/763, 9-10=-20/550, 10-21=0/1111, 6-21=-640/181, 20-21=-75/858, 3-19=-1302/0, 14-15=-628/164, 13-14=-71/174, 10-12=0/1108, 11-12=-457/5, 5-21=-2256/178, 8-21=-4861/349, 7-21=-3055/262

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 19-9-4, Exterior(2E) 19-9-4 to 22-9-4 zone; cantilever left and right exposed ; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; 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, with BCDL = 10.0psf.
7) Ceiling dead load (5.0 psf) on member(s). 20-21; Wall dead load (5.0psf) on member(s).15-20, 10-21
8) Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 13-15, 11-13, 10-11
9) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 28 lb uplift at joint 8.
11) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 19. This connection is for uplift only and does not consider lateral forces.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
13) Attic room checked for L/360 deflection.

LOAD CASE(S) Standard

April 1,2024

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

Job	Truss	Truss Type	Qty	Ply	23 Serenity - B329 B LH CP
24050019	A7GR	Flat Girder	1	1	I64576275 Job Reference (optional)

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

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Page: 1

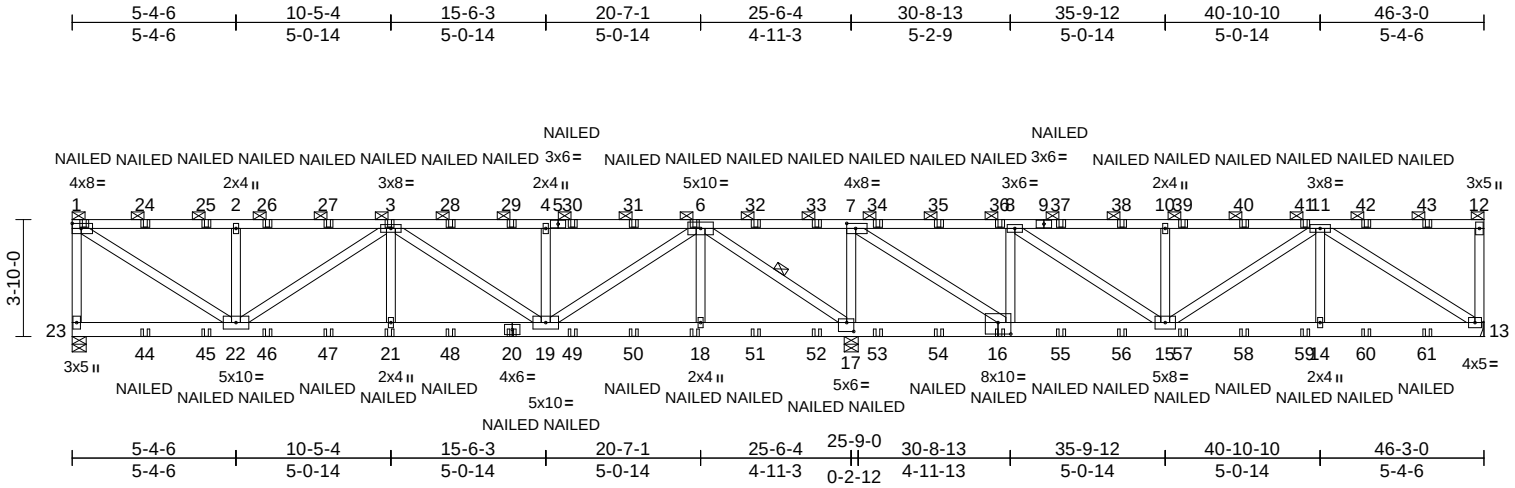

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Plate Offsets (X, Y): [7:0-3-8,0-2-0], [16:0-5-0,0-4-8], [17:0-2-12,0-3-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.98	Vert(LL)	-0.11	19-21	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.58	Vert(CT)	-0.19	19-21	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.90	Horz(CT)	0.03	13	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 299 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.1 *Except* 9-12:2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3 *Except* 22-1,16-7,13-11:2x4 SP No.2

BRACING
TOP CHORD 2-0-0 oc purlins (4-0-0 max.): 1-12, except end verticals.
BOT CHORD Rigid ceiling directly applied or 4-7-7 oc bracing.
WEBS 1 Row at midpt 6-17

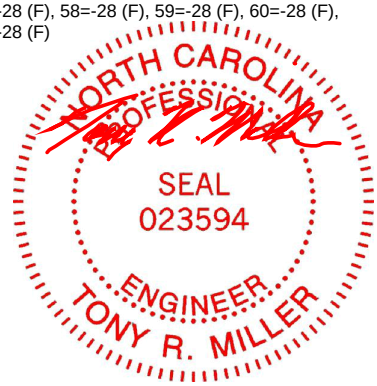
REACTIONS (size) 13= Mechanical, 17=0-5-8, 23=0-5-8
Max Horiz 23=119 (LC 9)
Max Uplift 13=-242 (LC 8), 17=-962 (LC 9), 23=-354 (LC 8)
Max Grav 13=1058 (LC 1), 17=4129 (LC 1), 23=1493 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-23=-1415/378, 1-2=-1811/438, 2-3=-1811/438, 3-4=-1865/443, 4-6=-1865/443, 6-7=-552/2286, 7-8=-81/209, 8-10=-1110/291, 10-11=-1110/291, 11-12=-63/44, 12-13=-220/98
BOT CHORD 22-23=-95/101, 21-22=-611/2380, 19-21=-611/2380, 18-19=-93/243, 17-18=-93/243, 15-17=-2286/553, 14-15=-299/1184, 13-14=-299/1184
WEBS 1-22=-500/2128, 2-22=-621/284, 3-22=-688/180, 3-21=0/276, 3-19=-624/160, 4-19=-575/261, 6-19=-466/1963, 6-18=0/247, 6-17=-3088/725, 7-17=-2090/604, 7-16=-580/2558, 8-16=-1381/445, 8-15=-312/1403, 10-15=-553/250, 11-15=-90/23, 11-14=0/308, 11-13=-1376/319

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; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); 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) Provide adequate drainage to prevent water ponding.
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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 242 lb uplift at joint 13.
9) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 23. This connection is for uplift only and does not consider lateral forces.
10) H10A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 17. This connection is for uplift only and does not consider lateral forces.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
13) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.
14) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-12=-60, 13-23=-20
Concentrated Loads (lb)
Vert: 1=-40 (F), 20=-28 (F), 3=-106 (F), 21=-28 (F), 6=-106 (F), 18=-28 (F), 16=-28 (F), 24=-106 (F), 25=-106 (F), 26=-106 (F), 27=-106 (F), 28=-106 (F), 29=-106 (F), 30=-106 (F), 31=-106 (F), 32=-106 (F), 33=-106 (F), 34=-106 (F), 35=-106 (F), 36=-106 (F), 37=-106 (F), 38=-106 (F), 39=-106 (F), 40=-106 (F), 41=-106 (F), 42=-106 (F), 43=-106 (F), 44=-28 (F), 45=-28 (F), 46=-28 (F), 47=-28 (F), 48=-28 (F), 49=-28 (F), 50=-28 (F), 51=-28 (F), 52=-28 (F), 53=-28 (F), 54=-28 (F), 55=-28 (F), 56=-28 (F), 57=-28 (F), 58=-28 (F), 59=-28 (F), 60=-28 (F), 61=-28 (F)



April 1,2024

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

Job	Truss	Truss Type	Qty	Ply	23 Serenity - B329 B LH CP
24050019	A6	Hip	1	1	I64576276 Job Reference (optional)

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

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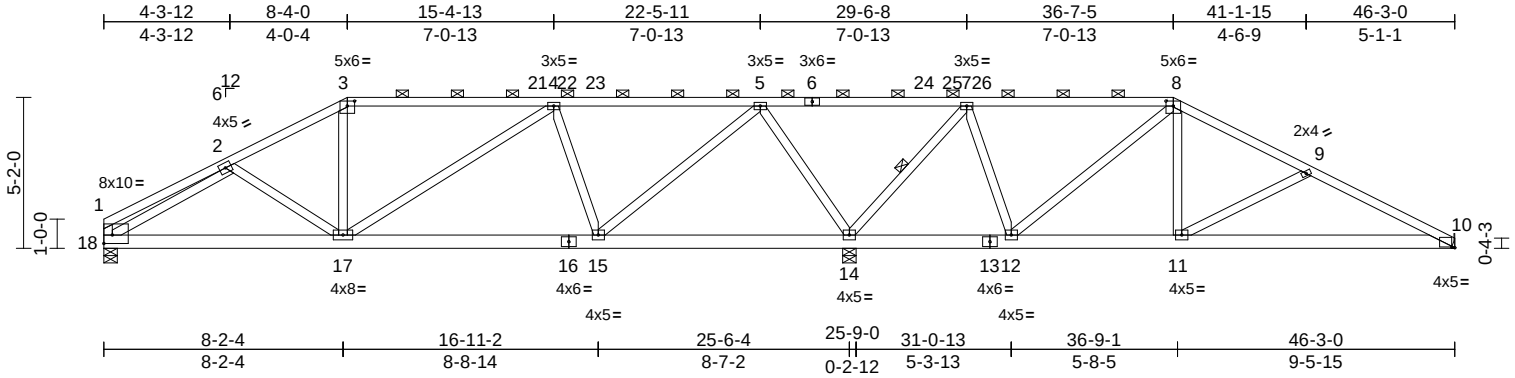

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Plate Offsets (X, Y): [1:Edge,0-3-8], [3:0-3-0,0-2-0], [8:0-3-0,0-2-0], [10:0-1-4,0-0-5]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.92	Vert(LL)	-0.06	11-20	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.45	Vert(CT)	-0.14	11-20	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.91	Horz(CT)	0.02	10	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 279 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 6-8:2x4 SP No.1
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-9-8 oc purlins, except end verticals, and 2-0-0 oc purlins (2-2-0 max.): 3-8.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 7-14

REACTIONS (size) 10= Mechanical, 14=0-5-8, 18=0-5-8
Max Horiz 18=-78 (LC 15)
Max Uplift 10=-117 (LC 15), 14=-258 (LC 10), 18=-135 (LC 14)
Max Grav 10=823 (LC 44), 14=2464 (LC 39), 18=966 (LC 42)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-341/57, 2-3=-1102/214, 3-4=-977/219, 4-5=-702/171, 5-7=-72/1036, 7-8=-62/153, 8-9=-780/186, 9-10=-1267/259, 1-18=-297/65
BOT CHORD 17-18=-221/1118, 15-17=-130/903, 14-15=-357/133, 12-14=-242/132, 11-12=-22/579, 10-11=-171/1095
WEBS 2-17=-298/124, 3-17=0/248, 4-17=-16/348, 4-15=-696/197, 5-15=-125/1269, 5-14=-1431/258, 7-14=-1410/237, 7-12=-3/564, 8-12=-735/85, 8-11=0/479, 9-11=-568/170, 2-18=-1065/197

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) 0-1-12 to 4-9-4, Exterior(2R) 4-9-4 to 14-10-8, Interior (1) 14-10-8 to 30-0-13, Exterior(2R) 30-0-13 to 41-3-14, Exterior(2E) 41-3-14 to 46-2-4 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) Provide adequate drainage to prevent water ponding.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 117 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) 14 and 18. This connection is for uplift only and does not consider lateral forces.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

April 1,2024

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

Job	Truss	Truss Type	Qty	Ply	23 Serenity - B329 B LH CP
24050019	A5	Hip	1	1	I64576277 Job Reference (optional)

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

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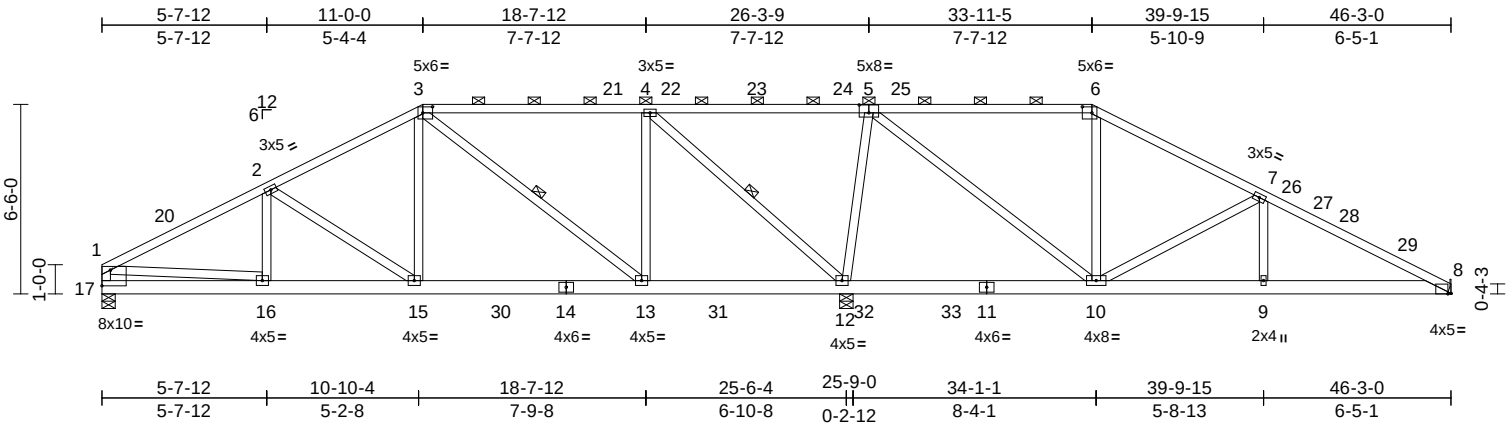

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Plate Offsets (X, Y): [3:0-4-0,0-2-8], [5:0-4-0,0-3-4], [6:0-4-0,0-2-8], [8:0-1-4,0-0-3], [17:Edge,0-6-8]

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	0.82	Vert(LL)	-0.06	13-15	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.52	Vert(CT)	-0.11	13-15	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.96	Horz(CT)	0.02	8	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 292 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 3-5,5-6:2x4 SP No.1
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-0-15 oc purlins, except end verticals, and 2-0-0 oc purlins (4-11-7 max.): 3-6.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 10-12.
WEBS 1 Row at midpt 3-13, 4-12

REACTIONS (size) 8= Mechanical, 12=0-5-8, 17=0-5-8
Max Horiz 17=-100 (LC 15)
Max Uplift 8=-114 (LC 15), 12=-188 (LC 10), 17=-134 (LC 14)
Max Grav 8=821 (LC 44), 12=2591 (LC 45), 17=1076 (LC 36)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1541/217, 2-3=-1144/217, 3-4=-576/171, 4-6=-391/834, 6-7=-575/165, 7-8=-1377/218, 1-17=-981/161
BOT CHORD 16-17=-119/310, 15-16=-207/1304, 13-15=-99/934, 12-13=-77/577, 10-12=-747/178, 9-10=-120/1154, 8-9=-120/1154
WEBS 2-16=-51/113, 2-15=-553/129, 3-15=0/589, 3-13=-739/77, 4-13=0/731, 4-12=-1794/224, 5-12=-1353/271, 5-10=-127/1352, 6-10=-275/101, 7-10=-876/184, 7-9=0/265, 1-16=-88/1014

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) 0-1-12 to 4-9-4, Exterior(2R) 4-9-4 to 17-6-8, Interior (1) 17-6-8 to 27-4-13, Exterior(2R) 27-4-13 to 40-5-13, Interior (1) 40-5-13 to 41-6-12, Exterior(2E) 41-6-12 to 46-2-4 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) Provide adequate drainage to prevent water ponding.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 114 lb uplift at joint 8.
10) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 17 and 12. This connection is for uplift only and does not consider lateral forces.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

April 1,2024

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

Job	Truss	Truss Type	Qty	Ply	23 Serenity - B329 B LH CP
24050019	JGE	Jack-Open Supported Gable	1	1	I64576278 Job Reference (optional)

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

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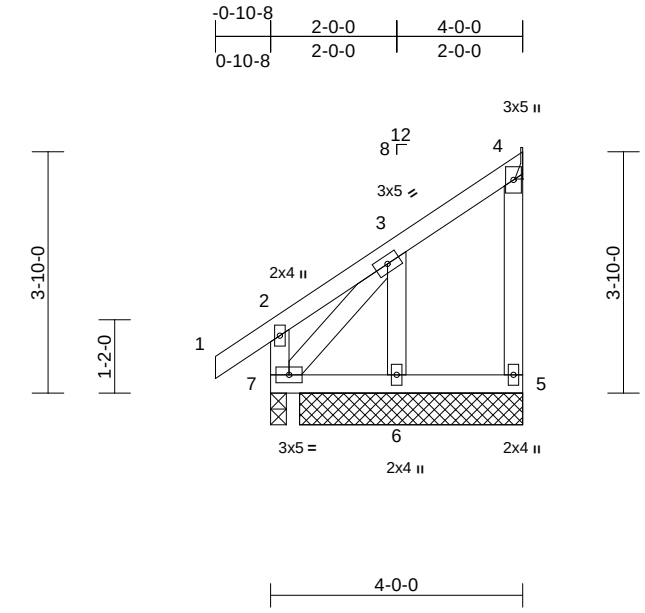

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.23	Vert(LL)	0.00	6-7	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	0.00	6-7	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 27 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 4-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 4= Mechanical, 5=3-6-8, 6=3-6-8, 7=0-3-0
Max Horiz 7=131 (LC 13)
Max Uplift 4=-31 (LC 11), 6=-90 (LC 14), 7=-25 (LC 10)
Max Grav 4=78 (LC 21), 5=28 (LC 7), 6=234 (LC 21), 7=222 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-7=-208/248, 1-2=0/57, 2-3=-59/147, 3-4=-74/97, 4-5=0/0
BOT CHORD 6-7=-44/79, 5-6=-44/79
WEBS 3-6=-236/277, 3-7=-275/213

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) 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) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
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) Refer to girder(s) for truss to truss connections.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 31 lb uplift at joint 4.
12) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at joint 7. This connection is for uplift only and does not consider lateral forces.
13) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
14) Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.

LOAD CASE(S) Standard

April 1,2024

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

Job	Truss	Truss Type	Qty	Ply	23 Serenity - B329 B LH CP
24050019	J	Jack-Open	22	1	I64576279 Job Reference (optional)

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

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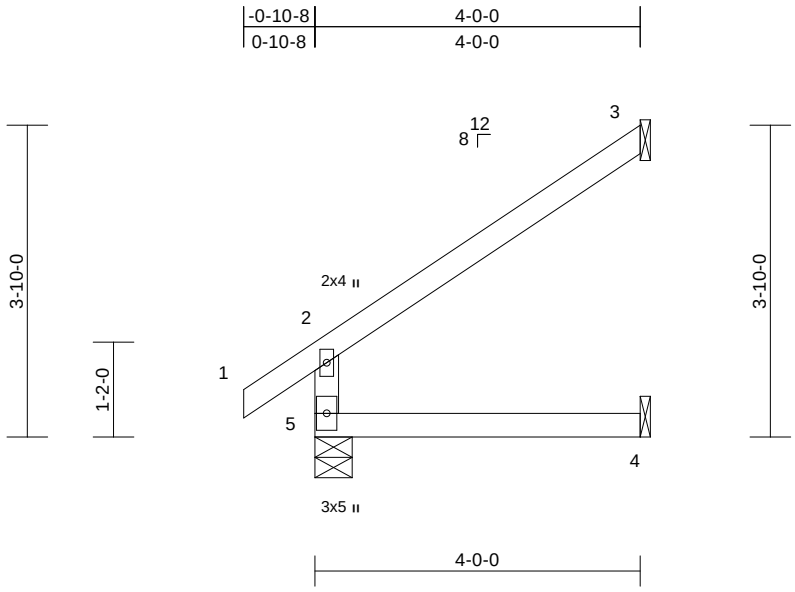

Scale = 1:28.3

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.35	Vert(LL)	0.02	4-5	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.22	Vert(CT)	-0.02	4-5	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.03	3	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 16 lb	FT = 20%

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

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

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-5-8
Max Horiz 5=102 (LC 14)
Max Uplift 3=-78 (LC 14)
Max Grav 3=166 (LC 21), 4=72 (LC 7), 5=345 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-317/95, 1-2=0/57, 2-3=-119/71
BOT CHORD 4-5=0/0

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) 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) Bearings are assumed to be: , Joint 5 User Defined .
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 78 lb uplift at joint 3.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 1,2024

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

Job	Truss	Truss Type	Qty	Ply	23 Serenity - B329 B LH CP
24050019	V11	Valley	1	1	I64576280 Job Reference (optional)

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

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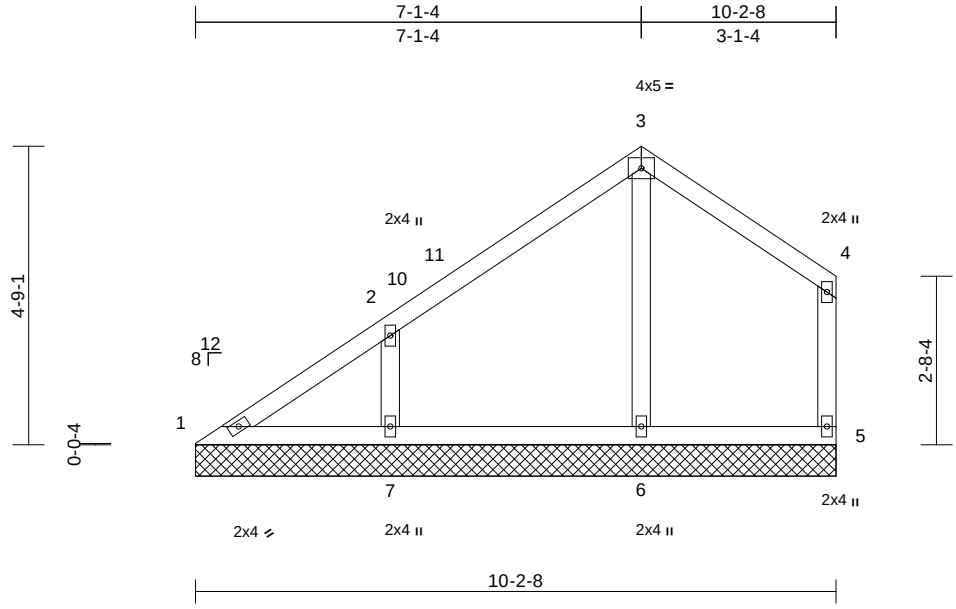

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.29	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.10	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.09	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 45 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS (size) 1=10-2-8, 5=10-2-8, 6=10-2-8, 7=10-2-8
Max Horiz 1=138 (LC 11)
Max Uplift 1=-19 (LC 10), 5=-39 (LC 15), 7=-118 (LC 14)
Max Grav 1=120 (LC 30), 5=182 (LC 21), 6=296 (LC 20), 7=401 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-170/119, 2-3=-133/109, 3-4=-101/117, 4-5=-158/100
BOT CHORD	1-7=-32/139, 6-7=-30/43, 5-6=-30/43
WEBS	3-6=-235/47, 2-7=-322/191

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) 0-0-6 to 3-1-10, Interior (1) 3-1-10 to 4-1-10, Exterior(2R) 4-1-10 to 7-1-10, Exterior(2E) 7-1-10 to 10-1-2 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; 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 39 lb uplift at joint 5, 19 lb uplift at joint 1 and 118 lb uplift at joint 7.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 1,2024

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

Job	Truss	Truss Type	Qty	Ply	23 Serenity - B329 B LH CP
24050019	V12	Valley	1	1	I64576281 Job Reference (optional)

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

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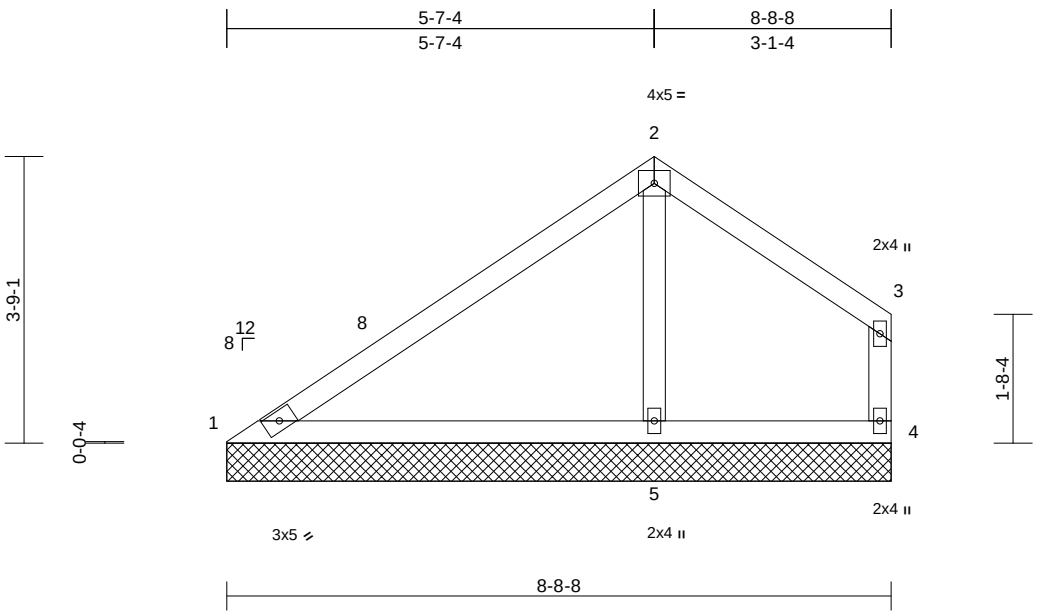

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.58	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.61	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.07	Horiz(TL)	0.01	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 34 lb	FT = 20%

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

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

REACTIONS (size) 1=8-8-8, 4=8-8-8, 5=8-8-8
Max Horiz 1=102 (LC 11)
Max Uplift 1=-26 (LC 14), 4=-40 (LC 15), 5=-22 (LC 14)
Max Grav 1=236 (LC 20), 4=151 (LC 21), 5=449 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-332/108, 2-3=-66/96, 3-4=-149/99
BOT CHORD 1-5=-105/310, 4-5=-19/27
WEBS 2-5=-262/39

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) 0-0-6 to 3-0-6, Exterior(2R) 3-0-6 to 5-7-10, Exterior(2E) 5-7-10 to 8-7-2 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; 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 40 lb uplift at joint 4, 26 lb uplift at joint 1 and 22 lb uplift at joint 5.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 1,2024

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

Job	Truss	Truss Type	Qty	Ply	23 Serenity - B329 B LH CP
24050019	V13	Valley	1	1	I64576282 Job Reference (optional)

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

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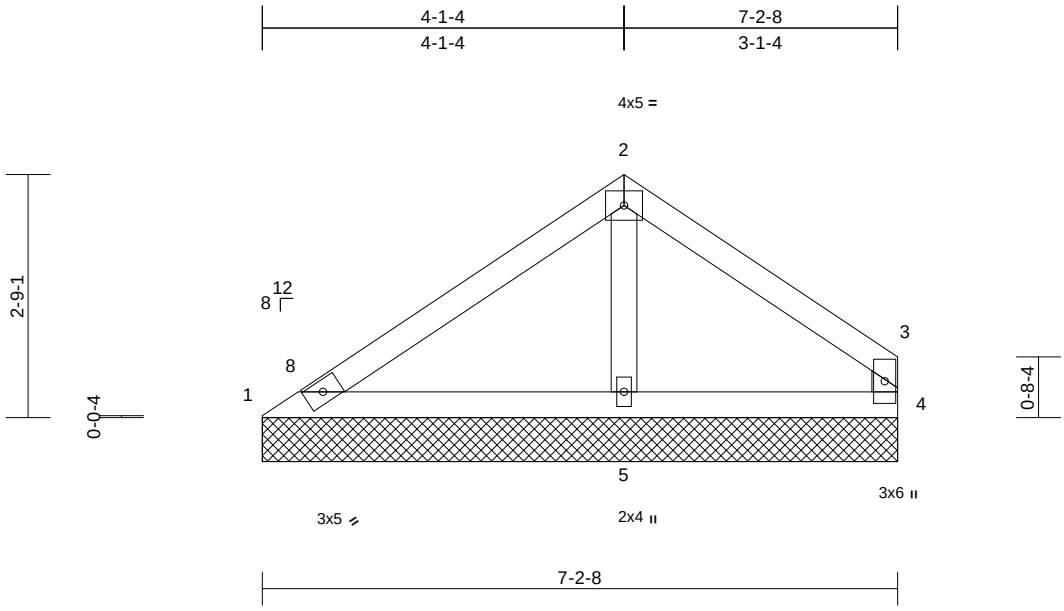

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.29	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.36	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 27 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 7-2-8 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=7-2-8, 4=7-2-8, 5=7-2-8
Max Horiz 1=66 (LC 11)
Max Uplift 1=-24 (LC 14), 4=-43 (LC 15), 5=-8 (LC 14)
Max Grav 1=195 (LC 20), 4=158 (LC 21), 5=351 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-272/112, 2-3=-64/79, 3-4=-144/97
BOT CHORD	1-5=-98/224, 4-5=-6/9
WEBS	2-5=-200/38

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) 0-0-6 to 3-0-6, Exterior(2R) 3-0-6 to 4-1-10, Exterior(2E) 4-1-10 to 7-1-2 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; 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 43 lb uplift at joint 4, 24 lb uplift at joint 1 and 8 lb uplift at joint 5.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 1,2024

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

Job	Truss	Truss Type	Qty	Ply	23 Serenity - B329 B LH CP
24050019	V14	Valley	1	1	I64576283 Job Reference (optional)

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

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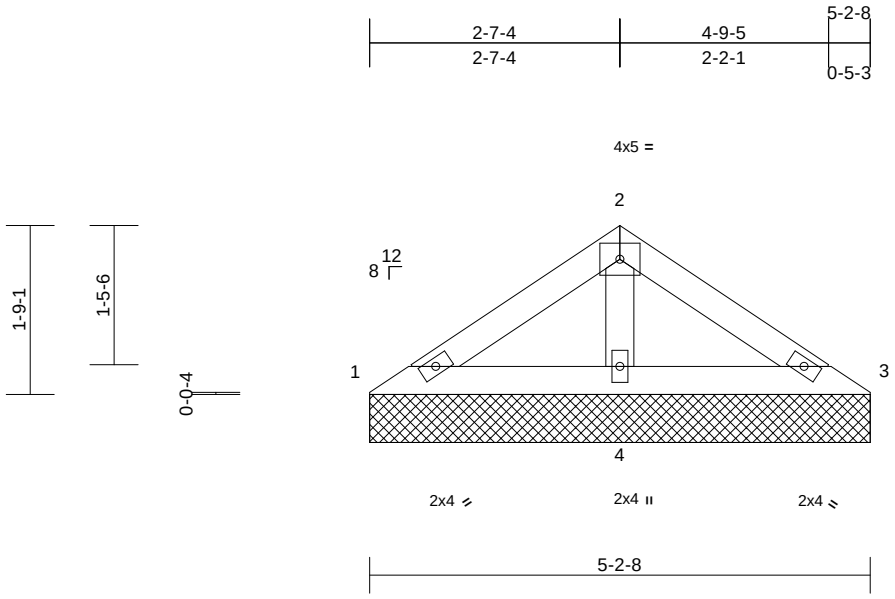

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.10	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.12	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 17 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 5-2-8 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=5-2-8, 3=5-2-8, 4=5-2-8
Max Horiz 1=-37 (LC 10)
Max Uplift 1=-5 (LC 14), 3=-11 (LC 15), 4=-28 (LC 14)
Max Grav 1=90 (LC 20), 3=90 (LC 21), 4=317 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-88/121, 2-3=-88/121
BOT CHORD 1-4=-105/84, 3-4=-105/84
WEBS 2-4=-230/101

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 1, 11 lb uplift at joint 3 and 28 lb uplift at joint 4.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 1,2024

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

Job	Truss	Truss Type	Qty	Ply	23 Serenity - B329 B LH CP
24050019	V1	Valley	1	1	I64576284 Job Reference (optional)

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

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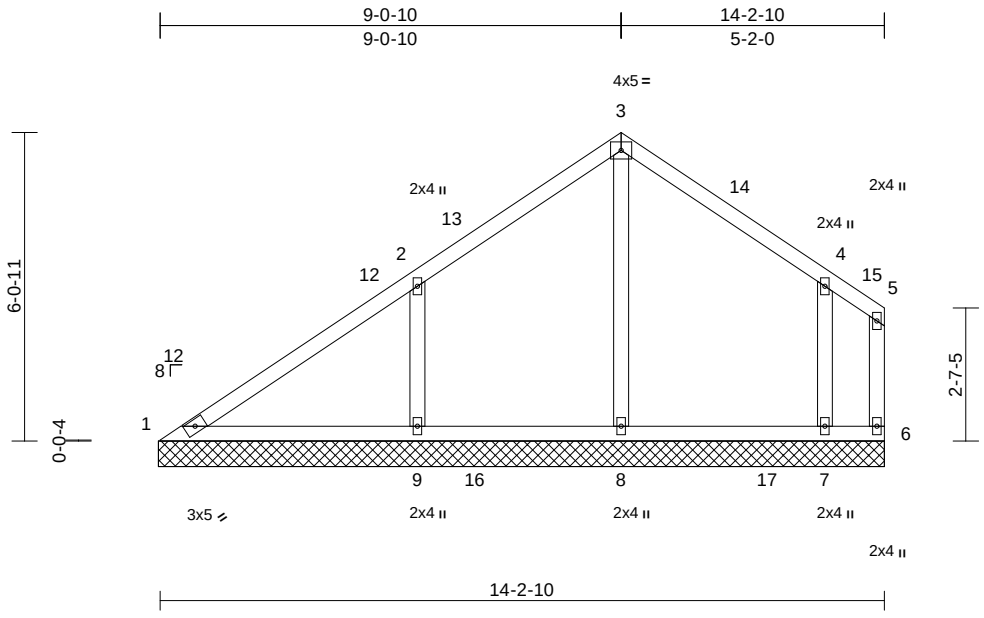

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.38	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.25	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.16	Horiz(TL)	0.00	9	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 66 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) 1=14-3-0, 6=14-3-0, 7=14-3-0, 8=14-3-0, 9=14-3-0
Max Horiz 1=167 (LC 11)
Max Uplift 1=-11 (LC 10), 6=-135 (LC 6), 7=-131 (LC 15), 9=-157 (LC 14)
Max Grav 1=196 (LC 25), 6=46 (LC 15), 7=501 (LC 21), 8=412 (LC 24), 9=564 (LC 5)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-299/179, 2-3=-129/148, 3-4=-118/147, 4-5=-44/115, 5-6=-52/111
BOT CHORD 1-9=-49/262, 8-9=-38/50, 7-8=-38/50, 6-7=-38/50
WEBS 3-8=-246/34, 2-9=-429/192, 4-7=-419/172

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, Interior (1) 3-0-0 to 6-1-0, Exterior(2R) 6-1-0 to 11-1-4, Exterior(2E) 11-1-4 to 14-1-4 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.
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, with BCDL = 10.0psf.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 135 lb uplift at joint 6, 11 lb uplift at joint 1, 157 lb uplift at joint 9 and 131 lb uplift at joint 7.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 1,2024

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

Job	Truss	Truss Type	Qty	Ply	23 Serenity - B329 B LH CP
24050019	V2	Valley	1	1	I64576285 Job Reference (optional)

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

Run: 9.03 S 8.73 Mar 21 2024 Print: 8.730 S Mar 21 2024 MiTek Industries, Inc. Fri Mar 29 10:41:43 Page: 1
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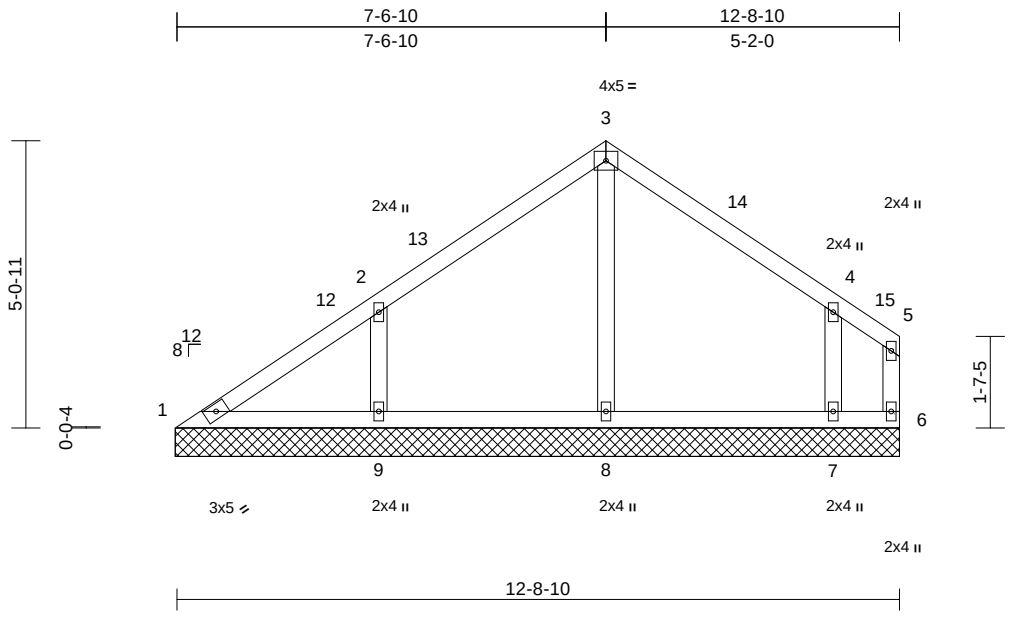

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.32	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.11	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.11	Horiz(TL)	0.00	9	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 55 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) 1=12-9-0, 6=12-9-0, 7=12-9-0, 8=12-9-0, 9=12-9-0
Max Horiz 1=131 (LC 11)
Max Uplift 1=-17 (LC 10), 6=-121 (LC 21), 7=-139 (LC 15), 9=-127 (LC 14)
Max Grav 1=127 (LC 25), 6=53 (LC 15), 7=488 (LC 21), 8=332 (LC 21), 9=479 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-183/139, 2-3=-124/125, 3-4=-118/125, 4-5=-46/113, 5-6=-55/110
BOT CHORD 1-9=-31/142, 8-9=-31/36, 7-8=-31/36, 6-7=-31/36
WEBS 3-8=-252/20, 2-9=-390/167, 4-7=-418/175

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, Interior (1) 3-0-0 to 4-7-0, Exterior(2R) 4-7-0 to 9-7-4, Exterior(2E) 9-7-4 to 12-7-4 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.
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 121 lb uplift at joint 6, 17 lb uplift at joint 1, 127 lb uplift at joint 9 and 139 lb uplift at joint 7.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 1,2024

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

Job	Truss	Truss Type	Qty	Ply	23 Serenity - B329 B LH CP
24050019	V3	Valley	1	1	I64576286 Job Reference (optional)

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

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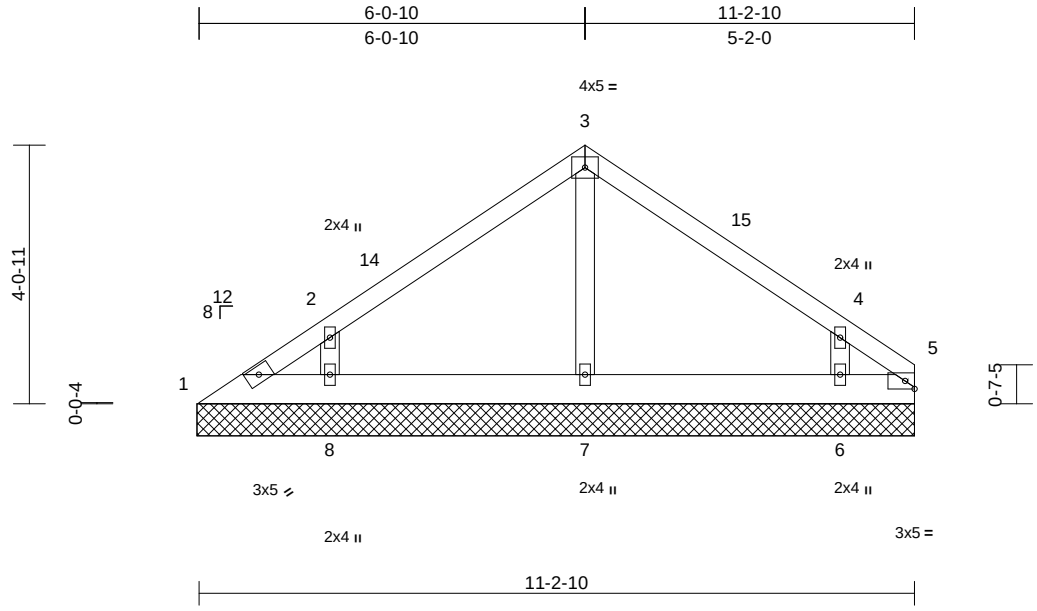

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.32	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.06	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.09	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 52 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
OTHERS 2x4 SP No.3

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

REACTIONS (size) 1=11-3-0, 5=11-3-0, 6=11-3-0, 7=11-3-0, 8=11-3-0, 9=11-3-0
Max Horiz 1=90 (LC 11)
Max Uplift 1=-14 (LC 10), 5=-50 (LC 13), 6=-131 (LC 15), 8=-107 (LC 14), 9=-50 (LC 13)
Max Grav 1=69 (LC 25), 5=64 (LC 15), 6=459 (LC 21), 7=284 (LC 21), 8=452 (LC 20), 9=64 (LC 15)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-96/81, 2-3=-180/75, 3-4=-171/75, 4-5=-90/88
BOT CHORD 1-8=-37/69, 7-8=-23/58, 6-7=-23/58, 5-6=-24/58
WEBS 3-7=-196/39, 2-8=-457/201, 4-6=-466/205

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 8-3-0, Exterior(2E) 8-3-0 to 11-3-0 zone; cantilever 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 50 lb uplift at joint 5, 14 lb uplift at joint 1, 107 lb uplift at joint 8, 131 lb uplift at joint 6 and 50 lb uplift at joint 5.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 1,2024

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

Job	Truss	Truss Type	Qty	Ply	23 Serenity - B329 B LH CP
24050019	V4	Valley	1	1	I64576287 Job Reference (optional)

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

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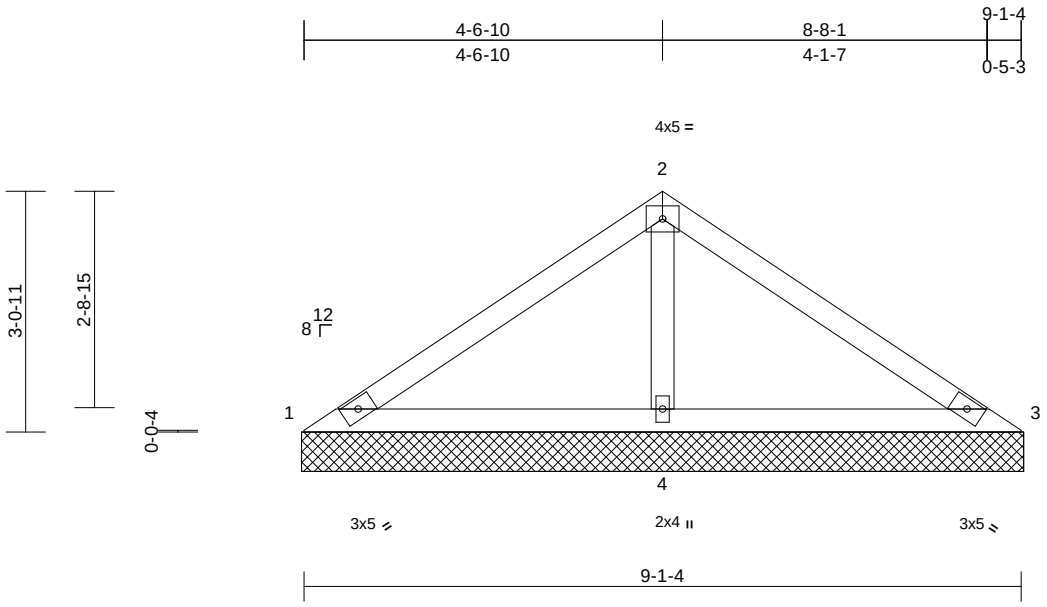

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.37	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.36	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.13	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 32 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 9-1-4 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=9-2-0, 3=9-2-0, 4=9-2-0
Max Horiz 1=-68 (LC 10)
Max Uplift 1=-38 (LC 21), 3=-38 (LC 20), 4=-72 (LC 14)
Max Grav 1=117 (LC 20), 3=117 (LC 21), 4=708 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-106/357, 2-3=-106/357
BOT CHORD 1-4=-258/141, 3-4=-258/141
WEBS 2-4=-580/211

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 6-2-0, Exterior(2E) 6-2-0 to 9-2-0 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
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 38 lb uplift at joint 1, 38 lb uplift at joint 3 and 72 lb uplift at joint 4.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 3.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 1,2024

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

Job	Truss	Truss Type	Qty	Ply	23 Serenity - B329 B LH CP
24050019	V5	Valley	1	1	I64576288 Job Reference (optional)

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

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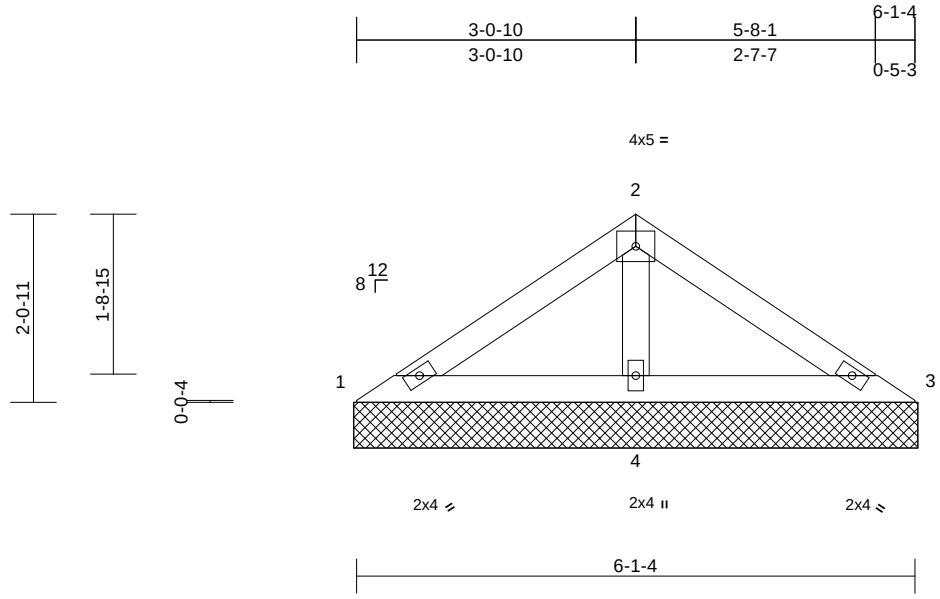

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.15	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.17	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 21 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-1-4 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=6-2-0, 3=6-2-0, 4=6-2-0
Max Horiz 1=-44 (LC 10)
Max Uplift 1=-3 (LC 14), 3=-10 (LC 15), 4=-39 (LC 14)
Max Grav 1=97 (LC 20), 3=97 (LC 21), 4=406 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-96/173, 2-3=-96/173
BOT CHORD 1-4=-149/109, 3-4=-149/109
WEBS 2-4=-312/137

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 3 lb uplift at joint 1, 10 lb uplift at joint 3 and 39 lb uplift at joint 4.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 3.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 1,2024

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

Job	Truss	Truss Type	Qty	Ply	23 Serenity - B329 B LH CP
24050019	V6	Valley	1	1	I64576289 Job Reference (optional)

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

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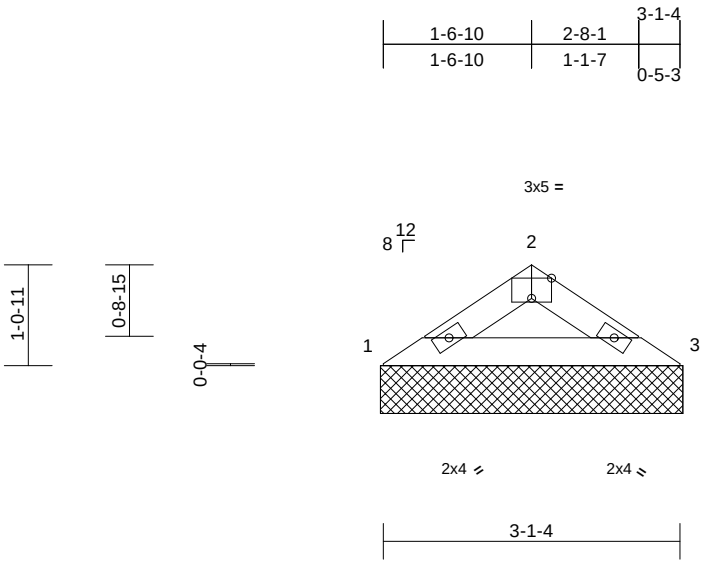

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Plate Offsets (X, Y): [2:0-2-8,Edge]

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	0.08	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	3	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 9 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 3-1-4 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=3-2-0, 3=3-2-0
Max Horiz 1=-21 (LC 12)
Max Uplift 1=-12 (LC 14), 3=-12 (LC 15)
Max Grav 1=143 (LC 20), 3=143 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-213/77, 2-3=-213/77
BOT CHORD 1-3=-52/170

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 12 lb uplift at joint 1 and 12 lb uplift at joint 3.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 3.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 1,2024

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

Job	Truss	Truss Type	Qty	Ply	23 Serenity - B329 B LH CP
24050019	PB1	Piggyback	9	1	I64576290 Job Reference (optional)

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

Run: 9.03 S 8.73 Mar 21 2024 Print: 8.730 S Mar 21 2024 MiTek Industries, Inc. Fri Mar 29 10:41:43 Page: 1
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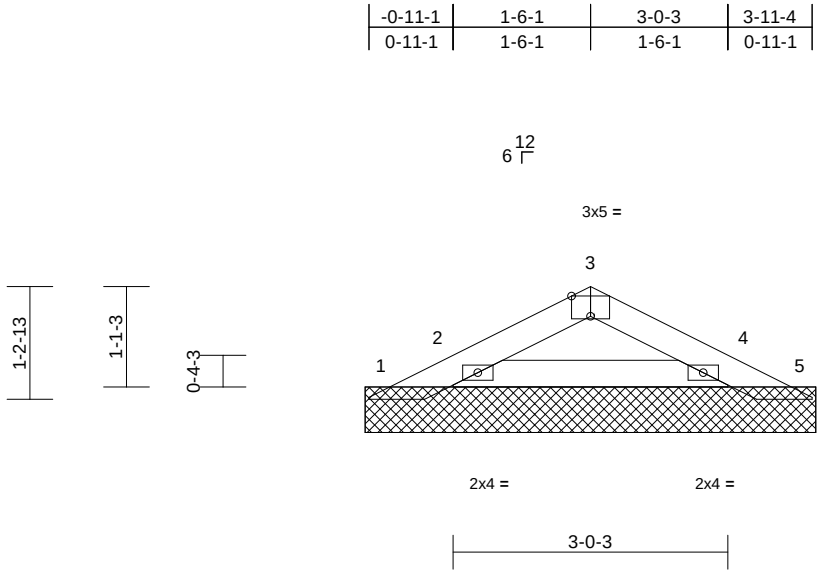

Scale = 1:25.3

Plate Offsets (X, Y): [3:0-2-8,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	0.06	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.04	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	9	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 13 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-11-5 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=4-11-5, 2=4-11-5, 4=4-11-5, 5=4-11-5, 6=4-11-5, 9=4-11-5
Max Horiz 1=-17 (LC 15)
Max Uplift 1=-21 (LC 7), 2=-18 (LC 14), 4=-17 (LC 15), 5=-19 (LC 7), 6=-18 (LC 14), 9=-17 (LC 15)
Max Grav 1=5 (LC 14), 2=228 (LC 21), 4=216 (LC 22), 5=-1 (LC 14), 6=228 (LC 21), 9=216 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-17/39, 2-3=-102/60, 3-4=-102/60, 4-5=0/34
BOT CHORD 2-4=-1/76

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 21 lb uplift at joint 1 and 19 lb uplift at joint 5.
11) N/A
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
13) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

April 1,2024

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

Job	Truss	Truss Type	Qty	Ply	23 Serenity - B329 B LH CP
24050019	FGE	Common Supported Gable	1	1	I64576291 Job Reference (optional)

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

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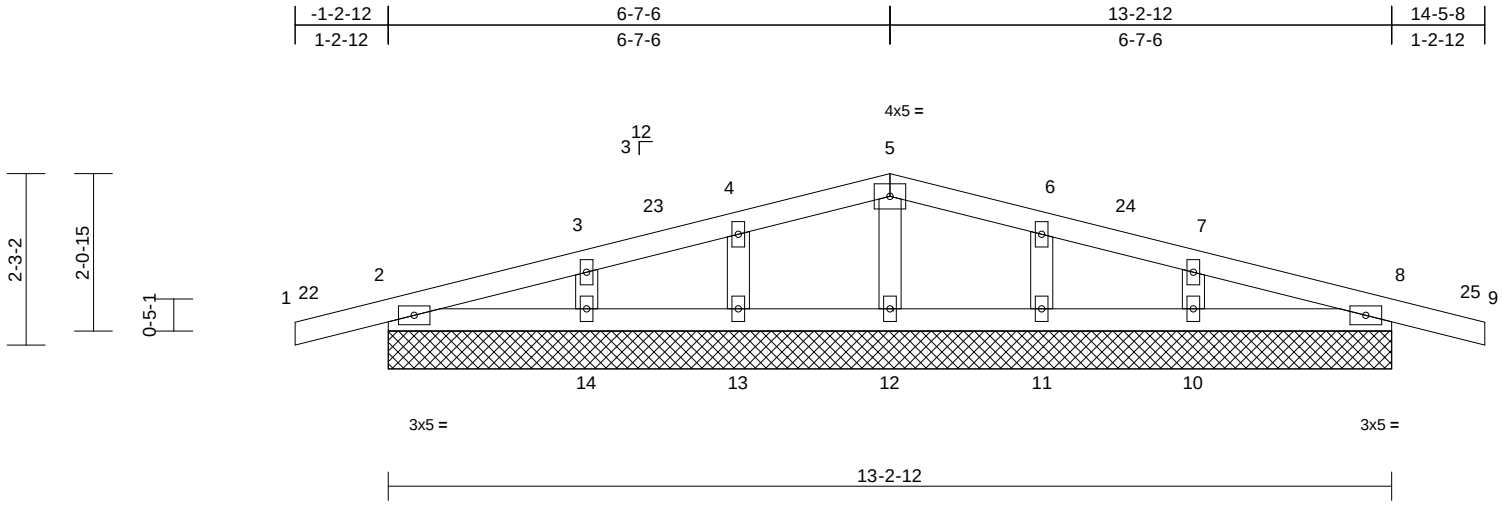

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.12	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	19	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 51 lb	FT = 20%

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

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

REACTIONS (size) 2=13-2-12, 8=13-2-12, 10=13-2-12, 11=13-2-12, 12=13-2-12, 13=13-2-12, 14=13-2-12, 15=13-2-12, 19=13-2-12
Max Horiz 2=-31 (LC 19), 15=-31 (LC 19)
Max Uplift 2=-67 (LC 10), 8=-71 (LC 11), 10=-32 (LC 15), 11=-36 (LC 11), 13=-36 (LC 10), 14=-33 (LC 14), 15=-67 (LC 10), 19=-71 (LC 11)
Max Grav 2=241 (LC 21), 8=241 (LC 22), 10=247 (LC 22), 11=211 (LC 22), 12=146 (LC 1), 13=211 (LC 21), 14=247 (LC 21), 15=241 (LC 21), 19=241 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/24, 2-3=-59/49, 3-4=-35/45, 4-5=-40/83, 5-6=-40/83, 6-7=-35/45, 7-8=-59/49, 8-9=0/24
BOT CHORD 2-14=-48/70, 13-14=0/38, 12-13=0/38, 11-12=0/38, 10-11=0/38, 8-10=-48/70
WEBS 5-12=-104/68, 4-13=-178/132, 3-14=-186/105, 6-11=-178/132, 7-10=-186/105

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 Corner(3E) -0-10-8 to 2-1-8, Exterior(2N) 2-1-8 to 3-11-10, Corner(3R) 3-11-10 to 9-11-10, Exterior(2N) 9-11-10 to 11-9-12, Corner(3E) 11-9-12 to 14-9-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 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) 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) N/A
13) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 8, 19.
14) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 1,2024

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

Job	Truss	Truss Type	Qty	Ply	23 Serenity - B329 B LH CP
24050019	F	Common	2	1	I64576292 Job Reference (optional)

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

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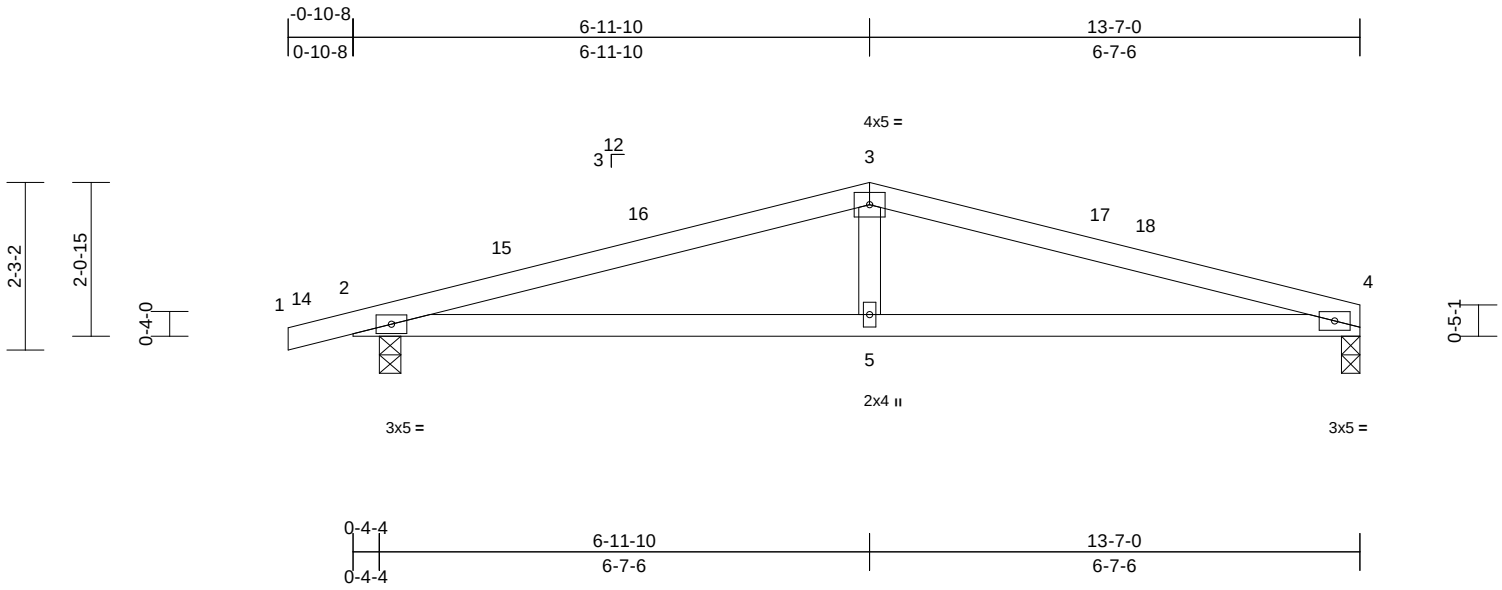

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.82	Vert(LL)	-0.11	5-8	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.74	Vert(CT)	-0.17	5-8	>954	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.02	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 45 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-6-7 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-5-2 oc bracing.

REACTIONS (size) 2=0-3-8, 4=0-3-0
Max Horiz 2=36 (LC 14)
Max Uplift 2=-221 (LC 10), 4=-176 (LC 11)
Max Grav 2=716 (LC 21), 4=605 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/16, 2-3=-1182/848, 3-4=-1188/846
BOT CHORD 2-5=-760/1105, 4-5=-760/1105
WEBS 3-5=-130/285

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) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 3-11-10, Exterior(2R) 3-11-10 to 9-11-10, Interior (1) 9-11-10 to 10-7-0, Exterior(2E) 10-7-0 to 13-7-0 zone; cantilever left and right exposed ; end vertical left and right exposed; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 4 and 2. This connection is for uplift only and does not consider lateral forces.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 1,2024

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

Job	Truss	Truss Type	Qty	Ply	23 Serenity - B329 B LH CP
24050019	ISE	Monopitch Structural Gable	1	1	I64576293 Job Reference (optional)

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

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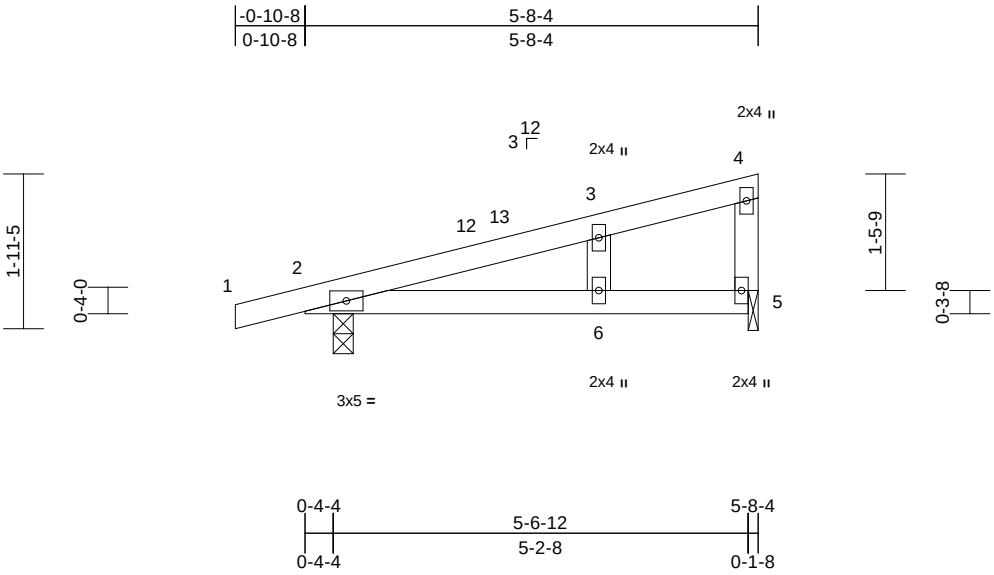

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.38	Vert(LL)	0.08	6-11	>859	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.44	Vert(CT)	-0.10	6-11	>653	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 21 lb	FT = 20%

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

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

REACTIONS (size) 2=0-3-0, 5=0-1-8
Max Horiz 2=58 (LC 13)
Max Uplift 2=-123 (LC 10), 5=-76 (LC 10)
Max Grav 2=397 (LC 21), 5=260 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/18, 2-3=-101/118, 3-4=-25/40, 4-5=-149/121
BOT CHORD 2-6=-118/127, 5-6=-18/27
WEBS 3-6=-84/70

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 2-6-8, Exterior(2E) 2-6-8 to 5-6-8 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
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) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Bearings are assumed to be: Joint 5 SP No.3 .
10) 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.
11) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 5.
12) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 5 and 2. This connection is for uplift only and does not consider lateral forces.
13) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 1,2024

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

Job	Truss	Truss Type	Qty	Ply	23 Serenity - B329 B LH CP
24050019	I	Monopitch	5	1	I64576294 Job Reference (optional)

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

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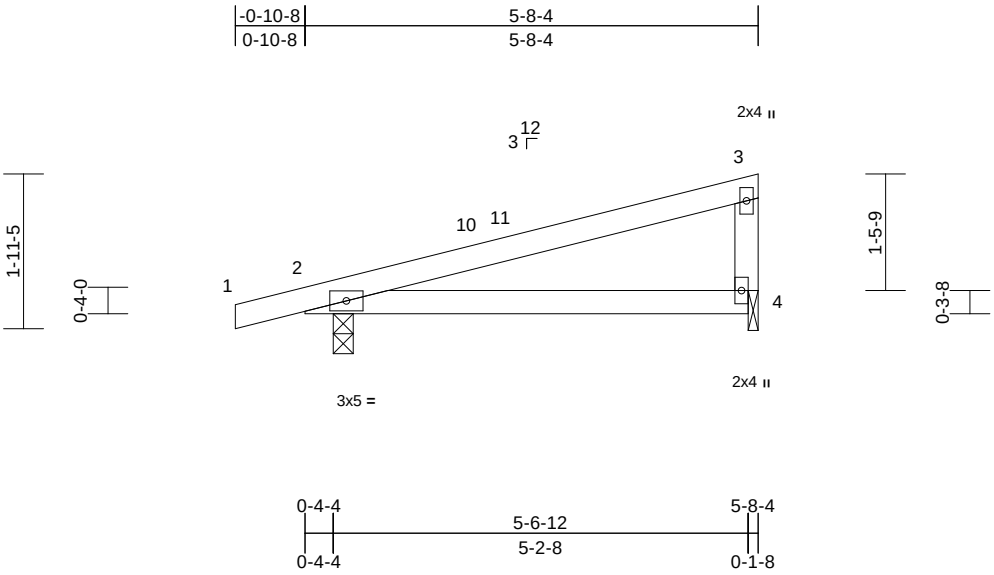

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.51	Vert(LL)	0.07	4-9	>967	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.37	Vert(CT)	-0.09	4-9	>762	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 20 lb	FT = 20%

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

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

REACTIONS (size) 2=0-3-0, 4=0-1-8
Max Horiz 2=58 (LC 13)
Max Uplift 2=-123 (LC 10), 4=-76 (LC 10)
Max Grav 2=397 (LC 21), 4=260 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/18, 2-3=-101/118, 3-4=-185/151
BOT CHORD 2-4=-118/127

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 2-6-8, Exterior(2E) 2-6-8 to 5-6-8 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
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 4 SP No.3 .
8) 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.
9) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 4.
10) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 4 and 2. This connection is for uplift only and does not consider lateral forces.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 1,2024

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

Job	Truss	Truss Type	Qty	Ply	23 Serenity - B329 B LH CP
24050019	C	Monopitch	1	1	I64576295 Job Reference (optional)

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

Run: 9.03 S 8.73 Mar 21 2024 Print: 8.730 S Mar 21 2024 MiTek Industries, Inc. Fri Mar 29 10:41:40 Page: 1
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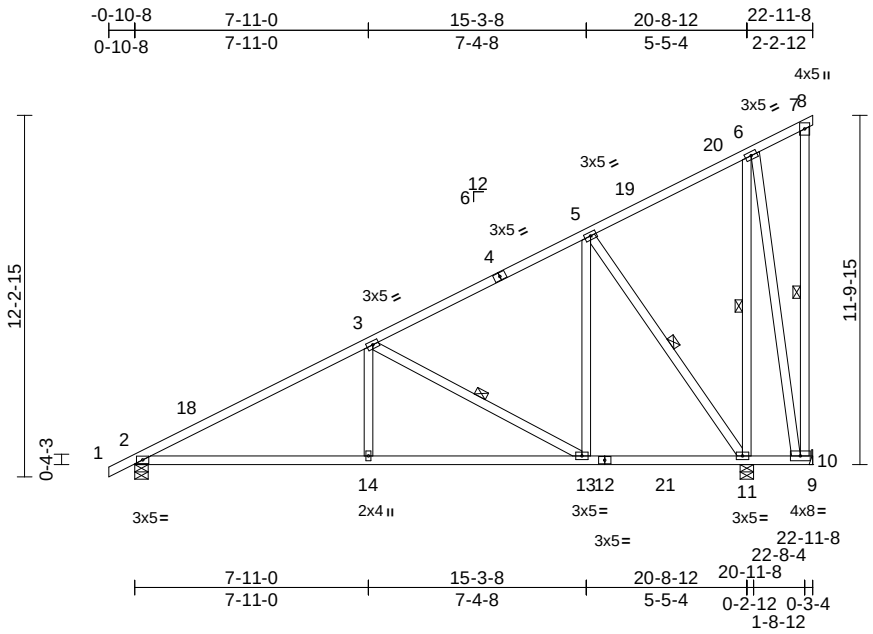

Scale = 1:78

Loading	(psf)	Spacing	1-11-4	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.80	Vert(LL)	-0.14	14-17	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.80	Vert(CT)	-0.27	14-17	>914	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.43	Horz(CT)	0.03	11	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 163 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 7-10,6-11,6-10:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-0-10 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 10-11.
WEBS 1 Row at midpt 7-10, 3-13, 5-11, 6-11

REACTIONS (size) 2=0-5-8, 10= Mechanical, 11=0-5-8
Max Horiz 2=422 (LC 13)
Max Uplift 2=-80 (LC 14), 10=-257 (LC 31), 11=-258 (LC 14)
Max Grav 2=892 (LC 5), 10=50 (LC 10), 11=1346 (LC 5)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-3=-1349/147, 3-5=-684/129, 5-6=-188/219, 6-7=-132/149, 7-8=-12/0, 7-10=-29/41
BOT CHORD 2-14=-200/1420, 13-14=-200/1420, 11-13=-119/625, 10-11=-165/194, 9-10=0/0
WEBS 3-14=0/329, 3-13=-904/203, 5-13=-9/669, 5-11=-959/208, 6-11=-486/58, 6-10=-26/203

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 19-11-8, Exterior(2E) 19-11-8 to 22-11-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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) All plates are 3x5 MT20 unless otherwise indicated.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 257 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) 2 and 11. This connection is for uplift only and does not consider lateral forces.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 1,2024

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

Job	Truss	Truss Type	Qty	Ply	23 Serenity - B329 B LH CP
24050019	KGR	Half Hip Girder	1	2	I64576296 Job Reference (optional)

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

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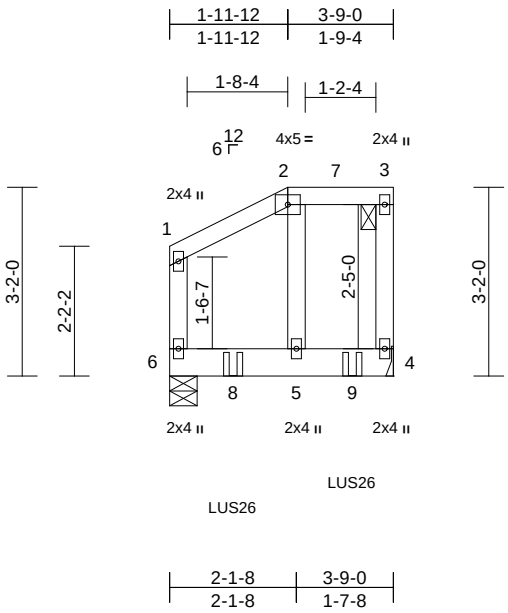

Scale = 1:38.6

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.30	Vert(LL)	-0.01	5-6	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.30	Vert(CT)	-0.02	5-6	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.03	Horz(CT)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 49 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 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, and 2-0-0 oc purlins (6-0-0 max.): 2-3.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 4= Mechanical, 6=0-5-8
Max Horiz 6=99 (LC 9)
Max Uplift 4=-141 (LC 9), 6=-94 (LC 12)
Max Grav 4=1076 (LC 32), 6=901 (LC 33)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-154/32, 2-3=-84/31, 3-4=-177/36, 1-6=-187/36
BOT CHORD 5-6=-47/81, 4-5=-45/87
WEBS 2-5=-21/144

NOTES
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) 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.
3) 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
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) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 141 lb uplift at joint 4.
11) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 6. This connection is for uplift only and does not consider lateral forces.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
14) Use Simpson Strong-Tie LUS26 (4-10d Girder, 3-10d Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 3-5-0 from the left end to 5-5-0 to connect truss(es) to back face of bottom chord.
15) Fill all nail holes where hanger is in contact with lumber.

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-60, 2-3=-60, 4-6=-20
Concentrated Loads (lb)
Vert: 8=-824 (B), 9=-828 (B)

April 1,2024

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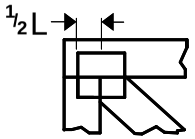
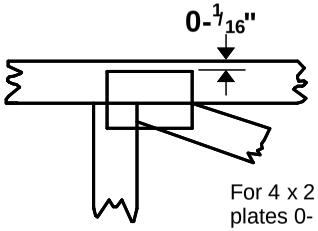
Symbols

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.

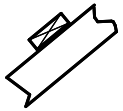
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

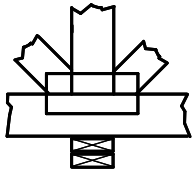
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

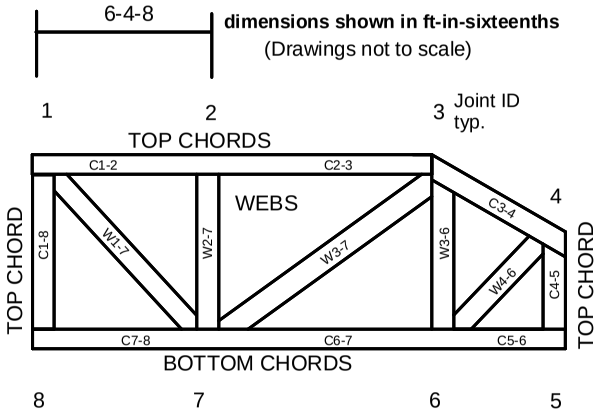


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-22: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



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

MiTek®

ENGINEERING BY TRENCO
A MiTek Affiliate

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