

Trenco  
818 Soundside Rd  
Edenton, NC 27932

Re: P-8923-1  
21 Chartres St-21 Chartres St

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Peak Truss Builders, LLC.

Pages or sheets covered by this seal: I52770267 thru I52770282

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

North Carolina COA: C-0844



June 28,2022

Gilbert, Eric

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

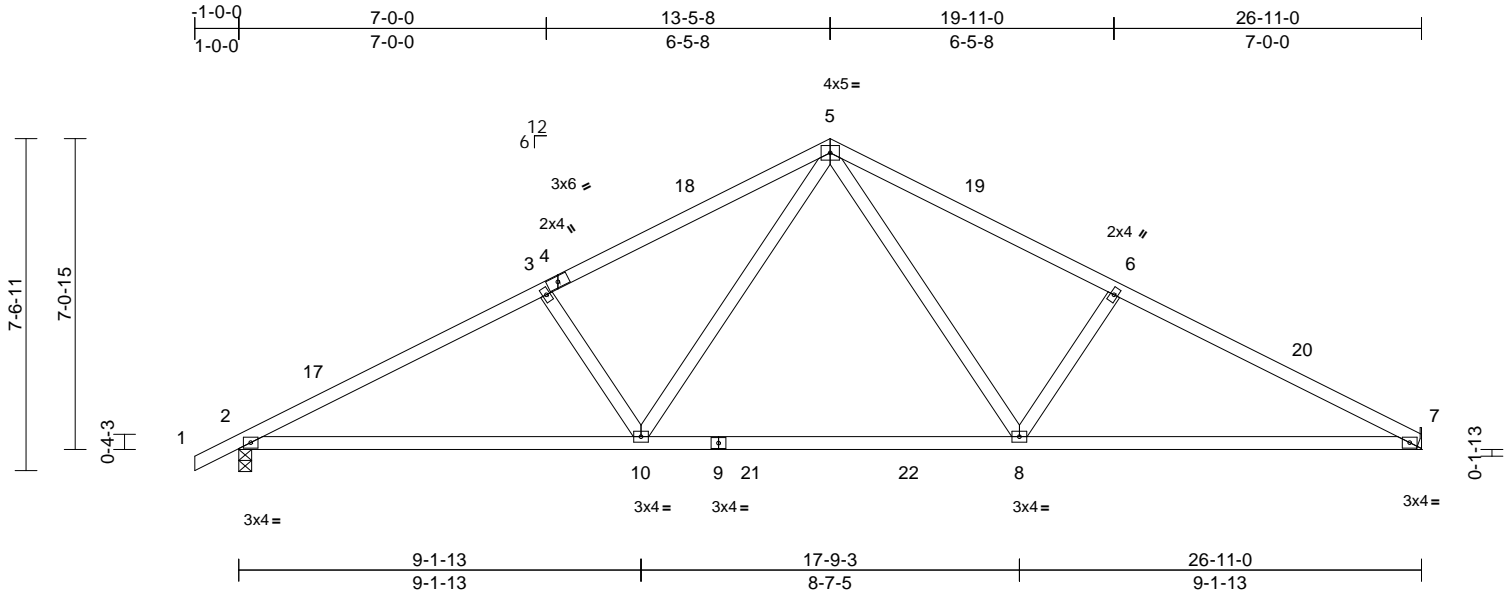


Job P-8923-1	Truss T1A	Truss Type Common	Qty 7	Ply 1	21 Chartres St-21 Chartres St Job Reference (optional)	152770268
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Peak Truss Builders, LLC, New Hill, NC - 27562,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Mon Jun 27 10:53:39  
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Page: 1



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.48	Vert(LL)	-0.20	8-10	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.59	Vert(CT)	-0.30	8-10	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.27	Horz(CT)	0.05	7	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 122 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.1  
BOT CHORD 2x4 SP No.1  
WEBS 2x4 SP No.3

5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 95 lb uplift at joint 7 and 127 lb uplift at joint 2.

**LOAD CASE(S)** Standard

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 3-11-12 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (lb/size) 2=1138/0-3-8, 7=1076/ Mechanical  
Max Horiz 2=98 (LC 10)  
Max Uplift 2=-127 (LC 11), 7=-95 (LC 11)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/27, 2-3=-1886/210, 3-5=-1689/227, 5-6=-1693/230, 6-7=-1891/213  
BOT CHORD 2-10=-116/1643, 8-10=-2/1078, 7-8=-119/1649  
WEBS 5-8=-48/687, 6-8=-425/169, 5-10=-44/682, 3-10=-421/167

- NOTES**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=20ft; L=27ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 13-5-8, Exterior (2) 13-5-8 to 16-5-8, Interior (1) 16-5-8 to 26-11-0 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) \* 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.
  - 4) Refer to girder(s) for truss to truss connections.



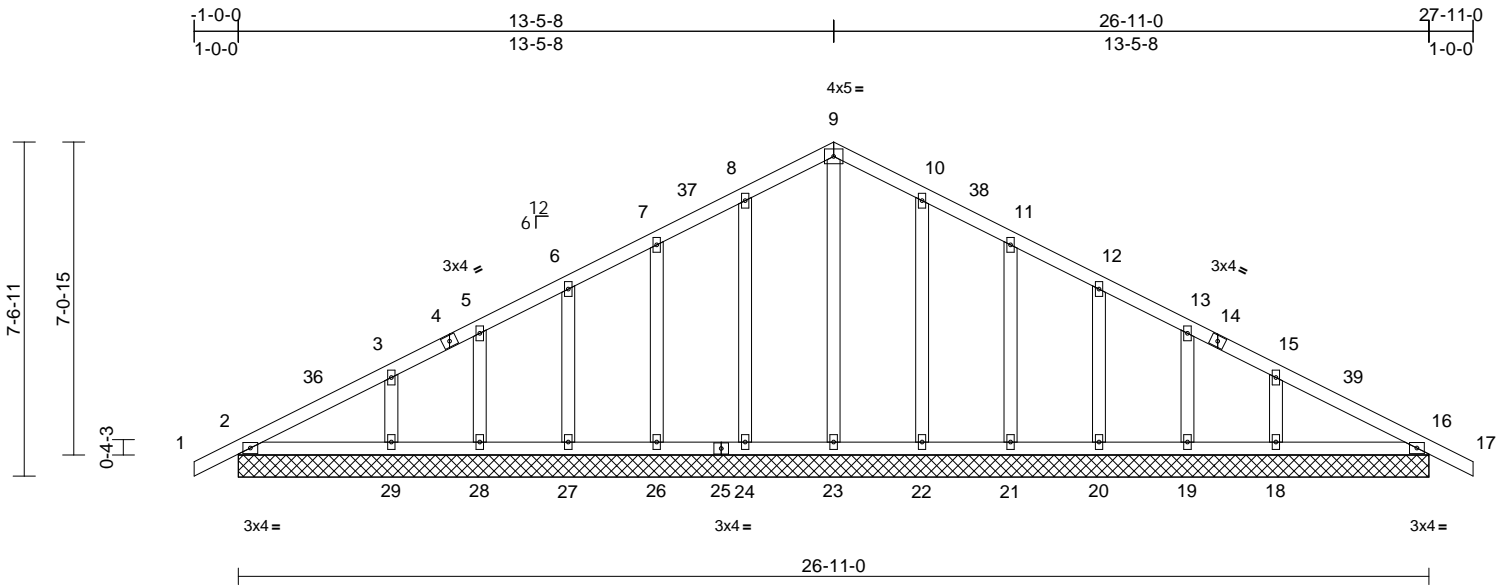
June 28, 2022

Job P-8923-1	Truss T1BGE	Truss Type Common Supported Gable	Qty 1	Ply 1	21 Chartres St-21 Chartres St Job Reference (optional)	152770269
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Peak Truss Builders, LLC, New Hill, NC - 27562,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Mon Jun 27 10:53:39  
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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	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.00	16	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS								

Weight: 151 lb FT = 20%

LUMBER	LOAD CASE(S)
TOP CHORD 2x4 SP No.1	Standard
BOT CHORD 2x4 SP No.1	
OTHERS 2x4 SP No.3	

BRACING	NOTES
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.	1) Unbalanced roof live loads have been considered for this design.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.	2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TC DL=6.0psf; BCDL=6.0psf; h=30ft; B=20ft; L=27ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner (3) -1-0-0 to 2-0-0, Exterior (2) 2-0-0 to 13-5-8, Corner (3) 13-5-8 to 16-5-8, Exterior (2) 16-5-8 to 27-11-0 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

REACTIONS	REMARKS
(lb/size) 2=193/26-11-0, 16=193/26-11-0, 18=264/26-11-0, 19=120/26-11-0, 20=170/26-11-0, 21=157/26-11-0, 22=166/26-11-0, 23=132/26-11-0, 24=166/26-11-0, 26=157/26-11-0, 27=170/26-11-0, 28=120/26-11-0, 29=264/26-11-0, 30=193/26-11-0, 33=193/26-11-0	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.

FORCES	REMARKS
(lb) - Maximum Compression/Maximum Tension	4) All plates are 2x4 MT20 unless otherwise indicated.
TOP CHORD 1-2=0/27, 2-3=-85/74, 3-5=-85/53, 5-6=-71/68, 6-7=-66/106, 7-8=-58/144, 8-9=-71/179, 9-10=-71/181, 10-11=-57/147, 11-12=-47/108, 12-13=-44/70, 13-15=-54/38, 15-16=-61/40, 16-17=0/27	5) Gable requires continuous bottom chord bearing.

REMARKS
6) Gable studs spaced at 2-0-0 oc.
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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 27 lb uplift at joint 2, 27 lb uplift at joint 16, 26 lb uplift at joint 24, 32 lb uplift at joint 26, 30 lb uplift at joint 27, 26 lb uplift at joint 28, 42 lb uplift at joint 29, 26 lb uplift at joint 22, 32 lb uplift at joint 21, 30 lb uplift at joint 20, 26 lb uplift at joint 19, 42 lb uplift at joint 18, 27 lb uplift at joint 2 and 27 lb uplift at joint 16.



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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

**ENGINEERING BY**  
**TRENCO**  
A MiTek Affiliate

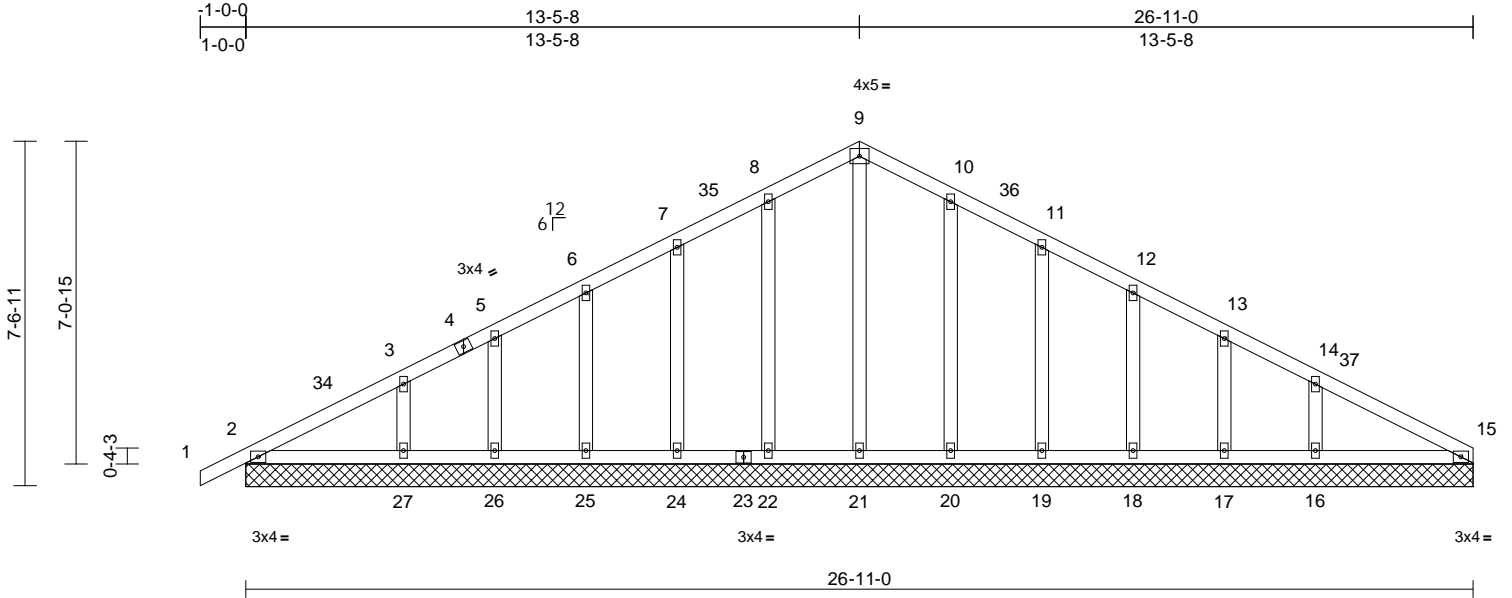
818 Soundside Road  
Edenton, NC 27932

Job P-8923-1	Truss T1GE	Truss Type Common Supported Gable	Qty 1	Ply 1	21 Chartres St-21 Chartres St Job Reference (optional)	152770270
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Peak Truss Builders, LLC, New Hill, NC - 27562,

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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	0.09	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.08	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.00	15	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 149 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.1  
BOT CHORD 2x4 SP No.1  
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** (lb/size)  
2=194/26-11-0, 15=122/26-11-0, 16=281/26-11-0, 17=113/26-11-0, 18=172/26-11-0, 19=156/26-11-0, 20=167/26-11-0, 21=132/26-11-0, 22=166/26-11-0, 24=157/26-11-0, 25=170/26-11-0, 26=120/26-11-0, 27=264/26-11-0, 28=194/26-11-0, 31=122/26-11-0  
Max Horiz 2=98 (LC 10), 28=98 (LC 10)  
Max Uplift 2=-23 (LC 11), 16=-54 (LC 11), 17=-21 (LC 11), 18=-31 (LC 11), 19=-31 (LC 11), 20=-27 (LC 11), 22=-27 (LC 11), 24=-32 (LC 11), 25=-30 (LC 11), 26=-26 (LC 11), 27=-42 (LC 11), 28=-23 (LC 11)  
Max Grav 2=194 (LC 1), 15=122 (LC 1), 16=281 (LC 21), 17=113 (LC 1), 18=172 (LC 21), 19=156 (LC 1), 20=169 (LC 21), 21=132 (LC 1), 22=169 (LC 20), 24=157 (LC 1), 25=170 (LC 20), 26=120 (LC 1), 27=264 (LC 20), 28=194 (LC 1), 31=122 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/27, 2-3=-85/71, 3-5=-85/50, 5-6=-71/62, 6-7=-66/100, 7-8=-59/138, 8-9=-70/173, 9-10=-70/174, 10-11=-56/139, 11-12=-47/101, 12-13=-44/62, 13-14=-57/33, 14-15=-68/42

**BOT CHORD** 2-27=-19/86, 26-27=-19/86, 25-26=-19/86, 24-25=-19/86, 22-24=-19/86, 21-22=-19/86, 20-21=-19/86, 19-20=-19/86, 18-19=-19/86, 17-18=-19/86, 16-17=-19/86, 15-16=-19/86  
**WEBS** 9-21=92/0, 8-22=128/103, 7-24=-118/66, 6-25=-125/61, 5-26=-98/53, 3-27=-180/92, 10-20=-128/103, 11-19=-118/66, 12-18=-126/63, 13-17=-95/51, 14-16=-188/122

**NOTES**  
1) Unbalanced roof live loads have been considered for this design.  
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=20ft; L=27ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner (3) -1-0-0 to 2-0-0, Exterior (2) 2-0-0 to 13-5-8, Corner (3) 13-5-8 to 16-5-8, Exterior (2) 16-5-8 to 26-11-0 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  
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) All plates are 2x4 MT20 unless otherwise indicated.  
5) Gable requires continuous bottom chord bearing.  
6) Gable studs spaced at 2-0-0 oc.  
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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 23 lb uplift at joint 2, 27 lb uplift at joint 22, 32 lb uplift at joint 24, 30 lb uplift at joint 25, 26 lb uplift at joint 26, 42 lb uplift at joint 27, 27 lb uplift at joint 20, 31 lb uplift at joint 19, 31 lb uplift at joint 18, 21 lb uplift at joint 17, 54 lb uplift at joint 16 and 23 lb uplift at joint 2.

9) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 15, 31.  
**LOAD CASE(S)** Standard



June 28, 2022

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Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



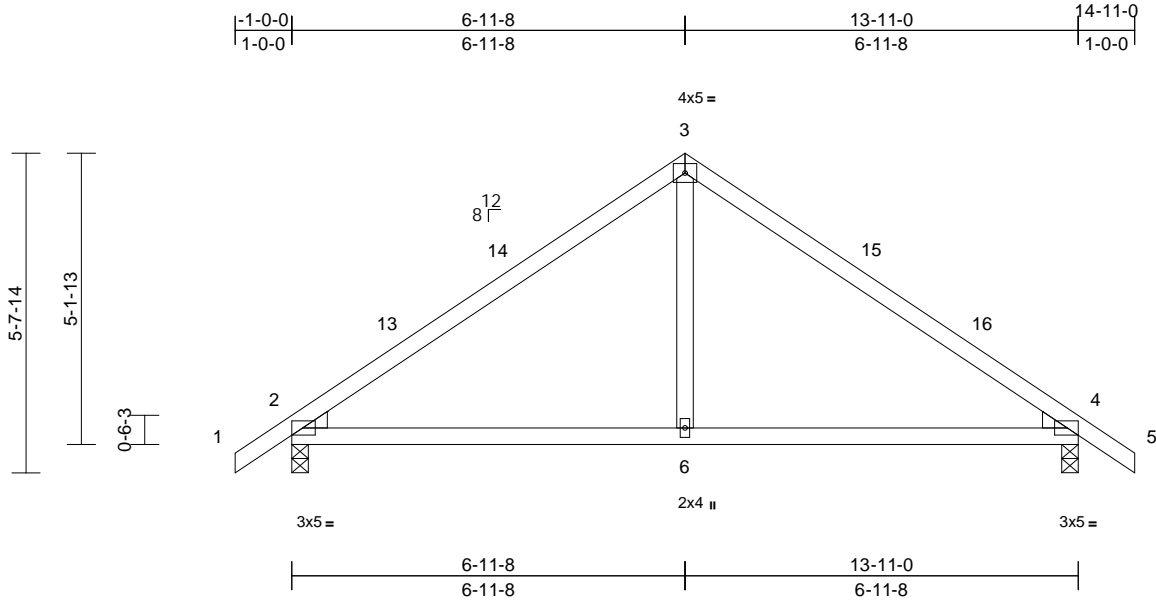
818 Soundside Road  
Edenton, NC 27932

Job P-8923-1	Truss T2	Truss Type Common	Qty 1	Ply 1	21 Chartres St-21 Chartres St Job Reference (optional)	I52770271
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Peak Truss Builders, LLC, New Hill, NC - 27562,

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Page: 1



Scale = 1:40.8

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

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	0.48	Vert(LL)	-0.06	6-12	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.33	Vert(CT)	-0.11	6-12	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.09	Horz(CT)	0.01	2	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 58 lb	FT = 20%

**LUMBER**

TOP CHORD 2x4 SP No.1  
 BOT CHORD 2x4 SP No.1  
 WEBS 2x4 SP No.3  
 WEDGE Left: 2x4 SP No.3  
 Right: 2x4 SP No.3

4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 81 lb uplift at joint 2 and 81 lb uplift at joint 4.

**LOAD CASE(S)** Standard

**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.

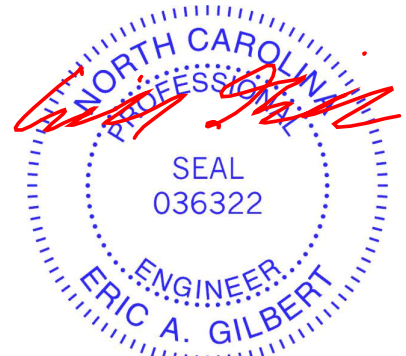
**REACTIONS** (lb/size) 2=617/0-3-8, 4=617/0-3-8  
 Max Horiz 2=-87 (LC 9)  
 Max Uplift 2=-81 (LC 11), 4=-81 (LC 11)

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

TOP CHORD 1-2=0/33, 2-3=-665/85, 3-4=-665/85, 4-5=0/33  
 BOT CHORD 2-6=-96/459, 4-6=-96/459  
 WEBS 3-6=0/213

**NOTES**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TC DL=6.0psf; BC DL=6.0psf; h=30ft; B=20ft; L=20ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 6-11-8, Exterior (2) 6-11-8 to 9-11-8, Interior (1) 9-11-8 to 14-11-0 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) \* 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.



June 28, 2022

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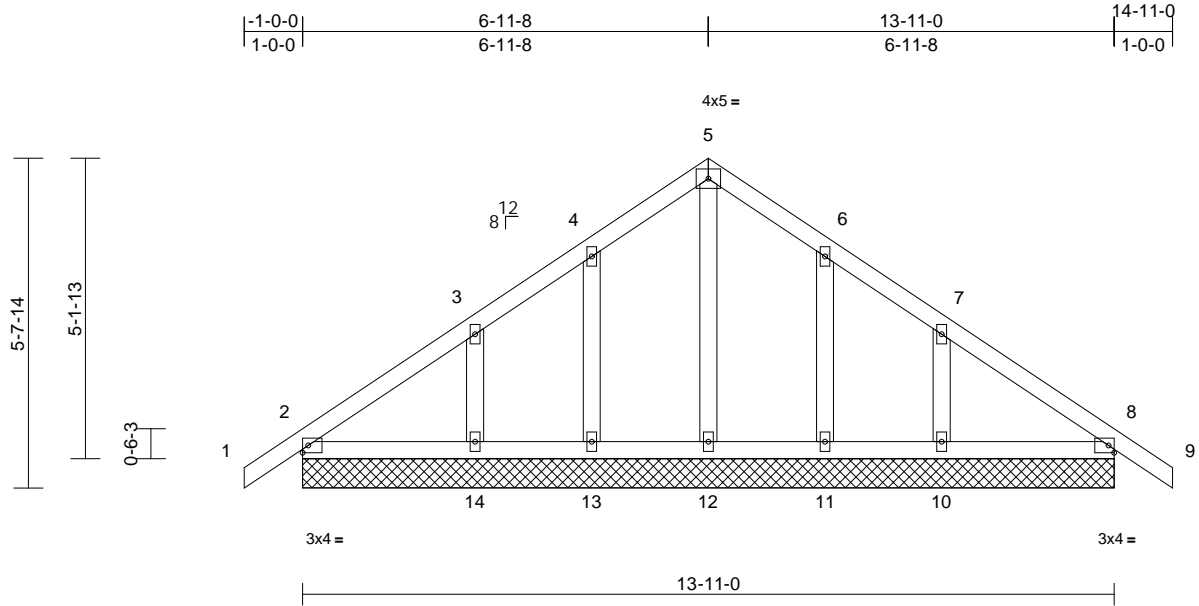
818 Soundside Road  
 Edenton, NC 27932

Job P-8923-1	Truss T2GE	Truss Type Common Supported Gable	Qty 1	Ply 1	21 Chartres St-21 Chartres St Job Reference (optional)	152770272
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Peak Truss Builders, LLC, New Hill, NC - 27562,

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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	0.14	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.09	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.18	Horz(CT)	0.00	8	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 72 lb	FT = 20%

**LUMBER**

TOP CHORD 2x4 SP No.1  
BOT CHORD 2x4 SP No.1  
OTHERS 2x4 SP No.3

**BRACING**

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

**REACTIONS**

(lb/size) 2=16/13-11-0, 8=0/13-11-0, 10=290/13-11-0, 11=107/13-11-0, 12=434/13-11-0, 13=141/13-11-0, 14=246/13-11-0, 15=16/13-11-0  
Max Horiz 2=87 (LC 10), 15=87 (LC 10)  
Max Uplift 2=-82 (LC 21), 10=-68 (LC 11), 11=-31 (LC 11), 13=-36 (LC 11), 14=-61 (LC 11), 15=-82 (LC 21)  
Max Grav 2=105 (LC 20), 10=290 (LC 1), 11=111 (LC 21), 12=434 (LC 1), 13=145 (LC 20), 14=246 (LC 1), 15=105 (LC 20)

**FORCES**

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/33, 2-3=-79/300, 3-4=-8/275, 4-5=0/276, 5-6=0/277, 6-7=-8/270, 7-8=-80/305, 8-9=0/33  
BOT CHORD 2-14=-206/112, 13-14=-206/112, 12-13=-206/112, 11-12=-206/112, 10-11=-206/112, 8-10=-206/112  
WEBS 5-12=-381/0, 4-13=-119/61, 3-14=-165/85, 6-11=-107/59, 7-10=-184/88

**NOTES**

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

- Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TC DL=6.0psf; BC DL=6.0psf; h=30ft; B=20ft; L=20ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner (3) -1-0-0 to 2-0-0, Exterior (2) 2-0-0 to 6-11-8, Corner (3) 6-11-8 to 9-11-8, Exterior (2) 9-11-8 to 14-11-0 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
- 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.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 82 lb uplift at joint 2, 36 lb uplift at joint 13, 61 lb uplift at joint 14, 31 lb uplift at joint 11, 68 lb uplift at joint 10 and 82 lb uplift at joint 2.
- Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 8.

**LOAD CASE(S)** Standard



June 28, 2022

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



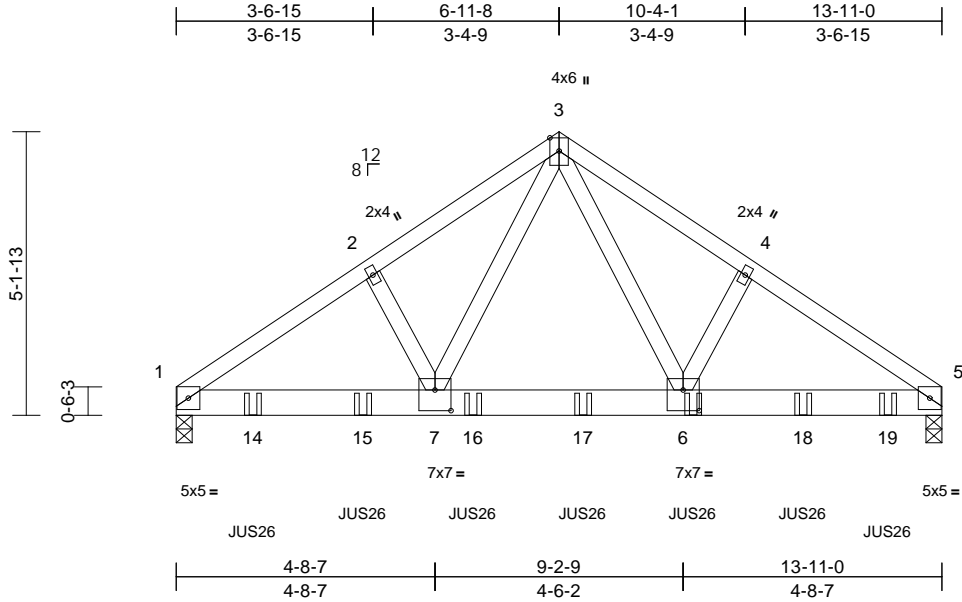
818 Soundside Road  
Edenton, NC 27932

Job P-8923-1	Truss T2GRD	Truss Type Common Girder	Qty 1	Ply 2	21 Chartres St-21 Chartres St Job Reference (optional)	152770273
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Peak Truss Builders, LLC, New Hill, NC - 27562,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Mon Jun 27 10:53:41  
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Page: 1



Scale = 1:41.9

Plate Offsets (X, Y): [6:0-3-8,0-4-8], [7:0-3-8,0-4-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.28	Vert(LL)	-0.05	6-7	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.74	Vert(CT)	-0.10	6-7	>999	180		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.67	Horz(CT)	0.02	5	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS								
											Weight: 159 lb	FT = 20%

**LUMBER**

TOP CHORD 2x4 SP No.1  
BOT CHORD 2x6 SP No.1  
WEBS 2x4 SP No.3

**BRACING**

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

**REACTIONS** (lb/size) 1=4067/0-3-8, 5=4435/0-3-8  
Max Horiz 1=-76 (LC 5)  
Max Uplift 1=-404 (LC 7), 5=-441 (LC 7)

**FORCES**

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-5407/564, 2-3=-5341/600,  
3-4=-5423/608, 4-5=-5486/572  
BOT CHORD 1-7=-424/4487, 6-7=-242/3082,  
5-6=-432/4563  
WEBS 3-6=-338/3235, 4-6=-225/102,  
3-7=-322/3081, 2-7=-204/100

**NOTES**

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.  
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-7-0 oc.  
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
- Unbalanced roof live loads have been considered for this design.

- Wind: ASCE 7-10; Vult=115mph (3-second gust)  
Vasd=91mph; TC DL=6.0psf; BC DL=6.0psf; h=30ft;  
B=20ft; L=20ft; eave=4ft; Cat. II; Exp B; Enclosed;  
MWFRS (directional); cantilever left and right exposed ;  
end vertical left and right exposed; Lumber DOL=1.60  
plate grip DOL=1.60
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 404 lb uplift at joint 1 and 441 lb uplift at joint 5.
- Use USP JUS26 (With 4-10d nails into Girder & 4-10d nails into Truss) or equivalent spaced at 2-0-0 oc max. starting at 1-4-12 from the left end to 12-11-4 to connect truss(es) to back face of bottom chord.
- Fill all nail holes where hanger is in contact with lumber.

**LOAD CASE(S)** Standard

- Dead + Roof Live (balanced): Lumber Increase=1.15,  
Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 1-3=-60, 3-5=-60, 8-11=-20  
Concentrated Loads (lb)  
Vert: 6=-1056 (B), 14=-1056 (B), 15=-1056 (B),  
16=-1056 (B), 17=-1056 (B), 18=-1056 (B),  
19=-1056 (B)



June 28, 2022

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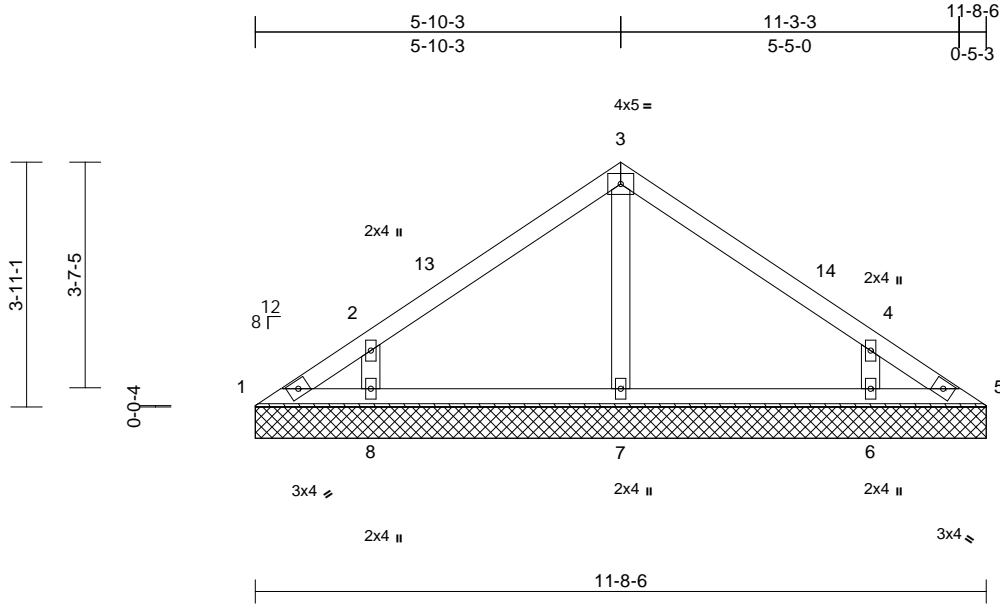


Job P-8923-1	Truss V1	Truss Type Valley	Qty 1	Ply 1	21 Chartres St-21 Chartres St Job Reference (optional)	152770274
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Peak Truss Builders, LLC, New Hill, NC - 27562,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Mon Jun 27 10:53:42  
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Page: 1



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.13	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.05	Horiz(TL)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 44 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.1  
BOT CHORD 2x4 SP No.1  
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.

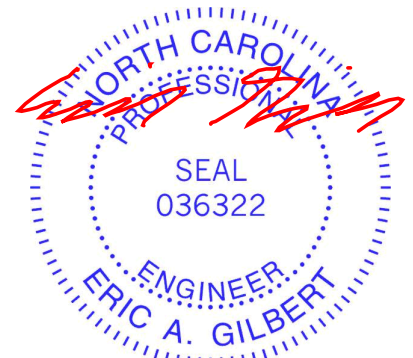
**REACTIONS** (lb/size)  
1=44/11-8-6, 5=44/11-8-6,  
6=297/11-8-6, 7=253/11-8-6,  
8=297/11-8-6  
Max Horiz 1=62 (LC 10)  
Max Uplift 1=-4 (LC 9), 6=-75 (LC 11), 8=-75 (LC 11)  
Max Grav 1=57 (LC 17), 5=46 (LC 16), 6=303 (LC 21), 7=253 (LC 1), 8=303 (LC 20)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-70/54, 2-3=-124/72, 3-4=-124/72, 4-5=-53/33  
BOT CHORD 1-8=-12/53, 7-8=-6/53, 6-7=-6/53, 5-6=-11/53  
WEBS 3-7=-166/6, 2-8=-256/135, 4-6=-256/135

**NOTES**  
1) Unbalanced roof live loads have been considered for this design.  
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TC DL=6.0psf; BC DL=6.0psf; h=30ft; B=20ft; L=20ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) 0-0-6 to 3-0-6, Interior (1) 3-0-6 to 5-10-9, Exterior (2) 5-10-9 to 8-10-9, Interior (1) 8-10-9 to 11-8-12 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

- 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.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 4 lb uplift at joint 1, 75 lb uplift at joint 8 and 75 lb uplift at joint 6.

**LOAD CASE(S)** Standard



June 28, 2022

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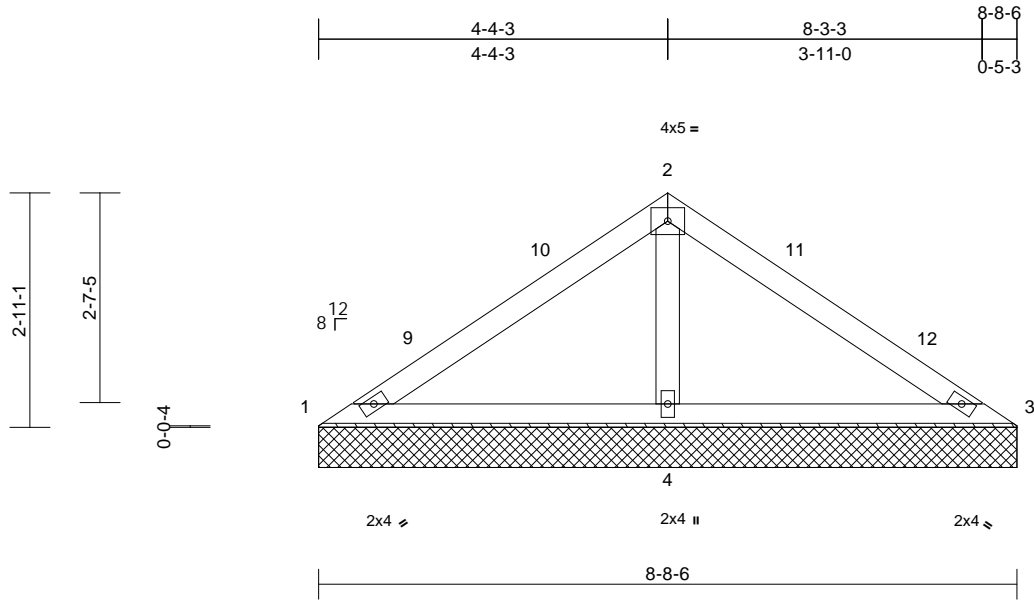
818 Soundside Road  
Edenton, NC 27932

Job P-8923-1	Truss V2	Truss Type Valley	Qty 1	Ply 1	21 Chartres St-21 Chartres St Job Reference (optional)	152770275
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Peak Truss Builders, LLC, New Hill, NC - 27562,

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Scale = 1:28.7

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.18	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.17	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.10	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MP							Weight: 30 lb	FT = 20%

#### LUMBER

TOP CHORD 2x4 SP No.1  
BOT CHORD 2x4 SP No.1  
OTHERS 2x4 SP No.3

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 8-8-6 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

#### REACTIONS

(lb/size) 1=33/8-8-6, 3=33/8-8-6,  
4=629/8-8-6  
Max Horiz 1=-45 (LC 9)  
Max Uplift 1=-18 (LC 21), 3=-18 (LC 20),  
4=-84 (LC 11)  
Max Grav 1=69 (LC 20), 3=69 (LC 21), 4=629  
(LC 1)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

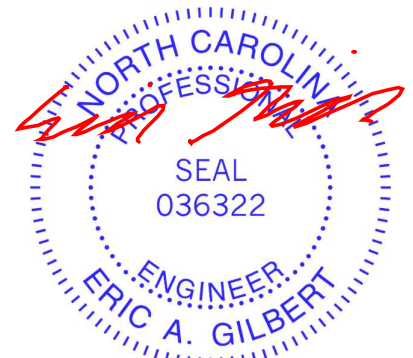
TOP CHORD 1-2=-52/284, 2-3=-52/284  
BOT CHORD 1-4=-215/87, 3-4=-215/87  
WEBS 2-4=-460/99

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=20ft; L=20ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) 0-0-6 to 3-0-6, Interior (1) 3-0-6 to 4-4-9, Exterior (2) 4-4-9 to 7-4-9, Interior (1) 7-4-9 to 8-8-12 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
- 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.
- Gable requires continuous bottom chord bearing.

- Gable studs spaced at 4-0-0 oc.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 18 lb uplift at joint 1, 18 lb uplift at joint 3 and 84 lb uplift at joint 4.

LOAD CASE(S) Standard



June 28, 2022

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

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

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

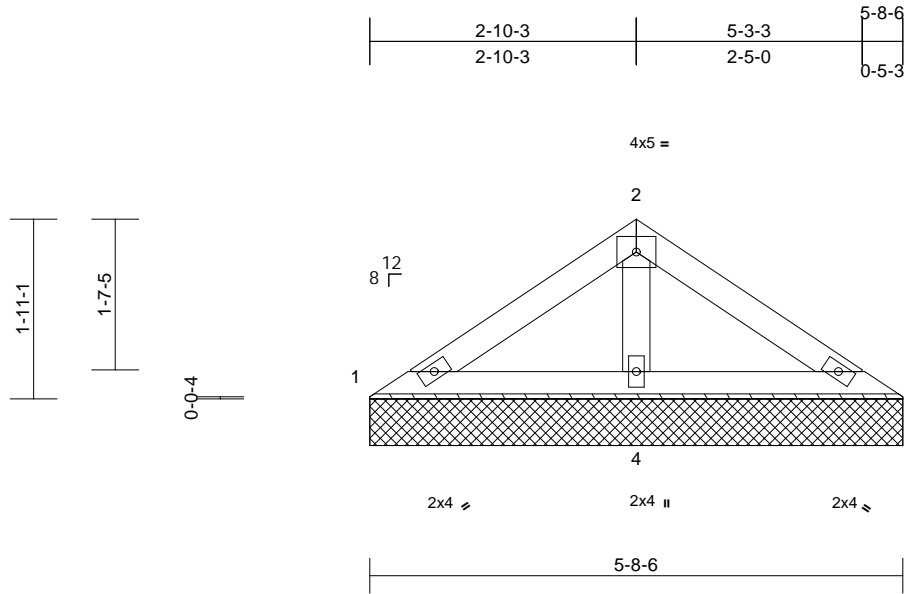
818 Soundside Road  
Edenton, NC 27932

Job P-8923-1	Truss V3	Truss Type Valley	Qty 1	Ply 1	21 Chartres St-21 Chartres St Job Reference (optional)	152770276
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Peak Truss Builders, LLC, New Hill, NC - 27562,

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Page: 1



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.06	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.07	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.05	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MP							Weight: 19 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.1  
BOT CHORD 2x4 SP No.1  
OTHERS 2x4 SP No.3

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 5-8-6 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

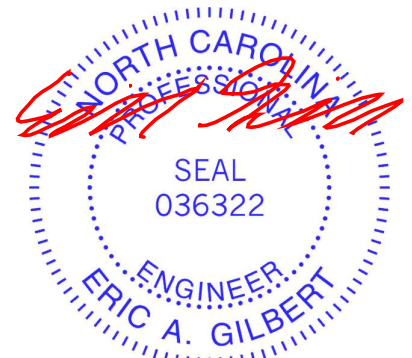
**REACTIONS** (lb/size) 1=53/5-8-6, 3=53/5-8-6, 4=349/5-8-6  
Max Horiz 1=29 (LC 10)  
Max Uplift 1=-2 (LC 11), 3=-2 (LC 11), 4=-36 (LC 11)  
Max Grav 1=68 (LC 20), 3=68 (LC 21), 4=349 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-65/124, 2-3=-65/124  
BOT CHORD 1-4=-95/50, 3-4=-95/50  
WEBS 2-4=-224/45

- NOTES**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=20ft; L=20ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - Gable requires continuous bottom chord bearing.
  - Gable studs spaced at 4-0-0 oc.

- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 2 lb uplift at joint 1, 2 lb uplift at joint 3 and 36 lb uplift at joint 4.

**LOAD CASE(S)** Standard



June 28, 2022

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**TRENCO**  
A MiTek Affiliate

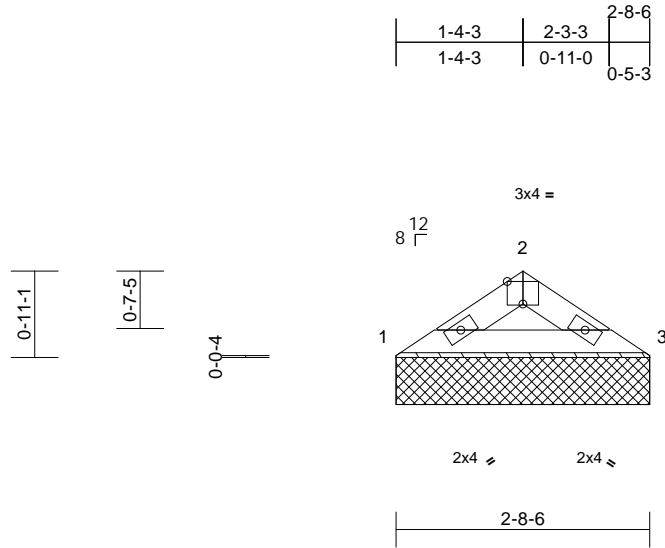
818 Soundside Road  
Edenton, NC 27932

Job P-8923-1	Truss V4	Truss Type Valley	Qty 1	Ply 1	21 Chartres St-21 Chartres St Job Reference (optional)	152770277
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Peak Truss Builders, LLC, New Hill, NC - 27562,

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Page: 1



Scale = 1:24.5

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.04	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MP							Weight: 7 lb	FT = 20%

**LUMBER**

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

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 2-8-6 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (lb/size) 1=108/2-8-6, 3=108/2-8-6  
Max Horiz 1=12 (LC 10)  
Max Uplift 1=-10 (LC 11), 3=-10 (LC 11)

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

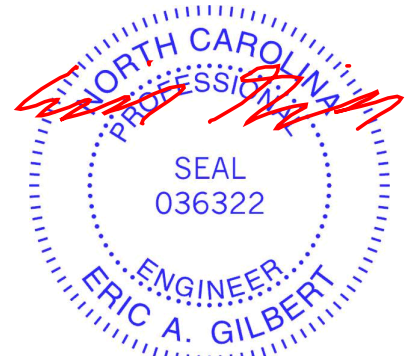
TOP CHORD 1-2=-149/19, 2-3=-149/19  
BOT CHORD 1-3=-8/119

**NOTES**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=20ft; L=20ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- \* 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 10 lb uplift at joint 1 and 10 lb uplift at joint 3.

**LOAD CASE(S)** Standard



June 28, 2022

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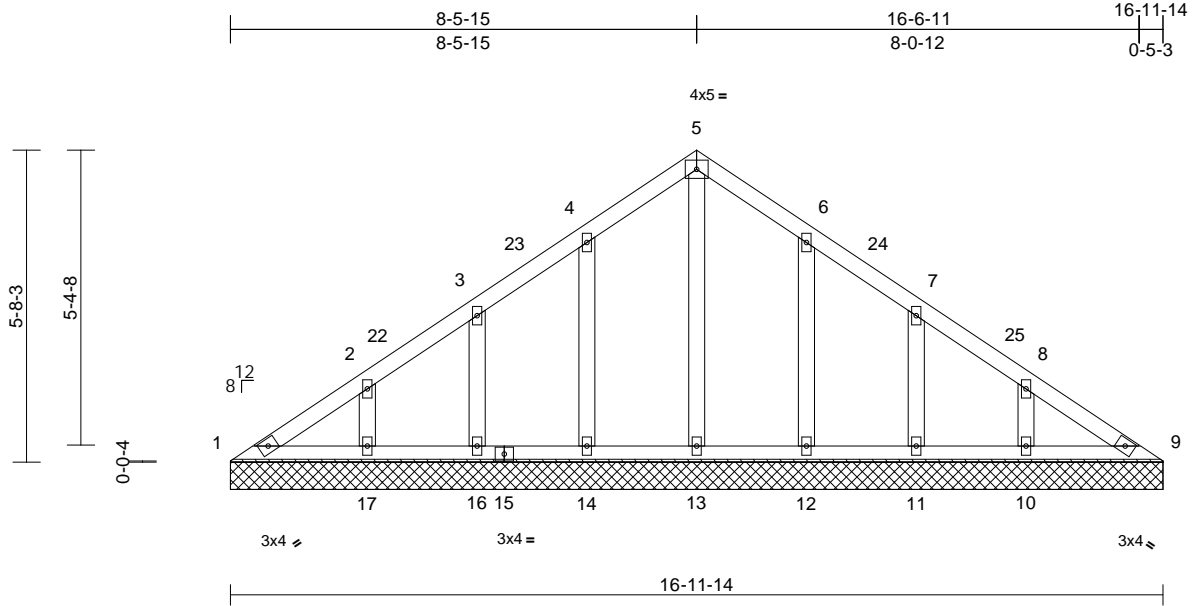
818 Soundside Road  
Edenton, NC 27932

Job P-8923-1	Truss V5	Truss Type Valley	Qty 1	Ply 1	21 Chartres St-21 Chartres St Job Reference (optional)	152770278
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Peak Truss Builders, LLC, New Hill, NC - 27562,

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Page: 1



Scale = 1:42

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	Horiz(TL)	0.00	9	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS						Weight: 84 lb	FT = 20%

**LUMBER**

TOP CHORD 2x4 SP No.1  
BOT CHORD 2x4 SP No.1  
OTHERS 2x4 SP No.3

**BRACING**

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

**REACTIONS**

(lb/size) 1=79/16-11-14, 9=79/16-11-14,  
10=209/16-11-14,  
11=144/16-11-14,  
12=171/16-11-14,  
13=152/16-11-14,  
14=171/16-11-14,  
16=144/16-11-14, 17=209/16-11-14  
Max Horiz 1=-91 (LC 9)  
Max Uplift 10=-40 (LC 11), 11=-43 (LC 11),  
12=-41 (LC 11), 14=-41 (LC 11),  
16=-43 (LC 11), 17=-40 (LC 11)  
Max Grav 1=89 (LC 17), 9=79 (LC 1), 10=209  
(LC 1), 11=144 (LC 17), 12=173  
(LC 21), 13=152 (LC 1), 14=173  
(LC 20), 16=144 (LC 1), 17=209  
(LC 1)

**FORCES**

(lb) - Maximum Compression/Maximum Tension

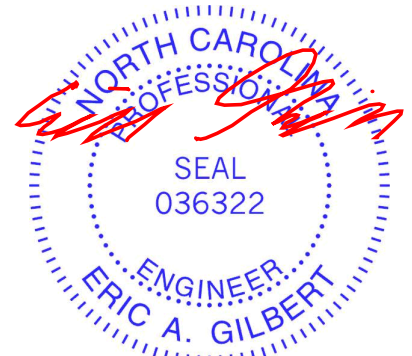
TOP CHORD 1-2=-114/87, 2-3=-62/68, 3-4=-49/61,  
4-5=-79/104, 5-6=-79/104, 6-7=-39/55,  
7-8=-37/43, 8-9=-90/64  
BOT CHORD 1-17=-60/96, 16-17=-60/69, 14-16=-60/69,  
13-14=-60/69, 12-13=-60/69, 11-12=-60/69,  
10-11=-60/69, 9-10=-60/72  
WEBS 5-13=-113/0, 4-14=-131/65, 3-16=-113/68,  
2-17=-138/61, 6-12=-131/65, 7-11=-113/68,  
8-10=-138/61

**NOTES**

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

- Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TC DL=6.0psf; BC DL=6.0psf; h=30ft; B=20ft; L=20ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) 0-0-6 to 3-0-6, Interior (1) 3-0-6 to 8-6-5, Exterior (2) 8-6-5 to 11-6-5, Interior (1) 11-6-5 to 17-0-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 41 lb uplift at joint 14, 43 lb uplift at joint 16, 40 lb uplift at joint 17, 41 lb uplift at joint 12, 43 lb uplift at joint 11 and 40 lb uplift at joint 10.

**LOAD CASE(S)** Standard



June 28, 2022

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



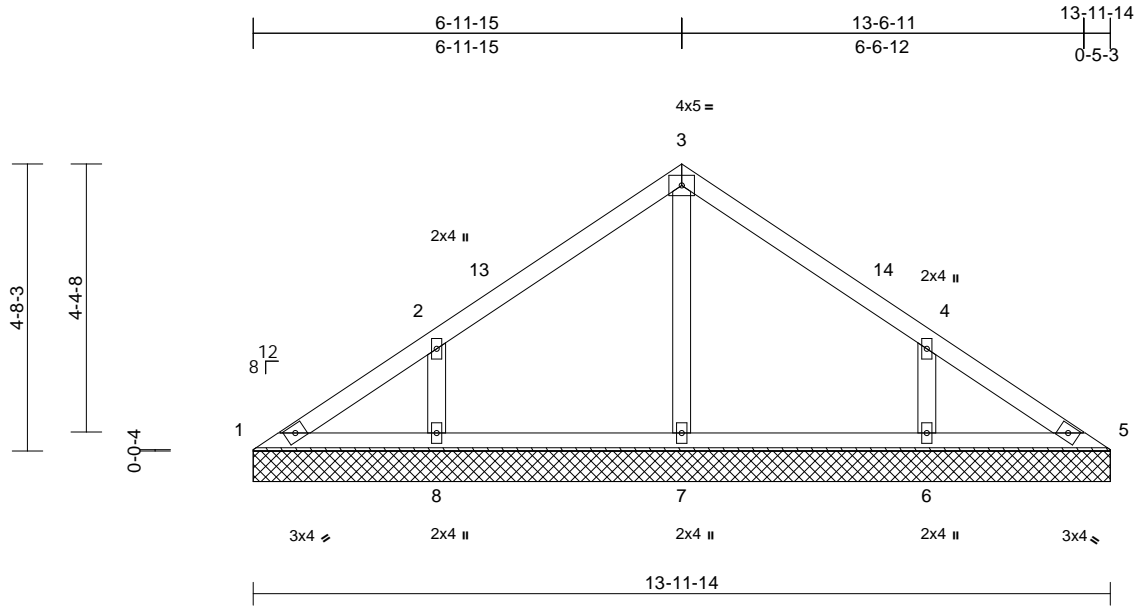
818 Soundside Road  
Edenton, NC 27932

Job P-8923-1	Truss V6	Truss Type Valley	Qty 1	Ply 1	21 Chartres St-21 Chartres St Job Reference (optional)	152770279
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Peak Truss Builders, LLC, New Hill, NC - 27562,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Mon Jun 27 10:53:43  
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Page: 1



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.14	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.08	Horiz(TL)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 55 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.1  
BOT CHORD 2x4 SP No.1  
OTHERS 2x4 SP No.3

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

**REACTIONS** (lb/size) 1=87/13-11-14, 5=87/13-11-14, 6=326/13-11-14, 7=292/13-11-14, 8=326/13-11-14  
Max Horiz 1=74 (LC 10)  
Max Uplift 6=83 (LC 11), 8=83 (LC 11)  
Max Grav 1=91 (LC 17), 5=87 (LC 1), 6=331 (LC 21), 7=292 (LC 1), 8=331 (LC 20)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-119/87, 2-3=-84/80, 3-4=-79/80, 4-5=-105/65  
BOT CHORD 1-8=-39/99, 7-8=-39/45, 6-7=-39/45, 5-6=-39/82  
WEBS 3-7=-213/0, 2-8=-248/123, 4-6=-248/123

**NOTES**  
1) Unbalanced roof live loads have been considered for this design.  
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCCL=6.0psf; BCDL=6.0psf; h=30ft; B=20ft; L=20ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) 0-0-6 to 3-0-5, Interior (1) 3-0-5 to 7-0-5, Exterior (2) 7-0-5 to 10-0-5, Interior (1) 10-0-5 to 14-0-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - Gable requires continuous bottom chord bearing.
  - Gable studs spaced at 4-0-0 oc.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 83 lb uplift at joint 8 and 83 lb uplift at joint 6.
- LOAD CASE(S)** Standard



June 28, 2022

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Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



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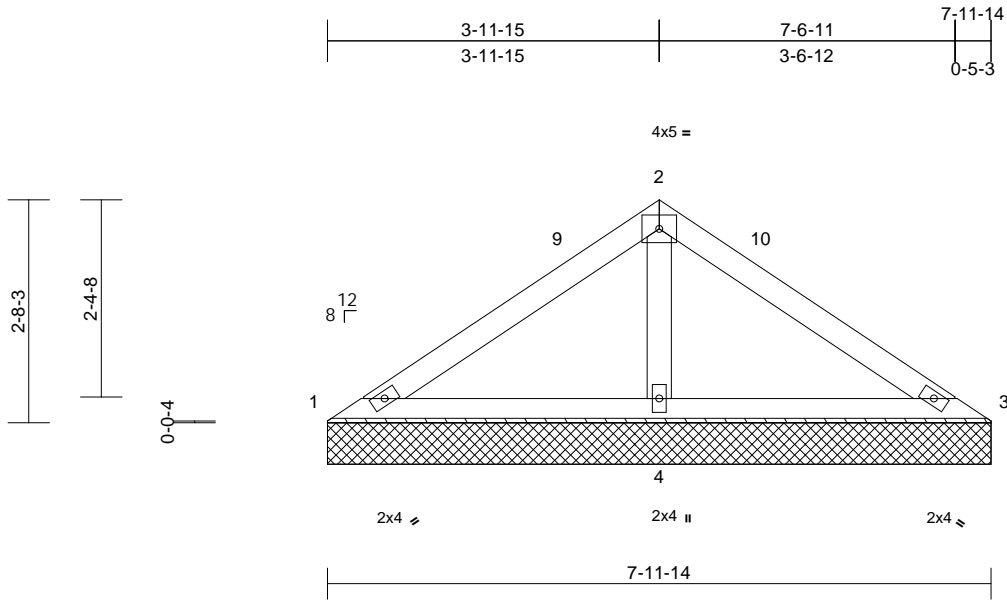


Job P-8923-1	Truss V8	Truss Type Valley	Qty 1	Ply 1	21 Chartres St-21 Chartres St Job Reference (optional)	152770281
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Page: 1



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.14	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.14	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.09	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MP							Weight: 28 lb	FT = 20%

**LUMBER**  
 TOP CHORD 2x4 SP No.1  
 BOT CHORD 2x4 SP No.1  
 OTHERS 2x4 SP No.3

**BRACING**  
 TOP CHORD Structural wood sheathing directly applied or 7-11-14 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

**REACTIONS** (lb/size) 1=41/7-11-14, 3=41/7-11-14, 4=557/7-11-14  
 Max Horiz 1=-41 (LC 9)  
 Max Uplift 1=-9 (LC 21), 3=-9 (LC 20), 4=-71 (LC 11)  
 Max Grav 1=71 (LC 20), 3=71 (LC 21), 4=557 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-2=-59/241, 2-3=-59/241  
 BOT CHORD 1-4=-182/75, 3-4=-182/75  
 WEBS 2-4=-398/83

- NOTES**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=20ft; L=20ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) 0-0-6 to 3-0-6, Interior (1) 3-0-6 to 4-0-5, Exterior (2) 4-0-5 to 7-1-1, Interior (1) 7-1-1 to 8-0-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - Gable requires continuous bottom chord bearing.
  - Gable studs spaced at 4-0-0 oc.

- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 9 lb uplift at joint 1, 9 lb uplift at joint 3 and 71 lb uplift at joint 4.

**LOAD CASE(S)** Standard



June 28, 2022

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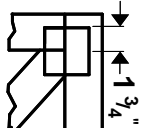
818 Soundside Road  
Edenton, NC 27932



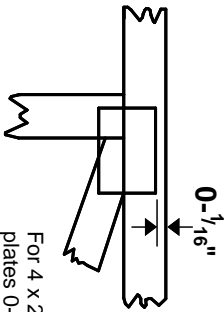


# Symbols

## PLATE LOCATION AND ORIENTATION



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



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



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

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

## PLATE SIZE

**4 X 4**

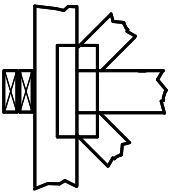
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## LATERAL BRACING LOCATION



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

## BEARING



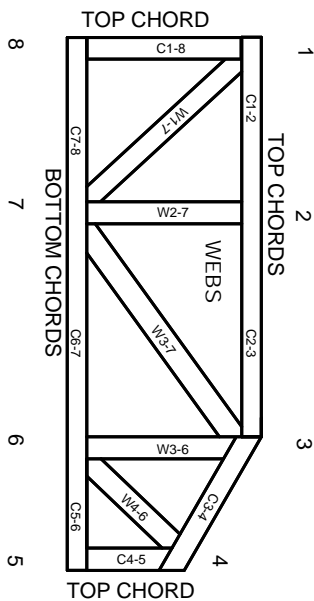
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

### Industry Standards:

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

# Numbering System

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



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

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

## PRODUCT CODE APPROVALS

ICC-ES Reports:

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

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

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

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



# General Safety Notes

## Failure to Follow Could Cause Property Damage or Personal Injury

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