

## Trenco

818 Soundside Rd Edenton, NC 27932

Re: Q-1900729-1

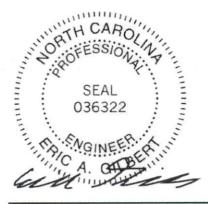
New Beginning-New Beginning

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: E12975569 thru E12975575

My license renewal date for the state of North Carolina is December 31, 2019.

North Carolina COA: C-0844



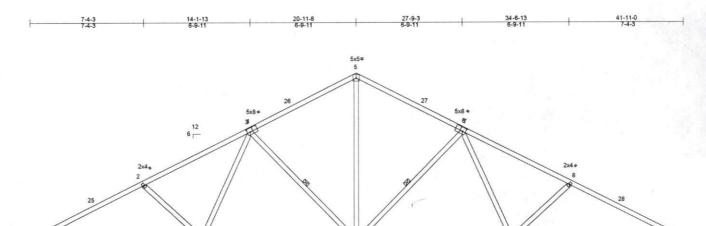
April 29,2019

Gilbert, Eric

**IMPORTANT NOTE:** Truss Engineer's responsibility is solely for design of individual trusses based upon design parameters shown on referenced truss drawings. Parameters have not been verified as appropriate for any use. Any location identification specified is for file reference only and has not been used in preparing design. Suitability of truss designs for any particular building is the responsibility of the building designer, not the Truss Engineer, per ANSI/TPI-1, Chapter 2.

Job	Truss	Truss Type	Qty	Ply	New Beginning-New Beginning	E12975569
Q-1900729-1	T1	Common	21	1	Job Reference (optional)	E12975569

Run: 10.41 S 8.23 Nov 4 2018 Print: 8.240 S Apr 19 2019 MiTek Industries, Inc. Mon Apr 29 14:09:25 ID:x2a04gXPUUTxbyJjtb1YYqzPrEf-3tCBi64S34HASx4S66yl31TNeGxz5V\_O1xSuXezLrgi



Scale = 1:70.5

Plate Offsets (X, Y): [1:0-3-8,0-1-13], [4:0-2-4,0-3-0], [6:0-2-4,0-3-0], [9:0-3-8,0-1-13]

11-0-10

13

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.97	Vert(LL)	-0.39	12-13	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.62	Vert(CT)	-0.69	12-13	>730	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.52	Horz(CT)	0.11	9	n/a	n/a		
BCDL	10.0	Code	IBC2015/TPI2014	Matrix-MS							Weight: 218 lb	FT = 20%

20-11-8

### LUMBER

TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP DSS
WEBS 2x4 SP No.3
WEDGE Left: 2x6 SP No.2
Right: 2x6 SP No.2

## BRACING

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

bracing.

WEBS 1 Row at midpt 7-12, 3-12 **REACTIONS** (lb/size) 1=1677/0-3-8, 9=1677/0-3-8

Max Horiz 1=174 (LC 10)

Max Uplift 1=-206 (LC 11), 9=-206 (LC 11)

FORCES (lb) - Max. Comp./Max. Ten. - All forces 250

(lb) or less except when shown.
OP CHORD 1-25=-2684/361 2-25=-2611/388

TOP CHORD 1-25=-2684/361, 2-25=-2611/388, 2-3=-2436/371, 3-4=-1830/327, 4-26=-1827/330, 5-26=-1739/363, 5-27=-1827/330

5-27=-1739/363, 6-27=-1827/330, 6-7=-1827/327, 7-8=-2436/371, 8-28=-2611/388, 9-28=-2684/361

BOT CHORD 1-14=-255/2390, 13-14=-255/2390,

13-29=-146/2084, 29-30=-146/2084, 12-30=-146/2084, 12-31=-146/1999, 11-31=-146/1999, 11-32=-146/1999, 10-32=-146/1999, 9-10=-255/2292

WEBS 5-12=-180/1262, 7-12=-695/202, 7-10=0/386, 8-10=-256/161, 3-12=-695/202, 3-13=0/386,

2-13=-256/161

#### NOTES

 Unbalanced roof live loads have been considered for this design.

- 2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=20ft; L=42ft; eave=5ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) 0-0-0 to 4-2-5, Interior (1) 4-2-5 to 20-11-8, Exterior (2) 20-11-8 to 25-1-13, Interior (1) 25-1-13 to 41-11-0 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
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 206 lb uplift at joint 1 and 206 lb uplift at joint 9.

LOAD CASE(S) Standard



April 29,2019

4×10=

1-0-0

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10:/03/2015 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 pertoperty damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see

ANSI/THI Quality Criteria, DSB-89 and BCSI Building Component Safety Information

available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



Job	Truss	Truss Type	Qty Ply New Beginning-New Beginning	E12975570		
Q-1900729-1	T1A	Scissor	24	1	Job Reference (optional)	E12973370

Run: 8.24 E Apr 6 2019 Print: 8.240 E Apr 6 2019 MiTek Industries, Inc. Mon Apr 29 10:29:55 ID:MdF9jiaImPrWTP2IYjbFATzPrEc-n2Y?ELNS9GXo1ob6leaxbWHfR90am\_FLKfChn5zLu0A

Page: 1



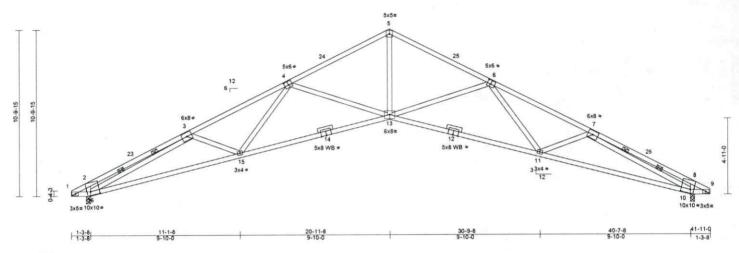


Plate Offsets (X, Y): [4:0-3-0,0-3-0], [6:0-3-0,0-3-0], [10:0-7-3,0-2-15], [16:0-7-3,0-2-15]

Loading	(psf)	Spacing	2-0-0	csi		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.80	Vert(LL)	-0.41	13-15	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.84	Vert(CT)	-0.97	13-15	>487	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	1.00	Horz(CT)	0.63	10	n/a	n/a		
BCDL	10.0	Code	IBC2015/TPI2014	Matrix-MS							Weight: 216 lb	FT = 20%

### LUMBER

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

2x4 SP No.3 \*Except\* 10-7,16-3:2x4 SP No.2 WEBS

OTHERS 2x4 SP No.3

## BRACING

TOP CHORD Structural wood sheathing directly applied. **BOT CHORD** Rigid ceiling directly applied or 9-5-7 oc

bracing.

2 Rows at 1/3 pts 7-10, 3-16 WERS

REACTIONS (lb/size) 10=1677/0-3-8, 16=1677/0-3-8

Max Horiz 16=174 (LC 10) Max Uplift 10=-230 (LC 12), 16=-230 (LC 11)

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

Tension

1-2=-583/74, 2-23=-707/153, 3-23=-603/172, TOP CHORD

3-4=-4194/479, 4-24=-3217/342, 5-24=-3119/364, 5-25=-3119/364, 6-25=-3217/342, 6-7=-4194/479,

7-26=-603/172, 8-26=-707/153, 8-9=-583/74

1-16=-126/681, 15-16=-421/3826, BOT CHORD 14-15=-268/3620, 13-14=-252/3642, 12-13=-252/3642, 11-12=-268/3620,

10-11=-421/3826, 9-10=-126/681

5-13=-177/2422, 6-13=-817/249, 6-11=0/370,

7-11=-75/183, 7-10=-3681/408, 8-10=-611/283, 4-13=-817/249, 4-15=0/370,

3-15=-75/183, 3-16=-3681/408,

2-16=-611/283

## NOTES

WEBS

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

- 2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=20ft: L=42ft: eave=5ft: Cat. II: Exp B: Enclosed: MWFRS (directional) and C-C Exterior (2) 0-0-0 to 4-2-5, Interior (1) 4-2-5 to 20-11-8, Exterior (2) 20-11-8 to 25-1-13, Interior (1) 25-1-13 to 41-11-0 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
- \* 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.
- 4) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 230 lb uplift at joint 16 and 230 lb uplift at joint 10.

LOAD CASE(S) Standard



MARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 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 properly damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSITPH Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

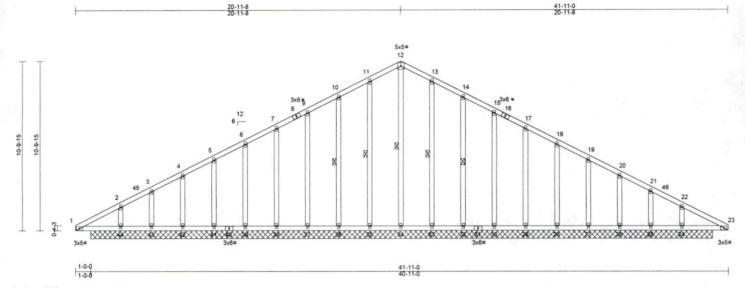


Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	New Beginning-New Beginning	C42075574
Q-1900729-1	T1BGE	Common Supported Gable	3	1	Job Reference (optional)	E12975571

Run: 8.24 E Apr 6 2019 Print: 8.240 E Apr 6 2019 MiTek Industries, Inc. Mon Apr 29 10:29:56 ID:qppXw2bwXjzN4ZdV6Q6UjgzPrEb-FE6NShO4waffey9IJM5A8jp tZXhVeuVZJxFKXzLu09

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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	0.17	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	0.15	Horiz(TL)	-0.01	24	n/a	n/a			
BCDL	10.0	Code	IBC2015/TPI2014	Matrix-S		1000	4				Weight: 289 lb	FT = 20%	

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

BRACING

LUMPER

WEBS

Structural wood sheathing directly applied or TOP CHORD 10-0-0 oc purlins BOT CHORD

Rigid ceiling directly applied or 6-0-0 oc bracing

12-34, 11-35, 10-36, 1 Row at midpt

13-33 14-32 24=296/39-11-0, 25=89/39-11-0,

REACTIONS (lb/size) 26=178/39-11-0, 27=156/39-11-0 28=161/39-11-0, 29=160/39-11-0, 30=161/39-11-0, 32=155/39-11-0, 33=176/39-11-0, 34=291/39-11-0, 35=176/39-11-0, 36=155/39-11-0, 37=161/39-11-0, 38=160/39-11-0, 39=161/39-11-0, 41=156/39-11-0, 42=178/39-11-0, 43=89/39-11-0,

44=296/39-11-0 Max Horiz 44=-174 (LC 9)

Max Uplift 24=-36 (LC 11), 25=-46 (LC 11), 26=-34 (LC 11), 27=-37 (LC 11), 28=-36 (LC 11), 29=-37 (LC 11), 30=-35 (LC 11), 32=-44 (LC 11), 33=-21 (LC 11), 35=-21 (LC 11), 36=-44 (LC 11), 37=-35 (LC 11), 38=-37 (LC 11), 39=-36 (LC 11),

41=-37 (LC 11), 42=-34 (LC 11),

43=-54 (LC 10), 44=-36 (LC 11)

Max Grav 24=352 (LC 21), 25=142 (LC 17), 26=189 (LC 21), 27=156 (LC 1), 28=162 (LC 21), 29=160 (LC 1), 30=161 (LC 1), 32=156 (LC 21), 33=176 (LC 1), 34=291 (LC 1), 35=176 (LC 1), 36=156 (LC 20), 37=161 (LC 1), 38=160 (LC 1), 39=162 (LC 20), 41=156 (LC 1), 42=189 (LC 20), 43=151 (LC 16), 44=352 (LC 20)

(lb) - Maximum Compression/Maximum Tension

1-2=-79/259, 2-45=-30/193, 3-45=-25/233, 3-4=0/230, 4-5=0/222, 5-6=0/216, 6-7=0/209, 7-8=0/229, 8-9=0/234, 9-10=0/274, 10-11=-7/317, 11-12=-22/351, 12-13=-22/351, 13-14=-7/317, 14-15=0/274,

15-16=0/234, 16-17=0/229, 17-18=0/201, 18-19=0/208, 19-20=0/214, 20-21=0/222, 21-46=-25/223, 22-46=-31/183, 22-23=-79/252

1-44=-203/96, 43-44=-195/95, BOT CHORD 42-43=-195/95, 41-42=-195/95

40-41=-195/95, 39-40=-195/95 38-39=-195/95, 37-38=-195/95 36-37=-195/95, 35-36=-195/95 34-35=-195/95, 33-34=-195/95 32-33=-195/95, 31-32=-195/95 30-31=-195/95, 29-30=-195/95, 28-29=-195/95, 27-28=-195/95, 26-27=-195/95, 25-26=-195/95

24-25=-195/95, 23-24=-195/95

12-34=-251/0 11-35=-136/108 WERS 10-36=-116/101, 9-37=-121/66

7-38=-120/67, 6-39=-121/67, 5-41=-118/68, 4-42=-134/72, 3-43=-108/80, 2-44=-227/185, 13-33=-136/108, 14-32=-116/101,

15-30=-121/66, 17-29=-120/67, 18-28=-121/67, 19-27=-118/68, 20-26=-134/72, 21-25=-104/80,

22-24=-227/185

## NOTES

- 1) Unbalanced roof live loads have been considered for this design
- Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=20ft; L=42ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner (3) 0-0-0 to 4-2-5. Exterior (2) 4-2-5 to 20-11-8, Corner (3) 20-11-8 to 24-11-8, Exterior (2) 24-11-8 to 41-11-0 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



Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE Mil-7473 rev. 10/03/2015 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 designs. 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 buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TPH Quality Criteria, DSB-89 and BCSI Building Col Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

FORCES

TOP CHORD



Job	Truss	Truss Type	Qty	Ply	New Beginning-New Beginning	E12975571
Q-1900729-1	T1BGE	Common Supported Gable	3	1	Job Reference (optional)	E12975571

Run: 8.24 E Apr 6 2019 Print: 8.240 E Apr 6 2019 MiTek Industries, Inc. Mon Apr 29 10:29:56
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Page: 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.
- 4) All plates are 2x4 MT20 unless otherwise indicated.
- 5) 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.
- All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 21 lb uplift at joint 35, 44 lb uplift at joint 36, 35 lb uplift at joint 37, 37 lb uplift at joint 38, 36 lb uplift at joint 39, 37 lb uplift at joint 41, 34 lb uplift at joint 42, 54 lb uplift at joint 43, 36 lb uplift at joint 44, 21 lb uplift at joint 33, 44 lb uplift at joint 32, 35 lb uplift at joint 30, 37 lb uplift at joint 29, 36 lb uplift at joint 28, 37 lb uplift at joint 27, 34 lb uplift at joint 26, 46 lb uplift at joint 25 and 36 lb uplift at joint 24.
- 9) Non Standard bearing condition. Review required.

LOAD CASE(S) Standard



WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10:03/2015 BEFORE USE.

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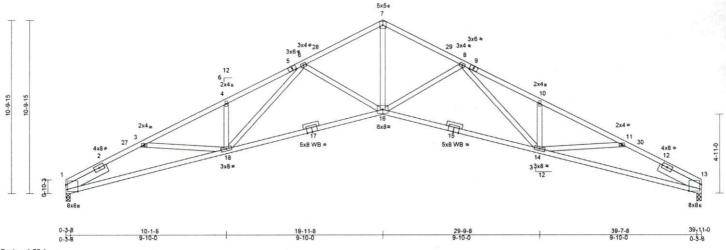


Job	Truss	Truss Type	Qty	Ply	New Beginning-New Beginning	E40075570
Q-1900729-1	T1C	Scissor	20	1	Job Reference (optional)	E12975572

Run: 8.24 E Apr 6 2019 Print: 8.240 E Apr 6 2019 MiTek Industries, Inc. Mon Apr 29 10:29:57 ID:qppXw2bwXjzN4ZdV6Q6UjgzPrEb-FE6NShO4waffey9IJM5A8jpq4ZKtVXFVZJxFKXzLu09

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Scale = 1:69.1

Plate Offsets (X, Y): [1:0-4-13,Edge], [13:0-4-13,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP	
TCLL (roof)		Plate Grip DOL	1.15	TC	0.80	Vert(LL)	-0.46	14-16	>999	240	MT20	244/190	
TCDL	10.0	Lumber DOL	1.15	BC	0.96	Vert(CT)	-1.07	14-16	>446	180			
BCLL	0.0*	Rep Stress Incr	YES	WB	0.63	Horz(CT)	0.63	13	n/a	n/a			
BCDL	10.0	Code	IBC2015/TPI2014	Matrix-MS							Weight: 215 lb	FT = 20%	

#### LUMBER

TOP CHORD 2x4 SP No.1 \*Except\* 1-5,9-13:2x4 SP DSS **BOT CHORD** 2x4 SP No.1

**WEBS** 2x4 SP No.3 \*Except\* 16-7:2x4 SP No.2 OTHERS

2x4 SP No.3

SLIDER Left 2x6 SP No.2 - 3-0-0, Right 2x6 SP No.2 - 3-0-0

BRACING

TOP CHORD Structural wood sheathing directly applied or

2-2-0 oc purlins

Rigid ceiling directly applied or 2-2-0 oc BOT CHORD

bracing

REACTIONS (lb/size) 1=1597/0-3-8, 13=1597/0-3-8

Max Horiz 1=-163 (LC 9)

Max Uplift 1=-197 (LC 11), 13=-197 (LC 11)

**FORCES** 

(lb) - Maximum Compression/Maximum

Tension TOP CHORD

1-2=-438/0, 2-27=-4176/560, 3-27=-4124/571, 3-4=-4423/509, 4-5=-4478/590, 5-6=-4361/613, 6-28=-3288/375, 7-28=-3220/399,

7-29=-3220/399, 8-29=-3288/375, 8-9=-4361/613, 9-10=-4478/590, 10-11=-4423/509, 11-30=-4124/571, 12-30=-4176/560, 12-13=-280/0

**BOT CHORD** 

1-18=-456/3688, 17-18=-256/3528, 16-17=-240/3552, 15-16=-240/3552 14-15=-256/3528, 13-14=-456/3688

WEBS 7-16=-243/2584, 8-16=-680/218, 8-14=-137/843, 10-14=-415/175

11-14=0/394, 3-18=0/379, 4-18=-415/175, 6-18=-137/843, 6-16=-680/218

#### NOTES

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

- 2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=20ft; L=40ft; eave=5ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) 0-0-0 to 3-11-14, Interior (1) 3-11-14 to 19-11-8, Exterior (2) 19-11-8 to 23-11-6, Interior (1) 23-11-6 to 39-11-0 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
- \* 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.
- 4) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
- Bearing at joint(s) 13, 1 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 197 lb uplift at joint 13 and 197 lb uplift at joint 1.

LOAD CASE(S) Standard



April 29,2019

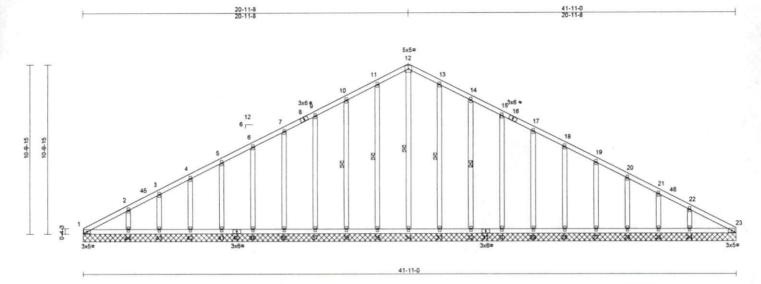
🚵 WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10:/03/2015 BEFORE USE Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before 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 accling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TPI Quality Criteria, DSB-89 and BCSI Building Co. Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



Job	Truss	Truss Type	Qty	Ply	New Beginning-New Beginning	E12975573
Q-1900729-1	T1GE	Common Supported Gable	1	1	Job Reference (optional)	E12973573

Run: 8.24 E Apr 6 2019 Print: 8.240 E Apr 6 2019 MiTek Industries, Inc. Mon Apr 29 10:29:57 ID:mCxHLkcA3KD4KtmtEr8vo5zPrEZ-iRglf1PihtnWG6kUt3cPgxMAFzvZE5Menzhos zLu08

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Sca		

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	7
TCLL (roof)		Plate Grip DOL	1.15	TC	0.07	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	0.13	Horiz(TL)	0.01	23	n/a	n/a			
BCDL	10.0	Code	IBC2015/TPI2014	Matrix-S		2.4.6					Weight: 289 lb	FT = 20%	

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

## BRACING

LUMPED

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins

**BOT CHORD** Rigid ceiling directly applied or 10-0-0 oc

bracing

WEBS 1 Row at midpt 12-34, 11-35, 10-36, 13-33, 14-32

(lb/size)	1=103/41-11-0, 23=103/41-11-0,
	24=244/41-11-0, 25=131/41-11-0,
	26=167/41-11-0, 27=158/41-11-0,
	28=160/41-11-0, 29=160/41-11-0,
	30=160/41-11-0, 32=159/41-11-0,
	33=165/41-11-0, 34=138/41-11-0,
	35=165/41-11-0, 36=159/41-11-0,
	37=160/41-11-0, 38=160/41-11-0,
	39=160/41-11-0, 41=158/41-11-0,
	42=167/41-11-0, 43=131/41-11-0,
	44=244/41-11-0
Max Horiz	1=-174 (LC 9)

Max Uplift 24=-57 (LC 11), 25=-30 (LC 11), 26=-38 (LC 11), 27=-36 (LC 11) 28=-37 (LC 11), 29=-37 (LC 11), 30=-36 (LC 11), 32=-42 (LC 11), 33=-25 (LC 11), 35=-25 (LC 11), 36=-42 (LC 11), 37=-36 (LC 11), 38=-37 (LC 11), 39=-37 (LC 11), 41=-36 (LC 11), 42=-38 (LC 11), 43=-30 (LC 11), 44=-57 (LC 11)

Max Grav 1=127 (LC 17), 23=103 (LC 1) 24=244 (LC 21), 25=131 (LC 21), 26=167 (LC 1), 27=158 (LC 21), 28=160 (LC 1), 29=160 (LC 21), 30=160 (LC 1), 32=160 (LC 21), 33=167 (LC 21), 34=182 (LC 11), 35=167 (LC 20), 36=160 (LC 20), 37=160 (LC 1), 38=160 (LC 20), 39=160 (LC 1), 41=158 (LC 20), 42=167 (LC 1), 43=131 (LC 20), 44=244 (LC 20)

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-143/138, 2-45=-131/99, 3-45=-115/115, 3-4=-120/111, 4-5=-110/101, 5-6=-100/93, 6-7=-92/134, 7-8=-85/170, 8-9=-65/175,

9-10=-77/215, 10-11=-91/257, 11-12=-104/293, 12-13=-104/294, 13-14=-91/259, 14-15=-76/216, 15-16=-46/176, 16-17=-62/171,

17-18=-48/135, 18-19=-45/95, 19-20=-52/54, 20-21=-58/38, 21-46=-73/42, 22-46=-83/26, 22-23=-143/67

**BOT CHORD** 

1-44=-49/147, 43-44=-49/147, 42-43=-49/147, 41-42=-49/147, 40-41=-49/147, 39-40=-49/147, 38-39=-49/147, 37-38=-49/147, 36-37=-49/147, 35-36=-49/147, 34-35=-49/147, 33-34=-49/147, 32-33=-49/147, 31-32=-49/147, 30-31=-49/147, 29-30=-49/147, 28-29=-49/147, 27-28=-49/147, 26-27=-49/147, 25-26=-49/147,

24-25=-49/147, 23-24=-49/147

WEBS

12-34=-172/19, 11-35=-127/112, 10-36=-120/100, 9-37=-120/66, 7-38=-120/67, 6-39=-120/67, 5-41=-119/66, 4-42=-124/69, 3-43=-101/57, 2-44=-176/173, 13-33=-127/112, 14-32=-120/100, 15-30=-120/66, 17-29=-120/67, 18-28=-120/67, 19-27=-119/66, 20-26=-124/69, 21-25=-101/57, 22-24=-176/172

## NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=20ft; L=42ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner (3) 0-0-0 to 4-2-5. Exterior (2) 4-2-5 to 20-11-8, Corner (3) 20-11-8 to 24-11-8, Exterior (2) 24-11-8 to 41-11-0 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



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WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10:03/2015 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 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 properly damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see \_\_ANSUTPH Quality Criteria, DSB-89 and BCSI Building Compt Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

**FORCES** 



Job	Truss	Truss Type	Qty	Ply	New Beginning-New Beginning	E12975573
Q-1900729-1	T1GE	Common Supported Gable	1	1	Job Reference (optional)	E129/55/3

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- 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.
- All plates are 2x4 MT20 unless otherwise indicated.
- 5) 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.
- 8) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 25 lb uplift at joint 35, 42 lb uplift at joint 36, 36 lb uplift at joint 37, 37 lb uplift at joint 38, 37 lb uplift at joint 39, 36 lb uplift at joint 41, 38 lb uplift at joint 42, 30 lb uplift at joint 43, 57 lb uplift at joint 44, 25 lb uplift at joint 33, 42 lb uplift at joint 32, 36 lb uplift at joint 30, 37 lb uplift at joint 29, 37 lb uplift at joint 28, 36 lb uplift at joint 27, 38 lb uplift at joint 26, 30 lb uplift at joint 25 and 57 lb uplift at joint 24.

LOAD CASE(S) Standard



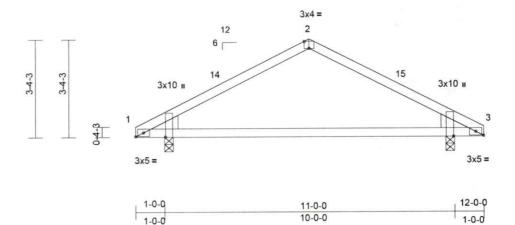
April 29,2019

Job	Truss	Truss Type	Qty	Ply	New Beginning-New Beginning	E12975574
Q-1900729-1	T2	Common	3	Job Reference (optional)		L12973374

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Scale = 1:38

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL (roof)		Plate Grip DOL	1.15	TC	0.24	Vert(LL)	0.03	8-13	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.30	Vert(CT)	-0.15	8-13	>950	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IBC2015/TPI2014	Matrix-MS							Weight: 43 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.1
WEDGE Left: 2x6 SP No.2

Right: 2x6 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or

6-0-0 oc purlins

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

bracing.

REACTIONS (lb/size) 1=480/0-3-8, 3=480/0-3-8

Max Horiz 1=44 (LC 10)

Max Uplift 1=-59 (LC 11), 3=-59 (LC 11) (lb) - Maximum Compression/Maximum

FORCES (lb) - Ma Tension

TOP CHORD 1-14=-392/84, 2-14=-353/106,

2-15=-353/106, 3-15=-392/84

BOT CHORD 1-3=-55/316

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; 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) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 6-0-0, Exterior (2) 6-0-0 to 9-0-0, Interior (1) 9-0-0 to 12-0-0 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) \* 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.
- All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.

 Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 59 lb uplift at joint 1 and 59 lb uplift at joint 3.

LOAD CASE(S) Standard



April 29,2019

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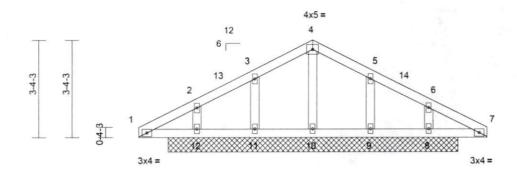


Job	Truss	Truss Type	Qty	Ply	New Beginning-New Beginning	E12975575
Q-1900729-1	T2AGE	Common Supported Gable	1	1	Job Reference (optional)	E12975575

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1-0-0 1-0-0 11-0-0

Scale = 1:38

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	0.06	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.05	Horiz(TL)	0.00	8	n/a	n/a		
BCDL	10.0	Code	IBC2015/TPI2014	Matrix-S							Weight: 50 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)

/size) 8=203/10-0-0, 9=148/10-0-0, 10=259/10-0-0, 11=148/10-0-0,

12=203/10-0-0 Max Horiz 12=45 (LC 10)

Max Uplift 8=-27 (LC 11), 9=-47 (LC 11),

11=-21 (LC 11), 12=-85 (LC 11)

Max Grav 8=232 (LC 21), 9=148 (LC 1), 10=259 (LC 1), 11=160 (LC 16),

12=232 (LC 20)

FORCES (lb) - Maximum Compression/Maximum

Tension

TOP CHORD 1-2=-90/151, 2-13=-33/92, 3-13=-24/140, 3-4=0/140, 4-5=0/140, 5-14=-33/140,

6-14=-37/92, 6-7=-78/151

BOT CHORD 1-12=-104/92, 11-12=-105/92,

10-11=-105/92, 9-10=-105/92, 8-9=-105/92,

7-8=-105/92

WEBS 4-10=-213/34, 3-11=-119/126,

2-12=-155/177, 5-9=-119/151, 6-8=-155/137

#### NOTES

 Unbalanced roof live loads have been considered for this design.

- 2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ff; B=20ff; L=20ff; eave=2ff; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner (3) 0-0-0 to 3-0-0, Exterior (2) 3-0-0 to 6-0-0, Corner (3) 6-0-0 to 9-0-0, Exterior (2) 9-0-0 to 12-0-0 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.
- 5) 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.
- All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 21 lb uplift at joint 11, 85 lb uplift at joint 12, 47 lb uplift at joint 9 and 27 lb uplift at joint 8.
- 9) Non Standard bearing condition. Review required.

LOAD CASE(S) Standard



April 29,2019

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ANSUTP! Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

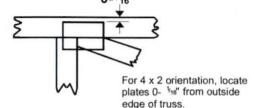


# **Symbols**

## 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.



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/TPI1: National Design Specification for Metal

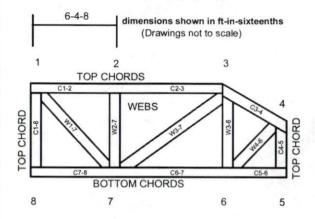
Plate Connected Wood Truss Construction.

DSB-89: Design Standard for Bracing.

BCSI:

Building Component Safety Information, Guide to Good Practice for Handling, Installing & 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-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/TPI 1 section 6.3 These truss designs rely on lumber values established by others.

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MiTek Engineering Reference Sheet: MII-7473 rev. 10/03/2015



# **General Safety Notes**

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

- Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
- 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.
- Never exceed the design loading shown and never stack materials on inadequately braced trusses.
- 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.
- 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.
- Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI 1.
- Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
- Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
- Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
- Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
- Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
- Top chords must be sheathed or purlins provided at spacing indicated on design.
- 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.
- Do not cut or alter truss member or plate without prior approval of an engineer.
- 17. Install and load vertically unless indicated otherwise.
- Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
- Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
- Design assumes manufacture in accordance with ANSI/TPI 1 Quality Criteria.