

Trenco  
818 Soundside Rd  
Edenton, NC 27932

Re: 25083758R  
MSM-190

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

Pages or sheets covered by this seal: I75737055 thru I75737072

My license renewal date for the state of North Carolina is December 31, 2025.

North Carolina COA: C-0844



August 19, 2025

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.



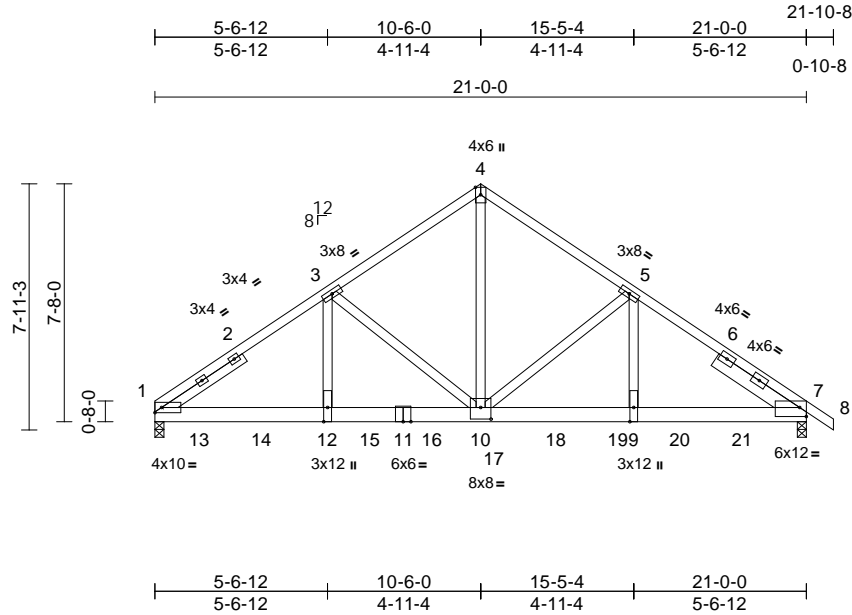
Job	Truss	Truss Type	Qty	Ply	MSM-190	
25083758R	B3GR	Common Girder	1	2	Job Reference (optional)	I75737055

The Building Center, Gastonia, NC - 28052,

Run: 8.83 S Jul 24 2025 Print: 8.830 S Jul 24 2025 MiTek Industries, Inc. Tue Aug 19 08:26:21

Page: 1

ID: Ai9qHSeGo0epnqmDUG70Jz3VfK-RfC?PsB70Hq3NSgPqnL8w3ulTxhGKWrCDoi7J4zJC?f



Scale = 1:74.3

Plate Offsets (X, Y): [7:Edge,0-3-8], [10:0-4-0,0-4-8]

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	0.95	Vert(LL)	-0.09	10-12	>999	240	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.49	Vert(CT)	-0.18	10-12	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.70	Horz(CT)	0.05	7	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-S								
BCDL	10.0											
											Weight: 279 lb	FT = 20%

#### LUMBER

TOP CHORD 2x4 SP DSS \*Except\* 4-8:2x4 SP No.2  
 BOT CHORD 2x6 SP DSS  
 WEBS 2x4 SP No.3 \*Except\* 10-4:2x4 SP No.2  
 SLIDER Left 2x4 SP No.3 -- 3-1-9, Right 2x6 SP No.1 -- 3-1-9

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 2-7-9 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS

(size) 1=0-3-8, 7=0-3-8  
 Max Horiz 1=-117 (LC 8)  
 Max Grav 1=6096 (LC 2), 7=5768 (LC 2)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-3=-8224/0, 3-4=-5573/0, 4-5=-5582/0, 5-7=-7935/0, 7-8=0/18  
 BOT CHORD 1-12=0/6603, 10-12=0/6603, 9-10=0/6403, 7-9=0/6403  
 WEBS 3-12=0/3039, 3-10=-2570/0, 4-10=0/5728, 5-10=-2312/0, 5-9=0/2650

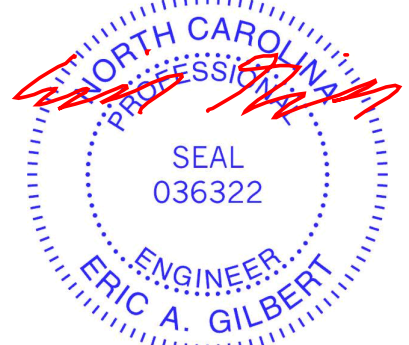
#### NOTES

- 2-ply truss to be connected together with 10d (0.120"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; TCDL=6.0psf; BCDL=6.0psf; h=25ft;  
 B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed;  
 MWFRS (directional); cantilever left and right exposed ;  
 Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1015 lb down at 1-5-4, 1015 lb down at 3-5-4, 1015 lb down at 5-5-4, 1015 lb down at 6-11-4, 1015 lb down at 8-11-4, 1015 lb down at 10-11-4, 1015 lb down at 12-11-4, 1015 lb down at 14-11-4, and 1015 lb down at 16-11-4, and 1015 lb down at 18-11-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

#### LOAD CASE(S) Standard

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
 Uniform Loads (lb/ft)  
 Vert: 1-4=-51, 4-8=-51, 1-7=-20  
 Concentrated Loads (lb)  
 Vert: 12=-896 (B), 13=-896 (B), 14=-896 (B),  
 15=-896 (B), 16=-896 (B), 17=-896 (B), 18=-896 (B),  
 19=-896 (B), 20=-896 (B), 21=-896 (B)



August 19,2025

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

ENGINEERING BY  
**TRENCO**  
 A MiTek Affiliate

818 Soundside Road  
 Edenton, NC 27932

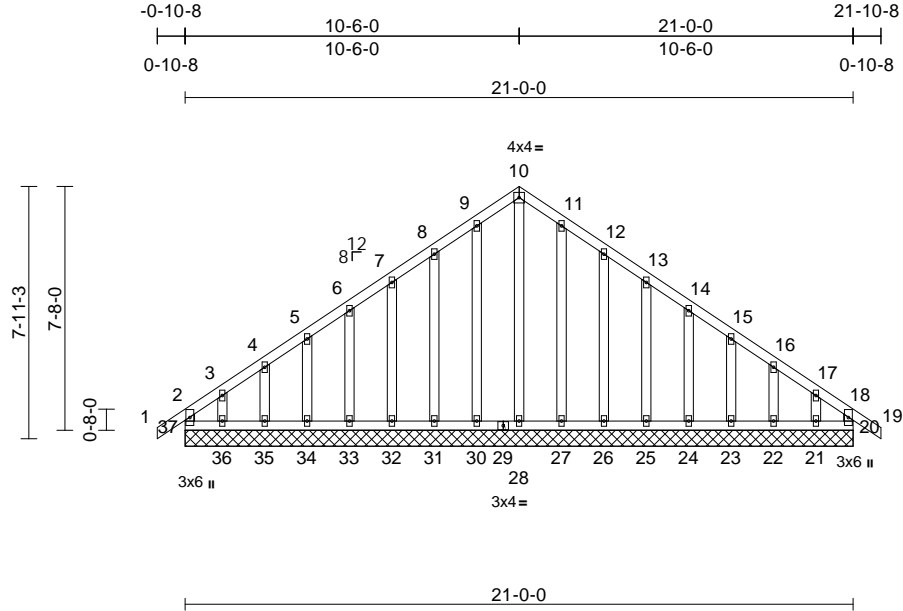


Job	Truss	Truss Type	Qty	Ply	MSM-190	
25083758R	B1GE	Common Supported Gable	1	1	Job Reference (optional)	I75737056

The Building Center, Gastonia, NC - 28052,

Run: 8.83 S Jul 24 2025 Print: 8.830 S Jul 24 2025 MiTek Industries, Inc. Tue Aug 19 08:26:21  
ID:pfEeyUmT7bRAWchBiQJaZwz3VgT-RfC?PsB70Hq3NSgPqnL8w3uITXbGKwRCDoi7J4zJC?f

Page: 1



Scale = 1:72.4

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	0.07	Vert(LL)	n/a	-	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	n/a	-	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.00	20	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-R							
BCDL	10.0										
Weight: 158 lb FT = 20%											

<b>LUMBER</b>		TOP CHORD	2-37=127/20, 1-2=0/34, 2-3=98/92, 3-4=77/78, 4-5=73/70, 5-6=65/62, 6-7=63/67, 7-8=88/97, 8-9=116/130, 9-10=134/152, 10-11=134/152, 11-12=116/130, 12-13=88/97, 13-14=63/67, 14-15=37/36, 15-16=40/38, 16-17=42/47, 17-18=67/73, 18-19=0/34, 18-20=113/28	4) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
TOP CHORD		2x4 SP No.2		
BOT CHORD		2x4 SP No.2		
WEBS		2x4 SP No.3		
OTHERS		2x4 SP No.3		
<b>BRACING</b>		TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.	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 15.4 psf on overhangs non-concurrent with other live loads.
TOP CHORD		Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.		6) All plates are 2x4 (  ) MT20 unless otherwise indicated.
BOT CHORD		Rigid ceiling directly applied or 6-0-0 oc bracing.		7) Gable requires continuous bottom chord bearing.
<b>REACTIONS</b> (size)		20=21-0-0, 21=21-0-0, 22=21-0-0, 23=21-0-0, 24=21-0-0, 25=21-0-0, 26=21-0-0, 27=21-0-0, 28=21-0-0, 30=21-0-0, 31=21-0-0, 32=21-0-0, 33=21-0-0, 34=21-0-0, 35=21-0-0, 36=21-0-0, 37=21-0-0		8) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
Max Horiz		37=130 (LC 12)		9) Gable studs spaced at 1-4-0 oc.
Max Uplift		20=1 (LC 11), 21=28 (LC 10), 22=8 (LC 14), 23=12 (LC 14), 24=11 (LC 14), 25=11 (LC 14), 26=17 (LC 14), 31=17 (LC 14), 32=11 (LC 14), 33=11 (LC 14), 34=12 (LC 14), 35=8 (LC 14), 36=36 (LC 11), 37=26 (LC 12)		10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
Max Grav		20=128 (LC 29), 21=85 (LC 25), 22=114 (LC 29), 23=105 (LC 2), 24=107 (LC 29), 25=107 (LC 2), 26=107 (LC 29), 27=111 (LC 29), 28=121 (LC 14), 30=111 (LC 28), 31=107 (LC 28), 32=107 (LC 2), 33=107 (LC 28), 34=105 (LC 2), 35=114 (LC 28), 36=99 (LC 24), 37=154 (LC 25)		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.
<b>FORCES</b> (lb) - Maximum Compression/Maximum Tension				
			<b>NOTES</b>	
			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=25ft; B=45ft; L=24ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner (3) -0-10-8 to 2-1-8, Exterior (2) 2-1-8 to 10-6-0, Corner (3) 10-6-0 to 13-6-0, Exterior (2) 13-6-0 to 21-10-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60	
			3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.	



August 19,2025

Continued on page 2

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

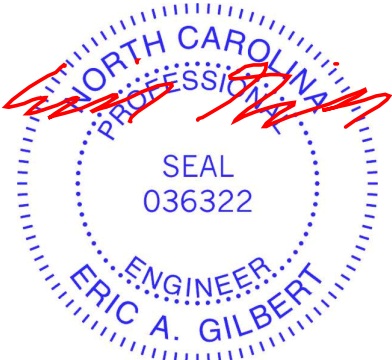
818 Soundside Road  
Edenton, NC 27932



Job	Truss	Truss Type	Qty	Ply	MSM-190	I75737056
25083758R	B1GE	Common Supported Gable	1	1	Job Reference (optional)	

12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 26 lb uplift at joint 37, 1 lb uplift at joint 20, 17 lb uplift at joint 31, 11 lb uplift at joint 32, 11 lb uplift at joint 33, 12 lb uplift at joint 34, 8 lb uplift at joint 35, 36 lb uplift at joint 36, 17 lb uplift at joint 26, 11 lb uplift at joint 25, 11 lb uplift at joint 24, 12 lb uplift at joint 23, 8 lb uplift at joint 22 and 28 lb uplift at joint 21.

LOAD CASE(S)    Standard



August 19,2025

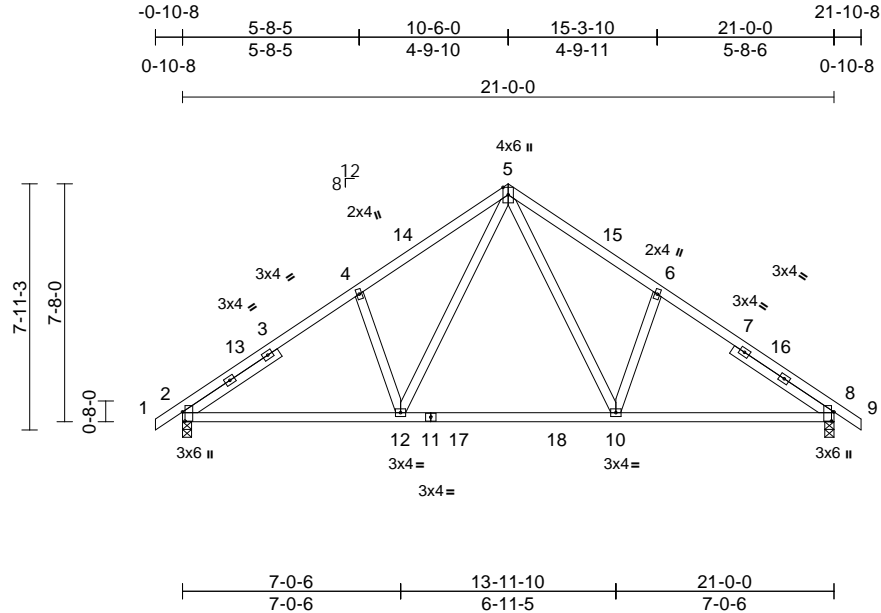


Job	Truss	Truss Type	Qty	Ply	MSM-190	I75737057
25083758R	B2	Common	6	1	Job Reference (optional)	

The Building Center, Gastonia, NC - 28052,

Run: 8.83 S Jul 24 2025 Print: 8.830 S Jul 24 2025 MiTek Industries, Inc. Tue Aug 19 08:26:21  
ID:2fp3QN4ntajUecgBEungcOz3Vg3-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWwCDoi7J4zJC?f

Page: 1



Scale = 1:74.3

Plate Offsets (X, Y): [2:0-3-9,0-0-15], [8:0-3-9,0-0-15]

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	0.31	Vert(LL)	-0.10	10-12	>999	240	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.49	Vert(CT)	-0.15	10-12	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.19	Horz(CT)	0.03	8	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-S								
BCDL	10.0											
											Weight: 119 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 -- 3-8-3, Right 2x4 SP No.3 -- 3-10-5

#### BRACING

TOP CHORD	Structural wood sheathing directly applied or 5-6-11 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS

(size)	2=0-3-8, 8=0-3-8
Max Horiz	2=118 (LC 13)
Max Uplift	2=-4 (LC 14), 8=-4 (LC 14)
Max Grav	2=893 (LC 2), 8=893 (LC 2)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

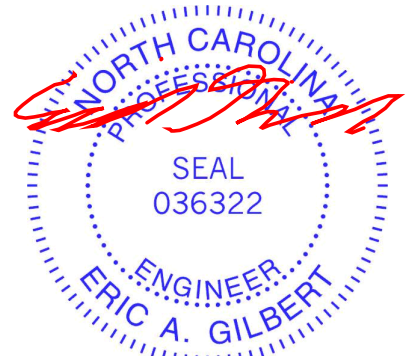
TOP CHORD	1-2=0/14, 2-4=-1141/49, 4-5=-1030/111, 5-6=-1030/110, 6-8=-1140/49, 8-9=0/14
BOT CHORD	2-12=0/911, 10-12=0/624, 8-10=0/866
WEBS	4-12=-269/119, 5-12=-29/486, 5-10=-29/486, 6-10=-269/119

#### 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=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) 0-10-8 to 2-1-8, Interior (1) 2-1-8 to 10-6-0, Exterior (2) 10-6-0 to 13-6-0, Interior (1) 13-6-0 to 21-10-8 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

- TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 4 lb uplift at joint 2 and 4 lb uplift at joint 8.

LOAD CASE(S) Standard



August 19,2025

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

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

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932

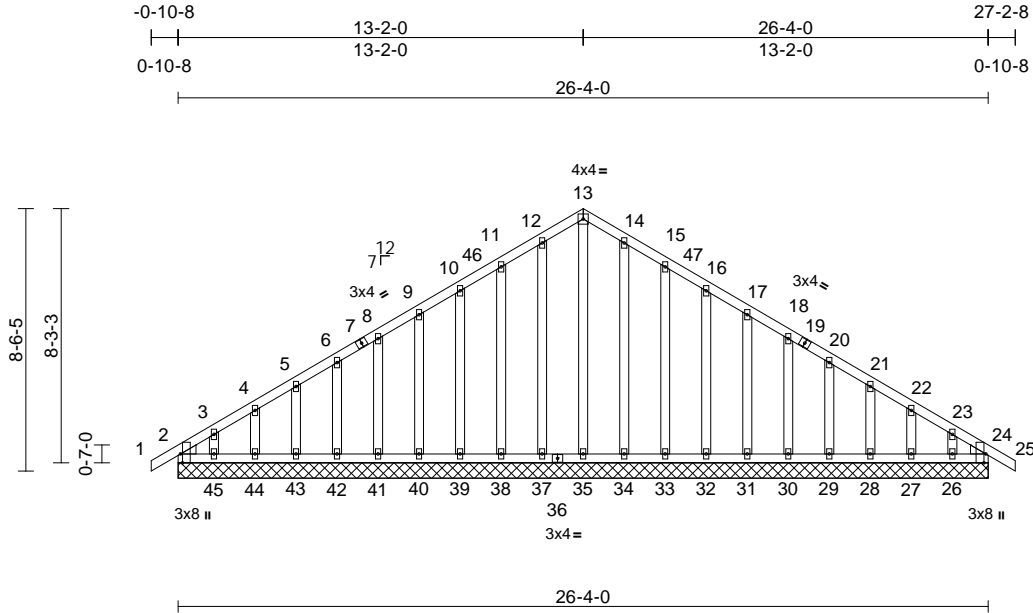


Job	Truss	Truss Type	Qty	Ply	MSM-190	175737058
25083758R	A1GE	Common Supported Gable	1	1	Job Reference (optional)	

The Building Center, Gastonia, NC - 28052,

Run: 8.83 S Jul 24 2025 Print: 8.830 S Jul 24 2025 MiTek Industries, Inc. Tue Aug 19 08:26:18  
ID:5fXlbpYmDdAdjC82wHPTz3Vhh-RfC?PsB70Hq3NSgPqnL8w3uITxbGKWrCDoi7J4zJC?f

Page: 1



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.05	Vert(LL)	n/a	-	n/a	999	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	n/a	-	n/a	999	
TCDL	10.0	Rep Stress Incr	YES	WB	0.14	Horz(CT)	0.00	24	n/a	n/a	
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-S							
BCDL	10.0										
Weight: 203 lb FT = 20%											

#### LUMBER

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

#### BRACING

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

#### REACTIONS

(size) 2=26-4-0, 24=26-4-0, 26=26-4-0, 27=26-4-0, 28=26-4-0, 29=26-4-0, 30=26-4-0, 31=26-4-0, 32=26-4-0, 33=26-4-0, 34=26-4-0, 35=26-4-0, 37=26-4-0, 38=26-4-0, 39=26-4-0, 40=26-4-0, 41=26-4-0, 42=26-4-0, 43=26-4-0, 44=26-4-0, 45=26-4-0  
Max Horiz 2=128 (LC 15)  
Max Uplift 2=-11 (LC 14), 26=-11 (LC 16), 27=-11 (LC 16), 28=-8 (LC 16), 29=-8 (LC 16), 30=-8 (LC 16), 31=-8 (LC 16), 32=-8 (LC 16), 33=-13 (LC 16), 38=-13 (LC 16), 39=-8 (LC 16), 40=-8 (LC 16), 41=-8 (LC 16), 42=-8 (LC 16), 43=-8 (LC 16), 44=-11 (LC 16), 45=-12 (LC 13)

#### FORCES

##### TOP CHORD

Max Grav 2=136 (LC 29), 24=121 (LC 2), 26=88 (LC 29), 27=112 (LC 33), 28=105 (LC 2), 29=107 (LC 33), 30=107 (LC 33), 31=107 (LC 2), 32=107 (LC 2), 33=121 (LC 22), 34=130 (LC 22), 35=107 (LC 16), 37=130 (LC 21), 38=121 (LC 21), 39=107 (LC 2), 40=107 (LC 2), 41=107 (LC 32), 42=107 (LC 32), 43=105 (LC 2), 44=112 (LC 32), 45=95 (LC 28)

##### BOT CHORD

(lb) - Maximum Compression/Maximum Tension  
1-2=0/14, 2-3=-113/105, 3-4=-94/89, 4-5=-87/81, 5-6=-81/74, 6-8=-74/67, 8-9=-68/59, 9-10=-76/82, 10-11=-97/107, 11-12=-121/135, 12-13=-136/153, 13-14=-136/153, 14-15=-121/135, 15-16=-97/107, 16-17=-76/82, 17-18=-54/56, 18-20=-36/30, 20-21=-41/24, 21-22=-47/31, 22-23=-57/48, 23-24=-93/83, 24-25=0/14

##### WEBS

2-45=-69/92, 44-45=-69/92, 43-44=-69/92, 42-43=-69/92, 41-42=-69/92, 40-41=-69/92, 39-40=-69/92, 38-39=-69/92, 37-38=-69/92, 35-37=-69/92, 34-35=-69/92, 33-34=-69/92, 32-33=-69/92, 31-32=-69/92, 30-31=-69/92, 29-30=-69/92, 28-29=-69/92, 27-28=-69/92, 26-27=-69/92, 24-26=-69/92  
13-35=-112/60, 12-37=-103/19, 11-38=-95/41, 10-39=-80/35, 9-40=-80/35, 8-41=-80/35, 6-42=-80/35, 5-43=-79/35, 4-44=-84/37, 3-45=-83/47, 14-34=-103/19, 15-33=-95/41, 16-32=-80/35, 17-31=-80/35, 18-30=-80/35, 20-29=-80/35, 21-28=-79/35, 22-27=-84/37, 23-26=-84/48

#### 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=25ft; B=45ft; L=26ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner (3) -0-10-8 to 2-1-8, Exterior (2) 2-1-8 to 13-2-0, Corner (3) 13-2-0 to 16-2-0, Exterior (2) 16-2-0 to 27-2-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C- C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- Unbalanced snow loads have been considered for this design.



August 19, 2025

Continued on page 2

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932



Job	Truss	Truss Type	Qty	Ply	MSM-190	I75737058
25083758R	A1GE	Common Supported Gable	1	1	Job Reference (optional)	

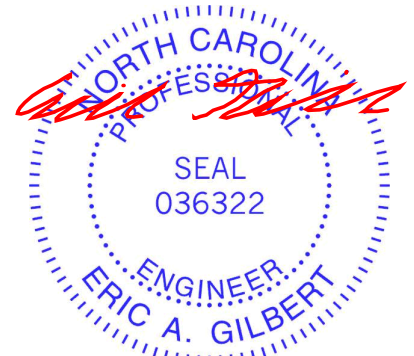
The Building Center, Gastonia, NC - 28052,

Run: 8.83 S Jul 24 2025 Print: 8.830 S Jul 24 2025 MiTek Industries, Inc. Tue Aug 19 08:26:18  
ID:5fXlbpYmddEAdjC82wHPTz3Vhh-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 2

- 6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 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 1-4-0 oc.
- 10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 11) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 11 lb uplift at joint 2, 13 lb uplift at joint 38, 8 lb uplift at joint 39, 8 lb uplift at joint 40, 8 lb uplift at joint 41, 8 lb uplift at joint 42, 8 lb uplift at joint 43, 11 lb uplift at joint 44, 12 lb uplift at joint 45, 13 lb uplift at joint 33, 8 lb uplift at joint 32, 8 lb uplift at joint 31, 8 lb uplift at joint 30, 8 lb uplift at joint 29, 8 lb uplift at joint 28, 11 lb uplift at joint 27 and 11 lb uplift at joint 26.

**LOAD CASE(S)** Standard



August 19, 2025

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

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

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932



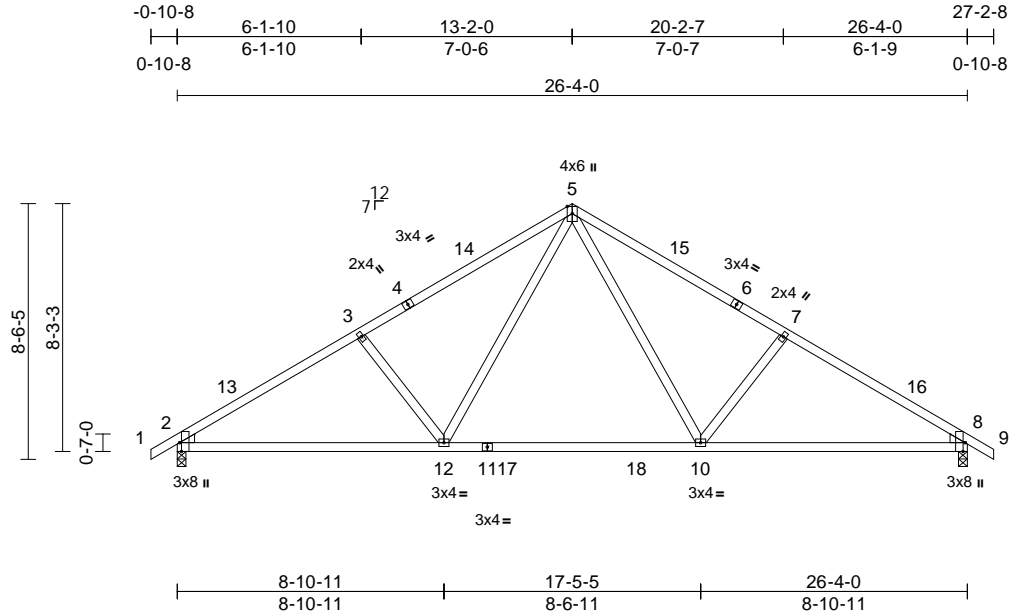
Job	Truss	Truss Type	Qty	Ply	MSM-190	
25083758R	A2	Common	5	1	Job Reference (optional)	I75737059

The Building Center, Gastonia, NC - 28052,

Run: 8.83 S Jul 24 2025 Print: 8.830 S Jul 24 2025 MiTek Industries, Inc. Tue Aug 19 08:26:19

Page: 1

ID:Vh914DR5f6jeysEq1s0ewz3ViA-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:76.8

Plate Offsets (X, Y): [2:0-3-8,Edge], [8:0-3-8,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	0.68	Vert(LL)	-0.26	10-12	>999	240	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.80	Vert(CT)	-0.34	2-12	>913	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.23	Horz(CT)	0.05	8	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-S								
BCDL	10.0											
											Weight: 129 lb	FT = 20%

#### LUMBER

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

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 3-9-8 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS

(size) 2=0-3-8, 8=0-3-8  
 Max Horiz 2=128 (LC 15)  
 Max Uplift 2=-4 (LC 16), 8=-4 (LC 16)  
 Max Grav 2=1103 (LC 2), 8=1103 (LC 2)

#### FORCES

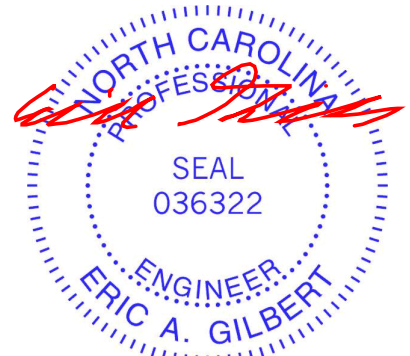
(lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-2=0/14, 2-3=-1596/63, 3-5=-1393/94,  
 5-7=-1393/94, 7-8=-1596/63, 8-9=0/14  
 BOT CHORD 2-12=0/1351, 10-12=0/883, 8-10=0/1298  
 WEBS 5-10=0/585, 7-10=-347/128, 5-12=0/585,  
 3-12=-346/128

#### 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=25ft;  
 B=45ft; L=26ft; eave=4ft; Cat. II; Exp B; Enclosed;  
 MWFRS (directional) and C-C Exterior (2) 0-10-8 to 2-1-8, Interior (1) 2-1-8 to 13-2-0, Exterior (2) 13-2-0 to 16-2-0, Interior (1) 16-2-0 to 27-2-8 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

- TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 4 lb uplift at joint 2 and 4 lb uplift at joint 8.

LOAD CASE(S) Standard



August 19,2025

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacompnents.com)

ENGINEERING BY  
**TRENCO**  
 A MiTek Affiliate

818 Soundside Road  
 Edenton, NC 27932

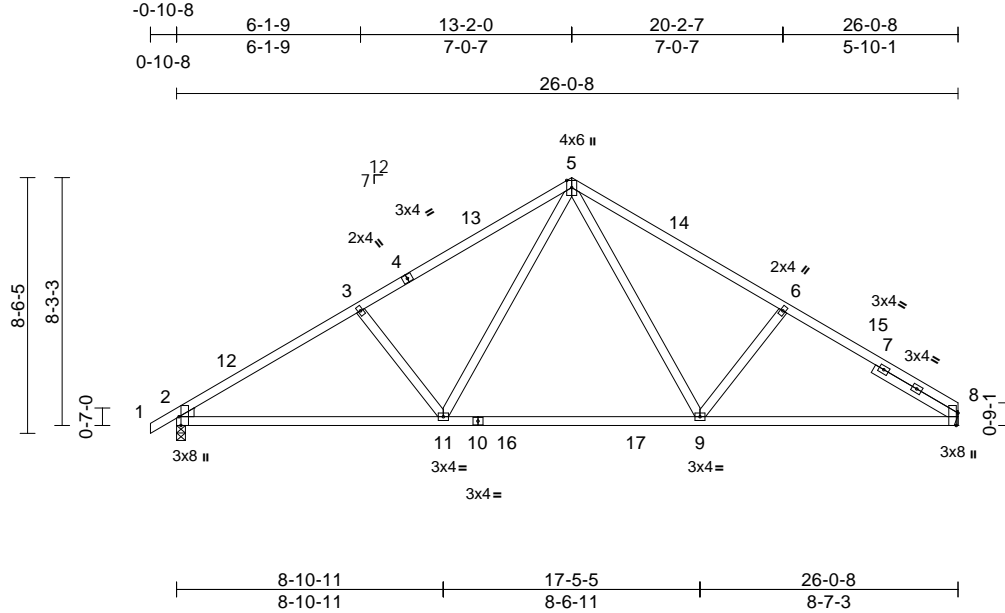


Job	Truss	Truss Type	Qty	Ply	MSM-190	
25083758R	A3	Common	3	1	Job Reference (optional)	I75737060

The Building Center, Gastonia, NC - 28052,

Run: 8.83 S Jul 24 2025 Print: 8.830 S Jul 24 2025 MiTek Industries, Inc. Tue Aug 19 08:26:19  
ID:8vmsK3mzrufaEGZTYHsuN7z3Vj2-RfC?PsB70Hq3NSgPqnL8w3uITxbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:76.8

Plate Offsets (X, Y): [2:0-3-8,Edge], [8:0-5-0,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	0.89	Vert(LL)	-0.26	9-11	>999	240	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.81	Vert(CT)	-0.35	9-11	>893	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.23	Horz(CT)	0.05	8	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-S								
BCDL	10.0											
Weight: 131 lb											FT = 20%	

#### LUMBER

TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3  
WEDGE Left: 2x4 SP No.3  
SLIDER Right 2x4 SP No.3 -- 3-2-15

#### BRACING

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

**REACTIONS** (size) 2=0-3-8, 8= Mechanical  
Max Horiz 2=127 (LC 15)  
Max Uplift 2=4 (LC 16)  
Max Grav 2=1098 (LC 2), 8=1035 (LC 2)

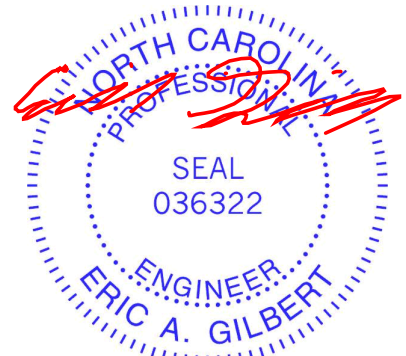
**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/14, 2-3=-1588/63, 3-5=-1385/95,  
5-6=-1355/99, 6-8=-1565/70  
BOT CHORD 2-11=0/1341, 9-11=0/875, 8-9=0/1254  
WEBS 5-9=0/545, 6-9=-322/128, 5-11=0/587,  
3-11=-345/128

#### 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=25ft;  
B=45ft; L=26ft; eave=4ft; Cat. II; Exp B; Enclosed;  
MWFRS (directional) and C-C Exterior (2) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 13-2-0, Exterior (2) 13-2-0 to 16-2-0, Interior (1) 16-2-0 to 26-0-8 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
- TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10

- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 4 lb uplift at joint 2.

**LOAD CASE(S)** Standard



August 19,2025

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932



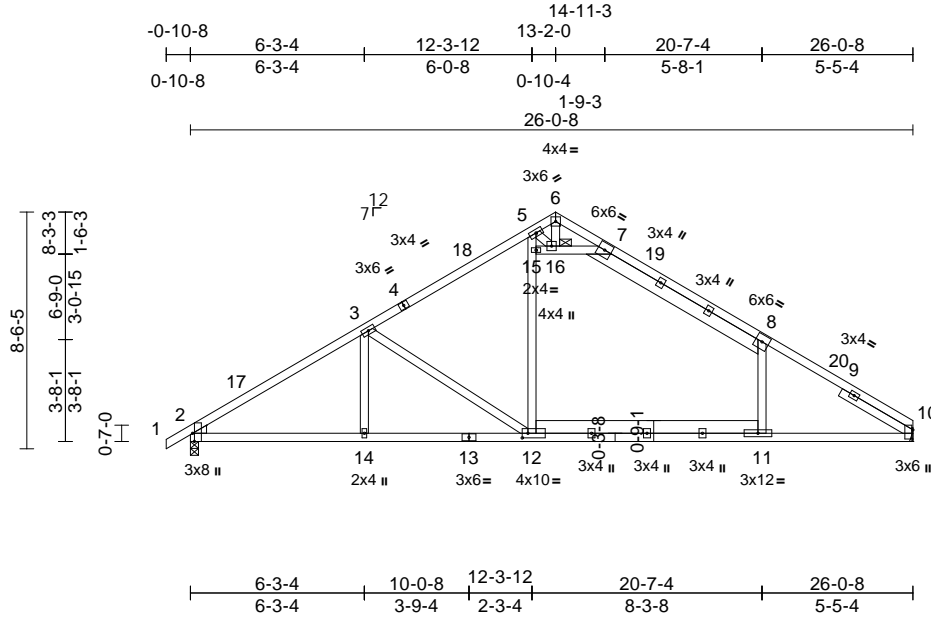
Job	Truss	Truss Type	Qty	Ply	MSM-190	175737061
25083758R	A4	Common	4	1	Job Reference (optional)	

The Building Center, Gastonia, NC - 28052,

Run: 8.83 S Jul 24 2025 Print: 8.830 S Jul 24 2025 MiTek Industries, Inc. Tue Aug 19 08:26:20

Page: 1

ID:CNLglNatt5cSGKH1vgfHufz3Vpl-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?i



Scale = 1:83.1

Plate Offsets (X, Y): [2:0-3-8,Edge], [10:0-4-0,0-0-7], [12:0-2-8,0-2-0]

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	0.91	Vert(LL)	-0.38	10-11	>807	240	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.69	Vert(CT)	-0.70	10-11	>447	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.68	Horz(CT)	0.03	10	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-S								
BCDL	10.0											
											Weight: 164 lb	FT = 20%

#### LUMBER

TOP CHORD	2x4 SP No.2 *Except* 6-10:2x4 SP No.1
BOT CHORD	2x4 SP No.2 *Except* 13-10:2x4 SP DSS, 12-11:2x6 SP No.1
WEBS	2x4 SP No.3 *Except* 11-8,5-12,15-7:2x4 SP No.2, 7-8:2x6 SP No.1
WEDGE	Left: 2x4 SP No.3
SLIDER	Right 2x4 SP No.3 -- 3-0-0

#### BRACING

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

JOINTS 1 Brace at Jt(s): 16

REACTIONS	(size) 2=0-3-8, 10= Mechanical
	Max Horiz 2=127 (LC 15)
	Max Uplift 2=-4 (LC 16)
	Max Grav 2=1098 (LC 2), 10=1035 (LC 2)

#### FORCES

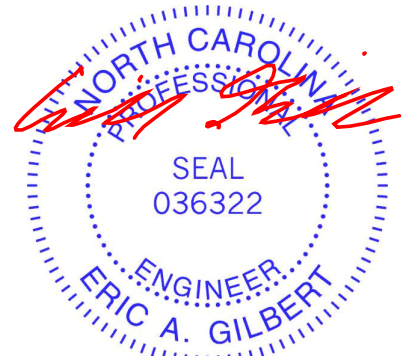
TOP CHORD	(lb) - Maximum Compression/Maximum Tension
	1-2=0/14, 2-3=-1605/34, 3-5=-1213/97, 5-6=-324/48, 6-7=-250/0, 7-8=-1150/88, 8-10=-1308/0
BOT CHORD	2-14=0/1277, 12-14=0/1277, 11-12=0/993, 10-11=0/993
WEBS	8-11=-88/142, 12-15=0/549, 5-15=0/538, 15-16=-298/61, 7-16=-888/135, 6-16=-73/584, 5-16=-890/110, 3-14=0/212, 3-12=-447/43

#### 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=25ft; B=45ft; L=26ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 13-2-0, Exterior (2) 13-2-0 to 16-2-0, Interior (1) 16-2-0 to 26-0-8 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) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 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 4 lb uplift at joint 2.

LOAD CASE(S) Standard



August 19,2025

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

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

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932

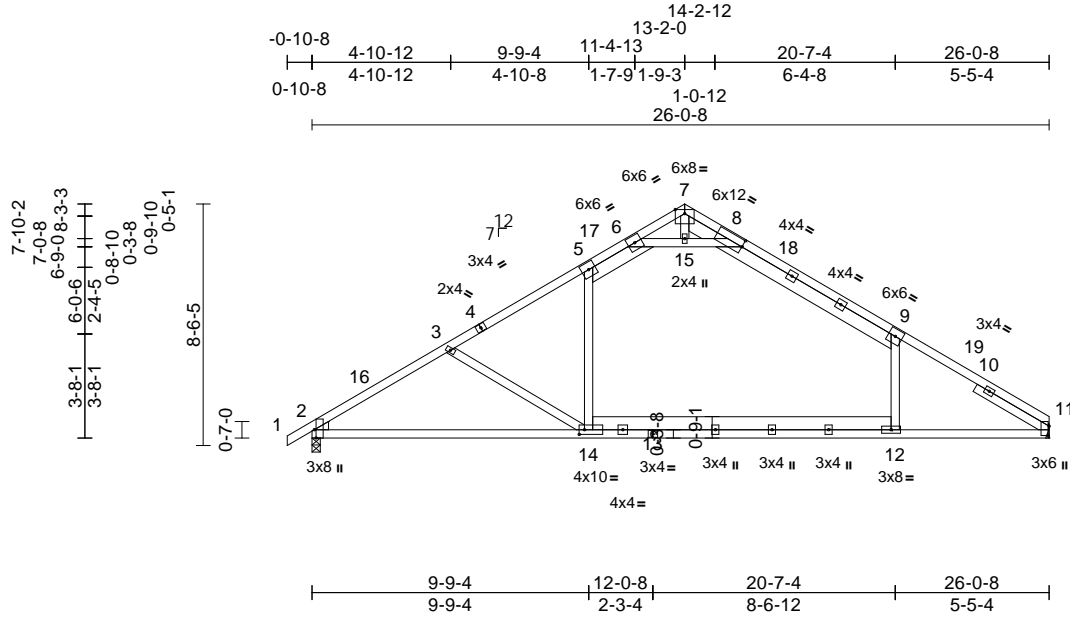


Job	Truss	Truss Type	Qty	Ply	MSM-190	
25083758R	A5	Common	3	1	Job Reference (optional)	I75737062

The Building Center, Gastonia, NC - 28052,

Run: 8.83 S Jul 24 2025 Print: 8.830 S Jul 24 2025 MiTek Industries, Inc. Tue Aug 19 08:26:20  
ID:Bey6xhl4LjPlDgpDyMBWcz3Vkk-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



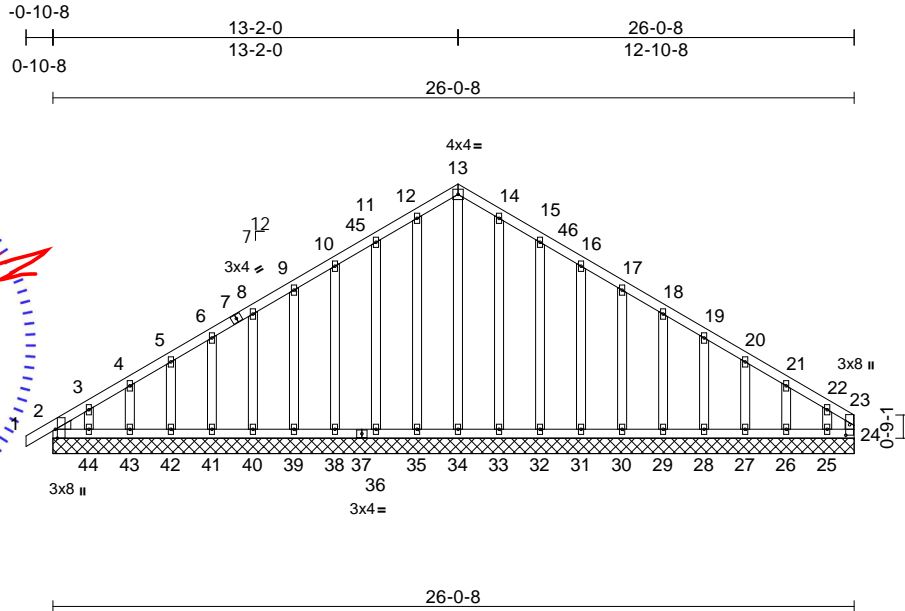


Job	Truss	Truss Type	Qty	Ply	MSM-190	175737063
25083758R	A6GE	Common Supported Gable	1	1	Job Reference (optional)	

The Building Center, Gastonia, NC - 28052,

Run: 8.83 S Jul 24 2025 Print: 8.830 S Jul 24 2025 MiTek Industries, Inc. Tue Aug 19 08:26:20  
ID:H1DKTO96mE8GXsanwQsXNz3VhF-RfC?PsB70Hq3NsgPqnL8w3ulTXbGKWrCdoi7J4JC?f

Page: 1



Scale = 1:74.9

Plate Offsets (X, Y): [2:0-3-8,Edge], [23:0-4-1,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.05	Vert(LL)	n/a	-	n/a	999	244/190
Snow (Pf/Pg)	15.4/20.0	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	24	n/a	n/a	
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-S							
BCDL	10.0										
Weight: 201 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  
WEDGE Left: 2x4 SP No.3

#### BRACING

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

#### REACTIONS

(size) 2=26-0-8, 24=26-0-8, 25=26-0-8, 26=26-0-8, 27=26-0-8, 28=26-0-8, 29=26-0-8, 30=26-0-8, 31=26-0-8, 32=26-0-8, 33=26-0-8, 34=26-0-8, 35=26-0-8, 36=26-0-8, 38=26-0-8, 39=26-0-8, 40=26-0-8, 41=26-0-8, 42=26-0-8, 43=26-0-8, 44=26-0-8  
Max Horiz 2=123 (LC 15)  
Max Uplift 2=-13 (LC 14), 24=-33 (LC 15), 25=-54 (LC 16), 26=-4 (LC 16), 27=-9 (LC 16), 28=-8 (LC 16), 29=-8 (LC 16), 30=-8 (LC 16), 31=-8 (LC 16), 32=-13 (LC 16), 36=-13 (LC 16), 38=-8 (LC 16), 39=-8 (LC 16), 40=-8 (LC 16), 41=-8 (LC 16), 42=-8 (LC 16), 43=-11 (LC 16), 44=-12 (LC 13)

#### FORCES

##### TOP CHORD

(lb) - Maximum Compression/Maximum Tension  
1-2=0/14, 2-3=-117/109, 3-4=-98/93, 4-5=-91/85, 5-6=-84/78, 6-8=-77/70, 8-9=-71/63, 9-10=-78/84, 10-11=-99/109, 11-12=-123/137, 12-13=-138/155, 13-14=-138/155, 14-15=-123/137, 15-16=-99/109, 16-17=-78/84, 17-18=-57/58, 18-19=-35/32, 19-20=-38/22, 20-21=-43/28, 21-22=-53/43, 22-23=-85/69, 23-24=-57/36  
2-44=-50/65, 43-44=-50/65, 42-43=-50/65, 41-42=-50/65, 40-41=-50/65, 39-40=-50/65, 38-39=-50/65, 36-38=-50/65, 35-36=-50/65, 34-35=-50/65, 33-34=-50/65, 32-33=-50/65, 31-32=-50/65, 30-31=-50/65, 29-30=-50/65, 28-29=-50/65, 27-28=-50/65, 26-27=-50/65, 25-26=-50/65, 24-25=-50/65  
13-34=-114/62, 12-35=-101/18, 11-36=-88/41, 10-38=-80/35, 9-39=-80/35, 8-40=-80/35, 6-41=-80/35, 5-42=-79/35, 4-43=-84/37, 3-44=-83/47, 14-33=-104/18, 15-32=-95/41, 16-31=-80/35, 17-30=-80/35, 18-29=-80/35, 19-28=-80/35, 20-27=-80/35, 21-26=-83/34, 22-25=-79/56

##### BOT CHORD

##### WEBS

#### 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=25ft; B=45ft; L=26ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner (3) -0-10-8 to 2-1-8, Exterior (2) 2-1-8 to 13-2-0, Corner (3) 13-2-0 to 16-2-0, Exterior (2) 16-2-0 to 25-10-12 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- 5) Unbalanced snow loads have been considered for this design.
- 6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.

August 19,2025

Continued on page 2

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932



Job	Truss	Truss Type	Qty	Ply	MSM-190	I75737063
25083758R	A6GE	Common Supported Gable	1	1	Job Reference (optional)	

The Building Center, Gastonia, NC - 28052,

Run: 8.83 S Jul 24 2025 Print: 8.830 S Jul 24 2025 MiTek Industries, Inc. Tue Aug 19 08:26:20

Page: 2

ID:H1DKTO96mE8GXsanwQsXNz3VhF-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

- 7) All plates are 2x4 (||) MT20 unless otherwise indicated.
- 8) Gable requires continuous bottom chord bearing.
- 9) Gable studs spaced at 1-4-0 oc.
- 10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 11) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 13 lb uplift at joint 2, 33 lb uplift at joint 24, 13 lb uplift at joint 36, 8 lb uplift at joint 38, 8 lb uplift at joint 39, 8 lb uplift at joint 40, 8 lb uplift at joint 41, 8 lb uplift at joint 42, 11 lb uplift at joint 43, 12 lb uplift at joint 44, 13 lb uplift at joint 32, 8 lb uplift at joint 31, 8 lb uplift at joint 30, 8 lb uplift at joint 29, 8 lb uplift at joint 28, 9 lb uplift at joint 27, 4 lb uplift at joint 26 and 54 lb uplift at joint 25.

LOAD CASE(S) Standard



August 19,2025

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute ([www.tpinst.org](http://www.tpinst.org)) and **BCSI Building Component Safety Information** available from the Structural Building Component Association ([www.sbcacomponents.com](http://www.sbcacomponents.com))



818 Soundside Road  
Edenton, NC 27932



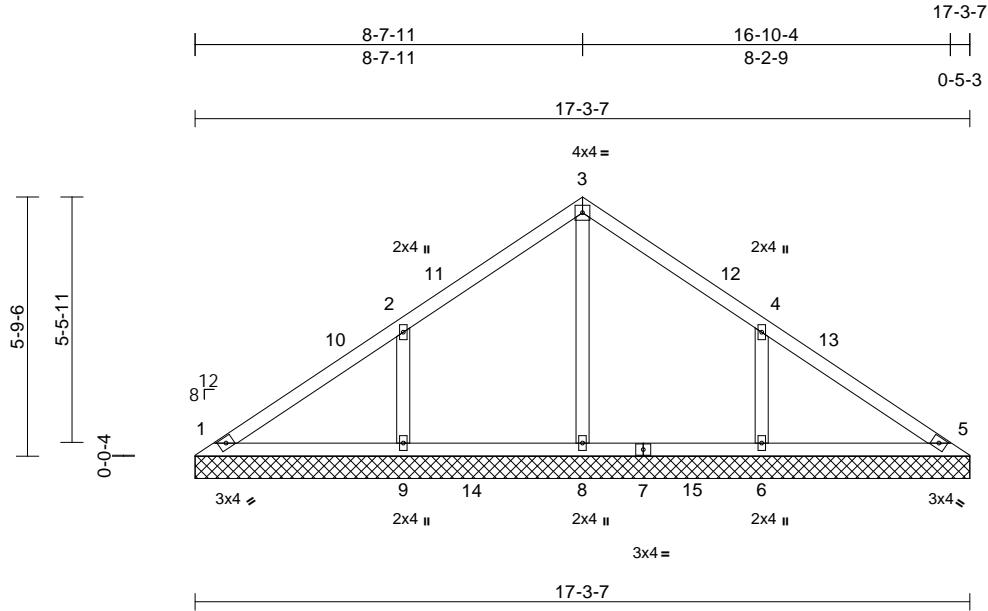
Job	Truss	Truss Type	Qty	Ply	MSM-190	175737064
25083758R	V1	Valley	1	1	Job Reference (optional)	

The Building Center, Gastonia, NC - 28052,

Run: 8.83 S Jul 24 2025 Print: 8.830 S Jul 24 2025 MiTek Industries, Inc. Tue Aug 19 08:26:22

Page: 1

ID:kBnl41ZF6nUbeAiqMz82yRz3Vpm-RfC?PsB70Hq3NSgPqnL8w3uITxbGKWrCDoi7J4zJC?f



Scale = 1:51.4

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	0.25	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.15	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.10	Horiz(TL)	0.00	5	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-S							
BCDL	10.0									Weight: 70 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)	1=17-3-7, 5=17-3-7, 6=17-3-7, 8=17-3-7, 9=17-3-7
Max Horiz	1=-85 (LC 12)
Max Uplift	6=-44 (LC 14), 9=-44 (LC 14)
Max Grav	1=150 (LC 2), 5=150 (LC 2), 6=401 (LC 24), 8=336 (LC 23), 9=401 (LC 23)

#### FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-107/81, 2-3=-112/87, 3-4=-112/87, 4-5=-84/59
BOT CHORD	1-9=-31/50, 8-9=-31/50, 6-8=-31/50, 5-6=-31/50
WEBS	3-8=-163/0, 2-9=-292/113, 4-6=-292/113

#### 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=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) 0-5-12 to 3-5-12, Interior (1) 3-5-12 to 8-8-1, Exterior (2) 8-8-1 to 11-8-1, Interior (1) 11-8-1 to 16-10-7 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

- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 44 lb uplift at joint 9 and 44 lb uplift at joint 6.

**LOAD CASE(S)** Standard



August 19,2025

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932



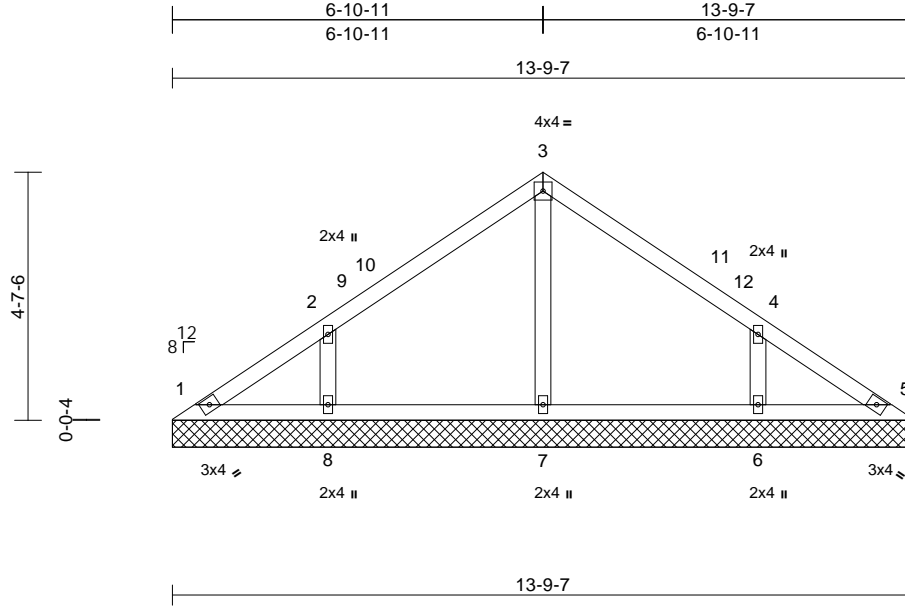
Job	Truss	Truss Type	Qty	Ply	MSM-190	175737065
25083758R	V2	Valley	1	1	Job Reference (optional)	

The Building Center, Gastonia, NC - 28052,

Run: 8.83 S Jul 24 2025 Print: 8.830 S Jul 24 2025 MiTek Industries, Inc. Tue Aug 19 08:26:23

Page: 1

ID:kBnl41ZF6nUbeAiqMz8yRz3Vpm-RfC?PsB70Hq3NSgPqnL8w3uITxbGKWrCDoi7J4zJC?f



<b>Loading</b>	(psf)	<b>Spacing</b>	2-0-0	<b>CSI</b>		<b>DEFL</b>	in	(loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.17	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.12	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.07	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-S							Weight: 54 lb	FT = 20%
BCDL	10.0											

#### 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)	1=13-9-7, 5=13-9-7, 6=13-9-7, 7=13-9-7, 8=13-9-7
Max Horiz	1=-67 (LC 12)
Max Uplift	6=-37 (LC 14), 8=-37 (LC 14)
Max Grav	1=86 (LC 24), 5=80 (LC 2), 6=310 (LC 28), 7=264 (LC 2), 8=310 (LC 27)

#### FORCES

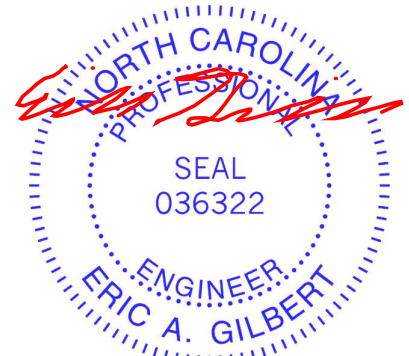
(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-83/55, 2-3=-111/70, 3-4=-111/70, 4-5=-65/33
BOT CHORD	1-8=-16/45, 7-8=-16/45, 6-7=-16/45, 5-6=-16/45
WEBS	3-7=-180/0, 2-8=-239/102, 4-6=-239/102

#### 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=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) 0-5-12 to 3-5-12, Interior (1) 3-5-12 to 6-11-1, Exterior (2) 6-11-1 to 9-11-1, Interior (1) 9-11-1 to 13-4-7 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

- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 37 lb uplift at joint 8 and 37 lb uplift at joint 6.

**LOAD CASE(S)** Standard



August 19,2025

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932



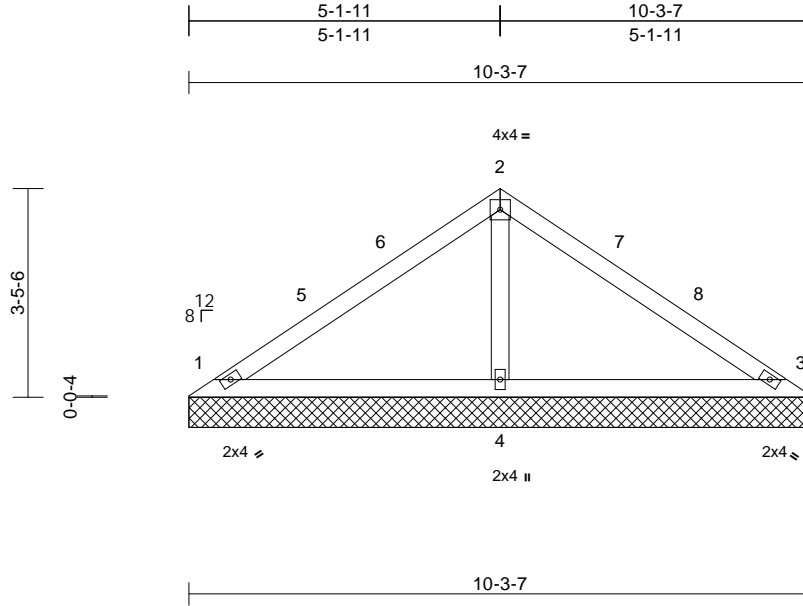
Job	Truss	Truss Type	Qty	Ply	MSM-190	I75737066
25083758R	V3	Valley	1	1	Job Reference (optional)	

The Building Center, Gastonia, NC - 28052,

Run: 8.83 S Jul 24 2025 Print: 8.830 S Jul 24 2025 MiTek Industries, Inc. Tue Aug 19 08:26:23

Page: 1

ID:kBnl41ZF6nUbeAiqMz82yRz3Vpm-RfC?PsB70Hq3NSgPqnL8w3uITxbGKWrCDoi7J4zJC?f



Scale = 1:38.1

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	0.31	Vert(LL)	n/a	-	n/a	999	MT20
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.22	Vert(TL)	n/a	-	n/a	999	244/190
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horiz(TL)	0.00	3	n/a	n/a	
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-S							
BCDL	10.0										
Weight: 36 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)	1=10-3-7, 3=10-3-7, 4=10-3-7
Max Horiz	1=49 (LC 13)
Max Uplift	1=-8 (LC 14), 3=-8 (LC 14)
Max Grav	1=185 (LC 2), 3=185 (LC 2), 4=381 (LC 2)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-127/48, 2-3=-127/48
BOT CHORD	1-4=-1/51, 3-4=-1/51
WEBS	2-4=-242/51

#### 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=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) 0-5-12 to 3-5-12, Interior (1) 3-5-12 to 5-2-1, Exterior (2) 5-2-1 to 8-2-1, Interior (1) 8-2-1 to 9-10-7 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
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 8 lb uplift at joint 1 and 8 lb uplift at joint 3.

LOAD CASE(S) Standard



August 19,2025

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacompnents.com)

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932



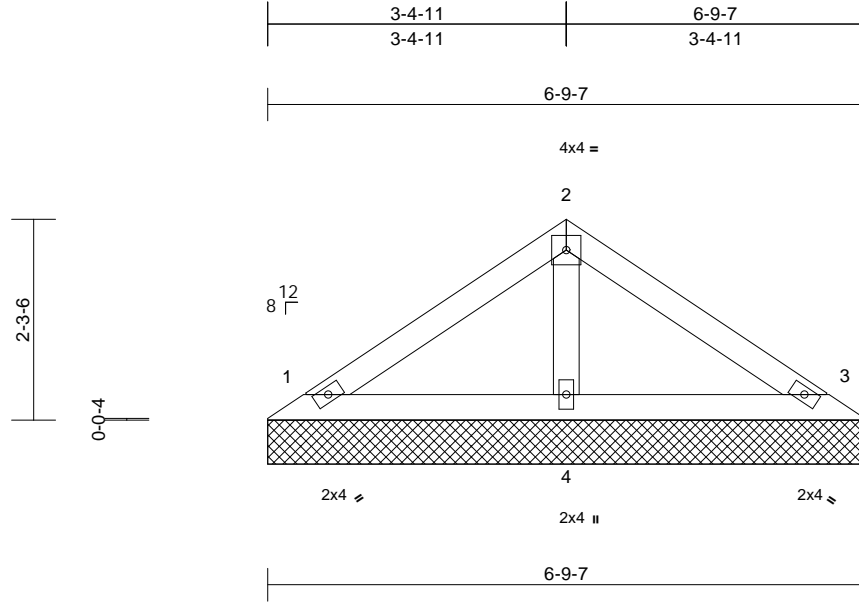
Job	Truss	Truss Type	Qty	Ply	MSM-190	I75737067
25083758R	V4	Valley	1	1	Job Reference (optional)	

The Building Center, Gastonia, NC - 28052,

Run: 8.83 S Jul 24 2025 Print: 8.830 S Jul 24 2025 MiTek Industries, Inc. Tue Aug 19 08:26:23

Page: 1

ID: jROkLHSApHubWF1OfgHROz3Vky-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWwCDoi7J4zJC?f



Scale = 1:26.2

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.16	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.09	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-P								
BCDL	10.0											
											Weight: 23 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)	1=6-9-7, 3=6-9-7, 4=6-9-7
Max Horiz	1=-31 (LC 12)
Max Uplift	1=-10 (LC 14), 3=-10 (LC 14)
Max Grav	1=127 (LC 2), 3=127 (LC 2), 4=217 (LC 2)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

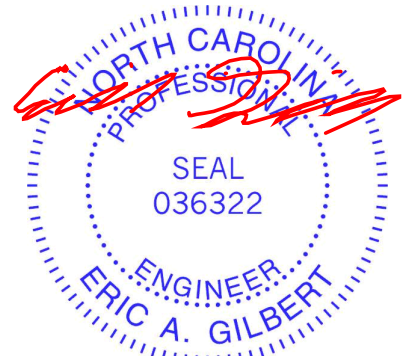
TOP CHORD	1-2=-69/29, 2-3=-69/29
BOT CHORD	1-4=-2/29, 3-4=-2/29
WEBS	2-4=-143/36

#### 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=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) 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
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- Gable requires continuous bottom chord bearing.

- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 10 lb uplift at joint 1 and 10 lb uplift at joint 3.

LOAD CASE(S) Standard



August 19,2025

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacompnents.com)

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932

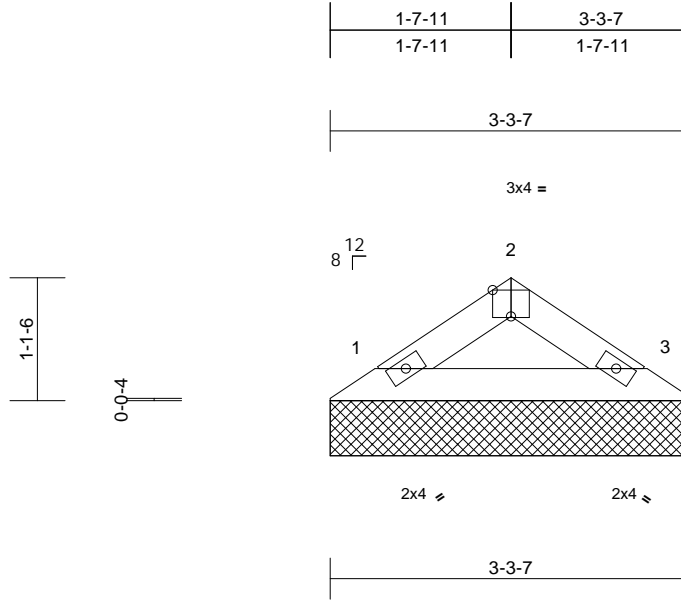


Job	Truss	Truss Type	Qty	Ply	MSM-190	
25083758R	V5	Valley	1	1	Job Reference (optional)	I75737068

The Building Center, Gastonia, NC - 28052,

Run: 8.83 S Jul 24 2025 Print: 8.830 S Jul 24 2025 MiTek Industries, Inc. Tue Aug 19 08:26:23  
ID:iWbS46de1jWy9hB1wYcTU5z3VfL-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:20.9

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	0.02	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.07	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-P								
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 3-4-3 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=3-3-7, 3=3-3-7

Max Horiz 1=-12 (LC 12)

Max Grav 1=95 (LC 2), 3=95 (LC 2)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-80/26, 2-3=-80/26

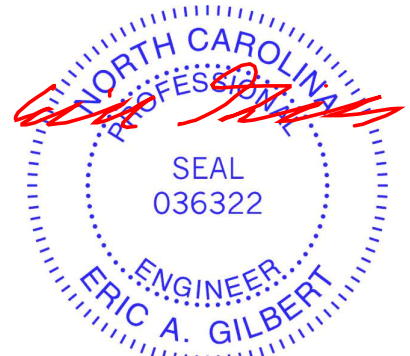
BOT CHORD 1-3=-6/54

#### 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=25ft;  
B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed;  
MWFRS (directional) and C-C Exterior (2) 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
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.

LOAD CASE(S) Standard



August 19,2025

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute ([www.tpinst.org](http://www.tpinst.org)) and **BCSI Building Component Safety Information** available from the Structural Building Component Association ([www.sbcacomponents.com](http://www.sbcacomponents.com))

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932

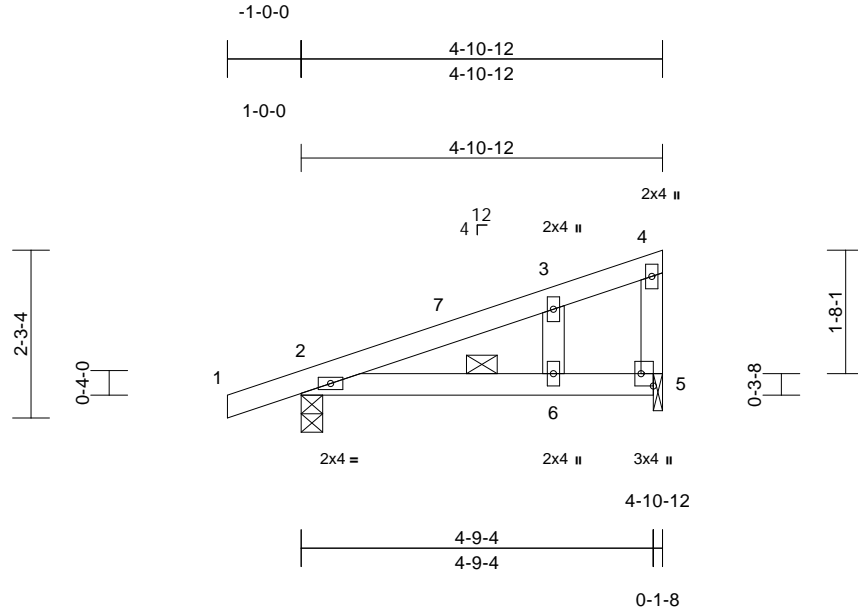


Job	Truss	Truss Type	Qty	Ply	MSM-190	175737069
25083758R	E1GE	Monopitch Supported Gable	1	1	Job Reference (optional)	

The Building Center, Gastonia, NC - 28052,

Run: 8.83 S Jul 24 2025 Print: 8.830 S Jul 24 2025 MiTek Industries, Inc. Tue Aug 19 08:26:22  
ID:0IC5WB9gMQO4H2qEJ0t0bgz3VdN-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWRcD0i7J4zJC?f

Page: 1



Scale = 1:31.2

Plate Offsets (X, Y): [5:Edge,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	0.22	Vert(LL)	0.03	2-6	>999	240	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.19	Vert(CT)	-0.03	2-6	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.01	Horz(CT)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-S								
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  
OTHERS 2x4 SP No.3

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 4-10-12 oc purlins, except end verticals.  
BOT CHORD 4-0-0 oc bracing.

#### REACTIONS

(size) 2=0-3-8, 5=0-1-8  
Max Horiz 2=47 (LC 16)  
Max Uplift 2=-55 (LC 16), 5=-36 (LC 16)  
Max Grav 2=261 (LC 2), 5=176 (LC 2)

#### FORCES

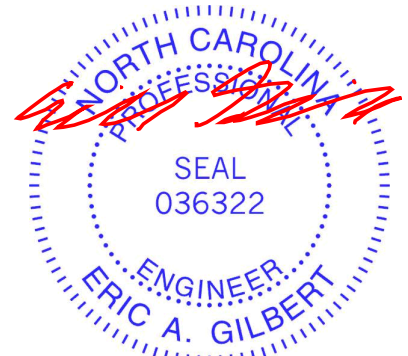
(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/17, 2-3=-114/27, 3-4=-67/35, 4-5=-77/66  
BOT CHORD 2-6=-59/70, 5-6=-59/70  
WEBS 3-6=-60/29

#### 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=25ft; B=45ft; L=24ft; 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 4-9-0 zone; cantilever left and right exposed; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- Gable studs spaced at 1-4-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 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.
- Provide mechanical connection (by others) of truss to bearing plate at joint(s) 5.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 55 lb uplift at joint 2 and 36 lb uplift at joint 5.

LOAD CASE(S) Standard



August 19,2025

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TPI1 Quality Criteria and DSB-22 available from Truss Plate Institute (www.tpinst.org) and BCSI Building Component Safety Information available from the Structural Building Component Association (www.sbcacompnents.com)

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932



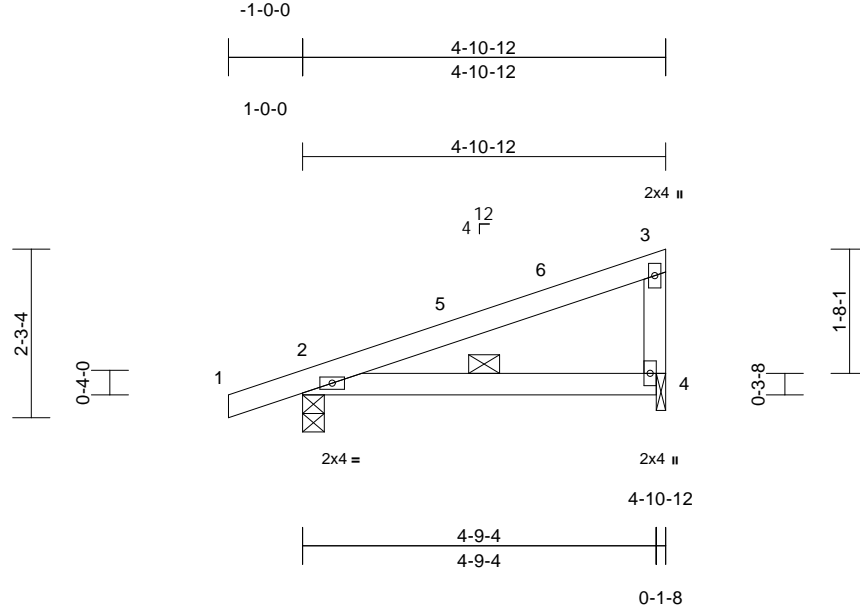
Job	Truss	Truss Type	Qty	Ply	MSM-190	175737070
25083758R	E2	Monopitch	4	1	Job Reference (optional)	

The Building Center, Gastonia, NC - 28052,

Run: 8.83 S Jul 24 2025 Print: 8.830 S Jul 24 2025 MiTek Industries, Inc. Tue Aug 19 08:26:22

Page: 1

ID:GqtdFKldJEkYU?JplZ3OUz3Vbv-RfC?PsB70Hq3NSgPqnL8w3uITxbGKWrCDoi7J4zJC?l



Scale = 1:31.1

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	0.36	Vert(LL)	0.04	2-4	>999	240	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.29	Vert(CT)	-0.05	2-4	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	n/a	-	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-P								
BCDL	10.0											
											Weight: 19 lb	FT = 20%

#### LUMBER

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

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 4-10-12 oc purlins, except end verticals.  
BOT CHORD 4-0-0 oc bracing.

#### REACTIONS (size) 2=0-3-8, 4=0-1-8

Max Horiz 2=47 (LC 16)  
Max Uplift 2=-55 (LC 16), 4=-36 (LC 16)  
Max Grav 2=261 (LC 2), 4=176 (LC 2)

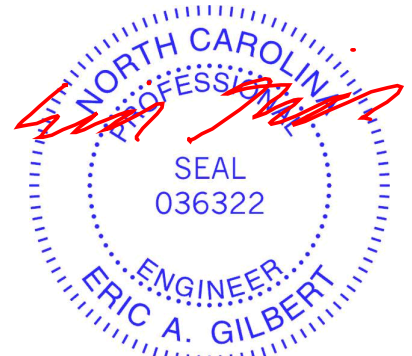
#### FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/17, 2-3=-49/34, 3-4=-130/80  
BOT CHORD 2-4=0/0

#### 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=25ft;  
B=45ft; L=24ft; 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 4-9-0 zone; cantilever left and right exposed; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown;  
Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
  - Bearing at joint(s) 4 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - Provide mechanical connection (by others) of truss to bearing plate at joint(s) 4.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 55 lb uplift at joint 2 and 36 lb uplift at joint 4.
- LOAD CASE(S)** Standard



August 19, 2025

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

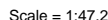
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute ([www.tpinst.org](http://www.tpinst.org)) and **BCSI Building Component Safety Information** available from the Structural Building Component Association ([www.sbcacomponents.com](http://www.sbcacomponents.com))

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932



The Building Center, Gastonia, NC - 28052, Run: 8.83 S Jul 24 2025 Print: 8.830 S Jul 24 2025 MiTek Industries, Inc. Tue Aug 19 08:26:22 Page: 1  
ID:GkzOokkz1?C9oiweCHxd6fymSar-RfC?PsB70Hg3NSaPqnL8w3u1TXbGKWrCDoi7J4zJC?f



**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=16-0-0, 12=16-0-0, 14=16-0-0, 15=16-0-0, 16=16-0-0, 17=16-0-0, 18=16-0-0, 19=16-0-0, 20=16-0-0, 21=16-0-0, 22=16-0-0  
Max Horiz 2=-57 (LC 14)  
Max Uplift 2=-14 (LC 16), 12=-14 (LC 16), 14=-6 (LC 16), 15=-6 (LC 16), 16=-7 (LC 16), 17=-2 (LC 16), 19=-2 (LC 16), 20=-7 (LC 16), 21=-6 (LC 16), 22=-6 (LC 16)  
Max Grav 2=156 (LC 2), 12=156 (LC 2), 14=197 (LC 33), 15=70 (LC 2), 16=114 (LC 33), 17=115 (LC 22), 18=93 (LC 2), 19=115 (LC 21), 20=114 (LC 32), 21=70 (LC 2), 22=197 (LC 32)

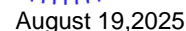
**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/14, 2-3=-68/55, 3-4=-49/54, 4-5=-38/70, 5-6=-35/98, 6-7=-43/120, 7-8=-43/121, 8-9=-35/99, 9-10=-25/71, 10-11=-35/55, 11-12=-50/36, 12-13=0/14  
BOT CHORD 2-22=-15/64, 21-22=-15/64, 20-21=-15/64, 19-20=-15/64, 18-19=-15/64, 17-18=-15/64, 16-17=-15/64, 15-16=-15/64, 14-15=-15/64, 12-14=-15/64

**WEBS** 7-18=-66/0, 6-19=-90/70, 5-20=-84/70, 4-21=-57/28, 3-22=-140/101, 8-17=-90/70, 9-16=-84/70, 10-15=-57/28, 11-14=-140/101

- 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=25ft; B=45ft; L=24ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (different) and C-C Corner (3) -0-10-8 to 2-1-8, Exterior (2) 2-1-8 to 8-0-0, Corner (3) 8-0-0 to 11-0-0, Exterior (2) 11-0-0 to 16-10-8 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 snow 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) TCDL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- 5) Unbalanced snow loads have been considered for this design.
- 6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 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 1-4-0 oc.
- 10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 11) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.

- 12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 14 lb uplift at joint 2, 14 lb uplift at joint 12, 2 lb uplift at joint 19, 7 lb uplift at joint 20, 6 lb uplift at joint 21, 6 lb uplift at joint 22, 2 lb uplift at joint 17, 7 lb uplift at joint 16, 6 lb uplift at joint 15 and 6 lb uplift at joint 14.
- 13) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 2.

## LOAD CASE(S) Standard



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



818 Soundside Road  
Edenton, NC 27932



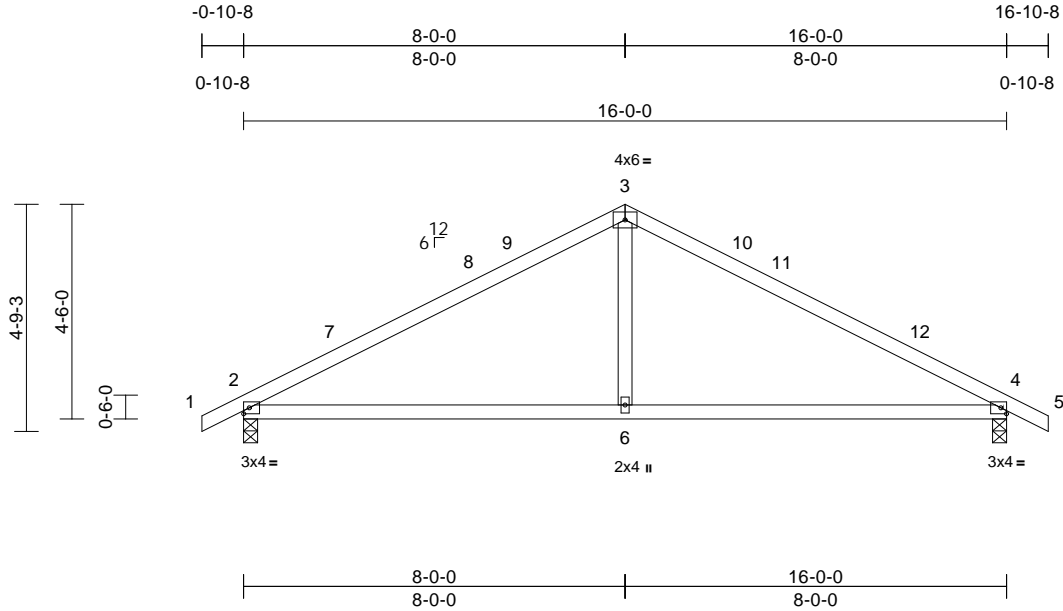
Job	Truss	Truss Type	Qty	Ply	MSM-190	175737072
25083758R	D2	Common	2	1	Job Reference (optional)	

The Building Center, Gastonia, NC - 28052,

Run: 8.83 S Jul 24 2025 Print: 8.830 S Jul 24 2025 MiTek Industries, Inc. Tue Aug 19 08:26:22

Page: 1

ID:GkzOokkz1?C9oiweCHxd6fymSar-RfC?PsB70Hq3NSgPqnL8w3uITxbGKWrcDoi7J4zJC?f



Scale = 1:48.3

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	0.78	Vert(LL)	-0.09	2-6	>999	240	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.69	Vert(CT)	-0.20	2-6	>956	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.15	Horz(CT)	0.02	4	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-S								
BCDL	10.0											
											Weight: 60 lb	FT = 20%

#### LUMBER

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

#### BRACING

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

#### REACTIONS

(size)	2=0-3-8, 4=0-3-8
Max Horiz	2=-57 (LC 14)
Max Uplift	2=-11 (LC 16), 4=-11 (LC 16)
Max Grav	2=690 (LC 2), 4=690 (LC 2)

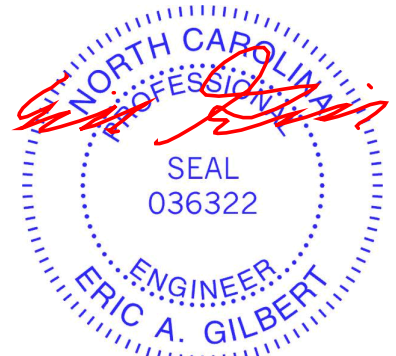
#### FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/14, 2-3=-877/58, 3-4=-877/58, 4-5=0/14
BOT CHORD	2-6=0/681, 4-6=0/681
WEBS	3-6=0/382

#### 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=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 8-0-0, Exterior (2) 8-0-0 to 11-0-0, Interior (1) 11-0-0 to 16-10-8 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
- TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- Unbalanced snow loads have been considered for this design.

- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 11 lb uplift at joint 2 and 11 lb uplift at joint 4.
- LOAD CASE(S)** Standard



August 19,2025

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacompnents.com)

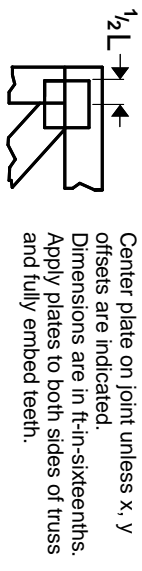
ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932



# Symbols

## PLATE LOCATION AND ORIENTATION



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

## PLATE SIZE

**4 X 4**

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

## LATERAL BRACING LOCATION



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

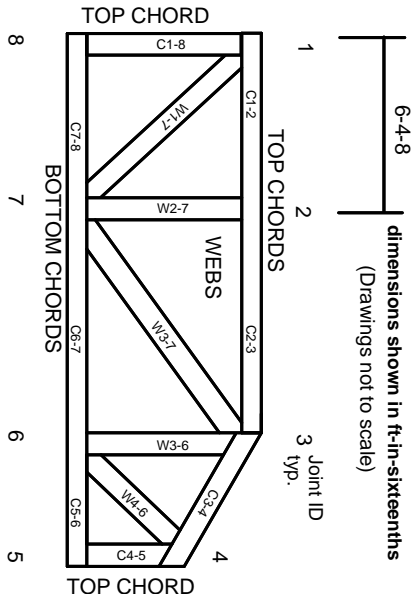
## BEARING



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

**Industry Standards:**  
ANSI/TP1: National Design Specification for Metal Plate Connected Wood Truss Construction.  
DSB-22: 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/TP1 section 6.3. These truss designs rely on lumber values established by others.

© 2023 MITek® All Rights Reserved

# General Safety Notes

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

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

**MITek®**

ENGINEERING BY  
**TRENCO**  
A MITek Affiliate

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