ENGINEERING BY TRENCO
A MiTek Affiliate

Lumber design values are in accordance with ANSI/TPI 1 section 6.3
These truss designs rely on lumber values established by others.

RE: 4513001 - Bridgeport, Oakley, 1 Cameron Hill Rd.

Trenco
818 Soundside Rd
Edenton, NC 27932

Site Information:

Project Customer: Bridgeport Development Project Name:
Lot/Block: 1 Subdivision: CAMERON HILL RD
Address: 3240 CAMERON HILL RD
City: CAMERON State: NC

Name Address and License # of Structural Engineer of Record, If there is one, for the building.

Name: License #:
Address:
City, County: State:

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

Design Code: IRC2015/TPI2014 Design Program: MiTek 20/20 8.8
Wind Code: ASCE 7-10 Design Method: MWFRS (Envelope)/C-C hybrid Wind ASCE 7-10
Wind Speed: 130 mph
Roof Load: 40.0 psf Floor Load: N/A psf

This package includes 16 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Job ID#	Truss Name	Date
1	I72074075	4513001	A01	3/18/25
2	I72074076	4513001	A02	3/18/25
3	I72074077	4513001	A03	3/18/25
4	I72074078	4513001	A04	3/18/25
5	I72074079	4513001		3/18/25
6	I72074080	4513001	A06	3/18/25
7		4513001	A07	3/18/25
8	I72074082	4513001	B01	3/18/25
9	I72074083	4513001	B02	3/18/25
10	I72074084	4513001	B03	3/18/25
11	I72074085	4513001	C01	3/18/25
12	I72074086	4513001	C02	3/18/25
13	I72074087	4513001	PB01	3/18/25
14	I72074088	4513001	PB02	3/18/25
	I72074089	4513001	V01	3/18/25
16		4513001	V02	3/18/25

The truss drawing(s) referenced above have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Builders FirstSource-Sumter,SC.

Truss Design Engineer's Name: Gilbert, Eric
My license renewal date for the state of North Carolina is December 31, 2025.

March 18,2025
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.

ENGINEERING BY TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

RE: $JOBNAME - $JOBDESC

Site Information:

Project Customer: $SI_CUSTOMER Project Name: $SI_JOBNAME
Lot/Block: $SI_LOTNUM Subdivision: $SI_SUBDIV
Address: $SI_SITEADDR
City, County: $SI_SITECITY State: $SI_SITESTATE

ENGINEERING BY TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

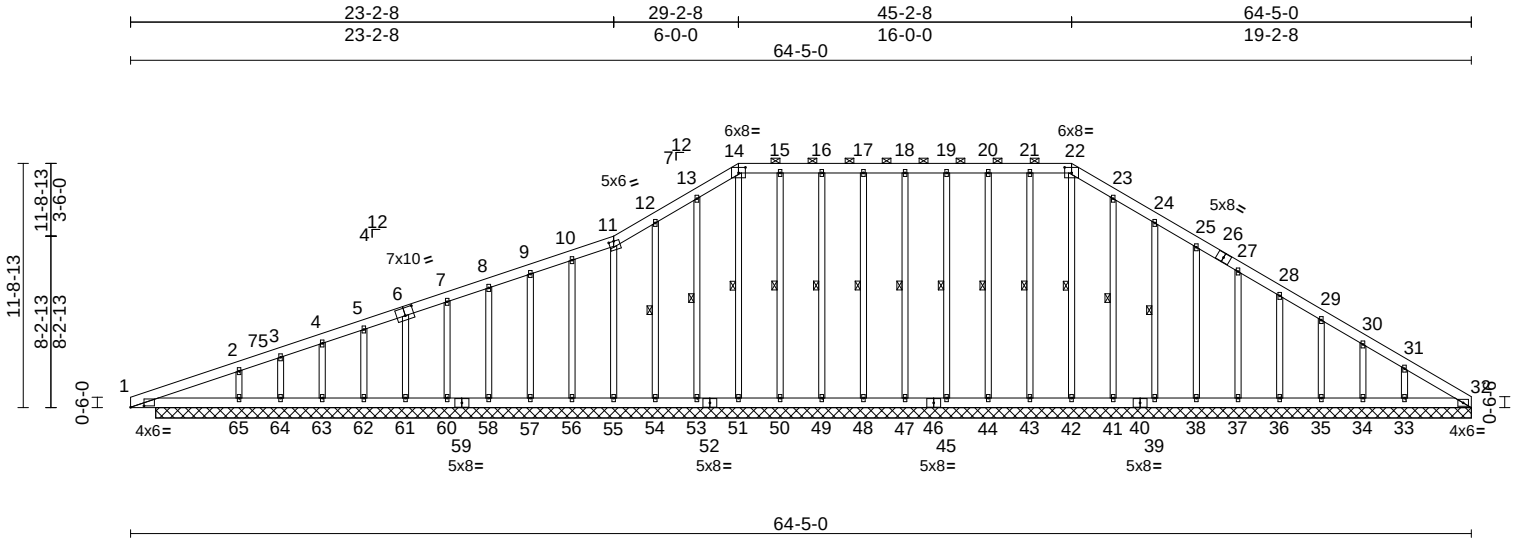
RE: $JOBNAME - $JOBDESC

Site Information:

Project Customer: $SI_CUSTOMER Project Name: $SI_JOBNAME
Lot/Block: $SI_LOTNUM Subdivision: $SI_SUBDIV
Address: $SI_SITEADDR
City, County: $SI_SITECITY State: $SI_SITESTATE

Job	Truss	Truss Type	Qty	Ply	Bridgeport, Oakley, 1 Cameron Hill Rd.
4513001	A01	Piggyback Base Supported Gable	1	1	I72074075 Job Reference (optional)

Builders FirstSource (Sumter, SC), Sumter, SC - 29153, Run: 8.83 S Mar 11 2025 Print: 8.830 S Mar 11 2025 MiTek Industries, Inc. Mon Mar 17 10:26:32 Page: 1
ID:uXsdAA3pp1AlkSBovDjHI4yKtQq-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:110.7

Plate Offsets (X, Y): [1:0-7-11,0-0-13], [6:0-5-0,0-4-8], [11:0-3-0,Edge], [14:0-4-0,0-3-3], [22:0-4-0,0-3-3]

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	0.13	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.13	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.16	Horiz(TL)	0.01	32	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 618 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 10-0-0 oc purlins, except 2-0-0 oc purlins (10-0-0 max.): 14-22.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 18-47, 19-45, 20-44, 21-43, 22-42, 23-41, 24-39, 17-48, 16-49, 15-50, 14-51, 13-53, 12-54

REACTIONS (size) 1=63-2-8, 32=63-2-8, 33=63-2-8, 34=63-2-8, 35=63-2-8, 36=63-2-8, 37=63-2-8, 38=63-2-8, 39=63-2-8, 41=63-2-8, 42=63-2-8, 43=63-2-8, 44=63-2-8, 45=63-2-8, 47=63-2-8, 48=63-2-8, 49=63-2-8, 50=63-2-8, 51=63-2-8, 53=63-2-8, 54=63-2-8, 55=63-2-8, 56=63-2-8, 57=63-2-8, 58=63-2-8, 60=63-2-8, 61=63-2-8, 62=63-2-8, 63=63-2-8, 64=63-2-8, 65=63-2-8
Max Horiz 1=421 (LC 9)
Max Uplift 1=-67 (LC 13), 33=-34 (LC 13), 34=-166 (LC 13), 35=-75 (LC 13), 36=-95 (LC 13), 37=-90 (LC 13), 38=-92 (LC 13), 39=-104 (LC 13), 41=-63 (LC 13), 43=-54 (LC 9), 44=-62 (LC 8), 45=-57 (LC 8), 47=-56 (LC 9), 48=-57 (LC 8), 49=-64 (LC 8), 50=-56 (LC 9), 51=-25 (LC 9), 53=-73 (LC 12), 54=-107 (LC 12), 55=-93 (LC 12), 56=-78 (LC 8), 57=-67 (LC 8), 58=-68 (LC 12), 60=-70 (LC 8), 61=-70 (LC 12), 62=-64 (LC 8), 63=-79 (LC 12), 64=-34 (LC 8), 65=-194 (LC 12)
Max Grav 1=244 (LC 20), 33=421 (LC 1), 34=97 (LC 11), 35=201 (LC 20), 36=173 (LC 20), 37=179 (LC 20), 38=177 (LC 20), 39=180 (LC 20), 41=180 (LC 20), 42=217 (LC 22), 43=172 (LC 24), 44=161 (LC 23), 45=160 (LC 23), 47=160 (LC 1), 48=160 (LC 23), 49=160 (LC 24), 50=171 (LC 1), 51=238 (LC 22), 53=196 (LC 19), 54=174 (LC 19), 55=144 (LC 23), 56=163 (LC 23), 57=161 (LC 1), 58=160 (LC 1), 60=162 (LC 23), 61=161 (LC 1), 62=154 (LC 23), 63=173 (LC 1), 64=105 (LC 23), 65=311 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-338/209, 2-3=-284/194, 3-4=-267/210, 4-5=-241/217, 5-7=-217/238, 7-8=-184/259, 8-9=-169/280, 9-10=-155/300, 10-11=-140/322, 11-12=-176/381, 12-13=-240/431, 13-14=-287/456, 14-15=-268/421, 15-16=-267/421, 16-17=-267/421, 17-18=-267/421, 18-19=-267/421, 19-20=-267/421, 20-21=-267/421, 21-22=-268/421, 22-23=-287/449, 23-24=-240/396, 24-25=-180/325, 25-27=-125/258, 27-28=-70/192, 28-29=-15/146, 29-30=0/140, 30-31=-66/137, 31-32=-131/202

March 18,2025

Continued on page 2

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

BOT CHORD 1-65=-291/195, 64-65=-190/170, 63-64=-190/170, 62-63=-190/170, 61-62=-190/170, 60-61=-192/170, 58-60=-192/170, 57-58=-192/170, 56-57=-192/170, 55-56=-192/170, 54-55=-192/170, 53-54=-192/170, 51-53=-192/170, 50-51=-192/170, 49-50=-192/170, 48-49=-192/170, 47-48=-192/170, 45-47=-192/170, 44-45=-192/170, 43-44=-192/170, 42-43=-192/170, 41-42=-192/170, 39-41=-192/170, 38-39=-192/170, 37-38=-192/170, 36-37=-192/170, 35-36=-192/170, 34-35=-192/170, 33-34=-192/170, 32-33=-192/170

WEBS 18-47=-120/82, 19-45=-120/84, 20-44=-121/91, 21-43=-132/78, 22-42=-177/20, 23-41=-141/87, 24-39=-158/128, 25-38=-150/116, 27-37=-149/115, 28-36=-149/116, 29-35=-154/111, 30-34=-121/144, 31-33=-237/111, 17-48=-120/84, 16-49=-120/91, 15-50=-131/80, 14-51=-198/49, 13-53=-156/97, 12-54=-167/131, 11-55=-136/151, 10-56=-123/113, 9-57=-121/101, 8-58=-120/104, 7-60=-122/106, 6-61=-121/105, 5-62=-115/99, 4-63=-126/111, 3-64=-87/70, 2-65=-216/326

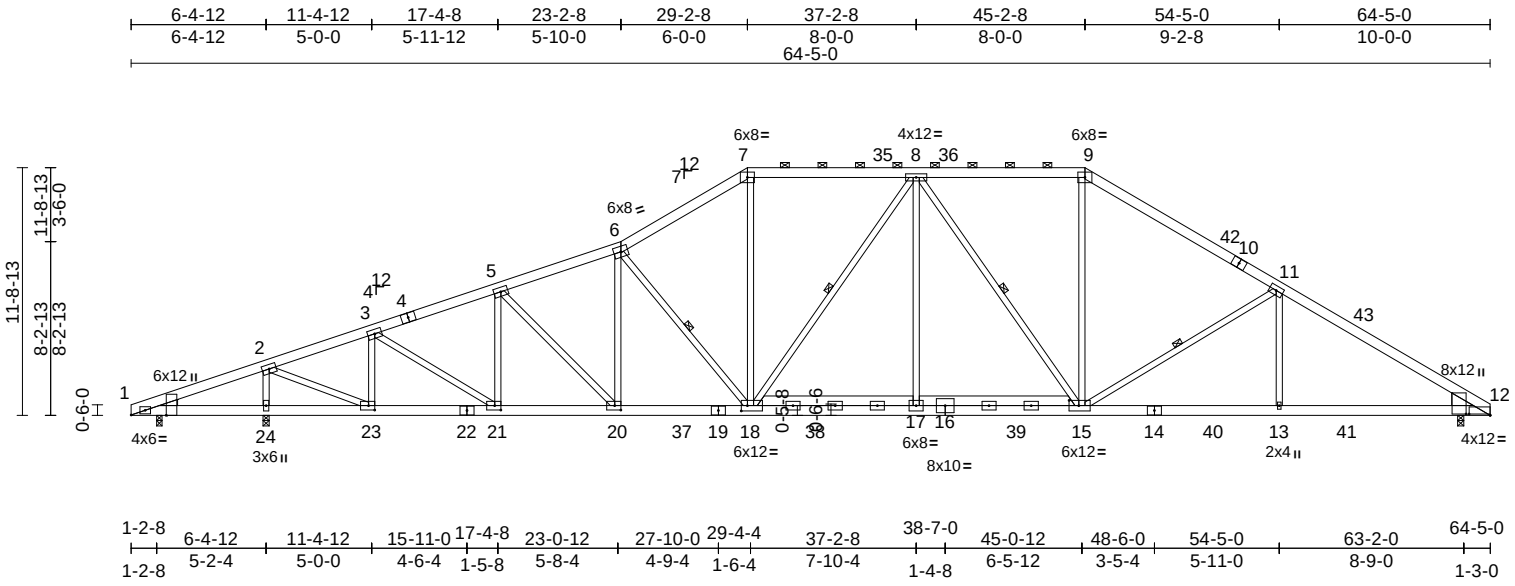
NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) 0-0-0 to 6-5-5, Exterior (2) 6-5-5 to 29-2-8, Corner (3) 29-2-8 to 35-7-13, Exterior (2) 35-7-13 to 45-2-8, Corner (3) 45-2-8 to 51-7-13, Exterior (2) 51-7-13 to 64-5-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) WARNING: This long span truss requires extreme care and experience for proper and safe handling and erection. For general handling and erection guidance, see Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses ("BCSI"), jointly produced by SBCA and TPI. The building owner or the owner's authorized agent shall contract with a qualified registered design professional for the design and inspection of the temporary installation restraint/bracing and the permanent individual truss member restraint/bracing. MiTek assumes no responsibility for truss manufacture, handling, erection, or bracing.
5) Provide adequate drainage to prevent water ponding.
6) All plates are 2x4 (||) MT20 unless otherwise indicated.
7) Gable studs spaced at 2-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) All bearings are assumed to be SP No.2 .
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 67 lb uplift at joint 1, 56 lb uplift at joint 47, 57 lb uplift at joint 45, 62 lb uplift at joint 44, 54 lb uplift at joint 43, 63 lb uplift at joint 41, 104 lb uplift at joint 39, 92 lb uplift at joint 38, 90 lb uplift at joint 37, 95 lb uplift at joint 36, 75 lb uplift at joint 35, 166 lb uplift at joint 34, 34 lb uplift at joint 33, 57 lb uplift at joint 48, 64 lb uplift at joint 49, 56 lb uplift at joint 50, 25 lb uplift at joint 51, 73 lb uplift at joint 53, 107 lb uplift at joint 54, 93 lb uplift at joint 55, 78 lb uplift at joint 56, 67 lb uplift at joint 57, 68 lb uplift at joint 58, 70 lb uplift at joint 60, 70 lb uplift at joint 61, 64 lb uplift at joint 62, 79 lb uplift at joint 63, 34 lb uplift at joint 64, 194 lb uplift at joint 65 and 67 lb uplift at joint 1.
12) Non Standard bearing condition. Review required.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	Bridgeport, Oakley, 1 Cameron Hill Rd.
4513001	A02	Piggyback Base	6	1	I72074076 Job Reference (optional)

Builders FirstSource (Sumter, SC), Sumter, SC - 29153, Run: 8.83 S Mar 11 2025 Print: 8.830 S Mar 11 2025 MiTek Industries, Inc. Mon Mar 17 10:26:34 Page: 1
ID:2DHyNcLkFPHvhdKVaOA_X8yKtT2-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:109.2

Plate Offsets (X, Y): [1:0-4-15,0-0-10], [1:0-0-3,Edge], [12:1-0-0,0-0-12], [12:0-0-12,1-1-11], [15:0-5-8,0-3-0], [18:0-3-8,0-3-0], [20:0-3-8,0-2-8], [21:0-3-8,0-2-8], [23:0-3-8,0-2-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.83	Vert(LL)	-0.22	17-18	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.85	Vert(CT)	-0.43	13-15	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.87	Horz(CT)	0.11	12	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS		Wind(LL)	0.20	17-18	>999	240	Weight: 534 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2 *Except* 1-22,14-12:2x6 SP 2400F 2.0E or 2x6 SP DSS
WEBS 2x4 SP No.3 *Except* 2-23,18-8,15-8:2x4 SP No.2
WEDGE Left: 2x4 SP No.3
Right: 2x8 SP 2400F 2.0E or DSS

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-5-8 oc purlins, except 2-0-0 oc purlins (4-2-15 max.): 7-9.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 6-18, 8-18, 8-15, 11-15

REACTIONS (size) 1=0-3-0, 12=0-3-8, 24=0-3-8
Max Horiz 1=422 (LC 9)
Max Uplift 1=-501 (LC 19), 12=-507 (LC 13), 24=-842 (LC 12)
Max Grav 1=98 (LC 12), 12=2350 (LC 2), 24=3297 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-418/1675, 2-3=-1918/550, 3-5=-3156/905, 5-6=-3373/1007, 7-8=-2633/942, 8-9=-2498/901, 6-7=-3101/1004, 9-11=-2993/939, 11-12=-3471/931
BOT CHORD 1-24=-1523/352, 23-24=-1523/352, 21-23=-523/1758, 20-21=-708/2947, 18-20=-666/3152, 17-18=-511/2890, 15-17=-511/2886, 13-15=-631/2872, 12-13=-631/2872
WEBS 2-24=-2928/814, 2-23=-789/3532, 3-23=-1412/429, 5-21=-648/234, 3-21=-324/1458, 5-20=-26/418, 6-20=-143/94, 6-18=-902/439, 7-18=-264/1182, 8-18=-588/189, 8-17=0/527, 8-15=-793/396, 9-15=-185/1026, 11-15=-697/427, 11-13=-33/241

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 0-0-0 to 6-4-12, Interior (1) 6-4-12 to 29-2-8, Exterior (2) 29-2-8 to 35-7-13, Interior (1) 35-7-13 to 45-2-8, Exterior (2) 45-2-8 to 51-7-13, Interior (1) 51-7-13 to 64-5-0 zone; cantilever left and right exposed ; end vertical left and right exposed; porch left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) WARNING: This long span truss requires extreme care and experience for proper and safe handling and erection. For general handling and erection guidance, see Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses ("BCSI"), jointly produced by SBCA and TPI. The building owner or the owner's authorized agent shall contract with a qualified registered design professional for the design and inspection of the temporary installation restraint/bracing and the permanent individual truss member restraint/bracing. MiTek assumes no responsibility for truss manufacture, handling, erection, or bracing.
4) Provide adequate drainage to prevent water ponding.
5) All plates are 5x8 (=) MT20 unless otherwise indicated.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) All bearings are assumed to be SP 2400F 2.0E or DSS .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 501 lb uplift at joint 1, 842 lb uplift at joint 24 and 507 lb uplift at joint 12.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

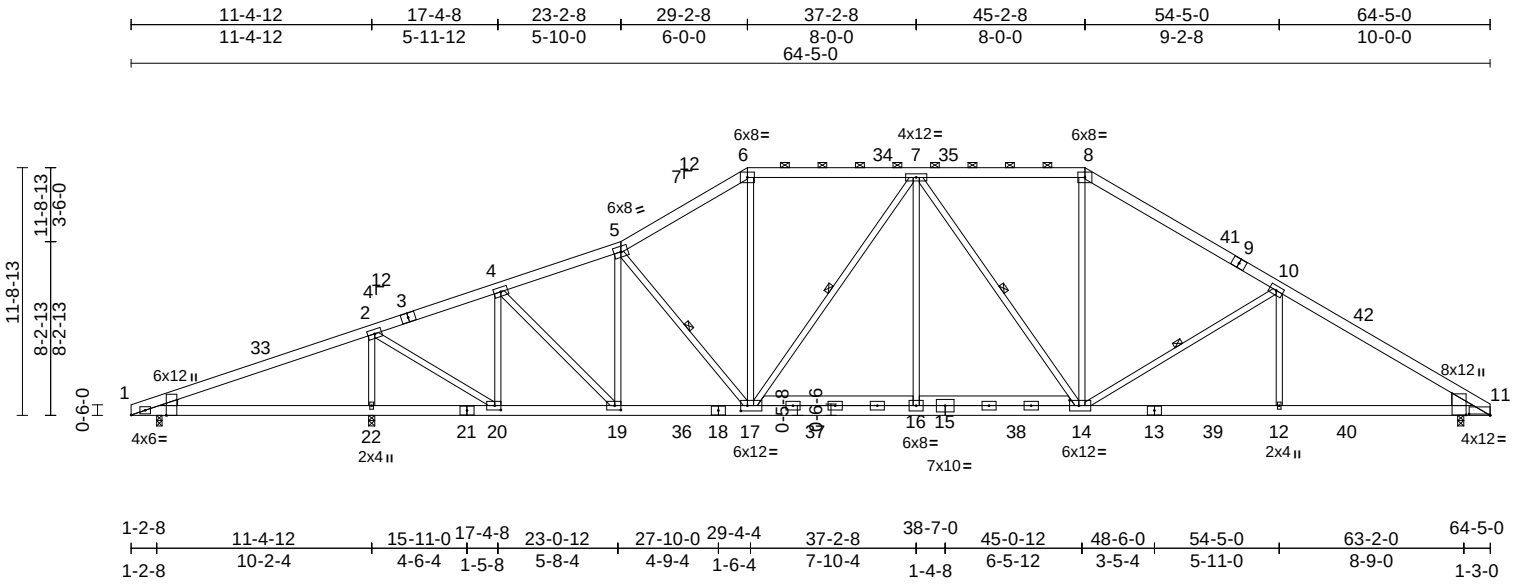
LOAD CASE(S) Standard

March 18,2025

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

Job	Truss	Truss Type	Qty	Ply	Bridgeport, Oakley, 1 Cameron Hill Rd.
4513001	A03	Piggyback Base	3	1	I72074077 Job Reference (optional)

Builders FirstSource (Sumter, SC), Sumter, SC - 29153, Run: 8.83 S Mar 11 2025 Print: 8.830 S Mar 11 2025 MiTek Industries, Inc. Mon Mar 17 10:26:35 Page: 1
ID:NCH8AN8a6ULjsfQXwAvJ9lyKtVu-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:109.2

Plate Offsets (X, Y): [1:0-4-15,0-0-10], [1:0-0-3,Edge], [11:1-0-0,0-0-12], [11:0-0-4,1-1-11], [14:0-5-4,0-3-0], [17:0-3-12,0-3-0], [19:0-3-8,0-2-8], [20:0-3-8,0-2-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.76	Vert(LL)	-0.18	12-14	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.78	Vert(CT)	-0.36	12-14	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.95	Horz(CT)	0.08	11	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS		Wind(LL)	0.14	12-14	>999	240	Weight: 524 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2 *Except* 1-21,13-11:2x6 SP 2400F 2.0E or 2x6 SP DSS
WEBS 2x4 SP No.3 *Except* 7-14,17-7:2x4 SP No.2
WEDGE Left: 2x4 SP No.3
Right: 2x8 SP 2400F 2.0E or DSS

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-11-4 oc purlins, except
2-0-0 oc purlins (4-8-13 max.): 6-8.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 5-17, 7-14, 7-17, 10-14

REACTIONS (size) 1=0-3-0, 11=0-3-8, 22=0-3-8
Max Horiz 1=422 (LC 9)
Max Uplift 1=-373 (LC 8), 11=-491 (LC 13), 22=-651 (LC 8)
Max Grav 1=338 (LC 23), 11=2176 (LC 2), 22=2727 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-81/673, 2-4=-1721/691, 4-5=-2422/872, 6-7=-2110/855, 7-8=-2217/862, 5-6=-2501/919, 8-10=-2671/886, 10-11=-3179/883
BOT CHORD 1-22=-683/244, 20-22=-683/244, 19-20=-483/1556, 17-19=-523/2264, 16-17=-450/2483, 14-16=-450/2479, 12-14=-596/2625, 11-12=-596/2625
WEBS 2-22=-2408/672, 8-14=-158/867, 5-17=-357/324, 6-17=-216/884, 7-14=-586/379, 7-16=0/515, 7-17=-754/217, 10-14=-729/430, 10-12=-9/258, 4-20=-1224/314, 2-20=-327/2306, 4-19=-176/1053, 5-19=-553/177

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 0-0-0 to 6-5-5, Interior (1) 6-5-5 to 29-2-8, Exterior (2) 29-2-8 to 35-7-13, Interior (1) 35-7-13 to 45-2-8, Exterior (2) 45-2-8 to 51-7-13, Interior (1) 51-7-13 to 64-5-0 zone; cantilever left and right exposed ; end vertical left and right exposed; porch left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) WARNING: This long span truss requires extreme care and experience for proper and safe handling and erection. For general handling and erection guidance, see Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses ("BCSI"), jointly produced by SBCA and TPI. The building owner or the owner's authorized agent shall contract with a qualified registered design professional for the design and inspection of the temporary installation restraint/bracing and the permanent individual truss member restraint/bracing. MiTek assumes no responsibility for truss manufacture, handling, erection, or bracing.
4) Provide adequate drainage to prevent water ponding.
5) All plates are 5x8 (=) MT20 unless otherwise indicated.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) All bearings are assumed to be SP 2400F 2.0E or DSS .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 373 lb uplift at joint 1, 651 lb uplift at joint 22 and 491 lb uplift at joint 11.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

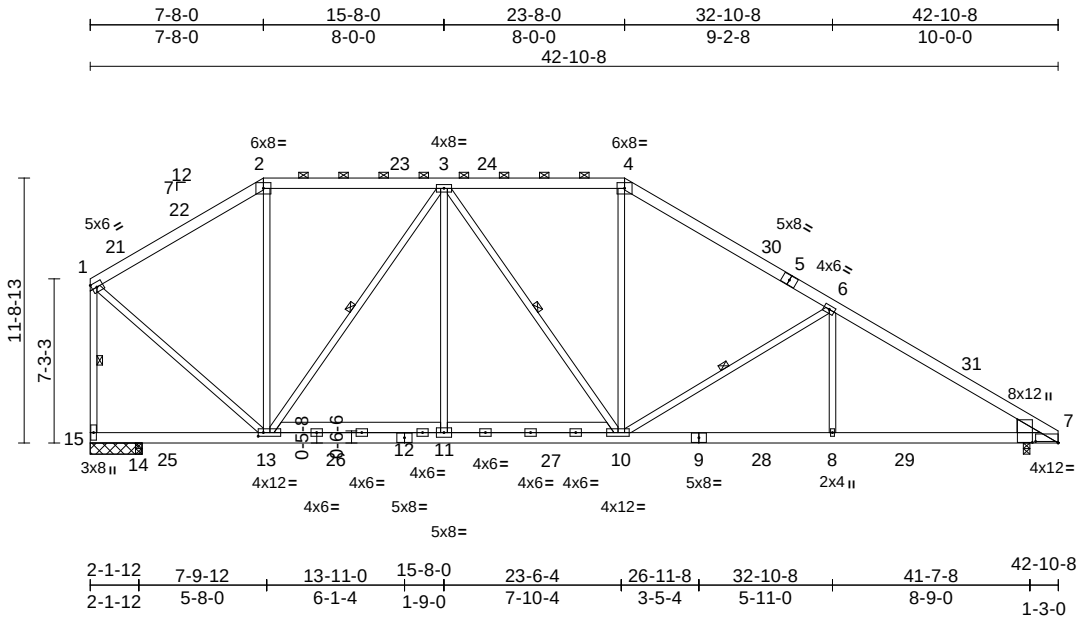
LOAD CASE(S) Standard

March 18,2025

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

Job	Truss	Truss Type	Qty	Ply	Bridgeport, Oakley, 1 Cameron Hill Rd.
4513001	A04	Piggyback Base	1	1	I72074078 Job Reference (optional)

Builders FirstSource (Sumter, SC), Sumter, SC - 29153, Run: 8.83 E Feb 18 2025 Print: 8.830 E Feb 18 2025 MiTek Industries, Inc. Tue Mar 18 09:39:09 Page: 1
ID:dgj6Q8W0Xcg9Ui33vt2BYiyKtaZ-Kc3mkyI0qxopUt64mNNy6xv7S_NAqqjRLYIrSSzZvEo



Scale = 1:102.1

Plate Offsets (X, Y): [7:1-0-0,0-0-12], [7:0-0-4,1-1-11], [13:0-2-12,0-2-0]

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	0.67	Vert(LL)	-0.14	8-10	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.99	Vert(CT)	-0.28	8-10	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.95	Horz(CT)	0.06	7	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS		Wind(LL)	0.10	8-10	>999	240	Weight: 385 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3 *Except* 15-1,13-3,10-3:2x4 SP No.2
WEDGE Right: 2x8 SP 2400F 2.0E or DSS

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-7-13 oc purlins, except end verticals, and 2-0-0 oc purlins (5-7-5 max.): 2-4.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
2-2-0 oc bracing: 7-8.
WEBS 1 Row at midpt 1-15, 3-13, 3-10, 6-10

REACTIONS (size) 7=0-3-8, 14=0-3-8, 15=2-3-8
Max Horiz 15=-455 (LC 13)
Max Uplift 7=-420 (LC 13), 15=-310 (LC 12)
Max Grav 7=1800 (LC 20), 14=256 (LC 2), 15=1520 (LC 2)

FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-21=-1157/394, 21-22=-1090/405, 2-22=-1068/431, 2-23=-942/453, 3-23=-942/453, 3-24=-1592/640, 4-24=-1592/640, 1-15=-1557/549, 4-30=-1840/628, 5-30=-1875/591, 5-6=-1954/577, 6-31=-2472/645, 7-31=-2534/600
BOT CHORD 14-15=-276/451, 14-25=-276/451, 13-25=-276/451, 13-26=-302/1571, 12-26=-300/1573, 11-12=-300/1572, 11-27=-299/1577, 10-27=-301/1569, 9-10=-401/2074, 9-28=-401/2074, 8-28=-401/2074, 8-29=-401/2074, 7-29=-401/2074
WEBS 1-13=-328/1251, 3-13=-1136/354, 3-11=0/503, 3-10=-185/355, 4-10=-27/509, 6-10=-796/446, 6-8=0/305

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 10-5-4 to 14-8-11, Interior (1) 14-8-11 to 17-11-8, Exterior (2) 17-11-8 to 24-0-4, Interior (1) 24-0-4 to 33-11-8, Exterior (2) 33-11-8 to 40-0-4, Interior (1) 40-0-4 to 53-2-0 zone; cantilever left and right exposed ; end vertical right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * 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.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 310 lb uplift at joint 15 and 420 lb uplift at joint 7.
7) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

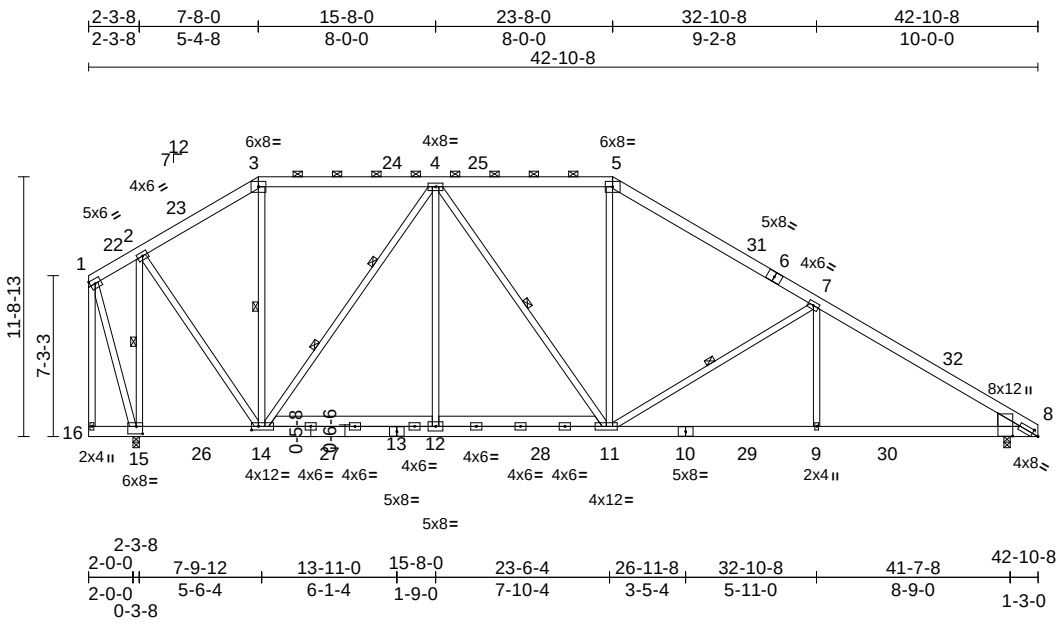
LOAD CASE(S) Standard

March 18,2025

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

Job	Truss	Truss Type	Qty	Ply	Bridgeport, Oakley, 1 Cameron Hill Rd.
4513001	A05	Piggyback Base	4	1	I72074079 Job Reference (optional)

Builders FirstSource (Sumter, SC), Sumter, SC - 29153, Run: 8.83 S Mar 11 2025 Print: 8.830 S Mar 11 2025 MiTek Industries, Inc. Mon Mar 17 10:26:35 Page: 1
ID:kqMuJWfsUUcMreZDhlIJdWyKtbh-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:104.1

Plate Offsets (X, Y): [8:0-3-8,0-2-0], [8:0-0-4,1-1-11], [14:0-3-12,0-2-0], [15:0-3-8,0-4-0]

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	0.63	Vert(LL)	-0.13	9-11	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.93	Vert(CT)	-0.26	9-11	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.75	Horz(CT)	0.05	8	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS		Wind(LL)	0.09	9-11	>999	240	Weight: 405 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3 *Except* 16-1,14-4,11-4:2x4 SP No.2
WEDGE Right: 2x8 SP 2400F 2.0E or DSS

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-10-7 oc purlins, except end verticals, and 2-0-0 oc purlins (5-10-6 max.): 3-5.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 1 Row at midpt 3-14, 4-11, 7-11, 2-15
WEBS 2 Rows at 1/3 pts 4-14

REACTIONS (size) 8=0-3-8, 15=0-3-8
Max Horiz 15=-455 (LC 13)
Max Uplift 8=-404 (LC 13), 15=-280 (LC 12)
Max Grav 8=1734 (LC 20), 15=1842 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-22/50, 2-3=-878/359, 3-4=-704/362, 4-5=-1463/593, 1-16=-46/17, 5-7=-1807/575, 7-8=-2400/596
BOT CHORD 15-16=-1/2, 14-15=-276/453, 12-14=-274/1386, 11-12=-274/1391, 9-11=-359/1960, 8-9=-359/1960
WEBS 1-15=-15/17, 4-14=-1205/359, 3-14=-34/160, 4-12=0/486, 4-11=-204/381, 5-11=-4/439, 7-11=-810/450, 7-9=0/311, 2-14=-286/1237, 2-15=-1635/561

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 10-5-4 to 14-8-11, Interior (1) 14-8-11 to 17-11-8, Exterior (2) 17-11-8 to 24-0-4, Interior (1) 24-0-4 to 33-11-8, Exterior (2) 33-11-8 to 40-0-4, Interior (1) 40-0-4 to 53-2-0 zone; cantilever right exposed ; end vertical right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * 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.
6) All bearings are assumed to be SP No.2 .
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 280 lb uplift at joint 15 and 404 lb uplift at joint 8.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

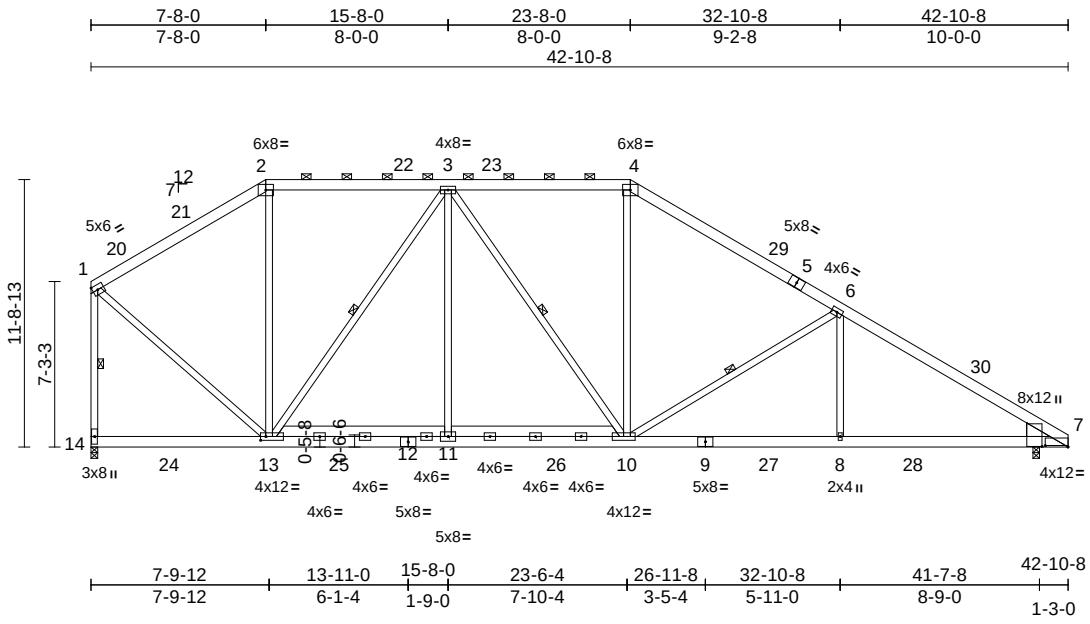
March 18,2025

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

Job	Truss	Truss Type	Qty	Ply	Bridgeport, Oakley, 1 Cameron Hill Rd.
4513001	A06	Piggyback Base	6	1	I72074080 Job Reference (optional)

Builders FirstSource (Sumter, SC), Sumter, SC - 29153, Run: 8.83 S Mar 11 2025 Print: 8.830 S Mar 11 2025 MiTek Industries, Inc. Mon Mar 17 10:26:36 Page: 1

ID:Q2iPkpjV9KR3f2KTJ8tn8nyKteB-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:101.1

Plate Offsets (X, Y): [7:1-0-0,0-0-12], [7:0-0-4,1-1-11], [13:0-2-12,0-2-0]

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	0.67	Vert(LL)	-0.14	8-10	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	1.00	Vert(CT)	-0.28	8-10	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.91	Horz(CT)	0.06	7	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS		Wind(LL)	0.10	8-10	>999	240	Weight: 385 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3 *Except* 14-1,13-3,10-3:2x4 SP No.2
WEDGE Right: 2x8 SP 2400F 2.0E or DSS

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-7-7 oc purlins, except end verticals, and 2-0-0 oc purlins (5-6-14 max.): 2-4.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
2-2-0 oc bracing: 7-8.
WEBS 1 Row at midpt 1-14, 3-13, 3-10, 6-10

REACTIONS (size) 7=0-3-8, 14=0-3-8
Max Horiz 14=-455 (LC 13)
Max Uplift 7=-418 (LC 13), 14=-265 (LC 12)
Max Grav 7=1811 (LC 20), 14=1764 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1219/424, 2-3=-995/447, 3-4=-1612/638, 1-14=-1632/540, 4-6=-1977/626, 6-7=-2555/642
BOT CHORD 13-14=-273/452, 11-13=-297/1598, 10-11=-297/1603, 8-10=-399/2091, 7-8=-399/2091
WEBS 1-13=-322/1315, 2-13=-28/281, 3-13=-1088/361, 3-11=0/471, 3-10=-186/351, 4-10=-26/520, 6-10=-793/447, 6-8=0/303

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 10-5-4 to 14-8-11, Interior (1) 14-8-11 to 17-11-8, Exterior (2) 17-11-8 to 24-0-4, Interior (1) 24-0-4 to 33-11-8, Exterior (2) 33-11-8 to 40-0-4, Interior (1) 40-0-4 to 53-2-0 zone; cantilever left and right exposed ; end vertical right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * 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.
6) All bearings are assumed to be SP No.2 .
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 265 lb uplift at joint 14 and 418 lb uplift at joint 7.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

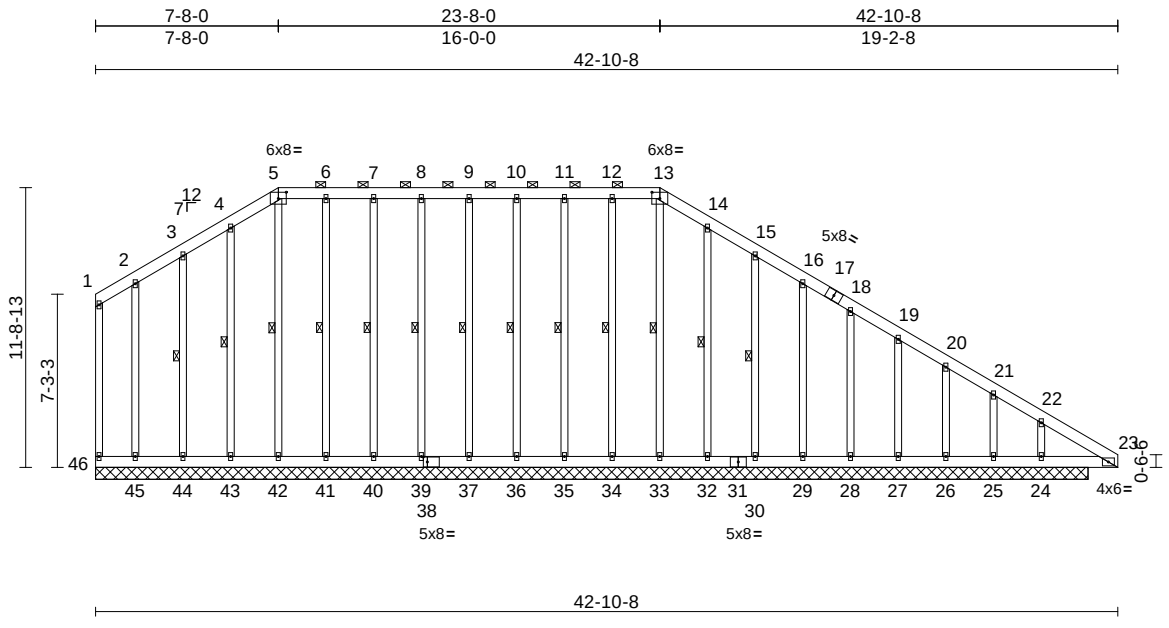
LOAD CASE(S) Standard

March 18,2025

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

Job	Truss	Truss Type	Qty	Ply	Bridgeport, Oakley, 1 Cameron Hill Rd.
4513001	A07	Piggyback Base Supported Gable	1	1	I72074081 Job Reference (optional)

Builders FirstSource (Sumter, SC), Sumter, SC - 29153, Run: 8.83 S Mar 11 2025 Print: 8.830 S Mar 11 2025 MiTek Industries, Inc. Mon Mar 17 10:26:36 Page: 1
ID:cL9OFHdjRgQSiGYbypXX0HyKtOp-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:96.6

Plate Offsets (X, Y): [5:0-4-0,0-3-3], [13:0-4-0,0-3-3], [38:0-2-0,0-2-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.21	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.31	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.16	Horiz(TL)	0.02	24	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 470 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (10-0-0 max.): 5-13.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 14-32, 15-30, 13-33, 12-34, 11-35, 10-36, 9-37, 8-39, 7-40, 6-41, 5-42, 4-43, 3-44

REACTIONS (size) 24=41-7-8, 25=41-7-8, 26=41-7-8, 27=41-7-8, 28=41-7-8, 29=41-7-8, 30=41-7-8, 32=41-7-8, 33=41-7-8, 34=41-7-8, 35=41-7-8, 36=41-7-8, 37=41-7-8, 39=41-7-8, 40=41-7-8, 41=41-7-8, 42=41-7-8, 43=41-7-8, 44=41-7-8, 45=41-7-8, 46=41-7-8
Max Horiz 46=-455 (LC 13)
Max Uplift 24=-92 (LC 9), 25=-574 (LC 13), 26=-11 (LC 12), 27=-114 (LC 13), 28=-86 (LC 13), 29=-93 (LC 13), 30=-97 (LC 13), 32=-84 (LC 13), 33=-45 (LC 8), 34=-60 (LC 8), 35=-61 (LC 9), 36=-57 (LC 9), 37=-56 (LC 8), 39=-57 (LC 9), 40=-60 (LC 9), 41=-58 (LC 8), 42=-3 (LC 8), 43=-77 (LC 12), 44=-103 (LC 12), 45=-79 (LC 12), 46=-41 (LC 13)
Max Grav 24=715 (LC 19), 25=287 (LC 11), 26=224 (LC 1), 27=177 (LC 20), 28=178 (LC 20), 29=177 (LC 20), 30=179 (LC 20), 32=185 (LC 20), 33=167 (LC 21), 34=164 (LC 24), 35=162 (LC 23), 36=160 (LC 23), 37=160 (LC 1), 39=160 (LC 24), 40=162 (LC 24), 41=164 (LC 1), 42=153 (LC 1), 43=177 (LC 19), 44=184 (LC 19), 45=187 (LC 19), 46=45 (LC 23)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-46=-51/44, 1-2=-27/37, 2-3=-79/94, 3-4=-140/170, 4-5=-191/233, 5-6=-182/231, 6-7=-182/231, 7-8=-182/231, 8-9=-182/231, 9-10=-182/231, 10-11=-182/231, 11-12=-182/231, 12-13=-182/231, 13-14=-191/248, 14-15=-140/214, 15-16=-151/172, 16-18=-170/172, 18-19=-200/196, 19-20=-241/222, 20-21=-293/242, 21-22=-462/299, 22-23=-419/294
BOT CHORD 45-46=-277/449, 44-45=-277/449, 43-44=-277/449, 42-43=-277/449, 41-42=-277/449, 40-41=-277/449, 39-40=-277/449, 37-39=-277/449, 36-37=-277/449, 35-36=-277/449, 34-35=-277/449, 33-34=-277/449, 32-33=-277/449, 30-32=-277/449, 29-30=-277/449, 28-29=-277/449, 27-28=-277/449, 26-27=-277/449, 25-26=-277/449, 24-25=-277/449, 23-24=-277/449
WEBS 14-32=-145/108, 15-30=-156/121, 16-29=-150/116, 18-28=-149/116, 19-27=-150/118, 20-26=-146/87, 21-25=-172/312, 22-24=-331/29, 13-33=-127/69, 12-34=-124/84, 11-35=-122/87, 10-36=-120/84, 9-37=-120/82, 8-39=-120/84, 7-40=-122/87, 6-41=-124/82, 5-42=-113/27, 4-43=-140/101, 3-44=-161/127, 2-45=-135/104

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) 10-5-4 to 14-8-11, Exterior (2) 14-8-11 to 17-11-8, Corner (3) 17-11-8 to 21-11-8, Exterior (2) 21-11-8 to 33-11-8, Corner (3) 33-11-8 to 37-11-8, Exterior (2) 37-11-8 to 53-2-0 zone; cantilever left and right exposed ; end vertical right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

March 18,2025

Continued on page 2

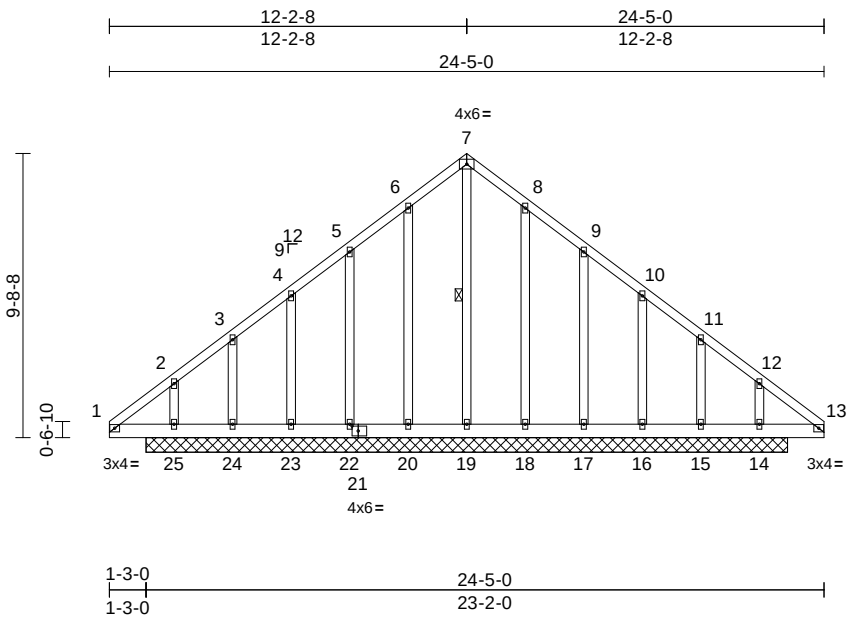
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

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) Provide adequate drainage to prevent water ponding.
5) All plates are 2x4 (||) MT20 unless otherwise indicated.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) All bearings are assumed to be SP No.2 .
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 41 lb uplift at joint 46, 84 lb uplift at joint 32, 97 lb uplift at joint 30, 93 lb uplift at joint 29, 86 lb uplift at joint 28, 114 lb uplift at joint 27, 11 lb uplift at joint 26, 574 lb uplift at joint 25, 92 lb uplift at joint 24, 45 lb uplift at joint 33, 60 lb uplift at joint 34, 61 lb uplift at joint 35, 57 lb uplift at joint 36, 56 lb uplift at joint 37, 57 lb uplift at joint 39, 60 lb uplift at joint 40, 58 lb uplift at joint 41, 3 lb uplift at joint 42, 77 lb uplift at joint 43, 103 lb uplift at joint 44 and 79 lb uplift at joint 45.
11) Non Standard bearing condition. Review required.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	Bridgeport, Oakley, 1 Cameron Hill Rd.
4513001	B01	Common Supported Gable	1	1	I72074082 Job Reference (optional)

Builders FirstSource (Sumter, SC), Sumter, SC - 29153, Run: 8.83 S Mar 11 2025 Print: 8.830 S Mar 11 2025 MiTek Industries, Inc. Mon Mar 17 10:26:37 Page: 1
ID:FSYDYJvn3R0DAgcdi9uYNxyKtJH-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:78.7

Plate Offsets (X, Y): [21:0-2-8,0-2-0]

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	0.10	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.18	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.18	Horiz(TL)	0.00	14	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 183 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 10-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 7-19

REACTIONS (size) 14=21-11-0, 15=21-11-0, 16=21-11-0, 17=21-11-0, 18=21-11-0, 19=21-11-0, 20=21-11-0, 22=21-11-0, 23=21-11-0, 24=21-11-0, 25=21-11-0
Max Horiz 25=306 (LC 9)
Max Uplift 14=-193 (LC 9), 15=-270 (LC 13), 16=-73 (LC 13), 17=-133 (LC 13), 18=-100 (LC 13), 20=-101 (LC 12), 22=-134 (LC 12), 23=-70 (LC 12), 24=-281 (LC 12), 25=-214 (LC 8)
Max Grav 14=358 (LC 19), 15=317 (LC 11), 16=179 (LC 24), 17=189 (LC 20), 18=194 (LC 20), 19=355 (LC 13), 20=194 (LC 19), 22=189 (LC 19), 23=179 (LC 23), 24=333 (LC 10), 25=373 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-186/212, 2-3=-160/206, 3-4=-104/193, 4-5=-140/245, 5-6=-221/304, 6-7=-292/351, 7-8=-292/351, 8-9=-221/295, 9-10=-140/236, 10-11=-90/186, 11-12=-145/194, 12-13=-173/202
BOT CHORD 1-25=-183/183, 24-25=-172/175, 23-24=-172/175, 22-23=-172/175, 20-22=-172/175, 19-20=-172/175, 18-19=-172/175, 17-18=-172/175, 16-17=-172/175, 15-16=-172/175, 14-15=-172/175, 13-14=-172/175
WEBS 7-19=-331/209, 6-20=-159/127, 5-22=-174/148, 4-23=-166/131, 3-24=-170/167, 2-25=-167/134, 8-18=-159/127, 9-17=-174/148, 10-16=-166/131, 11-15=-170/165, 12-14=-167/134

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) 0-0-0 to 3-0-0, Exterior (2) 3-0-0 to 12-2-8, Corner (3) 12-2-8 to 15-2-8, Exterior (2) 15-2-8 to 24-5-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 (||) MT20 unless otherwise indicated.
5) Gable studs spaced at 2-0-0 oc.
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) All bearings are assumed to be SP No.2 .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 101 lb uplift at joint 20, 134 lb uplift at joint 22, 70 lb uplift at joint 23, 281 lb uplift at joint 24, 214 lb uplift at joint 25, 100 lb uplift at joint 18, 133 lb uplift at joint 17, 73 lb uplift at joint 16, 270 lb uplift at joint 15 and 193 lb uplift at joint 14.
10) Non Standard bearing condition. Review required.

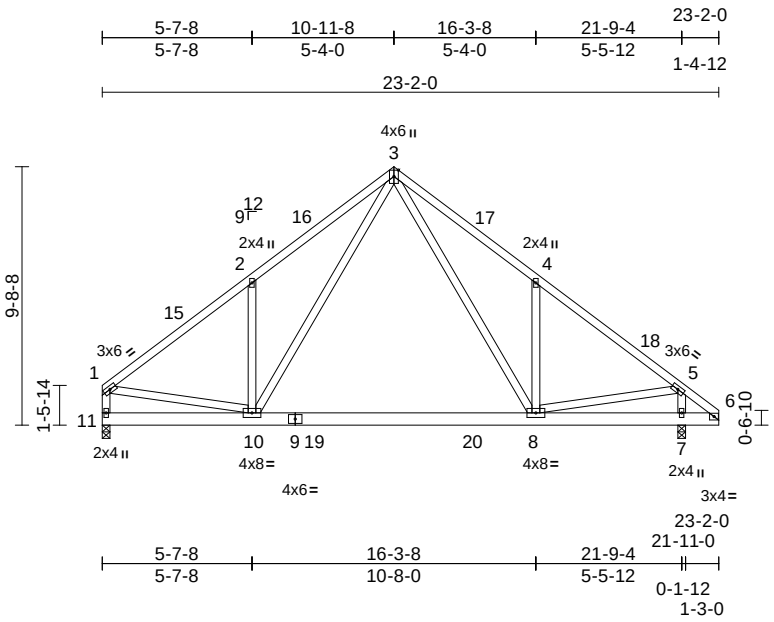
LOAD CASE(S) Standard

March 18,2025

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

Job	Truss	Truss Type	Qty	Ply	Bridgeport, Oakley, 1 Cameron Hill Rd.
4513001	B02	Common	5	1	I72074083 Job Reference (optional)

Builders FirstSource (Sumter, SC), Sumter, SC - 29153, Run: 8.83 S Mar 11 2025 Print: 8.830 S Mar 11 2025 MiTek Industries, Inc. Mon Mar 17 10:26:37 Page: 1
ID:iZ?uUP5lrrakeN_lGaBr9pyKtKK-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:86.6

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.39	Vert(LL)	-0.13	8-10	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.49	Vert(CT)	-0.23	8-10	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.76	Horz(CT)	0.01	7	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS		Wind(LL)	0.04	8-10	>999	240	Weight: 162 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3 *Except* 11-1:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-0-7 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 7=0-3-8, 11=0-3-8
Max Horiz 11=-329 (LC 10)
Max Uplift 7=-239 (LC 13), 11=-200 (LC 12)
Max Grav 7=980 (LC 1), 11=878 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1040/250, 2-3=-1203/505, 3-4=-1188/504, 4-5=-1038/248, 5-6=-80/66, 1-11=-873/233
BOT CHORD 10-11=-314/363, 8-10=-36/617, 7-8=-62/106, 6-7=-62/106
WEBS 1-10=-56/770, 5-7=-1034/356, 2-10=-498/424, 4-8=-477/406, 5-8=-40/788, 3-10=-350/682, 3-8=-349/662

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 0-1-12 to 3-1-12, Interior (1) 3-1-12 to 10-11-8, Exterior (2) 10-11-8 to 13-11-8, Interior (1) 13-11-8 to 23-2-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * 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.
5) All bearings are assumed to be SP No.2 .
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 200 lb uplift at joint 11 and 239 lb uplift at joint 7.

LOAD CASE(S) Standard

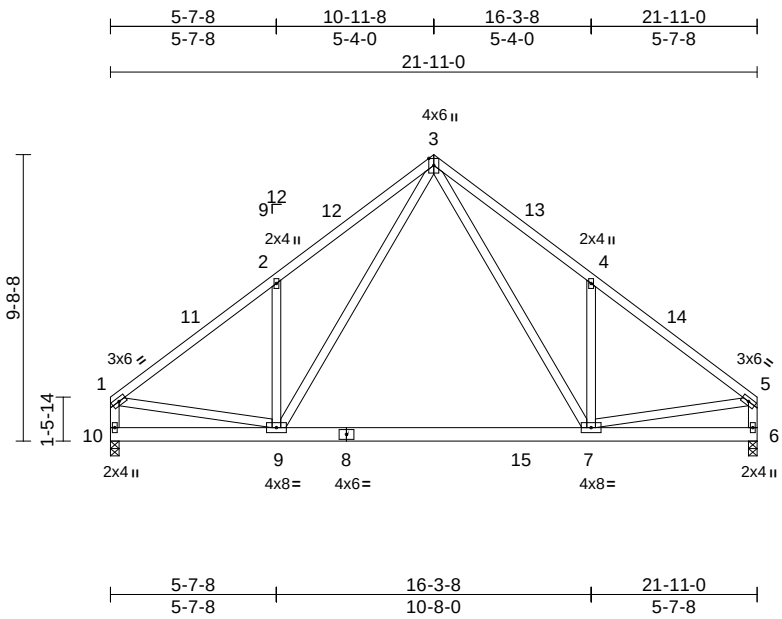
March 18,2025

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

Job	Truss	Truss Type	Qty	Ply	Bridgeport, Oakley, 1 Cameron Hill Rd.
4513001	B03	Common	6	1	I72074084 Job Reference (optional)

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.83 S Mar 11 2025 Print: 8.830 S Mar 11 2025 MiTek Industries, Inc. Mon Mar 17 10:26:37 Page: 1
ID:XGP0t5arQ8c2RX2Rc_vDnFyKtJi-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:78.1

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	0.39	Vert(LL)	-0.14	7-9	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.49	Vert(CT)	-0.23	7-9	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.76	Horz(CT)	0.01	6	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS		Wind(LL)	0.04	7-9	>999	240	Weight: 156 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3 *Except* 10-1,6-5:2x4 SP No.2

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

REACTIONS (size) 6=0-3-8, 10=0-3-8
Max Horiz 10=-329 (LC 8)
Max Uplift 6=-201 (LC 13), 10=-201 (LC 12)
Max Grav 6=880 (LC 20), 10=880 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1044/255, 2-3=-1205/505, 3-4=-1205/505, 4-5=-1045/255, 1-10=-875/237, 5-6=-874/237
BOT CHORD 9-10=-335/362, 7-9=-54/620, 6-7=-84/128
WEBS 1-9=-57/773, 5-7=-59/777, 2-9=-499/424, 4-7=-499/424, 3-9=-351/681, 3-7=-351/681

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 0-1-12 to 3-1-12, Interior (1) 3-1-12 to 10-11-8, Exterior (2) 10-11-8 to 13-11-8, Interior (1) 13-11-8 to 21-9-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * 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.
5) All bearings are assumed to be SP No.2 .
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 201 lb uplift at joint 10 and 201 lb uplift at joint 6.

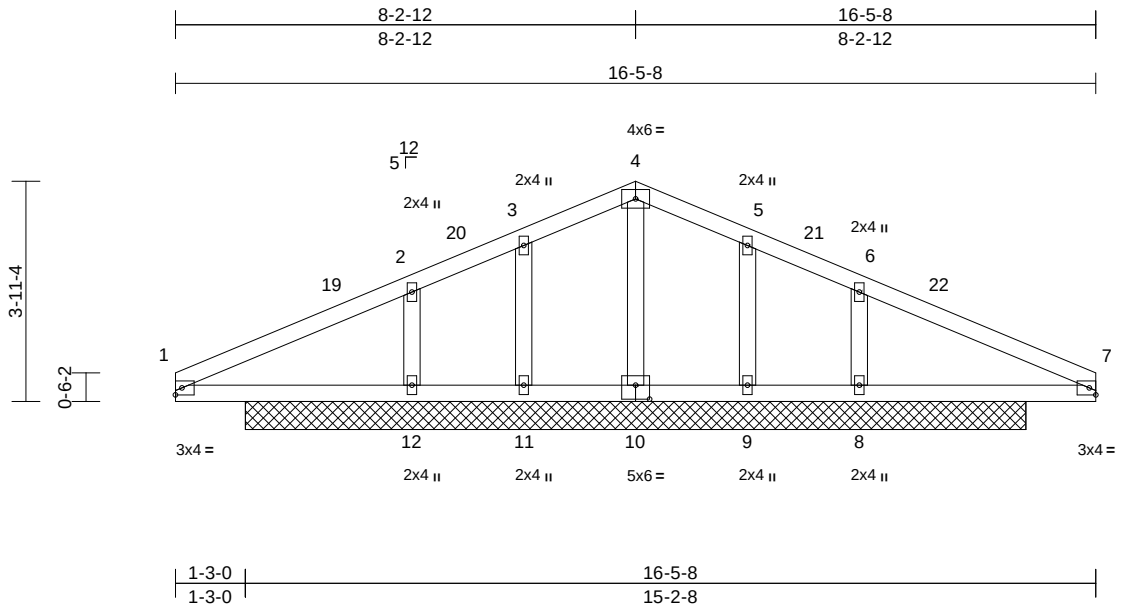
LOAD CASE(S) Standard

March 18,2025

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

Job	Truss	Truss Type	Qty	Ply	Bridgeport, Oakley, 1 Cameron Hill Rd.
4513001	C01	Common	1	1	I72074085 Job Reference (optional)

Builders FirstSource (Sumter, SC), Sumter, SC - 29153, Run: 8.83 S Mar 11 2025 Print: 8.830 S Mar 11 2025 MiTek Industries, Inc. Mon Mar 17 10:26:37 Page: 1
ID:sr?KlG5lay7NMBw5pZk_LRyJgyC-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:41.2

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.42	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.38	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.11	Horiz(TL)	0.00	8	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 69 lb	FT = 20%

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

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

REACTIONS (size) 8=13-11-8, 9=13-11-8, 10=13-11-8, 11=13-11-8, 12=13-11-8
Max Horiz 12=77 (LC 12)
Max Uplift 8=-194 (LC 13), 9=-49 (LC 24), 10=-9 (LC 12), 11=-49 (LC 23), 12=-193 (LC 12)
Max Grav 8=511 (LC 24), 9=117 (LC 23), 10=423 (LC 1), 11=117 (LC 24), 12=511 (LC 23)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-184/351, 2-3=-101/297, 3-4=-17/318, 4-5=-17/318, 5-6=-101/297, 6-7=-184/351
BOT CHORD 1-12=-271/218, 11-12=-271/218, 9-11=-271/218, 8-9=-271/218, 7-8=-271/218
WEBS 4-10=-354/144, 3-11=-65/196, 2-12=-312/343, 5-9=-65/196, 6-8=-312/343

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) 0-0-0 to 3-0-0, Exterior (2) 3-0-0 to 8-2-12, Corner (3) 8-2-12 to 11-2-12, Exterior (2) 11-2-12 to 16-5-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable studs spaced at 2-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) All bearings are assumed to be SP No.2 .
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 9 lb uplift at joint 10, 49 lb uplift at joint 11, 193 lb uplift at joint 12, 49 lb uplift at joint 9 and 194 lb uplift at joint 8.
9) Non Standard bearing condition. Review required.

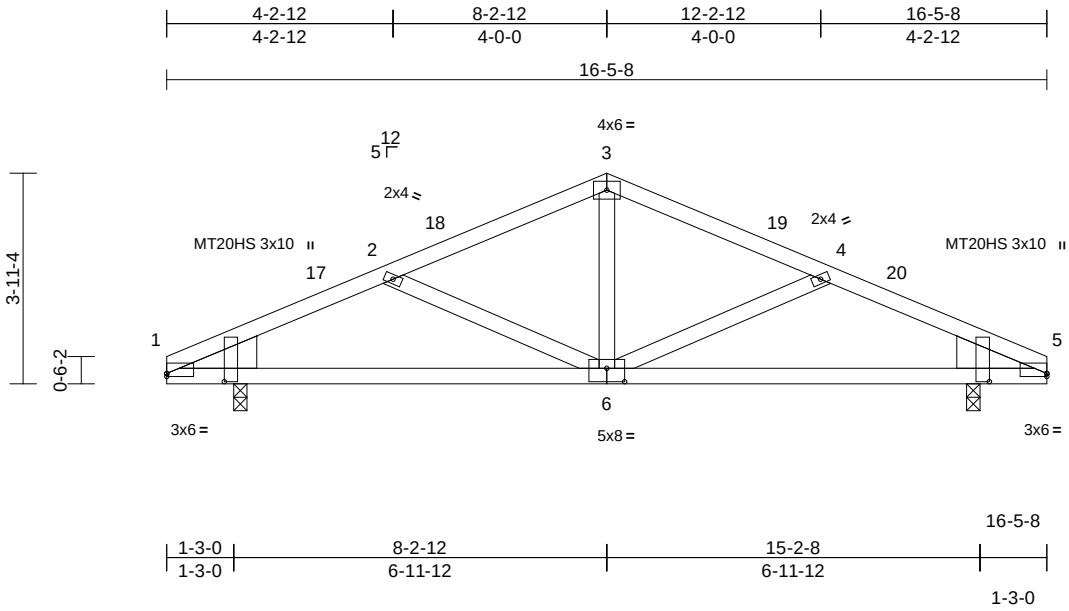
LOAD CASE(S) Standard

March 18,2025

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

Job	Truss	Truss Type	Qty	Ply	Bridgeport, Oakley, 1 Cameron Hill Rd.
4513001	C02	Common	3	1	I72074086 Job Reference (optional)

Builders FirstSource (Sumter, SC), Sumter, SC - 29153, Run: 8.83 S Mar 11 2025 Print: 8.830 S Mar 11 2025 MiTek Industries, Inc. Mon Mar 17 10:26:38 Page: 1
ID:saUuASteaj_nqZ7qKVx_9syJgyT-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:43.1

Plate Offsets (X, Y): [1:Edge,0-0-11], [1:0-1-13,1-0-14], [5:Edge,0-0-11], [5:0-1-13,1-0-14], [6:0-4-0,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.51	Vert(LL)	-0.04	6	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.46	Vert(CT)	-0.06	6-11	>999	240	MT20HS	187/143
BCLL	0.0*	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.02	5	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS		Wind(LL)	0.08	6-11	>999	240	Weight: 78 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3
WEDGE Left: 2x8 SP 2400F 2.0E or DSS
Right: 2x8 SP 2400F 2.0E or DSS

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-10-1 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-11-13 oc bracing.

REACTIONS (size) 1=0-3-0, 5=0-3-0
Max Horiz 1=77 (LC 12)
Max Uplift 1=-309 (LC 8), 5=-309 (LC 9)
Max Grav 1=658 (LC 1), 5=658 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-738/773, 2-3=-619/757, 3-4=-619/757, 4-5=-738/773
BOT CHORD 1-5=-637/617
WEBS 3-6=-387/253, 4-6=-125/157, 2-6=-125/156

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 8-2-12, Exterior (2) 8-2-12 to 11-2-12, Interior (1) 11-2-12 to 16-5-8 zone; cantilever left and right exposed ; end vertical left and right exposed; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) All plates are MT20 plates unless otherwise indicated.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * 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.
6) All bearings are assumed to be SP No.2 .
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 309 lb uplift at joint 1 and 309 lb uplift at joint 5.

LOAD CASE(S) Standard

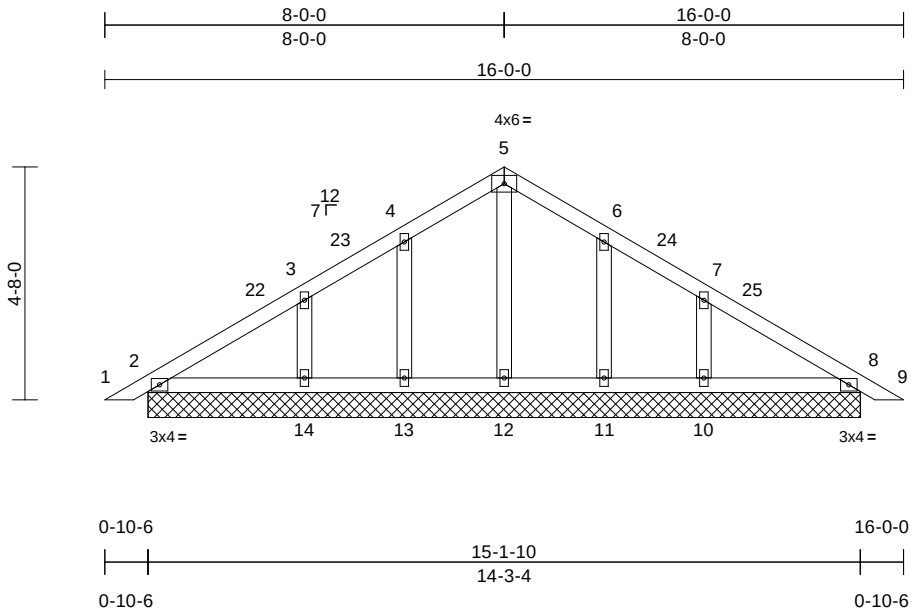
March 18,2025

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

Job	Truss	Truss Type	Qty	Ply	Bridgeport, Oakley, 1 Cameron Hill Rd.
4513001	PB01	Piggyback	2	1	I72074087 Job Reference (optional)

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.83 S Mar 11 2025 Print: 8.830 S Mar 11 2025 MiTek Industries, Inc. Mon Mar 17 10:26:38 Page: 1
ID:93Kt1_8uKucIbJYXLvZr?syKthW-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:46.1

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	0.09	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.08	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	8	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 68 lb	FT = 20%

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

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

REACTIONS (size) 2=14-3-4, 8=14-3-4, 10=14-3-4, 11=14-3-4, 12=14-3-4, 13=14-3-4, 14=14-3-4
Max Horiz 2=150 (LC 11)
Max Uplift 2=-33 (LC 13), 8=-30 (LC 13), 10=-145 (LC 13), 11=-77 (LC 13), 13=-78 (LC 12), 14=-145 (LC 12)
Max Grav 2=155 (LC 1), 8=155 (LC 1), 10=278 (LC 20), 11=149 (LC 20), 12=151 (LC 22), 13=150 (LC 19), 14=279 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-110/100, 3-4=-101/103, 4-5=-136/139, 5-6=-136/130, 6-7=-88/80, 7-8=-66/44, 8-9=0/17
BOT CHORD 2-14=-50/99, 13-14=-50/99, 12-13=-50/99, 11-12=-50/99, 10-11=-50/99, 8-10=-50/99
WEBS 5-12=-105/5, 4-13=-134/109, 3-14=-215/153, 6-11=-134/108, 7-10=-215/153

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 0-3-8 to 3-3-8, Interior (1) 3-3-8 to 8-0-0, Exterior (2) 8-0-0 to 11-0-0, Interior (1) 11-0-0 to 15-8-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 (||) MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) All bearings are assumed to be SP No.2 .
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 33 lb uplift at joint 2, 30 lb uplift at joint 8, 78 lb uplift at joint 13, 145 lb uplift at joint 14, 77 lb uplift at joint 11, 145 lb uplift at joint 10, 33 lb uplift at joint 2 and 30 lb uplift at joint 8.
11) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

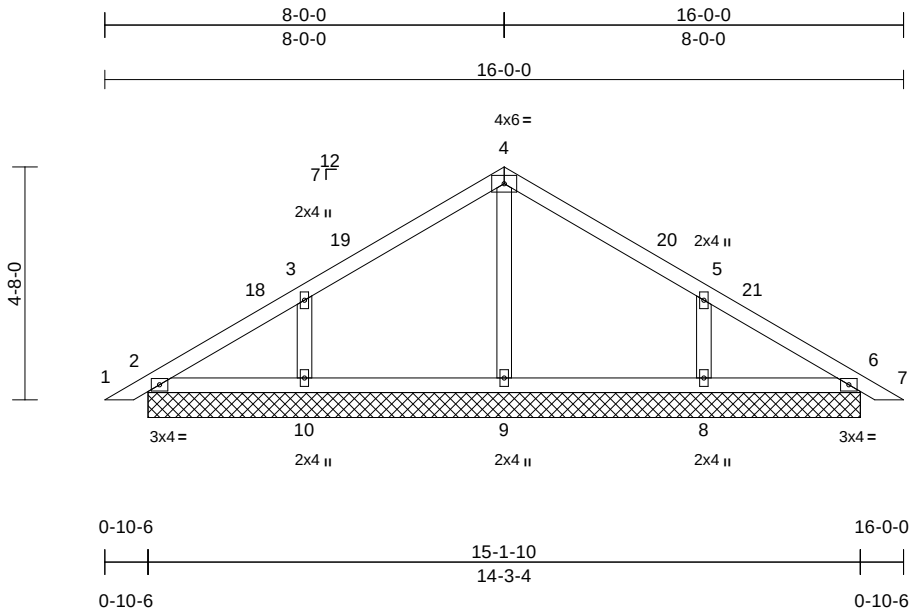
March 18,2025

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

Job	Truss	Truss Type	Qty	Ply	Bridgeport, Oakley, 1 Cameron Hill Rd.
4513001	PB02	Piggyback	20	1	I72074088 Job Reference (optional)

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.83 S Mar 11 2025 Print: 8.830 S Mar 11 2025 MiTek Industries, Inc. Mon Mar 17 10:26:38 Page: 1
ID:s_wf7OF9zyttosJSw0kBPzyKthM-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:46.1

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	0.19	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.11	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.07	Horz(CT)	0.00	6	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 59 lb	FT = 20%

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

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

REACTIONS (size) 2=14-3-4, 6=14-3-4, 8=14-3-4, 9=14-3-4, 10=14-3-4
Max Horiz 2=150 (LC 11)
Max Uplift 2=-36 (LC 13), 6=-26 (LC 13), 8=-199 (LC 13), 10=-200 (LC 12)
Max Grav 2=149 (LC 1), 6=149 (LC 1), 8=370 (LC 20), 9=260 (LC 1), 10=371 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-117/103, 3-4=-140/137, 4-5=-140/123, 5-6=-74/45, 6-7=0/17
BOT CHORD 2-10=-38/90, 9-10=-38/90, 8-9=-38/90, 6-8=-38/90
WEBS 4-9=-181/33, 3-10=-305/234, 5-8=-306/233

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 0-3-8 to 3-3-8, Interior (1) 3-3-8 to 8-0-0, Exterior (2) 8-0-0 to 11-0-0, Interior (1) 11-0-0 to 15-8-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 4-0-0 oc.
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) All bearings are assumed to be SP No.2 .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 36 lb uplift at joint 2, 26 lb uplift at joint 6, 200 lb uplift at joint 10, 199 lb uplift at joint 8, 36 lb uplift at joint 2 and 26 lb uplift at joint 6.
10) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

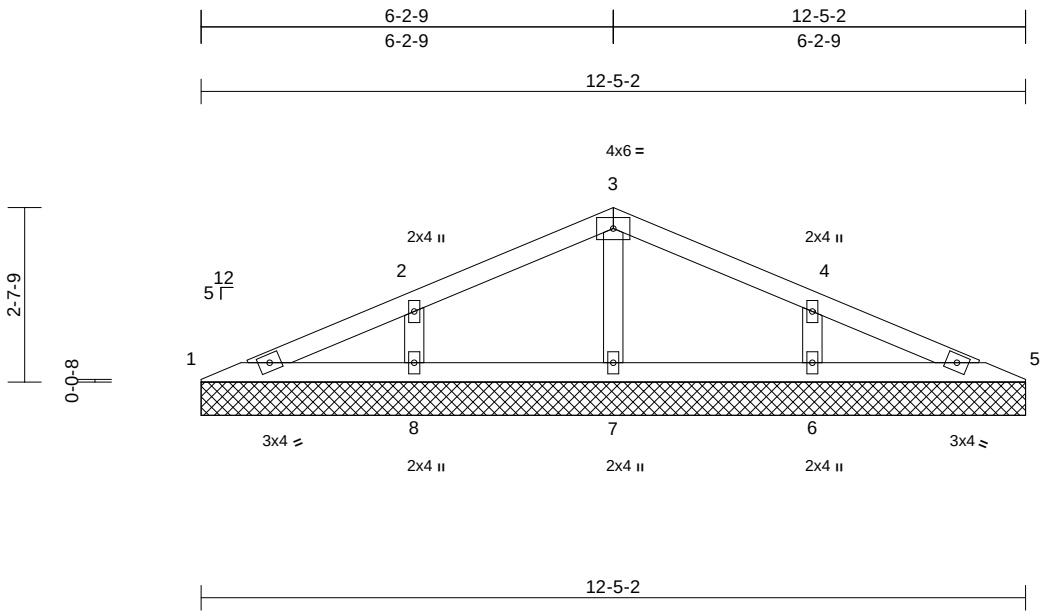
March 18,2025

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

Job	Truss	Truss Type	Qty	Ply	Bridgeport, Oakley, 1 Cameron Hill Rd.
4513001	V01	Valley	1	1	I72074089
					Job Reference (optional)

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.83 S Mar 11 2025 Print: 8.830 S Mar 11 2025 MiTek Industries, Inc. Mon Mar 17 10:26:39 Page: 1
ID:oVfVklJD6nWh85tlR3aRdSyJgxv-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:34.7

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.14	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.07	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.05	Horiz(TL)	0.00	6	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 42 lb	FT = 20%

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

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

REACTIONS (size) 1=12-5-2, 5=12-5-2, 6=12-5-2, 7=12-5-2, 8=12-5-2
Max Horiz 1=56 (LC 12)
Max Uplift 1=-16 (LC 12), 5=-26 (LC 13), 6=-134 (LC 13), 7=-17 (LC 12), 8=-135 (LC 12)
Max Grav 1=89 (LC 23), 5=89 (LC 24), 6=291 (LC 24), 7=249 (LC 1), 8=291 (LC 23)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-118/94, 2-3=0/100, 3-4=0/91, 4-5=-118/94
BOT CHORD 1-8=-60/102, 7-8=-60/58, 6-7=-60/58, 5-6=-60/102
WEBS 3-7=-201/77, 2-8=-206/162, 4-6=-206/162

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 0-1-3 to 3-3-12, Interior (1) 3-3-12 to 6-3-12, Exterior (2) 6-3-12 to 9-3-12, Interior (1) 9-3-12 to 12-6-5 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 3-0-0 oc.
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) All bearings are assumed to be SP No.2 .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 16 lb uplift at joint 1, 26 lb uplift at joint 5, 17 lb uplift at joint 7, 135 lb uplift at joint 8 and 134 lb uplift at joint 6.

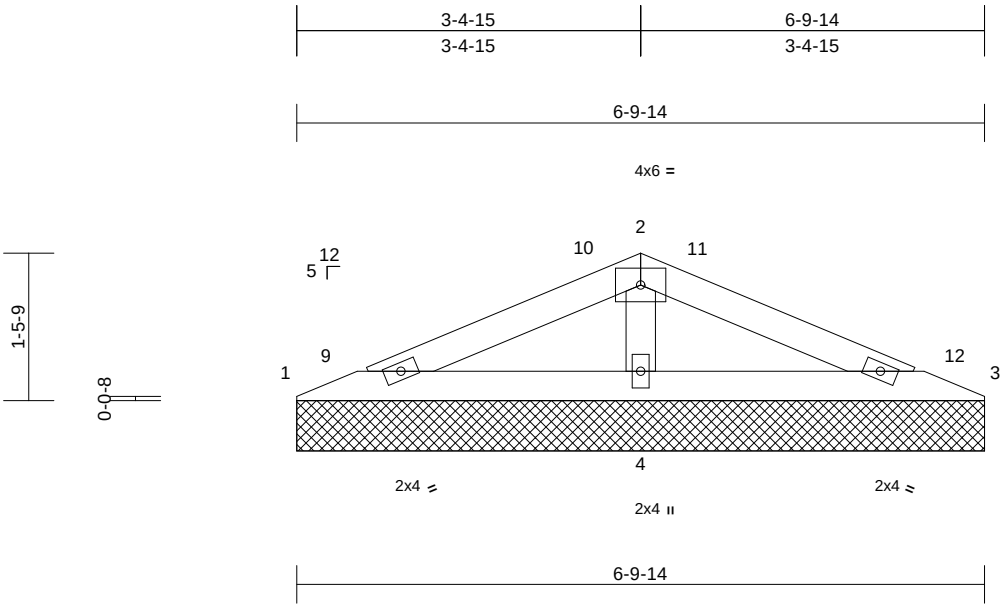
LOAD CASE(S) Standard

March 18,2025

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

Job	Truss	Truss Type	Qty	Ply	Bridgeport, Oakley, 1 Cameron Hill Rd.
4513001	V02	Valley	1	1	I72074090 Job Reference (optional)

Builders FirstSource (Sumter, SC), Sumter, SC - 29153, Run: 8.83 S Mar 11 2025 Print: 8.830 S Mar 11 2025 MiTek Industries, Inc. Mon Mar 17 10:26:39 Page: 1
ID:_cpf2WS7W9v7zoDsatH0ZmyJgxk-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:22.9

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.12	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.14	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.05	Horiz(TL)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MP							Weight: 20 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-9-14 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=6-9-14, 3=6-9-14, 4=6-9-14
Max Horiz 1=29 (LC 12)
Max Uplift 1=-27 (LC 12), 3=-33 (LC 13), 4=-93 (LC 12)
Max Grav 1=84 (LC 23), 3=84 (LC 24), 4=414 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-101/190, 2-3=-101/190
BOT CHORD 1-4=-157/151, 3-4=-157/151
WEBS 2-4=-261/185

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 0-1-3 to 3-1-3, Interior (1) 3-1-3 to 3-6-2, Exterior (2) 3-6-2 to 6-6-2, Interior (1) 6-6-2 to 6-11-2 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 4-0-0 oc.
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) All bearings are assumed to be SP No.2 .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 27 lb uplift at joint 1, 33 lb uplift at joint 3 and 93 lb uplift at joint 4.

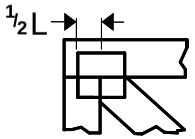
LOAD CASE(S) Standard

March 18,2025

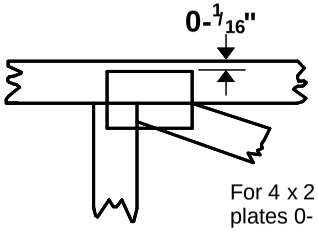
ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Symbols

PLATE LOCATION AND ORIENTATION



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



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

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

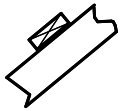
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

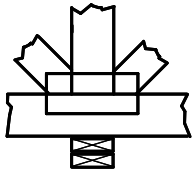
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



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

BEARING

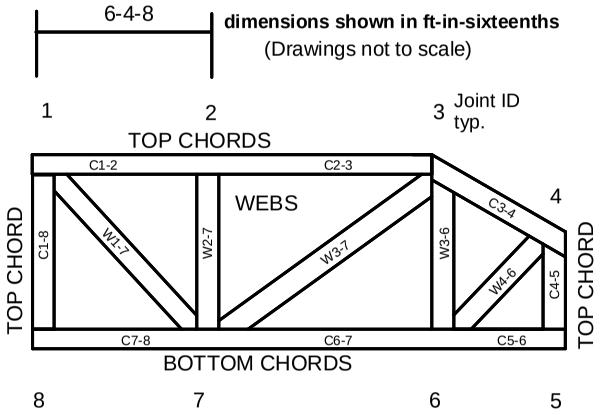


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

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

Numbering System



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

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

Product Code Approvals

ICC-ES Reports:

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

Design General Notes

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

Lumber design values are in accordance with ANSI/TPI 1 section 6.3 These truss designs rely on lumber values established by others.

MiTek®

ENGINEERING BY TRENCO
A MiTek Affiliate

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

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

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