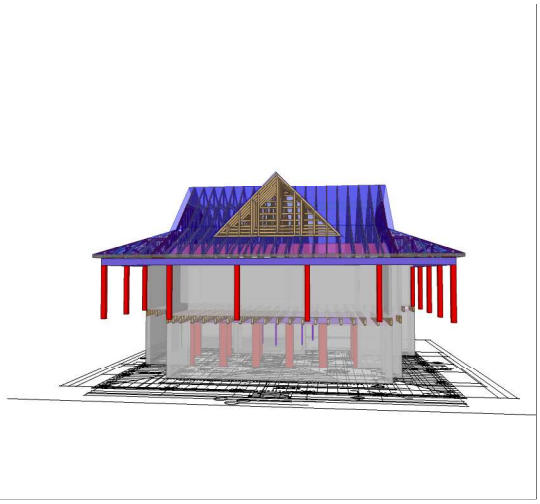
CARTER Lumber

Carter Sanford Component Plant
298 Harvey Faulk Rd
Sanford, NC 27332

Phone #:919-775-1450



Builder: **Tim Johnson Construction**

Model: **93 Dewey**

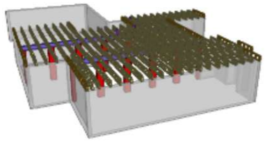
THE PLACEMENT PLAN NOTES:

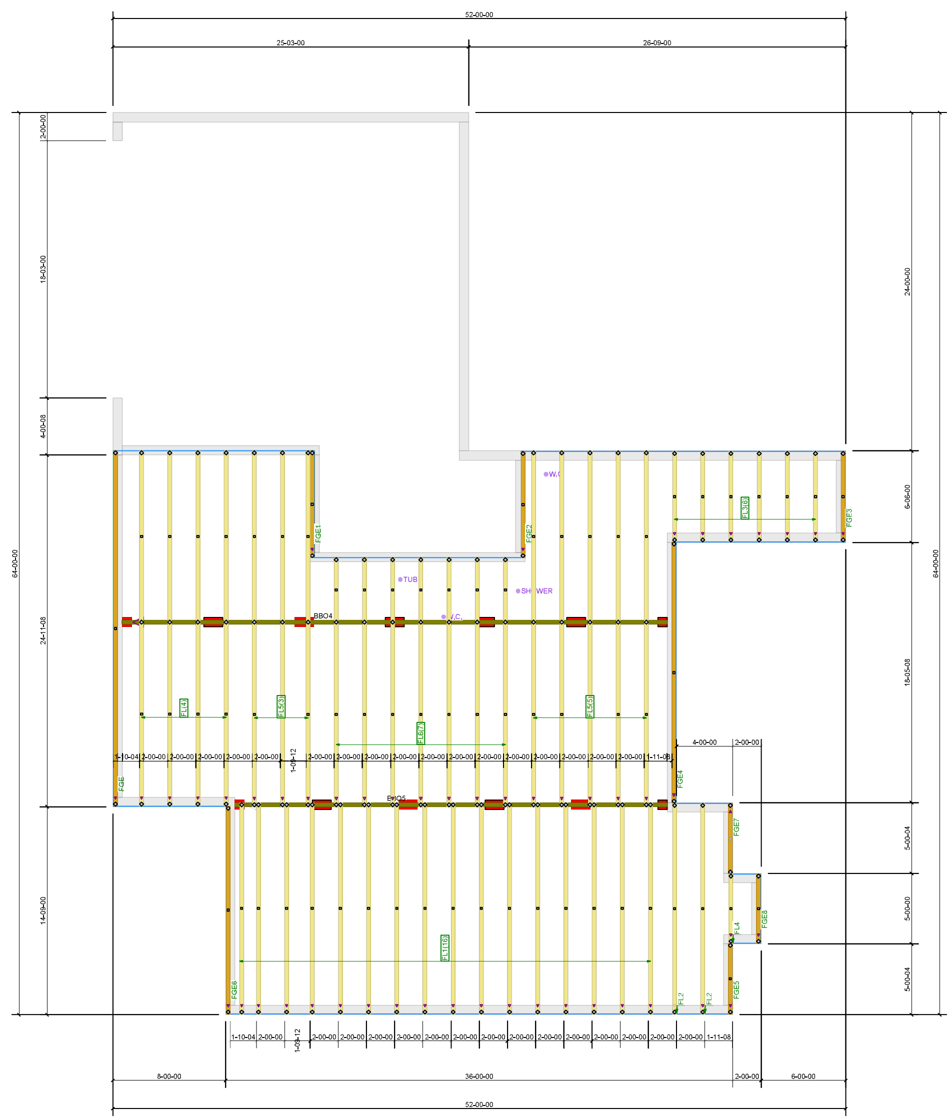
1. The Placement Plan is a diagram for truss installation. It is not an engineered drawing and has not been reviewed by an engineer. The Owner/Building Designer is responsible for obtaining an engineer's review if one is required by the local jurisdiction.
2. The responsibilities of the Owner, Contractor, Building Designer, Component Designer and Component Manufacturer shall be as set forth in ANSI/TPI 1. Capitalized terms shall be as defined in ANSI/TP 1 unless otherwise indicated.
3. Each Component is designed as an individual component utilizing information provided by others. The Owner/Building Designer is responsible for reviewing all Component Submittal Packages and individual Component Design Drawings for compliance with the Construction Documents and compatibility with the overall Building design.
4. Contractor will not proceed with component installation until the Owner/Building Designer has reviewed the Component Submittal Package. Questions on the suitability of any Component will be resolved by the Building Designer.
5. The Building Designer and Contractor are responsible for all temporary and permanent bracing.
6. The Placement Plan assumes the building is dimensionally correct, structurally sound, and in a suitable condition to support each Component during installation and thereafter, including but not limited to installation of all bearing points. Proper design and construction of all structural components, including foundations, headers, beams, walls and columns are the responsibility of the Owner, Building Designer and Contractor.
7. Do not cut, drill, or modify any Component without first consulting the Component Manufacturer or Building Designer. Damaged Components shall not be installed unless directed by the Building Designer or approved by the Component Manufacturer.
8. Components must be handled and installed following all applicable safety standards and best practices, including but not limited to BCSI, OSHA, TPI and local codes. Failure to properly handle, brace or otherwise install Component can result in serious injury or death.
9. All uplift connectors shown within these documents are recommendations only. Per ANSI/TPI 1, all uplift connectors are the responsibility of the building designer and or contractor.

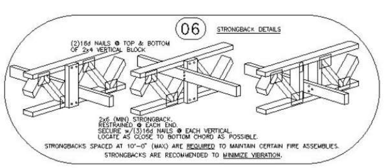
Approved By: _____ **Date:** _____

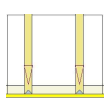
General Notes:

- ** CUTTING OR DRILLING OF COMPONENTS SHOULD NOT BE DONE WITHOUT CONTACTING COMPONENT SUPPLIER FIRST. CUSTOMER TAKES FULL RESPONSIBILITY FOR COMPONENTS IF CUT BEFORE AUTHORIZATION.
- ** ALL POINT LOADS FROM ABOVE MUST BE TRANSFERRED TO BEARING FROM UNDER SIDE OF SHEATHING.
- ** FRAMER MUST REFER TO PLANS WHILE SETTING COMPONENTS.
- ** DAMAGED COMPONENTS SHOULD NOT BE INSTALLED UNLESS TOLD TO BY THE COMPONENT PLANT.
- ** ALL BEARING POINTS MUST BE INSTALLED PRIOR TO SETTING ANY COMPONENTS.
- ** GIRDERS MUST BE FULLY CONNECTED TOGETHER PRIOR TO ADDING ANY LOADS.
- ** DIMENSIONS ARE READ AS: FOOT-INCH-SIXTEENTH.
- ** TRUSS TO TRUSS CONNECTIONS ARE TOE-NAILED, UNLESS NOTED OTHERWISE.









Truss Drawing Left End Indicator

PRELIMINARY – NOT FOR CONSTRUCTION

- ** TRIANGULAR SYMBOL NEAR END OF TRUSS INDICATES LEFT END OF TRUSS AS SHOWN ON INDIVIDUAL TRUSS DRAWINGS.
- ** PLUMBING DROPS NOTED ARE IN THE APPROXIMATE LOCATIONS PER PLAN. BUILDER TO VERIFY LOCATIONS BEFORE SETTING TRUSSES.
- ** REFER TO FINAL TRUSS ENGINEERING SHEETS FOR PLY TO PLY CONNECTIONS.

Revisions	
00/00/00	Name
00/00/00	Name
00/00/00	Name
00/00/00	Name
00/00/00	Name

THIS IS A TRUSS PLACEMENT DIAGRAM ONLY. These trusses are designed as individual components to be incorporated into the building design at the specification of the building designer. See individual design sheets for each truss design identified on the placement drawing. The building designer is responsible for temporary and permanent bracing of the roof and floor systems and for the overall structure. The disign of the tuss support structure including headers, beams, walls, and columns is the responsibility of the building designer. For general guidance regarding the bracing, consult "Bracing of Wood Truss" available from the Truss Plate Institute, 583 D'Onifrio Drive; Madison, WI 53179

CARTER Lumber

Tim Johnson Const.

93 Dewey

1ST FLOOR PLACEMENT PLAN

Scale: NTS

Date: 10/24/2025

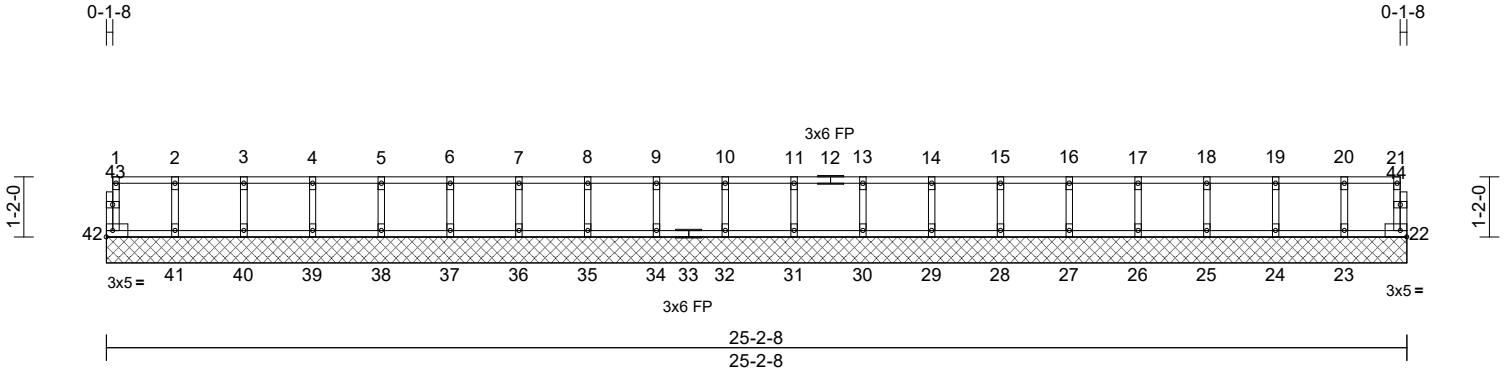
Designer: Mike Finch

Project Number: 24120007-B

Sheet Number: 1/2

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Crawl-Fitzgerald VKDRFR I77311147
24120007-B	FGE	Floor Supported Gable	1	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 09:46:07 Page: 1
ID:PxE2_o3Xb9_lmZh3G7MbSqyBtNo-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:44.7

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.01	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	0.00	22	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-R							Weight: 104 lb	FT = 20%F, 11%E

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

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) 22=25-2-8, 23=25-2-8, 24=25-2-8, 25=25-2-8, 26=25-2-8, 27=25-2-8, 28=25-2-8, 29=25-2-8, 30=25-2-8, 31=25-2-8, 32=25-2-8, 34=25-2-8, 35=25-2-8, 36=25-2-8, 37=25-2-8, 38=25-2-8, 39=25-2-8, 40=25-2-8, 41=25-2-8, 42=25-2-8
Max Grav 22=49 (LC 1), 23=135 (LC 1), 24=150 (LC 1), 25=146 (LC 1), 26=147 (LC 1), 27=147 (LC 1), 28=147 (LC 1), 29=147 (LC 1), 30=147 (LC 1), 31=147 (LC 1), 32=147 (LC 1), 34=147 (LC 1), 35=147 (LC 1), 36=147 (LC 1), 37=147 (LC 1), 38=147 (LC 1), 39=147 (LC 1), 40=147 (LC 1), 41=145 (LC 1), 42=54 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-42=-50/0, 21-22=-44/0, 1-2=-8/0, 2-3=-8/0, 3-4=-8/0, 4-5=-8/0, 5-6=-8/0, 6-7=-8/0, 7-8=-8/0, 8-9=-8/0, 9-10=-8/0, 10-11=-8/0, 11-13=-8/0, 13-14=-8/0, 14-15=-8/0, 15-16=-8/0, 16-17=-8/0, 17-18=-8/0, 18-19=-8/0, 19-20=-8/0, 20-21=-8/0
BOT CHORD 41-42=0/8, 40-41=0/8, 39-40=0/8, 38-39=0/8, 37-38=0/8, 36-37=0/8, 35-36=0/8, 34-35=0/8, 32-34=0/8, 31-32=0/8, 30-31=0/8, 29-30=0/8, 28-29=0/8, 27-28=0/8, 26-27=0/8, 25-26=0/8, 24-25=0/8, 23-24=0/8, 22-23=0/8
WEBS 2-41=-131/0, 3-40=-134/0, 4-39=-133/0, 5-38=-133/0, 6-37=-133/0, 7-36=-133/0, 8-35=-133/0, 9-34=-133/0, 10-32=-133/0, 11-31=-133/0, 13-30=-133/0, 14-29=-133/0, 15-28=-133/0, 16-27=-133/0, 17-26=-133/0, 18-25=-133/0, 19-24=-136/0, 20-23=-124/0

NOTES
1) All plates are 1.5x3 MT20 unless otherwise indicated.
2) Gable requires continuous bottom chord bearing.
3) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
4) Gable studs spaced at 1-4-0 oc.
5) All bearings are assumed to be SP No.2 .
6) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

LOAD CASE(S) Standard

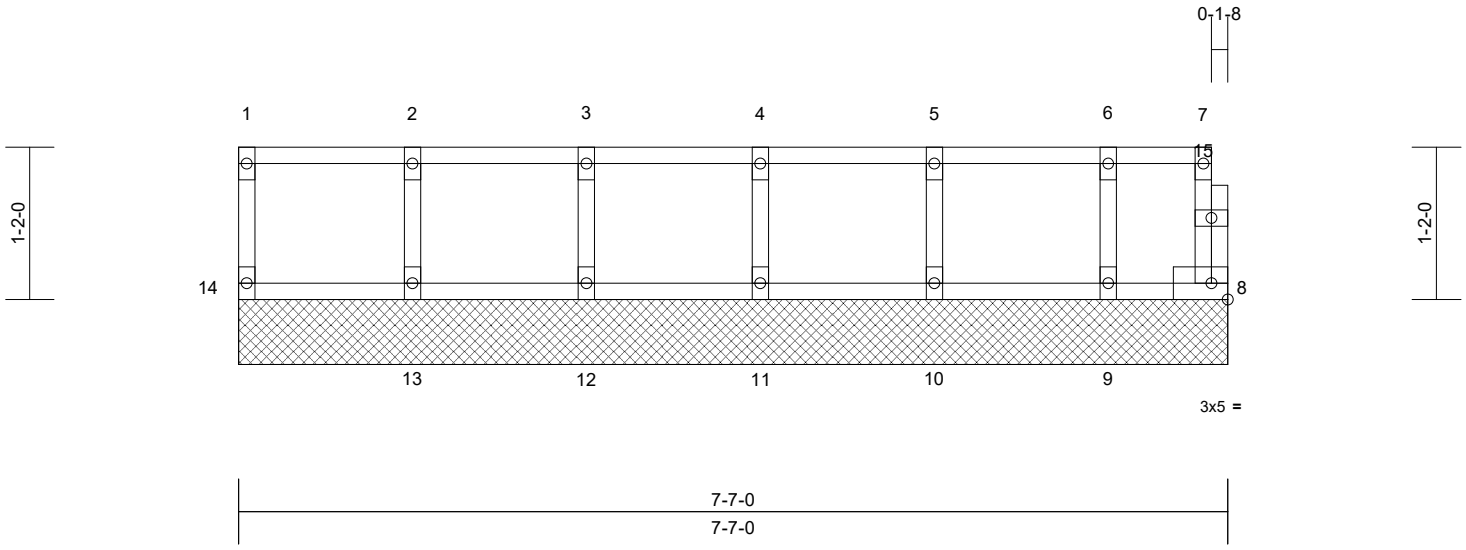
October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Crawl-Fitzgerald VKDRFR I77311148
24120007-B	FGE1	Floor Supported Gable	1	1	Job Reference (optional)

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

Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 09:46:08 Page: 1
ID:lW3rWbk1e3vyt0Od?BrUBQyBtMx-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:17.7

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.02	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	0.00	8	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-R							Weight: 33 lb	FT = 20%F, 11%E

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

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) 8=7-7-0, 9=7-7-0, 10=7-7-0, 11=7-7-0, 12=7-7-0, 13=7-7-0, 14=7-7-0
Max Grav 8=32 (LC 1), 9=118 (LC 1), 10=152 (LC 1), 11=146 (LC 1), 12=146 (LC 1), 13=152 (LC 1), 14=62 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-14=-56/0, 7-8=-26/0, 1-2=-7/0, 2-3=-7/0, 3-4=-7/0, 4-5=-7/0, 5-6=-7/0, 6-7=-7/0
BOT CHORD 13-14=0/7, 12-13=0/7, 11-12=0/7, 10-11=0/7, 9-10=0/7, 8-9=0/7
WEBS 2-13=-139/0, 3-12=-132/0, 4-11=-132/0, 5-10=-138/0, 6-9=-110/0

NOTES
1) All plates are 1.5x3 MT20 unless otherwise indicated.
2) Gable requires continuous bottom chord bearing.
3) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
4) Gable studs spaced at 1-4-0 oc.
5) All bearings are assumed to be SP No.2 .
6) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
7) CAUTION, Do not erect truss backwards.

LOAD CASE(S) Standard

October 27,2025

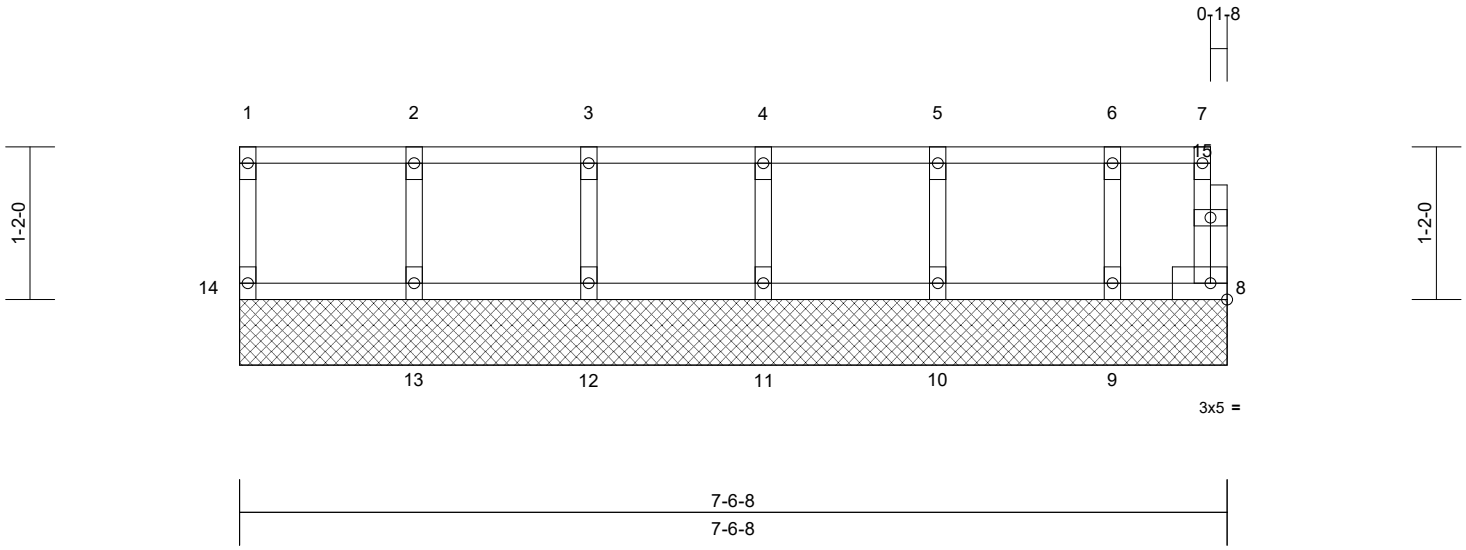
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Crawl-Fitzgerald VKDRFR I77311149
24120007-B	FGE2	Floor Supported Gable	1	1	Job Reference (optional)

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

Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 09:46:08
ID:fUskaJo9TbXEznHbnkRfuUyBtMs-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:17.6

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.02	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	0.00	8	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-R							Weight: 33 lb	FT = 20%F, 11%E

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

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) 8=7-6-8, 9=7-6-8, 10=7-6-8, 11=7-6-8, 12=7-6-8, 13=7-6-8, 14=7-6-8
Max Grav 8=29 (LC 1), 9=115 (LC 1), 10=153 (LC 1), 11=145 (LC 1), 12=146 (LC 1), 13=152 (LC 1), 14=62 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-14=-56/0, 7-8=-23/0, 1-2=-7/0, 2-3=-7/0, 3-4=-7/0, 4-5=-7/0, 5-6=-7/0, 6-7=-7/0
BOT CHORD 13-14=0/7, 12-13=0/7, 11-12=0/7, 10-11=0/7, 9-10=0/7, 8-9=0/7
WEBS 2-13=-139/0, 3-12=-132/0, 4-11=-132/0, 5-10=-138/0, 6-9=-109/0

NOTES
1) All plates are 1.5x3 MT20 unless otherwise indicated.
2) Gable requires continuous bottom chord bearing.
3) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
4) Gable studs spaced at 1-4-0 oc.
5) All bearings are assumed to be SP No.2 .
6) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
7) CAUTION, Do not erect truss backwards.

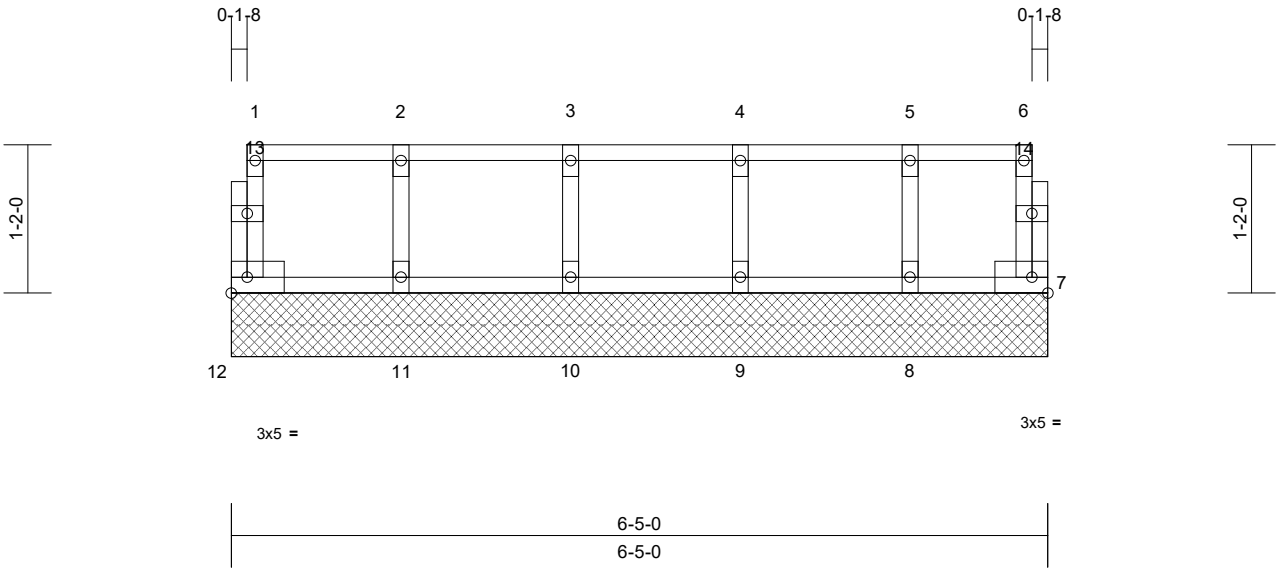
LOAD CASE(S) Standard

October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Crawl-Fitzgerald VKDRFR I77311150
24120007-B	FGE3	Floor Supported Gable	1	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 09:46:08 Page: 1
ID:pAH2ml45vzfOxzQlTvuM7XyBtP4-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:18.1

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.01	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	0.00	7	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-R							Weight: 29 lb	FT = 20%F, 11%E

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

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) 7=6-5-0, 8=6-5-0, 9=6-5-0, 10=6-5-0, 11=6-5-0, 12=6-5-0
Max Grav 7=42 (LC 1), 8=126 (LC 1), 9=151 (LC 1), 10=146 (LC 1), 11=146 (LC 1), 12=54 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-12=-50/0, 6-7=-37/0, 1-2=-8/0, 2-3=-8/0, 3-4=-8/0, 4-5=-8/0, 5-6=-8/0
BOT CHORD 11-12=0/8, 10-11=0/8, 9-10=0/8, 8-9=0/8, 7-8=0/8
WEBS 2-11=-131/0, 3-10=-133/0, 4-9=-137/0, 5-8=-117/0

NOTES
1) All plates are 1.5x3 MT20 unless otherwise indicated.
2) Gable requires continuous bottom chord bearing.
3) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
4) Gable studs spaced at 1-4-0 oc.
5) All bearings are assumed to be SP No.2 .
6) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

LOAD CASE(S) Standard

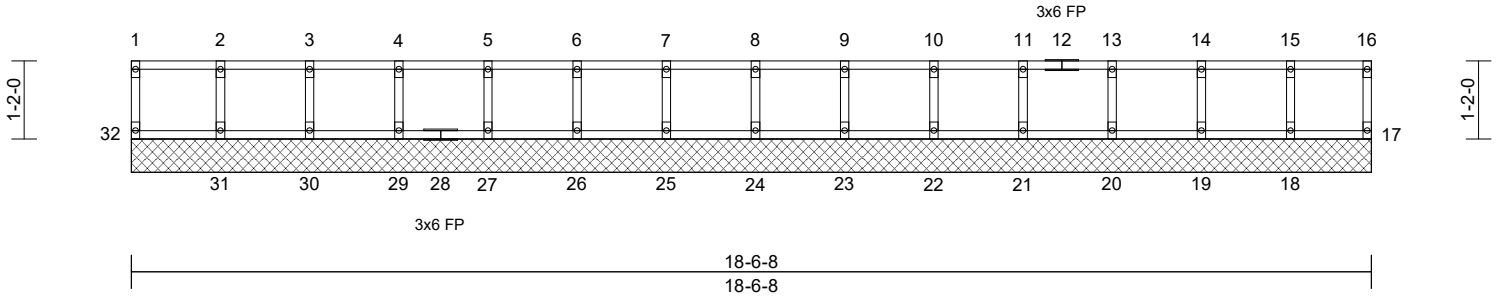
October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Crawl-Fitzgerald VKDRFR I77311151
24120007-B	FGE4	Floor Supported Gable	1	1	Job Reference (optional)

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

Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 09:46:08
ID:UeD?qMsw2RIOhikl8_Y37kyBtMm-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:34.4

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.01	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	0.00	17	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-R							Weight: 76 lb	FT = 20%F, 11%E

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

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) 17=18-6-8, 18=18-6-8, 19=18-6-8, 20=18-6-8, 21=18-6-8, 22=18-6-8, 23=18-6-8, 24=18-6-8, 25=18-6-8, 26=18-6-8, 27=18-6-8, 29=18-6-8, 30=18-6-8, 31=18-6-8, 32=18-6-8
Max Grav 17=57 (LC 1), 18=142 (LC 1), 19=148 (LC 1), 20=146 (LC 1), 21=147 (LC 1), 22=147 (LC 1), 23=147 (LC 1), 24=147 (LC 1), 25=147 (LC 1), 26=147 (LC 1), 27=147 (LC 1), 29=147 (LC 1), 30=146 (LC 1), 31=151 (LC 1), 32=63 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-32=-56/0, 16-17=-50/0, 1-2=-8/0, 2-3=-8/0, 3-4=-8/0, 4-5=-8/0, 5-6=-8/0, 6-7=-8/0, 7-8=-8/0, 8-9=-8/0, 9-10=-8/0, 10-11=-8/0, 11-13=-8/0, 13-14=-8/0, 14-15=-8/0, 15-16=-8/0
BOT CHORD 31-32=0/8, 30-31=0/8, 29-30=0/8, 27-29=0/8, 26-27=0/8, 25-26=0/8, 24-25=0/8, 23-24=0/8, 22-23=0/8, 21-22=0/8, 20-21=0/8, 19-20=0/8, 18-19=0/8, 17-18=0/8
WEBS 2-31=-139/0, 3-30=-132/0, 4-29=-134/0, 5-27=-133/0, 6-26=-133/0, 7-25=-133/0, 8-24=-133/0, 9-23=-133/0, 10-22=-133/0, 11-21=-133/0, 13-20=-133/0, 14-19=-134/0, 15-18=-131/0

NOTES
1) All plates are 1.5x3 MT20 unless otherwise indicated.
2) Gable requires continuous bottom chord bearing.
3) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
4) Gable studs spaced at 1-4-0 oc.
5) All bearings are assumed to be SP No.2 .
6) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

LOAD CASE(S) Standard

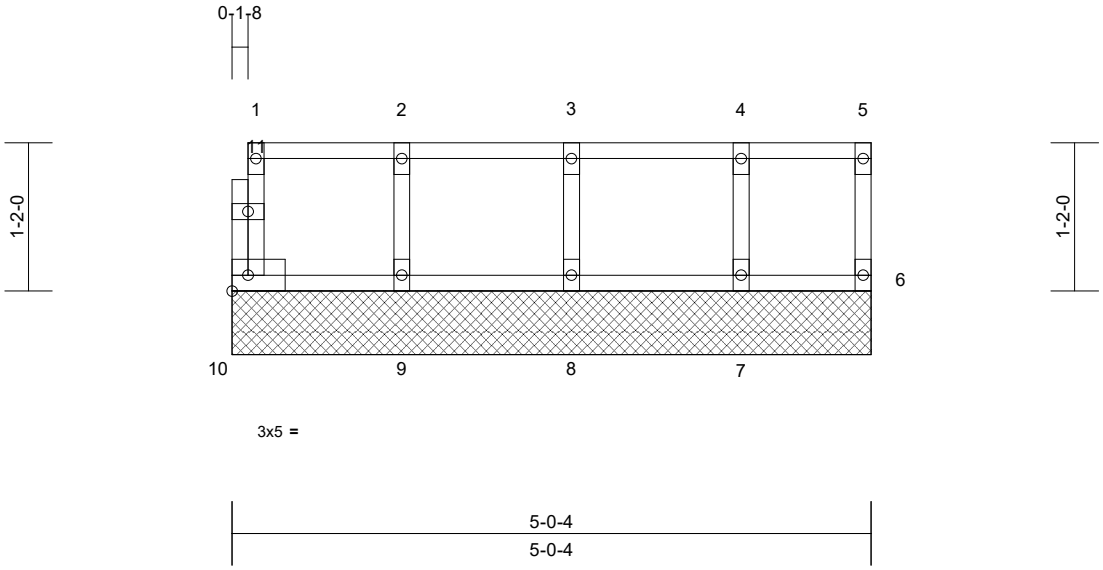
October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Crawl-Fitzgerald VKDRFR I77311152
24120007-B	FGE5	Floor Supported Gable	1	1	Job Reference (optional)

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

Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 09:46:08
ID:pRpULZHlvBozTaDZz_iLK6yBtOp-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:18.1

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.02	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	0.00	6	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-R							Weight: 23 lb	FT = 20%F, 11%E

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

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

REACTIONS (size) 6=5-0-4, 7=5-0-4, 8=5-0-4, 9=5-0-4, 10=5-0-4
Max Grav 6=47 (LC 1), 7=129 (LC 1), 8=151 (LC 1), 9=146 (LC 1), 10=53 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-10=-49/0, 5-6=-40/0, 1-2=-7/0, 2-3=-7/0, 3-4=-7/0, 4-5=-7/0
BOT CHORD 9-10=0/7, 8-9=0/7, 7-8=0/7, 6-7=0/7
WEBS 2-9=-131/0, 3-8=-137/0, 4-7=-120/0

NOTES
1) All plates are 1.5x3 MT20 unless otherwise indicated.
2) Gable requires continuous bottom chord bearing.
3) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
4) Gable studs spaced at 1-4-0 oc.
5) All bearings are assumed to be SP No.2 .
6) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
7) CAUTION, Do not erect truss backwards.

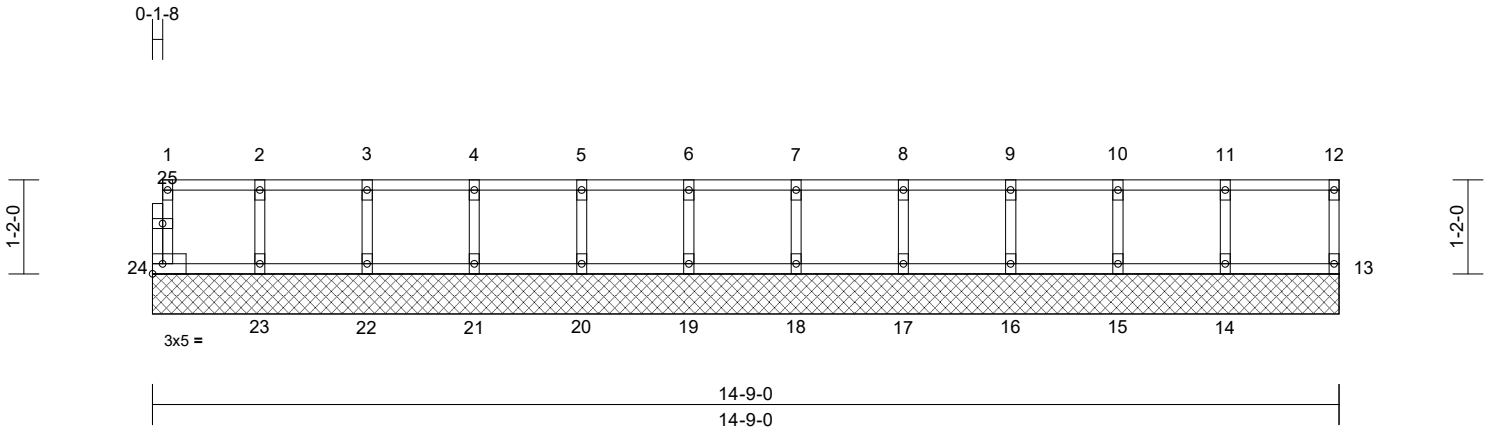
LOAD CASE(S) Standard

October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Crawl-Fitzgerald VKDRFR I77311153
24120007-B	FGE6	Floor Supported Gable	1	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 09:46:08 Page: 1
ID:8U?OU5QnDa5sCnFaqfNr?RyBtM2-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:28.6

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.09	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.02	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	0.00	13	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-R							Weight: 61 lb	FT = 20%F, 11%E

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

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) 13=14-9-0, 14=14-9-0, 15=14-9-0, 16=14-9-0, 17=14-9-0, 18=14-9-0, 19=14-9-0, 20=14-9-0, 21=14-9-0, 22=14-9-0, 23=14-9-0, 24=14-9-0
Max Grav 13=69 (LC 1), 14=155 (LC 1), 15=145 (LC 1), 16=147 (LC 1), 17=147 (LC 1), 18=147 (LC 1), 19=147 (LC 1), 20=147 (LC 1), 21=146 (LC 1), 22=148 (LC 1), 23=142 (LC 1), 24=57 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-24=-51/0, 12-13=-61/0, 1-2=-10/0, 2-3=-10/0, 3-4=-10/0, 4-5=-10/0, 5-6=-10/0, 6-7=-10/0, 7-8=-10/0, 8-9=-10/0, 9-10=-10/0, 10-11=-10/0, 11-12=-10/0
BOT CHORD 23-24=0/10, 22-23=0/10, 21-22=0/10, 20-21=0/10, 19-20=0/10, 18-19=0/10, 17-18=0/10, 16-17=0/10, 15-16=0/10, 14-15=0/10, 13-14=0/10
WEBS 2-23=-130/0, 3-22=-134/0, 4-21=-133/0, 5-20=-133/0, 6-19=-133/0, 7-18=-133/0, 8-17=-133/0, 9-16=-134/0, 10-15=-131/0, 11-14=-143/0

NOTES
1) All plates are 1.5x3 MT20 unless otherwise indicated.
2) Gable requires continuous bottom chord bearing.
3) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
4) Gable studs spaced at 1-4-0 oc.
5) All bearings are assumed to be SP No.2 .
6) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
7) CAUTION, Do not erect truss backwards.

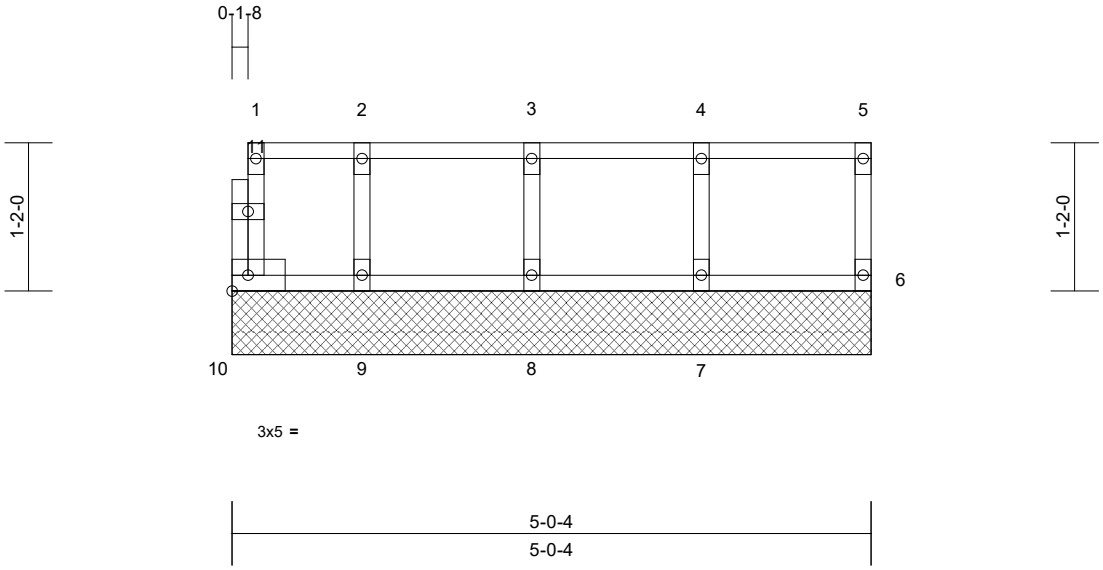
LOAD CASE(S) Standard

October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Crawl-Fitzgerald VKDRFR I77311154
24120007-B	FGE7	Floor Supported Gable	1	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 09:46:09 Page: 1
ID:pRpULZHlvBozTaDZz_iLK6yBtOp-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:18.1

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.01	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	0.00	6	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-R							Weight: 23 lb	FT = 20%F, 11%E

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

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

REACTIONS (size) 6=5-0-4, 7=5-0-4, 8=5-0-4, 9=5-0-4, 10=5-0-4
Max Grav 6=63 (LC 1), 7=150 (LC 1), 8=151 (LC 1), 9=124 (LC 1), 10=38 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-10=-33/0, 5-6=-56/0, 1-2=-7/0, 2-3=-7/0, 3-4=-7/0, 4-5=-7/0
BOT CHORD 9-10=0/7, 8-9=0/7, 7-8=0/7, 6-7=0/7
WEBS 4-7=-138/0, 3-8=-136/0, 2-9=-115/0

NOTES
1) All plates are 1.5x3 MT20 unless otherwise indicated.
2) Gable requires continuous bottom chord bearing.
3) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
4) Gable studs spaced at 1-4-0 oc.
5) All bearings are assumed to be SP No.2 .
6) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
7) CAUTION, Do not erect truss backwards.

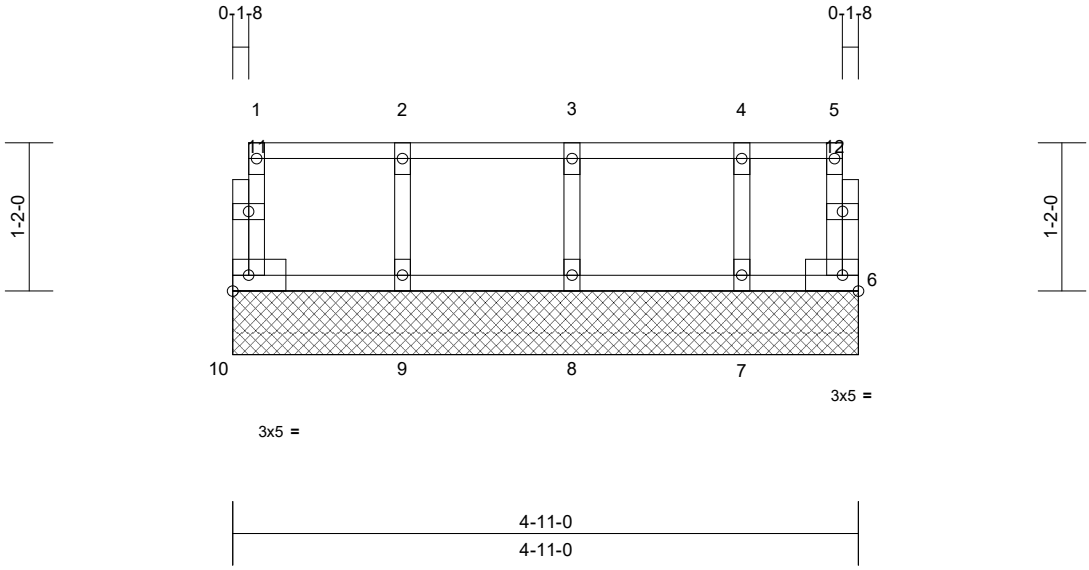
LOAD CASE(S) Standard

October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Crawl-Fitzgerald VKDRFR I77311155
24120007-B	FGE8	Floor Supported Gable	1	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 09:46:09 Page: 1
ID:il6rJZkbytaa1Q7tByNFs7yBtOD-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:18.1

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.02	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	0.00	6	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-R							Weight: 23 lb	FT = 20%F, 11%E

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

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

REACTIONS (size) 6=4-11-0, 7=4-11-0, 8=4-11-0, 9=4-11-0, 10=4-11-0
Max Grav 6=33 (LC 1), 7=117 (LC 1), 8=153 (LC 1), 9=145 (LC 1), 10=54 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-10=-50/0, 5-6=-27/0, 1-2=-7/0, 2-3=-7/0, 3-4=-7/0, 4-5=-7/0
BOT CHORD 9-10=0/7, 8-9=0/7, 7-8=0/7, 6-7=0/7
WEBS 2-9=-130/0, 3-8=-139/0, 4-7=-109/0

NOTES
1) All plates are 1.5x3 MT20 unless otherwise indicated.
2) Gable requires continuous bottom chord bearing.
3) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
4) Gable studs spaced at 1-4-0 oc.
5) All bearings are assumed to be SP No.2 .
6) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

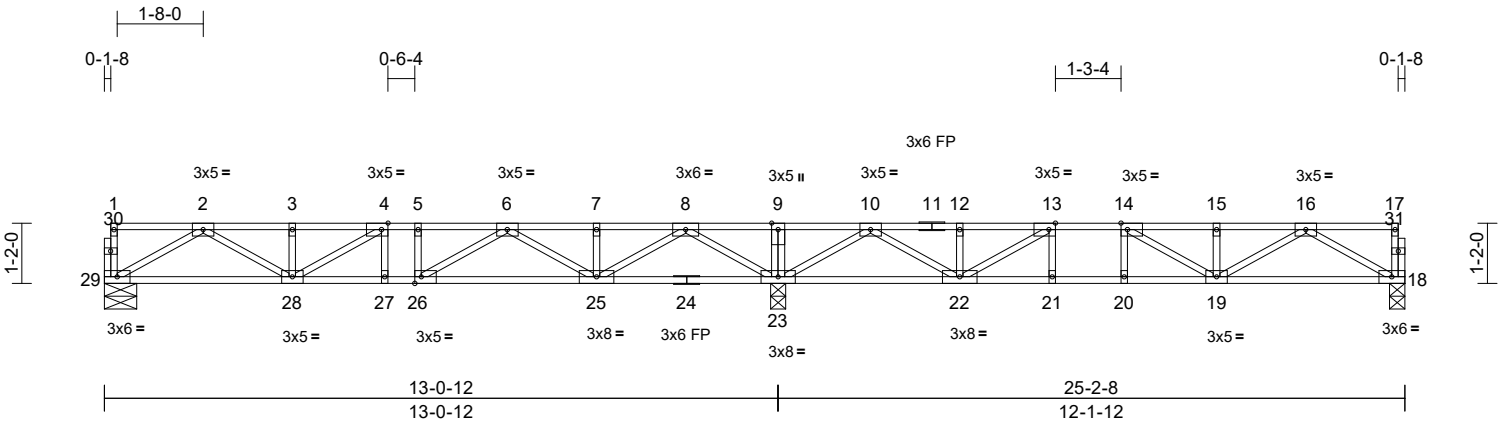
LOAD CASE(S) Standard

October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Crawl-Fitzgerald VKDRFR I77311156
24120007-B	FL	Floor	4	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 09:46:09 Page: 1
ID:I_?_OzKifcdmooo5?2EWpFyBtNT-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:44.7

Plate Offsets (X, Y): [4:0-1-8,Edge], [13:0-1-8,Edge], [14:0-1-8,Edge], [26:0-1-8,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.64	Vert(LL)	-0.08	25-26	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.67	Vert(CT)	-0.11	25-26	>999	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.52	Horz(CT)	0.02	18	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-SH							Weight: 130 lb	FT = 20%F, 11%E

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

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

REACTIONS (size) 18=0-3-8, 23=0-3-8, 29=0-7-8
Max Grav 18=566 (LC 4), 23=1660 (LC 1), 29=611 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-29=-71/0, 17-18=-73/0, 1-2=-4/0, 2-3=-1458/0, 3-4=-1458/0, 4-5=-1667/0, 5-6=-1667/0, 6-7=-922/252, 7-8=-922/252, 8-9=0/1659, 9-10=0/1659, 10-12=-870/399, 12-13=-870/399, 13-14=-1384/68, 14-15=-1320/0, 15-16=-1320/0, 16-17=-4/0
BOT CHORD 28-29=0/907, 27-28=0/1667, 26-27=0/1667, 25-26=-27/1447, 23-25=-606/66, 22-23=-735/117, 21-22=-68/1384, 20-21=-68/1384, 19-20=-68/1384, 18-19=0/831
WEBS 9-23=-199/0, 8-23=-1448/0, 2-29=-1044/0, 8-25=0/1088, 2-28=0/644, 7-25=-173/0, 3-28=-202/0, 6-25=-698/0, 4-28=-258/151, 6-26=0/497, 4-27=-105/37, 5-26=-138/0, 10-23=-1366/0, 16-18=-956/0, 10-22=0/990, 16-19=0/571, 12-22=-168/32, 15-19=-241/0, 13-22=-822/0, 14-19=-73/283, 13-21=0/170, 14-20=-147/0

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) All plates are 1.5x3 MT20 unless otherwise indicated.
3) All bearings are assumed to be SP No.2 .
4) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
5) CAUTION, Do not erect truss backwards.

LOAD CASE(S) Standard

October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Crawl-Fitzgerald VKDRFR
24120007-B	FL1	Floor	16	1	I77311157 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 09:46:09 Page: 1
ID:i0eGtNyFy5jAa1w8h1BE2jyBtNy-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

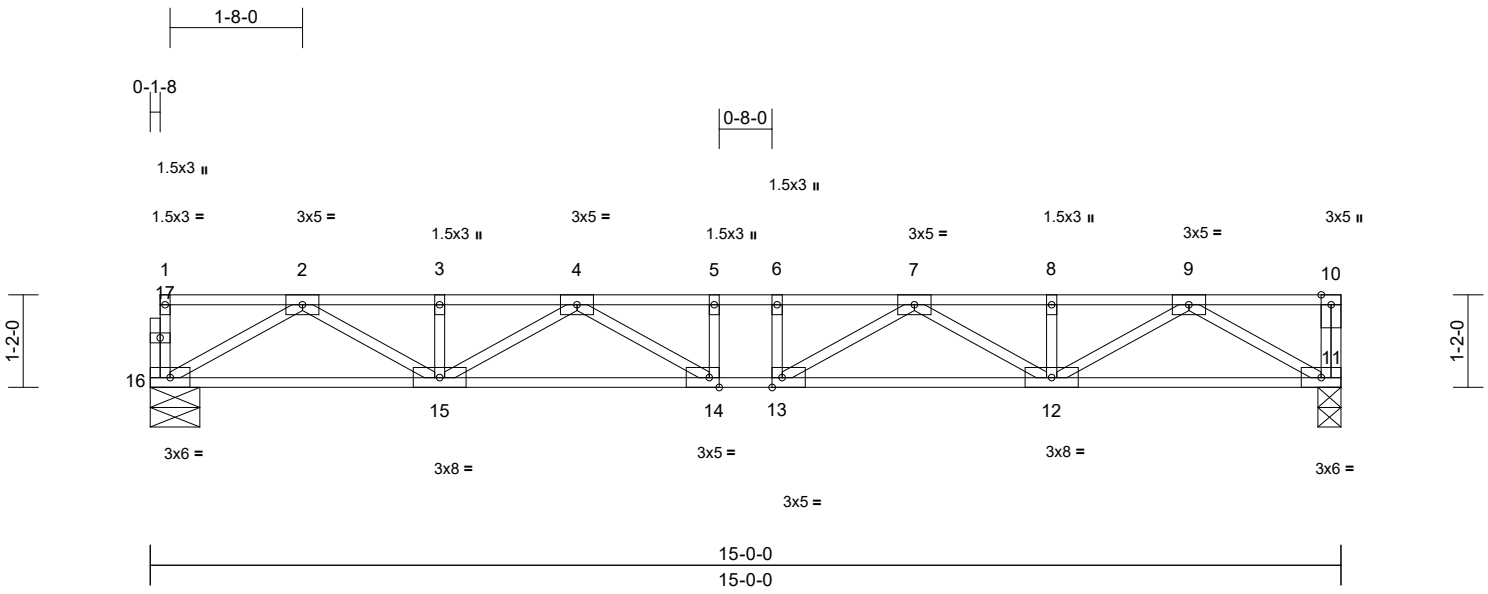


Plate Offsets (X, Y): [13:0-1-8,Edge], [14:0-1-8,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.32	Vert(LL)	-0.17	13-14	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.77	Vert(CT)	-0.23	13-14	>768	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.48	Horz(CT)	0.05	11	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-SH							Weight: 78 lb	FT = 20%F, 11%E

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

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) 11=0-3-8, 16=0-7-8
Max Grav 11=811 (LC 1), 16=805 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-16=-71/0, 10-11=-73/0, 1-2=-4/0, 2-3=-2110/0, 3-4=-2110/0, 4-5=-2869/0, 5-6=-2869/0, 6-7=-2869/0, 7-8=-2109/0, 8-9=-2109/0, 9-10=0/0
BOT CHORD 15-16=0/1241, 14-15=0/2641, 13-14=0/2869, 12-13=0/2641, 11-12=0/1242
WEBS 9-11=-1437/0, 2-16=-1430/0, 9-12=0/1012, 2-15=0/1015, 8-12=-162/0, 3-15=-164/0, 7-12=-621/0, 4-15=-621/0, 7-13=-54/466, 4-14=-54/466, 5-14=-159/0, 6-13=-159/0

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) All bearings are assumed to be SP No.2 .
3) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
4) CAUTION, Do not erect truss backwards.

LOAD CASE(S) Standard

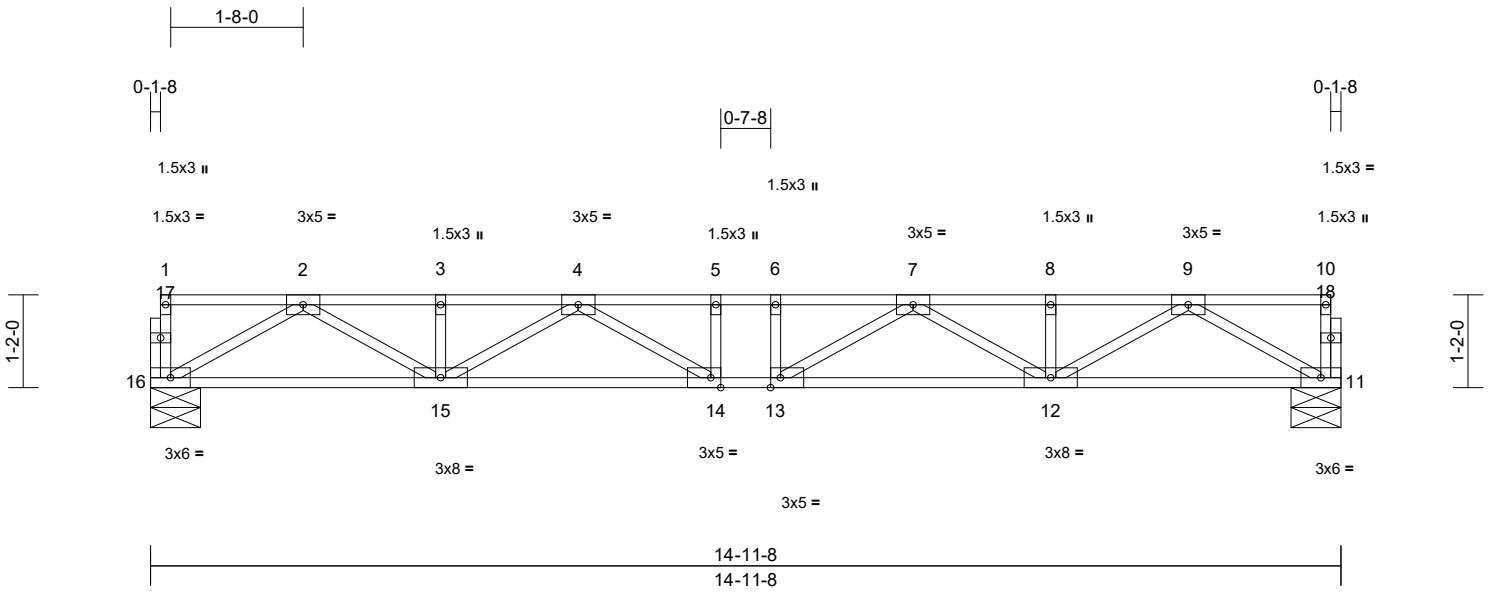
October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Crawl-Fitzgerald VKDRFR
24120007-B	FL2	Floor	2	1	I77311158 Job Reference (optional)

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

Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 09:46:09
ID:6WCiE89UG7XOH1SeNtW?w0yBtOz-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:29

Plate Offsets (X, Y): [13:0-1-8,Edge], [14:0-1-8,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.31	Vert(LL)	-0.17	13-14	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.76	Vert(CT)	-0.23	13-14	>774	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.48	Horz(CT)	0.05	11	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-SH							Weight: 77 lb	FT = 20%F, 11%E

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

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) 11=0-7-8, 16=0-7-8
Max Grav 11=803 (LC 1), 16=803 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-16=-71/0, 10-11=-71/0, 1-2=-4/0, 2-3=-2102/0, 3-4=-2102/0, 4-5=-2854/0, 5-6=-2854/0, 6-7=-2854/0, 7-8=-2102/0, 8-9=-2102/0, 9-10=-4/0
BOT CHORD 15-16=0/1237, 14-15=0/2630, 13-14=0/2854, 12-13=0/2630, 11-12=0/1237
WEBS 9-11=-1426/0, 2-16=-1426/0, 9-12=0/1010, 2-15=0/1010, 8-12=-164/0, 3-15=-164/0, 7-12=-616/0, 4-15=-616/0, 7-13=-56/459, 4-14=-56/459, 5-14=-156/0, 6-13=-156/0

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) All plates are 1.5x3 MT20 unless otherwise indicated.
3) All bearings are assumed to be SP No.2 .
4) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

LOAD CASE(S) Standard

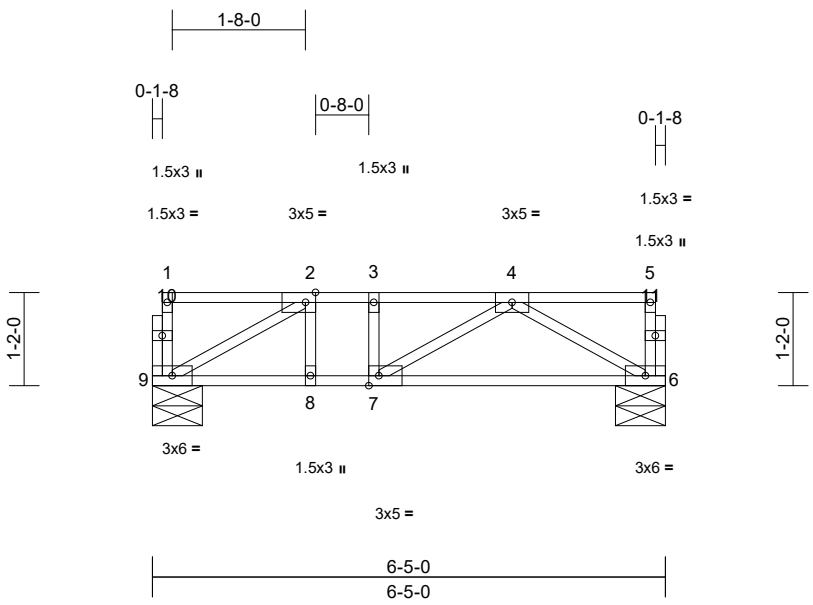
October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Crawl-Fitzgerald VKDRFR
24120007-B	FL3	Floor	6	1	I77311159 Job Reference (optional)

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

Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 09:46:09
ID:_0wnWi?KK7uED2y86enyuGyBtPA-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:28.8

Plate Offsets (X, Y): [2:0-1-8,Edge], [7:0-1-8,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.24	Vert(LL)	-0.03	6-7	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.28	Vert(CT)	-0.04	6-7	>999	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.00	6	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-SH							Weight: 35 lb	FT = 20%F, 11%E

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

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) 6=0-7-8, 9=0-7-8
Max Grav 6=333 (LC 1), 9=333 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-9=-75/2, 5-6=-65/0, 1-2=-5/0, 2-3=-480/0, 3-4=-480/0, 4-5=-4/0
BOT CHORD 8-9=0/480, 7-8=0/480, 6-7=0/434
WEBS 4-6=-498/0, 2-9=-546/0, 4-7=-6/132, 2-8=-8/73, 3-7=-28/0

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) All bearings are assumed to be SP No.2 .
3) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

LOAD CASE(S) Standard

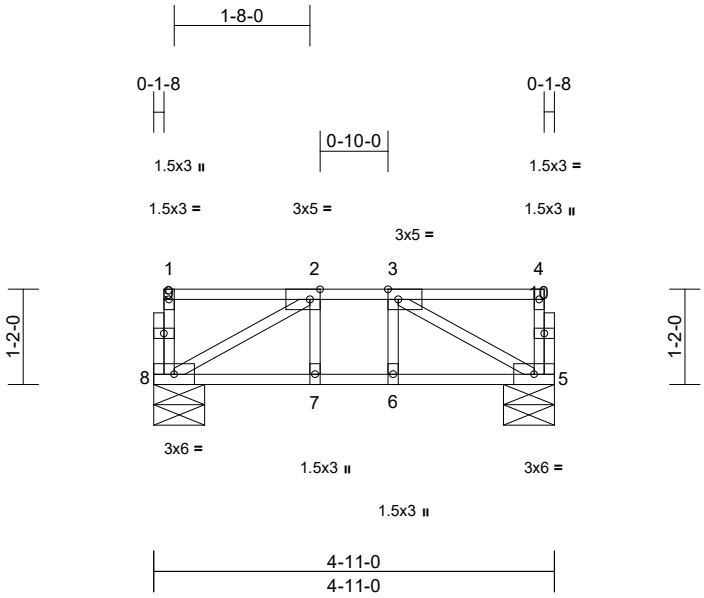
October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Crawl-Fitzgerald VKDRFR
24120007-B	FL4	Floor	1	1	I77311160
					Job Reference (optional)

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

Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 09:46:09
ID:3ivkMGojnPCt8B?q_WzQZByBtO8-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:28.3

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.20	Vert(LL)	-0.01	7-8	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.14	Vert(CT)	-0.01	7-8	>999	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.00	5	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-SH							Weight: 28 lb	FT = 20%F, 11%E

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

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

REACTIONS (size) 5=0-7-8, 8=0-7-8
Max Grav 5=250 (LC 1), 8=250 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-8=-82/0, 4-5=-82/0, 1-2=-5/0, 2-3=-299/0, 3-4=-5/0
BOT CHORD 7-8=0/299, 6-7=0/299, 5-6=0/299
WEBS 3-5=-337/0, 2-8=-337/0, 2-7=-20/49, 3-6=-20/49

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) All bearings are assumed to be SP No.2 .
3) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

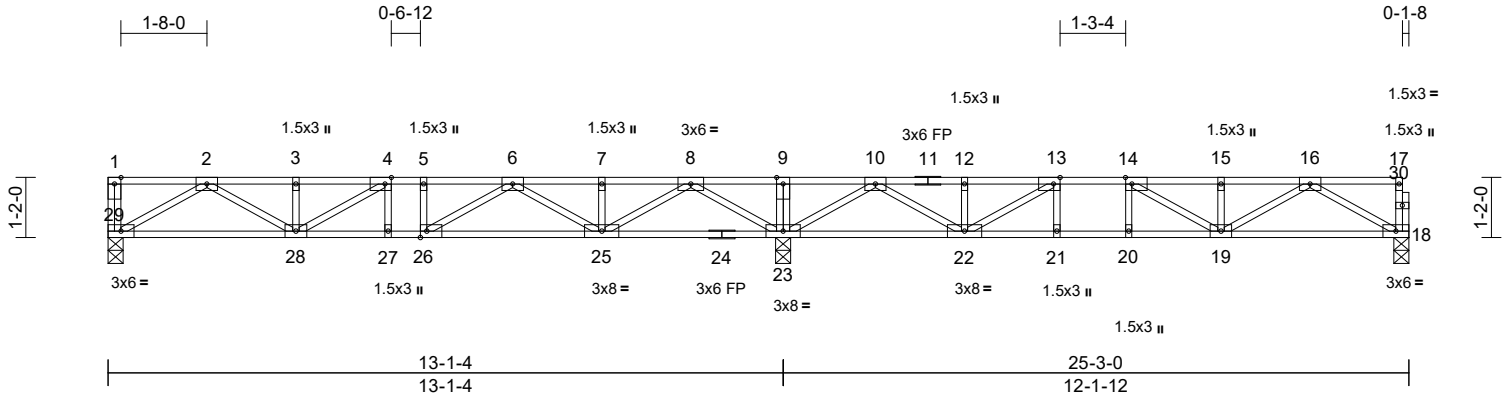
LOAD CASE(S) Standard

October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Crawl-Fitzgerald VKDRFR I77311161
24120007-B	FL5	Floor	8	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 09:46:09 Page: 1
ID:NOo9Gv6kCKaN?0AvUxCca3yQGTb-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:44.7

Plate Offsets (X, Y): [4:0-1-8,Edge], [13:0-1-8,Edge], [14:0-1-8,Edge], [26:0-1-8,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.64	Vert(LL)	-0.08	25-26	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.67	Vert(CT)	-0.11	25-26	>999	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.52	Horz(CT)	0.02	18	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-SH							Weight: 130 lb	FT = 20%F, 11%E

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

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

REACTIONS (size) 18=0-3-8, 23=0-3-8, 29=0-3-8
Max Grav 18=566 (LC 4), 23=1663 (LC 1), 29=619 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-29=-74/0, 17-18=-73/0, 1-2=0/0, 2-3=-1465/0, 3-4=-1465/0, 4-5=-1677/0, 5-6=-1677/0, 6-7=-923/251, 7-8=-923/251, 8-9=0/1665, 9-10=0/1665, 10-12=-871/404, 12-13=-871/404, 13-14=-1384/72, 14-15=-1320/0, 15-16=-1320/0, 16-17=-4/0
BOT CHORD 28-29=0/912, 27-28=0/1677, 26-27=0/1677, 25-26=-25/1453, 23-25=-604/63, 22-23=-742/117, 21-22=-72/1384, 20-21=-72/1384, 19-20=-72/1384, 18-19=0/831
WEBS 9-23=-199/0, 8-23=-1452/0, 2-29=-1055/0, 8-25=0/1092, 2-28=0/645, 7-25=-173/0, 3-28=-202/0, 6-25=-702/0, 4-28=-263/148, 6-26=0/504, 4-27=-104/37, 5-26=-143/0, 10-23=-1367/0, 16-18=-956/0, 10-22=0/991, 16-19=0/571, 12-22=-167/32, 15-19=-241/0, 13-22=-823/0, 14-19=-74/285, 13-21=0/170, 14-20=-147/0

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) All plates are 3x5 MT20 unless otherwise indicated.
3) All bearings are assumed to be SP No.2 .
4) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
5) CAUTION, Do not erect truss backwards.

LOAD CASE(S) Standard

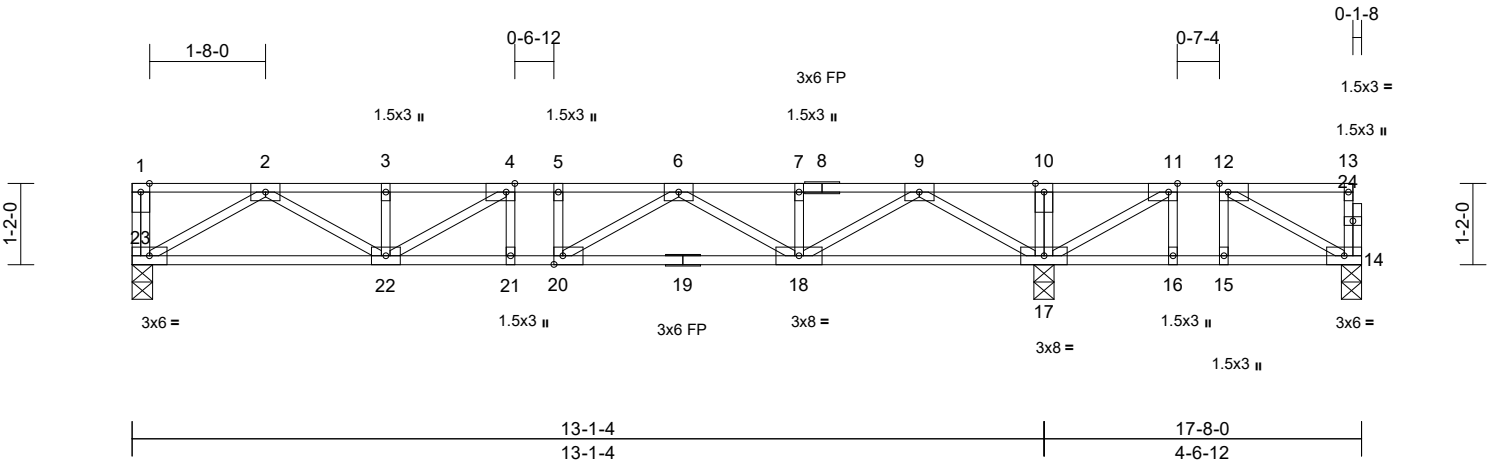
October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Crawl-Fitzgerald VKDRFR I77311162
24120007-B	FL6	Floor	7	1	Job Reference (optional)

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

Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 09:46:09 Page: 1
ID:tW2w2dAUMyUuuN5vVp9naWyQGJB-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:33.1

Plate Offsets (X, Y): [4:0-1-8,Edge], [11:0-1-8,Edge], [12:0-1-8,Edge], [20:0-1-8,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.62	Vert(LL)	-0.08	18-20	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.48	Vert(CT)	-0.11	18-20	>999	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.48	Horz(CT)	0.02	17	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-SH							Weight: 94 lb	FT = 20%F, 11%E

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

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

REACTIONS (size) 14=0-3-8, 17=0-3-8, 23=0-3-8
Max Uplift 14=-187 (LC 3)
Max Grav 14=161 (LC 4), 17=1305 (LC 1), 23=631 (LC 10)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-23=-74/0, 13-14=-106/0, 1-2=0/0, 2-3=-1505/0, 3-4=-1505/0, 4-5=-1743/0, 5-6=-1743/0, 6-7=-1036/0, 7-9=-1036/0, 9-10=0/1119, 10-11=0/1119, 11-12=-111/461, 12-13=-6/0
BOT CHORD 22-23=0/933, 21-22=0/1743, 20-21=0/1743, 18-20=0/1544, 17-18=-30/192, 16-17=-461/111, 15-16=-461/111, 14-15=-461/111
WEBS 10-17=-167/0, 9-17=-1397/0, 2-23=-1079/0, 9-18=0/1009, 2-22=0/668, 7-18=-168/0, 3-22=-193/0, 6-18=-612/0, 4-22=-390/16, 6-20=0/379, 4-21=-74/66, 5-20=-105/0, 11-17=-911/0, 12-14=-121/532, 11-16=0/195, 12-15=-169/0

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) All plates are 3x5 MT20 unless otherwise indicated.
3) All bearings are assumed to be SP No.2 .
4) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 14. This connection is for uplift only and does not consider lateral forces.
5) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
6) CAUTION, Do not erect truss backwards.

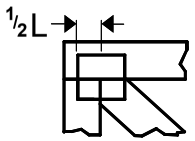
LOAD CASE(S) Standard

October 27,2025

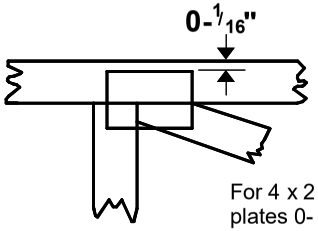
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

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.

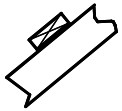
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

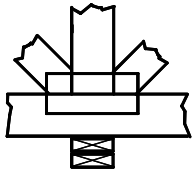
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

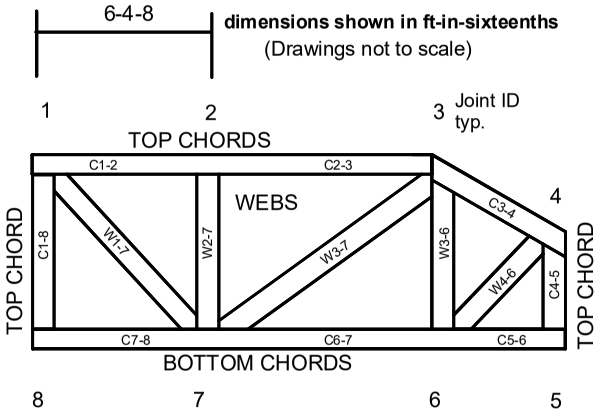


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

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

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

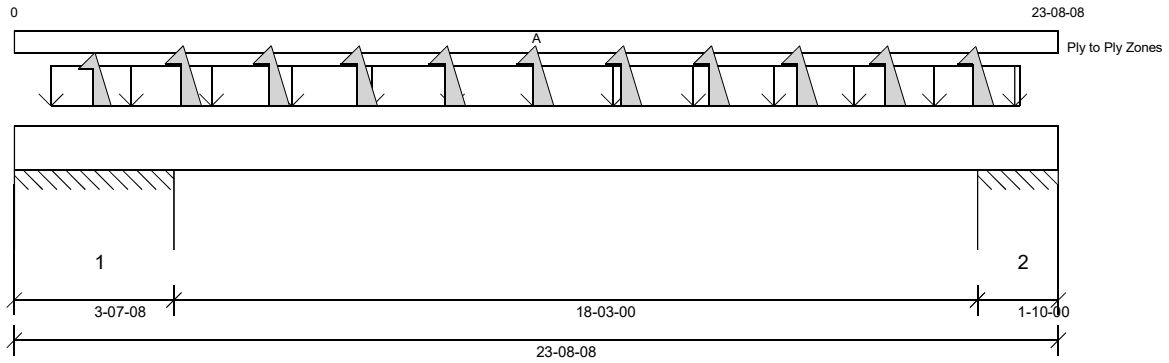
1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed 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.

Customer: Job Name: City: Customer Ph...	Job Name: **A** Level: **2nd floor** Label: **BM1 - i139** Type: **Beam**	**2 Ply Member** **2.1 RigidLam SP LVL 1-3/4 x 11-7/8**	Status: **Design Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.7.3.303.Update13.26

Report Version: 2023.09.18 10/24/2025 10:53



DESIGN INFORMATION a

Building Code:	IRC 2021
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
System Spacing:	-
LL Deflection Limit:	L/360, 0.75" (absolute)
TL Deflection Limit:	L/240, 1.00" (absolute)

Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 1'- 10 1/2" Bottom: 23'- 6 1/2"

Bearing Stress of Support Material:

- 875 psi Wall @ 0'- 1 1/2"
- 875 psi Wall @ 3'- 6"
- 875 psi Wall @ 22'
- 875 psi Wall @ 23'- 7"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	11'- 10"	D + Lr	1.15	8950 lb ft	24315 lb ft	Passed - 37%
Max Neg. Moment:	22'	D + Lr	1.15	15119 lb ft	15840 lb ft	Passed - 95%
Max Shear:	20'- 10 5/8"	D + Lr	1.15	4517 lb	9241 lb	Passed - 49%
Live Load (LL) Pos. Defl.:	12'- 6 3/4"	0.75(L + Lr + 0.6W)		0.206"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	12'- 6 13/16"	D + 0.75(L + Lr + 0.6W)		0.388"	L/240	Passed - L/564

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Downward Reaction	Uplift Reaction	Resistance of Member	Resistance of Support	Result
1	11-12	0.6D + 0.6W	1.60	733 lb		42913 lb	35984 lb	Passed - 2%
1	11-12	D + Lr	1.15		-3614 lb	-	-	
1	1-06-00	D + 0.75(L + Lr + 0.6W)	1.60	9702 lb		47250 lb	55125 lb	Passed - 21%
1	1-06-00	0.6D + 0.6W	1.60		-1970 lb	-	-	
2	1-01-08	D + 0.75(L + Lr + 0.6W)	1.60	15111 lb		35438 lb	41344 lb	Passed - 43%
2	1-01-08	0.6D + 0.6W	1.60		-3115 lb	-	-	
2	8-08	0.6D + 0.6W	1.60	1979 lb		22313 lb	26031 lb	Passed - 9%
2	8-08	D + 0.75(L + Lr + 0.6W)	1.60		-9552 lb	-	-	

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	23'- 8 1/2"	Self Weight	Top	11 lb/ft	-	-	-	-
Uniform	0'- 10"	22'- 10"	Smoothed Load	Top	258 lb/ft	-	134 lb/ft	268 lb/ft	83 lb/ft
Point	1'- 10"	1'- 10"	B2(Cond11)	Top	-	-	-	-	-635 lb
Point	3'- 10"	3'- 10"	B2(Cond10)	Top	-	-	-	-	-746 lb
Point	5'- 10"	5'- 10"	B2(Cond09)	Top	-	-	-	-	-746 lb
Point	7'- 10"	7'- 10"	B2(Cond08)	Top	-	-	-	-	-746 lb
Point	9'- 10"	9'- 10"	B2(Cond07)	Top	-	-	-	-	-746 lb
Point	11'- 10"	11'- 10"	B2(Cond06)	Top	-	-	-	-	-746 lb
Point	13'- 10"	13'- 10"	B2(Cond05)	Top	-	-	-	-	-746 lb
Point	15'- 10"	15'- 10"	B2(Cond04)	Top	-	-	-	-	-746 lb
Point	17'- 10"	17'- 10"	B2(Cond03)	Top	-	-	-	-	-746 lb
Point	19'- 10"	19'- 10"	B2(Cond02)	Top	-	-	-	-	-746 lb
Point	21'- 10"	21'- 10"	B2(Cond01)	Top	-	-	-	-	-735 lb

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	3'- 7 1/2"	W26(i45)	3262 lb	-	1622 lb	3478 lb	1773 lb/ -5227 lb
==>	0'- 1 1/2"	0'- 1 1/2"	W26(i45)	-	-	-	240 lb	-
==>	3'- 6"	3'- 6"	W26(i45)	3262 lb	-	1622 lb	3238 lb	-
2	21'- 10 1/2"	23'- 8 1/2"	-	2685 lb	-	1337 lb	2735/-24 lb	-
++>	22'	22'	W45(i79)	2685 lb	-	1337 lb	2716/-24 lb	-
++>	23'- 7"	23'- 7"	W27(i60)	-	-	-	19 lb	-

DESIGN NOTES

- CAUTION: The maximum net analysis reaction exceeds the user-defined maximum uplift value at one or more supports.
- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.

MiTek	Customer: Job Name: City: Customer Ph...	Job Name: **A** Level: **2nd floor** Label: **BM1 - i139** Type: **Beam**	**2 Ply Member** **2.1 RigidLam SP LVL 1-3/4 x 11-7/8**	Status: **Design Passed**

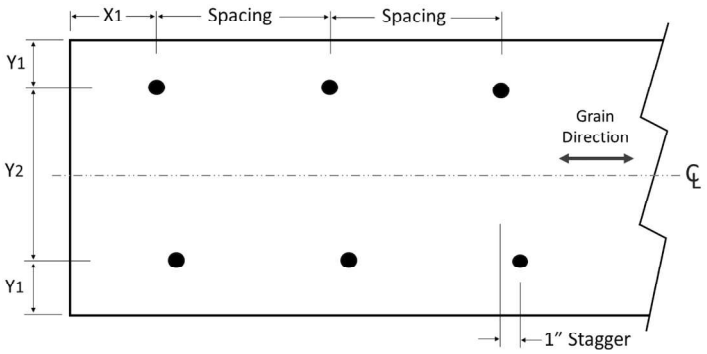
DESIGN NOTES

- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- Beam Stability Factor used in the calculation for Allowable Max Pos Moment (CL) = 0.99
- Beam Stability Factor used in the calculation for Allowable Max Neg Moment (CL) = 0.48

PLY TO PLY CONNECTION

- Zone A: Factored load = 0 plf. Use 12d (0.148"x3.25") nails. LDF = 1.00. Qty = 48. Row = 2, Spacing = 12"
  12d (0.148"x3.25") nails properties: D = 0.148" , L = 3.25". Fastener capacity = 128 lbs. X1 = 2.25" , Y1 = 0.75", Y2 = 1.5"
  Install fasteners from one face.
  X1 = Minimum end distance, X2 = Minimum edge distance, Y2 = Minimum row spacing.

FASTENER INSTALLATION – 2 ROWS (FROM ONE FACE)



General Notes:

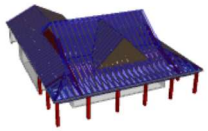
** CUTTING OR DRILLING OF COMPONENTS SHOULD NOT BE DONE WITHOUT CONTACTING COMPONENT SUPPLIER FIRST. CUSTOMER TAKES FULL RESPONSIBILITY FOR COMPONENTS IF CUT BEFORE AUTHORIZATION.

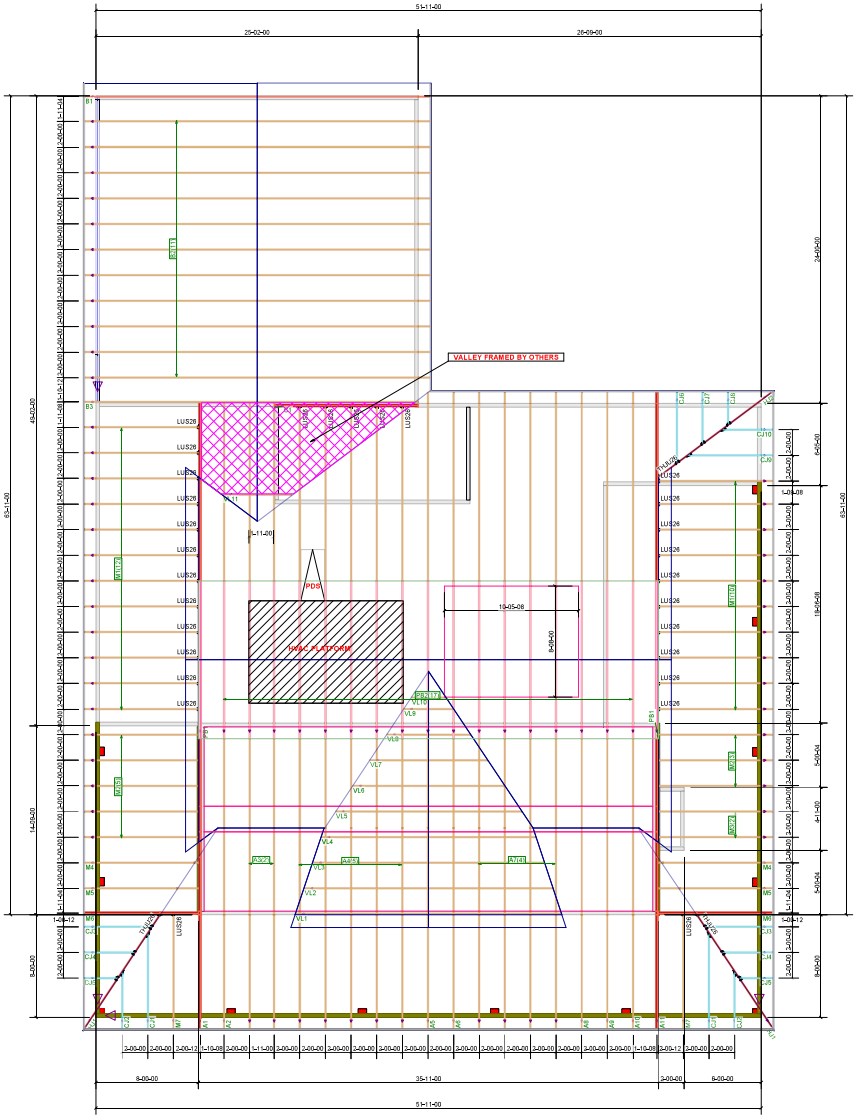
** ALL BEARING POINTS MUST BE INSTALLED PRIOR TO SETTING ANY COMPONENTS.

** FRAMER MUST REFER TO PLANS WHILE SETTING COMPONENTS.

** DAMAGED COMPONENTS SHOULD NOT BE INSTALLED UNLESS TOLD TO BY THE COMPONENT PLANT.

** TRUSS TO TRUSS CONNECTIONS ARE TO BE INSTALLED, UNLESS NOTED OTHERWISE.





Truss Drawing Left End Indicator

PRELIMINARY – NOT FOR CONSTRUCTION

** TRIANGULAR SYMBOL NEAR END OF TRUSS INDICATES LEFT END OF TRUSS AS SHOWN ON INDIVIDUAL TRUSS DRAWINGS.

** PLUMBING DROPS NOTED ARE IN THE APPROXIMATE LOCATIONS PER PLAN. BUILDER TO VERIFY LOCATIONS BEFORE SETTING TRUSSES.

** REFER TO FINAL TRUSS ENGINEERING SHEETS FOR PLY TO PLY CONNECTIONS.

** All uplift connectors shown within these documents are recommendations only. Per ANSI/TPI 1, all uplift connectors are the responsibility of the bldg designer and or contractor.

** DIMENSIONS ARE READ AS FOOT-INCH-SIXTEENTH.

** GIRDERS MUST BE FULLY CONNECTED TOGETHER PRIOR TO ADDING ANY LOADS.

Revisions	
00/00/00	Name
00/00/00	Name
00/00/00	Name
00/00/00	Name
00/00/00	Name

THIS IS A TRUSS PLACEMENT DIAGRAM ONLY. These trusses are designed as individual components to be incorporated into the building design at the specification of the building designer. See individual design sheets for each truss design identified on this placement drawing. The building designer is responsible for temporary and permanent bracing of the roof and floor systems and for the overall structure. The design of the truss support structure including headers, beams, walls, and columns is the responsibility of the building designer. For general guidance regarding the bracing, consult "Bracing of Wood Trusses" available from the Truss Plate Institute, 583 D'Onofrio Drive; Madison, WI 53719

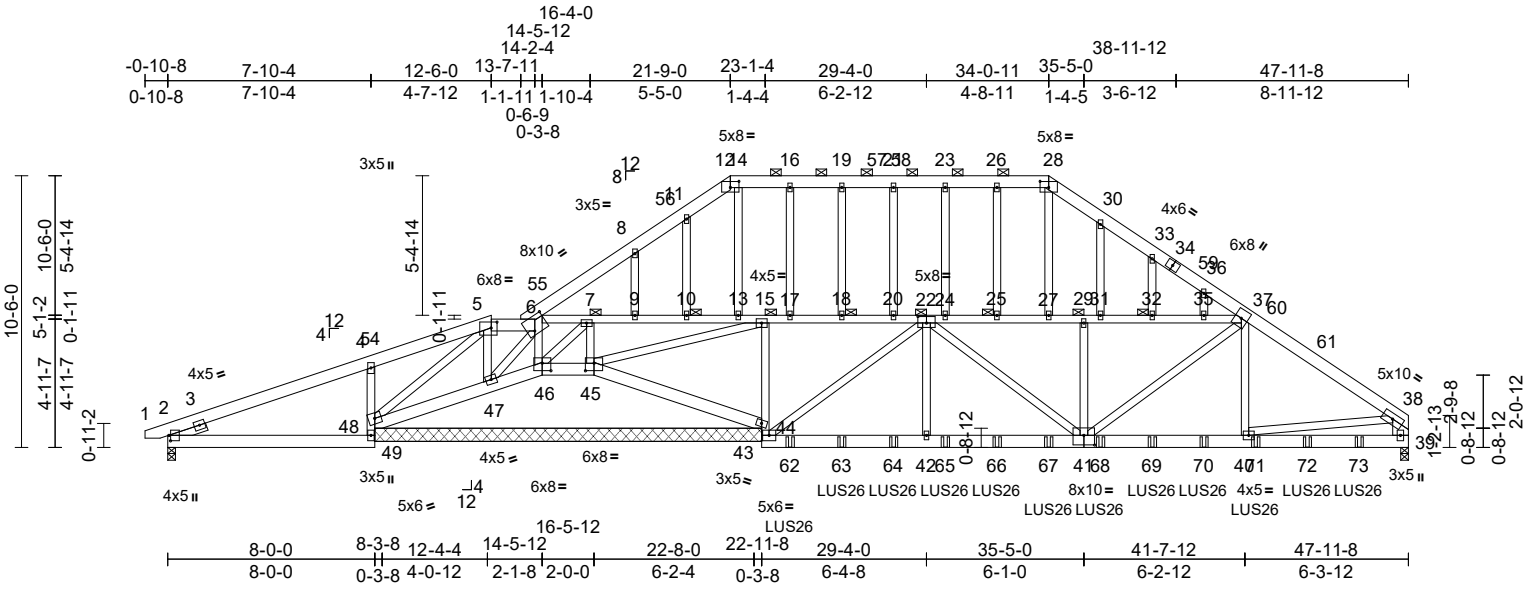
CARTER Lumber

Tim Johnson Const.	93 Dewey	ROOF PLACEMENT PLAN

Scale:	NTS
Date:	10/24/2025
Designer:	Mike Finch
Project Number:	24120007-A
Sheet Number:	2/2

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Roof-Fitzgerald VKDRFR
24120007-A	A1	Piggyback Base Girder	1	2	I77311757 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 10:03:09 Page: 1
ID:1FDMgcQP4cTeWg2l?Xr8xTyBttc-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:89.1

Plate Offsets (X, Y): [2:0-2-8,0-0-12], [5:0-2-12,0-2-12], [6:0-6-12,0-6-4], [12:0-4-0,0-2-13], [22:0-4-0,0-3-0], [28:0-4-0,0-2-13], [41:0-5-0,0-4-8], [45:0-4-0,0-3-8], [46:0-4-0,0-3-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.31	Vert(LL)	-0.07	40-41	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.76	Vert(CT)	-0.12	40-41	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.97	Horz(CT)	0.02	39	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 925 lb	FT = 20%

LUMBER

TOP CHORD	2x6 SP No.2 *Except* 6-22,22-37:2x4 SP No.2
BOT CHORD	2x6 SP No.2 *Except* 49-4:2x4 SP No.3, 15-43:2x4 SP No.2
WEBS	2x4 SP No.3 *Except* 39-38:2x8 SP 2400F 2.0E
OTHERS	2x4 SP No.3
SLIDER	Left 2x4 SP No.3 -- 1-6-0

BRACING

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 12-28, 6-37, 5-6.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 44-45.
JOINTS	1 Brace at Jt(s): 15, 29, 22, 7, 25, 18, 10, 32

REACTIONS (size) 2=0-3-8, 39=0-3-8, 44=14-11-8, 45=14-11-8, 46=14-11-8, 47=14-11-8, 48=14-11-8, 49=14-11-8
Max Horiz 2=202 (LC 10)
Max Uplift 2=-49 (LC 66), 39=-201 (LC 12), 44=-134 (LC 7), 45=-205 (LC 56), 46=-68 (LC 11), 48=-152 (LC 7)
Max Grav 2=470 (LC 41), 39=3105 (LC 41), 44=3270 (LC 40), 45=146 (LC 7), 46=595 (LC 41), 47=440 (LC 41), 48=1254 (LC 41), 49=102 (LC 41)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/18, 2-4=-349/87, 4-5=-562/130, 6-8=-1127/90, 8-11=-1005/119, 11-12=-905/131, 12-14=-803/126, 14-16=-803/126, 16-19=-803/126, 19-21=-803/126, 21-23=-803/126, 23-26=-803/126, 26-28=-804/126, 28-30=-914/128, 30-33=-990/115, 33-36=-1064/99, 36-37=-1178/88, 37-38=-4035/288, 38-39=-2665/196, 6-7=-29/562, 7-9=-25/613, 9-10=-25/613, 10-13=-25/613, 13-15=-25/613, 15-17=-31/1117, 17-18=-31/1117, 18-20=-31/1117, 20-24=-2857/1117, 24-25=-2857/291, 25-27=-2857/291, 27-29=-2857/291, 29-31=-2857/291, 31-32=-2857/291, 32-35=-2857/291, 35-37=-2857/291, 5-6=-229/128
BOT CHORD	2-49=-59/270, 48-49=0/0, 4-48=-1331/161, 47-48=-61/222, 46-47=-56/383, 45-46=-52/217, 44-45=-472/93, 43-44=-163/2796, 15-44=-242/142, 42-43=-139/2679, 40-42=-190/3338, 39-40=-58/675
WEBS	5-47=-190/37, 37-40=-28/836, 38-40=-134/2709, 29-41=-65/266, 37-41=-64/587, 22-42=-38/1256, 22-41=-113/1402, 5-48=-43/63, 6-46=-516/64, 6-47=-294/15, 7-45=-244/105, 7-46=-33/118, 15-45=-9/577, 27-28=-27/191, 25-26=-40/7, 23-24=-307/85, 20-21=-198/51, 18-19=-17/12, 16-17=-170/77, 13-14=-30/211, 10-11=-39/18, 8-9=-182/122, 30-31=-47/134, 32-33=-47/9, 35-36=-5/21, 22-43=-3800/254

NOTES

1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x8 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.33

October 27,2025

Continued on page 2

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

5) 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.
6) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10, Lu=50-0-0
7) Unbalanced snow loads have been considered for this design.
8) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
9) Provide adequate drainage to prevent water ponding.
10) All plates are 2x4 MT20 unless otherwise indicated.
11) Gable studs spaced at 2-0-0 oc.
12) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
13) All bearings are assumed to be SP No.2 .
14) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 68 lb uplift at joint 46.
15) N/A

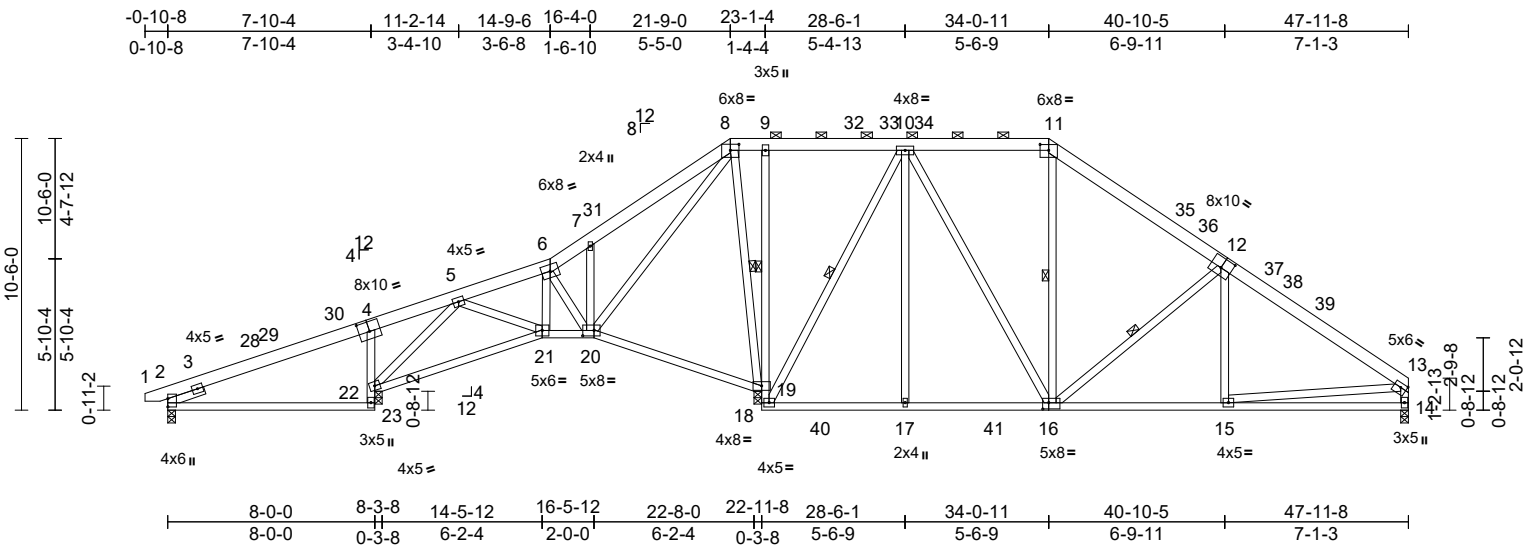
16) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
17) Use Simpson Strong-Tie LUS26 (4-10d Girder, 3-10d Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 24-0-12 from the left end to 46-0-12 to connect truss(es) to back face of bottom chord.
18) Fill all nail holes where hanger is in contact with lumber.

LOAD CASE(S) Standard

1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (lb/ft)
   Vert: 1-5=-48, 6-12=-48, 12-28=-58, 28-37=-48, 37-38=-48, 49-50=-20, 46-48=-20, 45-46=-20, 44-45=-20, 39-43=-20, 5-6=-58
   Concentrated Loads (lb)
   Vert: 54=-850, 62=-332 (B), 63=-332 (B), 64=-332 (B), 65=-332 (B), 66=-332 (B), 67=-332 (B), 68=-332 (B), 69=-332 (B), 70=-332 (B), 71=-332 (B), 72=-332 (B), 73=-332 (B)

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Roof-Fitzgerald VKDRFR I77311758
24120007-A	A2	Piggyback Base	1	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 10:03:10 Page: 1
ID:M_k?vw6kdQjSt?InJZg5aCyBuFG-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:89.1

Plate Offsets (X, Y): [2:0-3-13,0-0-1], [4:0-5-0,0-4-8], [8:0-4-0,0-2-13], [11:0-4-0,0-2-12], [12:0-5-0,0-4-8], [13:0-2-12,0-2-0], [16:0-2-12,0-3-0], [20:0-5-4,0-2-8]

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	0.42	Vert(LL)	-0.07	23-26	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.65	Vert(CT)	-0.16	23-26	>597	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.76	Horz(CT)	0.03	19	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 364 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 23-4:2x4 SP No.3
WEBS 2x4 SP No.3 *Except* 18-10,16-10:2x4 SP No.2
SLIDER Left 2x4 SP No.3 -- 1-6-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-11-12 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 8-11.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 19-20.
1 Row at midpt 9-19
WEBS 1 Row at midpt 10-18, 11-16, 12-16, 8-19

REACTIONS (size) 2=0-3-8, 14=0-3-8, 19=0-3-8, 22=0-3-8
Max Horiz 2=204 (LC 14)
Max Uplift 2=-48 (LC 11), 14=-29 (LC 16), 22=-64 (LC 15)
Max Grav 2=363 (LC 34), 14=1087 (LC 62), 19=2085 (LC 3), 22=843 (LC 41)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/14, 2-5=-418/137, 5-6=-595/250, 6-7=-394/264, 7-8=-556/393, 8-9=0/344, 9-10=0/338, 10-11=-664/345, 11-13=-1427/333, 13-14=-1033/221
BOT CHORD 2-23=-216/136, 22-23=0/142, 4-22=-521/179, 21-22=-79/418, 20-21=-69/468, 19-20=-316/131, 18-19=-89/1242, 9-19=-397/101, 17-18=0/352, 15-17=-133/1102, 14-15=-58/228
WEBS 6-21=0/224, 6-20=-407/70, 7-20=-437/225, 10-18=-1313/141, 10-17=0/342, 10-16=-42/690, 11-16=-46/137, 12-16=-693/197, 12-15=0/231, 13-15=-100/883, 5-22=-382/127, 5-21=-4/223, 8-19=-683/105, 8-20=-215/890

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-7-1 to 4-2-8, Interior (1) 4-2-8 to 21-9-0, Exterior(2R) 21-9-0 to 26-6-9, Interior (1) 26-6-9 to 34-0-11, Exterior(2R) 34-0-11 to 38-10-4, Interior (1) 38-10-4 to 47-9-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10, Lu=50-0-0
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 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) * This truss has been designed for a 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 No.2 .
9) Bearing at joint(s) 22, 19 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
10) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 22, and 14. This connection is for uplift only and does not consider lateral forces.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

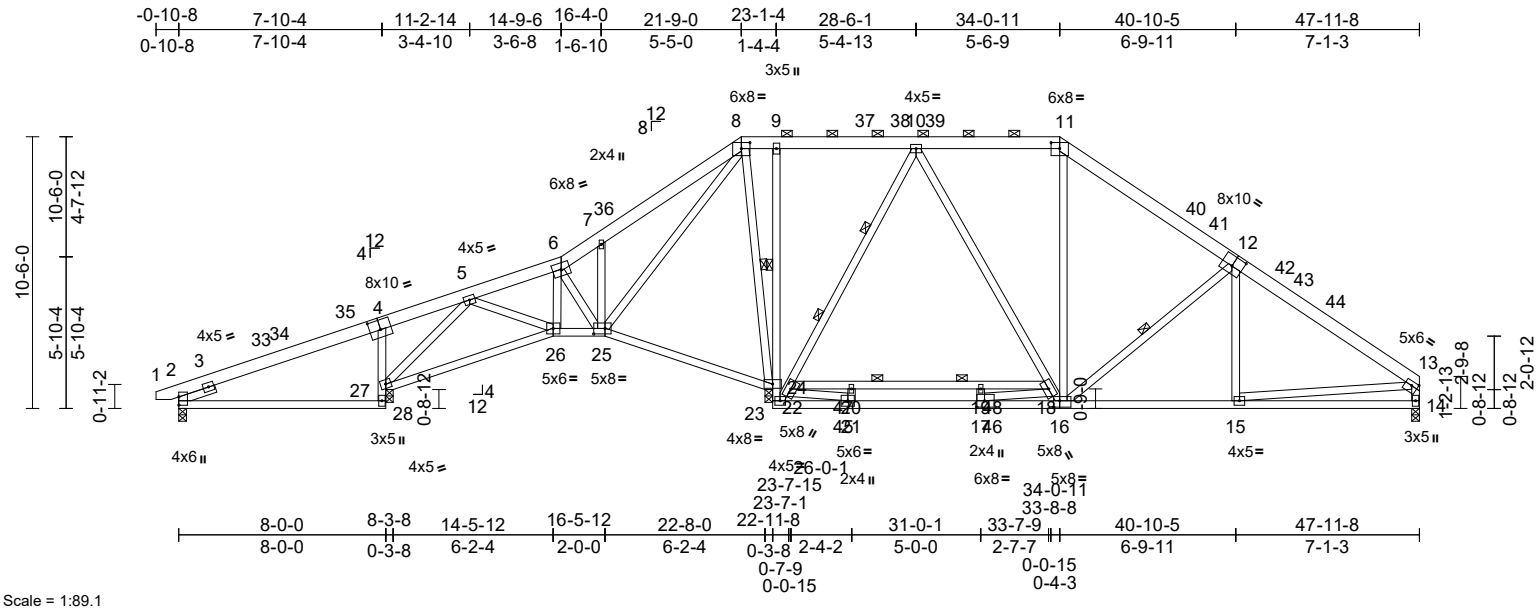
LOAD CASE(S) Standard

October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Roof-Fitzgerald VKDRFR I77311759
24120007-A	A3	Piggyback Base	2	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 10:03:11 ID:kE_JSxr?znqd6gE42aL0ATyBuJT-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f Page: 1



Scale = 1:89.1

Plate Offsets (X, Y): [2:0-3-13,0-0-1], [4:0-5-0,0-4-8], [8:0-4-0,0-2-12], [11:0-4-0,0-2-12], [12:0-5-0,0-4-8], [13:0-2-12,0-2-0], [16:0-2-12,0-3-0], [17:0-3-8,0-3-0], [25:0-5-4,0-2-8]

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	0.44	Vert(LL)	-0.13	17-21	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.96	Vert(CT)	-0.25	17-21	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.99	Horz(CT)	0.03	24	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 374 lb	FT = 20%

LUMBER

TOP CHORD	2x6 SP No.2
BOT CHORD	2x4 SP No.2 *Except* 28-4:2x4 SP No.3
WEBS	2x4 SP No.3 *Except* 10-23,10-16:2x4 SP No.2
SLIDER	Left 2x4 SP No.3 -- 1-6-0

BRACING

TOP CHORD	Structural wood sheathing directly applied or 5-7-9 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 8-11.
BOT CHORD	Rigid ceiling directly applied or 3-6-1 oc bracing. Except:
1 Row at midpt	9-24
WEBS	1 Row at midpt 12-16, 8-24
WEBS	2 Rows at 1/3 pts 10-23

REACTIONS (size) 2=0-3-8, 14=0-3-8, 24=0-3-8, 27=0-3-8
Max Horiz 2=204 (LC 14)
Max Uplift 2=-47 (LC 11), 27=-66 (LC 15)
Max Grav 2=366 (LC 34), 14=1212 (LC 62), 24=2594 (LC 3), 27=820 (LC 41)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/14, 2-5=-419/137, 5-6=-551/250, 6-7=-346/263, 7-8=-508/393, 8-9=0/367, 9-10=0/358, 10-11=-836/249, 11-13=-1613/218, 13-14=-1155/153
BOT CHORD	2-28=-213/142, 27-28=0/142, 4-27=-520/179, 26-27=-79/402, 25-26=-71/427, 24-25=-345/132, 23-24=0/1720, 9-24=-425/89, 21-23=0/1030, 17-21=0/2269, 15-17=-49/1256, 14-15=-52/238, 20-22=-2086/0, 19-20=-2086/0, 18-19=-2086/0
WEBS	6-26=0/232, 6-25=-401/69, 7-25=-436/225, 11-16=0/259, 12-16=-673/211, 12-15=0/205, 13-15=-20/1029, 8-24=-669/113, 8-25=-217/869, 5-27=-359/128, 5-26=-5/197, 22-23=-2110/0, 10-22=-1360/82, 10-18=0/1098, 16-18=-108/571, 20-21=-189/0, 17-19=-254/0, 17-18=0/1927, 21-22=0/1535

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-7-1 to 4-2-8, Interior (1) 4-2-8 to 21-9-0, Exterior(2R) 21-9-0 to 26-6-9, Interior (1) 26-6-9 to 34-0-11, Exterior(2R) 34-0-11 to 38-10-4, Interior (1) 38-10-4 to 47-9-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10, Lu=50-0-0
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 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
6) 200.0lb AC unit load placed on the bottom chord, 28-6-1 from left end, supported at two points, 5-0-0 apart.
7) Provide adequate drainage to prevent water ponding.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
9) All bearings are assumed to be SP No.2 .
10) Bearing at joint(s) 27, 24 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
11) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 27. This connection is for uplift only and does not consider lateral forces.
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

October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Roof-Fitzgerald VKDRFR
24120007-A	A4	Piggyback Base	5	1	I77311760 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 10:03:11 Page: 1
ID:eZBgMRnIZ2yWFnOSkxJhQ7yBuNQ-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

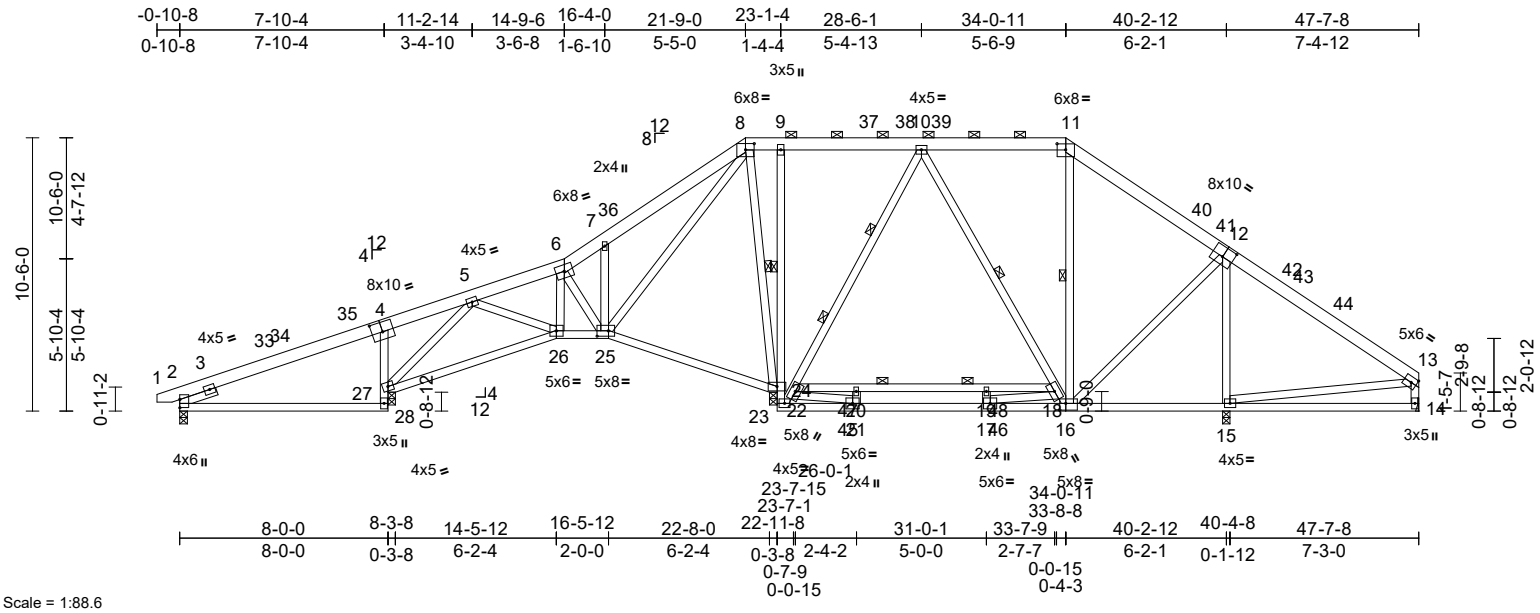


Plate Offsets (X, Y): [2:0-3-13,0-0-1], [4:0-5-0,0-4-8], [8:0-4-0,0-2-13], [11:0-4-0,0-2-12], [12:0-5-0,0-4-8], [16:0-2-12,0-3-0], [25:0-5-4,0-2-8]

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	0.41	Vert(LL)	-0.13	17-21	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.95	Vert(CT)	-0.23	17-21	>906	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.74	Horz(CT)	0.04	24	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 373 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 28-4:2x4 SP No.3
WEBS 2x4 SP No.3 *Except* 10-23,10-16:2x4 SP No.2
SLIDER Left 2x4 SP No.3 -- 1-6-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 8-11.
BOT CHORD Rigid ceiling directly applied or 3-6-5 oc bracing. Except:
1 Row at midpt 9-24
WEBS 1 Row at midpt 11-16, 8-24, 10-16
WEBS 2 Rows at 1/3 pts 10-23

REACTIONS (size) 2=0-3-8, 14= Mechanical, 15=0-3-8, 24=0-3-8, 27=0-3-8
Max Horiz 2=206 (LC 14)
Max Uplift 2=-48 (LC 11), 14=-38 (LC 16), 27=-57 (LC 15)
Max Grav 2=359 (LC 34), 14=295 (LC 62), 15=1331 (LC 62), 24=2144 (LC 3), 27=861 (LC 41)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/14, 2-5=-418/136, 5-6=-669/255, 6-7=-480/269, 7-8=-642/398, 8-9=-3/298, 9-10=-6/292, 10-11=-457/234, 11-13=-609/210, 13-14=-216/123
BOT CHORD 2-28=-221/128, 27-28=0/142, 4-27=-521/180, 26-27=-85/451, 25-26=-78/542, 24-25=-269/129, 23-24=0/1321, 9-24=-400/86, 21-23=0/775, 17-21=0/2137, 15-17=-61/464, 14-15=-48/168, 20-22=-2074/0, 19-20=-2074/0, 18-19=-2074/0
WEBS 6-26=0/219, 6-25=-418/70, 7-25=-437/225, 11-16=-151/70, 12-16=0/557, 12-15=-1130/126, 13-15=-178/41, 5-27=-441/130, 5-26=-7/263, 8-24=-667/118, 8-25=-219/925, 22-23=-1600/0, 10-22=-894/72, 10-18=0/534, 16-18=-220/110, 20-21=-205/0, 21-22=0/1615, 17-19=-240/0, 17-18=0/1875

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-7-1 to 4-2-2, Interior (1) 4-2-2 to 21-9-0, Exterior(2R) 21-9-0 to 26-6-2, Interior (1) 26-6-2 to 34-0-11, Exterior(2R) 34-0-11 to 38-9-13, Interior (1) 38-9-13 to 47-5-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10, Lu=50-0-0
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 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
6) 200.0lb AC unit load placed on the bottom chord, 28-6-1 from left end, supported at two points, 5-0-0 apart.
7) Provide adequate drainage to prevent water ponding.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
9) Bearings are assumed to be: Joint 2 SP No.2 , Joint 27 SP No.2 , Joint 24 SP No.2 , Joint 15 SP No.2 .
10) Refer to girder(s) for truss to truss connections.
11) Bearing at joint(s) 27, 24 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 38 lb uplift at joint 14.
13) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 27. This connection is for uplift only and does not consider lateral forces.
14) 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

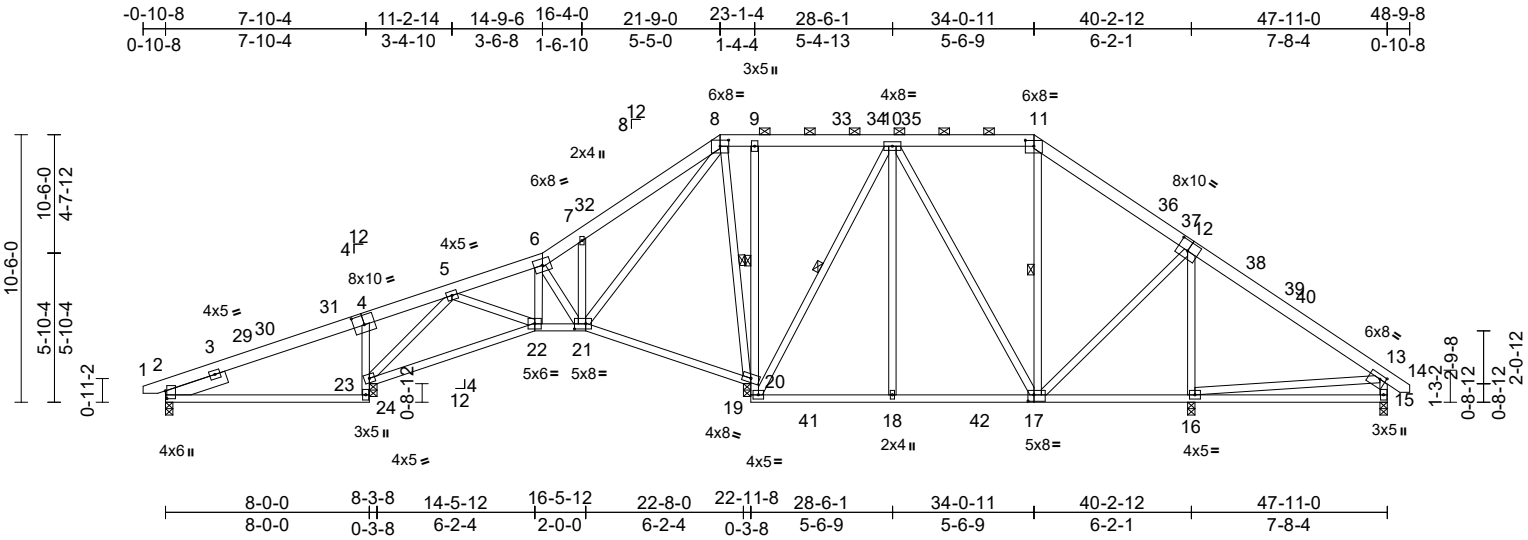
October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Roof-Fitzgerald VKDRFR I77311761
24120007-A	A5	Piggyback Base	1	1	Job Reference (optional)

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

Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 10:03:12 Page: 1
ID:Fjv5451DoUmeR_6h07ElJXyBuSH-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:90.4

Plate Offsets (X, Y): [2:0-3-9,0-0-11], [4:0-5-0,0-4-8], [8:0-4-0,0-2-13], [11:0-4-0,0-2-12], [12:0-5-0,0-4-8], [13:0-2-12,0-2-0], [17:0-2-12,0-3-0], [21:0-5-4,0-2-8]

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	0.54	Vert(LL)	-0.08	15-16	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.87	Vert(CT)	-0.15	15-16	>590	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.56	Horz(CT)	0.03	20	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 371 lb	FT = 20%

LUMBER

TOP CHORD	2x6 SP No.2
BOT CHORD	2x4 SP No.2 *Except* 24-4,9-19:2x4 SP No.3
WEBS	2x4 SP No.3 *Except* 19-10,17-10:2x4 SP No.2
SLIDER	Left 2x6 SP No.2 -- 2-6-0

BRACING

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 8-11.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 2-24,20-21.
1 Row at midpt	9-20
WEBS	1 Row at midpt 10-19, 11-17, 8-20

REACTIONS (size) 2=0-3-8, 15=0-3-8, 16=0-3-8, 20=0-3-8, 23=0-3-8
Max Horiz 2=207 (LC 14)
Max Uplift 2=-54 (LC 11), 15=-37 (LC 16), 16=-3 (LC 16), 23=-61 (LC 15)
Max Grav 2=346 (LC 34), 15=425 (LC 34), 16=1050 (LC 62), 20=1721 (LC 3), 23=905 (LC 41)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/14, 2-5=-597/147, 5-6=-679/285, 6-7=-506/299, 7-8=-669/429, 8-9=-11/292, 9-10=-13/297, 10-11=-378/305, 11-13=-519/296, 13-14=0/35, 13-15=-327/175

BOT CHORD 2-24=-194/89, 23-24=0/135, 4-23=-531/171, 22-23=-78/423, 21-22=-80/553, 20-21=-239/123, 19-20=-31/931, 9-20=-379/94, 18-19=-8/266, 16-18=-8/266, 15-16=-76/267

WEBS 6-22=0/197, 6-21=-403/76, 7-21=-437/226, 10-19=-958/74, 10-18=0/348, 10-17=0/261, 11-17=-181/20, 12-17=-4/322, 12-16=-838/240, 13-16=-172/98, 8-20=-668/90, 8-21=-223/923, 5-23=-486/150, 5-22=-16/297

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-7-1 to 4-2-7, Interior (1) 4-2-7 to 21-9-0, Exterior(2R) 21-9-0 to 26-6-8, Interior (1) 26-6-8 to 34-0-11, Exterior(2R) 34-0-11 to 38-10-3, Interior (1) 38-10-3 to 48-7-3 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=1.33
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10, Lu=50-0-0
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 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) * This truss has been designed for a 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 No.2 .
9) Bearing at joint(s) 23, 20 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
10) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 23, 16, and 15. This connection is for uplift only and does not consider lateral forces.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

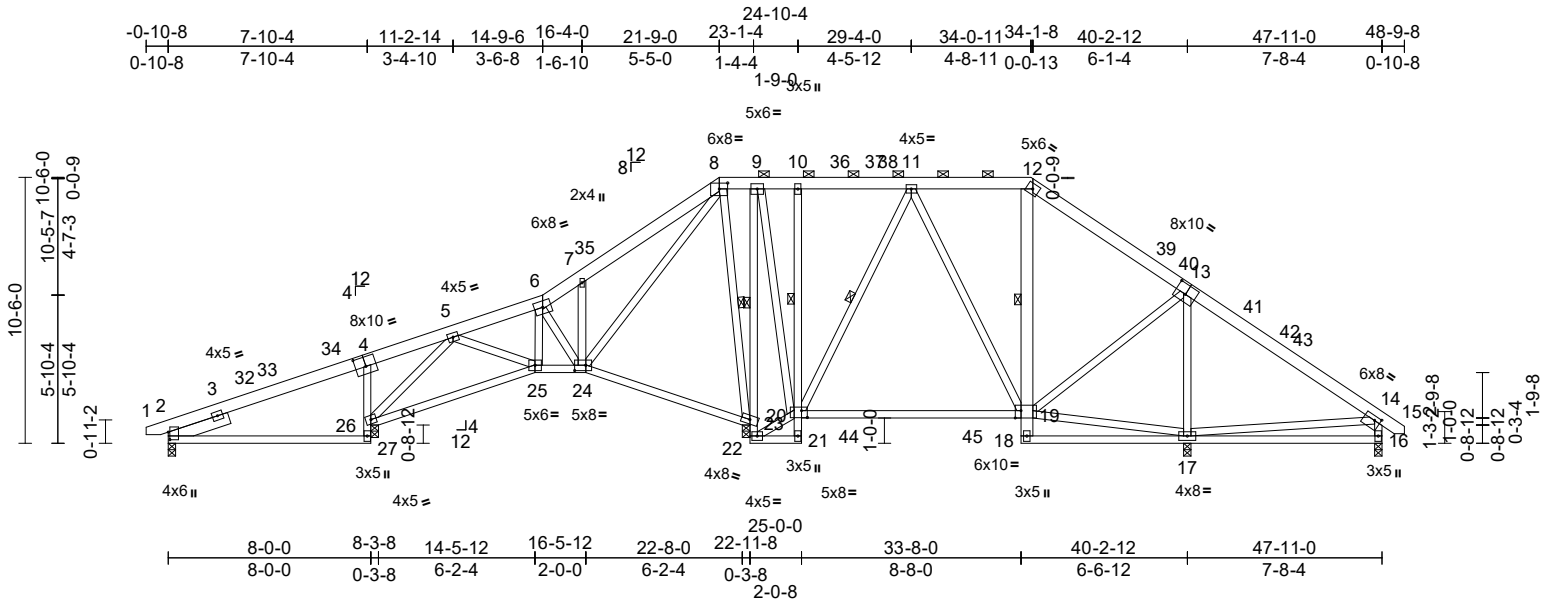
LOAD CASE(S) Standard

October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Roof-Fitzgerald VKDRFR I77311762
24120007-A	A6	Piggyback Base	1	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 10:03:12 Page: 1
ID:EH9FznAFqUUMaUwHYU_tcGyBuUg-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:91

Plate Offsets (X, Y): [2:0-3-9,0-0-11], [4:0-5-0,0-4-8], [8:0-4-0,0-2-13], [13:0-5-0,0-4-8], [14:0-2-12,0-2-0], [19:0-2-12,Edge], [20:0-2-12,0-3-4], [24:0-5-4,0-2-8]

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	0.52	Vert(LL)	-0.26	19-20	>805	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.61	Vert(CT)	-0.41	19-20	>505	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.63	Horz(CT)	0.03	16	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 400 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 27-4,9-22,21-10:2x4 SP No.3, 20-19:2x4 SP 2400F 2.0E, 12-18:2x6 SP No.2
WEBS 2x4 SP No.3
SLIDER Left 2x6 SP No.2 -- 2-6-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 8-12.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing. Except:
1 Row at midpt 9-23, 10-20, 12-19
WEBS 1 Row at midpt 11-20, 8-23

REACTIONS (size) 2=0-3-8, 16=0-3-8, 17=0-3-8, 23=0-3-8, 26=0-3-8
Max Horiz 2=206 (LC 14)
Max Uplift 2=-53 (LC 11), 16=-55 (LC 16), 26=-60 (LC 15)
Max Grav 2=351 (LC 34), 16=315 (LC 62), 17=1163 (LC 62), 23=1719 (LC 3), 26=859 (LC 41)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/14, 2-5=-598/149, 5-6=-565/264, 6-7=-383/277, 7-8=-539/407, 8-9=0/354, 9-10=-29/282, 10-11=-31/281, 11-12=-312/284, 12-14=-434/272, 14-15=0/35, 14-16=-221/171
BOT CHORD 2-27=-185/100, 26-27=0/135, 4-26=-529/170, 25-26=-69/377, 24-25=-60/445, 23-24=-312/137, 22-23=-49/109, 9-23=-1049/44, 21-22=-188/0, 20-21=-29/68, 10-20=-191/77, 19-20=-41/216, 18-19=0/101, 12-19=-197/11, 17-18=-145/0, 16-17=-74/249
WEBS 6-25=0/209, 6-24=-389/72, 7-24=-428/226, 13-17=-960/232, 14-17=-333/100, 17-19=-61/90, 13-19=0/453, 11-20=-608/96, 11-19=0/321, 5-26=-394/134, 5-25=-3/236, 8-23=-746/101, 8-24=-215/868, 20-22=-228/201, 9-20=-13/872

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-7-1 to 4-2-7, Interior (1) 4-2-7 to 21-9-0, Exterior(2R) 21-9-0 to 26-6-8, Interior (1) 26-6-8 to 34-1-8, Exterior(2R) 34-1-8 to 38-11-0, Interior (1) 38-11-0 to 48-7-3 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=1.33
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10, Lu=50-0-0
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 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) * This truss has been designed for a 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 No.2 .
9) Bearing at joint(s) 26, 23 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
10) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 26, and 16. This connection is for uplift only and does not consider lateral forces.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

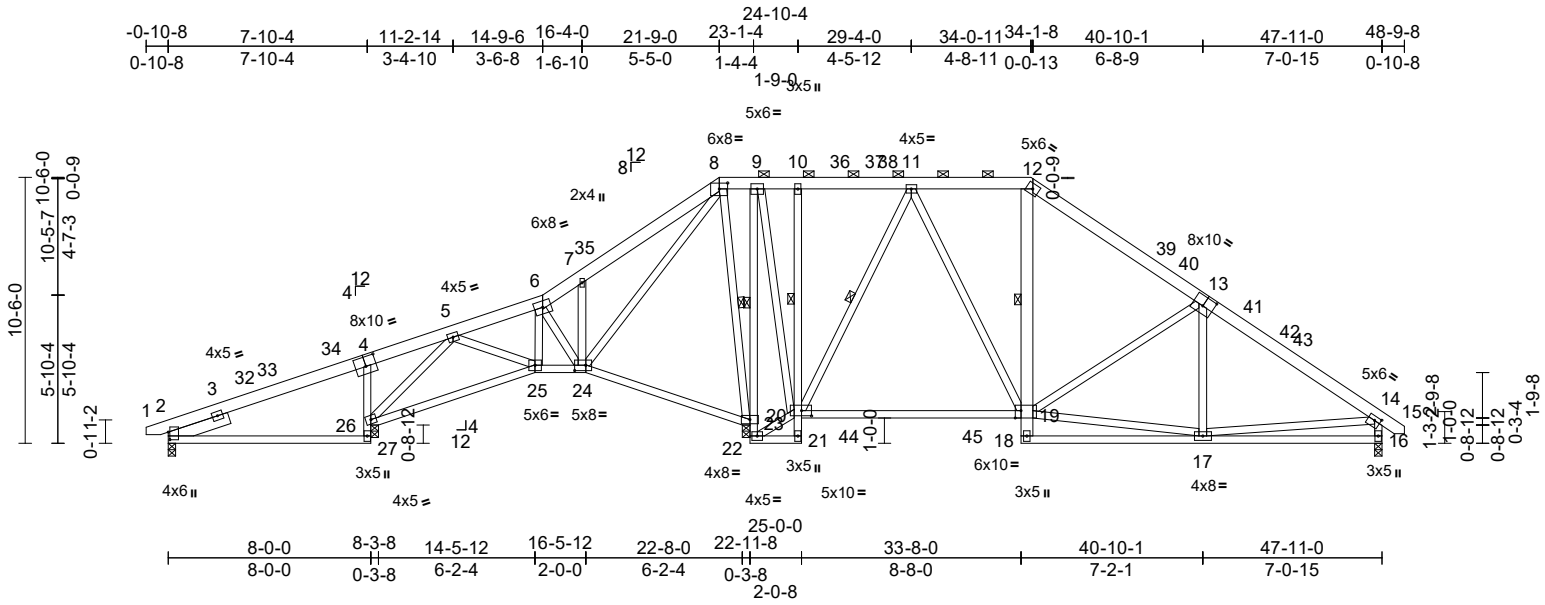
LOAD CASE(S) Standard

October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Roof-Fitzgerald VKDRFR I77311763
24120007-A	A7	Piggyback Base	4	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 10:03:12 Page: 1
ID:65UWqsO2FeeyYwAaj_t4BVyBv7i-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:91

Plate Offsets (X, Y): [2:0-3-9,0-0-11], [4:0-5-0,0-4-8], [8:0-4-0,0-2-13], [13:0-5-0,0-4-8], [14:0-2-12,0-2-0], [19:0-2-12,Edge], [20:0-4-12,0-2-8], [24:0-5-4,0-2-8]

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	0.50	Vert(LL)	-0.27	19-20	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.75	Vert(CT)	-0.43	19-20	>685	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.74	Horz(CT)	0.04	16	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 400 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 27-4,9-22,21-10:2x4 SP No.3, 20-19:2x4 SP 2400F 2.0E, 12-18:2x6 SP No.2
WEBS 2x4 SP No.3
SLIDER Left 2x6 SP No.2 -- 2-6-0

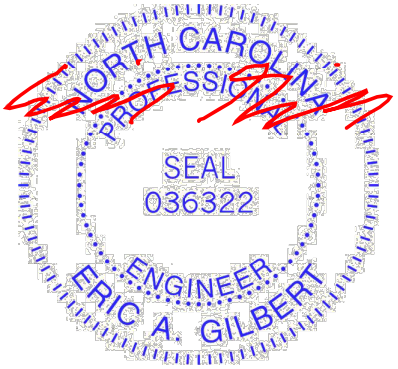
BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 8-12.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing. Except:
1 Row at midpt 9-23, 10-20, 12-19
WEBS 1 Row at midpt 8-23, 11-20

REACTIONS (size) 2=0-3-8, 16=0-3-8, 23=0-3-8, 26=0-3-8
Max Horiz 2=206 (LC 14)
Max Uplift 2=-53 (LC 11), 16=-40 (LC 16), 26=-67 (LC 15)
Max Grav 2=360 (LC 34), 16=1089 (LC 62), 23=2134 (LC 3), 26=814 (LC 41)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/14, 2-5=-599/152, 5-6=-431/246, 6-7=-234/258, 7-8=-386/387, 8-9=0/429, 9-10=-21/279, 10-11=-24/279, 11-12=-677/336, 12-14=-1367/322, 14-15=0/35, 14-16=-1024/260
BOT CHORD 2-27=-173/115, 26-27=0/135, 4-26=-526/169, 25-26=-68/324, 24-25=-47/327, 23-24=-400/149, 22-23=-54/148, 9-23=-1388/91, 21-22=-178/0, 20-21=-31/83, 10-20=-180/76, 19-20=0/347, 18-19=0/123, 12-19=-41/140, 17-18=-73/30, 16-17=-61/244
WEBS 6-25=0/223, 6-24=-373/70, 7-24=-422/225, 11-19=-6/800, 13-17=-77/152, 14-17=-75/814, 8-23=-786/105, 17-19=-76/1088, 13-19=-588/184, 20-22=-337/216, 9-20=-59/1208, 8-24=-207/801, 5-26=-320/120, 5-25=-3/164, 11-20=-1035/149

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-7-1 to 4-2-7, Interior (1) 4-2-7 to 21-9-0, Exterior(2R) 21-9-0 to 26-6-8, Interior (1) 26-6-8 to 34-1-8, Exterior(2R) 34-1-8 to 38-11-0, Interior (1) 38-11-0 to 48-7-3 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=1.33
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10, Lu=50-0-0
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 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) * This truss has been designed for a 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 No.2 .
9) Bearing at joint(s) 26, 23 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
10) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 26, and 16. This connection is for uplift only and does not consider lateral forces.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

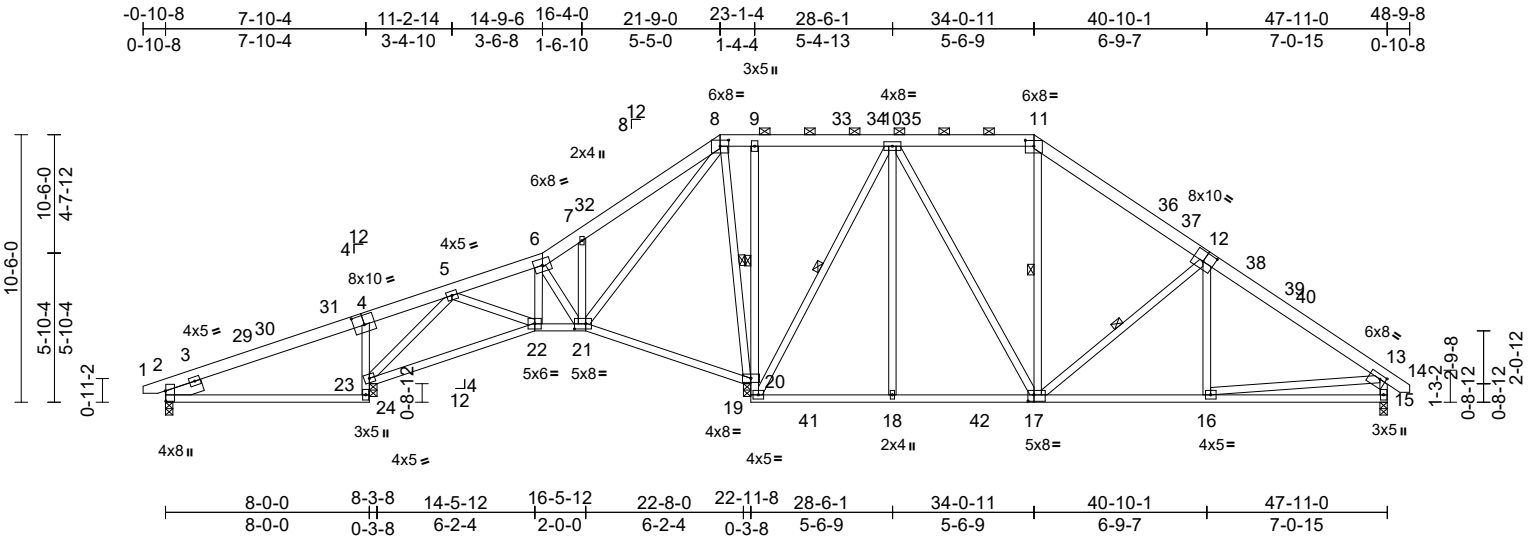


October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Roof-Fitzgerald VKDRFR I77311764
24120007-A	A8	Piggyback Base	1	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 10:03:13 Page: 1
ID:65UWqsO2FeeyYwAaj_t4BVyBv7i-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:90.4

Plate Offsets (X, Y): [2:0-4-13,0-0-3], [4:0-5-0,0-4-8], [8:0-4-0,0-2-13], [11:0-4-0,0-2-12], [12:0-5-0,0-4-8], [13:0-2-12,0-2-0], [17:0-2-12,0-3-0], [21:0-5-4,0-2-8]

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	0.54	Vert(LL)	-0.07	22-23	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.65	Vert(CT)	-0.08	24-27	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.76	Horz(CT)	0.03	20	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 368 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 24-4:2x4 SP No.3
WEBS 2x4 SP No.3 *Except* 19-10,17-10:2x4 SP No.2
SLIDER Left 2x6 SP No.2 -- 1-6-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 8-11.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 20-21.
1 Row at midpt 9-20
WEBS 1 Row at midpt 10-19, 11-17, 12-17, 8-20

REACTIONS (size) 2=0-3-8, 15=0-3-8, 20=0-3-8, 23=0-3-8
Max Horiz 2=207 (LC 14)
Max Uplift 2=-50 (LC 11), 15=-39 (LC 16), 23=-65 (LC 15)
Max Grav 2=362 (LC 34), 15=1126 (LC 62), 20=2080 (LC 3), 23=849 (LC 41)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/14, 2-5=-348/144, 5-6=-594/264, 6-7=-395/278, 7-8=-557/407, 8-9=0/348, 9-10=0/342, 10-11=-661/352, 11-13=-1418/342, 13-14=0/35, 13-15=-1060/266
BOT CHORD 2-24=-154/137, 23-24=0/137, 4-23=-527/170, 22-23=-70/416, 21-22=-63/469, 20-21=-312/135, 19-20=-78/1239, 9-20=-397/100, 18-19=0/354, 16-18=-109/1089, 15-16=-65/260
WEBS 6-22=0/223, 6-21=-406/71, 7-21=-437/226, 10-19=-1308/128, 10-18=0/342, 10-17=-31/685, 11-17=-48/136, 12-17=-683/195, 12-16=0/230, 13-16=-75/838, 8-20=-683/91, 8-21=-215/890, 5-23=-382/136, 5-22=-5/227

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-7-1 to 4-2-7, Interior (1) 4-2-7 to 21-9-0, Exterior(2R) 21-9-0 to 26-6-8, Interior (1) 26-6-8 to 34-0-11, Exterior(2R) 34-0-11 to 38-10-3, Interior (1) 38-10-3 to 48-7-3 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=1.33
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10, Lu=50-0-0
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 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) * This truss has been designed for a 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 No.2 .
9) Bearing at joint(s) 23, 20 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
10) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 23, and 15. This connection is for uplift only and does not consider lateral forces.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

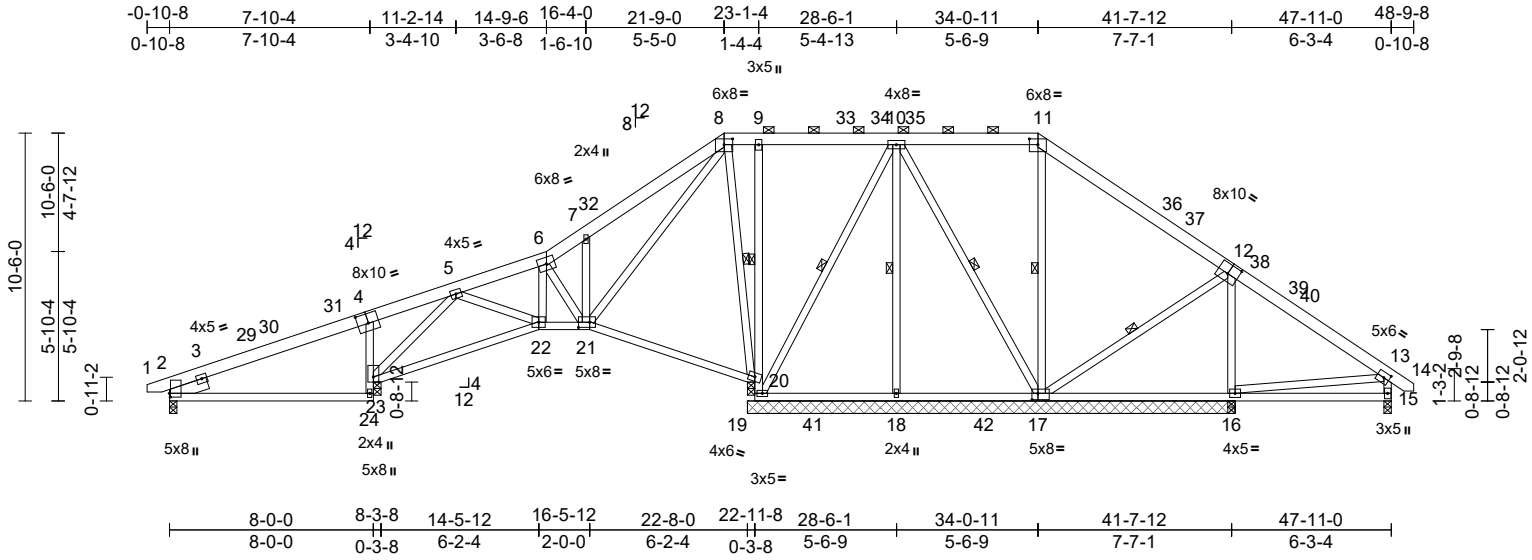
LOAD CASE(S) Standard

October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Roof-Fitzgerald VKDRFR I77311765
24120007-A	A9	Piggyback Base	1	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 10:03:13 ID:DHFbPnk3nfL?ZO7tUT?5uWyBvGI-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f Page: 1



Scale = 1:90.4

Plate Offsets (X, Y): [2:0-1-12,0-0-7], [4:0-5-0,0-4-8], [8:0-4-0,0-2-12], [11:0-4-0,0-2-12], [12:0-5-0,0-4-8], [13:0-2-9,0-2-8], [17:0-2-12,0-3-0], [21:0-5-4,0-2-8]

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	0.43	Vert(LL)	-0.10	22-23	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.56	Vert(CT)	-0.11	24-27	>833	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.34	Horz(CT)	0.04	20	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 366 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 9-19:2x4 SP No.3
WEBS 2x4 SP No.3 *Except* 10-17,19-10:2x4 SP No.2
SLIDER Left 2x6 SP No.2 -- 1-6-10

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.): 8-11.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing. Except:
1 Row at midpt 9-20
WEBS 1 Row at midpt 8-20, 10-18, 11-17, 12-17, 10-17, 10-19

REACTIONS (size) 2=0-3-8, 15=0-3-8, 16=19-1-8, 17=19-1-8, 18=19-1-8, 19=19-1-8, 20=19-1-8, 23=0-3-8
Max Horiz 2=207 (LC 14)
Max Uplift 2=-49 (LC 11), 15=-26 (LC 16), 16=-33 (LC 16), 17=-6 (LC 16), 20=-19 (LC 12), 23=-66 (LC 15)
Max Grav 2=361 (LC 34), 15=307 (LC 34), 16=698 (LC 62), 17=635 (LC 70), 18=452 (LC 53), 19=329 (LC 65), 20=934 (LC 33), 23=889 (LC 41)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/14, 2-5=-298/158, 5-6=-726/283, 6-7=-537/302, 7-8=-699/431, 8-9=-12/294, 9-10=-14/299, 10-11=-61/254, 11-13=-168/271, 13-14=0/35, 13-15=-242/135

BOT CHORD 2-24=-205/92, 22-23=-76/453, 21-22=-79/596, 20-21=-230/121, 19-20=0/0, 9-20=-360/97, 18-19=-160/97, 16-18=-160/97, 15-16=-32/117

WEBS 23-24=0/116, 4-23=-565/175, 5-22=-12/313, 5-23=-472/137, 6-22=0/219, 7-21=-436/225, 6-21=-438/72, 8-20=-685/88, 8-21=-223/954, 10-18=-225/45, 11-17=-451/71, 12-16=-475/194, 12-17=-209/123, 13-16=-75/59, 10-17=-82/126, 10-19=-300/22

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-7-1 to 4-2-7, Interior (1) 4-2-7 to 21-9-0, Exterior(2R) 21-9-0 to 26-6-8, Interior (1) 26-6-8 to 34-0-11, Exterior(2R) 34-0-11 to 38-10-3, Interior (1) 38-10-3 to 48-7-3 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=1.33
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10, Lu=50-0-0
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 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
6) N/A
7) Provide adequate drainage to prevent water ponding.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
9) All bearings are assumed to be SP No.2 .
10) Bearing at joint(s) 23, 20 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 19 lb uplift at joint 20.
12) N/A
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

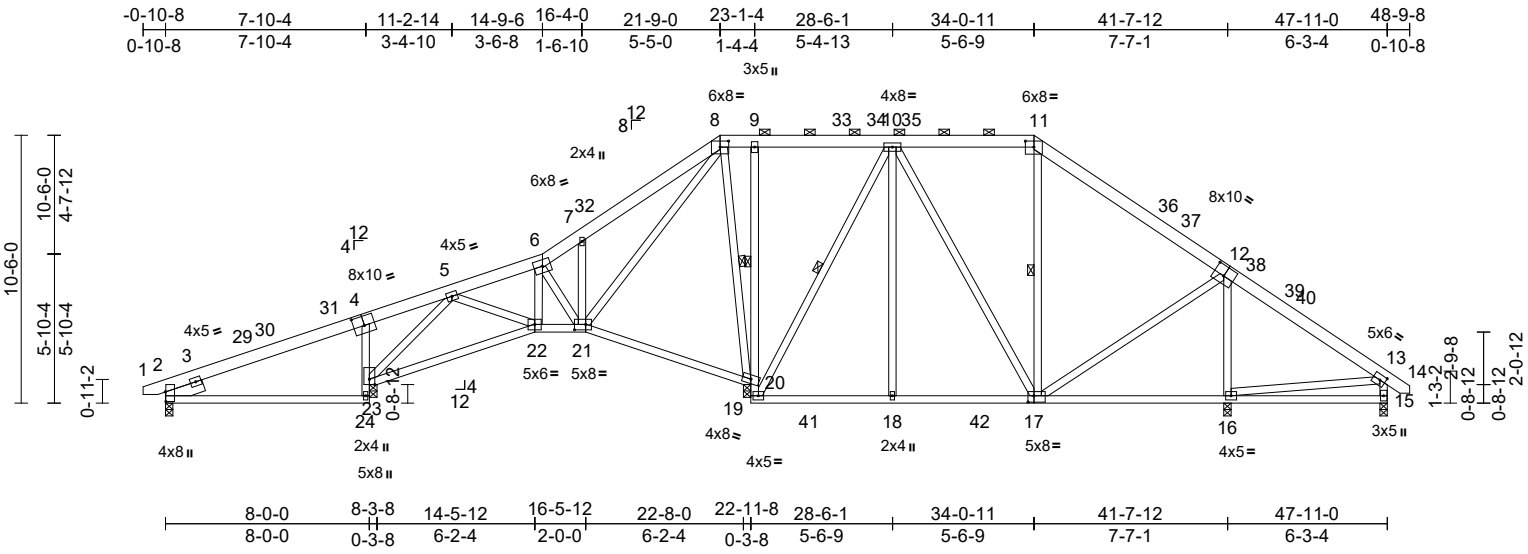
LOAD CASE(S) Standard

October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Roof-Fitzgerald VKDRFR
24120007-A	A10	Piggyback Base	1	1	I77311766 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 10:03:14 Page: 1
ID:NpNV_Er8nqfkoy7WfTlfKXyBvPB-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:90.4

Plate Offsets (X, Y): [2:0-4-9,0-0-3], [4:0-5-0,0-4-8], [8:0-4-0,0-2-13], [11:0-4-0,0-2-12], [12:0-5-0,0-4-8], [13:0-2-9,0-2-8], [17:0-2-12,0-3-0], [21:0-5-4,0-2-8]

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	0.43	Vert(LL)	-0.10	22-23	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.90	Vert(CT)	-0.12	24-27	>818	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.59	Horz(CT)	0.04	20	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 366 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 9-19:2x4 SP No.3
WEBS 2x4 SP No.3 *Except* 19-10,17-10:2x4 SP No.2
SLIDER Left 2x6 SP No.2 -- 1-6-10

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 8-11.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 20-21.
1 Row at midpt 9-20
WEBS 1 Row at midpt 10-19, 11-17, 8-20

REACTIONS (size) 2=0-3-8, 15=0-3-8, 16=0-3-8, 20=0-3-8, 23=0-3-8
Max Horiz 2=207 (LC 14)
Max Uplift 2=-49 (LC 11), 15=-26 (LC 16), 16=-18 (LC 16), 23=-67 (LC 15)
Max Grav 2=364 (LC 34), 15=325 (LC 34), 16=1122 (LC 62), 20=1776 (LC 3), 23=880 (LC 41)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/14, 2-5=-416/159, 5-6=-709/282, 6-7=-519/299, 7-8=-680/428, 8-9=-9/293, 9-10=-11/297, 10-11=-434/312, 11-13=-604/281, 13-14=0/35, 13-15=-260/139
BOT CHORD 2-24=-199/99, 22-23=-75/450, 21-22=-77/579, 20-21=-243/122, 19-20=-31/977, 9-20=-383/98, 18-19=-6/282, 16-18=-6/282, 15-16=-33/119
WEBS 6-22=0/223, 6-21=-438/72, 7-21=-436/225, 10-19=-1007/76, 10-18=0/331, 10-17=0/333, 11-17=-248/32, 12-17=0/351, 12-16=-927/265, 13-16=-53/55, 23-24=0/116, 4-23=-564/175, 5-23=-453/135, 5-22=-11/303, 8-20=-676/88, 8-21=-222/947

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-7-1 to 4-2-7, Interior (1) 4-2-7 to 21-9-0, Exterior(2R) 21-9-0 to 26-6-8, Interior (1) 26-6-8 to 34-0-11, Exterior(2R) 34-0-11 to 38-10-3, Interior (1) 38-10-3 to 48-7-3 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=1.33
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10, Lu=50-0-0
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 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) * This truss has been designed for a 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 No.2 .
9) Bearing at joint(s) 23, 20 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
10) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 23, 16, and 15. This connection is for uplift only and does not consider lateral forces.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

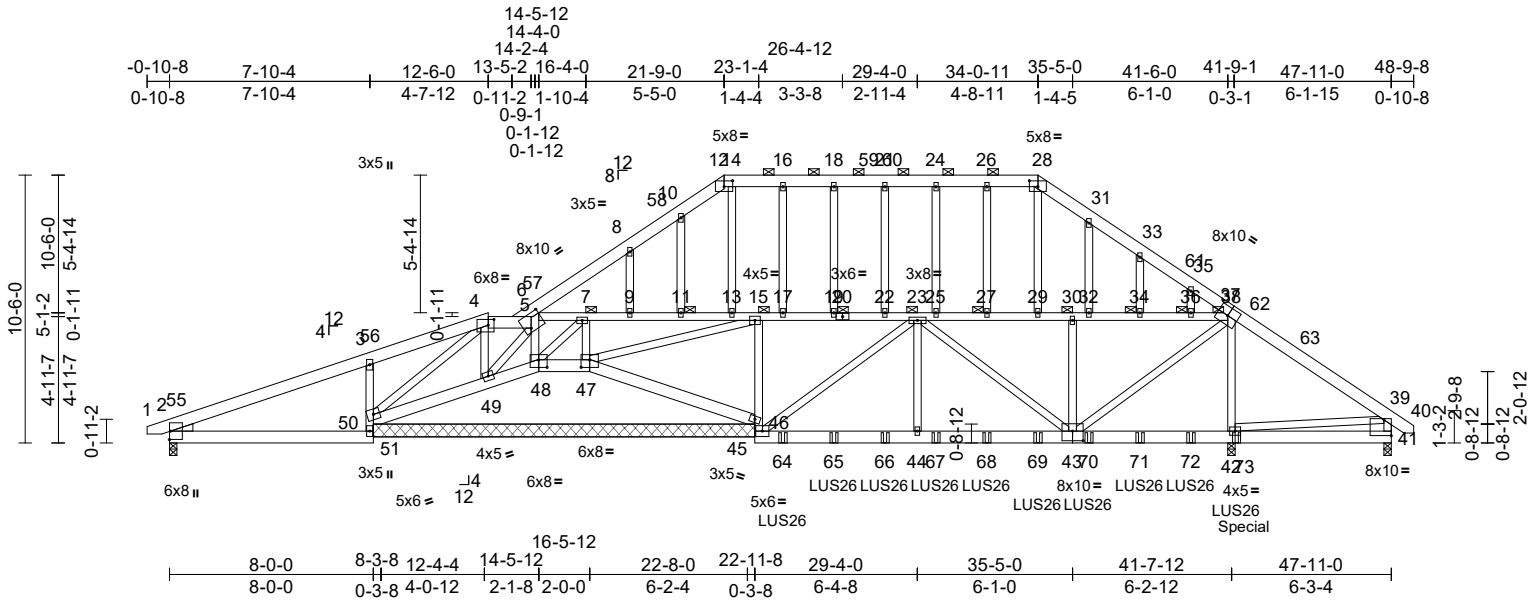
LOAD CASE(S) Standard

October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Roof-Fitzgerald VKDRFR
24120007-A	A11	Piggyback Base Girder	1	2	I77311767 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 10:03:14 Page: 1
ID:6aPlxPYxCByNPPsJJ8m9ybyBu9X-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:90.4

Plate Offsets (X, Y): [4:0-2-12,0-2-12], [5:0-6-12,0-6-4], [12:0-4-0,0-2-13], [28:0-4-0,0-2-13], [41:Edge,0-7-8], [43:0-5-0,0-4-8], [47:0-4-0,0-3-8], [48:0-4-0,0-3-8]

Loading	(psf)	Spacing	1-11-4	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.25	Vert(LL)	-0.04	44-45	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.81	Vert(CT)	-0.08	44-45	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.63	Horz(CT)	0.01	41	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 926 lb	FT = 20%

LUMBER

TOP CHORD	2x6 SP No.2 *Except* 5-20,20-37:2x4 SP No.2
BOT CHORD	2x6 SP No.2 *Except* 51-3,15-45:2x4 SP No.3
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, and 2-0-0 oc purlins (6-0-0 max.): 12-28, 4-5, 5-38.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 46-47,42-43.
JOINTS	1 Brace at Jt(s): 15, 7, 23, 30, 38, 27, 19, 11, 34, 36

REACTIONS (size) 2=0-3-8, 41=0-3-8, 42=0-3-8, 46=14-11-8, 47=14-11-8, 48=14-11-8, 49=14-11-8, 50=14-11-8
Max Horiz 2=198 (LC 10)
Max Uplift 2=-39 (LC 7), 41=-20 (LC 69), 42=-321 (LC 12), 46=-86 (LC 8), 47=-79 (LC 68), 48=-75 (LC 11), 50=-61 (LC 7)
Max Grav 2=466 (LC 41), 41=271 (LC 2), 42=3534 (LC 41), 46=2307 (LC 40), 47=223 (LC 53), 48=543 (LC 41), 49=375 (LC 41), 50=547 (LC 41)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/14, 2-3=-373/83, 3-4=-352/119, 5-6=-913/61, 6-8=-876/81, 8-10=-799/107, 10-12=-695/118, 12-14=-627/114, 14-16=-627/114, 16-18=-627/114, 18-21=-627/114, 21-24=-627/114, 24-26=-627/114, 26-28=-628/114, 28-31=-725/116, 31-33=-764/102, 33-35=-833/86, 35-39=-941/76, 39-40=0/34, 39-41=-252/37, 4-5=-244/131, 5-7=-28/376, 7-9=-22/366, 9-11=-22/366, 11-13=-22/366, 13-15=-22/366, 15-17=-25/578, 17-19=-25/578, 19-22=-25/578, 22-23=-25/578, 23-25=-1138/164, 25-27=-1138/164, 27-29=-1138/164, 29-30=-1138/164, 30-32=-1138/164, 32-34=-1138/164, 34-36=-1138/164, 36-38=-1138/164
BOT CHORD	2-51=-113/288, 50-51=0/107, 3-50=-534/105, 49-50=-47/239, 48-49=-49/387, 47-48=-44/293, 46-47=-90/75, 45-46=-105/1990, 15-46=-226/142, 44-45=-110/1952, 42-44=-110/1952, 41-42=-40/73
WEBS	4-50=-36/74, 4-49=-131/26, 38-42=-2144/211, 37-38=-992/139, 39-42=-86/89, 5-49=-292/16, 7-47=-189/110, 5-48=-401/68, 7-48=-67/20, 23-44=-38/1239, 30-43=-82/173, 23-43=-364/82, 38-43=-162/2091, 15-47=-5/262, 23-45=-2450/155, 28-29=-24/141, 26-27=-31/6, 24-25=-310/78, 21-22=-198/46, 18-19=-14/17, 16-17=-176/70, 13-14=-27/128, 10-11=-30/27, 8-9=-203/99, 31-32=-101/108, 33-34=-50/11, 35-36=-10/39

NOTES

1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-6-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.33

October 27,2025

Continued on page 2

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

5) 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.
6) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10, Lu=50-0-0
7) Unbalanced snow loads have been considered for this design.
8) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
9) Provide adequate drainage to prevent water ponding.
10) All plates are 2x4 MT20 unless otherwise indicated.
11) Gable studs spaced at 2-0-0 oc.
12) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
13) All bearings are assumed to be SP No.2 .
14) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 75 lb uplift at joint 48.
15) N/A

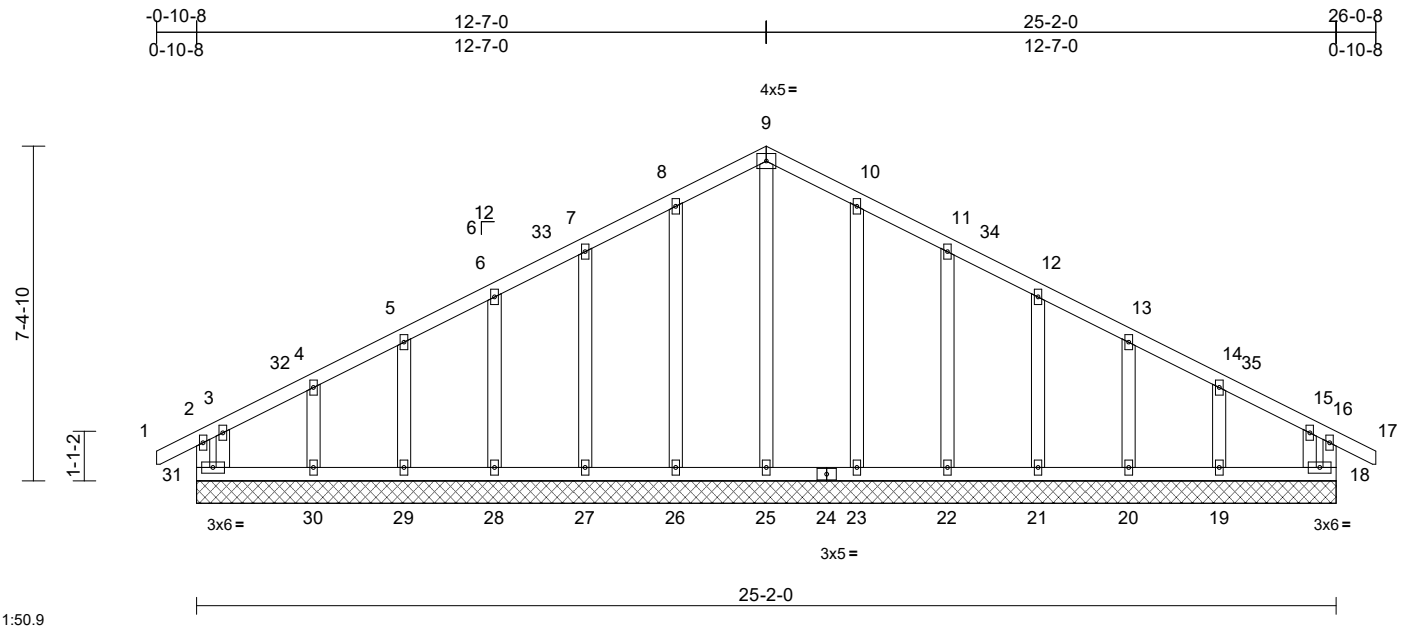
16) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
17) Use Simpson Strong-Tie LUS26 (4-10d Girder, 3-10d Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 24-0-12 from the left end to 41-10-4 to connect truss(es) to front face of bottom chord.
18) Fill all nail holes where hanger is in contact with lumber.
19) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 480 lb down and 99 lb up at 42-2-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (lb/ft)
   Vert: 1-4=-46, 5-12=-46, 12-28=-56, 28-39=-46, 39-40=-46, 51-52=-19, 48-50=-19, 47-48=-19, 46-47=-19, 41-45=-19, 4-5=-56
   Concentrated Loads (lb)
   Vert: 42=-332 (F), 64=-332 (F), 65=-332 (F), 66=-332 (F), 67=-332 (F), 68=-332 (F), 69=-332 (F), 70=-332 (F), 71=-332 (F), 72=-332 (F), 73=-480 (F)

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Roof-Fitzgerald VKDRFR I77311768
24120007-A	B1	Common Supported Gable	1	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 10:03:15 Page: 1
ID:jh3glh5ddTjgkGpPTkguHFyBvQA-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:50.9

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	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.16	Horz(CT)	0.00	18	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 154 lb	FT = 20%

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

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

REACTIONS (size) 18=25-2-0, 19=25-2-0, 20=25-2-0, 21=25-2-0, 22=25-2-0, 23=25-2-0, 25=25-2-0, 26=25-2-0, 27=25-2-0, 28=25-2-0, 29=25-2-0, 30=25-2-0, 31=25-2-0
Max Horiz 31=-92 (LC 13)
Max Uplift 18=-13 (LC 12), 19=-41 (LC 16), 20=-8 (LC 16), 21=-17 (LC 16), 22=-17 (LC 16), 23=-14 (LC 16), 26=-14 (LC 15), 27=-17 (LC 15), 28=-18 (LC 15), 29=-7 (LC 15), 30=-45 (LC 15), 31=-25 (LC 11)
Max Grav 18=170 (LC 2), 19=180 (LC 40), 20=155 (LC 2), 21=162 (LC 40), 22=179 (LC 23), 23=206 (LC 23), 25=143 (LC 36), 26=206 (LC 22), 27=179 (LC 22), 28=162 (LC 39), 29=155 (LC 2), 30=181 (LC 33), 31=170 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-31=-106/129, 1-2=0/33, 2-3=-23/44, 3-4=-75/52, 4-5=-63/89, 5-6=-72/130, 6-7=-84/176, 7-8=-95/223, 8-9=-109/265, 9-10=-109/265, 10-11=-95/223, 11-12=-84/176, 12-13=-71/130, 13-14=-62/88, 14-15=-61/37, 15-16=-22/44, 16-17=0/33, 16-18=-106/132
BOT CHORD 30-31=-30/55, 29-30=-30/55, 28-29=-30/55, 27-28=-30/55, 26-27=-30/55, 25-26=-30/55, 23-25=-30/55, 22-23=-30/55, 21-22=-30/55, 20-21=-30/55, 19-20=-30/55, 18-19=-30/55
WEBS 9-25=-170/37, 8-26=-166/71, 7-27=-139/80, 6-28=-128/79, 5-29=-125/70, 4-30=-146/116, 3-31=-113/57, 10-23=-166/71, 11-22=-139/81, 12-21=-127/79, 13-20=-124/70, 14-19=-143/118, 15-18=-94/32

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Corner (3E) -0-10-1 to 2-1-15, Exterior(2N) 2-1-15 to 12-7-0, Corner(3R) 12-7-0 to 15-7-0, Exterior(2N) 15-7-0 to 26-0-1 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=1.33
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
7) All plates are 2x4 MT20 unless otherwise indicated.
8) Gable requires continuous bottom chord bearing.
9) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
10) Gable studs spaced at 2-0-0 oc.
11) * This truss has been designed for a 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) All bearings are assumed to be SP No.2 .
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 25 lb uplift at joint 31, 13 lb uplift at joint 18, 14 lb uplift at joint 26, 17 lb uplift at joint 27, 18 lb uplift at joint 28, 7 lb uplift at joint 29, 45 lb uplift at joint 30, 14 lb uplift at joint 23, 17 lb uplift at joint 22, 17 lb uplift at joint 21, 8 lb uplift at joint 20 and 41 lb uplift at joint 19.

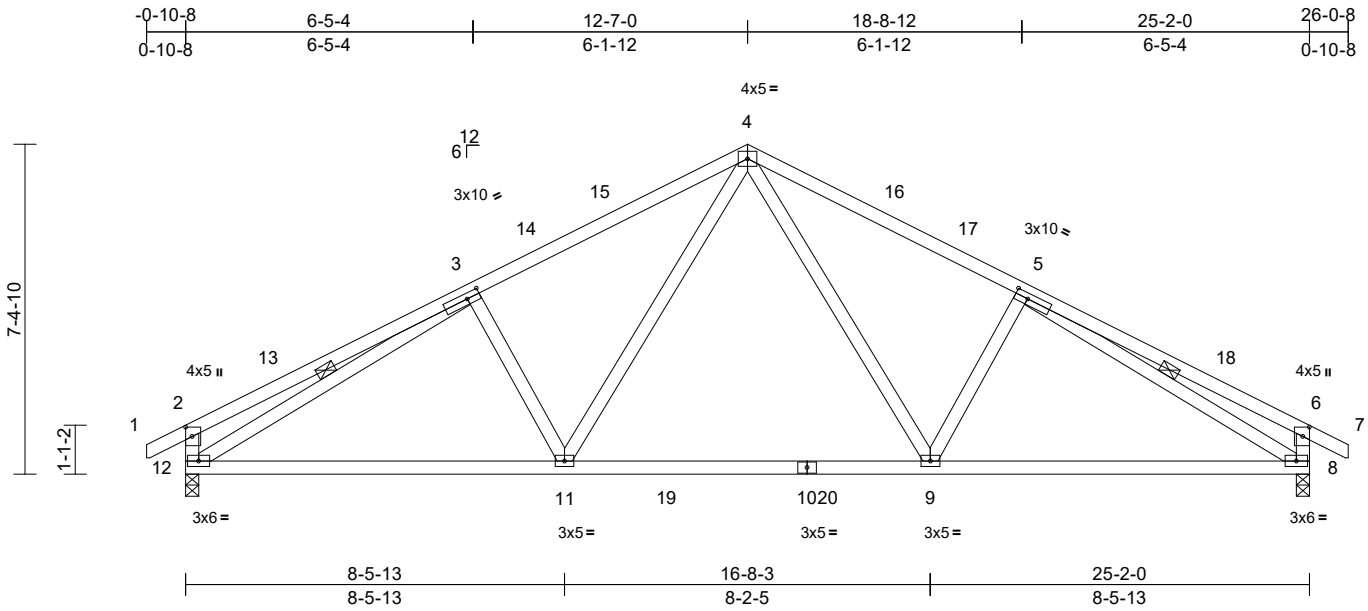
LOAD CASE(S) Standard

October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Roof-Fitzgerald VKDRFR I77311769
24120007-A	B2	Common	11	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 10:03:15 Page: 1
ID:7ElPo0W0VeJj5qo29CQYmkyBvYf-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:51.6

Plate Offsets (X, Y): [2:0-2-8,0-1-12], [3:0-3-8,0-1-8], [5:0-3-8,0-1-8], [6:0-2-8,0-1-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.62	Vert(LL)	-0.16	9-11	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.82	Vert(CT)	-0.24	9-11	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.40	Horz(CT)	0.05	8	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 141 lb	FT = 20%

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

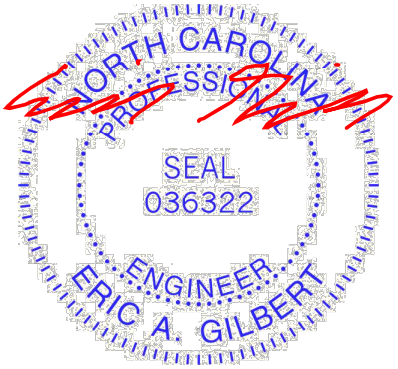
BRACING
TOP CHORD Structural wood sheathing directly applied or 4-1-7 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 3-12, 5-8

REACTIONS (size) 8=0-3-8, 12=0-3-8
Max Horiz 12=92 (LC 14)
Max Grav 8=1134 (LC 3), 12=1134 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/33, 2-3=-473/124, 3-4=-1654/242, 4-5=-1654/242, 5-6=-473/124, 6-7=0/33, 2-12=-414/150, 6-8=-414/150
BOT CHORD 11-12=-125/1484, 9-11=-23/1067, 8-9=-112/1481
WEBS 4-9=-49/617, 5-9=-267/166, 4-11=-49/617, 3-11=-267/166, 3-12=-1353/103, 5-8=-1353/103

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-10-1 to 2-1-15, Interior (1) 2-1-15 to 12-7-0, Exterior(2R) 12-7-0 to 15-7-0, Interior (1) 15-7-0 to 26-0-1 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=1.33
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) All bearings are assumed to be SP No.2 .

LOAD CASE(S) Standard



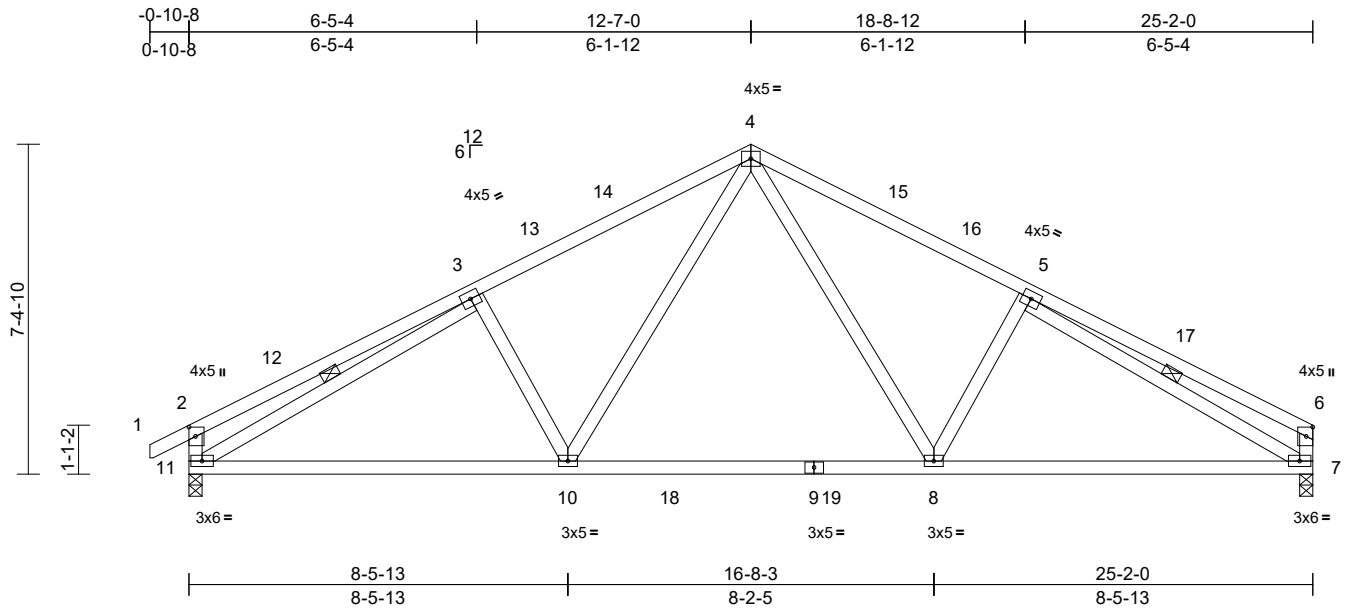
October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Roof-Fitzgerald VKDRFR
24120007-A	B3	Common	1	1	I77311770 Job Reference (optional)

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

Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 10:03:15 Page: 1
ID:QPBXCgiT5UuVFXYBgM2b3XyBuEV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:51.6

Plate Offsets (X, Y): [2:0-2-8,0-1-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.64	Vert(LL)	-0.16	8-10	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.83	Vert(CT)	-0.24	8-10	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.43	Horz(CT)	0.05	7	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 140 lb	FT = 20%

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

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

REACTIONS (size) 7=0-3-8, 11=0-3-8
Max Horiz 11=93 (LC 14)
Max Grav 7=1083 (LC 3), 11=1135 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/33, 2-3=-467/121, 3-4=-1655/241, 4-5=-1661/245, 5-6=-389/87, 2-11=-409/148, 6-7=-315/84
BOT CHORD 10-11=-155/1490, 8-10=-51/1072, 7-8=-146/1495
WEBS 4-8=-49/622, 5-8=-274/167, 4-10=-48/615, 3-10=-266/166, 3-11=-1362/107, 5-7=-1446/144

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-10-1 to 2-1-15, Interior (1) 2-1-15 to 12-7-0, Exterior(2R) 12-7-0 to 15-7-0, Interior (1) 15-7-0 to 25-0-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) All bearings are assumed to be SP No.2 .

LOAD CASE(S) Standard

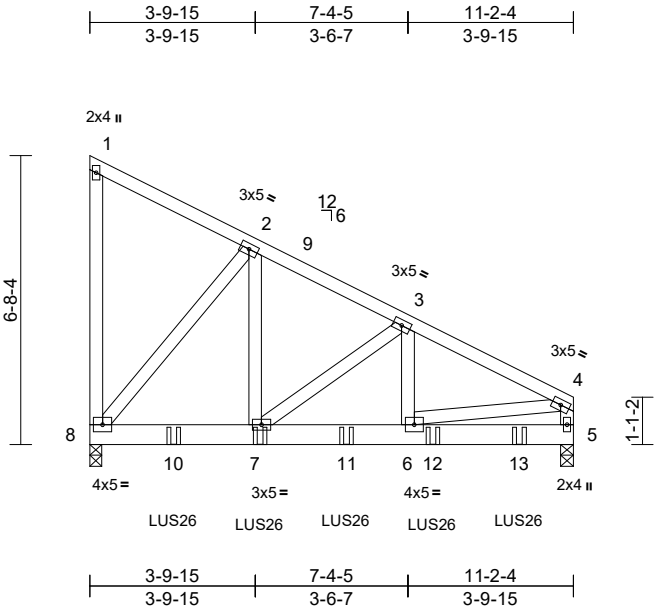
October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Roof-Fitzgerald VKDRFR
24120007-A	C1	Roof Special Girder	1	**2**	I77311771 Job Reference (optional)

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

Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 10:03:15 Page: 1
ID:rOXlwJP1_UuCVhXeuT1w_2yBtYz-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:53.3

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	0.22	Vert(LL)	-0.01	6-7	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.18	Vert(CT)	-0.02	6-7	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.20	Horz(CT)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 165 lb	FT = 20%

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

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

REACTIONS (size) 5=0-3-8, 8=0-3-4
Max Horiz 8=-182 (LC 9)
Max Uplift 5=-121 (LC 12), 8=-146 (LC 12)
Max Grav 5=1131 (LC 24), 8=1076 (LC 18)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-8=-119/29, 1-2=-109/52, 2-3=-850/108, 3-4=-1322/147, 4-5=-871/99
BOT CHORD 7-8=-51/746, 6-7=-105/1153, 5-6=-32/202
WEBS 2-8=-1075/178, 2-7=-123/956, 3-7=-553/102, 3-6=-51/382, 4-6=-75/976

NOTES
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.33
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) * This truss has been designed for 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) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 5 and 8. This connection is for uplift only and does not consider lateral forces.
9) Use Simpson Strong-Tie LUS26 (4-10d Girder, 3-10d Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 1-11-4 from the left end to 9-11-4 to connect truss(es) to front face of bottom chord.
10) Fill all nail holes where hanger is in contact with lumber.

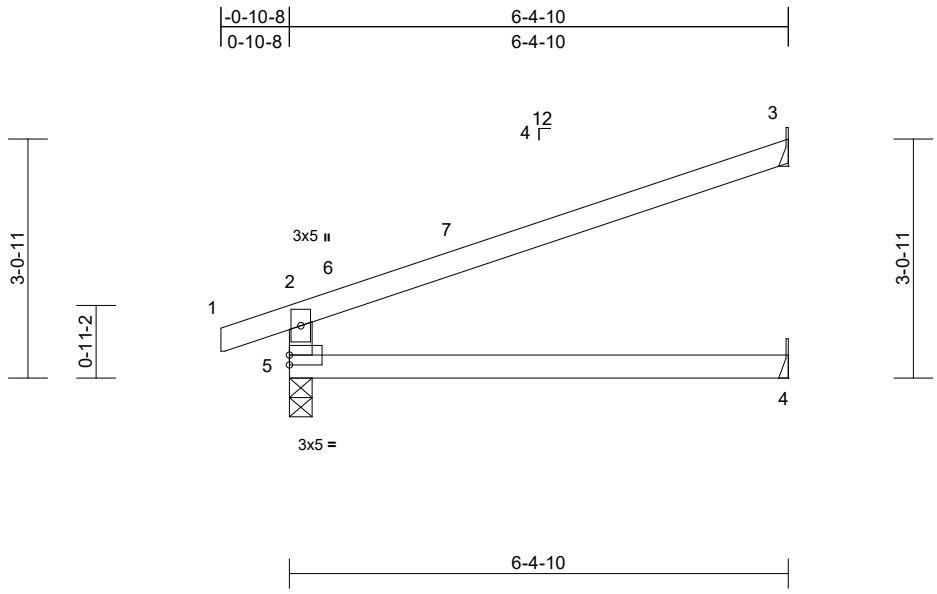
LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-4=-48, 5-8=-20
Concentrated Loads (lb)
Vert: 7=-256 (F), 10=-256 (F), 11=-256 (F), 12=-256 (F), 13=-256 (F)

October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Roof-Fitzgerald VKDRFR
24120007-A	CJ1	Jack-Open	2	1	I77311772 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 10:03:16 Page: 1
ID:EKHu?rQhuNT6oDq4xTimDMyBvSJ-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:29.5

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.76	Vert(LL)	0.08	4-5	>963	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.42	Vert(CT)	-0.14	4-5	>523	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.07	3	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 22 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 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-3-8
Max Horiz 5=58 (LC 11)
Max Uplift 3=-44 (LC 15), 5=-17 (LC 11)
Max Grav 3=200 (LC 22), 4=78 (LC 22), 5=322 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-287/187, 1-2=0/24, 2-3=-82/54
BOT CHORD 4-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-10-3 to 2-1-13, Interior (1) 2-1-13 to 6-3-14 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=1.33
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with 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) Bearings are assumed to be: , Joint 5 SP No.2 .
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 44 lb uplift at joint 3.
9) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 5. This connection is for uplift only and does not consider lateral forces.

LOAD CASE(S) Standard

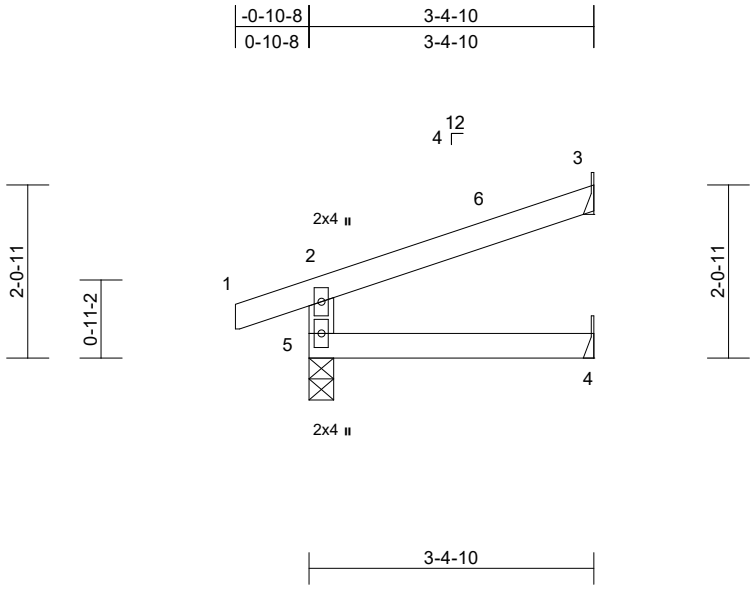
October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Roof-Fitzgerald VKDRFR
24120007-A	CJ2	Jack-Open	2	1	I77311773 Job Reference (optional)

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

Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 10:03:16 Page: 1
ID:MZ2N9TNBq8ygJbXJideq3WyBvSN-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:27.4

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	0.22	Vert(LL)	0.01	4-5	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.12	Vert(CT)	-0.01	4-5	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.01	3	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 12 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 3-4-10 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-3-8
Max Horiz 5=36 (LC 12)
Max Uplift 3=-24 (LC 15), 5=-21 (LC 11)
Max Grav 3=96 (LC 22), 4=35 (LC 22), 5=222 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-193/153, 1-2=0/24, 2-3=-46/28
BOT CHORD 4-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-10-3 to 2-1-13, Interior (1) 2-1-13 to 3-3-14 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=1.33
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with 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) Bearings are assumed to be: , Joint 5 SP No.2 .
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 24 lb uplift at joint 3.
9) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 5. This connection is for uplift only and does not consider lateral forces.

LOAD CASE(S) Standard

October 27,2025

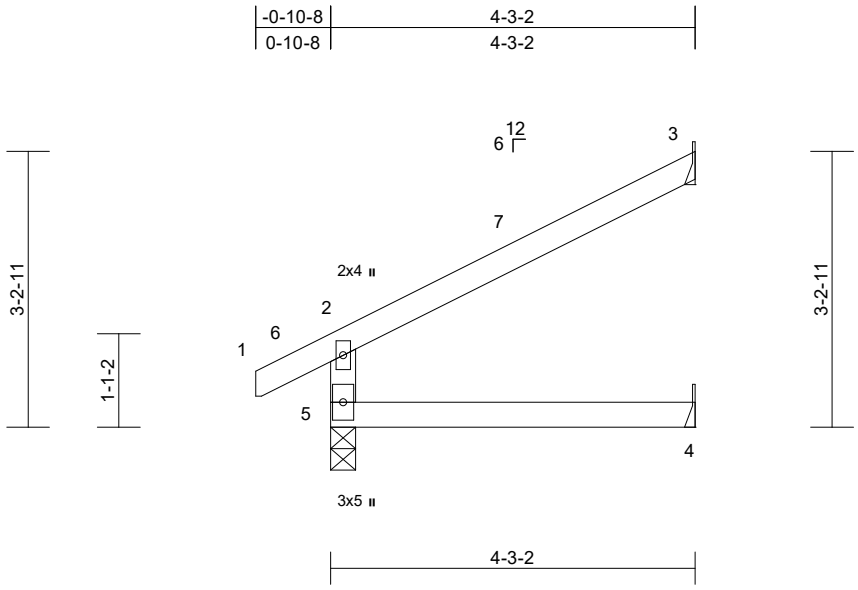
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Roof-Fitzgerald VKDRFR
24120007-A	CJ3	Jack-Open	2	1	I77311774 Job Reference (optional)

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

Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 10:03:16
ID:lo5NyROl8ydJU?GYvPAbkDyBvTf-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:26.9

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	0.37	Vert(LL)	0.02	4-5	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.25	Vert(CT)	-0.03	4-5	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.03	3	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 16 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-3-2 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-3-8
Max Horiz 5=58 (LC 12)
Max Uplift 3=-39 (LC 15)
Max Grav 3=139 (LC 22), 4=50 (LC 22), 5=267 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-235/137, 1-2=0/33, 2-3=-80/54
BOT CHORD 4-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-10-1 to 2-1-15, Interior (1) 2-1-15 to 4-2-6 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=1.33
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with 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) Bearings are assumed to be: , Joint 5 SP No.2 .
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 39 lb uplift at joint 3.

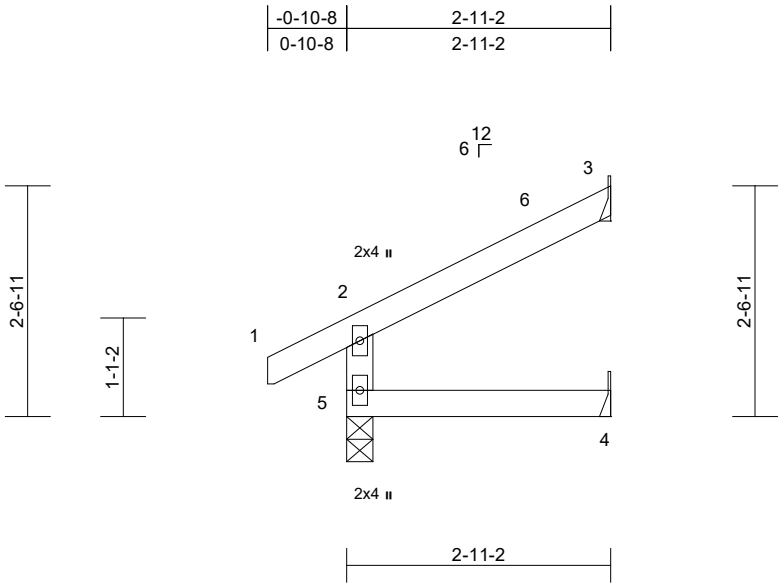
LOAD CASE(S) Standard

October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Roof-Fitzgerald VKDRFR
24120007-A	CJ4	Jack-Open	2	1	I77311775 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 10:03:16 Page: 1
ID:eZKuooRFBB7kycZJ8FEXv3yBvTb-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:25.5

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.22	Vert(LL)	0.01	4-5	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.13	Vert(CT)	-0.01	4-5	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.01	3	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 12 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-11-2 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-3-8
Max Horiz 5=45 (LC 12)
Max Uplift 3=-28 (LC 15)
Max Grav 3=84 (LC 22), 4=30 (LC 33), 5=210 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-185/112, 1-2=0/33, 2-3=-56/36
BOT CHORD 4-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-10-1 to 2-1-15, Interior (1) 2-1-15 to 2-10-6 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=1.33
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with 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) Bearings are assumed to be: , Joint 5 SP No.2 .
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 28 lb uplift at joint 3.

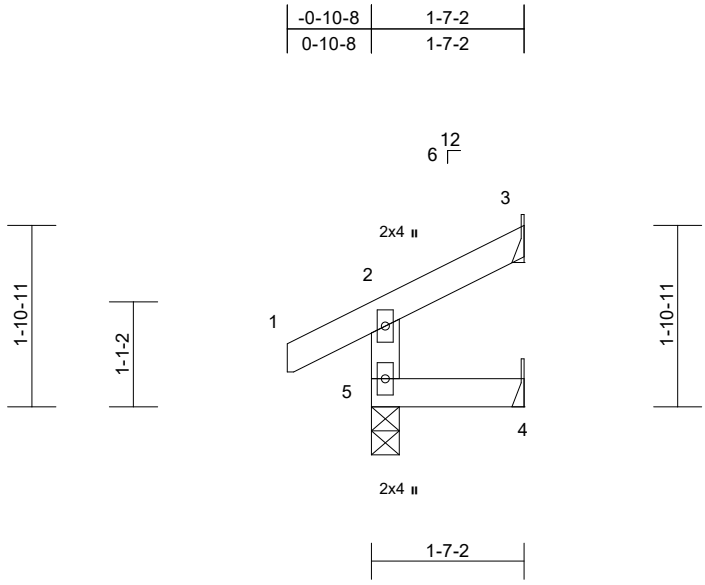
LOAD CASE(S) Standard

October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Roof-Fitzgerald VKDRFR I77311776
24120007-A	CJ5	Jack-Open	2	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 10:03:16 Page: 1
ID:TоosK6KgmwSEr_DYTnZuvgyBvSR-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:24

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)	0.00	4-5	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	0.00	4-5	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 8 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 1-7-2 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-3-8
Max Horiz 5=34 (LC 12)
Max Uplift 3=-17 (LC 15), 4=-1 (LC 12)
Max Grav 3=30 (LC 22), 4=16 (LC 13), 5=153 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-134/88, 1-2=0/33, 2-3=-32/18
BOT CHORD 4-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with 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) Bearings are assumed to be: , Joint 5 SP No.2 .
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1 lb uplift at joint 4 and 17 lb uplift at joint 3.

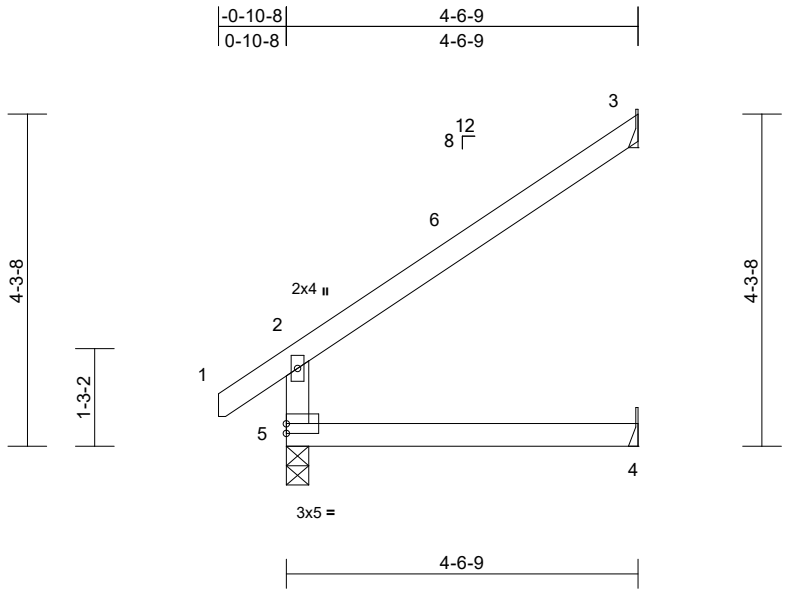
LOAD CASE(S) Standard

October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Roof-Fitzgerald VKDRFR I77311777
24120007-A	CJ6	Jack-Open	1	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 10:03:16 Page: 1
ID:X4yy_smZnnqtUuKuKPnEayyBvYL-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:29.8

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	0.47	Vert(LL)	0.03	4-5	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.33	Vert(CT)	-0.04	4-5	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.05	3	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 18 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 4-6-9 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-3-8
Max Horiz 5=80 (LC 13)
Max Uplift 3=-55 (LC 13)
Max Grav 3=126 (LC 29), 4=56 (LC 29), 5=239 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-206/96, 1-2=0/41, 2-3=-104/76
BOT CHORD 4-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-10-0 to 2-2-0, Interior (1) 2-2-0 to 4-5-13 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=1.33
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with 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.
5) Bearings are assumed to be: , Joint 5 SP No.2 .
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 55 lb uplift at joint 3.

LOAD CASE(S) Standard

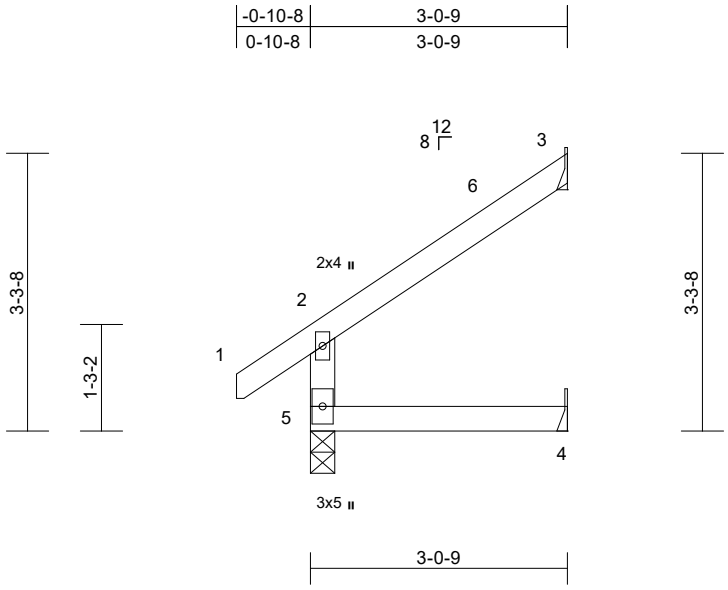
October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Roof-Fitzgerald VKDRFR
24120007-A	CJ7	Jack-Open	1	1	I77311778 Job Reference (optional)

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

Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 10:03:16
ID:mXTxJ7fYgJq0XgjMsjeMFGyBvYT-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:27.3

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	0.29	Vert(LL)	0.01	4-5	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.19	Vert(CT)	-0.01	4-5	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.02	3	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 13 lb	FT = 20%

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

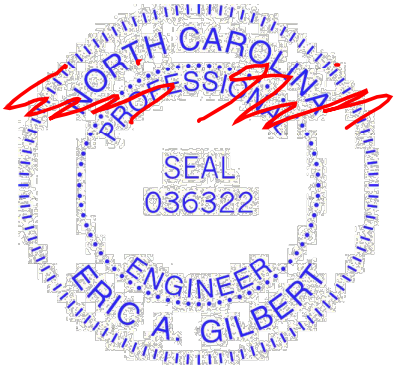
BRACING
TOP CHORD Structural wood sheathing directly applied or 3-0-9 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-3-8
Max Horiz 5=59 (LC 10)
Max Uplift 3=-39 (LC 13)
Max Grav 3=81 (LC 29), 4=37 (LC 11), 5=182 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-160/86, 1-2=0/41, 2-3=-76/52
BOT CHORD 4-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-10-0 to 2-2-0, Interior (1) 2-2-0 to 2-11-13 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=1.33
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with 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.
5) Bearings are assumed to be: , Joint 5 SP No.2 .
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 39 lb uplift at joint 3.

LOAD CASE(S) Standard

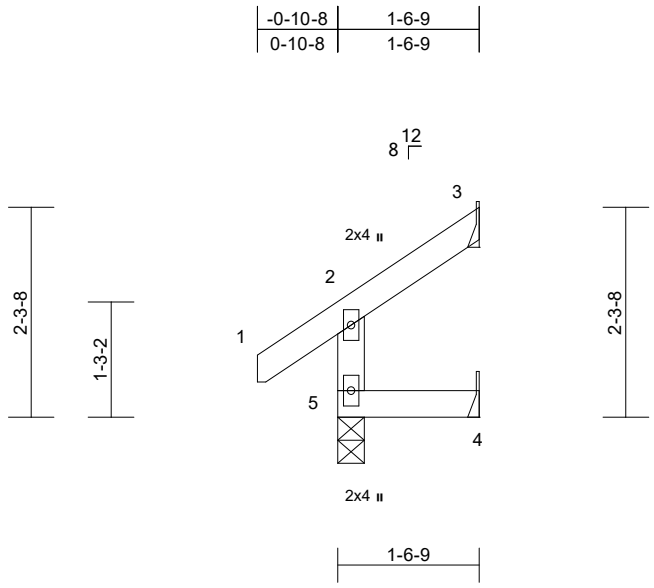


October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Roof-Fitzgerald VKDRFR
24120007-A	CJ8	Jack-Open	1	1	I77311779 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 10:03:16 Page: 1
ID:7VHqMqjhVsSldRbJfGEXyKyBvYO-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:25.2

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	0.17	Vert(LL)	0.00	4-5	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.09	Vert(CT)	0.00	4-5	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.01	3	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 8 lb	FT = 20%

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

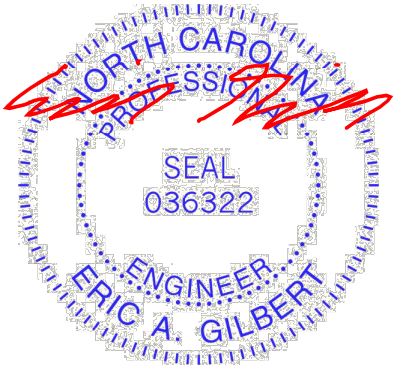
BRACING
TOP CHORD Structural wood sheathing directly applied or 1-6-9 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-3-8
Max Horiz 5=42 (LC 10)
Max Uplift 3=-23 (LC 13), 4=-6 (LC 10)
Max Grav 3=33 (LC 29), 4=23 (LC 11), 5=135 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-124/77, 1-2=0/41, 2-3=-45/29
BOT CHORD 4-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with 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.
5) Bearings are assumed to be: , Joint 5 SP No.2 .
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 6 lb uplift at joint 4 and 23 lb uplift at joint 3.

LOAD CASE(S) Standard

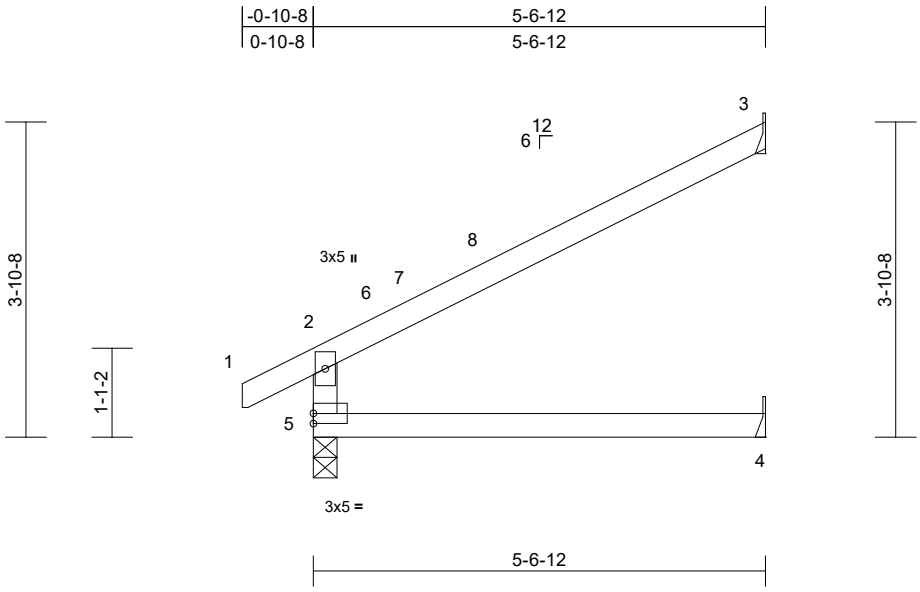


October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Roof-Fitzgerald VKDRFR I77311780
24120007-A	CJ9	Jack-Open	1	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 10:03:16 Page: 1
ID:IcR_gbsavErkS7xQo4w7veyBvYD-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:28.3

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.60	Vert(LL)	0.06	4-5	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.38	Vert(CT)	-0.08	4-5	>791	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.06	3	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 20 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-6-12 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-3-8
Max Horiz 5=73 (LC 15)
Max Uplift 3=-50 (LC 15)
Max Grav 3=185 (LC 22), 4=68 (LC 22), 5=291 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-252/156, 1-2=0/33, 2-3=-104/70
BOT CHORD 4-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-10-1 to 2-1-15, Interior (1) 2-1-15 to 5-6-0 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=1.33
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with 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) Bearings are assumed to be: , Joint 5 SP No.2 .
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 50 lb uplift at joint 3.

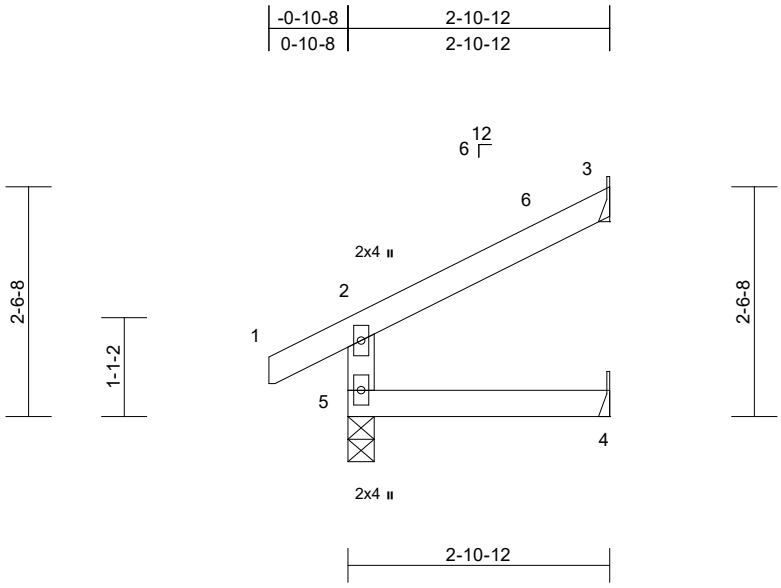
LOAD CASE(S) Standard

October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Roof-Fitzgerald VKDRFR I77311781
24120007-A	CJ10	Jack-Open	1	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 10:03:16 Page: 1
ID:QrCTqDp4r?KJzWdfZEsBloyBvYH-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:25.5

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.22	Vert(LL)	0.01	4-5	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.13	Vert(CT)	-0.01	4-5	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.01	3	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 12 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-10-12 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-3-8
Max Horiz 5=45 (LC 12)
Max Uplift 3=-28 (LC 15)
Max Grav 3=82 (LC 22), 4=29 (LC 33), 5=209 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-184/112, 1-2=0/33, 2-3=-55/36
BOT CHORD 4-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-10-1 to 2-1-15, Interior (1) 2-1-15 to 2-10-0 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=1.33
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with 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) Bearings are assumed to be: , Joint 5 SP No.2 .
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 28 lb uplift at joint 3.

LOAD CASE(S) Standard

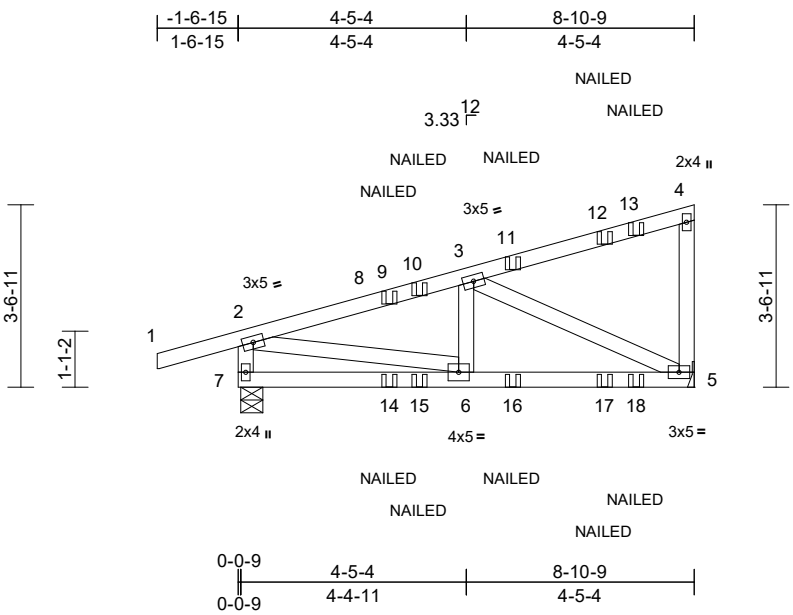
October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Roof-Fitzgerald VKDRFR
24120007-A	HJ1	Diagonal Hip Girder	2	1	I77311782 Job Reference (optional)

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

Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 10:03:16 Page: 1
ID:3Ue9GuVSTDDFW8lEIkpATdyBvSD-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:44.9

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	0.70	Vert(LL)	-0.01	5-6	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.38	Vert(CT)	-0.04	5-6	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.28	Horz(CT)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 50 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 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 5= Mechanical, 7=0-5-3
Max Horiz 7=99 (LC 10)
Max Uplift 5=-44 (LC 8), 7=-61 (LC 7)
Max Grav 5=557 (LC 18), 7=486 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-7=-456/77, 1-2=0/34, 2-3=-606/31, 3-4=-80/54, 4-5=-214/61
BOT CHORD 6-7=-97/12, 5-6=-61/561
WEBS 2-6=-3/571, 3-6=0/85, 3-5=-620/54

NOTES
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.33
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with 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) Bearings are assumed to be: Joint 7 SP No.2 .
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 61 lb uplift at joint 7 and 44 lb uplift at joint 5.
9) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidlines.
10) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

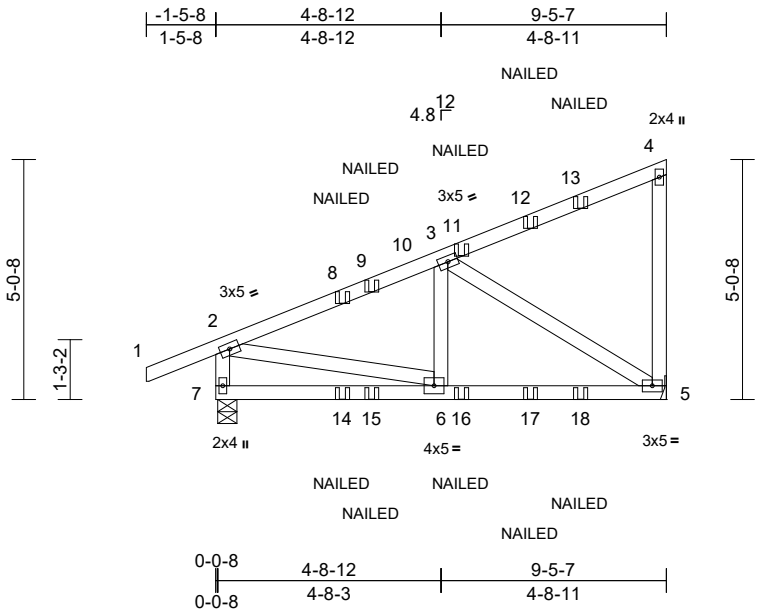
LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-48, 2-4=-48, 5-7=-20
Concentrated Loads (lb)
Vert: 10=-16 (B), 11=-26 (F), 12=-119 (B), 13=-87 (F), 14=0 (F), 15=-5 (B), 16=-5 (F), 17=-44 (B), 18=-28 (F)

October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Roof-Fitzgerald VKDRFR I77311783
24120007-A	HJ2	Diagonal Hip Girder	1	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 10:03:17 Page: 1
ID:XLUOZgzEn?zT1W79qTbEmXyBvY4-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:48.4

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	0.48	Vert(LL)	-0.01	5-6	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.29	Vert(CT)	-0.03	5-6	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.28	Horz(CT)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 57 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 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 5= Mechanical, 7=0-4-13
Max Horiz 7=147 (LC 10)
Max Uplift 5=-85 (LC 8), 7=-57 (LC 7)
Max Grav 5=505 (LC 18), 7=506 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-7=-469/73, 1-2=0/44, 2-3=-521/54, 3-4=-144/48, 4-5=-175/68
BOT CHORD 6-7=-133/33, 5-6=-107/438
WEBS 2-6=-32/433, 3-6=0/97, 3-5=-495/92

NOTES
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.33
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with 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) Bearings are assumed to be: Joint 7 SP No.2 .
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 85 lb uplift at joint 5.
9) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 7. This connection is for uplift only and does not consider lateral forces.
10) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidlines.
11) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

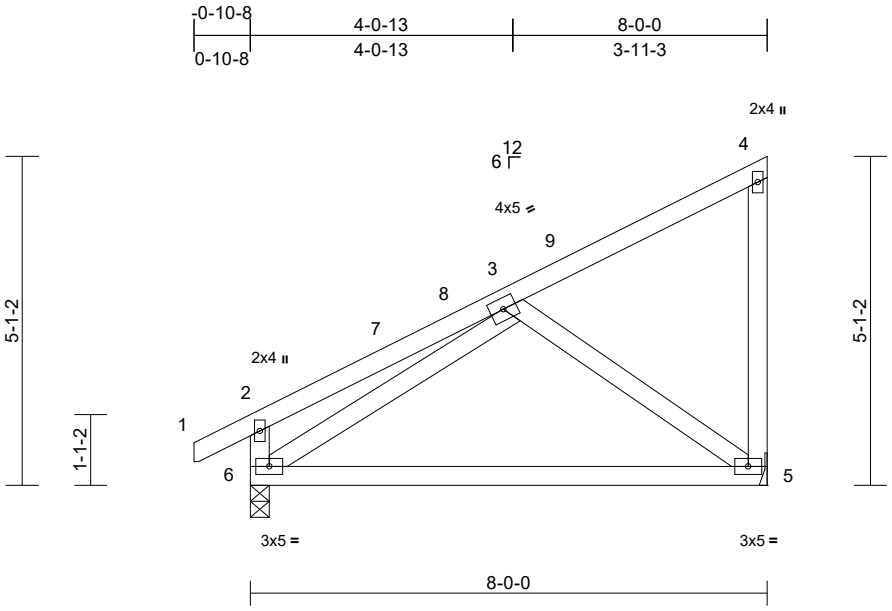
LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-48, 2-4=-48, 5-7=-20
Concentrated Loads (lb)
Vert: 9=-12 (B), 11=-1 (F), 12=-106 (B), 13=-34 (F), 14=1 (F), 15=-3 (B), 16=-4 (F), 17=-35 (B), 18=-23 (F)

October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Roof-Fitzgerald VKDRFR I77311784
24120007-A	M1	Monopitch	22	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 10:03:17 Page: 1
ID:bEu3io8eFcsKKpm2C7MltiyBvXr-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:35.7

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	0.38	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.57	Vert(CT)	-0.21	5-6	>437	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 48 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 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 5= Mechanical, 6=0-3-8
Max Horiz 6=144 (LC 12)
Max Uplift 5=-22 (LC 15)
Max Grav 5=352 (LC 22), 6=371 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/33, 2-3=-47/96, 3-4=-124/99, 4-5=-130/118, 2-6=-172/164
BOT CHORD 5-6=-271/297
WEBS 3-6=-280/59, 3-5=-306/263

NOTES
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-10-1 to 2-1-15, Interior (1) 2-1-15 to 7-10-4 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=1.33
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with 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) Bearings are assumed to be: Joint 6 SP No.2 .
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 22 lb uplift at joint 5.

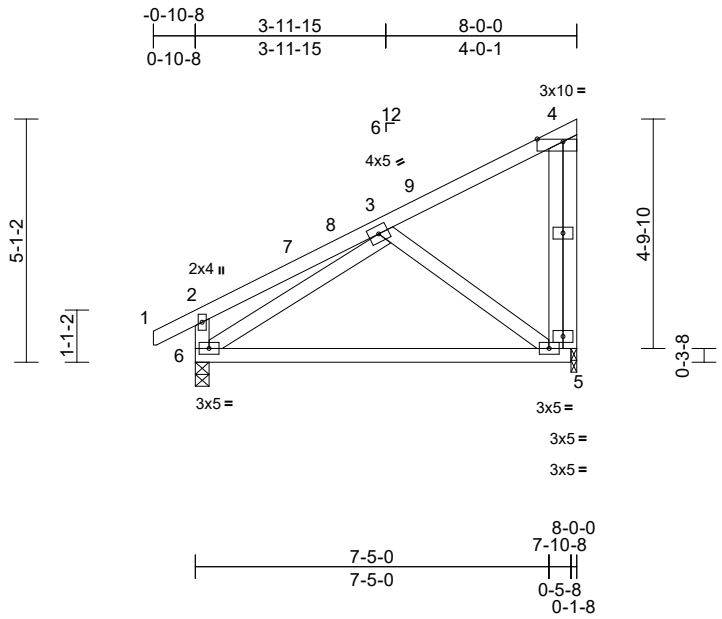
LOAD CASE(S) Standard

October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Roof-Fitzgerald VKDRFR I77311785
24120007-A	M2	Monopitch	8	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 10:03:17 Page: 1
ID:4h_sUyMx087nUa8VGvhzcVyBvXZ-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:48.3

Plate Offsets (X, Y): [4:0-6-8,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	0.23	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.55	Vert(CT)	-0.20	5-6	>463	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.12	Horz(CT)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 54 lb	FT = 20%

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

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

REACTIONS (size) 5=0-1-8, 6=0-3-8
Max Horiz 6=142 (LC 12)
Max Uplift 5=-21 (LC 12)
Max Grav 5=346 (LC 22), 6=366 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/33, 2-3=-46/95, 3-4=-122/97, 4-5=-127/116, 2-6=-171/163
BOT CHORD 5-6=-266/290
WEBS 3-6=-274/57, 3-5=-299/259

NOTES
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-10-1 to 2-1-15, Interior (1) 2-1-15 to 7-8-8 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=1.33
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with 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) Bearings are assumed to be: Joint 6 SP No.2 , Joint 5 SP No.3 .
7) 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.
8) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 5.
9) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 5. This connection is for uplift only and does not consider lateral forces.

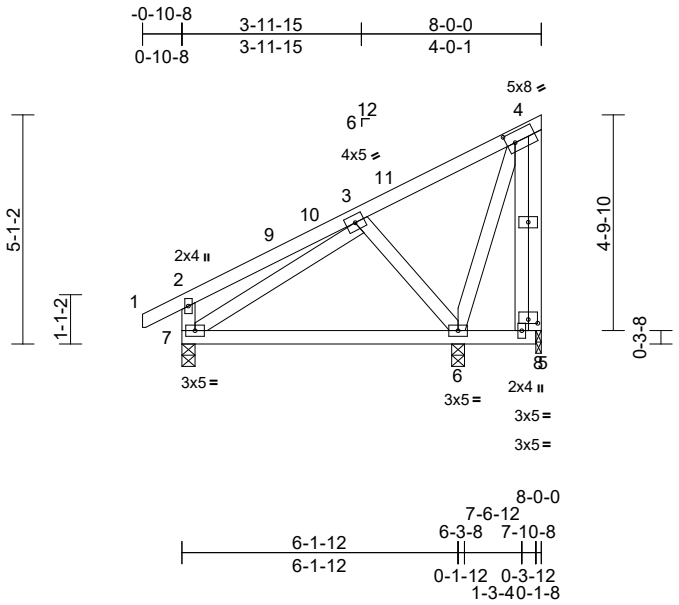
LOAD CASE(S) Standard

October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Roof-Fitzgerald VKDRFR I77311786
24120007-A	M3	Monopitch	2	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 10:03:17 Page: 1
ID:y?HESxqm3pwO2Q2oUuMt9WyBvWz-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:51.3

Plate Offsets (X, Y): [4:0-2-4,0-2-12], [5:0-2-8,0-1-0]

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	0.24	Vert(LL)	0.00	5	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.23	Vert(CT)	-0.04	6-7	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.00	8	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 59 lb	FT = 20%

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

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

REACTIONS (size) 6=0-3-8, 7=0-3-8, 8=0-1-8
Max Horiz 7=101 (LC 15)
Max Uplift 6=-4 (LC 15), 8=-36 (LC 15)
Max Grav 6=422 (LC 22), 7=287 (LC 2), 8=11 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/33, 2-3=-46/95, 3-4=-69/74, 4-5=-31/0, 2-7=-170/162
BOT CHORD 6-7=-144/155, 5-6=-4/1
WEBS 3-7=-164/0, 3-6=-281/238, 4-6=-97/36, 4-8=-11/76

NOTES
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-10-1 to 2-1-15, Interior (1) 2-1-15 to 7-8-8 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=1.33
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with 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) Bearings are assumed to be: Joint 7 SP No.2 , Joint 6 SP No.2 , Joint 8 SP No.3 .
7) Bearing at joint(s) 8 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
8) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 8.
9) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 6 and 8. This connection is for uplift only and does not consider lateral forces.

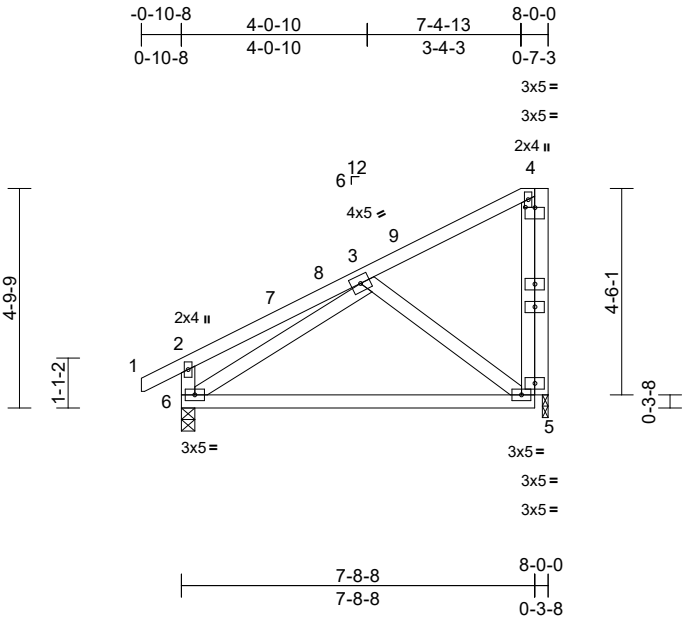
LOAD CASE(S) Standard

October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Roof-Fitzgerald VKDRFR I77311787
24120007-A	M4	Half Hip	2	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 10:03:17 Page: 1
ID:ZEANXMPtmZzapoj1IzD85dyBvWD-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:50.3

Plate Offsets (X, Y): [4:0-2-8,0-0-2]

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	0.24	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.55	Vert(CT)	-0.20	5-6	>463	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.12	Horz(CT)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 53 lb	FT = 20%

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

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

REACTIONS (size) 5=0-1-8, 6=0-3-8
Max Horiz 6=142 (LC 12)
Max Uplift 5=-24 (LC 12)
Max Grav 5=356 (LC 22), 6=365 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/33, 2-3=-47/90, 3-4=-126/101, 4-5=-132/121, 2-6=-172/163
BOT CHORD 5-6=-239/289
WEBS 3-6=-273/45, 3-5=-305/231

NOTES
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-10-1 to 2-1-15, Interior (1) 2-1-15 to 7-10-4 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=1.33
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
5) Provide adequate drainage to prevent water ponding.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Bearings are assumed to be: Joint 6 SP No.2 , Joint 5 SP No.3 .
8) 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.
9) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 5.
10) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 5. This connection is for uplift only and does not consider lateral forces.

LOAD CASE(S) Standard

October 27,2025

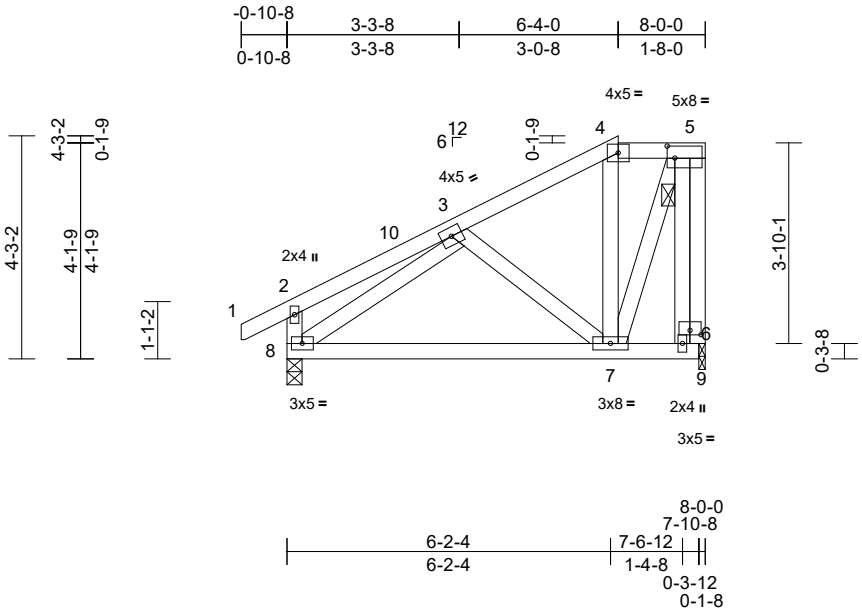
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Roof-Fitzgerald VKDRFR
24120007-A	M5	Half Hip	2	1	I77311788
					Job Reference (optional)

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

Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 10:03:17
ID:5gnZkudEzbhFQJxRjgXphxyBvUe-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:44.1

Plate Offsets (X, Y): [5:0-1-12,0-2-12], [6:0-2-8,0-1-0]

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	0.19	Vert(LL)	0.00	7-8	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.25	Vert(CT)	-0.05	7-8	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.14	Horz(CT)	0.00	9	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 59 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS (size) 8=0-3-8, 9=0-1-8
Max Horiz 8=81 (LC 15)
Max Uplift 9=-17 (LC 15)
Max Grav 8=486 (LC 41), 9=310 (LC 41)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/37, 2-3=-56/81, 3-4=-226/27, 4-5=-156/56, 5-6=-32/0, 2-8=-198/153
BOT CHORD	7-8=-201/341, 6-7=-10/21
WEBS	3-8=-388/19, 4-7=-62/76, 5-7=-120/366, 3-7=-240/191, 5-9=-346/165

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-10-1 to 2-1-15, Interior (1) 2-1-15 to 6-4-0, Exterior(2E) 6-4-0 to 7-8-8 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=1.33
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10, Lu=50-0-0
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 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) * This truss has been designed for a 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) Bearings are assumed to be: Joint 8 SP No.2 , Joint 9 SP No.3 .
9) Bearing at joint(s) 9 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
10) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 9.
11) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 9. This connection is for uplift only and does not consider lateral forces.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

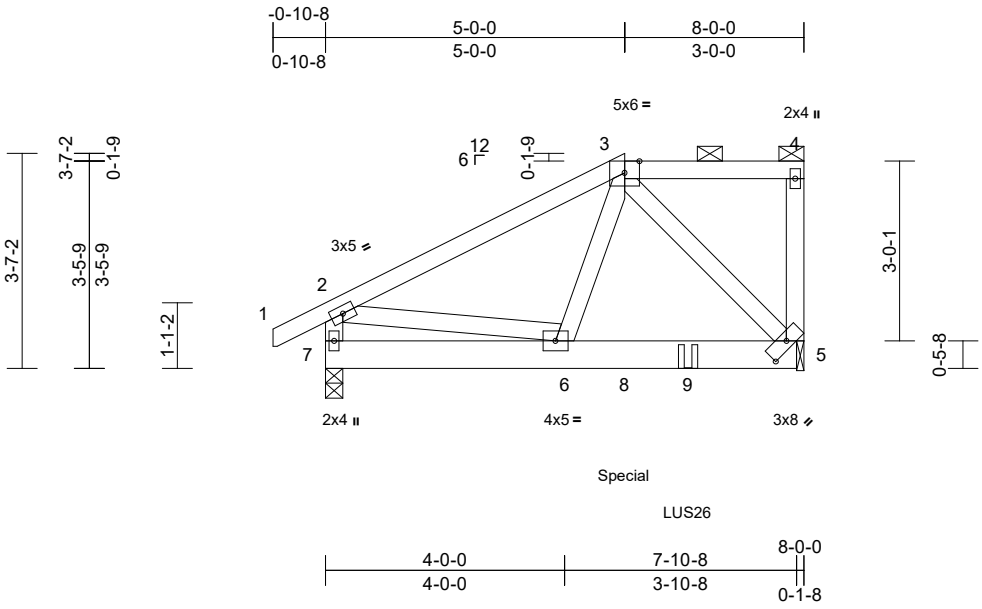
LOAD CASE(S) Standard

October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Roof-Fitzgerald VKDRFR
24120007-A	M6	Half Hip Girder	2	2	I77311789 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 10:03:17 Page: 1
ID:U9R?9AM_I1ABX2Dty8bprbyBvR6-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:38.5

Plate Offsets (X, Y): [5:0-4-7,0-1-7]

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	0.37	Vert(LL)	-0.01	5-6	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.32	Vert(CT)	-0.02	5-6	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.14	Horz(CT)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 106 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins: 3-4.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 5=0-1-8, 7=0-3-8
Max Horiz 7=96 (LC 8)
Max Uplift 5=-70 (LC 8), 7=-30 (LC 11)
Max Grav 5=898 (LC 32), 7=733 (LC 33)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/37, 2-3=-830/42, 3-4=-34/26, 4-5=-120/20, 2-7=-763/54
BOT CHORD 6-7=-93/30, 5-6=-59/481
WEBS 3-6=-17/667, 3-5=-714/62, 2-6=-9/693

NOTES
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.33
5) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10, Lu=50-0-0
6) Unbalanced snow loads have been considered for this design.
7) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
8) Provide adequate drainage to prevent water ponding.
9) * This truss has been designed for a 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) Bearings are assumed to be: Joint 7 SP No.2 , Joint 5 SP No.3 .
11) 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.
12) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 5.
13) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 7 and 5. This connection is for uplift only and does not consider lateral forces.
14) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
15) Use Simpson Strong-Tie LUS26 (4-10d Girder, 3-10d Truss, Single Ply Girder) or equivalent at 6-0-12 from the left end to connect truss(es) to back face of bottom chord, skewed 0.0 deg.to the right, sloping 0.0 deg. down.
16) Fill all nail holes where hanger is in contact with lumber.
17) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 533 lb down and 59 lb up at 5-0-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

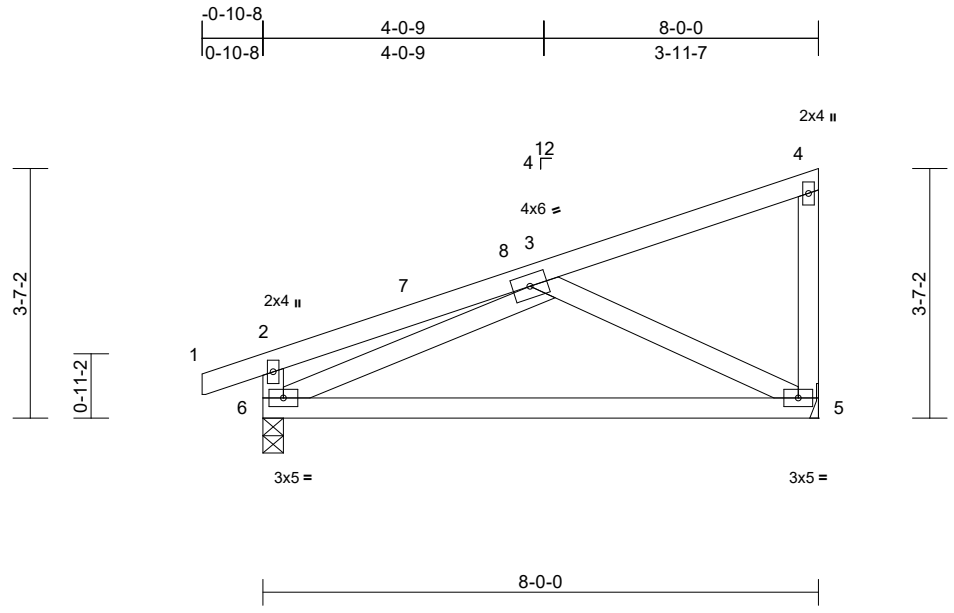
LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-48, 2-3=-48, 3-4=-58, 5-7=-20
Concentrated Loads (lb)
Vert: 8=-533 (B), 9=-323 (B)

October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Roof-Fitzgerald VKDRFR I77311790
24120007-A	M7	Monopitch	2	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 10:03:18 Page: 1
ID:MrZokHbrqN5GsDKaCiRpF5yBvS6-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:33.2

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	0.24	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.58	Vert(CT)	-0.21	5-6	>437	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.14	Horz(CT)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 43 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 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 9-9-0 oc bracing.

REACTIONS (size) 5= Mechanical, 6=0-3-8
Max Horiz 6=101 (LC 12)
Max Uplift 5=-13 (LC 15), 6=-27 (LC 11)
Max Grav 5=343 (LC 22), 6=372 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-6=-171/146, 1-2=0/24, 2-3=-38/60, 3-4=-88/65, 4-5=-114/113
BOT CHORD 5-6=-318/361
WEBS 3-5=-367/313, 3-6=-349/128

NOTES
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-10-3 to 2-1-13, Interior (1) 2-1-13 to 7-10-4 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=1.33
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with 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) Bearings are assumed to be: Joint 6 SP No.2 .
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 13 lb uplift at joint 5.
9) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 6. This connection is for uplift only and does not consider lateral forces.

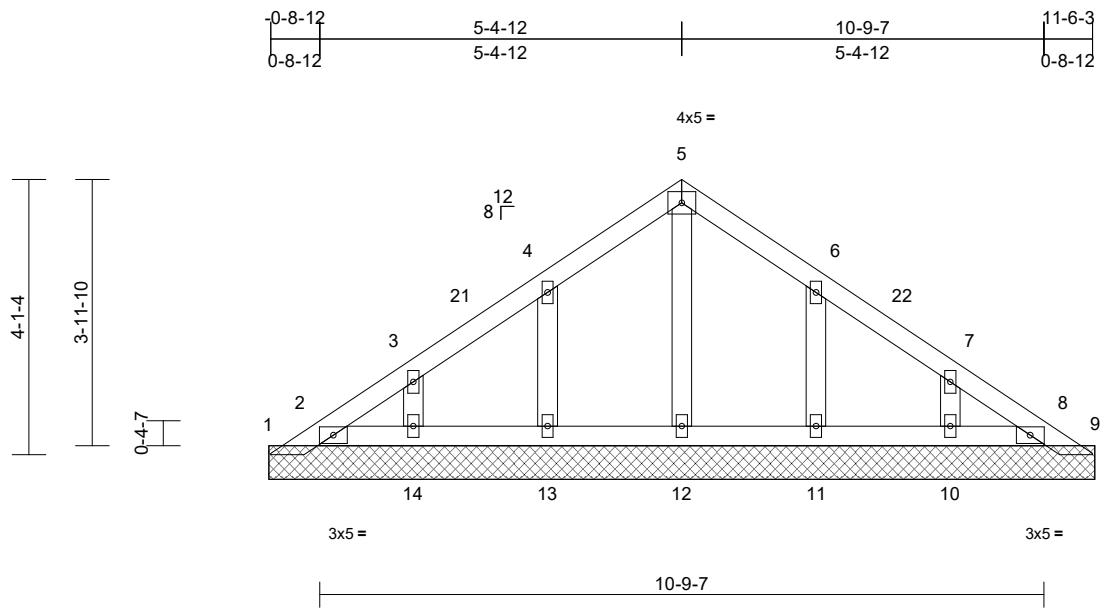
LOAD CASE(S) Standard

October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Roof-Fitzgerald VKDRFR
24120007-A	PB1	Piggyback	2	2	I77311791 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 10:03:18 Page: 1
ID:EpAE52VR8ySywoYY4IhDnlyBu9b-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:34.3

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	0.03	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.01	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.02	Horiz(TL)	0.00	9	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 103 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=12-3-11, 2=12-3-11, 8=12-3-11, 9=12-3-11, 10=12-3-11, 11=12-3-11, 12=12-3-11, 13=12-3-11, 14=12-3-11
Max Horiz 1=-74 (LC 9)
Max Uplift 1=-43 (LC 9), 10=-25 (LC 14), 11=-28 (LC 14), 13=-29 (LC 13), 14=-23 (LC 13)
Max Grav 1=48 (LC 12), 2=105 (LC 29), 8=87 (LC 2), 9=9 (LC 2), 10=148 (LC 30), 11=176 (LC 30), 12=126 (LC 2), 13=177 (LC 29), 14=149 (LC 29)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-87/95, 2-3=-61/53, 3-4=-70/44, 4-5=-88/93, 5-6=-88/92, 6-7=-51/24, 7-8=-42/27, 8-9=-4/17
BOT CHORD 2-14=-31/64, 13-14=-31/64, 12-13=-31/64, 11-12=-31/64, 10-11=-31/64, 8-10=-31/64
WEBS 5-12=-86/0, 4-13=-165/102, 3-14=-133/82, 6-11=-165/102, 7-10=-133/82

NOTES
1) 2-ply truss to be connected together as follows:
Top chords connected with 10d (0.131"x3") nails as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected with 10d (0.131"x3") nails as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-3-5 to 3-3-5, Interior (1) 3-3-5 to 6-1-13, Exterior(2R) 6-1-13 to 9-1-13, Interior (1) 9-1-13 to 12-0-6 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=1.33
5) 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.
6) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
7) All plates are 2x4 MT20 unless otherwise indicated.
8) Gable requires continuous bottom chord bearing.
9) Gable studs spaced at 2-0-0 oc.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
11) All bearings are assumed to be SP No.2 .
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 43 lb uplift at joint 1.
13) N/A
14) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

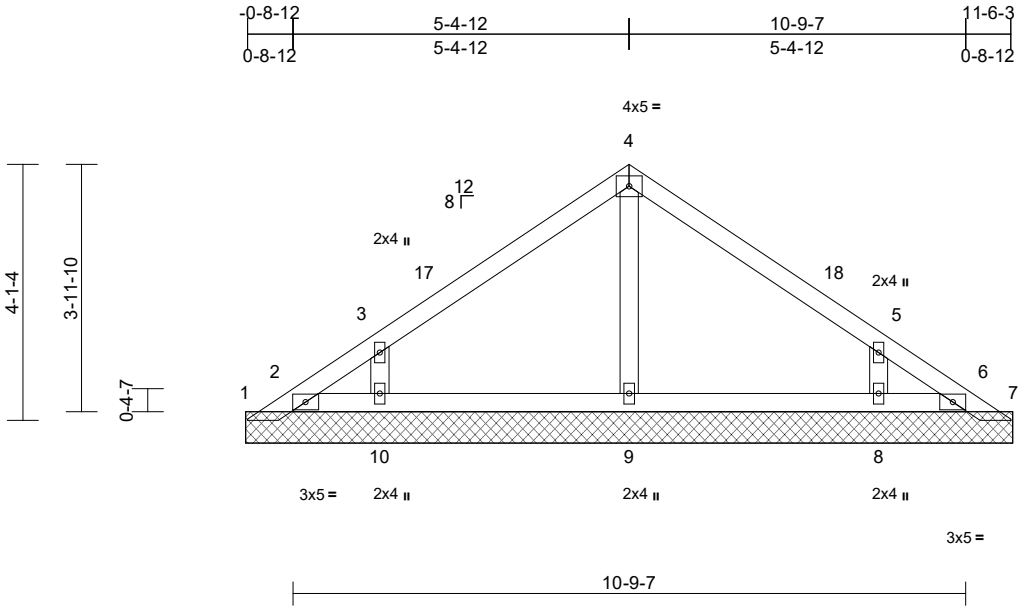
LOAD CASE(S) Standard

October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Roof-Fitzgerald VKDRFR
24120007-A	PB2	Piggyback	17	1	I77311792 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 10:03:18 Page: 1
ID:RQFkZYquFDP0Yez7Y2GBF6yBvPD-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:37

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.18	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.09	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horiz(TL)	0.00	7	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 45 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=12-3-11, 2=12-3-11, 6=12-3-11, 7=12-3-11, 8=12-3-11, 9=12-3-11, 10=12-3-11
Max Horiz 1=-74 (LC 9)
Max Uplift 1=-27 (LC 9), 2=-19 (LC 35), 6=-40 (LC 12), 7=-9 (LC 14), 8=-60 (LC 14), 10=-59 (LC 13)
Max Grav 1=71 (LC 30), 2=32 (LC 14), 6=41 (LC 14), 7=55 (LC 36), 8=315 (LC 30), 9=265 (LC 2), 10=316 (LC 29)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-94/83, 2-3=-75/71, 3-4=-129/85, 4-5=-129/84, 5-6=-61/49, 6-7=-33/20
BOT CHORD 2-10=-17/51, 9-10=-17/51, 8-9=-17/51, 6-8=-17/51
WEBS 4-9=-178/30, 3-10=-317/201, 5-8=-316/201

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-3-5 to 3-3-5, Interior (1) 3-3-5 to 6-1-13, Exterior(2R) 6-1-13 to 9-1-13, Interior (1) 9-1-13 to 12-0-6 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=1.33
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 4-0-0 oc.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) 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 and 9 lb uplift at joint 7.
10) N/A
11) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

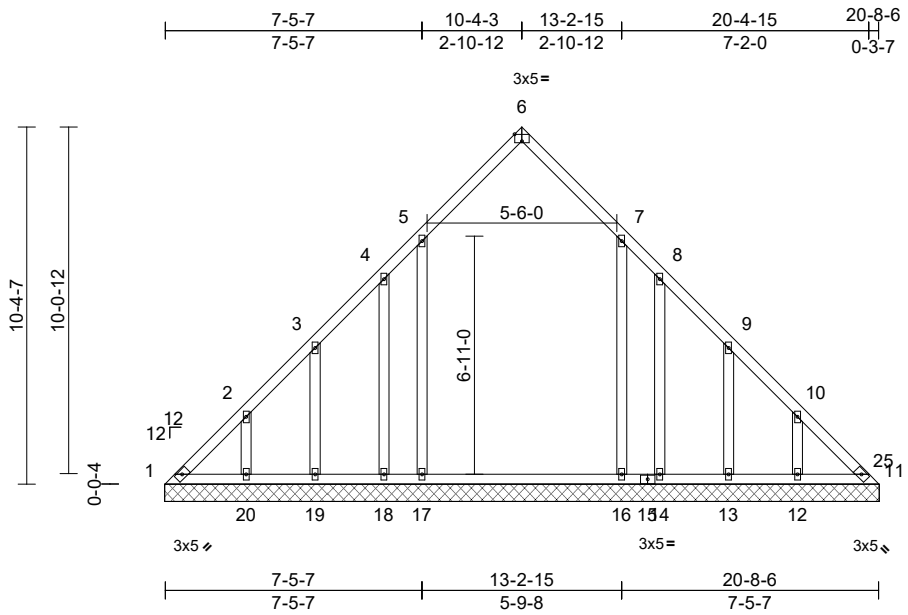
LOAD CASE(S) Standard

October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Roof-Fitzgerald VKDRFR I77311793
24120007-A	VL1	Valley	1	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 10:03:18 Page: 1
ID:RxDrgS3wtj2092d7cY3vDuyBulb-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:66.9

Plate Offsets (X, Y): [6:0-2-8,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.09	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.31	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.21	Horiz(TL)	0.01	11	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 128 lb	FT = 20%

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

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

REACTIONS (size) 1=20-8-14, 11=20-8-14, 12=20-8-14, 13=20-8-14, 14=20-8-14, 16=20-8-14, 17=20-8-14, 18=20-8-14, 19=20-8-14, 20=20-8-14
Max Horiz 1=191 (LC 10)
Max Uplift 1=-25 (LC 11), 11=-18 (LC 12), 12=-16 (LC 14), 13=-63 (LC 14), 14=-88 (LC 19), 16=-12 (LC 14), 17=-15 (LC 13), 18=-87 (LC 19), 19=-60 (LC 13), 20=-27 (LC 13)
Max Grav 1=189 (LC 30), 11=170 (LC 31), 12=244 (LC 29), 13=218 (LC 29), 14=44 (LC 2), 16=458 (LC 29), 17=462 (LC 28), 18=44 (LC 2), 19=213 (LC 28), 20=261 (LC 28)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-308/218, 2-3=-230/139, 3-4=-178/54, 4-5=-140/32, 5-6=-195/61, 6-7=-195/61, 7-8=-136/27, 8-9=-177/54, 9-10=-230/139, 10-11=-308/217
BOT CHORD 1-20=-171/254, 19-20=-171/254, 18-19=-171/254, 17-18=-171/254, 16-17=-171/254, 14-16=-171/254, 13-14=-171/254, 12-13=-171/254, 11-12=-171/254
WEBS 4-18=-110/75, 3-19=-190/124, 2-20=-197/90, 8-14=-110/75, 9-13=-190/124, 10-12=-196/90, 5-17=-217/117, 7-16=-217/117

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Corner (3E) 0-0-0 to 3-0-0, Exterior(2N) 3-0-0 to 10-4-7, Corner (3R) 10-4-7 to 13-3-3, Exterior(2N) 13-3-3 to 20-4-10 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=1.33
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) All plates are 2x4 MT20 unless otherwise indicated.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 2-0-0 oc.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
9) All bearings are assumed to be SP No.2 .
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 25 lb uplift at joint 1, 18 lb uplift at joint 11, 87 lb uplift at joint 18, 60 lb uplift at joint 19, 27 lb uplift at joint 20, 88 lb uplift at joint 14, 63 lb uplift at joint 13, 16 lb uplift at joint 12, 15 lb uplift at joint 17 and 12 lb uplift at joint 16.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 11.

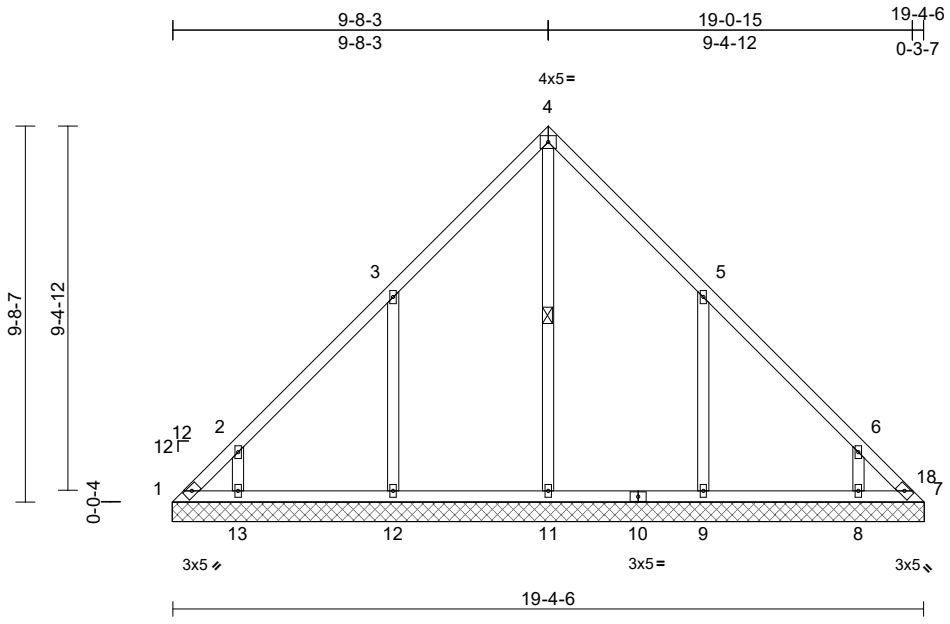
LOAD CASE(S) Standard

October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Roof-Fitzgerald VKDRFR I77311794
24120007-A	VL2	Valley	1	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 10:03:18 Page: 1
ID:pjT7Ll8NXZ6nj0BitMRA?eyBuUj-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:59.4

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	0.22	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.17	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.22	Horiz(TL)	0.00	7	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 100 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.
WEBS 1 Row at midpt 4-11

REACTIONS (size) 1=19-4-14, 7=19-4-14, 8=19-4-14, 9=19-4-14, 11=19-4-14, 12=19-4-14, 13=19-4-14
Max Horiz 1=178 (LC 10)
Max Uplift 1=-77 (LC 11), 7=-46 (LC 12), 8=-53 (LC 14), 9=-125 (LC 14), 12=-125 (LC 13), 13=-59 (LC 13)
Max Grav 1=130 (LC 10), 7=102 (LC 14), 8=318 (LC 29), 9=472 (LC 29), 11=352 (LC 31), 12=472 (LC 28), 13=328 (LC 28)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-210/169, 2-3=-192/117, 3-4=-236/177, 4-5=-236/177, 5-6=-159/74, 6-7=-209/168
BOT CHORD 1-13=-99/146, 12-13=-99/146, 11-12=-99/146, 9-11=-99/146, 8-9=-99/146, 7-8=-99/146
WEBS 4-11=-146/57, 3-12=-407/252, 2-13=-313/189, 5-9=-407/252, 6-8=-311/188

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Corner (3E) 0-0-0 to 3-0-0, Exterior(2N) 3-0-0 to 9-8-7, Corner (3R) 9-8-7 to 12-8-7, Exterior(2N) 12-8-7 to 19-0-10 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=1.33
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) All plates are 2x4 MT20 unless otherwise indicated.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
9) All bearings are assumed to be SP No.2 .
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 77 lb uplift at joint 1, 46 lb uplift at joint 7, 125 lb uplift at joint 12, 59 lb uplift at joint 13, 125 lb uplift at joint 9 and 53 lb uplift at joint 8.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 7.

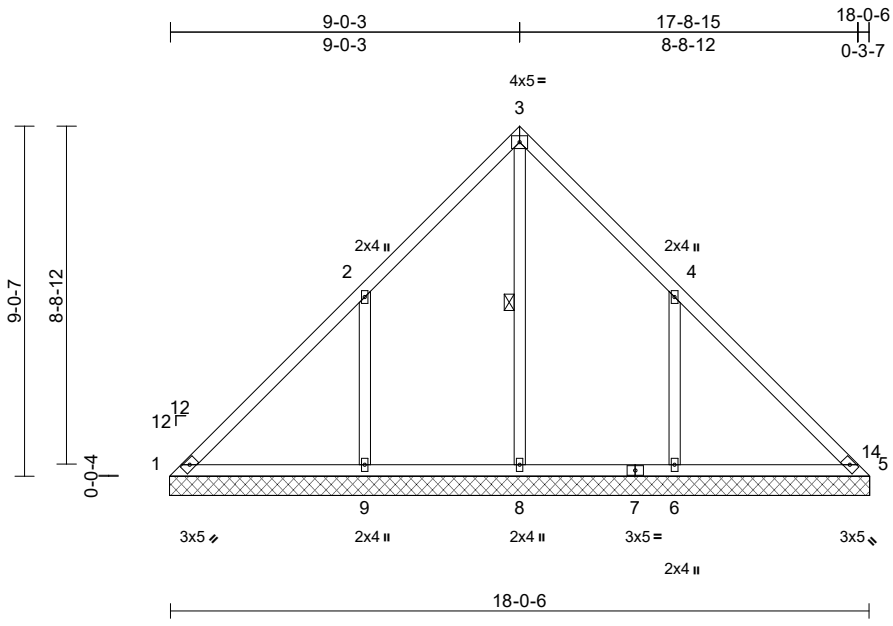
LOAD CASE(S) Standard

October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Roof-Fitzgerald VKDRFR I77311795
24120007-A	VL3	Valley	1	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 10:03:18 Page: 1
ID:pjT7Ll8NXZ6nj0BitMRA?eyBuUj-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:59.5

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.34	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.23	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.19	Horiz(TL)	0.01	5	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 89 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.
WEBS 1 Row at midpt 3-8

REACTIONS (size) 1=18-0-14, 5=18-0-14, 6=18-0-14, 8=18-0-14, 9=18-0-14
Max Horiz 1=166 (LC 10)
Max Uplift 1=-28 (LC 11), 6=-137 (LC 14), 9=-140 (LC 13)
Max Grav 1=121 (LC 29), 5=88 (LC 31), 6=573 (LC 29), 8=538 (LC 28), 9=578 (LC 28)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-166/342, 2-3=-15/215, 3-4=-13/196, 4-5=-168/341
BOT CHORD 1-9=-222/184, 8-9=-222/184, 6-8=-222/184, 5-6=-222/184
WEBS 3-8=-373/0, 2-9=-464/274, 4-6=-463/273

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Corner (3E) 0-0-0 to 3-0-0, Exterior(2N) 3-0-0 to 9-0-7, Corner (3R) 9-0-7 to 12-0-7, Exterior(2N) 12-0-7 to 17-8-10 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=1.33
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 4-0-0 oc.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) All bearings are assumed to be SP No.2 .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 28 lb uplift at joint 1, 140 lb uplift at joint 9 and 137 lb uplift at joint 6.
10) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 5.

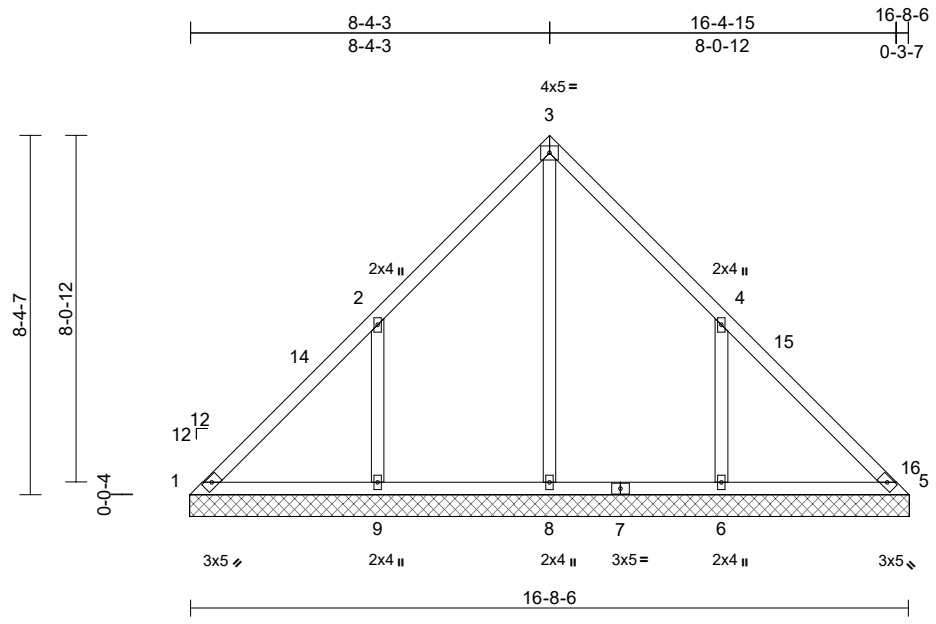
LOAD CASE(S) Standard

October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Roof-Fitzgerald VKDRFR I77311796
24120007-A	VL4	Valley	1	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 10:03:18 Page: 1
ID:pjT7Ll8NXZ6nj0BitMRA?eyBuUj-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:53.6

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	0.26	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.18	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.36	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 81 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=16-8-14, 5=16-8-14, 6=16-8-14, 8=16-8-14, 9=16-8-14
Max Horiz 1=153 (LC 10)
Max Uplift 1=-23 (LC 9), 6=-124 (LC 14), 9=-127 (LC 13)
Max Grav 1=133 (LC 29), 5=96 (LC 31), 6=523 (LC 29), 8=480 (LC 28), 9=528 (LC 28)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-178/240, 2-3=-49/162, 3-4=-50/146, 4-5=-174/218
BOT CHORD 1-9=-123/206, 8-9=-123/206, 6-8=-123/206, 5-6=-123/206
WEBS 3-8=-293/0, 2-9=-368/323, 4-6=-367/326

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Corner (3E) 0-0-0 to 3-0-0, Exterior(2N) 3-0-0 to 8-4-7, Corner (3R) 8-4-7 to 11-4-7, Exterior(2N) 11-4-7 to 16-4-10 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=1.33
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 4-0-0 oc.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) All bearings are assumed to be SP No.2 .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 23 lb uplift at joint 1, 127 lb uplift at joint 9 and 124 lb uplift at joint 6.
10) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 5.

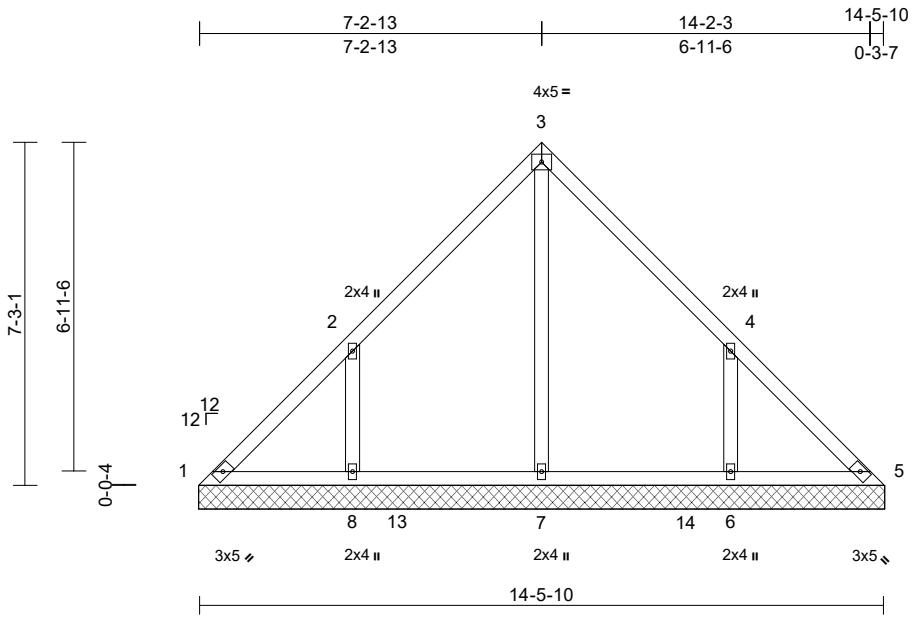
LOAD CASE(S) Standard

October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Roof-Fitzgerald VKDRFR I77311797
24120007-A	VL5	Valley	1	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 10:03:19 Page: 1
ID:pjT7Ll8NXZ6nj0BitMRA?eyBuUj-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:48.7

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	0.20	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.17	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.19	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										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 6-0-0 oc bracing.

REACTIONS (size) 1=14-6-2, 5=14-6-2, 6=14-6-2, 7=14-6-2, 8=14-6-2
Max Horiz 1=-132 (LC 9)
Max Uplift 1=-25 (LC 9), 6=-106 (LC 14), 8=-109 (LC 13)
Max Grav 1=134 (LC 29), 5=111 (LC 28), 6=440 (LC 29), 7=398 (LC 28), 8=444 (LC 28)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-153/142, 2-3=-127/148, 3-4=-127/149, 4-5=-134/113
BOT CHORD 1-8=-72/165, 7-8=-72/165, 6-7=-72/165, 5-6=-72/165
WEBS 3-7=-205/0, 2-8=-333/321, 4-6=-333/321

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Corner (3E) 0-0-0 to 3-3-1, Exterior(2N) 3-3-1 to 7-3-1, Corner (3R) 7-3-1 to 10-3-1, Exterior(2N) 10-3-1 to 14-6-2 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=1.33
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 4-0-0 oc.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) All bearings are assumed to be SP No.2 .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 25 lb uplift at joint 1, 109 lb uplift at joint 8 and 106 lb uplift at joint 6.
10) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 5.

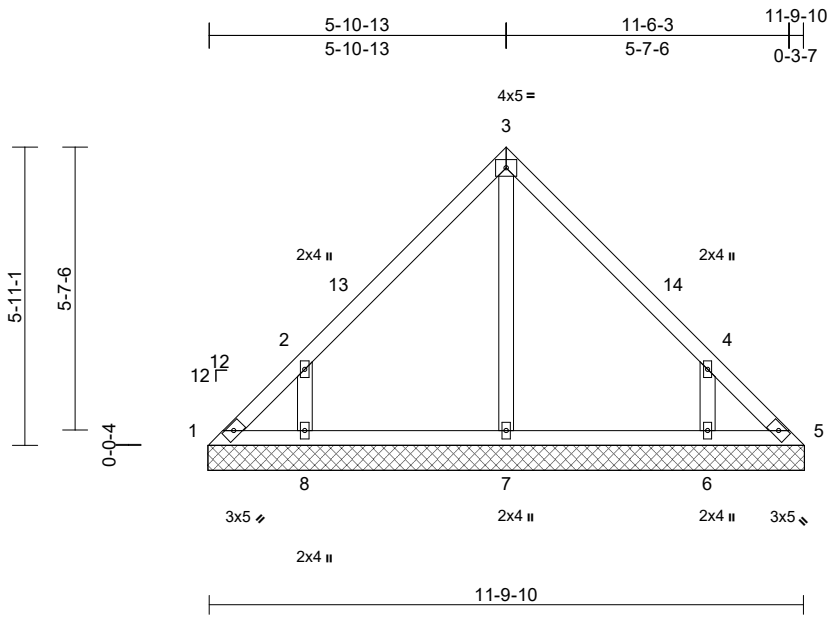
LOAD CASE(S) Standard

October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Roof-Fitzgerald VKDRFR I77311798
24120007-A	VL6	Valley	1	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 10:03:19 Page: 1
ID:pjT7Ll8NXZ6nj0BitMRA?eyBuUj-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:45.8

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	0.19	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.09	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.11	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 53 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=11-10-2, 5=11-10-2, 6=11-10-2, 7=11-10-2, 8=11-10-2
Max Horiz 1=-107 (LC 9)
Max Uplift 1=-34 (LC 9), 5=-9 (LC 10), 6=-92 (LC 14), 8=-95 (LC 13)
Max Grav 1=97 (LC 29), 5=78 (LC 28), 6=322 (LC 29), 7=222 (LC 2), 8=326 (LC 28)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-152/102, 2-3=-181/158, 3-4=-181/157, 4-5=-144/72
BOT CHORD 1-8=-32/114, 7-8=-32/114, 6-7=-32/114, 5-6=-32/114
WEBS 3-7=-136/0, 2-8=-335/364, 4-6=-335/363

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Corner (3E) 0-0-0 to 3-0-0, Exterior(2N) 3-0-0 to 5-11-1, Corner (3R) 5-11-1 to 8-11-1, Exterior(2N) 8-11-1 to 11-10-2 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=1.33
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 4-0-0 oc.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) All bearings are assumed to be SP No.2 .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 34 lb uplift at joint 1, 9 lb uplift at joint 5, 95 lb uplift at joint 8 and 92 lb uplift at joint 6.
10) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 5.

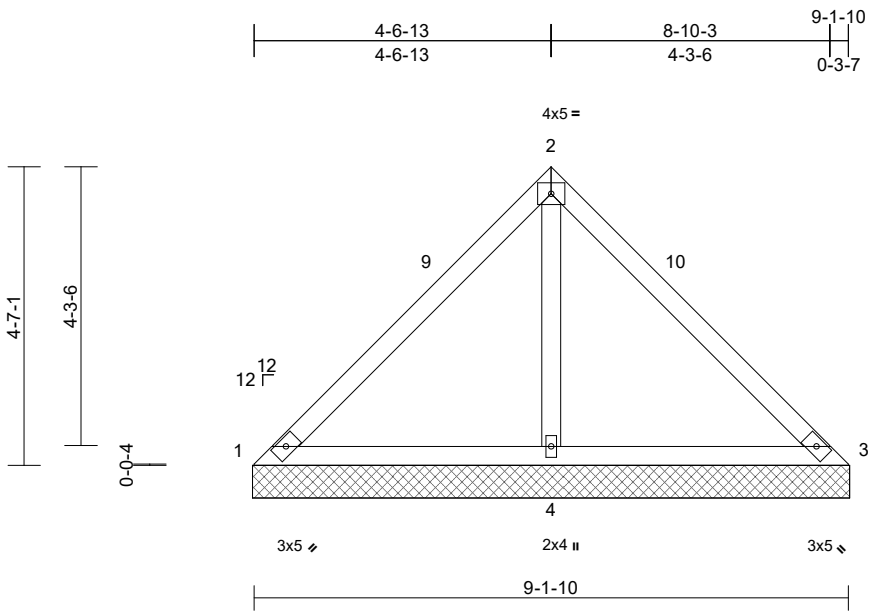
LOAD CASE(S) Standard

October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Roof-Fitzgerald VKDRFR I77311799
24120007-A	VL7	Valley	1	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 10:03:19 ID:Hv1VY58?IsEeLAmuQ3yPXsyBuUi-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f Page: 1



Scale = 1:35.4

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	0.24	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.29	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.21	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 37 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 9-1-10 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=9-2-2, 3=9-2-2, 4=9-2-2
Max Horiz 1=-82 (LC 9)
Max Uplift 1=-20 (LC 35), 3=-20 (LC 34), 4=-38 (LC 13)
Max Grav 1=72 (LC 34), 3=72 (LC 35), 4=661 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-184/300, 2-3=-174/300
BOT CHORD 1-4=-208/267, 3-4=-208/267
WEBS 2-4=-607/400

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Corner (3E) 0-0-0 to 3-0-0, Exterior(2N) 3-0-0 to 4-7-1, Corner (3R) 4-7-1 to 7-7-1, Exterior(2N) 7-7-1 to 9-2-2 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=1.33
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 4-0-0 oc.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) All bearings are assumed to be SP No.2 .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 20 lb uplift at joint 1, 20 lb uplift at joint 3 and 38 lb uplift at joint 4.
10) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 3.

LOAD CASE(S) Standard

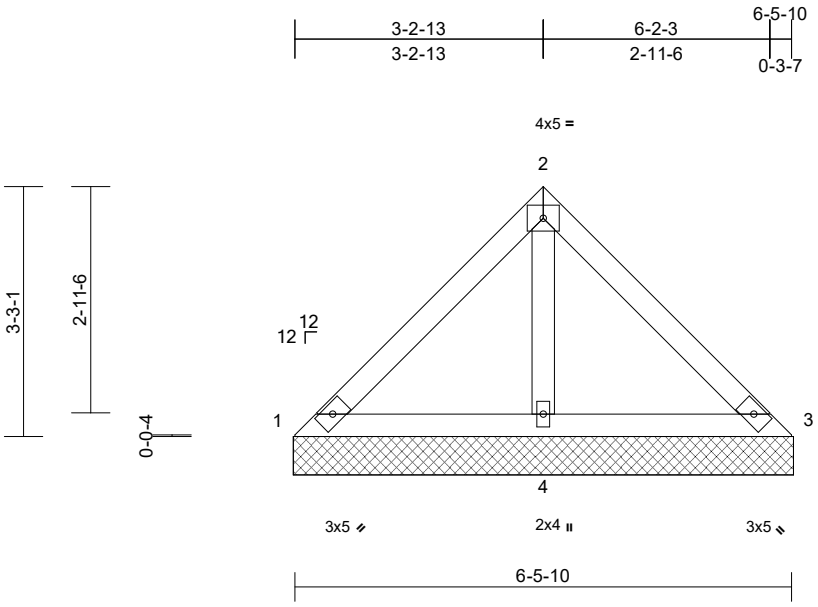
October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Roof-Fitzgerald VKDRFR
24120007-A	VL8	Valley	1	1	I77311800
					Job Reference (optional)

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

Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 10:03:19
ID:Hv1VY58?IsEeLAmuQ3yPXsyBuUi-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:30

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.15	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.20	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.09	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 26 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 6-5-10 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=6-6-2, 3=6-6-2, 4=6-6-2
Max Horiz 1=57 (LC 10)
Max Uplift 4=-21 (LC 13)
Max Grav 1=66 (LC 34), 3=66 (LC 35), 4=429 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-122/171, 2-3=-122/171
BOT CHORD 1-4=-141/222, 3-4=-141/222
WEBS 2-4=-364/294

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Corner (3E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 4-0-0 oc.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) All bearings are assumed to be SP No.2 .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 21 lb uplift at joint 4.
10) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 3.

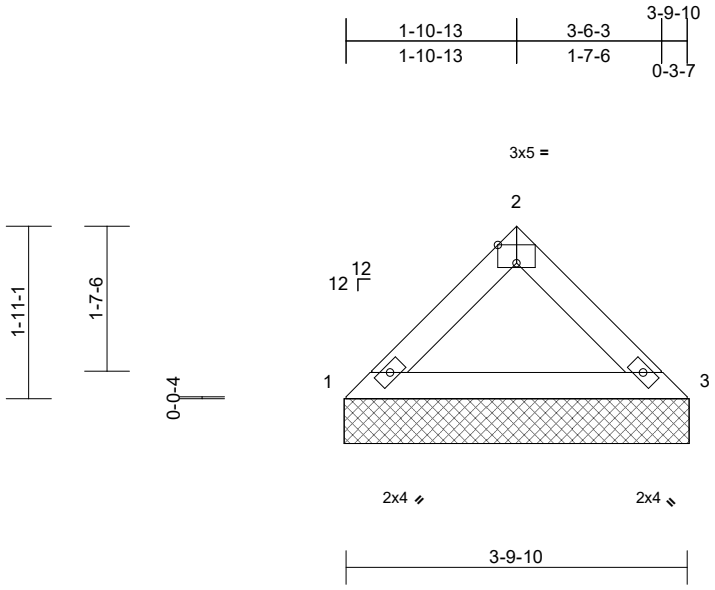
LOAD CASE(S) Standard

October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Roof-Fitzgerald VKDRFR I77311801
24120007-A	VL9	Valley	1	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 10:03:19 Page: 1
ID:Hv1VY58?IsEeLAmuQ3yPXsyBuUi-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:25.7

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.10	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.09	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 12 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 3-9-10 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=3-10-2, 3=3-10-2
Max Horiz 1=-32 (LC 11)
Max Grav 1=154 (LC 2), 3=154 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-221/128, 2-3=-221/128
BOT CHORD 1-3=-73/149

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Corner (3E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 4-0-0 oc.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) All bearings are assumed to be SP No.2 .
9) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 3.

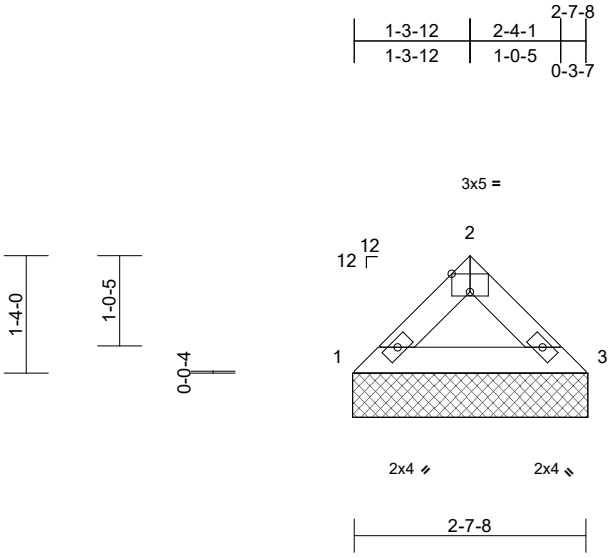
LOAD CASE(S) Standard

October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Roof-Fitzgerald VKDRFR I77311802
24120007-A	VL10	Valley	1	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 10:03:19 Page: 1
ID:q8DzS3_LVZO4aXO6K_g2hvyBuSK-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:26.1

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.05	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.05	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	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 8 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 2-7-8 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=2-8-0, 3=2-8-0
Max Horiz 1=-21 (LC 9)
Max Grav 1=107 (LC 2), 3=107 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-146/92, 2-3=-146/92
BOT CHORD 1-3=-47/96

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Corner (3E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 4-0-0 oc.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) All bearings are assumed to be SP No.2 .
9) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 3.

LOAD CASE(S) Standard

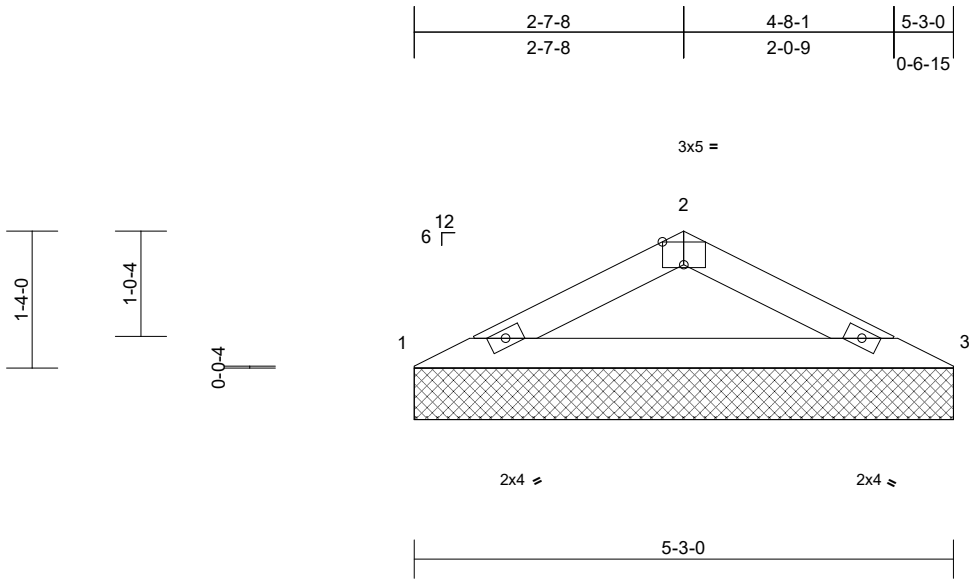
October 27,2025

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

Job	Truss	Truss Type	Qty	Ply	93 Dewey-Tim Johnson Const.-Roof-Fitzgerald VKDRFR
24120007-A	VL11	Valley	1	1	I77311803 Job Reference (optional)

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

Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Oct 24 10:03:19 Page: 1
ID:orsZ1FqlS9avsM4hx9JY52yBuJV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:22.4

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.21	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.17	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.01	3	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 15 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 5-3-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=5-3-0, 3=5-3-0
Max Horiz 1=12 (LC 12)
Max Grav 1=210 (LC 2), 3=210 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-426/230, 2-3=-426/212
BOT CHORD 1-3=-205/370

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) * This truss has been designed for a 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 .

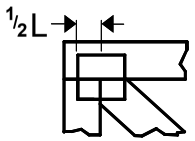
LOAD CASE(S) Standard

October 27,2025

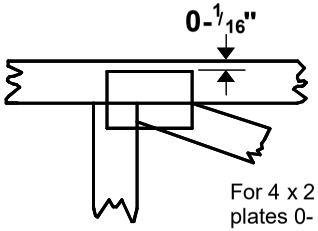
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

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.

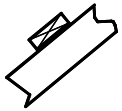
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

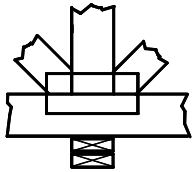
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

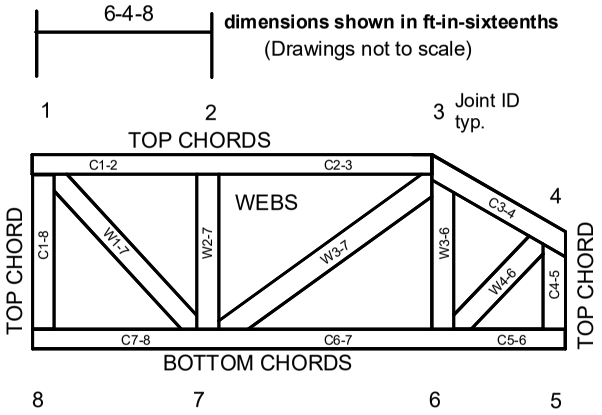


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

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

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.