

**Trenco**

818 Soundside Rd  
Edenton, NC 27932

Re: 25-0518-A  
FFF-LOT #54 Roof

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

Pages or sheets covered by this seal: I72248434 thru I72248466

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

North Carolina COA: C-0844



March 26, 2025

Gilbert, Eric

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

|           |       |            |     |     |                  |
|-----------|-------|------------|-----|-----|------------------|
| Job       | Truss | Truss Type | Qty | Ply | FFF-LOT #54 Roof |
| 25-0518-A | J02   | Jack-Open  | 1   | 1   | 172248434        |

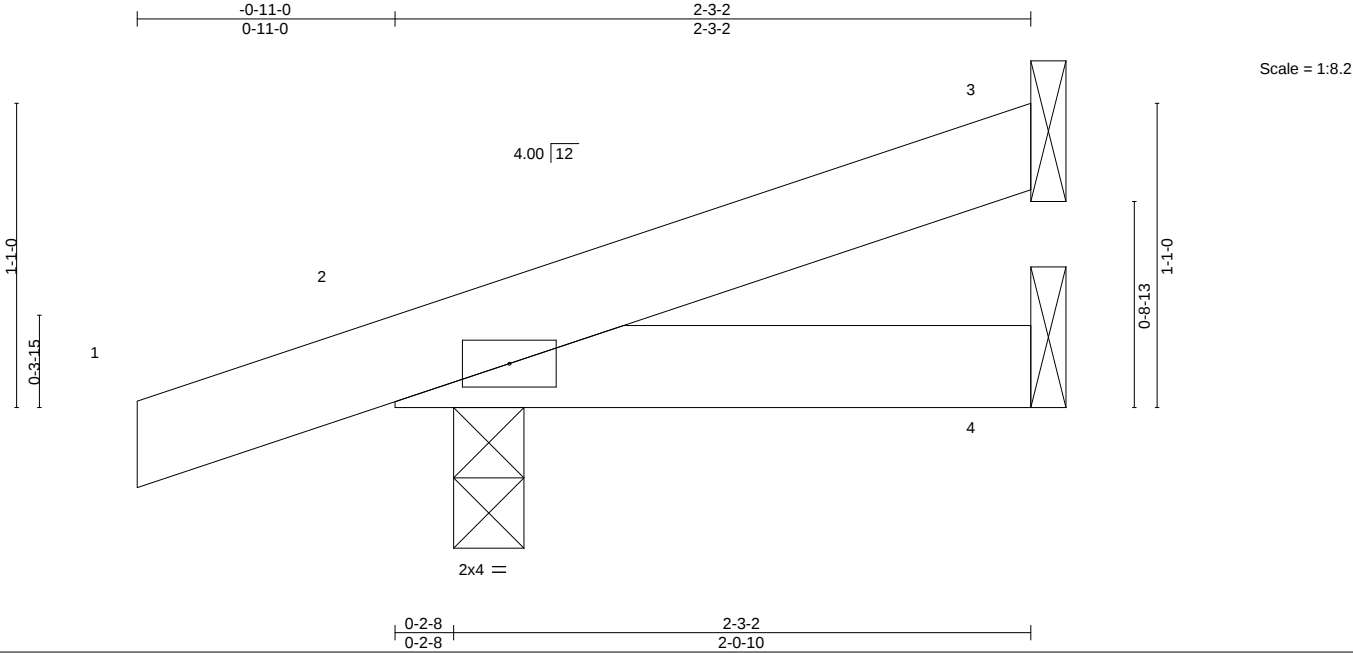
Riverside Roof Truss, LLC,

Danville, Va - 24541,

8.730 s Feb 19 2025 MiTek Industries, Inc. Mon Mar 24 14:26:53 2025 Page 1

ID:kk2\_eRZGXXvKblGikzSpyNzs9fO-4aBKTPB\_6ytvAn3UonHeJ3nL2NIb61sSng4tfVzXhw0

Job Reference (optional)



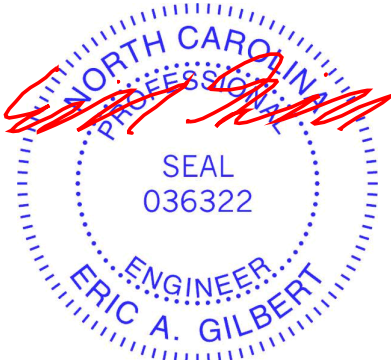
| LOADING (psf)          | SPACING-             | CSI.      | DEFL.    | in    | (loc) | I/defl | L/d | PLATES       | GRIP     |
|------------------------|----------------------|-----------|----------|-------|-------|--------|-----|--------------|----------|
| TCLL (roof) 20.0       | 2-0-0                | TC 0.06   | Vert(LL) | -0.00 | 7     | >999   | 240 | MT20         | 244/190  |
| Snow (Pf/Pg) 15.4/20.0 | 1.15                 | BC 0.05   | Vert(CT) | -0.00 | 7     | >999   | 180 |              |          |
| TCDL 10.0              | 1.15                 | WB 0.00   | Horz(CT) | -0.00 | 3     | n/a    | n/a |              |          |
| BCLL 0.0 *             | Rep Stress Incr YES  | Matrix-MP |          |       |       |        |     | Weight: 8 lb | FT = 20% |
| BCDL 10.0              | Code IRC2018/TPI2014 |           |          |       |       |        |     |              |          |

|                       |                                                                           |
|-----------------------|---------------------------------------------------------------------------|
| <b>LUMBER-</b>        | <b>BRACING-</b>                                                           |
| TOP CHORD 2x4 SP No.2 | TOP CHORD Structural wood sheathing directly applied or 2-3-2 oc purlins. |
| BOT CHORD 2x4 SP No.2 | BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.            |

**REACTIONS.** (size) 3=Mechanical, 4=Mechanical, 2=0-3-0  
Max Horz 2=34(LC 16)  
Max Uplift 3=-10(LC 16), 2=-37(LC 16)  
Max Grav 3=55(LC 21), 4=37(LC 7), 2=175(LC 21)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

- NOTES-**
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(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=1.60
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Refer to girder(s) for truss to truss connections.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 2.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



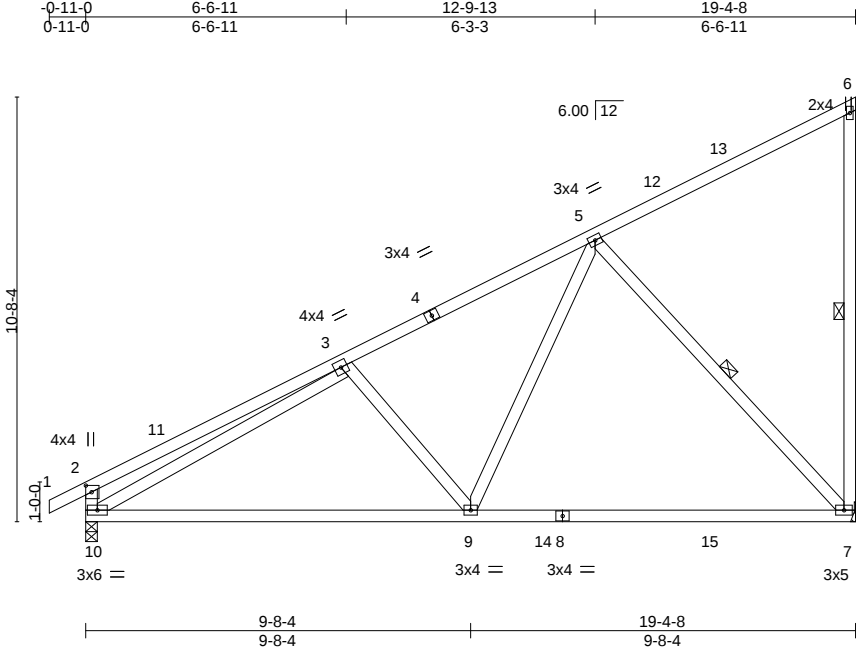
March 26,2025

|           |       |            |     |     |                  |
|-----------|-------|------------|-----|-----|------------------|
| Job       | Truss | Truss Type | Qty | Ply | FFF-LOT #54 Roof |
| 25-0518-A | M01   | MONOPITCH  | 15  | 1   | 172248435        |

Riverside Roof Truss, LLC, Danville, Va - 24541,

8.730 s Feb 19 2025 MiTek Industries, Inc. Mon Mar 24 14:26:53 2025 Page 1

ID:kk2\_eRZGXXvKblGikzSpyNzs9fO-4aBKTpB\_6ytvAn3UonHeJ3nC2NZd6s\_SNg4tfVzXhw0



| Plate Offsets (X,Y)-- [2:0-2-0,0-1-12] |           |                      |      |             |      |              |                    |                |          |
|----------------------------------------|-----------|----------------------|------|-------------|------|--------------|--------------------|----------------|----------|
| <b>LOADING</b> (psf)                   |           | <b>SPACING-</b>      |      | <b>CSI.</b> |      | <b>DEFL.</b> |                    | <b>PLATES</b>  |          |
| TCLL (roof)                            | 20.0      | Plate Grip DOL       | 1.15 | TC          | 0.64 | Vert(LL)     | -0.37 7-9 >618 240 | MT20           | 244/190  |
| Snow (Pf/Pg)                           | 15.4/20.0 | Lumber DOL           | 1.15 | BC          | 0.81 | Vert(CT)     | -0.57 7-9 >402 180 |                |          |
| TCDL                                   | 10.0      | Rep Stress Incr      | YES  | WB          | 0.76 | Horz(CT)     | 0.02 7 n/a n/a     |                |          |
| BCLL                                   | 0.0 *     | Code IRC2018/TPI2014 |      | Matrix-MS   |      |              |                    |                |          |
| BCDL                                   | 10.0      |                      |      |             |      |              |                    | Weight: 121 lb | FT = 20% |

|                |                      |                 |                                                                                       |
|----------------|----------------------|-----------------|---------------------------------------------------------------------------------------|
| <b>LUMBER-</b> |                      | <b>BRACING-</b> |                                                                                       |
| TOP CHORD      | 2x4 SP No.2          | TOP CHORD       | Structural wood sheathing directly applied or 5-9-8 oc purlins, except end verticals. |
| BOT CHORD      | 2x4 SP No.2 *Except* | BOT CHORD       | Rigid ceiling directly applied or 10-0-0 oc bracing.                                  |
|                | 8-10: 2x4 SP No.1    | WEBS            | 1 Row at midpt 6-7, 5-7                                                               |
| WEBS           | 2x4 SP No.3          |                 |                                                                                       |

**REACTIONS.** (size) 7=Mechanical, 10=0-3-8  
Max Horz 10=316(LC 16)  
Max Uplift 7=-126(LC 16)  
Max Grav 7=917(LC 28), 10=920(LC 28)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-473/149, 3-5=-982/3, 2-10=-409/180  
BOT CHORD 9-10=-290/1003, 7-9=-154/566  
WEBS 3-9=-278/200, 5-9=-21/688, 5-7=-824/229, 3-10=-712/0

**NOTES-**

- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2E) -0-11-0 to 2-1-0, Interior(1) 2-1-0 to 19-2-12 zone; cantilever left and right exposed ; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; 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 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 7) Refer to girder(s) for truss to truss connections.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 7=126.
- 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



March 26,2025

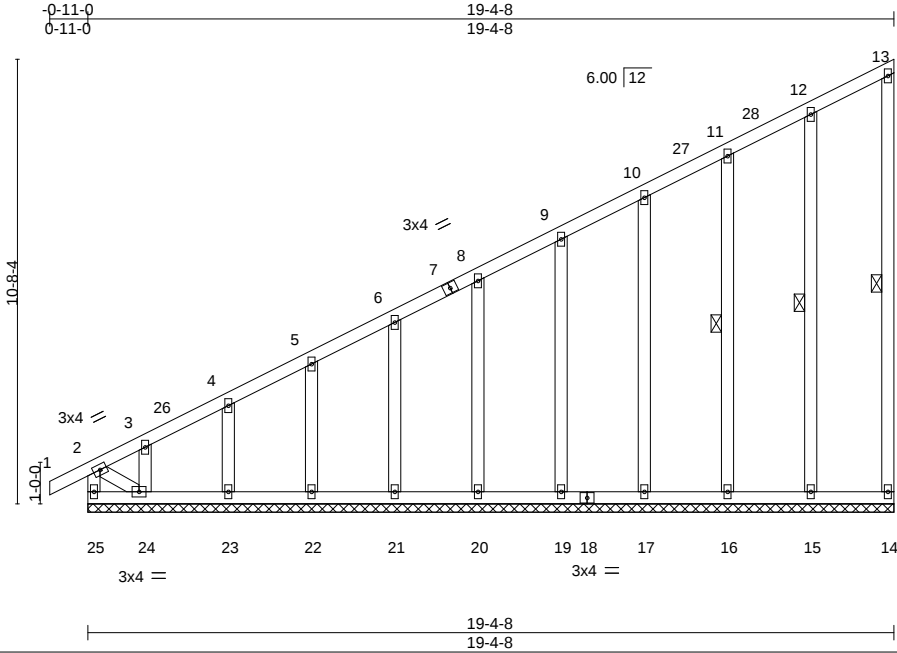
**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**  
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

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



|           |       |                     |     |     |                  |
|-----------|-------|---------------------|-----|-----|------------------|
| Job       | Truss | Truss Type          | Qty | Ply | FFF-LOT #54 Roof |
| 25-0518-A | M01GE | MONOPITCH SUPPORTED | 2   | 1   | 172248437        |

Riverside Roof Truss, LLC, Danville, Va - 24541, 8.730 s Feb 19 2025 MiTek Industries, Inc. Mon Mar 24 14:26:54 2025 Page 1  
ID:kk2\_eRZGXxvKblGikzSpyNzs9fO-YmlhlBctG?moxehLUotrHKWWn54rSpbbKpQCxzXhw?



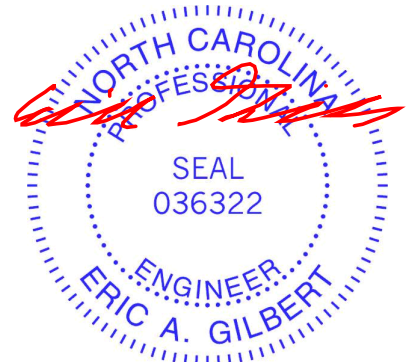
| LOADING (psf)          | SPACING-             | CSI.     | DEFL.          | in (loc) | I/defl | L/d | PLATES         | GRIP     |
|------------------------|----------------------|----------|----------------|----------|--------|-----|----------------|----------|
| TCLL (roof) 20.0       | 2-0-0                | TC 0.08  | Vert(LL) 0.00  | 1        | n/r    | 120 | MT20           | 244/190  |
| Snow (Pl/Pg) 15.4/20.0 | Plate Grip DOL 1.15  | BC 0.03  | Vert(CT) -0.00 | 1        | n/r    | 120 |                |          |
| TCDL 10.0              | Lumber DOL 1.15      | WB 0.15  | Horz(CT) -0.00 | 14       | n/a    | n/a |                |          |
| BCLL 0.0 *             | Rep Stress Incr YES  | Matrix-S |                |          |        |     |                |          |
| BCDL 10.0              | Code IRC2018/TPI2014 |          |                |          |        |     | Weight: 149 lb | FT = 20% |

| LUMBER-               | BRACING-                                                                                        |
|-----------------------|-------------------------------------------------------------------------------------------------|
| TOP CHORD 2x4 SP No.2 | TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals. |
| BOT CHORD 2x4 SP No.2 | BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:                          |
| WEBS 2x4 SP No.3      | 6-0-0 oc bracing: 24-25.                                                                        |
| OTHERS 2x4 SP No.3    | WEBS 1 Row at midpt 13-14, 12-15, 11-16                                                         |

**REACTIONS.** All bearings 19-4-8.  
(lb) - Max Horz 25=316(LC 16)  
Max Uplift All uplift 100 lb or less at joint(s) 25, 14, 15, 16, 17, 19, 20, 21, 22, 23 except 24=-193(LC 16)  
Max Grav All reactions 250 lb or less at joint(s) 14, 15, 16, 17, 19, 20, 21, 22, 23, 24 except 25=271(LC 16)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-25=-434/165, 2-3=-476/177, 3-4=-437/159, 4-5=-387/141, 5-6=-340/122, 6-8=-291/104  
BOT CHORD 24-25=-421/146  
WEBS 2-24=-171/495

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner(3E) -0-11-0 to 2-1-0, Exterior(2N) 2-1-0 to 19-2-12 zone; cantilever left and right exposed; end vertical left exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; 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 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
  - 6) All plates are 2x4 MT20 unless otherwise indicated.
  - 7) Gable requires continuous bottom chord bearing.
  - 8) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
  - 9) Gable studs spaced at 2-0-0 oc.
  - 10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 11) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 25, 14, 15, 16, 17, 19, 20, 21, 22, 23 except (jt=lb) 24=193.
  - 13) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



March 26, 2025

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

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

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932

Riverside Roof Truss, LLC, Danville, Va - 24541, 8.730 s Feb 19 2025 MiTek Industries, Inc. Mon Mar 24 14:26:55 2025 Page 1  
 ID:kk2\_eRZGXvKbGikzSpyNzs9fO-0yJ4u5CEea7dQ4DtVCK6OUtWXBBAkaalq\_Z\_koZxhw\_

Structural drawing of a roof truss system. The drawing shows a side elevation of the truss with various members and supports. Key dimensions and specifications include:

- Overall Dimensions:**
  - Vertical height: 10'-8"-4"
  - Horizontal span: 9'-0"-0", 14'-0"-8", 19'-4"-8", 5'-4"-0"
- Members and Connections:**
  - Top chord: 3x4 ||, 3x4 ||, 3x5 ||, 2x4 ||, 2x4 ||
  - Bottom chord: 3x5 =, 3x8 =, 3x6 =, 2x4 =
  - Vertical supports: 2x4 ||, 2x4 ||, 2x4 ||
  - Diagonal bracing: 4x5 =, 3x4 ||, 2x4 ||, 2x4 ||
- Labels and Notes:**
  - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22
  - 6.00' 12"
  - 1'-0"-0"
  - 10'-8"-4"
  - 9'-0"-0", 14'-0"-8", 19'-4"-8", 5'-4"-0"

| LUMBER-   |             | BRACING-  |                                                                                       |
|-----------|-------------|-----------|---------------------------------------------------------------------------------------|
| TOP CHORD | 2x4 SP No.2 | TOP CHORD | Structural wood sheathing directly applied or 5-1-6 oc purlins, except end verticals. |
| BOT CHORD | 2x4 SP No.1 | BOT CHORD | Rigid ceiling directly applied or 2-2-0 oc bracing. Except:                           |
| WEBS      | 2x4 SP No.3 |           | 5-5-0 oc bracing: 10-13                                                               |
|           |             | WEBS      | 1 Row at midbt 7-8, 6-8                                                               |

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

|           |                                                                                              |
|-----------|----------------------------------------------------------------------------------------------|
| TOP CHORD | 2-3=-299/78, 3-5=-1243/0, 5-6=-1258/11, 2-15=-295/128                                        |
| BOT CHORD | 14-15=-280/1169, 9-14=-79/597, 8-9=-79/597                                                   |
| WEBS      | 5-14=-274/146, 13-14=-112/910, 6-13=-54/1107, 6-10=-855/202, 8-10=-1050/144,<br>3-15=-1092/0 |

- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TC DL=6.0psf; BC DL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2E) -0-11-0 to 2-1-0, Interior(1) 2-1-0 to 19-2-12 zone; cantilever left and right exposed ; end vertical left exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; 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 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BC DL = 10.0psf.
- 7) Refer to girder(s) for truss to truss connections.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 8.
- 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/APCI 1.



March 26.2025



**WARNING – Verify design parameters and READ NOTES ON THIS AND INCLUDED MITER REFERENCE PAGE MIT-17-19 (Rev. 1/2/2025) BEFORE USE.**

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



818 Soundside Road  
Edenton, NC 27932

|           |       |            |     |     |                          |           |
|-----------|-------|------------|-----|-----|--------------------------|-----------|
| Job       | Truss | Truss Type | Qty | Ply | FFF-LOT #54 Roof         | 172248439 |
| 25-0518-A | M02   | MONOPITCH  | 10  | 1   | Job Reference (optional) |           |

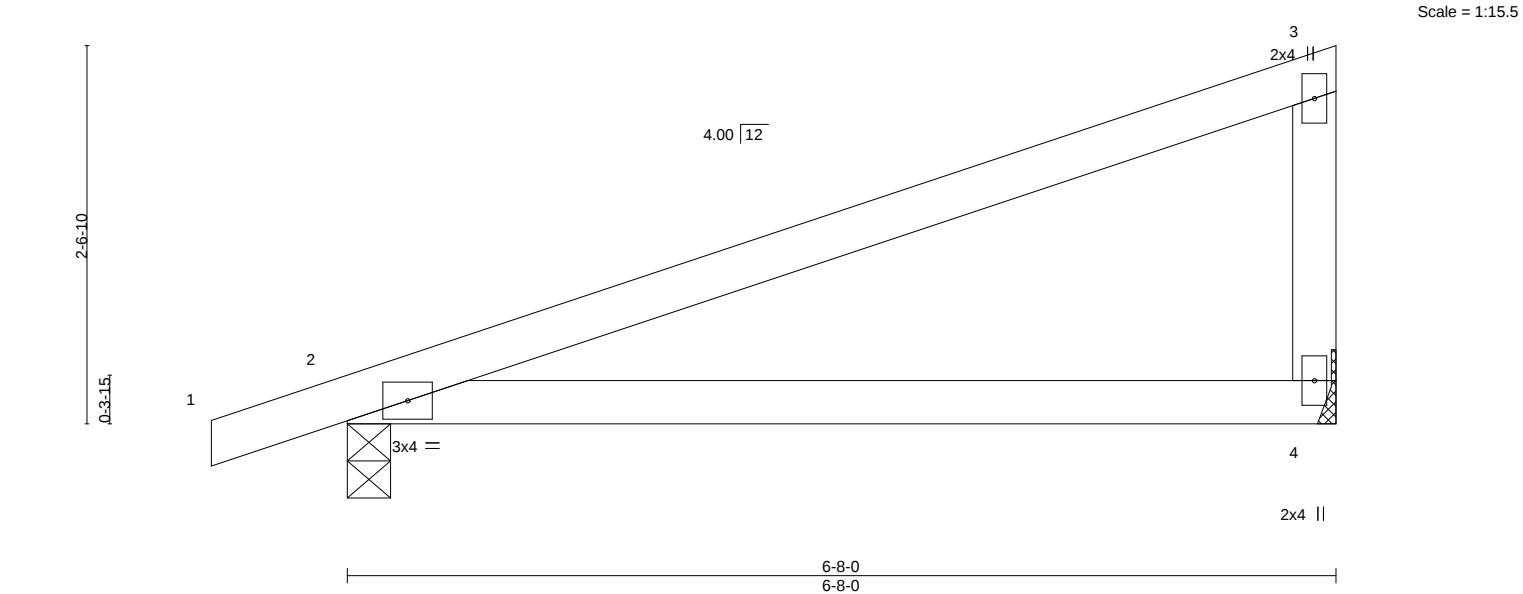
Riverside Roof Truss, LLC, Danville, Va - 24541,

8.730 s Feb 19 2025 MiTek Industries, Inc. Mon Mar 24 14:26:55 2025 Page 1

ID:kk2\_eRZGXXvKblGikzSpyNzs9fO-0yJ4u5CEea7dQ4DtvCK6OUtWHBHDaxMlq\_Z\_kOzXhw\_

-0-11-0  
0-11-0

6-8-0  
6-8-0



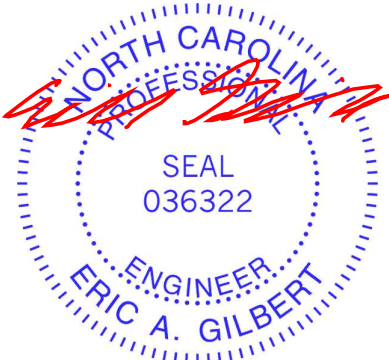
| LOADING (psf)          | SPACING-             | CSI.      | DEFL.    | in    | (loc) | l/defl | L/d | PLATES        | GRIP     |
|------------------------|----------------------|-----------|----------|-------|-------|--------|-----|---------------|----------|
| TCLL (roof) 20.0       | 2-0-0                | TC 0.79   | Vert(LL) | -0.11 | 4-7   | >696   | 240 | MT20          | 244/190  |
| Snow (Pf/Pg) 15.4/20.0 | Plate Grip DOL 1.15  | BC 0.61   | Vert(CT) | -0.22 | 4-7   | >358   | 180 |               |          |
| TCDL 10.0              | Lumber DOL 1.15      | WB 0.00   | Horz(CT) | 0.00  | 2     | n/a    | n/a |               |          |
| BCLL 0.0 *             | Rep Stress Incr YES  | Matrix-MP |          |       |       |        |     |               |          |
| BCDL 10.0              | Code IRC2018/TPI2014 |           |          |       |       |        |     |               |          |
|                        |                      |           |          |       |       |        |     | Weight: 25 lb | FT = 20% |

| LUMBER-               | BRACING-                                                                                        |
|-----------------------|-------------------------------------------------------------------------------------------------|
| TOP CHORD 2x4 SP No.2 | TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals. |
| BOT CHORD 2x4 SP No.2 | BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.                                  |
| WEBS 2x4 SP No.3      |                                                                                                 |

**REACTIONS.** (size) 4=Mechanical, 2=0-3-8  
Max Horz 2=81(LC 15)  
Max Uplift 4=-16(LC 16), 2=-45(LC 16)  
Max Grav 4=303(LC 21), 2=340(LC 21)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2E) -0-11-0 to 2-1-0, Interior(1) 2-1-0 to 6-6-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; 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 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
  - 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 7) Refer to girder(s) for truss to truss connections.
  - 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4, 2.
  - 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

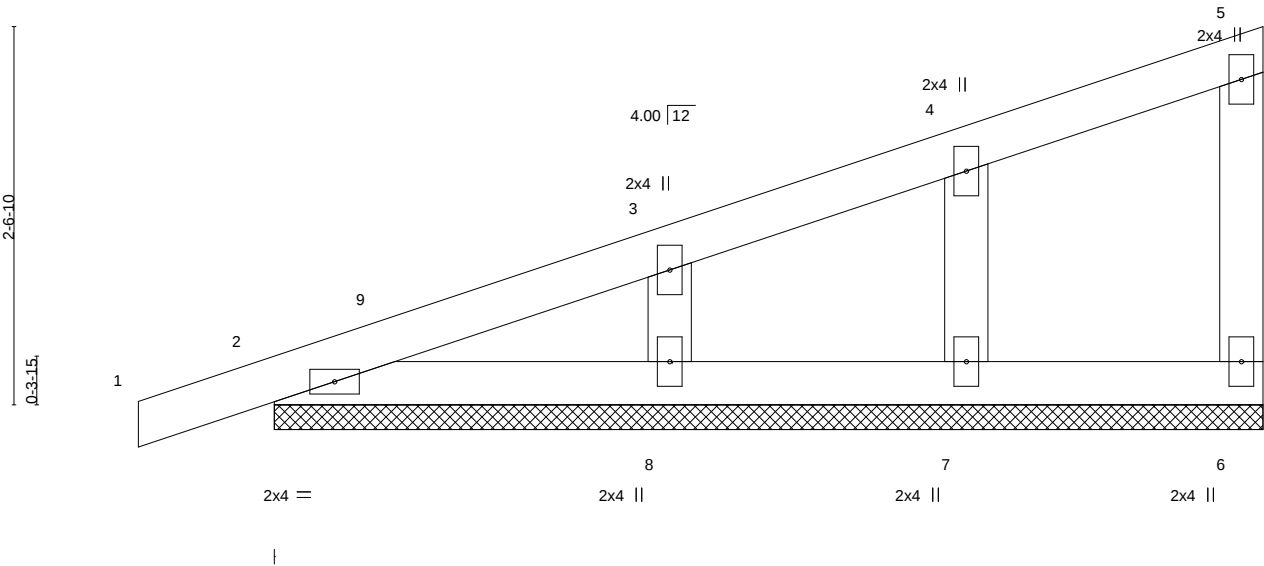


March 26,2025

|           |       |            |     |     |                          |           |
|-----------|-------|------------|-----|-----|--------------------------|-----------|
| Job       | Truss | Truss Type | Qty | Ply | FFF-LOT #54 Roof         | 172248440 |
| 25-0518-A | M02GE | GABLE      | 1   | 1   | Job Reference (optional) |           |

Riverside Roof Truss, LLC, Danville, Va - 24541,

8.730 s Feb 19 2025 MiTek Industries, Inc. Mon Mar 24 14:26:56 2025 Page 1  
ID:kk2\_eRZGXXvKblGikzSpyNzs9fO-V9sT5QDsPtFU1En3TvrLxiPssbmDJNdu3eiXFqzXhvw  
6-8-0  
6-8-0



| LOADING (psf)          | SPACING-             | CSI.     | DEFL.    | in (loc) | l/defl | L/d | PLATES        | GRIP     |
|------------------------|----------------------|----------|----------|----------|--------|-----|---------------|----------|
| TCLL (roof) 20.0       | 2-0-0                | TC 0.09  | Vert(LL) | 0.00     | 1      | n/r | MT20          | 244/190  |
| Snow (Pf/Pg) 15.4/20.0 | Plate Grip DOL 1.15  | BC 0.05  | Vert(CT) | 0.00     | 1      | n/r |               |          |
| TCDL 10.0              | Lumber DOL 1.15      | WB 0.06  | Horz(CT) | 0.00     | 6      | n/a |               |          |
| BCLL 0.0 *             | Rep Stress Incr YES  | Matrix-P |          |          |        |     |               |          |
| BCDL 10.0              | Code IRC2018/TPI2014 |          |          |          |        |     | Weight: 28 lb | FT = 20% |

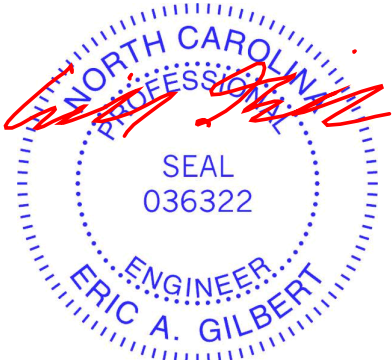
| LUMBER-               | BRACING-                                                                                        |
|-----------------------|-------------------------------------------------------------------------------------------------|
| TOP CHORD 2x4 SP No.2 | TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals. |
| BOT CHORD 2x4 SP No.2 | BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.                                  |
| WEBS 2x4 SP No.3      |                                                                                                 |
| OTHERS 2x4 SP No.3    |                                                                                                 |

**REACTIONS.** All bearings 6-8-0.  
(lb) - Max Horz 2=81(LC 13)  
Max Uplift All uplift 100 lb or less at joint(s) 6, 2, 7, 8  
Max Grav All reactions 250 lb or less at joint(s) 6, 2, 7, 8

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

**NOTES-**

- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner(3E) -0-11-0 to 2-1-0, Exterior(2N) 2-1-0 to 6-6-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; 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 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- 6) Gable requires continuous bottom chord bearing.
- 7) Gable studs spaced at 2-0-0 oc.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 6, 2, 7, 8.
- 11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



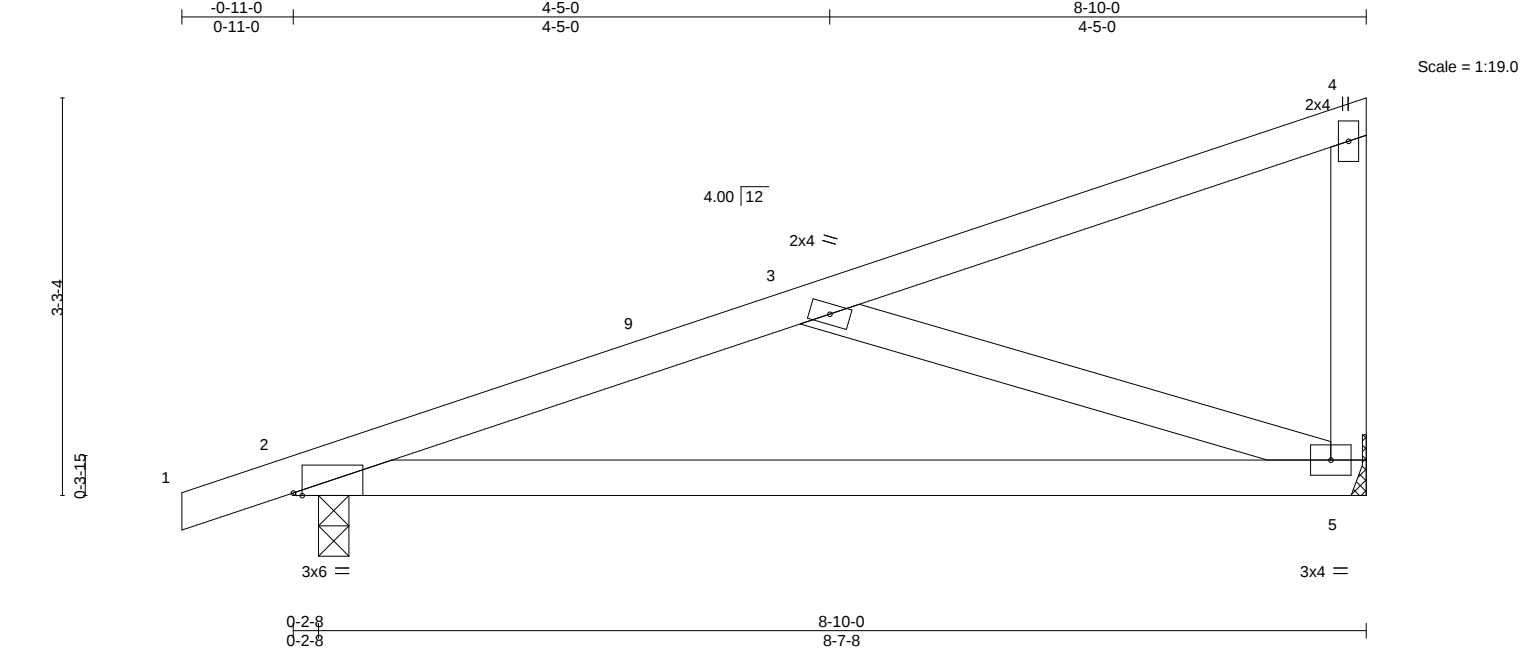
March 26,2025

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**  
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

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

|           |       |            |     |     |                          |           |
|-----------|-------|------------|-----|-----|--------------------------|-----------|
| Job       | Truss | Truss Type | Qty | Ply | FFF-LOT #54 Roof         | 172248441 |
| 25-0518-A | M03   | Monopitch  | 3   | 1   | Job Reference (optional) |           |

Riverside Roof Truss, LLC, Danville, Va - 24541, 8.730 s Feb 19 2025 MiTek Industries, Inc. Mon Mar 24 14:26:56 2025 Page 1  
ID:kk2\_eRZGXxvKblGikzSpyNzs9fO-V9sT5QDsPtFU1En3TvrLxiPkYbchJJAu3elXFqzXhvv



| LOADING (psf) |           | SPACING-             |      | CSI.      |      | DEFL.    |                    | PLATES        |  | GRIP     |  |
|---------------|-----------|----------------------|------|-----------|------|----------|--------------------|---------------|--|----------|--|
| TCLL (roof)   | 20.0      | Plate Grip DOL       | 1.15 | TC        | 0.62 | Vert(LL) | -0.15 5-8 >683 240 | MT20          |  | 244/190  |  |
| Snow (Pf/Pg)  | 15.4/20.0 | Lumber DOL           | 1.15 | BC        | 0.66 | Vert(CT) | -0.31 5-8 >333 180 |               |  |          |  |
| TCDL          | 10.0      | Rep Stress Incr      | YES  | WB        | 0.28 | Horz(CT) | 0.01 5 n/a n/a     |               |  |          |  |
| BCLL          | 0.0 *     | Code IRC2018/TPI2014 |      | Matrix-MP |      |          |                    |               |  |          |  |
| BCDL          | 10.0      |                      |      |           |      |          |                    |               |  |          |  |
|               |           |                      |      |           |      |          |                    | Weight: 39 lb |  | FT = 20% |  |

| LUMBER-   |             | BRACING-  |                                                                                       |
|-----------|-------------|-----------|---------------------------------------------------------------------------------------|
| TOP CHORD | 2x4 SP No.2 | TOP CHORD | Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals. |
| BOT CHORD | 2x4 SP No.2 | BOT CHORD | Rigid ceiling directly applied or 9-4-10 oc bracing.                                  |
| WEBS      | 2x4 SP No.3 |           |                                                                                       |

**REACTIONS.** (size) 5=Mechanical, 2=0-3-0  
Max Horz 2=106(LC 15)  
Max Uplift 5=-22(LC 16), 2=-49(LC 16)  
Max Grav 5=395(LC 21), 2=405(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-659/296  
BOT CHORD 2-5=-376/626  
WEBS 3-5=-656/357

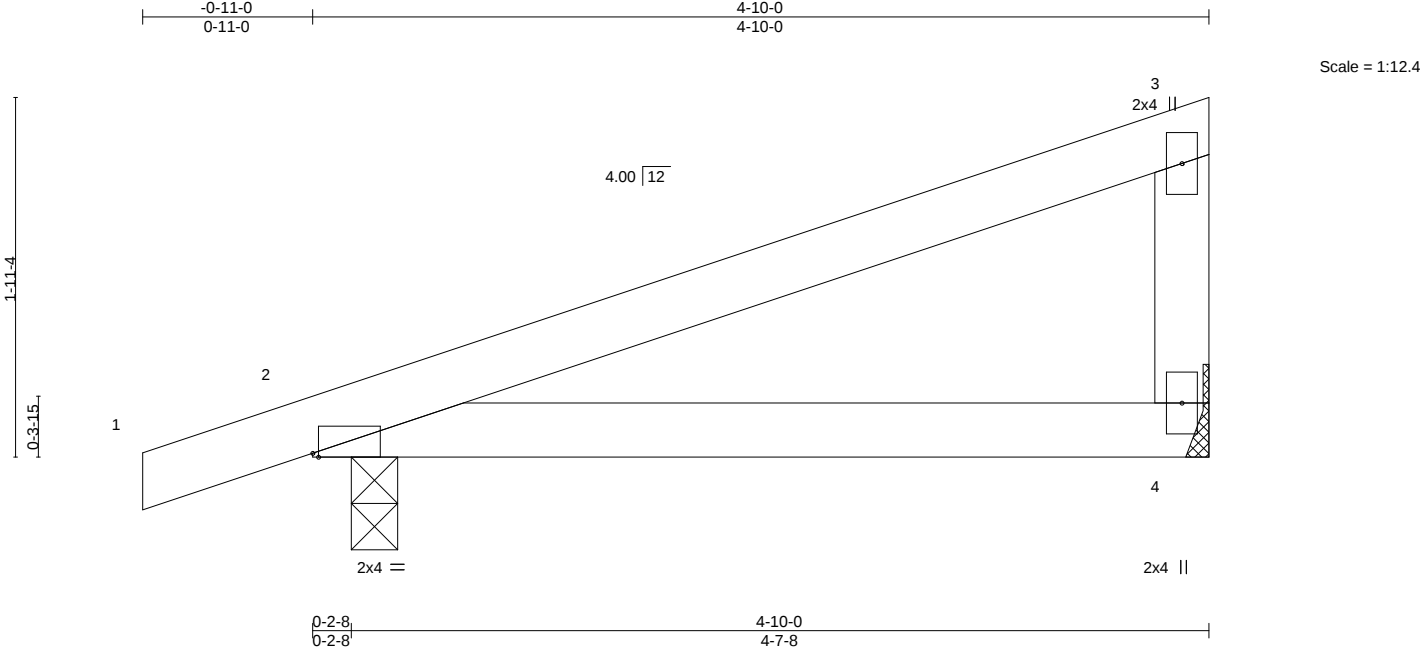
- NOTES-**
- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2E) -0-11-0 to 2-1-0, Interior(1) 2-1-0 to 8-8-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; 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 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
  - 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 7) Refer to girder(s) for truss to truss connections.
  - 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 2.
  - 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



March 26, 2025

|           |       |            |     |     |                          |           |
|-----------|-------|------------|-----|-----|--------------------------|-----------|
| Job       | Truss | Truss Type | Qty | Ply | FFF-LOT #54 Roof         | I72248442 |
| 25-0518-A | M04   | Monopitch  | 5   | 1   | Job Reference (optional) |           |

Riverside Roof Truss, LLC, Danville, Va - 24541, 8.730 s Feb 19 2025 MiTek Industries, Inc. Mon Mar 24 14:26:57 2025 Page 1  
ID:kk2\_eRZGXXvKblGikzSpyNzs9fO-zLQrJmEVABNLfOMF1cMaTvyzP?2Z2qs2II25nGzXhvy



| LOADING (psf) |           | SPACING-        |                 | CSI.      |      | DEFL.    |       | PLATES        |  | GRIP     |  |
|---------------|-----------|-----------------|-----------------|-----------|------|----------|-------|---------------|--|----------|--|
| TCLL (roof)   | 20.0      | Plate Grip DOL  | 1.15            | TC        | 0.36 | Vert(LL) | -0.03 | MT20          |  | 244/190  |  |
| Snow (Pf/Pg)  | 15.4/20.0 | Lumber DOL      | 1.15            | BC        | 0.30 | Vert(CT) | -0.06 |               |  |          |  |
| TCDL          | 10.0      | Rep Stress Incr | YES             | WB        | 0.00 | Horz(CT) | 0.00  |               |  |          |  |
| BCLL          | 0.0 *     | Code            | IRC2018/TPI2014 | Matrix-MP |      |          |       |               |  |          |  |
| BCDL          | 10.0      |                 |                 |           |      |          |       |               |  |          |  |
|               |           |                 |                 |           |      |          |       | Weight: 18 lb |  | FT = 20% |  |

| LUMBER-   |             | BRACING-  |                                                                                        |
|-----------|-------------|-----------|----------------------------------------------------------------------------------------|
| TOP CHORD | 2x4 SP No.2 | TOP CHORD | Structural wood sheathing directly applied or 4-10-0 oc purlins, except end verticals. |
| BOT CHORD | 2x4 SP No.2 | BOT CHORD | Rigid ceiling directly applied or 10-0-0 oc bracing.                                   |
| WEBS      | 2x4 SP No.3 |           |                                                                                        |

| REACTIONS. |                            |
|------------|----------------------------|
| (size)     | 4=Mechanical, 2=0-3-0      |
| Max Horz   | 2=60(LC 15)                |
| Max Uplift | 4=-10(LC 16), 2=-42(LC 16) |
| Max Grav   | 4=215(LC 21), 2=296(LC 21) |

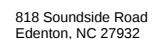
| FORCES.                     |                                                  |
|-----------------------------|--------------------------------------------------|
| (lb) - Max. Comp./Max. Ten. | - All forces 250 (lb) or less except when shown. |

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2E) -0-11-0 to 2-1-0, Interior(1) 2-1-0 to 4-8-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; 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 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
  - 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 7) Refer to girder(s) for truss to truss connections.
  - 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4, 2.
  - 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



March 26,2025

Riverside Roof Truss, LLC, Danville, Va - 24541, 8.730 s Feb 19 2025 MiTek Industries, Inc. Mon Mar 24 14:26:57 2025 Page 1  
 ID:kk2\_eRZGXXvKbIGikzSpyNzs9f0-zLQrJmEVABNLfOMF1cMaTvyzP?2Z2qs2lI25nGzXhvy  
 -0-11-0 4-10-0  
 0-11-0 4-10-0

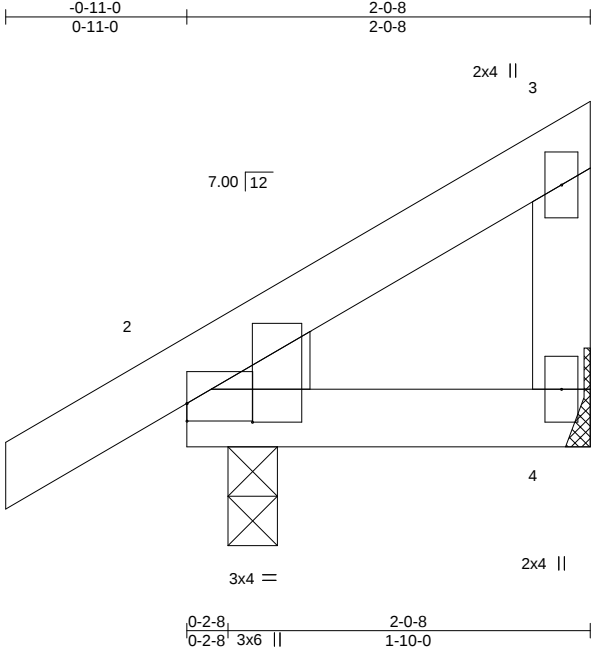


|           |       |            |     |     |                  |
|-----------|-------|------------|-----|-----|------------------|
| Job       | Truss | Truss Type | Qty | Ply | FFF-LOT #54 Roof |
| 25-0518-A | M06   | Monopitch  | 3   | 1   | 172248444        |

Riverside Roof Truss, LLC, Danville, Va - 24541,

8.730 s Feb 19 2025 MiTek Industries, Inc. Mon Mar 24 14:26:57 2025 Page 1

ID:kk2\_eRZGXXvKblGikzSpyNzs9fO-zLQrJmEVABNLfOMF1cMaTvy1v?6Y2qs2II25nGzXhvy



| Plate Offsets (X,Y)-- [2:0-0-0,0-1-1], [2:0-1-2,0-4-0] |           |                 |                 |           |      |          |              |               |          |
|--------------------------------------------------------|-----------|-----------------|-----------------|-----------|------|----------|--------------|---------------|----------|
| LOADING (psf)                                          |           | SPACING-        |                 | CSI.      |      | DEFL.    |              | PLATES        | GRIP     |
| TCLL (roof)                                            | 20.0      | Plate Grip DOL  | 1.15            | TC        | 0.07 | Vert(LL) | -0.00 7 >999 | MT20          | 244/190  |
| Snow (Pf/Pg)                                           | 15.4/20.0 | Lumber DOL      | 1.15            | BC        | 0.05 | Vert(CT) | -0.00 7 >999 |               |          |
| TCDL                                                   | 10.0      | Rep Stress Incr | YES             | WB        | 0.00 | Horz(CT) | 0.00 2 n/a   |               |          |
| BCLL                                                   | 0.0 *     | Code            | IRC2018/TPI2014 | Matrix-MP |      |          |              | Weight: 11 lb | FT = 20% |
| BCDL                                                   | 10.0      |                 |                 |           |      |          |              |               |          |

| LUMBER-           |             | BRACING-  |                                                                                       |
|-------------------|-------------|-----------|---------------------------------------------------------------------------------------|
| TOP CHORD         | 2x4 SP No.2 | TOP CHORD | Structural wood sheathing directly applied or 2-0-8 oc purlins, except end verticals. |
| BOT CHORD         | 2x4 SP No.2 | BOT CHORD | Rigid ceiling directly applied or 10-0-0 oc bracing.                                  |
| WEBS              | 2x4 SP No.3 |           |                                                                                       |
| WEDGE             |             |           |                                                                                       |
| Left: 2x4 SP No.3 |             |           |                                                                                       |

**REACTIONS.** (size) 4=Mechanical, 2=0-3-0  
Max Horz 2=53(LC 15)  
Max Uplift 4=12(LC 13), 2=38(LC 16)  
Max Grav 4=73(LC 21), 2=174(LC 21)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(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=1.60
  - 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; 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 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
  - 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 7) Refer to girder(s) for truss to truss connections.
  - 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4, 2.
  - 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



March 26,2025

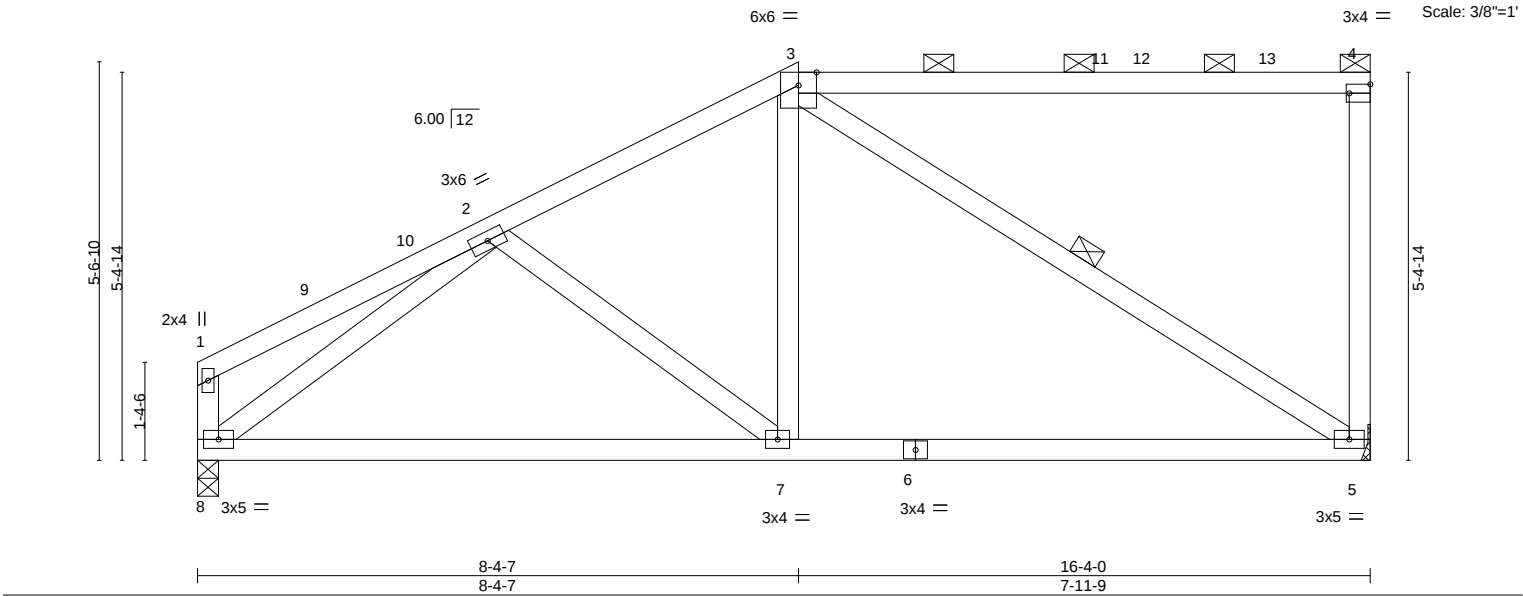
**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

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

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

|           |       |            |     |     |                          |           |
|-----------|-------|------------|-----|-----|--------------------------|-----------|
| Job       | Truss | Truss Type | Qty | Ply | FFF-LOT #54 Roof         | 172248445 |
| 25-0518-A | SM01  | Half Hip   | 1   | 1   | Job Reference (optional) |           |

Riverside Roof Truss, LLC, Danville, Va - 24541, 8.730 s Feb 19 2025 MiTek Industries, Inc. Mon Mar 24 14:26:58 2025 Page 1  
ID:kk2\_eRZGXXvKblGikzSpyNzs9fO-RX\_DW6F7xVWCHYxSaKtp07V?jOIPnB5BWyneKjzXhvx  
16-4-0 7-11-9



| Plate Offsets (X,Y)-- [4:Edge,0-1-8] |           |                 |                 |             |      |              |                    |               |          |
|--------------------------------------|-----------|-----------------|-----------------|-------------|------|--------------|--------------------|---------------|----------|
| <b>LOADING</b> (psf)                 |           | <b>SPACING-</b> |                 | <b>CSI.</b> |      | <b>DEFL.</b> |                    | <b>PLATES</b> |          |
| TCLL (roof)                          | 20.0      | Plate Grip DOL  | 1.15            | TC          | 0.90 | Vert(LL)     | -0.09 5-7 >999 240 | MT20          | 244/190  |
| Snow (Pf/Pg)                         | 20.4/20.0 | Lumber DOL      | 1.15            | BC          | 0.65 | Vert(CT)     | -0.18 5-7 >999 180 |               |          |
| TCDL                                 | 10.0      | Rep Stress Incr | YES             | WB          | 0.38 | Horz(CT)     | 0.02 5 n/a n/a     |               |          |
| BCLL                                 | 0.0 *     | Code            | IRC2018/TPI2014 | Matrix-MS   |      |              |                    | Weight: 94 lb | FT = 20% |
| BCDL                                 | 10.0      |                 |                 |             |      |              |                    |               |          |

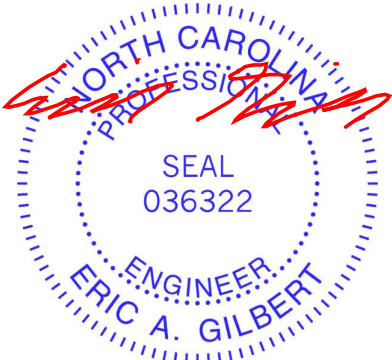
|                |                                         |                 |                                                                                                                               |
|----------------|-----------------------------------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------|
| <b>LUMBER-</b> |                                         | <b>BRACING-</b> |                                                                                                                               |
| TOP CHORD      | 2x4 SP No.2 *Except*<br>3-4: 2x4 SP DSS | 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.): 3-4. |
| BOT CHORD      | 2x4 SP No.2                             | BOT CHORD       | Rigid ceiling directly applied or 10-0-0 oc bracing.                                                                          |
| WEBS           | 2x4 SP No.3                             | WEBS            | 1 Row at midpt 3-5                                                                                                            |

**REACTIONS.** (size) 5=Mechanical, 8=0-3-8  
Max Horz 8=176(LC 15)  
Max Uplift 5=-101(LC 13), 8=-34(LC 16)  
Max Grav 5=739(LC 34), 8=751(LC 35)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-688/147, 4-5=-339/97  
BOT CHORD 7-8=-314/707, 5-7=-208/549  
WEBS 3-7=0/355, 3-5=-619/170, 2-8=-777/133

**NOTES-**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior(1) 3-1-12 to 8-4-7, Exterior(2R) 8-4-7 to 12-7-6, Interior(1) 12-7-6 to 16-2-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0; Min. flat roof snow load governs. Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.
- Unbalanced snow loads have been considered for this design.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 8 except (jt=lb) 5=101.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



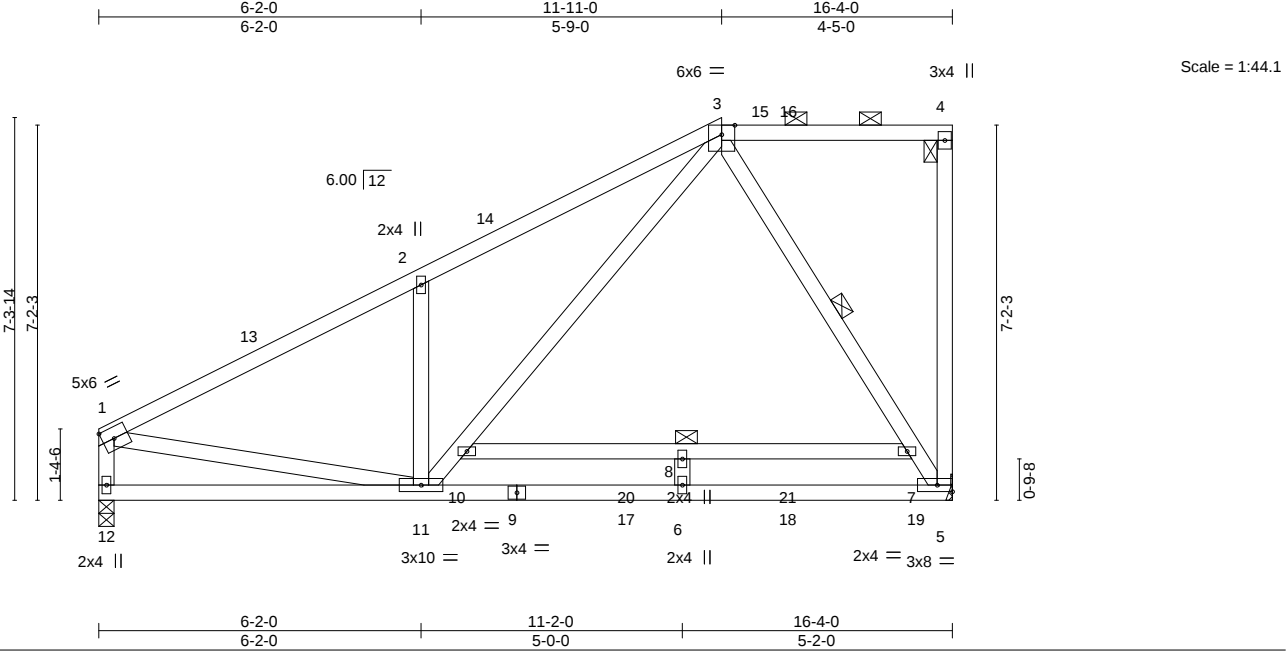
March 26,2025



|           |       |            |     |     |                          |           |
|-----------|-------|------------|-----|-----|--------------------------|-----------|
| Job       | Truss | Truss Type | Qty | Ply | FFF-LOT #54 Roof         | 172248447 |
| 25-0518-A | SM03  | Half Hip   | 1   | 1   | Job Reference (optional) |           |

Riverside Roof Truss, LLC, Danville, Va - 24541,

8.730 s Feb 19 2025 MiTek Industries, Inc. Mon Mar 24 14:26:59 2025 Page 1  
ID:kk2\_eRGZXXvKblGikzSpyNzs9fO-vkYbkSFlioe3uiWe81O2YK1BFoaFWcLKlcXBs9zXhww



| LOADING (psf)          | SPACING-             | CSI.      | DEFL.          | in  | (loc) | l/defl | L/d | PLATES         | GRIP     |
|------------------------|----------------------|-----------|----------------|-----|-------|--------|-----|----------------|----------|
| TCLL (roof) 20.0       | 2-0-0                | TC 0.85   | Vert(LL) -0.43 | 5-6 | >445  | 240    |     | MT20           | 244/190  |
| Snow (Pf/Pg) 20.4/20.0 | Plate Grip DOL 1.15  | BC 0.93   | Vert(CT) -0.72 | 5-6 | >267  | 180    |     |                |          |
| TCDL 10.0              | Lumber DOL 1.15      | WB 0.51   | Horz(CT) 0.01  | 5   | n/a   | n/a    |     |                |          |
| BCLL 0.0 *             | Rep Stress Incr YES  | Matrix-MS |                |     |       |        |     |                |          |
| BCDL 10.0              | Code IRC2018/TPI2014 |           |                |     |       |        |     | Weight: 115 lb | FT = 20% |

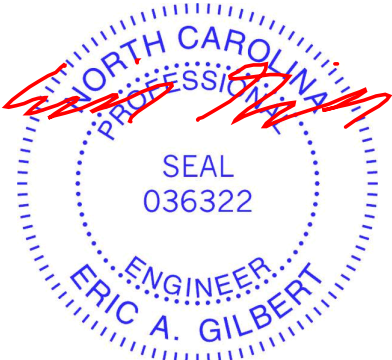
| LUMBER-               | BRACING-                                                                                                                                |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| TOP CHORD 2x4 SP No.2 | TOP CHORD Structural wood sheathing directly applied or 4-6-8 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 3-4. |
| BOT CHORD 2x4 SP No.1 | BOT CHORD Rigid ceiling directly applied or 9-8-5 oc bracing. Except:                                                                   |
| WEBS 2x4 SP No.3      | 6-0-0 oc bracing: 7-10                                                                                                                  |
|                       | WEBS 1 Row at midpt 3-5                                                                                                                 |

**REACTIONS.** (size) 5=Mechanical, 12=0-3-8  
Max Horz 12=238(LC 15)  
Max Uplift 5=-13(LC 13)  
Max Grav 5=1005(LC 39), 12=966(LC 39)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

TOP CHORD 1-2=-1285/57, 2-3=-1317/167, 1-12=-918/84  
BOT CHORD 11-12=-395/336, 6-11=-155/532, 5-6=-155/532  
WEBS 2-11=-574/197, 10-11=-126/934, 3-10=-64/1135, 3-7=-702/223, 5-7=-905/160, 1-11=0/997

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior(1) 3-1-12 to 11-11-0, Exterior(2E) 11-11-0 to 16-2-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0; Min. flat roof snow load governs. Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.
  - Unbalanced snow loads have been considered for this design.
  - Provide adequate drainage to prevent water ponding.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - Refer to girder(s) for truss to truss connections.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



March 26,2025

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

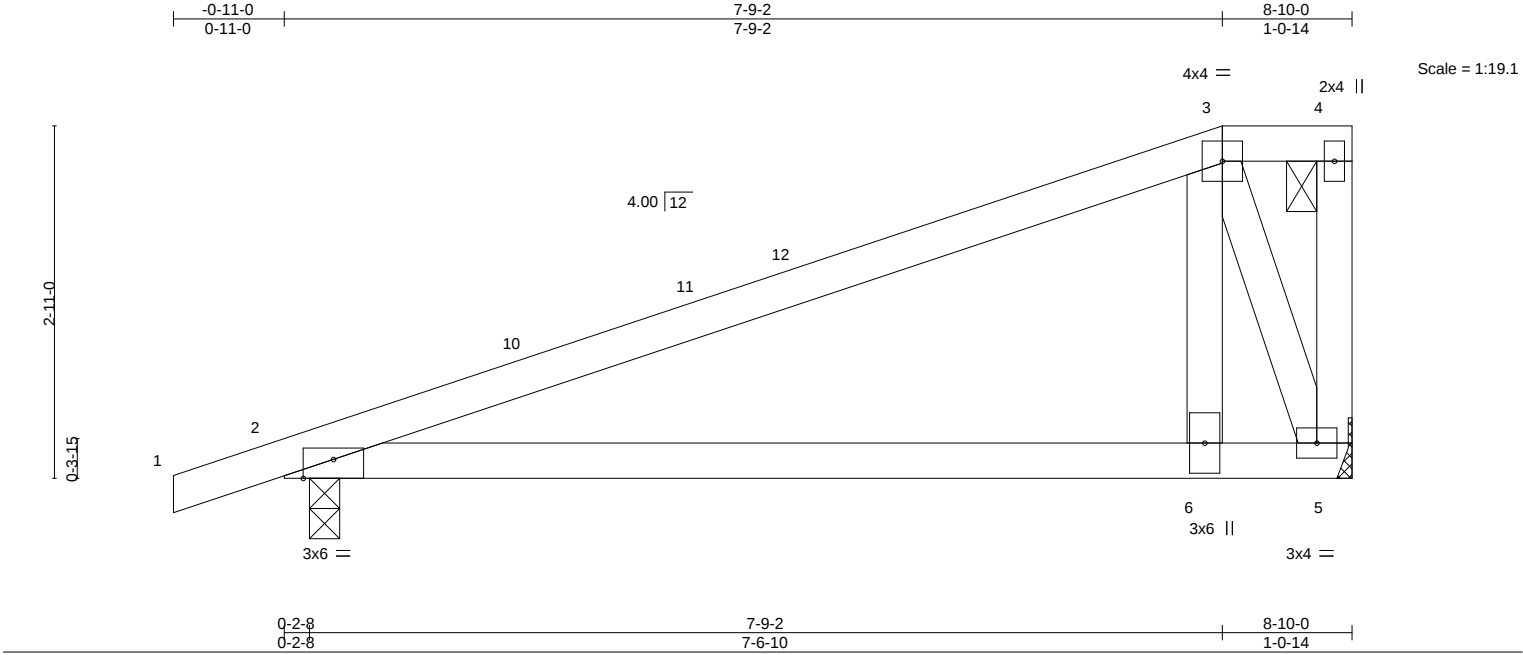
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall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

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932

|           |       |            |     |     |                          |           |
|-----------|-------|------------|-----|-----|--------------------------|-----------|
| Job       | Truss | Truss Type | Qty | Ply | FFF-LOT #54 Roof         | 172248448 |
| 25-0518-A | SM04  | Half Hip   | 1   | 1   | Job Reference (optional) |           |

Riverside Roof Truss, LLC, Danville, Va - 24541, 8.730 s Feb 19 2025 MiTek Industries, Inc. Mon Mar 24 14:26:59 2025 Page 1  
ID:kk2\_eRZGXxvKblGikzSpyNzs9fO-vkYbkSFlioe3uiWe81O2YK1B4oc8WIXKlcXBs9zXhww



| LOADING (psf) |           | SPACING-             |      | CSI.      |      | DEFL.    |                    | PLATES        |  | GRIP     |  |
|---------------|-----------|----------------------|------|-----------|------|----------|--------------------|---------------|--|----------|--|
| TCLL (roof)   | 20.0      | Plate Grip DOL       | 1.15 | TC        | 0.86 | Vert(LL) | -0.15 6-9 >684 240 | MT20          |  | 244/190  |  |
| Snow (Pf/Pg)  | 20.4/20.0 | Lumber DOL           | 1.15 | BC        | 0.81 | Vert(CT) | -0.26 6-9 >398 180 |               |  |          |  |
| TCDL          | 10.0      | Rep Stress Incr      | YES  | WB        | 0.18 | Horz(CT) | 0.00 2 n/a n/a     |               |  |          |  |
| BCLL          | 0.0 *     | Code IRC2018/TPI2014 |      | Matrix-MP |      |          |                    |               |  |          |  |
| BCDL          | 10.0      |                      |      |           |      |          |                    |               |  |          |  |
|               |           |                      |      |           |      |          |                    | Weight: 39 lb |  | FT = 20% |  |

| LUMBER-   |                                          | BRACING-  |                                                                                                                  |
|-----------|------------------------------------------|-----------|------------------------------------------------------------------------------------------------------------------|
| TOP CHORD | 2x4 SP No.1 *Except*<br>3-4: 2x4 SP No.2 | TOP CHORD | Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins: 3-4. |
| BOT CHORD | 2x4 SP No.1                              | BOT CHORD | Rigid ceiling directly applied or 10-0-0 oc bracing.                                                             |
| WEBS      | 2x4 SP No.3                              |           |                                                                                                                  |

**REACTIONS.** (size) 5=Mechanical, 2=0-3-0  
Max Horz 2=96(LC 15)  
Max Uplift 5=22(LC 16), 2=-49(LC 16)  
Max Grav 5=388(LC 36), 2=513(LC 36)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-355/57  
WEBS 3-6=-49/436, 3-5=-663/241

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2E) -0-11-0 to 2-1-0, Interior(1) 2-1-0 to 7-9-2, Exterior(2E) 7-9-2 to 8-8-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0; Min. flat roof snow load governs. Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
  - Provide adequate drainage to prevent water ponding.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Refer to girder(s) for truss to truss connections.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 2.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



March 26,2025

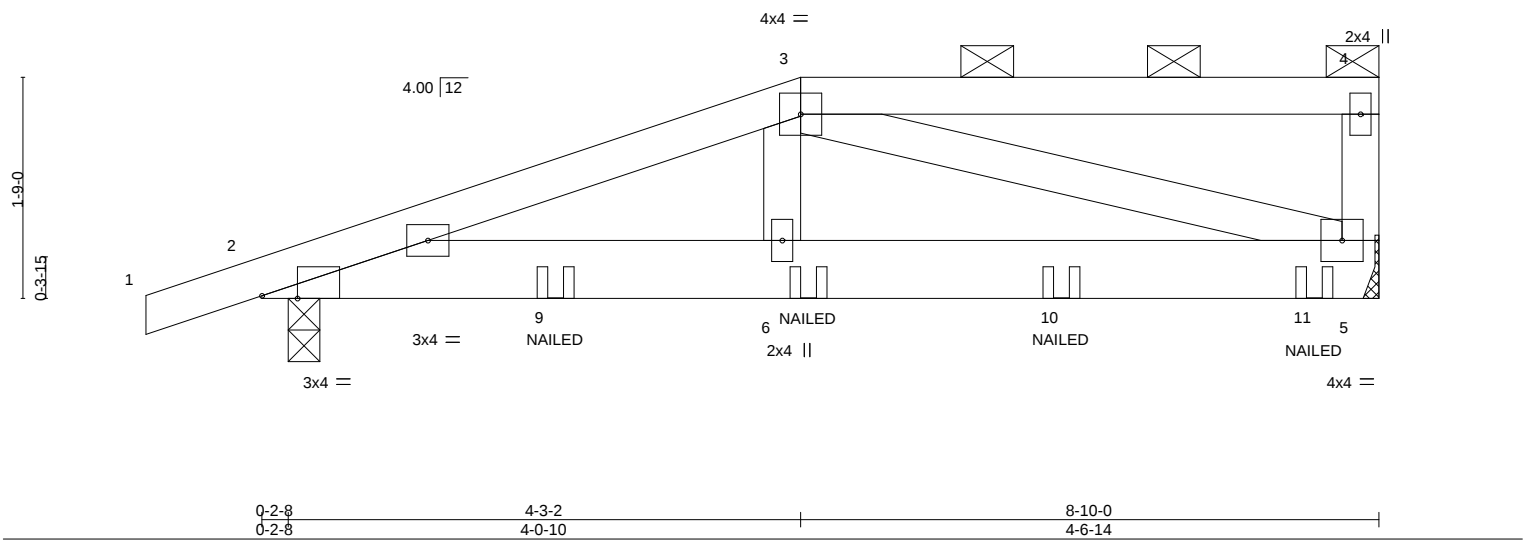
|           |       |                 |     |     |                          |           |
|-----------|-------|-----------------|-----|-----|--------------------------|-----------|
| Job       | Truss | Truss Type      | Qty | Ply | FFF-LOT #54 Roof         | 172248449 |
| 25-0518-A | SM05G | Half Hip Girder | 1   | 1   | Job Reference (optional) |           |

Riverside Roof Truss, LLC, Danville, Va - 24541, 8.730 s Feb 19 2025 MiTek Industries, Inc. Mon Mar 24 14:27:00 2025 Page 1

ID:kk2\_eRZGXXvKbIGikzSpyNzs9fO-Nw6zxoGNT6mwWs5qilvH5YaQBC2zF66U\_GGIObzXhvv

0-11-0 0-11-0 4-3-2 4-3-2 8-10-0 4-6-14

Scale = 1:18.2



| Plate Offsets (X,Y)-- [2:0-3-6,Edge] |           |                      |      |           |      |          |                    |               |          |
|--------------------------------------|-----------|----------------------|------|-----------|------|----------|--------------------|---------------|----------|
| LOADING (psf)                        |           | SPACING-             |      | CSI.      |      | DEFL.    |                    | PLATES        |          |
| TCLL (roof)                          | 20.0      | Plate Grip DOL       | 1.15 | TC        | 0.58 | Vert(LL) | -0.02 6-8 >999 240 | MT20          | 244/190  |
| Snow (Pf/Pg)                         | 20.4/20.0 | Lumber DOL           | 1.15 | BC        | 0.38 | Vert(CT) | -0.04 6-8 >999 180 |               |          |
| TCDL                                 | 10.0      | Rep Stress Incr      | NO   | WB        | 0.35 | Horz(CT) | 0.01 5 n/a n/a     |               |          |
| BCLL                                 | 0.0 *     | Code IRC2018/TPI2014 |      | Matrix-MP |      |          |                    |               |          |
| BCDL                                 | 10.0      |                      |      |           |      |          |                    | Weight: 45 lb | FT = 20% |

| LUMBER-   |             | BRACING-  |                                                                                                                  |
|-----------|-------------|-----------|------------------------------------------------------------------------------------------------------------------|
| TOP CHORD | 2x4 SP No.2 | 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 | 2x6 SP No.2 | BOT CHORD | Rigid ceiling directly applied or 10-0-0 oc bracing.                                                             |
| WEBS      | 2x4 SP No.3 |           |                                                                                                                  |

**REACTIONS.** (size) 5=Mechanical, 2=0-3-0  
Max Horz 2=54(LC 9)  
Max Uplift 5=-96(LC 8), 2=-85(LC 12)  
Max Grav 5=529(LC 31), 2=559(LC 32)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-851/127  
BOT CHORD 2-6=-124/777, 5-6=-124/746  
WEBS 3-6=-5/311, 3-5=-781/122

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0; Min. flat roof snow load governs. Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
  - Provide adequate drainage to prevent water ponding.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Refer to girder(s) for truss to truss connections.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 2.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidelines.
  - 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

March 26,2025

|           |       |                 |     |     |                  |
|-----------|-------|-----------------|-----|-----|------------------|
| Job       | Truss | Truss Type      | Qty | Ply | FFF-LOT #54 Roof |
| 25-0518-A | SM05G | Half Hip Girder | 1   | 1   | I72248449        |

Riverside Roof Truss, LLC, Danville, Va - 24541,

8.730 s Feb 19 2025 MiTek Industries, Inc. Mon Mar 24 14:27:00 2025 Page 2  
ID:kk2\_eRZGXXvKblGikzSpyNzs9fO-Nw6zxoGNT6mwWs5qilvH5YaQBC2zF66U\_GGIObzXhvv

**LOAD CASE(S)** Standard

- 1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
- Uniform Loads (plf)  
Vert: 1-3=-51, 3-4=-61, 2-5=-20
- Concentrated Loads (lb)  
Vert: 6=-56(B) 9=-74(B) 10=-56(B) 11=-62(B)

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

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



818 Soundside Road  
Edenton, NC 27932



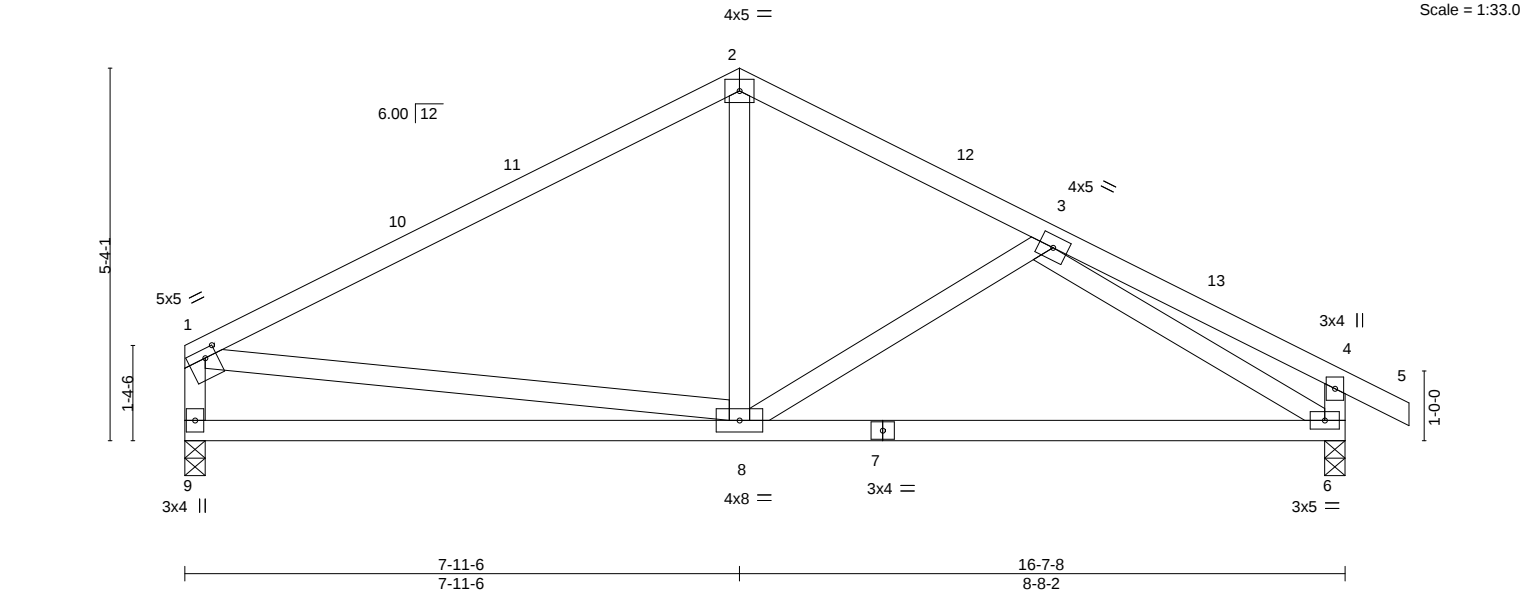
|           |       |            |     |     |                          |           |
|-----------|-------|------------|-----|-----|--------------------------|-----------|
| Job       | Truss | Truss Type | Qty | Ply | FFF-LOT #54 Roof         | 172248451 |
| 25-0518-A | T01   | Common     | 10  | 1   | Job Reference (optional) |           |

Riverside Roof Truss, LLC, Danville, Va - 24541,

8.730 s Feb 19 2025 MiTek Industries, Inc. Mon Mar 24 14:27:01 2025 Page 1  
ID:kk2\_eRZGXxvKblGikzSpyNzs9fO-r6gM98H?EQun8?g1GSQWel7Y4cJk\_ZbdCw0lx1zXhvu

7-11-6  
7-11-6  
12-3-7  
4-4-1  
16-7-8  
4-4-1  
17-6-8  
0-11-0

Scale = 1:33.0



| Plate Offsets (X,Y)-- [1:0-2-0,0-1-8] |           |                 |                 |             |      |              |                    |               |          |
|---------------------------------------|-----------|-----------------|-----------------|-------------|------|--------------|--------------------|---------------|----------|
| <b>LOADING</b> (psf)                  |           | <b>SPACING-</b> |                 | <b>CSI.</b> |      | <b>DEFL.</b> |                    | <b>PLATES</b> |          |
| TCLL (roof)                           | 20.0      | Plate Grip DOL  | 1.15            | TC          | 0.83 | Vert(LL)     | -0.10 6-8 >999 240 | MT20          | 244/190  |
| Snow (Pf/Pg)                          | 15.4/20.0 | Lumber DOL      | 1.15            | BC          | 0.67 | Vert(CT)     | -0.21 6-8 >924 180 |               |          |
| TCDL                                  | 10.0      | Rep Stress Incr | YES             | WB          | 0.34 | Horz(CT)     | 0.01 6 n/a n/a     |               |          |
| BCLL                                  | 0.0 *     | Code            | IRC2018/TPI2014 | Matrix-MS   |      |              |                    | Weight: 89 lb | FT = 20% |
| BCDL                                  | 10.0      |                 |                 |             |      |              |                    |               |          |

|                |                                          |                 |                                                                                       |
|----------------|------------------------------------------|-----------------|---------------------------------------------------------------------------------------|
| <b>LUMBER-</b> |                                          | <b>BRACING-</b> |                                                                                       |
| TOP CHORD      | 2x4 SP No.1 *Except*<br>2-5: 2x4 SP No.2 | TOP CHORD       | Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals. |
| BOT CHORD      | 2x4 SP No.2                              | BOT CHORD       | Rigid ceiling directly applied or 10-0-0 oc bracing.                                  |
| WEBS           | 2x4 SP No.3                              |                 |                                                                                       |

**REACTIONS.** (size) 9=0-3-8, 6=0-3-8  
Max Horz 9=-110(LC 14)  
Max Uplift 9=-39(LC 16), 6=-73(LC 16)  
Max Grav 9=651(LC 2), 6=719(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-2=-757/177, 2-3=-707/196, 1-9=-582/182, 4-6=-276/140  
BOT CHORD 8-9=-87/277, 6-8=-128/699  
WEBS 2-8=0/335, 1-8=0/396, 3-6=-673/165

**NOTES-**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior(1) 3-1-12 to 7-11-6, Exterior(2R) 7-11-6 to 10-11-6, Interior(1) 10-11-6 to 17-6-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 9, 6.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



March 26,2025

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

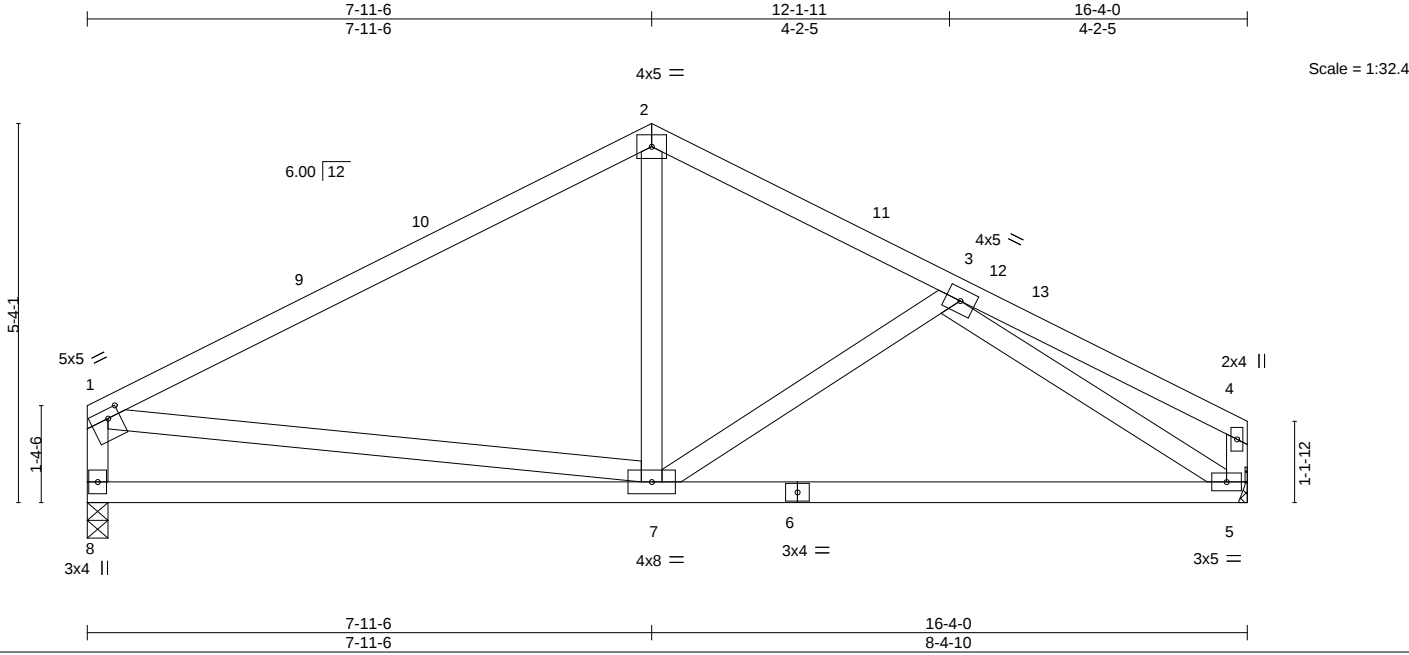
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall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

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932

|           |       |            |     |     |                          |           |
|-----------|-------|------------|-----|-----|--------------------------|-----------|
| Job       | Truss | Truss Type | Qty | Ply | FFF-LOT #54 Roof         | 172248452 |
| 25-0518-A | T01A  | Common     | 3   | 1   | Job Reference (optional) |           |

Riverside Roof Truss, LLC, Danville, Va - 24541, 8.730 s Feb 19 2025 MiTek Industries, Inc. Mon Mar 24 14:27:02 2025 Page 1  
ID:kk2\_eRZGXXvKblGikzSpyNzs9fO-JJEkMUIId?j0em9FDpAylAzfju0gVj0unRalsTUzXhvt



|                                       |           |                 |                 |             |              |          |        |      |                        |
|---------------------------------------|-----------|-----------------|-----------------|-------------|--------------|----------|--------|------|------------------------|
| Plate Offsets (X,Y)-- [1:0-2-0,0-1-8] |           |                 |                 |             |              |          |        |      |                        |
| <b>LOADING</b> (psf)                  |           | <b>SPACING-</b> | 2-0-0           | <b>CSI.</b> | <b>DEFL.</b> | in (loc) | l/defl | L/d  | <b>PLATES</b>          |
| TCLL (roof)                           | 20.0      | Plate Grip DOL  | 1.15            | TC 0.83     | Vert(LL)     | -0.09    | 5-7    | >999 | MT20                   |
| Snow (Pf/Pg)                          | 15.4/20.0 | Lumber DOL      | 1.15            | BC 0.64     | Vert(CT)     | -0.18    | 5-7    | >999 | 244/190                |
| TCDL                                  | 10.0      | Rep Stress Incr | YES             | WB 0.33     | Horz(CT)     | 0.01     | 5      | n/a  |                        |
| BCLL                                  | 0.0 *     | Code            | IRC2018/TPI2014 | Matrix-MS   |              |          |        |      |                        |
| BCDL                                  | 10.0      |                 |                 |             |              |          |        |      | Weight: 87 lb FT = 20% |

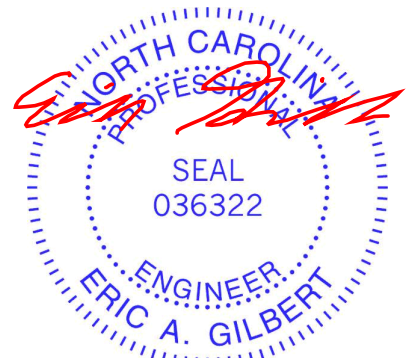
|                                                    |                                                                                                 |
|----------------------------------------------------|-------------------------------------------------------------------------------------------------|
| <b>LUMBER-</b>                                     | <b>BRACING-</b>                                                                                 |
| TOP CHORD 2x4 SP No.1 *Except*<br>2-4: 2x4 SP No.2 | TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals. |
| BOT CHORD 2x4 SP No.2                              | BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.                                  |
| WEBS 2x4 SP No.3                                   |                                                                                                 |

**REACTIONS.** (size) 8=0-3-8, 5=Mechanical  
Max Horz 8=-102(LC 14)  
Max Uplift 8=-39(LC 16), 5=-39(LC 16)  
Max Grav 8=642(LC 2), 5=642(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-2=-739/176, 2-3=-687/200, 1-8=-571/183  
BOT CHORD 7-8=-127/272, 5-7=-164/660  
WEBS 2-7=0/322, 1-7=0/381, 3-5=-689/189

**NOTES-**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior(1) 3-1-12 to 7-11-6, Exterior(2R) 7-11-6 to 10-11-6, Interior(1) 10-11-6 to 16-2-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 8, 5.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



March 26, 2025

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

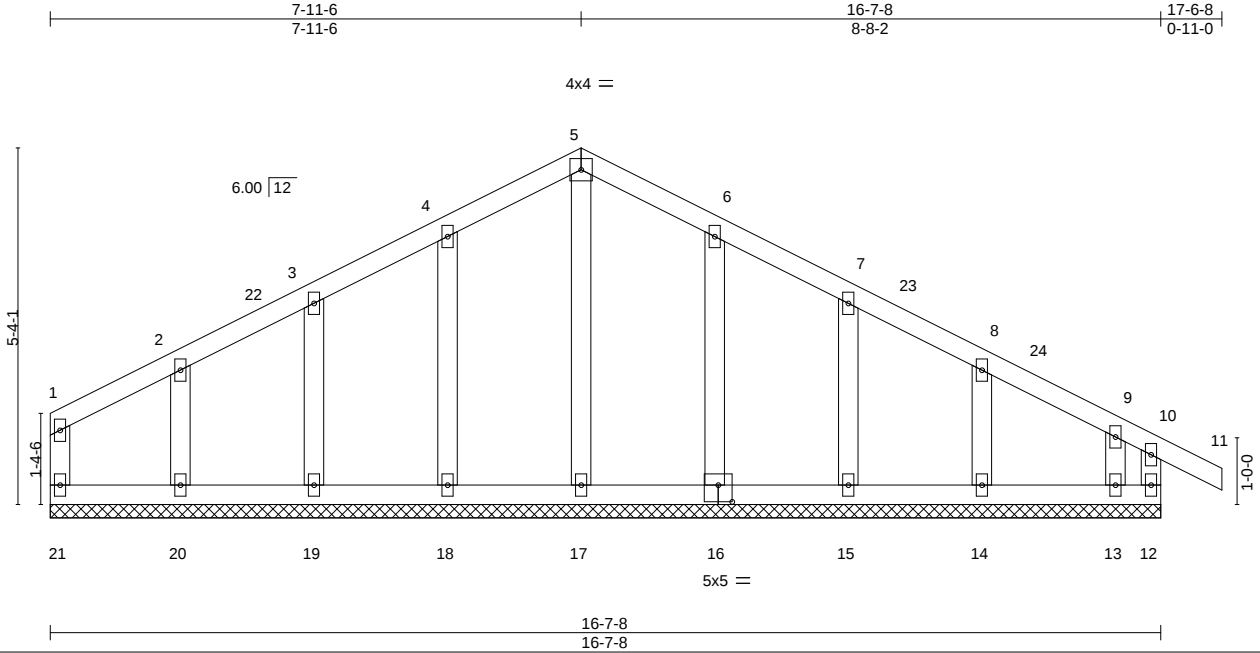
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall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

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932

|           |       |            |     |     |                          |           |
|-----------|-------|------------|-----|-----|--------------------------|-----------|
| Job       | Truss | Truss Type | Qty | Ply | FFF-LOT #54 Roof         | 172248453 |
| 25-0518-A | T01GE | GABLE      | 1   | 1   | Job Reference (optional) |           |

Riverside Roof Truss, LLC, Danville, Va - 24541, 8.730 s Feb 19 2025 MiTek Industries, Inc. Mon Mar 24 14:27:02 2025 Page 1  
ID:kk2\_eRZGXXvKblGikzSpyNzs9fO-JJEkMUIId?j0em9FDpAylAzfuZ0pcj58nRalsTUzXhvt



| Plate Offsets (X,Y)-- [16:0-2-8,0-3-0] |           |                      |      |          |      |                           |       |    |     |             |               |          |
|----------------------------------------|-----------|----------------------|------|----------|------|---------------------------|-------|----|-----|-------------|---------------|----------|
| LOADING (psf)                          |           | SPACING- 2-0-0       |      | CSI.     |      | DEFL. in (loc) l/defl L/d |       |    |     | PLATES GRIP |               |          |
| TCLL (roof)                            | 20.0      | Plate Grip DOL       | 1.15 | TC       | 0.08 | Vert(LL)                  | -0.00 | 11 | n/r | 120         | MT20          | 244/190  |
| Snow (Pf/Pg)                           | 15.4/20.0 | Lumber DOL           | 1.15 | BC       | 0.05 | Vert(CT)                  | -0.00 | 11 | n/r | 120         |               |          |
| TCDL                                   | 10.0      | Rep Stress Incr      | YES  | WB       | 0.06 | Horz(CT)                  | 0.00  | 12 | n/a | n/a         |               |          |
| BCLL                                   | 0.0 *     | Code IRC2018/TPI2014 |      | Matrix-R |      |                           |       |    |     |             | Weight: 90 lb | FT = 20% |
| BCDL                                   | 10.0      |                      |      |          |      |                           |       |    |     |             |               |          |

| LUMBER-               | BRACING-                                                                                        |
|-----------------------|-------------------------------------------------------------------------------------------------|
| TOP CHORD 2x4 SP No.2 | TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals. |
| BOT CHORD 2x4 SP No.2 | BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.                                  |
| WEBS 2x4 SP No.3      |                                                                                                 |
| OTHERS 2x4 SP No.3    |                                                                                                 |

**REACTIONS.** All bearings 16-7-8.  
(lb) - Max Horz 21=-110(LC 14)  
Max Uplift All uplift 100 lb or less at joint(s) 21, 12, 18, 19, 20, 16, 15, 14, 13  
Max Grav All reactions 250 lb or less at joint(s) 21, 12, 17, 18, 19, 20, 16, 15, 14, 13

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

**NOTES-**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner(3E) 0-1-12 to 3-1-12, Exterior(2N) 3-1-12 to 7-11-6, Corner(3R) 7-11-6 to 10-11-6, Exterior(2N) 10-11-6 to 17-6-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 21, 12, 18, 19, 20, 16, 15, 14, 13.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



March 26,2025

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

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

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932

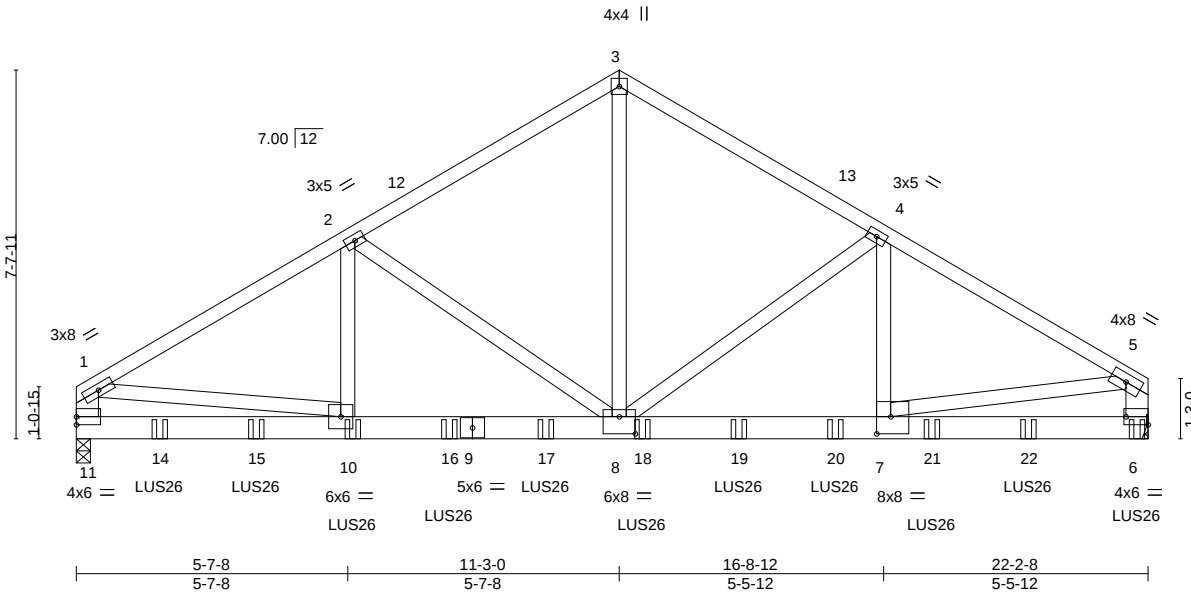


|           |       |               |     |     |                          |           |
|-----------|-------|---------------|-----|-----|--------------------------|-----------|
| Job       | Truss | Truss Type    | Qty | Ply | FFF-LOT #54 Roof         | 172248455 |
| 25-0518-A | T02G  | COMMON GIRDER | 1   | 2   | Job Reference (optional) |           |

Riverside Roof Truss, LLC, Danville, Va - 24541, 8.730 s Feb 19 2025 MiTek Industries, Inc. Mon Mar 24 14:27:04 2025 Page 1

ID:kk2\_eRZGXXvKblGikzSpyNzs9fO-GhLU9JuXLGL?TPcxb\_DFOl6bpKbBnk4vtEyXMzXhvr

5-7-8 5-7-8 11-3-0 5-7-8 16-8-12 5-5-12 22-2-8 5-5-12



|                                                                        |           |                      |      |                         |                     |
|------------------------------------------------------------------------|-----------|----------------------|------|-------------------------|---------------------|
| Plate Offsets (X,Y)-- [6:Edge,0-2-0], [7:0-3-8,0-4-4], [8:0-4-0,0-4-4] |           |                      |      |                         |                     |
| <b>LOADING</b> (psf)                                                   |           | <b>SPACING-</b>      |      | <b>CSI.</b>             |                     |
| TCLL (roof)                                                            | 20.0      | 2-0-0                |      | DEFL.                   | in (loc) l/defl L/d |
| Snow (Pf/Pg)                                                           | 15.4/20.0 | Plate Grip DOL       | 1.15 | Vert(LL)                | -0.09 7-8 >999 240  |
| TCDL                                                                   | 10.0      | Lumber DOL           | 1.15 | Vert(CT)                | -0.18 7-8 >999 180  |
| BCLL                                                                   | 0.0 *     | Rep Stress Incr      | NO   | Horz(CT)                | 0.03 6 n/a n/a      |
| BCDL                                                                   | 10.0      | Code IRC2018/TPI2014 |      |                         |                     |
|                                                                        |           |                      |      | <b>PLATES</b>           | <b>GRIP</b>         |
|                                                                        |           |                      |      | MT20                    | 244/190             |
|                                                                        |           |                      |      | Weight: 297 lb FT = 20% |                     |

|                |                        |                 |                                                                                        |
|----------------|------------------------|-----------------|----------------------------------------------------------------------------------------|
| <b>LUMBER-</b> |                        | <b>BRACING-</b> |                                                                                        |
| TOP CHORD      | 2x4 SP No.2            | TOP CHORD       | Structural wood sheathing directly applied or 4-9-14 oc purlins, except end verticals. |
| BOT CHORD      | 2x6 SP No.2 *Except*   | BOT CHORD       | Rigid ceiling directly applied or 10-0-0 oc bracing.                                   |
|                | 6-9: 2x6 SP 2400F 2.0E |                 |                                                                                        |
| WEBS           | 2x4 SP No.3 *Except*   |                 |                                                                                        |
|                | 1-11,5-6: 2x6 SP No.2  |                 |                                                                                        |

**REACTIONS.** (size) 11=0-3-8, 6=Mechanical  
Max Horz 11=157(LC 11)  
Max Grav 11=4295(LC 2), 6=5755(LC 3)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-2=-5651/0, 2-3=-4496/0, 3-4=-4493/0, 4-5=-6258/0, 5-6=-4103/0  
BOT CHORD 10-11=-72/949, 8-10=0/4810, 7-8=0/5345, 6-7=0/834  
WEBS 2-10=-251/1252, 2-8=-1490/356, 3-8=0/4179, 4-8=-1919/0, 4-7=0/1799, 1-10=0/3904, 5-7=0/4590

- NOTES-**
- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc, 2x6 - 2 rows staggered at 0-9-0 oc.  
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.  
Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
  - All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
  - Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Refer to girder(s) for truss to truss connections.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - Use Simpson Strong-Tie LUS26 (4-10d Girder, 3-10d Truss, Single Ply Girder) or equivalent at 1-8-12 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.
  - 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 3-8-12 from the left end to 9-8-12 to connect truss(es) to back face of bottom chord.



March 26,2025

|           |       |               |     |     |                  |
|-----------|-------|---------------|-----|-----|------------------|
| Job       | Truss | Truss Type    | Qty | Ply | FFF-LOT #54 Roof |
| 25-0518-A | T02G  | COMMON GIRDER | 1   | 2   | I72248455        |

Riverside Roof Truss, LLC, Danville, Va - 24541,

8.730 s Feb 19 2025 MiTek Industries, Inc. Mon Mar 24 14:27:04 2025 Page 2  
ID:kk2\_eRZGXXvKblGikzSpyNzs9fO-GhLUn9JuXLGL?TPcxb\_DFOl6bpKbBnk4vtEyXMzXhvr

- NOTES-**
- 13) Use Simpson Strong-Tie LUS26 (4-10d Girder, 4-10d Truss) or equivalent spaced at 2-3-0 oc max. starting at 11-8-12 from the left end to 21-11-12 to connect truss(es) to back face of bottom chord.
- 14) 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 (plf)

Vert: 1-3=-51, 3-5=-51, 6-11=-20

Concentrated Loads (lb)

Vert: 10=-593(B) 6=-683(B) 14=-593(B) 15=-593(B) 16=-656(B) 17=-668(B) 18=-846(B) 19=-675(B) 20=-675(B) 21=-675(B) 22=-675(B)

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

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



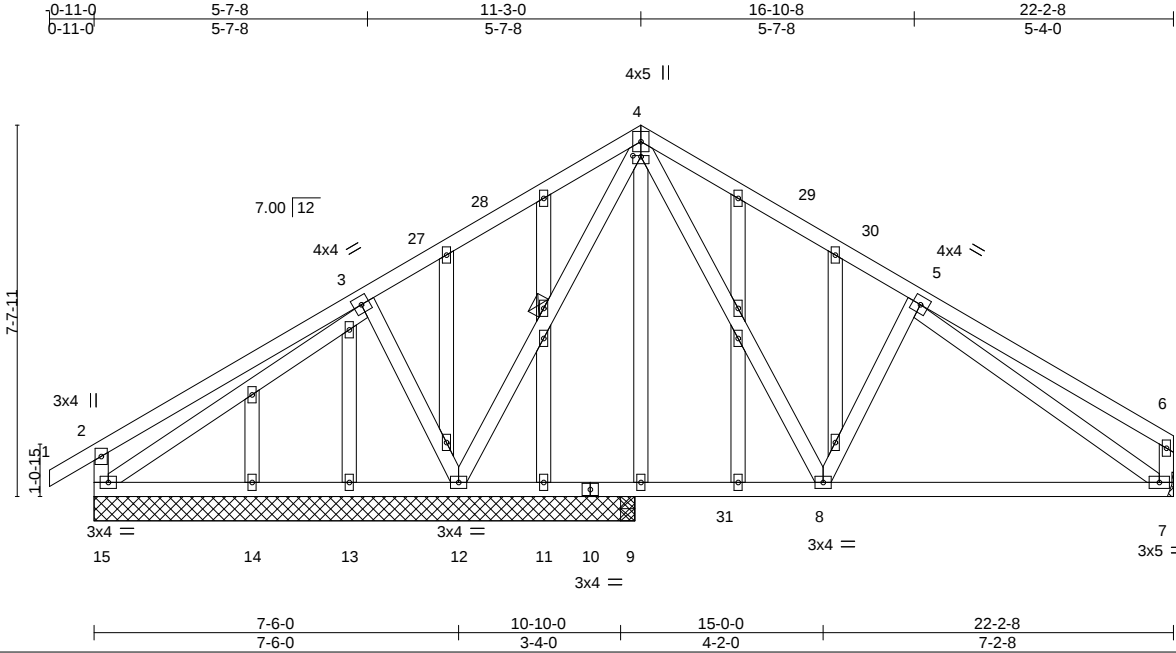
818 Soundside Road  
Edenton, NC 27932

|           |        |                      |     |     |                  |
|-----------|--------|----------------------|-----|-----|------------------|
| Job       | Truss  | Truss Type           | Qty | Ply | FFF-LOT #54 Roof |
| 25-0518-A | T02SGE | COMMON STRUCTURAL GA | 1   | 1   | 172248456        |

Riverside Roof Truss, LLC, Danville, Va - 24541,

8.730 s Feb 19 2025 MiTek Industries, Inc. Mon Mar 24 14:27:04 2025 Page 1

ID:kk2\_eRZGXxvKblGikzSpyNzs9fO-GhLUn9JuXLGL?TPcxb\_DFOl7VpP4BvG4vtEyXMzXhvr



|                                       |           |                      |      |             |      |              |                |                |          |
|---------------------------------------|-----------|----------------------|------|-------------|------|--------------|----------------|----------------|----------|
| Plate Offsets (X,Y)-- [4:0-2-0,0-0-4] |           |                      |      |             |      |              |                |                |          |
| <b>LOADING</b> (psf)                  |           | <b>SPACING-</b>      |      | <b>CSI.</b> |      | <b>DEFL.</b> |                | <b>PLATES</b>  |          |
| TCLL (roof)                           | 20.0      | Plate Grip DOL       | 1.15 | TC          | 0.50 | in (loc)     | l/defl         | L/d            | GRIP     |
| Snow (Pf/Pg)                          | 15.4/20.0 | Lumber DOL           | 1.15 | BC          | 0.44 | Vert(LL)     | -0.07 7-8 >999 | 240            | 244/190  |
| TCDL                                  | 10.0      | Rep Stress Incr      | YES  | WB          | 0.40 | Vert(CT)     | -0.14 7-8 >969 | 180            |          |
| BCLL                                  | 0.0 *     | Code IRC2018/TPI2014 |      | Matrix-MS   |      | Horz(CT)     | 0.01 7 n/a     | n/a            |          |
| BCDL                                  | 10.0      |                      |      |             |      |              |                |                |          |
|                                       |           |                      |      |             |      |              |                | Weight: 178 lb | FT = 20% |

|                |             |                 |                                                                                       |
|----------------|-------------|-----------------|---------------------------------------------------------------------------------------|
| <b>LUMBER-</b> |             | <b>BRACING-</b> |                                                                                       |
| TOP CHORD      | 2x4 SP No.2 | TOP CHORD       | Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals. |
| BOT CHORD      | 2x4 SP No.2 | BOT CHORD       | Rigid ceiling directly applied or 10-0-0 oc bracing.                                  |
| WEBS           | 2x4 SP No.3 | WEBS            | 1 Row at midpt 4-12                                                                   |
| OTHERS         | 2x4 SP No.3 |                 |                                                                                       |

**REACTIONS.** All bearings 11-1-8 except (jt=length) 7=Mechanical.  
(lb) - Max Horz 15=169(LC 15)  
Max Uplift All uplift 100 lb or less at joint(s) 15, 7 except 12=127(LC 16)  
Max Grav All reactions 250 lb or less at joint(s) 9, 9, 11, 13, 14 except 12=828(LC 28), 15=298(LC 34), 7=614(LC 29)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 4-5=-576/150, 2-15=-259/125  
BOT CHORD 7-8=-50/492  
WEBS 3-12=-332/158, 4-12=-549/48, 4-8=-51/513, 5-8=-261/144, 5-7=-505/52

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2E) -0-11-0 to 2-1-0, Interior(1) 2-1-0 to 11-3-0, Exterior(2R) 11-3-0 to 14-3-0, Interior(1) 14-3-0 to 22-0-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - Gable studs spaced at 2-0-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - Refer to girder(s) for truss to truss connections.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 15, 7 except (jt=lb) 12=127.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



March 26,2025

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**  
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

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

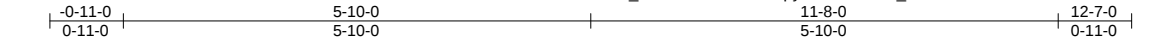
|           |       |            |     |     |                  |
|-----------|-------|------------|-----|-----|------------------|
| Job       | Truss | Truss Type | Qty | Ply | FFF-LOT #54 Roof |
| 25-0518-A | T03   | COMMON     | 1   | 1   | 172248457        |

Riverside Roof Truss, LLC, Danville, Va - 24541,

8.730 s Feb 19 2025 MiTek Industries, Inc. Mon Mar 24 14:27:05 2025 Page 1

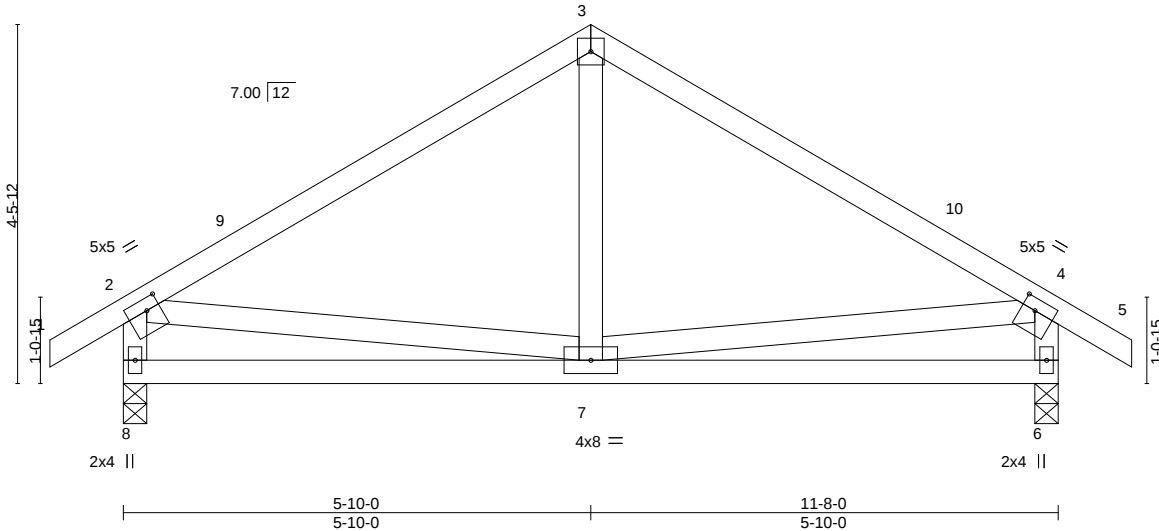
ID:kk2\_eRZGXxvKblGikzSpyNzs9fO-kuvs\_VKWleOCddzoVIVSobHF1DndwRND7X\_W4pzXhvq

Job Reference (optional)



4x4 =

Scale = 1:28.8



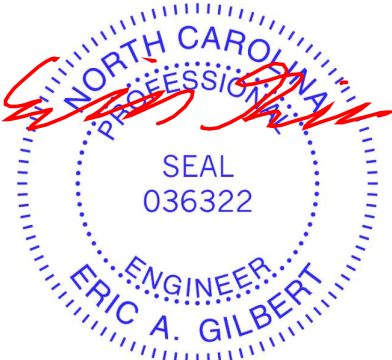
|                                                          |           |                 |                 |           |      |          |                    |               |              |
|----------------------------------------------------------|-----------|-----------------|-----------------|-----------|------|----------|--------------------|---------------|--------------|
| Plate Offsets (X,Y)-- [2:0-2-0,0-1-12], [4:0-2-0,0-1-12] |           |                 |                 |           |      |          |                    |               |              |
| LOADING (psf)                                            |           | SPACING-        |                 | CSI.      |      | DEFL.    |                    | PLATES        |              |
| TCLL (roof)                                              | 20.0      | Plate Grip DOL  | 1.15            | TC        | 0.70 | Vert(LL) | -0.02 7-8 >999 240 | MT20          | GRIP 244/190 |
| Snow (Pf/Pg)                                             | 15.4/20.0 | Lumber DOL      | 1.15            | BC        | 0.29 | Vert(CT) | -0.05 7-8 >999 180 |               |              |
| TCDL                                                     | 10.0      | Rep Stress Incr | YES             | WB        | 0.09 | Horz(CT) | 0.00 6 n/a n/a     |               |              |
| BCLL                                                     | 0.0 *     | Code            | IRC2018/TPI2014 | Matrix-MS |      |          |                    | Weight: 65 lb | FT = 20%     |
| BCDL                                                     | 10.0      |                 |                 |           |      |          |                    |               |              |

|           |             |           |                                                                                       |
|-----------|-------------|-----------|---------------------------------------------------------------------------------------|
| LUMBER-   |             | BRACING-  |                                                                                       |
| TOP CHORD | 2x4 SP No.2 | TOP CHORD | Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals. |
| BOT CHORD | 2x4 SP No.2 | BOT CHORD | Rigid ceiling directly applied or 10-0-0 oc bracing.                                  |
| WEBS      | 2x4 SP No.3 |           |                                                                                       |

REACTIONS. (size) 8=0-3-8, 6=0-3-8  
Max Horz 8=-106(LC 14)  
Max Uplift 8=-61(LC 16), 6=-61(LC 16)  
Max Grav 8=520(LC 21), 6=520(LC 22)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-485/108, 3-4=-485/108, 2-8=-468/163, 4-6=-469/164  
BOT CHORD 7-8=-107/267, 6-7=-80/259

- NOTES-
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2E) -0-11-0 to 2-1-0, Interior(1) 2-1-0 to 5-10-0, Exterior(2R) 5-10-0 to 8-10-0, Interior(1) 8-10-0 to 12-7-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 8, 6.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



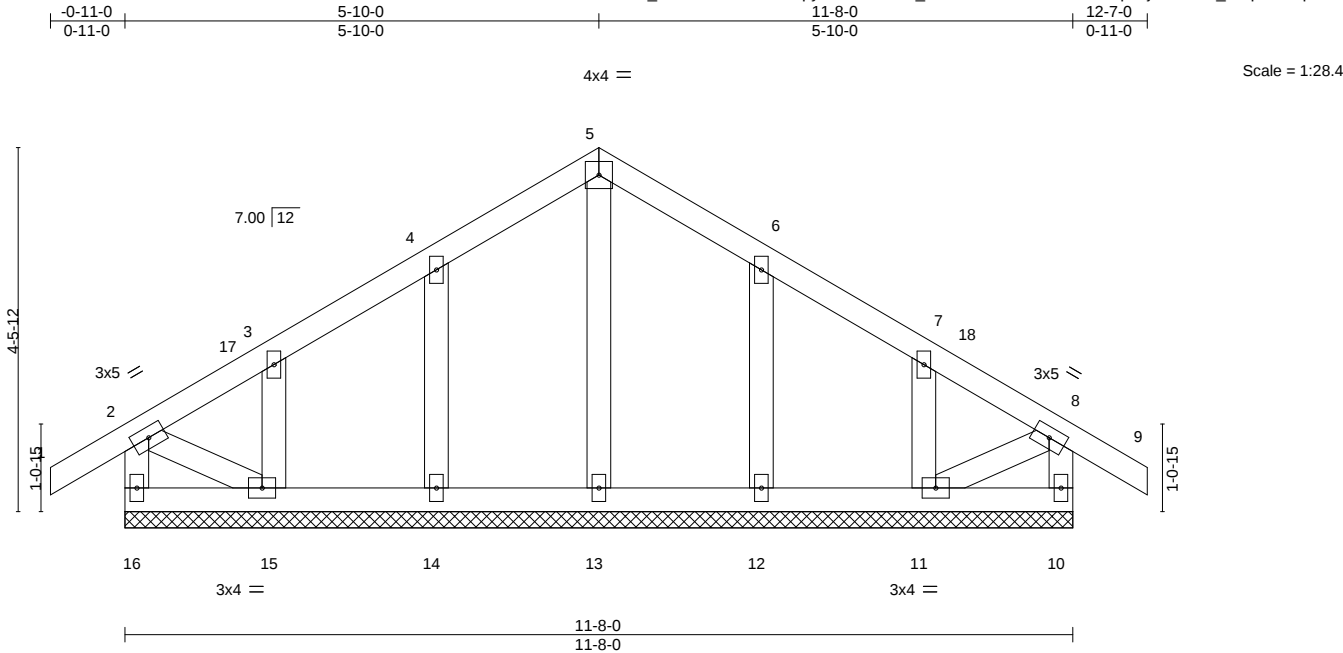
March 26,2025

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**  
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

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

|           |       |                      |     |     |                  |
|-----------|-------|----------------------|-----|-----|------------------|
| Job       | Truss | Truss Type           | Qty | Ply | FFF-LOT #54 Roof |
| 25-0518-A | T03GE | COMMON SUPPORTED GAB | 1   | 1   | 172248458        |

Riverside Roof Truss, LLC, Danville, Va - 24541, 8.730 s Feb 19 2025 MiTek Industries, Inc. Mon Mar 24 14:27:05 2025 Page 1  
ID:kk2\_eRZGXxvKblGikzSpyNzs9fO-kuvS\_VKWleOCddzoVIVSobHOOpDrjWS7DX\_W4pzXhqv



| LOADING (psf)          | SPACING-             | CSI.     | DEFL.    | in (loc) | l/defl | L/d | PLATES        | GRIP     |
|------------------------|----------------------|----------|----------|----------|--------|-----|---------------|----------|
| TCLL (roof) 20.0       | 2-0-0                | TC 0.08  | Vert(LL) | -0.00    | 9      | n/r | MT20          | 244/190  |
| Snow (Pf/Pg) 15.4/20.0 | Plate Grip DOL 1.15  | BC 0.03  | Vert(CT) | -0.00    | 9      | n/r |               |          |
| TCDL 10.0              | Lumber DOL 1.15      | WB 0.05  | Horz(CT) | 0.00     | 10     | n/a |               |          |
| BCLL 0.0 *             | Rep Stress Incr YES  | Matrix-S |          |          |        |     |               |          |
| BCDL 10.0              | Code IRC2018/TPI2014 |          |          |          |        |     | Weight: 66 lb | FT = 20% |

| LUMBER-               | BRACING-                                                                                        |
|-----------------------|-------------------------------------------------------------------------------------------------|
| TOP CHORD 2x4 SP No.2 | TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals. |
| BOT CHORD 2x4 SP No.2 | BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.                                   |
| WEBS 2x4 SP No.3      |                                                                                                 |
| OTHERS 2x4 SP No.3    |                                                                                                 |

**REACTIONS.** All bearings 11-8-0.  
(lb) - Max Horz 16=-106(LC 14)  
Max Uplift All uplift 100 lb or less at joint(s) 16, 10, 14, 15, 12, 11  
Max Grav All reactions 250 lb or less at joint(s) 16, 10, 13, 14, 15, 12, 11

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner(3E) -0-11-0 to 1-10-0, Exterior(2N) 1-10-0 to 5-10-0, Corner(3R) 5-10-0 to 8-10-0, Exterior(2N) 8-10-0 to 12-7-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - Gable requires continuous bottom chord bearing.
  - Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
  - Gable studs spaced at 2-0-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 16, 10, 14, 15, 12, 11.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



March 26,2025

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**  
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacompoments.com)

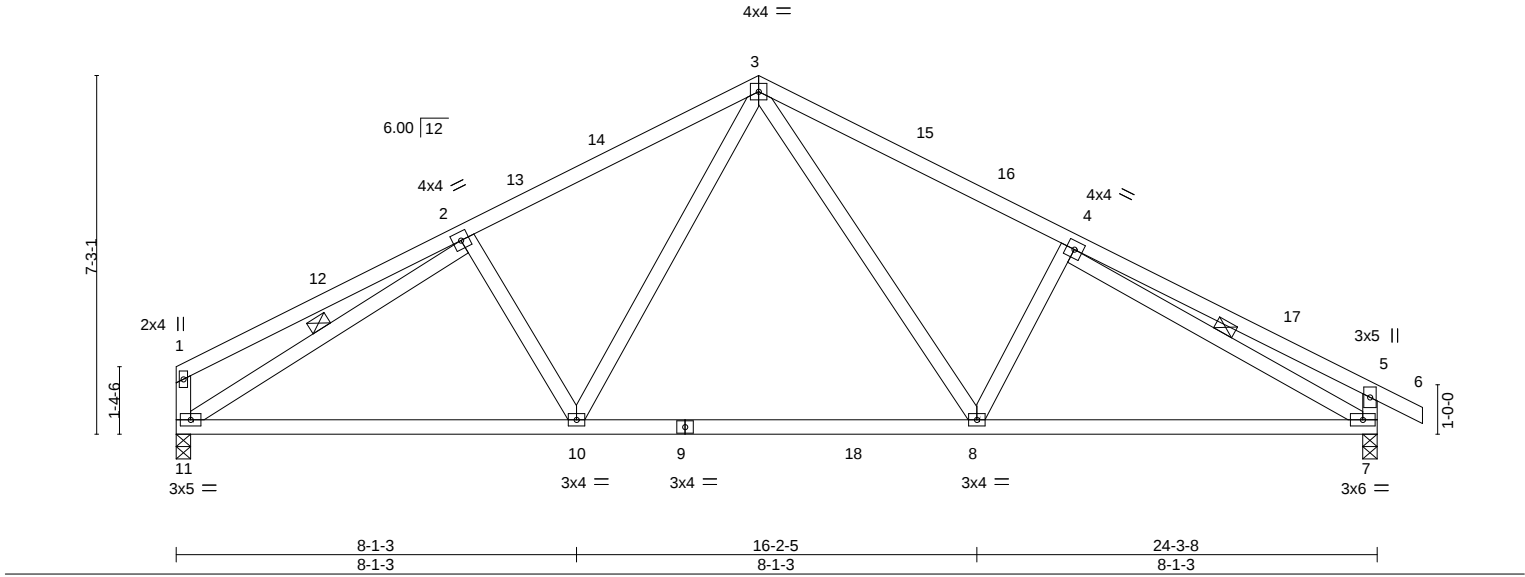
ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate  
818 Soundside Road  
Edenton, NC 27932

|           |       |            |     |     |                          |           |
|-----------|-------|------------|-----|-----|--------------------------|-----------|
| Job       | Truss | Truss Type | Qty | Ply | FFF-LOT #54 Roof         | 172248459 |
| 25-0518-A | T04   | Common     | 3   | 1   | Job Reference (optional) |           |

Riverside Roof Truss, LLC, Danville, Va - 24541,

8.730 s Feb 19 2025 MiTek Industries, Inc. Mon Mar 24 14:27:06 2025 Page 1  
ID:kk2\_eRZGXxvKblGikzSpyNzs9fO-C4TECrL83yW3EnY\_2?0hLpqPdd?EfQDMMBj3cFzXhvp  
5-10-11 11-9-6 18-0-7 24-3-8 25-2-8  
5-10-11 5-10-11 6-3-1 6-3-1 0-11-0

Scale = 1:46.6



| LOADING (psf)          | SPACING-             | CSI.      | DEFL.                        | PLATES         | GRIP     |
|------------------------|----------------------|-----------|------------------------------|----------------|----------|
| TCLL (roof) 20.0       | 2-0-0                | TC 0.71   | in (loc) l/defl L/d          | MT20           | 244/190  |
| Snow (Pf/Pg) 15.4/20.0 | Plate Grip DOL 1.15  | BC 0.78   | Vert(LL) -0.15 8-10 >999 240 |                |          |
| TCDL 10.0              | Lumber DOL 1.15      | WB 0.38   | Vert(CT) -0.23 8-10 >999 180 |                |          |
| BCLL 0.0 *             | Rep Stress Incr YES  | Matrix-MS | Horz(CT) 0.04 7 n/a n/a      |                |          |
| BCDL 10.0              | Code IRC2018/TPI2014 |           |                              | Weight: 136 lb | FT = 20% |

| LUMBER-               | BRACING-                                                                                        |
|-----------------------|-------------------------------------------------------------------------------------------------|
| TOP CHORD 2x4 SP No.2 | TOP CHORD Structural wood sheathing directly applied or 3-7-0 oc purlins, except end verticals. |
| BOT CHORD 2x4 SP No.2 | BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.                                  |
| WEBS 2x4 SP No.3      | WEBS 1 Row at midpt 2-11, 4-7                                                                   |

| REACTIONS.                             | (size) |
|----------------------------------------|--------|
| 11=0-3-8, 7=0-3-8                      |        |
| Max Horz 11=-142(LC 14)                |        |
| Max Uplift 11=-58(LC 16), 7=-92(LC 16) |        |
| Max Grav 11=1054(LC 28), 7=1115(LC 29) |        |

| FORCES.   | (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown. |
|-----------|------------------------------------------------------------------------------|
| TOP CHORD | 2-3=-1344/233, 3-4=-1444/246, 4-5=-428/119, 5-7=-377/149                     |
| BOT CHORD | 10-11=-111/1262, 8-10=-16/952, 7-8=-112/1312                                 |
| WEBS      | 3-10=-36/507, 3-8=-58/609, 4-8=-274/170, 2-11=-1271/157, 4-7=-1188/111       |

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior(1) 3-1-12 to 11-9-6, Exterior(2R) 11-9-6 to 14-9-6, Interior(1) 14-9-6 to 25-2-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 11, 7.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



March 26, 2025

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**  
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

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

|           |       |               |     |     |                          |           |
|-----------|-------|---------------|-----|-----|--------------------------|-----------|
| Job       | Truss | Truss Type    | Qty | Ply | FFF-LOT #54 Roof         | 172248460 |
| 25-0518-A | T04G  | Common Girder | 1   | 2   | Job Reference (optional) |           |

Riverside Roof Truss, LLC, Danville, Va - 24541, 8.730 s Feb 19 2025 MiTek Industries, Inc. Mon Mar 24 14:27:07 2025 Page 1  
ID:kk2\_eRZGXxvKbIGikzSpyNzs9fO-gG1dPBMmpGewsw7AcjXwt0Nci1QiO8fWbrTc8hzXhvo

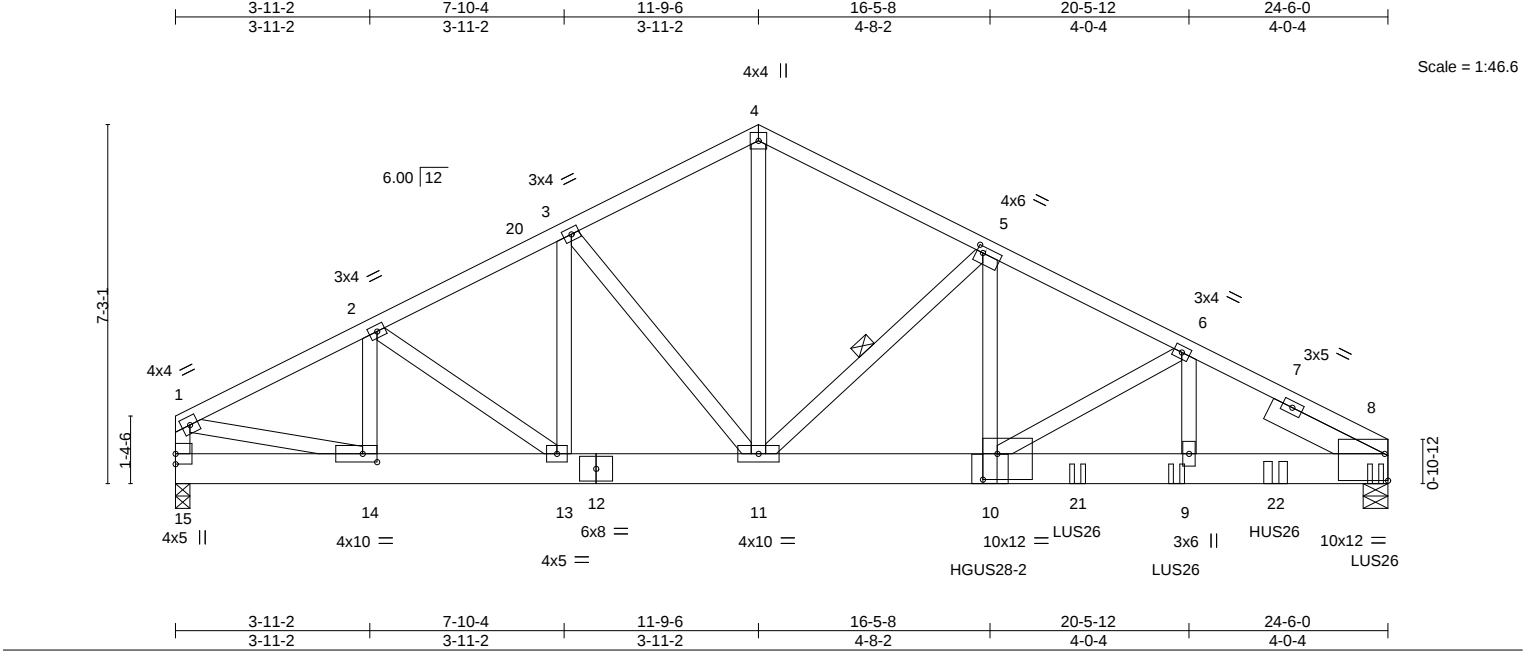


Plate Offsets (X,Y)-- [5:0-1-8,0-1-8], [8:Edge,0-6-8], [10:0-3-8,0-6-4], [14:0-3-8,0-2-0]

| LOADING (psf)          | SPACING-             | CSI.      | DEFL.                        | PLATES         | GRIP     |
|------------------------|----------------------|-----------|------------------------------|----------------|----------|
| TCLL (roof) 20.0       | 2-0-0                | TC 0.63   | in (loc) l/defl L/d          | MT20           | 244/190  |
| Snow (Pf/Pg) 15.4/20.0 | Plate Grip DOL 1.15  | BC 0.51   | Vert(LL) -0.13 9-10 >999 240 |                |          |
| TCDL 10.0              | Lumber DOL 1.15      | WB 0.94   | Vert(CT) -0.26 9-10 >999 180 |                |          |
| BCLL 0.0 *             | Rep Stress Incr NO   | Matrix-MS | Horz(CT) 0.05 8 n/a n/a      |                |          |
| BCDL 10.0              | Code IRC2018/TPI2014 |           |                              | Weight: 375 lb | FT = 20% |

| LUMBER-                                           | BRACING-                                                                                        |
|---------------------------------------------------|-------------------------------------------------------------------------------------------------|
| TOP CHORD 2x4 SP No.2 *Except*<br>4-8: 2x4 SP DSS | TOP CHORD Structural wood sheathing directly applied or 3-8-6 oc purlins, except end verticals. |
| BOT CHORD 2x8 SP DSS                              | BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.                                  |
| WEBS 2x4 SP No.3 *Except*<br>5-10: 2x4 SP No.2    | WEBS 1 Row at midpt 5-11                                                                        |
| SLIDER Right 2x6 SP No.2 2-6-0                    |                                                                                                 |

**REACTIONS.** (size) 8=0-6-0, 15=0-3-8  
Max Horz 15=-125(LC 35)  
Max Grav 8=7642(LC 3), 15=3156(LC 3)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-2=-4378/0, 2-3=-5166/0, 3-4=-5359/0, 4-5=-5375/0, 5-6=-10503/0, 6-8=-10750/0, 1-15=-2967/0  
BOT CHORD 14-15=-20/338, 13-14=0/3873, 11-13=0/4581, 10-11=0/9403, 9-10=0/9375, 8-9=0/9375  
WEBS 2-14=-1052/0, 2-13=0/914, 3-13=-515/0, 3-11=-172/419, 4-11=0/4540, 5-11=-6424/0, 5-10=0/6405, 6-10=-93/508, 6-9=-361/537, 1-14=0/3706

- NOTES-**
- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
Top chords connected as follows: 2x4 - 1 row at 0-7-0 oc.  
Bottom chords connected as follows: 2x8 - 3 rows staggered at 0-2-0 oc.  
Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
  - All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
  - Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=25ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - Use Simpson Strong-Tie HGUS28-2 (36-16d Girder, 12-16d Truss) or equivalent at 16-5-8 from the left end to connect truss(es) to front face of bottom chord.
  - Use Simpson Strong-Tie LUS26 (4-10d Girder, 3-10d Truss) or equivalent spaced at 2-0-0 oc max. starting at 18-2-12 from the left end to connect truss(es) to front face of bottom chord.



March 26,2025

|           |       |               |     |     |                  |
|-----------|-------|---------------|-----|-----|------------------|
| Job       | Truss | Truss Type    | Qty | Ply | FFF-LOT #54 Roof |
| 25-0518-A | T04G  | Common Girder | 1   | 2   | 172248460        |

Riverside Roof Truss, LLC, Danville, Va - 24541,

8.730 s Feb 19 2025 MiTek Industries, Inc. Mon Mar 24 14:27:07 2025 Page 2  
ID:kk2\_eRZGXXvKbIGikzSpyNzs9fO-gG1dPBMmpGewsw7AcjXwt0Nci1QiO8fWbrTc8hzXhvo

- NOTES-**
- 12) Use Simpson Strong-Tie HUS26 (14-16d Girder, 4-16d Truss) or equivalent at 22-2-12 from the left end to connect truss(es) to front face of bottom chord.
  - 13) Use Simpson Strong-Tie LUS26 (4-10d Girder, 3-10d Truss, Single Ply Girder) or equivalent at 24-3-0 from the left end to connect truss(es) to front face of bottom chord.
  - 14) 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 (plf)

Vert: 1-4=-51, 4-8=-51, 15-16=-20

Concentrated Loads (lb)

Vert: 10=-4751(F) 9=-776(F) 16=-517(F) 21=-776(F) 22=-776(F)

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

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



818 Soundside Road  
Edenton, NC 27932

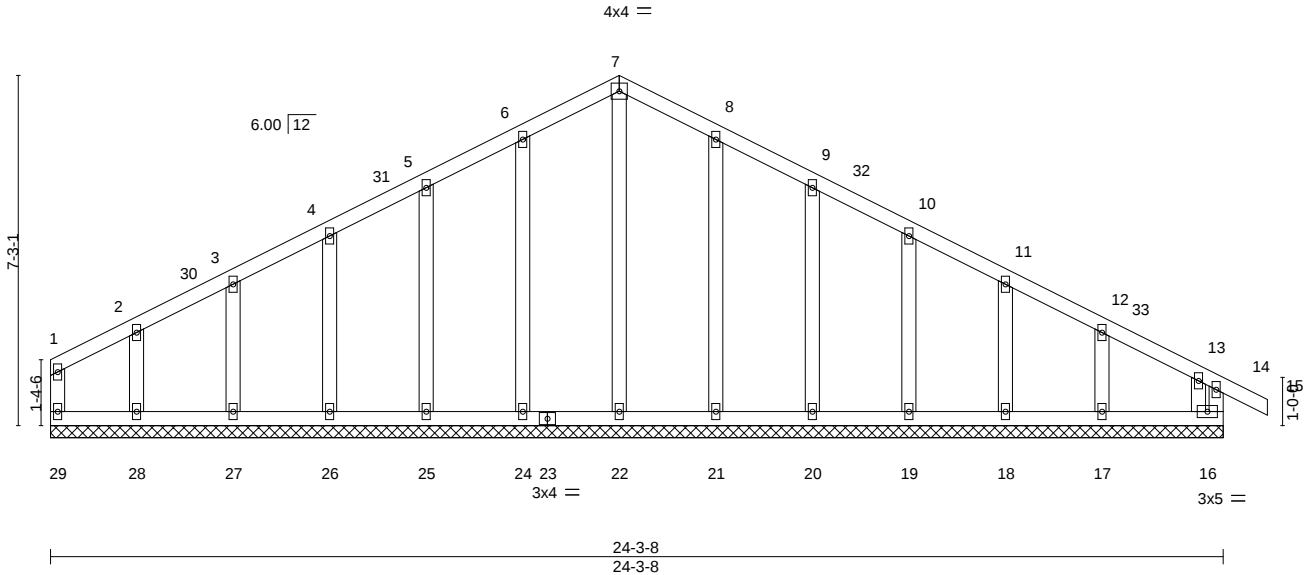
|           |       |            |     |     |                          |           |
|-----------|-------|------------|-----|-----|--------------------------|-----------|
| Job       | Truss | Truss Type | Qty | Ply | FFF-LOT #54 Roof         | I72248461 |
| 25-0518-A | T04GE | GABLE      | 1   | 1   | Job Reference (optional) |           |

Riverside Roof Truss, LLC, Danville, Va - 24541,

8,730 s Feb 19 2025 MiTek Industries, Inc. Mon Mar 24 14:27:07 2025 Page 1  
ID:kk2\_eRZGXXvkBlGikzSpyNzs9fO-gG1dPBMmpGewsw7AcjXwt0NkG1XjOK3WbrTc8hzXhvo

11-9-6  
11-9-6  
24-3-8  
12-6-2  
25-2-8  
0-11-0

Scale: 1/4"=1'



| LOADING (psf)          | SPACING-             | CSI.     | DEFL.    | in    | (loc) | l/defl | L/d | PLATES         | GRIP     |
|------------------------|----------------------|----------|----------|-------|-------|--------|-----|----------------|----------|
| TCLL (roof) 20.0       | 2-0-0                | TC 0.08  | Vert(LL) | -0.00 | 15    | n/r    | 120 | MT20           | 244/190  |
| Snow (Pf/Pg) 15.4/20.0 | Plate Grip DOL 1.15  | BC 0.06  | Vert(CT) | -0.00 | 15    | n/r    | 120 |                |          |
| TCDL 10.0              | Lumber DOL 1.15      | WB 0.15  | Horz(CT) | 0.00  | 16    | n/a    | n/a |                |          |
| BCLL 0.0 *             | Rep Stress Incr YES  | Matrix-R |          |       |       |        |     |                |          |
| BCDL 10.0              | Code IRC2018/TPI2014 |          |          |       |       |        |     | Weight: 147 lb | FT = 20% |

| LUMBER-               | BRACING-                                                                                        |
|-----------------------|-------------------------------------------------------------------------------------------------|
| TOP CHORD 2x4 SP No.2 | TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals. |
| BOT CHORD 2x4 SP No.2 | BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.                                   |
| WEBS 2x4 SP No.3      |                                                                                                 |
| OTHERS 2x4 SP No.3    |                                                                                                 |

**REACTIONS.** All bearings 24-3-8.  
(lb) - Max Horz 29=-142(LC 14)  
Max Uplift All uplift 100 lb or less at joint(s) 29, 16, 24, 25, 26, 27, 28, 21, 20, 19, 18, 17  
Max Grav All reactions 250 lb or less at joint(s) 29, 16, 22, 24, 25, 26, 27, 28, 21, 20, 19, 18, 17

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 6-7=-102/250, 7-8=-102/250

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner(3E) 0-1-12 to 3-1-12, Exterior(2N) 3-1-12 to 11-9-6, Corner(3R) 11-9-6 to 14-9-6, Exterior(2N) 14-9-6 to 25-2-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - Gable requires continuous bottom chord bearing.
  - Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
  - Gable studs spaced at 2-0-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 29, 16, 24, 25, 26, 27, 28, 21, 20, 19, 18, 17.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



March 26,2025

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**  
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

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



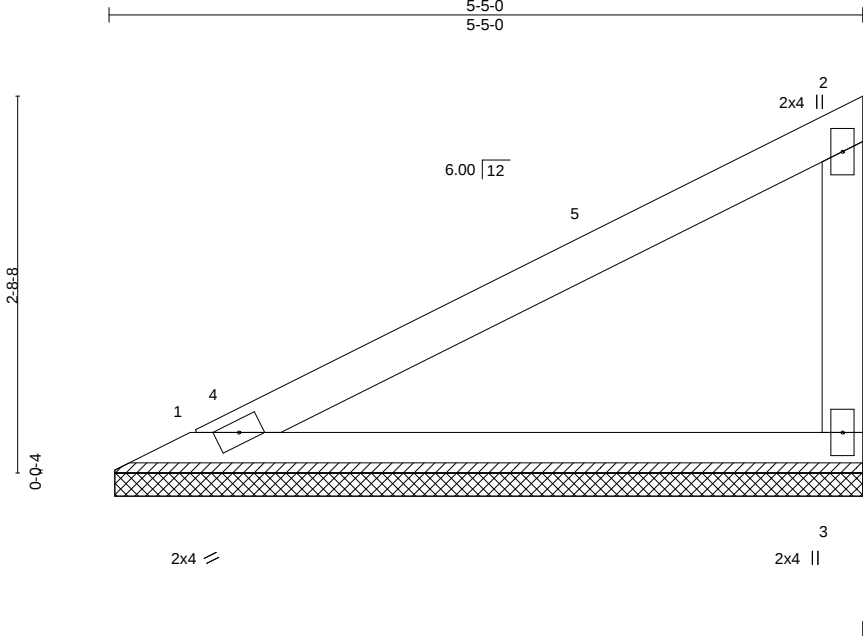
|           |       |            |     |     |                  |
|-----------|-------|------------|-----|-----|------------------|
| Job       | Truss | Truss Type | Qty | Ply | FFF-LOT #54 Roof |
| 25-0518-A | V01   | Valley     | 1   | 1   | 172248463        |

Riverside Roof Truss, LLC,

Danville, Va - 24541,

8.730 s Feb 19 2025 MiTek Industries, Inc. Mon Mar 24 14:27:08 2025 Page 1

ID:kk2\_eRZGXxvKblGikzSpyNzs9fO-8Sb?dXMOaZmnU4iNAQ29QEvoIQoi7pafpVCAG7zXhvn



| LOADING (psf)          | SPACING-             | CSI.     | DEFL.    | in   | (loc) | I/defl | L/d | PLATES        | GRIP     |
|------------------------|----------------------|----------|----------|------|-------|--------|-----|---------------|----------|
| TCLL (roof) 20.0       | 2-0-0                | TC 0.55  | Vert(LL) | n/a  | -     | n/a    | 999 | MT20          | 244/190  |
| Snow (Pf/Pg) 15.4/20.0 | Plate Grip DOL 1.15  | BC 0.27  | Vert(CT) | n/a  | -     | n/a    | 999 |               |          |
| TCDL 10.0              | Lumber DOL 1.15      | WB 0.00  | Horz(CT) | 0.00 | 3     | n/a    | n/a |               |          |
| BCLL 0.0 *             | Rep Stress Incr YES  | Matrix-P |          |      |       |        |     |               |          |
| BCDL 10.0              | Code IRC2018/TPI2014 |          |          |      |       |        |     | Weight: 19 lb | FT = 20% |

| LUMBER-               | BRACING-                                                                                        |
|-----------------------|-------------------------------------------------------------------------------------------------|
| TOP CHORD 2x4 SP No.2 | TOP CHORD Structural wood sheathing directly applied or 5-5-0 oc purlins, except end verticals. |
| BOT CHORD 2x4 SP No.2 | BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.                                  |
| WEBS 2x4 SP No.3      |                                                                                                 |

**REACTIONS.** (size) 1=5-4-8, 3=5-4-8  
Max Horz 1=81(LC 13)  
Max Uplift 1=-8(LC 16), 3=-15(LC 16)  
Max Grav 1=229(LC 20), 3=229(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2E) 0-7-9 to 3-7-9, Interior(1) 3-7-9 to 5-3-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - 3) Unbalanced snow loads have been considered for this design.
  - 4) Gable requires continuous bottom chord bearing.
  - 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
  - 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



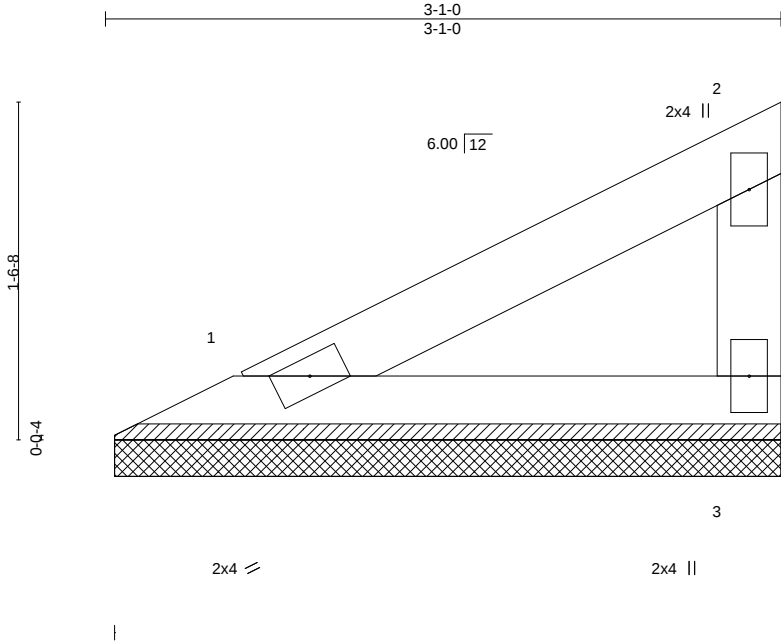
March 26,2025

|           |       |            |     |     |                  |
|-----------|-------|------------|-----|-----|------------------|
| Job       | Truss | Truss Type | Qty | Ply | FFF-LOT #54 Roof |
| 25-0518-A | V02   | Valley     | 1   | 1   | 172248464        |

Riverside Roof Truss, LLC, Danville, Va - 24541,

8.730 s Feb 19 2025 MiTek Industries, Inc. Mon Mar 24 14:27:09 2025 Page 1

ID:kk2\_eRZGXXvKblGikzSpyNzs9fO-cf9NqtN0Ltue5EHZk8aOyRS4JqCAsGqp29yjDazXhvm



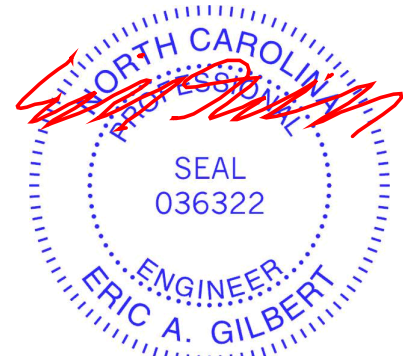
| LOADING (psf)          | SPACING-             | CSI.     | DEFL.    | in (loc) | I/defl | L/d | PLATES        | GRIP     |
|------------------------|----------------------|----------|----------|----------|--------|-----|---------------|----------|
| TCLL (roof) 20.0       | 2-0-0                | TC 0.11  | Vert(LL) | n/a      | -      | n/a | MT20          | 244/190  |
| Snow (Pf/Pg) 15.4/20.0 | Plate Grip DOL 1.15  | BC 0.06  | Vert(CT) | n/a      | -      | n/a |               |          |
| TCDL 10.0              | Lumber DOL 1.15      | WB 0.00  | Horz(CT) | 0.00     | 3      | n/a |               |          |
| BCLL 0.0 *             | Rep Stress Incr YES  | Matrix-P |          |          |        |     |               |          |
| BCDL 10.0              | Code IRC2018/TPI2014 |          |          |          |        |     | Weight: 10 lb | FT = 20% |

| LUMBER-               | BRACING-                                                                                        |
|-----------------------|-------------------------------------------------------------------------------------------------|
| TOP CHORD 2x4 SP No.2 | TOP CHORD Structural wood sheathing directly applied or 3-1-0 oc purlins, except end verticals. |
| BOT CHORD 2x4 SP No.2 | BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.                                  |
| WEBS 2x4 SP No.3      |                                                                                                 |

**REACTIONS.** (size) 1=3-0-8, 3=3-0-8  
Max Horz 1=41(LC 15)  
Max Uplift 1=-4(LC 16), 3=-7(LC 16)  
Max Grav 1=104(LC 20), 3=104(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(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=1.60
  - 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - 3) Unbalanced snow loads have been considered for this design.
  - 4) Gable requires continuous bottom chord bearing.
  - 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
  - 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



March 26,2025

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

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

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

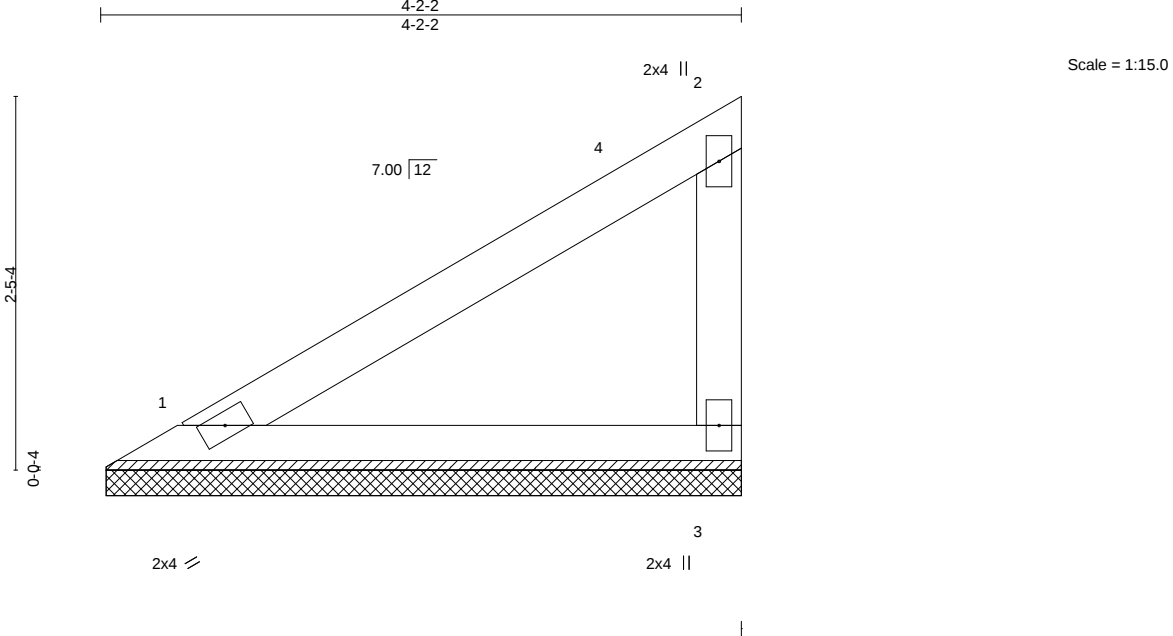
818 Soundside Road  
Edenton, NC 27932

|           |       |            |     |     |                  |
|-----------|-------|------------|-----|-----|------------------|
| Job       | Truss | Truss Type | Qty | Ply | FFF-LOT #54 Roof |
| 25-0518-A | V03   | Valley     | 1   | 1   | 172248465        |

Riverside Roof Truss, LLC, Danville, Va - 24541,

8.730 s Feb 19 2025 MiTek Industries, Inc. Mon Mar 24 14:27:09 2025 Page 1

ID:kk2\_eRZGXXvKblGikzSpyNzs9fO-cf9NqtN0Ltue5EHZk8aOyRS1RqAssGqp29yjDazXhvm



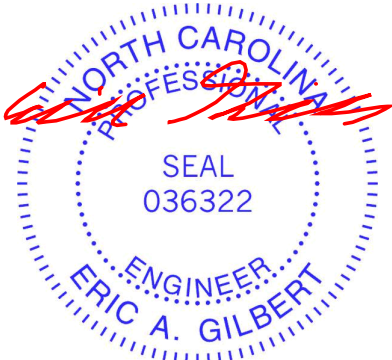
| LOADING (psf)          | SPACING-             | CSI.     | DEFL.    | in (loc) | L/d | PLATES        | GRIP     |
|------------------------|----------------------|----------|----------|----------|-----|---------------|----------|
| TCLL (roof) 20.0       | 2-0-0                | TC 0.29  | Vert(LL) | n/a      | n/a | MT20          | 244/190  |
| Snow (Pf/Pg) 15.4/20.0 | Plate Grip DOL 1.15  | BC 0.14  | Vert(CT) | n/a      | n/a |               |          |
| TCDL 10.0              | Lumber DOL 1.15      | WB 0.00  | Horz(CT) | 0.00     | n/a |               |          |
| BCLL 0.0 *             | Rep Stress Incr YES  | Matrix-P |          |          |     |               |          |
| BCDL 10.0              | Code IRC2018/TPI2014 |          |          |          |     | Weight: 15 lb | FT = 20% |

| LUMBER-               | BRACING-                                                                                        |
|-----------------------|-------------------------------------------------------------------------------------------------|
| TOP CHORD 2x4 SP No.2 | TOP CHORD Structural wood sheathing directly applied or 4-2-2 oc purlins, except end verticals. |
| BOT CHORD 2x4 SP No.2 | BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.                                  |
| WEBS 2x4 SP No.3      |                                                                                                 |

**REACTIONS.** (size) 1=4-1-11, 3=4-1-11  
Max Horz 1=71(LC 13)  
Max Uplift 1=-5(LC 16), 3=-14(LC 13)  
Max Grav 1=169(LC 20), 3=169(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

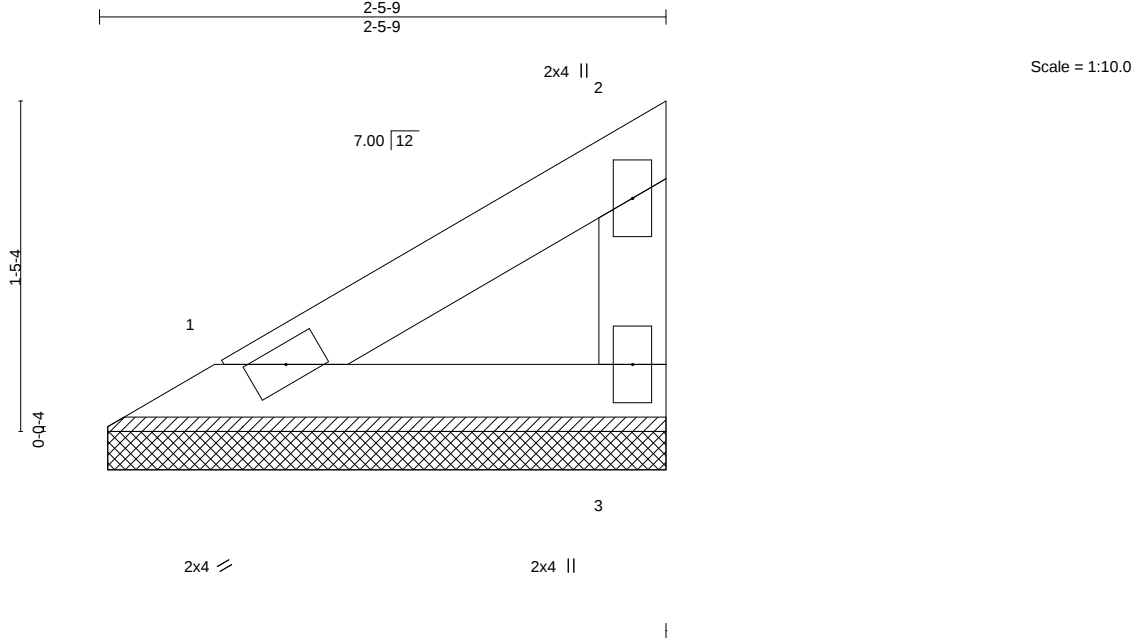
- NOTES-**
- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2E) 0-6-8 to 3-6-8, Interior(1) 3-6-8 to 4-0-6 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - 3) Unbalanced snow loads have been considered for this design.
  - 4) Gable requires continuous bottom chord bearing.
  - 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
  - 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



March 26,2025

|           |       |            |     |     |                  |
|-----------|-------|------------|-----|-----|------------------|
| Job       | Truss | Truss Type | Qty | Ply | FFF-LOT #54 Roof |
| 25-0518-A | V04   | Valley     | 1   | 1   | 172248466        |

Riverside Roof Truss, LLC, Danville, Va - 24541, 8.730 s Feb 19 2025 MiTek Industries, Inc. Mon Mar 24 14:27:09 2025 Page 1  
ID:kk2\_eRZGXXvKblGikzSpyNzs9fO-cf9NqtN0Ltue5EHZk8aOyRS52qCZsGqp29yjDazXhvm



| LOADING (psf)          | SPACING-             | CSI.     | DEFL.    | in (loc) | I/defl | L/d | PLATES       | GRIP     |
|------------------------|----------------------|----------|----------|----------|--------|-----|--------------|----------|
| TCLL (roof) 20.0       | 2-0-0                | TC 0.06  | Vert(LL) | n/a      | -      | n/a | MT20         | 244/190  |
| Snow (Pf/Pg) 15.4/20.0 | Plate Grip DOL 1.15  | BC 0.03  | Vert(CT) | n/a      | -      | n/a |              |          |
| TCDL 10.0              | Lumber DOL 1.15      | WB 0.00  | Horz(CT) | 0.00     | 3      | n/a |              |          |
| BCLL 0.0 *             | Rep Stress Incr YES  | Matrix-P |          |          |        |     |              |          |
| BCDL 10.0              | Code IRC2018/TPI2014 |          |          |          |        |     | Weight: 8 lb | FT = 20% |

| LUMBER-               | BRACING-                                                                                        |
|-----------------------|-------------------------------------------------------------------------------------------------|
| TOP CHORD 2x4 SP No.2 | TOP CHORD Structural wood sheathing directly applied or 2-5-9 oc purlins, except end verticals. |
| BOT CHORD 2x4 SP No.2 | BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.                                  |
| WEBS 2x4 SP No.3      |                                                                                                 |

**REACTIONS.** (size) 1=2-5-2, 3=2-5-2  
Max Horz 1=36(LC 13)  
Max Uplift 1=-2(LC 16), 3=-7(LC 13)  
Max Grav 1=79(LC 20), 3=79(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(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=1.60
  - 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - 3) Unbalanced snow loads have been considered for this design.
  - 4) Gable requires continuous bottom chord bearing.
  - 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
  - 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



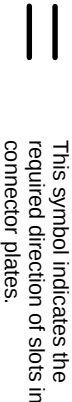
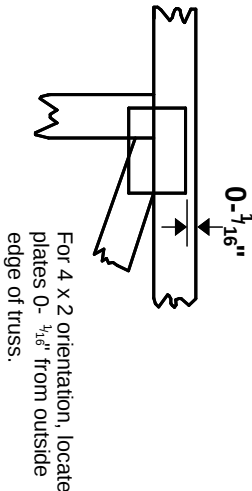
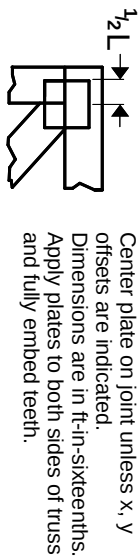
March 26, 2025

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**  
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacompnents.com)

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

# Symbols

## PLATE LOCATION AND ORIENTATION



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

## PLATE SIZE

**4 X 4**

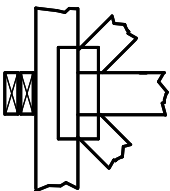
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## LATERAL BRACING LOCATION



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

## BEARING

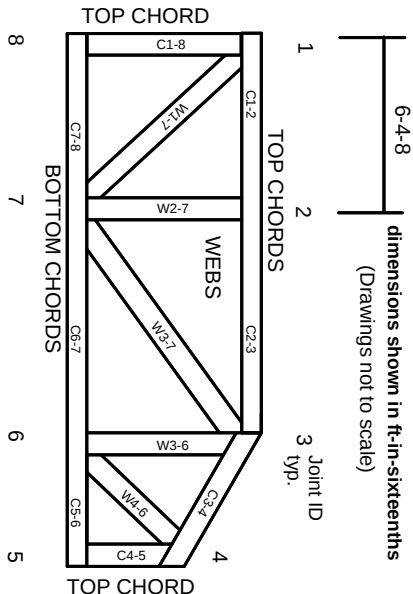


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

## Industry Standards:

ANSI/TP1.1: 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/TP1 1 section 6.3. These truss designs rely on lumber values established by others.

© 2023 MITek® All Rights Reserved

# General Safety Notes

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

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

**MITek®**

ENGINEERING BY  
**TRENCO**  
A MITek Affiliate

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