

RE: 2504-5093-A - The Farm at Neills Creek Lot 00.0184 Roof

Trenco  
818 Soundside Rd  
Edenton, NC 27932

**Site Information:**

Project Customer: DRB Raleigh Project Name: The Farm at Neills Creek Lot 00.0184

Lot/Block: Lot 00.0184

Subdivision: The Farm at Neills Creek

Model: Cooper 3

Address: 102 Appleseed Dr

City: Lillington

State: NC

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

Design Code: IRC2021/TPI2014

Wind Code: ASCE 7-16

Wind Speed: 120 mph

Roof Load: 40.0 psf

Mean Roof Height (feet): 25

Design Program: MiTek 20/20 8.8

Design Method: MWFRS (Envelope)/C-C hybrid Wind ASCE 7-16

Floor Load: N/A psf

Exposure Category: B

| No. | Seal#     | Truss Name | Date    |
|-----|-----------|------------|---------|
| 1   | I72666429 | A1T        | 4/11/25 |
| 2   | I72666430 | A1A        | 4/11/25 |
| 3   | I72666431 | A3         | 4/11/25 |
| 4   | I72666432 | A3G        | 4/11/25 |
| 5   | I72666433 | A2A        | 4/11/25 |
| 6   | I72666434 | A2G        | 4/11/25 |
| 7   | I72666435 | A2         | 4/11/25 |
| 8   | I72666436 | G1         | 4/11/25 |
| 9   | I72666437 | G1G        | 4/11/25 |
| 10  | I72666438 | G1A        | 4/11/25 |
| 11  | I72666439 | PB1G       | 4/11/25 |
| 12  | I72666440 | PB1        | 4/11/25 |
| 13  | I72666441 | V1         | 4/11/25 |
| 14  | I72666442 | V1G        | 4/11/25 |
|     | I72666443 | PB2G       | 4/11/25 |
| 16  | I72666444 | PB2        | 4/11/25 |
| 17  | I72666445 | V2         | 4/11/25 |
| 18  | I72666446 | B1         | 4/11/25 |
| 19  | I72666447 | B1G        | 4/11/25 |
| 20  | I72666448 | C1A        | 4/11/25 |
| 21  | I72666449 | C1         | 4/11/25 |
| 22  | I72666450 | C1G        | 4/11/25 |
| 23  | I72666451 | V3         | 4/11/25 |
|     | I72666452 | VA2        | 4/11/25 |
| 25  | I72666453 | V4         | 4/11/25 |
| 26  | I72666454 | PB3        | 4/11/25 |
| 27  | I72666455 | VA1        | 4/11/25 |
| 28  | I72666456 | P1         | 4/11/25 |
| 29  | I72666457 | V5         | 4/11/25 |
| 30  | I72666458 | F1         | 4/11/25 |
| 31  | I72666459 | F1G        | 4/11/25 |
| 32  | I72666460 | M1         | 4/11/25 |

The truss drawing(s) referenced above have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Structural, LLC.

Truss Design Engineer's Name: Galinski, John

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

**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.



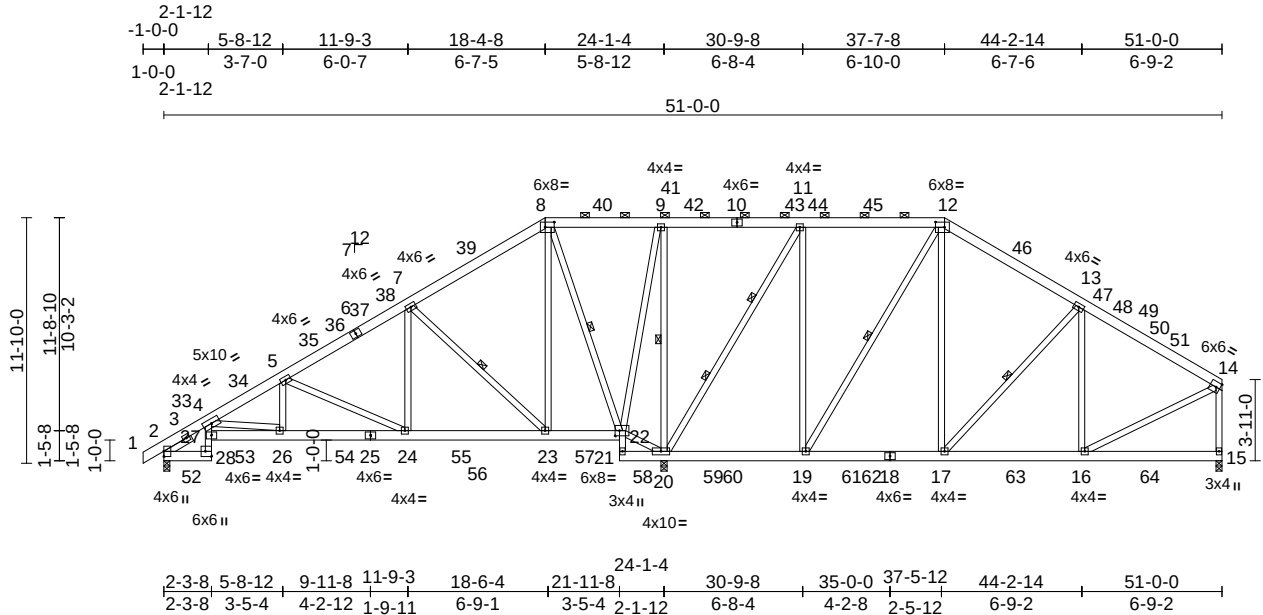
April 11, 2025

|                          |       |                |     |     |                                           |
|--------------------------|-------|----------------|-----|-----|-------------------------------------------|
| Job                      | Truss | Truss Type     | Qty | Ply | The Farm at Neills Creek Lot 00.0184 Roof |
| 2504-5093-A              | A1T   | Piggyback Base | 2   | 1   | 172666429                                 |
| Job Reference (optional) |       |                |     |     |                                           |

Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Mar 20 2025 Print: 8.830 S Mar 20 2025 MiTek Industries, Inc. Thu Apr 10 08:29:04  
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Page: 1



Scale = 1:111

Plate Offsets (X, Y): [8:0-5-4,0-3-0], [12:0-5-4,0-3-0], [22:0-2-8,0-3-0], [28:Edge,0-3-8]

| Loading        | (psf)     | Spacing         | 2-0-0           | CSI       |      | DEFL     | in    | (loc) | l/defl | L/d | PLATES   | GRIP    |
|----------------|-----------|-----------------|-----------------|-----------|------|----------|-------|-------|--------|-----|----------|---------|
| TCLL (roof)    | 20.0      | Plate Grip DOL  | 1.15            | TC        | 0.46 | Vert(LL) | -0.07 | 23-24 | >999   | 360 | MT20     | 244/190 |
| Snow (Pf/Pg)   | 20.4/20.0 | Lumber DOL      | 1.15            | BC        | 0.96 | Vert(CT) | -0.13 | 23-24 | >999   | 240 |          |         |
| TCDL           | 10.0      | Rep Stress Incr | YES             | WB        | 0.91 | Horz(CT) | 0.09  | 15    | n/a    | n/a |          |         |
| BCLL           | 0.0*      | Code            | IRC2021/TPI2014 | Matrix-AS |      | Wind(LL) | 0.03  | 26-27 | >999   | 240 |          |         |
| BCDL           | 10.0      |                 |                 |           |      |          |       |       |        |     |          |         |
| Weight: 472 lb |           |                 |                 |           |      |          |       |       |        |     | FT = 20% |         |

|                                            |                                                                                                                                                                                             |                                |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| <b>LUMBER</b>                              |                                                                                                                                                                                             |                                |
| TOP CHORD                                  | 2x6 SP No.2                                                                                                                                                                                 |                                |
| BOT CHORD                                  | 2x6 SP No.2 *Except* 28-4:2x4 SP No.2, 22-21:2x4 SP No.3                                                                                                                                    |                                |
| WEBS                                       | 2x4 SP No.3 *Except* 19-12,20-11:2x4 SP No.2                                                                                                                                                |                                |
| SLIDER                                     | Left 2x4 SP No.3 -- 1-6-0                                                                                                                                                                   |                                |
| <b>BRACING</b>                             |                                                                                                                                                                                             |                                |
| TOP CHORD                                  | Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 8-12.                                                                                  |                                |
| BOT CHORD                                  | Rigid ceiling directly applied.                                                                                                                                                             |                                |
| WEBS                                       | 1 Row at midpt                                                                                                                                                                              | 8-22, 12-19, 13-17, 9-20, 7-23 |
| WEBS                                       | 2 Rows at 1/3 pts                                                                                                                                                                           | 11-20                          |
| <b>REACTIONS</b>                           |                                                                                                                                                                                             |                                |
| (size)                                     | 2=0-3-8, 15=0-3-8, 20=0-3-8                                                                                                                                                                 |                                |
| Max Horiz                                  | 2=214 (LC 15)                                                                                                                                                                               |                                |
| Max Grav                                   | 2=773 (LC 57), 15=1021 (LC 59), 20=2974 (LC 3)                                                                                                                                              |                                |
| <b>FORCES</b>                              |                                                                                                                                                                                             |                                |
| (lb) - Maximum Compression/Maximum Tension |                                                                                                                                                                                             |                                |
| TOP CHORD                                  | 1-2=0/41, 2-4=-1051/30, 4-5=-1330/0, 5-7=-726/69, 7-8=-65/405, 8-9=-2/719, 9-11=0/888, 11-12=-263/229, 12-13=-670/164, 13-14=-921/84, 14-15=-940/35                                         |                                |
| BOT CHORD                                  | 2-28=-109/748, 27-28=-20/383, 4-27=0/365, 26-27=-65/1457, 24-26=-17/1198, 23-24=-17/560, 22-23=-282/147, 21-22=-169/62, 20-21=-76/6, 19-20=-211/243, 17-19=0/494, 16-17=0/715, 15-16=-39/65 |                                |

**WEBS** 8-23=0/915, 8-22=-1479/52, 11-19=0/1073, 12-19=-945/10, 12-17=0/668, 13-17=-506/74, 13-16=-184/180, 14-16=0/753, 9-20=-1203/44, 11-20=-1639/20, 7-24=0/585, 7-23=-1053/62, 5-26=0/404, 5-24=-716/39, 4-26=-373/49, 20-22=-942/99, 9-22=-17/895

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 4-1-0, Interior (1) 4-1-0 to 18-4-8, Exterior(2R) 18-4-8 to 25-6-13, Interior (1) 25-6-13 to 37-7-8, Exterior(2R) 37-7-8 to 44-9-13, Interior (1) 44-9-13 to 50-10-4 zone; cantilever left and right exposed; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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
- 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 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- Plates checked for a plus or minus 5 degree rotation about its center.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- All bearings are assumed to be SP No.2 .

- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 15. This connection is for uplift only and does not consider lateral forces.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard



April 11,2025

**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)

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**TRENCO**  
A MiTek Affiliate

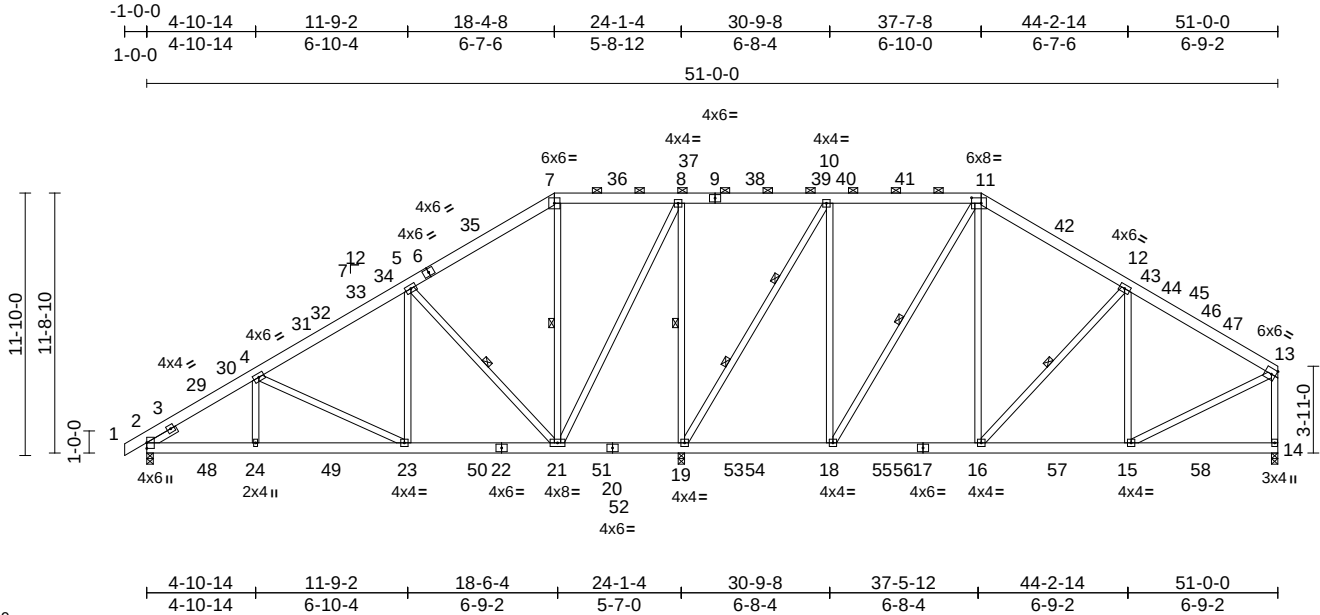
818 Soundside Road  
Edenton, NC 27932

|                          |       |                |     |     |                                           |
|--------------------------|-------|----------------|-----|-----|-------------------------------------------|
| Job                      | Truss | Truss Type     | Qty | Ply | The Farm at Neills Creek Lot 00.0184 Roof |
| 2504-5093-A              | A1A   | Piggyback Base | 1   | 1   | 172666430                                 |
| Job Reference (optional) |       |                |     |     |                                           |

Structural, LLC, Thurmont, MD - 21788,

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Page: 1



Scale = 1:103.9

Plate Offsets (X, Y): [11:0-5-4-0-3-0]

| 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        | 0.40 | Vert(LL) | -0.07 | 23-24 | >999   | 360 | MT20           | 244/190  |
| Snow (Pf/Pg) | 20.4/20.0 | Lumber DOL      | 1.15            | BC        | 0.48 | Vert(CT) | -0.11 | 23-24 | >999   | 240 |                |          |
| TCDL         | 10.0      | Rep Stress Incr | YES             | WB        | 0.87 | Horz(CT) | 0.03  | 14    | n/a    | n/a |                |          |
| BCLL         | 0.0*      | Code            | IRC2021/TPI2014 | Matrix-AS |      | Wind(LL) | 0.02  | 23-24 | >999   | 240 |                |          |
| BCDL         | 10.0      |                 |                 |           |      |          |       |       |        |     |                |          |
|              |           |                 |                 |           |      |          |       |       |        |     | Weight: 455 lb | FT = 20% |

#### LUMBER

|           |                                                   |
|-----------|---------------------------------------------------|
| TOP CHORD | 2x6 SP No.2                                       |
| BOT CHORD | 2x6 SP No.2                                       |
| WEBS      | 2x4 SP No.3 *Except* 18-11,21-8,19-10:2x4 SP No.2 |
| SLIDER    | Left 2x4 SP No.3 -- 1-6-0                         |

#### BRACING

|           |                                                                                                            |
|-----------|------------------------------------------------------------------------------------------------------------|
| TOP CHORD | Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 7-11. |
| BOT CHORD | Rigid ceiling directly applied.                                                                            |
| WEBS      | 1 Row at midpt 7-21, 12-16, 5-21, 8-19, 11-18                                                              |
| WEBS      | 2 Rows at 1/3 pts 10-19                                                                                    |

#### REACTIONS

|           |                                                  |
|-----------|--------------------------------------------------|
| (size)    | 2=0-3-8, 14=0-3-8, 19=0-3-8                      |
| Max Horiz | 2=214 (LC 15)                                    |
| Max Grav  | 2=1053 (LC 57), 14=1202 (LC 59), 19=2633 (LC 50) |

#### FORCES

|                                            |                                                                                                                                                                                                     |
|--------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (lb) - Maximum Compression/Maximum Tension |                                                                                                                                                                                                     |
| TOP CHORD                                  | 1-2=0/41, 2-4=-1519/0, 4-5=-1154/51, 5-7=-480/131, 7-8=-307/128, 8-10=0/312, 10-11=-589/132, 11-12=-952/116, 12-13=-1162/63, 13-14=-1172/8                                                          |
| BOT CHORD                                  | 2-24=-110/1302, 23-24=-42/1302, 21-23=-41/945, 19-21=-385/137, 18-19=-2/537, 16-18=0/741, 15-16=-4/941, 14-15=-39/67                                                                                |
| WEBS                                       | 7-21=-235/59, 11-16=0/601, 12-15=-244/135, 13-15=0/989, 12-16=-420/83, 4-24=0/318, 5-23=0/504, 4-23=-429/46, 5-21=-1006/58, 8-19=-1395/45, 10-18=0/836, 11-18=-646/10, 8-21=-34/1252, 10-19=-1405/3 |

#### NOTES

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

- 2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 4-1-0, Interior (1) 4-1-0 to 18-4-8, Exterior(2R) 18-4-8 to 25-6-13, Interior (1) 25-6-13 to 37-7-8, Exterior(2R) 37-7-8 to 44-9-13, Interior (1) 44-9-13 to 50-10-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) 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
- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- 6) Provide adequate drainage to prevent water ponding.
- 7) Plates checked for a plus or minus 5 degree rotation about its center.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 10) All bearings are assumed to be SP No.2.
- 11) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 12) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

- 13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



April 11, 2025

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**TRENCO**  
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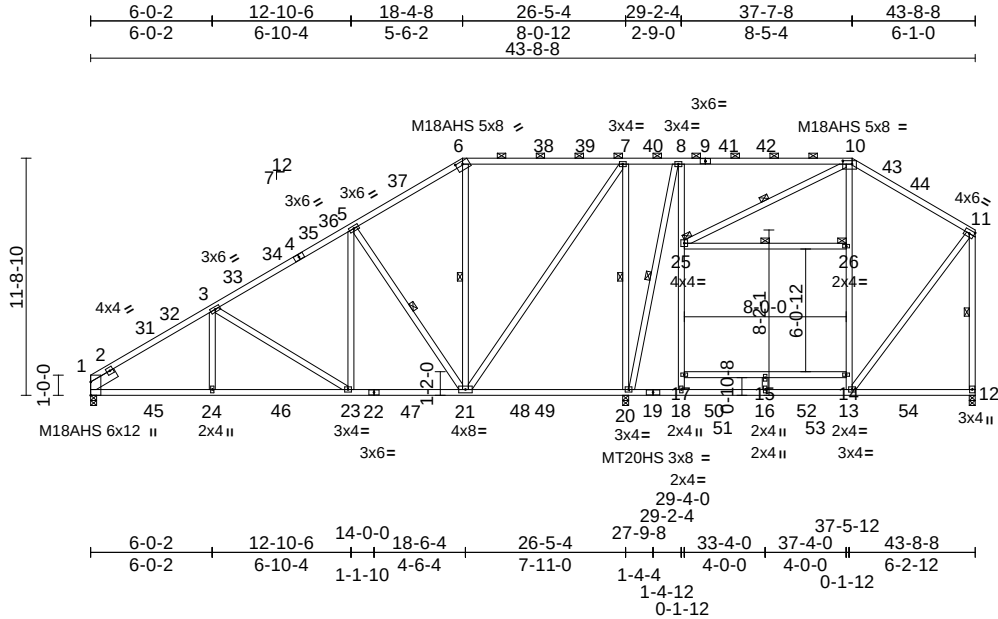
818 Soundside Road  
Edenton, NC 27932

|                          |       |            |     |     |                                           |
|--------------------------|-------|------------|-----|-----|-------------------------------------------|
| Job                      | Truss | Truss Type | Qty | Ply | The Farm at Neills Creek Lot 00.0184 Roof |
| 2504-5093-A              | A3    | Attic      | 6   | 1   | 172666431                                 |
| Job Reference (optional) |       |            |     |     |                                           |

Structural, LLC, Thurmont, MD - 21788,

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Page: 1



Scale = 1:113.9

Plate Offsets (X, Y): [6:0-4-0,0-1-11], [10:0-5-8,0-2-0]

| Loading      | (psf)     | Spacing         | 2-0-0           | CSI       |      | DEFL     | in    | (loc) | l/defl | L/d | PLATES         | GRIP     |
|--------------|-----------|-----------------|-----------------|-----------|------|----------|-------|-------|--------|-----|----------------|----------|
| TCLL (roof)  | 20.0      | Plate Grip DOL  | 1.15            | TC        | 0.77 | Vert(LL) | -0.20 | 20-21 | >999   | 360 | MT20           | 244/190  |
| Snow (Pf/Pg) | 20.4/20.0 | Lumber DOL      | 1.15            | BC        | 0.55 | Vert(CT) | -0.48 | 13-16 | >427   | 240 | M18AHS         | 186/179  |
| TCDL         | 10.0      | Rep Stress Incr | YES             | WB        | 0.77 | Horz(CT) | -0.05 | 1     | n/a    | n/a | MT20HS         | 187/143  |
| BCLL         | 0.0*      | Code            | IRC2021/TPI2014 | Matrix-AS |      | Wind(LL) | 0.03  | 23-24 | >999   | 240 |                |          |
| BCDL         | 10.0      |                 |                 |           |      |          |       |       |        |     |                |          |
|              |           |                 |                 |           |      |          |       |       |        |     | Weight: 350 lb | FT = 20% |

#### LUMBER

TOP CHORD 2x4 SP SS \*Except\* 4-6,10-11:2x4 SP No.2  
BOT CHORD 2x4 SP SS \*Except\* 17-14:2x4 SP No.2  
WEBS 2x4 SP No.3 \*Except\*  
7-21,8-18,10-13,25-26:2x4 SP No.2  
SLIDER Left 2x6 SP No.2 -- 1-6-0

#### BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 6-10.

BOT CHORD Rigid ceiling directly applied.

WEBS 1 Row at midpt 5-21, 6-21, 7-20, 8-20, 25-26, 11-12, 10-25

JOINTS 1 Brace at Jt(s): 25, 26

REACTIONS (size) 1=0-3-8, 12=0-3-8, 20=0-3-8  
Max Horiz 1=248 (LC 15)  
Max Grav 1=1370 (LC 57), 12=1229 (LC 59), 20=2202 (LC 50)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-3=-2124/170, 3-5=-1769/16, 5-6=-1234/78, 6-7=-978/81, 7-8=-416/107, 8-10=-634/17, 10-11=-808/0, 11-12=-1234/0

BOT CHORD 1-24=-249/1868, 23-24=-122/1868, 21-23=-107/1527, 20-21=-37/410, 18-20=0/636, 16-18=0/630, 13-16=0/630, 12-13=-109/117

WEBS 5-21=-925/60, 6-21=-99/266, 7-21=-65/1042, 7-20=-1165/72, 8-20=-1108/0, 17-18=0/727, 17-25=0/795, 8-25=0/801, 13-14=-234/172, 14-26=-184/206, 10-26=-184/206, 11-13=0/944, 15-17=0/11, 14-15=0/11, 25-26=-1/12, 3-24=0/323, 3-23=-416/62, 5-23=0/477, 15-16=0/163, 10-25=-30/0

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-0-0 to 4-4-4, Interior (1) 4-4-4 to 18-4-8, Exterior(2R) 18-4-8 to 24-6-7, Interior (1) 24-6-7 to 37-7-8, Exterior(2E) 37-7-8 to 43-6-12 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
- 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
- Unbalanced snow loads have been considered for this design.
- 250.0lb AC unit load placed on the bottom chord, 33-4-0 from left end, supported at two points, 5-0-0 apart.
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.
- The Fabrication Tolerance at joint 10 = 8%
- Plates checked for a plus or minus 5 degree rotation about its center.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- All bearings are assumed to be SP SS.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.

- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- Attic room checked for L/360 deflection.

LOAD CASE(S) Standard



April 11, 2025

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

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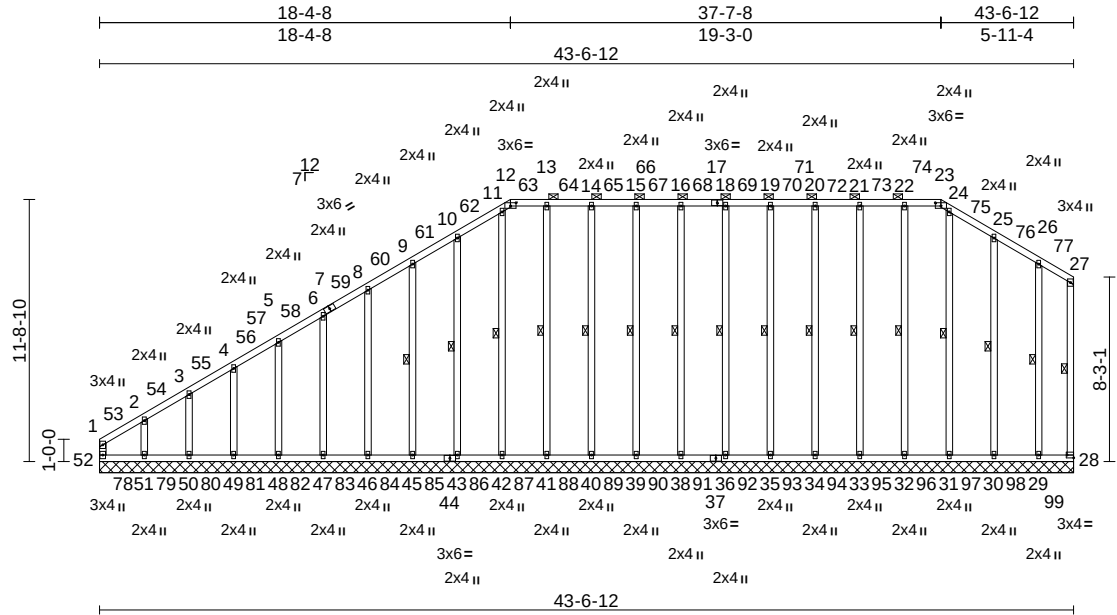
|                          |       |                                |     |     |                                           |
|--------------------------|-------|--------------------------------|-----|-----|-------------------------------------------|
| Job                      | Truss | Truss Type                     | Qty | Ply | The Farm at Neills Creek Lot 00.0184 Roof |
| 2504-5093-A              | A3G   | Piggyback Base Supported Gable | 1   | 1   | 172666432                                 |
| Job Reference (optional) |       |                                |     |     |                                           |

Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Mar 20 2025 Print: 8.830 S Mar 20 2025 MiTek Industries, Inc. Thu Apr 10 08:29:09

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Scale = 1:103

Plate Offsets (X, Y): [12:0-3-0,0-1-12], [23:0-3-0,0-1-12], [28:Edge,0-1-8]

| Loading                 | (psf)     | Spacing         | 2-0-0           | CSI       |      | DEFL      | in   | (loc) | l/defl | L/d | PLATES | GRIP    |
|-------------------------|-----------|-----------------|-----------------|-----------|------|-----------|------|-------|--------|-----|--------|---------|
| TCLL (roof)             | 20.0      | Plate Grip DOL  | 1.15            | TC        | 0.65 | Vert(LL)  | n/a  | -     | n/a    | 999 | MT20   | 244/190 |
| Snow (Pf/Pg)            | 20.4/20.0 | Lumber DOL      | 1.15            | BC        | 0.25 | Vert(TL)  | n/a  | -     | n/a    | 999 |        |         |
| TCDL                    | 10.0      | Rep Stress Incr | YES             | WB        | 0.31 | Horiz(TL) | 0.01 | 28    | n/a    | n/a |        |         |
| BCLL                    | 0.0*      | Code            | IRC2021/TPI2014 | Matrix-AS |      |           |      |       |        |     |        |         |
| BCDL                    | 10.0      |                 |                 |           |      |           |      |       |        |     |        |         |
| Weight: 425 lb FT = 20% |           |                 |                 |           |      |           |      |       |        |     |        |         |

#### LUMBER

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

#### BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 12-23.  
BOT CHORD Rigid ceiling directly applied.  
WEBS 1 Row at midpt

#### REACTIONS (size)

28=43-6-12, 29=43-6-12, 30=43-6-12, 31=43-6-12, 32=43-6-12, 33=43-6-12, 34=43-6-12, 35=43-6-12, 36=43-6-12, 38=43-6-12, 39=43-6-12, 40=43-6-12, 41=43-6-12, 42=43-6-12, 43=43-6-12, 45=43-6-12, 46=43-6-12, 47=43-6-12, 48=43-6-12, 49=43-6-12, 50=43-6-12, 51=43-6-12, 52=43-6-12  
Max Horiz 52=252 (LC 13)  
Max Uplift 28=-21 (LC 16), 29=-11 (LC 12), 30=-17 (LC 17), 32=-2 (LC 13), 41=-1 (LC 13), 42=-13 (LC 13), 43=-15 (LC 16), 45=-10 (LC 16), 46=-10 (LC 16), 47=-11 (LC 16), 48=-9 (LC 16), 49=-15 (LC 16), 51=-125 (LC 13), 52=-123 (LC 14)

Max Grav 28=275 (LC 160), 29=326 (LC 159), 30=335 (LC 158), 31=332 (LC 157), 32=333 (LC 156), 33=333 (LC 155), 34=333 (LC 154), 35=333 (LC 153), 36=333 (LC 152), 38=333 (LC 151), 39=333 (LC 150), 40=333 (LC 149), 41=333 (LC 148), 42=333 (LC 147), 43=333 (LC 146), 45=333 (LC 145), 46=333 (LC 144), 47=333 (LC 143), 48=333 (LC 142), 49=333 (LC 141), 50=332 (LC 140), 51=339 (LC 139), 52=282 (LC 138)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-52=-267/162, 1-2=-360/300, 2-3=-275/238, 3-4=-245/224, 4-5=-203/199, 5-6=-173/177, 6-8=-164/153, 8-9=-156/182, 9-10=-167/222, 10-11=-193/265, 11-12=-169/228, 12-13=-169/246, 13-14=-169/246, 14-15=-169/246, 15-16=-169/246, 16-18=-169/246, 18-19=-169/246, 19-20=-169/246, 20-21=-169/246, 21-22=-169/246, 22-23=-169/246, 23-24=-169/228, 24-25=-193/265, 25-26=-161/218, 26-27=-182/238, 27-28=-256/207

BOT CHORD 51-52=-113/148, 50-51=-113/148, 49-50=-113/148, 48-49=-113/148, 47-48=-113/148, 46-47=-113/148, 45-46=-113/148, 43-45=-113/148, 42-43=-113/148, 41-42=-113/148, 40-41=-113/148, 39-40=-113/148, 38-39=-113/148, 36-38=-113/148, 35-36=-113/148, 34-35=-113/148, 33-34=-113/148, 32-33=-113/148, 31-32=-113/148, 30-31=-113/148, 29-30=-113/148, 28-29=-113/148  
WEBS 18-36=-264/35, 16-38=-264/35, 15-39=-264/35, 14-40=-264/43, 13-41=-264/31, 11-42=-267/37, 10-43=-269/64, 9-45=-271/55, 8-46=-273/55, 6-47=-276/55, 5-48=-278/55, 4-49=-281/60, 3-50=-284/51, 2-51=-291/148, 19-35=-264/35, 20-34=-264/35, 21-33=-264/43, 22-32=-264/31, 24-31=-266/35, 25-30=-270/73, 26-29=-262/107

#### NOTES



April 11, 2025

Continued on page 2

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

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|             |       |                                |                          |     |                                           |
|-------------|-------|--------------------------------|--------------------------|-----|-------------------------------------------|
| Job         | Truss | Truss Type                     | Qty                      | Ply | The Farm at Neills Creek Lot 00.0184 Roof |
| 2504-5093-A | A3G   | Piggyback Base Supported Gable | 1                        | 1   | I72666432                                 |
|             |       |                                | Job Reference (optional) |     |                                           |

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=120mph (3-second gust)  
Vasd=95mph; TCdL=6.0psf; BCdL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Corner (3E) 0-1-12 to 4-6-0, Exterior(2N) 4-6-0 to 18-4-8, Corner(3R) 18-4-8 to 22-8-12, Exterior(2N) 22-8-12 to 37-7-8, Corner(3R) 37-7-8 to 42-0-0, Exterior(2N) 42-0-0 to 43-5-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) 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
- 5) Unbalanced snow loads have been considered for this design.
- 6) Provide adequate drainage to prevent water ponding.
- 7) Plates checked for a plus or minus 5 degree rotation about its center.
- 8) Gable requires continuous bottom chord bearing.
- 9) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 10) Gable studs spaced at 2-0-0 oc.
- 11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 12) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 13) All bearings are assumed to be SP No.2 .
- 14) N/A

- 15) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 16) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- 17) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

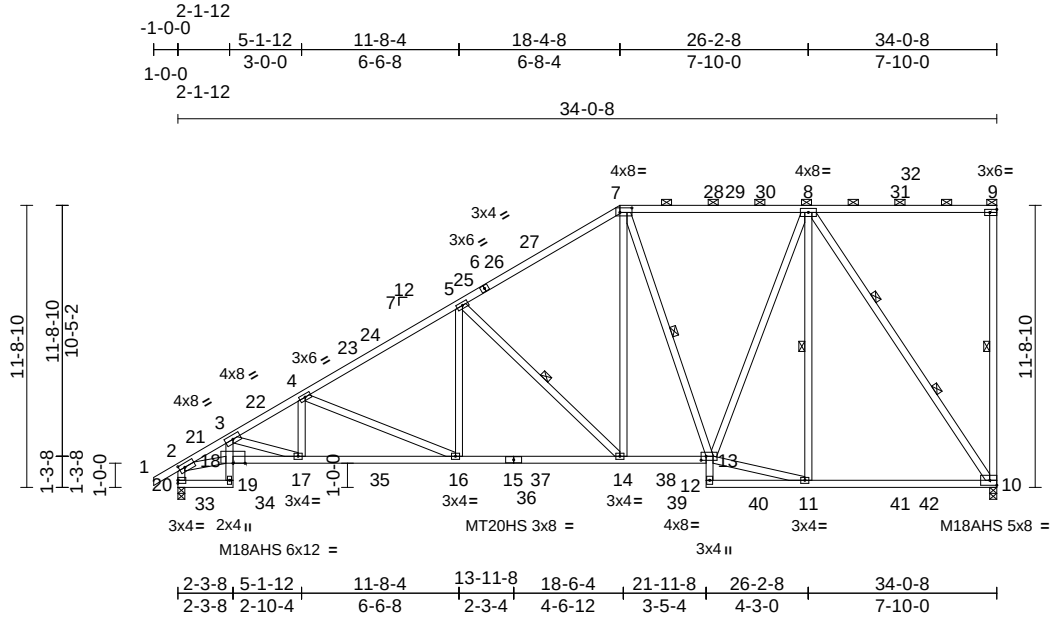
LOAD CASE(S) Standard

|             |       |                |     |     |                                           |
|-------------|-------|----------------|-----|-----|-------------------------------------------|
| Job         | Truss | Truss Type     | Qty | Ply | The Farm at Neills Creek Lot 00.0184 Roof |
| 2504-5093-A | A2A   | Piggyback Base | 2   | 1   | Job Reference (optional)                  |
|             |       |                |     |     | I72666433                                 |

Structural, LLC, Thurmont, MD - 21788,

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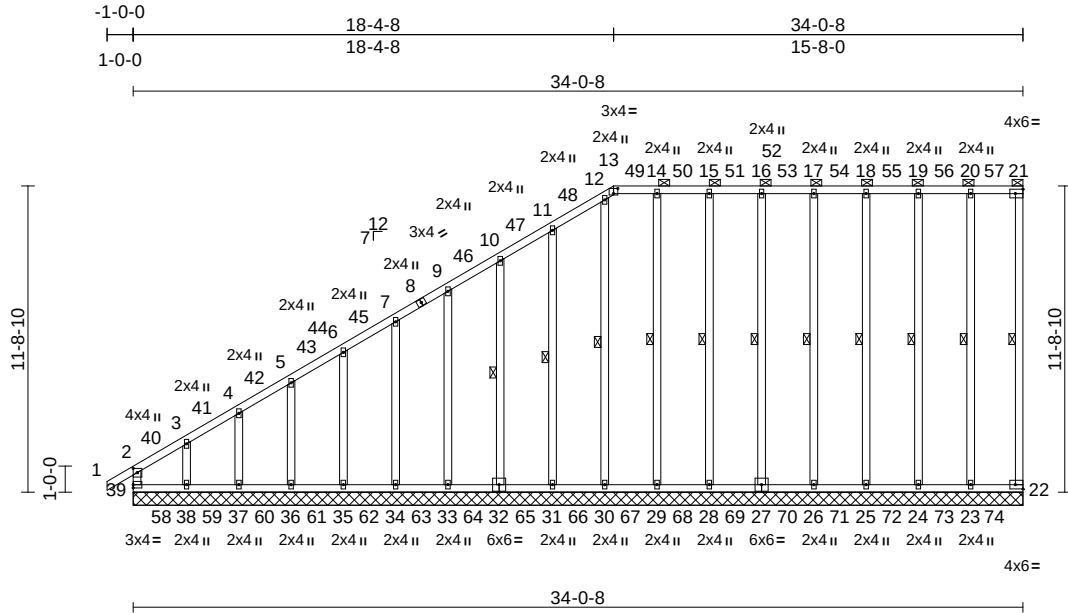


|                          |       |                                |     |     |                                           |
|--------------------------|-------|--------------------------------|-----|-----|-------------------------------------------|
| Job                      | Truss | Truss Type                     | Qty | Ply | The Farm at Neills Creek Lot 00.0184 Roof |
| 2504-5093-A              | A2G   | Piggyback Base Supported Gable | 1   | 1   | 172666434                                 |
| Job Reference (optional) |       |                                |     |     |                                           |

Structural, LLC, Thurmont, MD - 21788,

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Page: 1



Scale = 1:88.1

Plate Offsets (X, Y): [2:0-2-0,0-1-12], [13:0-2-0,0-2-5], [21:Edge,0-2-0], [22:Edge,0-2-0]

| Loading                 | (psf)     | Spacing         | 2-0-0           | CSI       | DEFL | in       | (loc) | l/defl | L/d | PLATES | GRIP    |
|-------------------------|-----------|-----------------|-----------------|-----------|------|----------|-------|--------|-----|--------|---------|
| TCLL (roof)             | 20.0      | Plate Grip DOL  | 1.15            | TC        | 0.72 | Vert(LL) | n/a   | -      | n/a | 999    | 244/190 |
| Snow (Pf/Pg)            | 20.4/20.0 | Lumber DOL      | 1.15            | BC        | 0.46 | Vert(CT) | n/a   | -      | n/a | 999    |         |
| TCDL                    | 10.0      | Rep Stress Incr | YES             | WB        | 0.31 | Horz(CT) | 0.01  | 22     | n/a | n/a    |         |
| BCLL                    | 0.0*      | Code            | IRC2021/TPI2014 | Matrix-AS |      |          |       |        |     |        |         |
| BCDL                    | 10.0      |                 |                 |           |      |          |       |        |     |        |         |
| Weight: 325 lb FT = 20% |           |                 |                 |           |      |          |       |        |     |        |         |

#### LUMBER

|           |                                        |
|-----------|----------------------------------------|
| TOP CHORD | 2x4 SP No.2                            |
| BOT CHORD | 2x4 SP No.2                            |
| WEBS      | 2x4 SP No.3 *Except* 21-22:2x4 SP No.2 |
| OTHERS    | 2x4 SP No.3                            |

#### BRACING

|           |                                                                                                             |
|-----------|-------------------------------------------------------------------------------------------------------------|
| TOP CHORD | Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 13-21. |
| BOT CHORD | Rigid ceiling directly applied.                                                                             |
| WEBS      | 1 Row at midpt 21-22, 20-23, 19-24, 18-25, 17-26, 16-27, 15-28, 14-29, 12-30, 11-31, 10-32                  |

|                  |                                                                                                                                                                                                                          |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| REACTIONS (size) | 22=34-0-8, 23=34-0-8, 24=34-0-8, 25=34-0-8, 26=34-0-8, 27=34-0-8, 28=34-0-8, 29=34-0-8, 30=34-0-8, 31=34-0-8, 32=34-0-8, 33=34-0-8, 34=34-0-8, 35=34-0-8, 36=34-0-8, 37=34-0-8, 38=34-0-8, 39=34-0-8                     |
| Max Horiz        | 39=289 (LC 13)                                                                                                                                                                                                           |
| Max Uplift       | 22=6 (LC 13), 23=-11 (LC 12), 24=6 (LC 13), 25=-1 (LC 12), 29=-3 (LC 13), 30=-21 (LC 13), 31=-14 (LC 16), 32=-10 (LC 16), 33=-11 (LC 16), 34=-10 (LC 16), 35=-9 (LC 16), 36=-17 (LC 16), 38=-135 (LC 13), 39=-72 (LC 12) |

#### FORCES

|                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (lb) - Maximum Compression/Maximum Tension |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| TOP CHORD                                  | 2-39=-315/231, 1-2=0/47, 2-3=-525/418, 3-4=-416/340, 4-5=-390/330, 5-6=-348/304, 6-7=-309/281, 7-9=-269/258, 9-10=-229/235, 10-11=-189/212, 11-12=-173/204, 12-13=-153/180, 13-14=-152/193, 14-15=-152/193, 15-16=-152/193, 16-17=-152/193, 17-18=-152/193, 18-19=-152/193, 19-20=-152/193, 20-21=-152/193, 21-22=-263/184, 22-23=-153/194, 23-24=-153/194, 24-25=-153/194, 25-26=-153/194, 26-27=-153/194, 27-28=-153/194, 28-29=-153/194, 29-30=-153/194, 30-31=-153/194, 31-32=-153/194, 32-33=-153/194, 33-34=-153/194, 34-35=-153/194, 35-36=-153/194, 36-37=-153/194, 37-38=-153/194, 38-39=-153/194, 39-40=-153/194 |
| BOT CHORD                                  | 20-23=-282/135, 19-24=-264/61, 18-25=-264/36, 17-26=-264/35, 16-27=-264/35, 15-28=-264/41, 14-29=-264/49, 12-30=-267/98, 11-31=-269/61, 10-32=-271/55, 9-33=-273/56, 7-34=-276/55, 6-35=-278/55, 5-36=-281/62, 4-37=-285/48, 3-38=-284/194                                                                                                                                                                                                                                                                                                                                                                                 |
| WEBS                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Corner (3E) -1-0-0 to 2-4-14, Exterior(2N) 2-4-14 to 18-4-8, Corner(3R) 18-4-8 to 22-0-8, Exterior(2N) 22-0-8 to 33-10-12 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=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
- Unbalanced snow loads have been considered for this design.



April 11, 2025

Continued on page 2

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818 Soundside Road  
Edenton, NC 27932



|             |       |                                |     |     |                                           |
|-------------|-------|--------------------------------|-----|-----|-------------------------------------------|
| Job         | Truss | Truss Type                     | Qty | Ply | The Farm at Neills Creek Lot 00.0184 Roof |
| 2504-5093-A | A2G   | Piggyback Base Supported Gable | 1   | 1   | I72666434                                 |
|             |       |                                |     |     | Job Reference (optional)                  |

- 6) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- 7) Provide adequate drainage to prevent water ponding.
- 8) Plates checked for a plus or minus 5 degree rotation about its center.
- 9) Gable requires continuous bottom chord bearing.
- 10) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 11) Gable studs spaced at 2-0-0 oc.
- 12) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 13) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 14) All bearings are assumed to be SP No.2 .
- 15) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 72 lb uplift at joint 39, 6 lb uplift at joint 22, 11 lb uplift at joint 23, 6 lb uplift at joint 24, 1 lb uplift at joint 25, 3 lb uplift at joint 29, 21 lb uplift at joint 30, 14 lb uplift at joint 31, 10 lb uplift at joint 32, 11 lb uplift at joint 33, 10 lb uplift at joint 34, 9 lb uplift at joint 35, 17 lb uplift at joint 36 and 135 lb uplift at joint 38.
- 16) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 17) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- 18) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

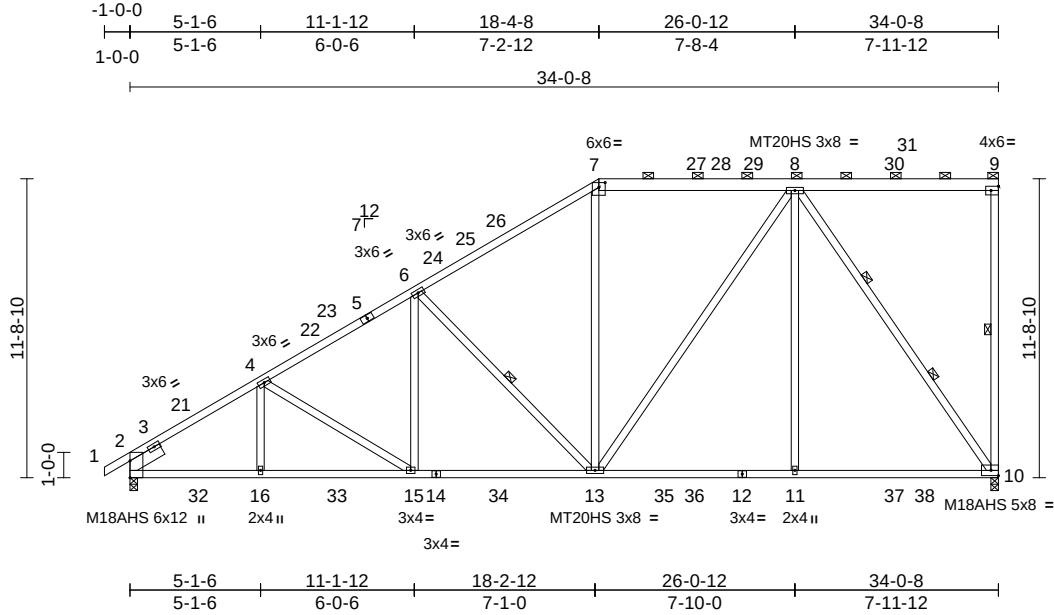
LOAD CASE(S) Standard

|             |       |                |     |     |                                           |
|-------------|-------|----------------|-----|-----|-------------------------------------------|
| Job         | Truss | Truss Type     | Qty | Ply | The Farm at Neills Creek Lot 00.0184 Roof |
| 2504-5093-A | A2    | Piggyback Base | 8   | 1   | Job Reference (optional)                  |
|             |       |                |     |     | I72666435                                 |

Structural, LLC, Thurmont, MD - 21788,

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Page: 1



Scale = 1:90.3

Plate Offsets (X, Y): [7:0-3-0,0-2-5], [9:Edge,0-2-0]

| Loading      | (psf)     | Spacing         | 2-0-0           | CSI       |      | DEFL     | in    | (loc) | l/defl | L/d | PLATES         | GRIP     |
|--------------|-----------|-----------------|-----------------|-----------|------|----------|-------|-------|--------|-----|----------------|----------|
| TCLL (roof)  | 20.0      | Plate Grip DOL  | 1.15            | TC        | 0.84 | Vert(LL) | -0.28 | 10-11 | >999   | 360 | MT20           | 244/190  |
| Snow (Pf/Pg) | 20.4/20.0 | Lumber DOL      | 1.15            | BC        | 0.59 | Vert(CT) | -0.37 | 10-11 | >999   | 240 | M18AHS         | 186/179  |
| TCDL         | 10.0      | Rep Stress Incr | YES             | WB        | 0.90 | Horz(CT) | 0.06  | 10    | n/a    | n/a | MT20HS         | 187/143  |
| BCLL         | 0.0*      | Code            | IRC2021/TPI2014 | Matrix-AS |      | Wind(LL) | 0.07  | 10-11 | >999   | 240 |                |          |
| BCDL         | 10.0      |                 |                 |           |      |          |       |       |        |     |                |          |
|              |           |                 |                 |           |      |          |       |       |        |     | Weight: 253 lb | FT = 20% |

#### LUMBER

TOP CHORD 2x4 SP No.2 \*Except\* 7-9:2x6 SP No.2, 1-5:2x4 SP SS  
BOT CHORD 2x4 SP SS \*Except\* 2-14:2x4 SP DSS  
WEBS 2x4 SP No.3 \*Except\* 9-10:2x4 SP No.2, 13-8,10-8:2x4 SP SS  
SLIDER Left 2x6 SP No.2 -- 1-6-0

#### BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (5-11-10 max.): 7-9.  
BOT CHORD Rigid ceiling directly applied.  
WEBS 1 Row at midpt 9-10, 6-13  
WEBS 2 Rows at 1/3 pts 8-10

#### REACTIONS

(size) 2=0-3-8, 10=0-3-8  
Max Horiz 2=282 (LC 15)  
Max Grav 2=1623 (LC 50), 10=1734 (LC 43)

#### FORCES

TOP CHORD 1-2=0/41, 2-4=-2459/140, 4-6=-2298/0, 6-7=-1716/77, 7-8=-1379/85, 8-9=-163/170, 9-10=-318/52  
BOT CHORD 2-16=-349/2184, 15-16=-207/2184, 13-15=-182/2081, 11-13=-111/1161, 10-11=-111/1161  
WEBS 7-13=0/399, 8-13=-90/740, 8-11=0/501, 8-10=-1876/27, 6-15=0/414, 6-13=-911/59, 4-16=-30/269, 4-15=-250/55

#### NOTES

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

- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 2-4-14, Interior (1) 2-4-14 to 18-4-8, Exterior(2R) 18-4-8 to 23-2-4, Interior (1) 23-2-4 to 33-10-12 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
- 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
- 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 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.
- Plates checked for a plus or minus 5 degree rotation about its center.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Bearings are assumed to be: Joint 2 SP DSS , Joint 10 SP SS .
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

14) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



April 11,2025

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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)

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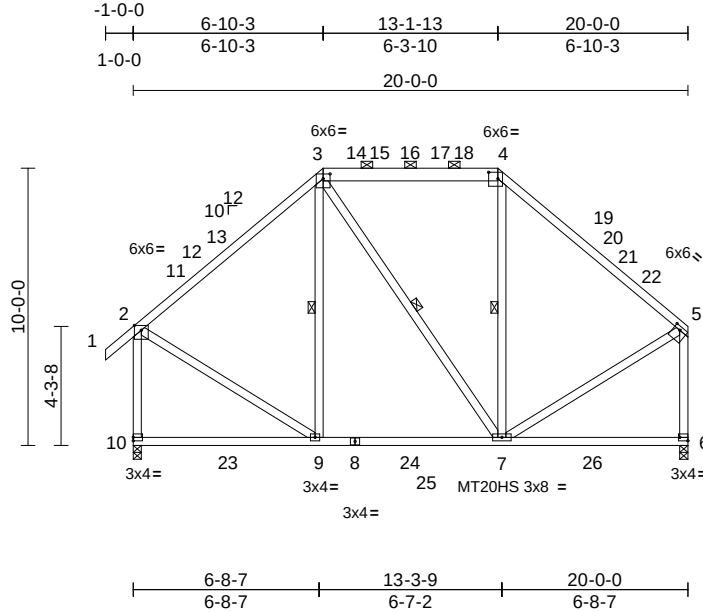
818 Soundside Road  
Edenton, NC 27932

|             |       |                |     |     |                                           |
|-------------|-------|----------------|-----|-----|-------------------------------------------|
| Job         | Truss | Truss Type     | Qty | Ply | The Farm at Neills Creek Lot 00.0184 Roof |
| 2504-5093-A | G1    | Piggyback Base | 1   | 1   | Job Reference (optional)                  |
|             |       |                |     |     | I72666436                                 |

Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Mar 20 2025 Print: 8.830 S Mar 20 2025 MiTek Industries, Inc. Thu Apr 10 08:29:13  
ID:XXZ?22VbBuVQg4ZVskfK2Oy3nLJ-RFC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:83.1

Plate Offsets (X, Y): [3:0-3-0,0-2-1], [4:0-4-0,0-2-12], [5:0-2-12,0-1-8], [6:Edge,0-1-8]

| Loading      | (psf)     | Spacing         | 2-0-0           | CSI       |      | DEFL     | in    | (loc) | l/defl | L/d | PLATES         | GRIP     |
|--------------|-----------|-----------------|-----------------|-----------|------|----------|-------|-------|--------|-----|----------------|----------|
| TCLL (roof)  | 20.0      | Plate Grip DOL  | 1.15            | TC        | 0.79 | Vert(LL) | -0.19 | 7-9   | >999   | 360 | MT20           | 244/190  |
| Snow (Pf/Pg) | 20.4/20.0 | Lumber DOL      | 1.15            | BC        | 0.89 | Vert(CT) | -0.23 | 9-10  | >999   | 240 | MT20HS         | 187/143  |
| TCDL         | 10.0      | Rep Stress Incr | YES             | WB        | 0.20 | Horz(CT) | 0.01  | 6     | n/a    | n/a |                |          |
| BCLL         | 0.0*      | Code            | IRC2021/TPI2014 | Matrix-AS |      | Wind(LL) | 0.01  | 7-9   | >999   | 240 |                |          |
| BCDL         | 10.0      |                 |                 |           |      |          |       |       |        |     |                |          |
|              |           |                 |                 |           |      |          |       |       |        |     | Weight: 151 lb | FT = 20% |

#### LUMBER

TOP CHORD 2x4 SP No.2 \*Except\* 3-4:2x6 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3 \*Except\* 10-2,6-5:2x4 SP No.2

#### BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 3-4.

BOT CHORD Rigid ceiling directly applied.

WEBS 1 Row at midpt 3-9, 3-7, 4-7

#### REACTIONS

(size) 6=0-3-8, 10=0-3-8  
Max Horiz 10=195 (LC 15)  
Max Grav 6=979 (LC 51), 10=1082 (LC 51)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/72, 2-3=-843/103, 3-4=-539/139,

4-5=-833/100, 2-10=-1087/103, 5-6=-977/80

BOT CHORD 9-10=-201/183, 7-9=-90/559, 6-7=-51/101

WEBS 3-9=-92/210, 3-7=-101/105, 4-7=-129/132,

2-9=0/543, 5-7=-14/543

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 6-10-3, Exterior(2R) 6-10-3 to 11-1-2, Interior (1) 11-1-2 to 13-1-13, Exterior(2R) 13-1-13 to 17-4-11, Interior (1) 17-4-11 to 19-10-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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

- 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 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.
- Plates checked for a plus or minus 5 degree rotation about its center.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- All bearings are assumed to be SP No.2 .
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



April 11,2025

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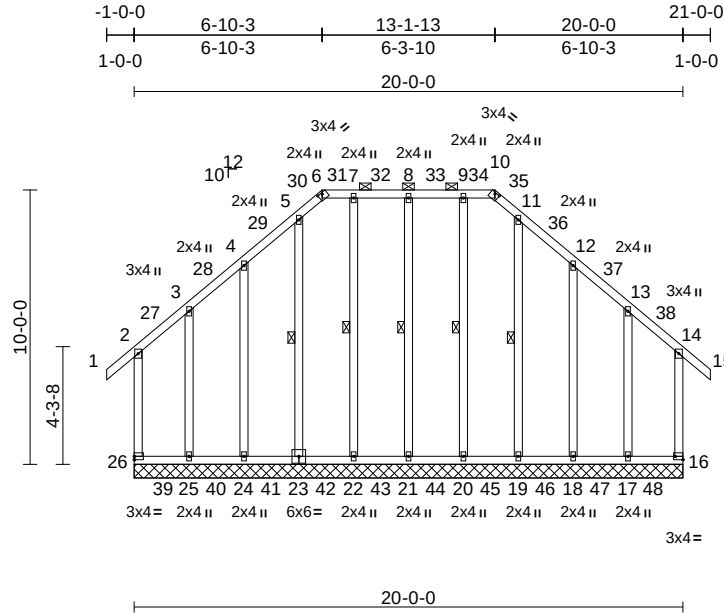
818 Soundside Road  
Edenton, NC 27932

|             |       |                                |     |     |                                           |
|-------------|-------|--------------------------------|-----|-----|-------------------------------------------|
| Job         | Truss | Truss Type                     | Qty | Ply | The Farm at Neills Creek Lot 00.0184 Roof |
| 2504-5093-A | G1G   | Piggyback Base Supported Gable | 1   | 1   | Job Reference (optional)                  |
|             |       |                                |     |     | I72666437                                 |

Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Mar 20 2025 Print: 8.830 S Mar 20 2025 MiTek Industries, Inc. Thu Apr 10 08:29:13  
ID:2ddfFeGH?Bm2yvqBdSLKGv8y8SrO-RfC?PsB70Hq3NSgPqnl8w3uITxbGKWrcDOI7J4zJC?f

Page: 1



Scale = 1:84

Plate Offsets (X, Y): [6:0-2-0,0-0-10], [10:0-2-0,0-0-10], [16:Edge,0-1-8]

| Loading                 | (psf)     | Spacing         | 2-0-0           | CSI       |      | DEFL     | in   | (loc) | l/defl | L/d | PLATES | GRIP    |
|-------------------------|-----------|-----------------|-----------------|-----------|------|----------|------|-------|--------|-----|--------|---------|
| TCLL (roof)             | 20.0      | Plate Grip DOL  | 1.15            | TC        | 0.62 | Vert(LL) | n/a  | -     | n/a    | 999 | MT20   | 244/190 |
| Snow (Pf/Pg)            | 20.4/20.0 | Lumber DOL      | 1.15            | BC        | 0.30 | Vert(CT) | n/a  | -     | n/a    | 999 |        |         |
| TCDL                    | 10.0      | Rep Stress Incr | YES             | WB        | 0.28 | Horz(CT) | 0.00 | 16    | n/a    | n/a |        |         |
| BCLL                    | 0.0*      | Code            | IRC2021/TPI2014 | Matrix-AS |      |          |      |       |        |     |        |         |
| BCDL                    | 10.0      |                 |                 |           |      |          |      |       |        |     |        |         |
| Weight: 187 lb FT = 20% |           |                 |                 |           |      |          |      |       |        |     |        |         |

#### LUMBER

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

#### BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 6-10.

BOT CHORD Rigid ceiling directly applied.

WEBS 1 Row at midpt 8-21, 7-22, 5-23, 9-20, 11-19

#### REACTIONS

|            |                                                                                                                                                                                       |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (size)     | 16=20-0-0, 17=20-0-0, 18=20-0-0, 19=20-0-0, 20=20-0-0, 21=20-0-0, 22=20-0-0, 23=20-0-0, 24=20-0-0, 25=20-0-0, 26=20-0-0                                                               |
| Max Horiz  | 26=200 (LC 14)                                                                                                                                                                        |
| Max Uplift | 16=213 (LC 13), 17=233 (LC 12), 18=33 (LC 17), 21=5 (LC 12), 24=33 (LC 16), 25=235 (LC 13), 26=216 (LC 12)                                                                            |
| Max Grav   | 16=358 (LC 57), 17=390 (LC 59), 18=334 (LC 111), 19=333 (LC 110), 20=333 (LC 109), 21=333 (LC 108), 22=333 (LC 107), 23=333 (LC 106), 24=334 (LC 105), 25=392 (LC 57), 26=360 (LC 59) |

#### FORCES

|                                            |                                                                                                                                                                                                                                |
|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (lb) - Maximum Compression/Maximum Tension |                                                                                                                                                                                                                                |
| TOP CHORD                                  | 2-26=-295/202, 1-2=0/72, 2-3=-149/151, 3-4=-93/186, 4-5=-122/270, 5-6=-146/242, 6-7=-95/243, 7-8=-95/243, 8-9=-95/243, 9-10=-95/243, 10-11=-146/242, 11-12=-121/269, 12-13=-93/187, 13-14=-147/149, 14-15=0/72, 14-16=-295/200 |

BOT CHORD 25-26=-114/130, 24-25=-114/130, 22-24=-114/130, 21-22=-114/130, 20-21=-114/130, 19-20=-114/130, 18-19=-114/130, 17-18=-114/130, 16-17=-114/130

WEBS 8-21=-267/81, 7-22=-268/0, 5-23=-272/1, 4-24=-277/126, 3-25=-275/129, 9-20=-268/0, 11-19=-272/1, 12-18=-277/126, 13-17=-275/128

#### NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Corner (3E) -1-0-0 to 2-0-0, Exterior(2N) 2-0-0 to 6-10-3, Corner (3R) 6-10-3 to 10-0-0, Exterior(2N) 10-0-0 to 13-1-13, Corner(3R) 13-1-13 to 16-0-0, Exterior(2N) 16-0-0 to 21-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=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
- 5) Unbalanced snow loads have been considered for this design.
- 6) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- 7) Provide adequate drainage to prevent water ponding.
- 8) Plates checked for a plus or minus 5 degree rotation about its center.

- 9) Gable requires continuous bottom chord bearing.
- 10) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 11) Gable studs spaced at 2-0-0 oc.
- 12) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 13) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 14) All bearings are assumed to be SP No.2 .
- 15) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 216 lb uplift at joint 26, 213 lb uplift at joint 16, 5 lb uplift at joint 21, 33 lb uplift at joint 24, 235 lb uplift at joint 25, 33 lb uplift at joint 18 and 233 lb uplift at joint 17.
- 16) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.



April 11,2025

Continued on page 2

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Edenton, NC 27932



|             |       |                                |     |     |                                           |
|-------------|-------|--------------------------------|-----|-----|-------------------------------------------|
| Job         | Truss | Truss Type                     | Qty | Ply | The Farm at Neills Creek Lot 00.0184 Roof |
| 2504-5093-A | G1G   | Piggyback Base Supported Gable | 1   | 1   | I72666437                                 |
|             |       |                                |     |     | Job Reference (optional)                  |

- 17) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- 18) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

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

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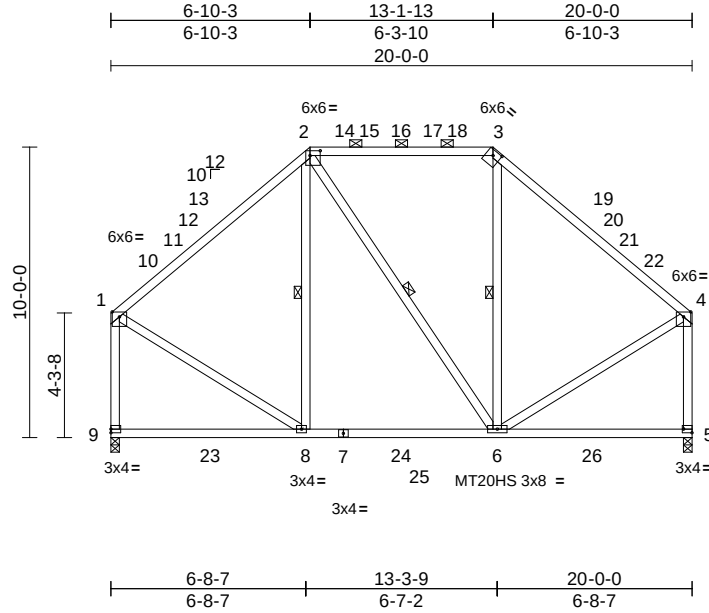
818 Soundside Road  
Edenton, NC 27932

|                          |       |                |     |     |                                           |
|--------------------------|-------|----------------|-----|-----|-------------------------------------------|
| Job                      | Truss | Truss Type     | Qty | Ply | The Farm at Neills Creek Lot 00.0184 Roof |
| 2504-5093-A              | G1A   | Piggyback Base | 9   | 1   | I72666438                                 |
| Job Reference (optional) |       |                |     |     |                                           |

Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Mar 20 2025 Print: 8.830 S Mar 20 2025 MiTek Industries, Inc. Thu Apr 10 08:29:13  
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Page: 1



Scale = 1:79.3

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

| Loading      | (psf)     | Spacing         | 2-0-0           | CSI       |      | DEFL     | in    | (loc) | l/defl | L/d | PLATES         | GRIP     |
|--------------|-----------|-----------------|-----------------|-----------|------|----------|-------|-------|--------|-----|----------------|----------|
| TCLL (roof)  | 20.0      | Plate Grip DOL  | 1.15            | TC        | 0.93 | Vert(LL) | -0.19 | 8-9   | >999   | 360 | MT20           | 244/190  |
| Snow (Pf/Pg) | 20.4/20.0 | Lumber DOL      | 1.15            | BC        | 0.89 | Vert(CT) | -0.23 | 8-9   | >999   | 240 | MT20HS         | 187/143  |
| TCDL         | 10.0      | Rep Stress Incr | YES             | WB        | 0.21 | Horz(CT) | 0.01  | 5     | n/a    | n/a |                |          |
| BCLL         | 0.0*      | Code            | IRC2021/TPI2014 | Matrix-AS |      | Wind(LL) | -0.01 | 8-9   | >999   | 240 |                |          |
| BCDL         | 10.0      |                 |                 |           |      |          |       |       |        |     | Weight: 144 lb | FT = 20% |

#### LUMBER

TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3 \*Except\* 9-1,5-4:2x4 SP No.2

#### BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (2-2-0 max.): 2-3.

BOT CHORD Rigid ceiling directly applied.

WEBS 1 Row at midpt 2-8, 2-6, 3-6

#### REACTIONS

(size) 5=0-3-8, 9=0-3-8  
Max Horiz 9=185 (LC 13)  
Max Grav 5=982 (LC 50), 9=990 (LC 50)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-842/95, 2-3=-532/134, 3-4=-834/95, 1-9=-990/77, 4-5=-980/77

BOT CHORD 8-9=-181/185, 6-8=-84/557, 5-6=-52/105

WEBS 2-8=-98/210, 2-6=-103/103, 3-6=-127/134, 1-8=-8/556, 4-6=-8/548

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior (1) 3-1-12 to 6-10-3, Exterior(2R) 6-10-3 to 11-1-2, Interior (1) 11-1-2 to 13-1-13, Exterior(2R) 13-1-13 to 17-4-11, Interior (1) 17-4-11 to 19-10-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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

- Unbalanced snow loads have been considered for this design.
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.
- Plates checked for a plus or minus 5 degree rotation about its center.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- All bearings are assumed to be SP No.2 .
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



April 11, 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))

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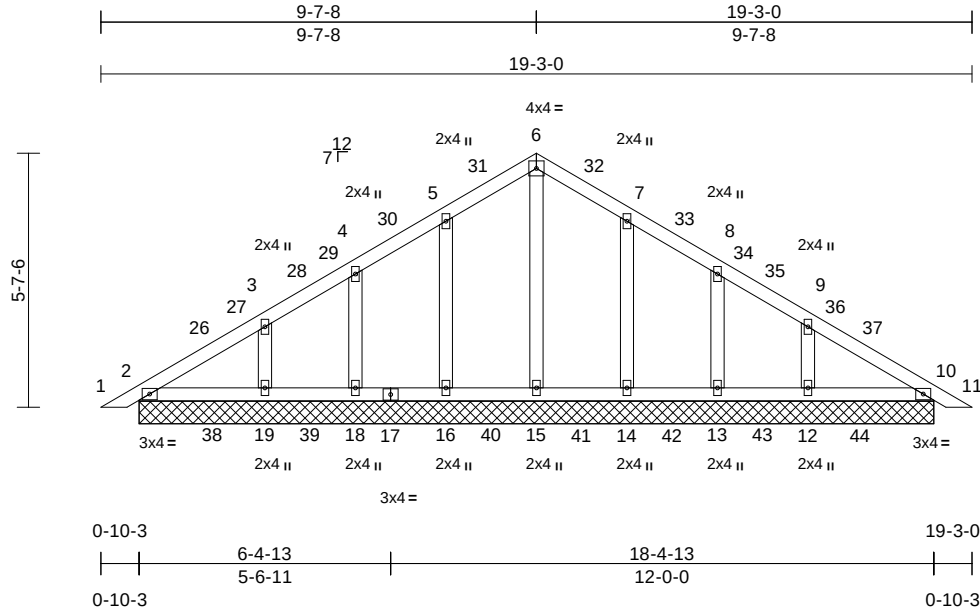
818 Soundside Road  
Edenton, NC 27932

|                          |       |            |     |     |                                           |
|--------------------------|-------|------------|-----|-----|-------------------------------------------|
| Job                      | Truss | Truss Type | Qty | Ply | The Farm at Neills Creek Lot 00.0184 Roof |
| 2504-5093-A              | PB1G  | Piggyback  | 1   | 1   | 172666439                                 |
| Job Reference (optional) |       |            |     |     |                                           |

Structural, LLC, Thurmont, MD - 21788,

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Scale = 1:50.9

| Loading                | (psf)     | Spacing         | 2-0-0           | CSI       | DEFL | in       | (loc) | l/defl | L/d | PLATES | GRIP    |
|------------------------|-----------|-----------------|-----------------|-----------|------|----------|-------|--------|-----|--------|---------|
| TCLL (roof)            | 20.0      | Plate Grip DOL  | 1.15            | TC        | 0.25 | Vert(LL) | n/a   | -      | n/a | 999    | 244/190 |
| Snow (Pf/Pg)           | 15.4/20.0 | Lumber DOL      | 1.15            | BC        | 0.43 | Vert(CT) | n/a   | -      | n/a | 999    |         |
| TCDL                   | 10.0      | Rep Stress Incr | YES             | WB        | 0.12 | Horz(CT) | 0.00  | 10     | n/a | n/a    |         |
| BCLL                   | 0.0*      | Code            | IRC2021/TPI2014 | Matrix-AS |      |          |       |        |     |        |         |
| BCDL                   | 10.0      |                 |                 |           |      |          |       |        |     |        |         |
| Weight: 90 lb FT = 20% |           |                 |                 |           |      |          |       |        |     |        |         |

#### LUMBER

|           |             |
|-----------|-------------|
| TOP CHORD | 2x4 SP No.2 |
| BOT CHORD | 2x4 SP No.3 |
| OTHERS    | 2x4 SP No.3 |

#### BRACING

|           |                                             |
|-----------|---------------------------------------------|
| TOP CHORD | Structural wood sheathing directly applied. |
| BOT CHORD | Rigid ceiling directly applied.             |

#### REACTIONS

|            |                                                                                                                                               |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| (size)     | 2=17-6-11, 10=17-6-11, 12=17-6-11, 13=17-6-11, 14=17-6-11, 15=17-6-11, 16=17-6-11, 18=17-6-11, 19=17-6-11                                     |
| Max Horiz  | 2=-87 (LC 14)                                                                                                                                 |
| Max Uplift | 12=-15 (LC 17), 13=-10 (LC 17), 14=-10 (LC 17), 16=-10 (LC 16), 18=-9 (LC 16), 19=-15 (LC 16)                                                 |
| Max Grav   | 2=315 (LC 65), 10=315 (LC 85), 12=366 (LC 83), 13=322 (LC 82), 14=337 (LC 81), 15=322 (LC 80), 16=337 (LC 79), 18=322 (LC 78), 19=366 (LC 77) |

#### FORCES

|                                            |                                                                                                                           |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| (lb) - Maximum Compression/Maximum Tension |                                                                                                                           |
| TOP CHORD                                  | 1-2=0/23, 2-3=-107/75, 3-4=-83/64, 4-5=-78/69, 5-6=-106/91, 6-7=-106/90, 7-8=-78/69, 8-9=-83/64, 9-10=-107/75, 10-11=0/23 |
| BOT CHORD                                  | 2-19=-26/75, 18-19=-26/52, 16-18=-26/52, 15-16=-26/52, 14-15=-26/52, 13-14=-26/52, 12-13=-26/52, 10-12=-26/75             |
| WEBS                                       | 6-15=-238/6, 5-16=-285/53, 4-18=-280/42, 3-19=-305/48, 7-14=-285/53, 8-13=-280/42, 9-12=-305/48                           |

#### NOTES

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

- 2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-3-8 to 3-3-8, Interior (1) 3-3-8 to 9-7-8, Exterior(2R) 9-7-8 to 12-7-8, Interior (1) 12-7-8 to 18-11-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) 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
- 5) Unbalanced snow loads have been considered for this design.
- 6) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- 7) Plates checked for a plus or minus 5 degree rotation about its center.
- 8) Gable requires continuous bottom chord bearing.
- 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 12) All bearings are assumed to be SP No.3 .
- 13) N/A

- 14) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 15) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- 16) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard



April 11, 2025

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

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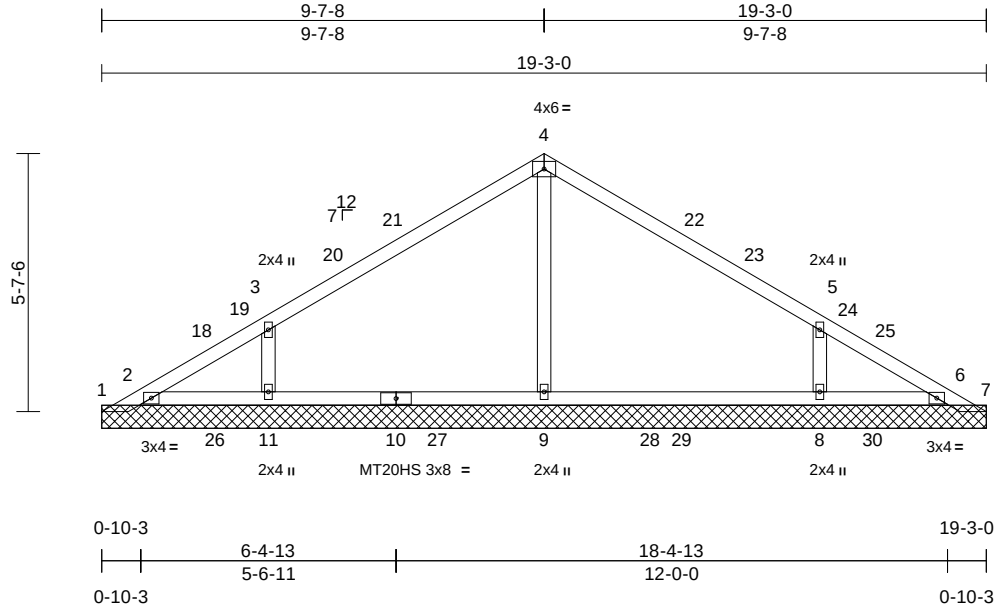
818 Soundside Road  
Edenton, NC 27932

|                          |       |            |     |     |                                           |
|--------------------------|-------|------------|-----|-----|-------------------------------------------|
| Job                      | Truss | Truss Type | Qty | Ply | The Farm at Neills Creek Lot 00.0184 Roof |
| 2504-5093-A              | PB1   | Piggyback  | 17  | 1   | 172666440                                 |
| Job Reference (optional) |       |            |     |     |                                           |

Structural, LLC, Thurmont, MD - 21788,

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Scale = 1:50.1

| Loading      | (psf)     | Spacing         | 2-0-0           | CSI       |      | DEFL      | in   | (loc) | l/defl | L/d | PLATES        | GRIP     |
|--------------|-----------|-----------------|-----------------|-----------|------|-----------|------|-------|--------|-----|---------------|----------|
| TCLL (roof)  | 20.0      | Plate Grip DOL  | 1.15            | TC        | 0.63 | Vert(LL)  | n/a  | -     | n/a    | 999 | MT20          | 244/190  |
| Snow (Pf/Pg) | 15.4/20.0 | Lumber DOL      | 1.15            | BC        | 0.70 | Vert(TL)  | n/a  | -     | n/a    | 999 | MT20HS        | 187/143  |
| TCDL         | 10.0      | Rep Stress Incr | YES             | WB        | 0.17 | Horiz(TL) | 0.00 | 7     | n/a    | n/a |               |          |
| BCLL         | 0.0*      | Code            | IRC2021/TPI2014 | Matrix-AS |      |           |      |       |        |     |               |          |
| BCDL         | 10.0      |                 |                 |           |      |           |      |       |        |     |               |          |
|              |           |                 |                 |           |      |           |      |       |        |     | Weight: 71 lb | FT = 20% |

#### LUMBER

|           |             |
|-----------|-------------|
| TOP CHORD | 2x4 SP No.2 |
| BOT CHORD | 2x4 SP No.2 |
| OTHERS    | 2x4 SP No.3 |

#### BRACING

|           |                                             |
|-----------|---------------------------------------------|
| TOP CHORD | Structural wood sheathing directly applied. |
| BOT CHORD | Rigid ceiling directly applied.             |

|           |            |                                                                                                          |
|-----------|------------|----------------------------------------------------------------------------------------------------------|
| REACTIONS | (size)     | 1=19-3-0, 2=19-3-0, 6=19-3-0, 7=19-3-0, 8=19-3-0, 9=19-3-0, 11=19-3-0                                    |
|           | Max Horiz  | 1=-87 (LC 12)                                                                                            |
|           | Max Uplift | 1=-122 (LC 62), 2=-171 (LC 63), 6=-176 (LC 64), 7=-120 (LC 65), 8=-37 (LC 17), 11=-37 (LC 16)            |
|           | Max Grav   | 1=276 (LC 44), 2=371 (LC 68), 6=358 (LC 66), 7=279 (LC 60), 8=514 (LC 35), 9=553 (LC 34), 11=514 (LC 34) |

#### FORCES

(lb) - Maximum Compression/Maximum Tension

|           |                                                                           |
|-----------|---------------------------------------------------------------------------|
| TOP CHORD | 1-2=-104/96, 2-3=-96/73, 3-4=-157/84, 4-5=-157/81, 5-6=-92/62, 6-7=-71/72 |
| BOT CHORD | 2-11=-57/87, 9-11=-16/59, 8-9=-16/59, 6-8=-57/84                          |
| WEBS      | 4-9=-315/26, 3-11=-378/124, 5-8=-378/124                                  |

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-3-8 to 3-3-8, Interior (1) 3-3-8 to 9-7-8, Exterior(2R) 9-7-8 to 12-7-8, Interior (1) 12-7-8 to 18-11-8 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.
- All plates are MT20 plates unless otherwise indicated.
- Plates checked for a plus or minus 5 degree rotation about its center.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- All bearings are assumed to be SP No.2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 122 lb uplift at joint 1 and 120 lb uplift at joint 7.
- N/A

- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

#### LOAD CASE(S)

Standard

- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.



April 11, 2025

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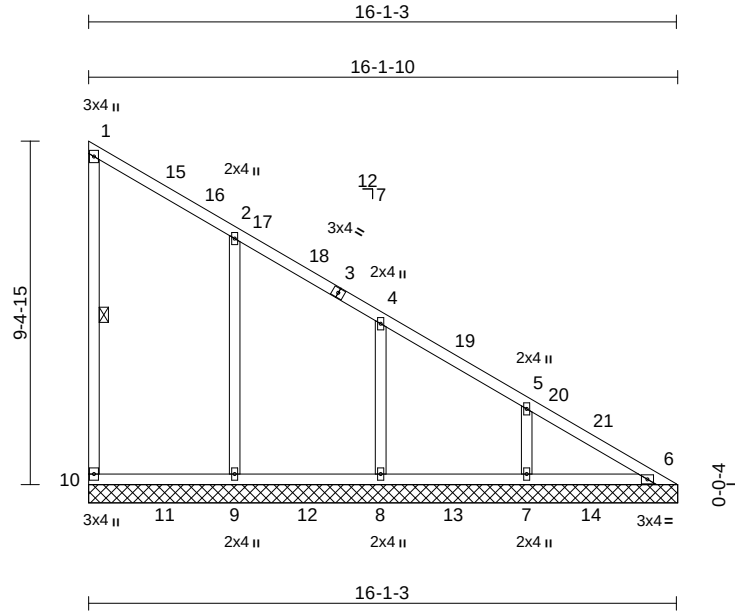
818 Soundside Road  
Edenton, NC 27932

|             |       |            |     |     |                                           |
|-------------|-------|------------|-----|-----|-------------------------------------------|
| Job         | Truss | Truss Type | Qty | Ply | The Farm at Neills Creek Lot 00.0184 Roof |
| 2504-5093-A | V1    | Valley     | 1   | 1   | Job Reference (optional)                  |
|             |       |            |     |     | I72666441                                 |

Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Mar 20 2025 Print: 8.830 S Mar 20 2025 MiTek Industries, Inc. Thu Apr 10 08:29:16  
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Page: 1



Scale = 1:63.1

| Loading      | (psf)     | Spacing         | 2-0-0           | CSI      | DEFL | in        | (loc) | l/defl | L/d | PLATES        | GRIP     |
|--------------|-----------|-----------------|-----------------|----------|------|-----------|-------|--------|-----|---------------|----------|
| TCLL (roof)  | 20.0      | Plate Grip DOL  | 1.15            | TC       | 0.81 | n/a       | -     | n/a    | 999 | MT20          | 244/190  |
| Snow (Pf/Pg) | 15.4/20.0 | Lumber DOL      | 1.15            | BC       | 0.49 | n/a       | -     | n/a    | 999 |               |          |
| TCDL         | 10.0      | Rep Stress Incr | YES             | WB       | 0.30 | Horiz(TL) | 0.01  | 6      | n/a |               |          |
| BCLL         | 0.0*      | Code            | IRC2021/TPI2014 | Matrix-S |      |           |       |        |     |               |          |
| BCDL         | 10.0      |                 |                 |          |      |           |       |        |     | Weight: 83 lb | FT = 20% |

#### LUMBER

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

#### BRACING

|           |                                                                                       |
|-----------|---------------------------------------------------------------------------------------|
| TOP CHORD | Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals. |
| BOT CHORD | Rigid ceiling directly applied or 10-0-0 oc bracing.                                  |
| WEBS      | 1 Row at midpt 1-10                                                                   |

#### REACTIONS

|            |                                                                            |
|------------|----------------------------------------------------------------------------|
| (size)     | 6=16-1-10, 7=16-1-10, 8=16-1-10, 9=16-1-10, 10=16-1-10                     |
| Max Horiz  | 10=-223 (LC 12)                                                            |
| Max Uplift | 6=-6 (LC 13), 7=-23 (LC 17), 8=-20 (LC 17), 9=-23 (LC 17), 10=-20 (LC 12)  |
| Max Grav   | 6=308 (LC 48), 7=423 (LC 56), 8=408 (LC 55), 9=480 (LC 35), 10=316 (LC 53) |

#### FORCES

|                                            |                                                                      |
|--------------------------------------------|----------------------------------------------------------------------|
| (lb) - Maximum Compression/Maximum Tension |                                                                      |
| TOP CHORD                                  | 1-10=-284/66, 1-2=-142/127, 2-4=-216/201, 4-5=-282/243, 5-6=-353/297 |
| BOT CHORD                                  | 9-10=-252/319, 8-9=-252/319, 7-8=-252/319, 6-7=-252/319              |
| WEBS                                       | 2-9=-338/127, 4-8=-329/100, 5-7=-337/97                              |

#### NOTES

- 1) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior (1) 3-1-12 to 15-6-11 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) Plates checked for a plus or minus 5 degree rotation about its center.
- 6) Gable requires continuous bottom chord bearing.
- 7) Gable studs spaced at 4-0-0 oc.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 10) All bearings are assumed to be SP No.2.
- 11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 20 lb uplift at joint 10, 6 lb uplift at joint 6, 23 lb uplift at joint 9, 20 lb uplift at joint 8 and 23 lb uplift at joint 7.
- 12) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.

LOAD CASE(S) Standard



April 11, 2025

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818 Soundside Road  
Edenton, NC 27932

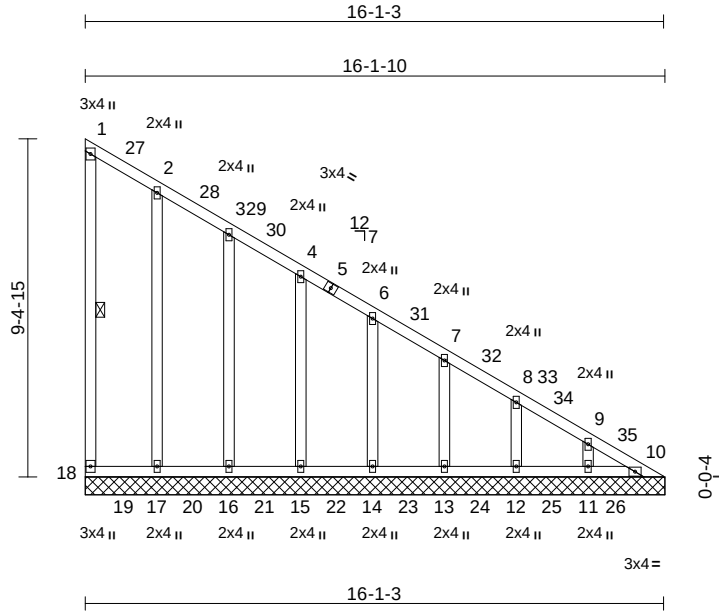


|                          |       |            |     |     |                                           |
|--------------------------|-------|------------|-----|-----|-------------------------------------------|
| Job                      | Truss | Truss Type | Qty | Ply | The Farm at Neills Creek Lot 00.0184 Roof |
| 2504-5093-A              | V1G   | Valley     | 1   | 1   | 172666442                                 |
| Job Reference (optional) |       |            |     |     |                                           |

Structural, LLC, Thurmont, MD - 21788,

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|                |           |                 |                 |            |      |             |      |       |        |     |               |             |
|----------------|-----------|-----------------|-----------------|------------|------|-------------|------|-------|--------|-----|---------------|-------------|
| Scale = 1:64.1 |           |                 |                 |            |      |             |      |       |        |     |               |             |
| <b>Loading</b> | (psf)     | <b>Spacing</b>  | 2-0-0           | <b>CSI</b> |      | <b>DEFL</b> | in   | (loc) | l/defl | L/d | <b>PLATES</b> | <b>GRIP</b> |
| TCLL (roof)    | 20.0      | Plate Grip DOL  | 1.15            | TC         | 0.76 | Vert(LL)    | n/a  | -     | n/a    | 999 | MT20          | 244/190     |
| Snow (Pf/Pg)   | 15.4/20.0 | Lumber DOL      | 1.15            | BC         | 0.20 | Vert(TL)    | n/a  | -     | n/a    | 999 |               |             |
| TCDL           | 10.0      | Rep Stress Incr | YES             | WB         | 0.34 | Horiz(TL)   | 0.01 | 10    | n/a    | n/a |               |             |
| BCLL           | 0.0*      | Code            | IRC2021/TPI2014 | Matrix-S   |      |             |      |       |        |     |               |             |
| BCDL           | 10.0      |                 |                 |            |      |             |      |       |        |     |               |             |
| Weight: 108 lb |           |                 |                 |            |      |             |      |       |        |     |               | FT = 20%    |

|                                                          |                                                                                                                                                |
|----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>LUMBER</b>                                            |                                                                                                                                                |
| TOP CHORD                                                | 2x4 SP No.2                                                                                                                                    |
| BOT CHORD                                                | 2x4 SP No.2                                                                                                                                    |
| WEBS                                                     | 2x4 SP No.3                                                                                                                                    |
| OTHERS                                                   | 2x4 SP No.3                                                                                                                                    |
| <b>BRACING</b>                                           |                                                                                                                                                |
| TOP CHORD                                                | Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.                                                          |
| BOT CHORD                                                | Rigid ceiling directly applied or 6-0-0 oc bracing.                                                                                            |
| WEBS                                                     | 1 Row at midpt 1-18                                                                                                                            |
| <b>REACTIONS</b> (size)                                  |                                                                                                                                                |
|                                                          | 10=16-1-10, 11=16-1-10, 12=16-1-10, 13=16-1-10, 14=16-1-10, 15=16-1-10, 16=16-1-10, 17=16-1-10, 18=16-1-10                                     |
| Max Horiz                                                | 18=223 (LC 14)                                                                                                                                 |
| Max Uplift                                               | 10=35 (LC 15), 11=12 (LC 17), 12=10 (LC 17), 13=10 (LC 17), 14=10 (LC 17), 15=12 (LC 17), 16=8 (LC 17), 17=14 (LC 17), 18=29 (LC 14)           |
| Max Grav                                                 | 10=276 (LC 56), 11=332 (LC 72), 12=333 (LC 71), 13=333 (LC 70), 14=333 (LC 69), 15=333 (LC 68), 16=332 (LC 67), 17=337 (LC 66), 18=283 (LC 65) |
| <b>FORCES</b> (lb) - Maximum Compression/Maximum Tension |                                                                                                                                                |
| TOP CHORD                                                | 1-18=-264/21, 1-2=-110/109, 2-3=-158/158, 3-4=-189/176, 4-6=-225/201, 6-7=-260/224, 7-8=-295/248, 8-9=-331/272, 9-10=-364/297                  |
| BOT CHORD                                                | 17-18=-253/320, 16-17=-253/320, 15-16=-253/320, 14-15=-253/320, 13-14=-253/320, 12-13=-253/320, 11-12=-253/320, 10-11=-253/320                 |
| WEBS                                                     | 2-17=-278/105, 3-16=-276/63, 4-15=-278/47, 6-14=-281/46, 7-13=-284/46, 8-12=-287/47, 9-11=-289/48                                              |

#### NOTES

- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior (1) 3-1-12 to 15-6-11 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.
- Plates checked for a plus or minus 5 degree rotation about its center.
- Gable requires continuous bottom chord bearing.
- 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2 .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 29 lb uplift at joint 18, 35 lb uplift at joint 10, 14 lb uplift at joint 17, 8 lb uplift at joint 16, 12 lb uplift at joint 15, 10 lb uplift at joint 14, 10 lb uplift at joint 13, 10 lb uplift at joint 12 and 12 lb uplift at joint 11.

- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.

**LOAD CASE(S)** Standard



April 11, 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

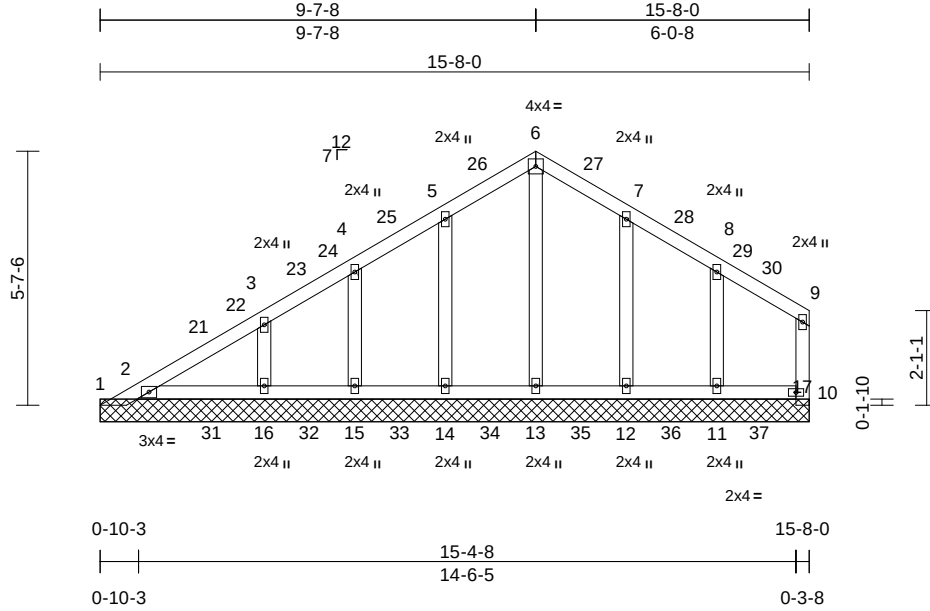
818 Soundside Road  
Edenton, NC 27932

|             |       |            |     |     |                                           |
|-------------|-------|------------|-----|-----|-------------------------------------------|
| Job         | Truss | Truss Type | Qty | Ply | The Farm at Neills Creek Lot 00.0184 Roof |
| 2504-5093-A | PB2G  | Piggyback  | 1   | 1   | 172666443                                 |
|             |       |            |     |     | Job Reference (optional)                  |

Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Mar 20 2025 Print: 8.830 S Mar 20 2025 MiTek Industries, Inc. Thu Apr 10 08:29:15  
ID:7wxcYOXfLjhwI\_oDCqVjoKyATy9-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrcDOI7J4zJC7f

Page: 1



|                |           |                 |                 |            |      |             |      |       |        |     |               |             |
|----------------|-----------|-----------------|-----------------|------------|------|-------------|------|-------|--------|-----|---------------|-------------|
| <b>Loading</b> | (psf)     | <b>Spacing</b>  | 2-0-0           | <b>CSI</b> |      | <b>DEFL</b> | in   | (loc) | l/defl | L/d | <b>PLATES</b> | <b>GRIP</b> |
| TCLL (roof)    | 20.0      | Plate Grip DOL  | 1.15            | TC         | 0.22 | Vert(LL)    | n/a  | -     | n/a    | 999 | MT20          | 244/190     |
| Snow (Pf/Pg)   | 15.4/20.0 | Lumber DOL      | 1.15            | BC         | 0.23 | Vert(TL)    | n/a  | -     | n/a    | 999 |               |             |
| TCDL           | 10.0      | Rep Stress Incr | YES             | WB         | 0.14 | Horiz(TL)   | 0.00 | 17    | n/a    | n/a |               |             |
| BCLL           | 0.0*      | Code            | IRC2021/TPI2014 | Matrix-AS  |      |             |      |       |        |     |               |             |
| BCDL           | 10.0      |                 |                 |            |      |             |      |       |        |     | Weight: 80 lb | FT = 20%    |

|                                                                        |                                                                                                                                                                   |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                              |                                                                                                                                                                                                                                      |
|------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>LUMBER</b>                                                          |                                                                                                                                                                   | 2)  | Wind: ASCE 7-16; Vult=120mph (3-second gust)<br>Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat.<br>II; Exp B; Enclosed; MWFRS (envelope) and C-C<br>Exterior(2E) 0-3-8 to 3-3-8, Interior (1) 3-3-8 to 9-7-8,<br>Exterior(2R) 9-7-8 to 12-7-8, Interior (1) 12-7-8 to 15-6-4<br>zone; cantilever left and right exposed ; end vertical left<br>and right exposed; C-C for members and forces &<br>MWFRS for reactions shown; Lumber DOL=1.60 plate<br>grip DOL=1.60 | 14)                          | This truss has been designed for a moving concentrated<br>load of 250.0lb live and 3.0lb dead located at all mid<br>panels and at all panel points along the Top Chord and<br>Bottom Chord, nonconcurrent with any other live loads. |
| TOP CHORD                                                              | 2x4 SP No.2                                                                                                                                                       | 3)  | Truss designed for wind loads in the plane of the truss<br>only. For studs exposed to wind (normal to the face),<br>see Standard Industry Gable End Details as applicable,<br>or consult qualified building designer as per ANSI/TPI 1.                                                                                                                                                                                                                                | 15)                          | This truss design requires that a minimum of 7/16"<br>structural wood sheathing be applied directly to the top<br>chord and 1/2" gypsum sheetrock be applied directly to<br>the bottom chord.                                        |
| BOT CHORD                                                              | 2x4 SP No.2                                                                                                                                                       | 4)  | TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15<br>Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL =<br>1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially<br>Exp.; Ce=1.0; Cs=1.00; Ct=1.10                                                                                                                                                                                                                                                                | 16)                          | See Standard Industry Piggyback Truss Connection<br>Detail for Connection to base truss as applicable, or<br>consult qualified building designer.                                                                                    |
| WEBS                                                                   | 2x4 SP No.3                                                                                                                                                       | 5)  | Unbalanced snow loads have been considered for this<br>design.                                                                                                                                                                                                                                                                                                                                                                                                         | <b>LOAD CASE(S)</b> Standard |                                                                                                                                                                                                                                      |
| OTHERS                                                                 | 2x4 SP No.3                                                                                                                                                       | 6)  | Plates checked for a plus or minus 5 degree rotation<br>about its center.                                                                                                                                                                                                                                                                                                                                                                                              |                              |                                                                                                                                                                                                                                      |
| <b>BRACING</b>                                                         |                                                                                                                                                                   | 7)  | Gable requires continuous bottom chord bearing.                                                                                                                                                                                                                                                                                                                                                                                                                        |                              |                                                                                                                                                                                                                                      |
| TOP CHORD                                                              | Structural wood sheathing directly applied,<br>except end verticals.                                                                                              | 8)  | Gable studs spaced at 2-0-0 oc.                                                                                                                                                                                                                                                                                                                                                                                                                                        |                              |                                                                                                                                                                                                                                      |
| BOT CHORD                                                              | Rigid ceiling directly applied.                                                                                                                                   | 9)  | This truss has been designed for a 10.0 psf bottom<br>chord live load nonconcurrent with any other live loads.                                                                                                                                                                                                                                                                                                                                                         |                              |                                                                                                                                                                                                                                      |
| <b>REACTIONS</b>                                                       | (size)                                                                                                                                                            | 10) | * This truss has been designed for a live load of 20.0psf<br>on the bottom chord in all areas where a rectangle<br>3-06-00 tall by 2-00-00 wide will fit between the bottom<br>chord and any other members.                                                                                                                                                                                                                                                            |                              |                                                                                                                                                                                                                                      |
|                                                                        | 1=15-8-0, 2=15-8-0, 10=15-8-0,<br>11=15-8-0, 12=15-8-0, 13=15-8-0,<br>14=15-8-0, 15=15-8-0, 16=15-8-0,<br>17=15-8-0                                               | 11) | All bearings are assumed to be SP No.2 .                                                                                                                                                                                                                                                                                                                                                                                                                               |                              |                                                                                                                                                                                                                                      |
|                                                                        | Max Horiz 1=105 (LC 13)                                                                                                                                           | 12) | Bearing at joint(s) 10, 17 considers parallel to grain<br>value using ANSI/TPI 1 angle to grain formula. Building<br>designer should verify capacity of bearing surface.                                                                                                                                                                                                                                                                                               |                              |                                                                                                                                                                                                                                      |
|                                                                        | Max Uplift 1=-153 (LC 64), 11=-17 (LC 17),<br>12=-8 (LC 17), 14=-10 (LC 16),<br>15=-10 (LC 16), 16=-13 (LC 16)                                                    | 13) | Provide mechanical connection (by others) of truss to<br>bearing plate capable of withstanding 153 lb uplift at joint<br>1, 10 lb uplift at joint 14, 10 lb uplift at joint 15, 13 lb uplift<br>at joint 16, 8 lb uplift at joint 12 and 17 lb uplift at joint 11.                                                                                                                                                                                                     |                              |                                                                                                                                                                                                                                      |
|                                                                        | Max Grav 1=225 (LC 44), 2=441 (LC 72),<br>10=289 (LC 79), 11=335 (LC 78),<br>12=334 (LC 77), 13=326 (LC 76),<br>14=336 (LC 75), 15=325 (LC 74),<br>16=356 (LC 73) |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                              |                                                                                                                                                                                                                                      |
| <b>FORCES</b>                                                          |                                                                                                                                                                   |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                              |                                                                                                                                                                                                                                      |
| (lb) - Maximum Compression/Maximum<br>Tension                          |                                                                                                                                                                   |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                              |                                                                                                                                                                                                                                      |
| TOP CHORD                                                              | 1-2=-118/128, 2-3=-96/84, 3-4=-92/75,<br>4-5=-82/92, 5-6=-100/126, 6-7=-100/124,<br>7-8=-80/85, 8-9=-95/52, 10-17=0/0,<br>9-10=-269/31                            |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                              |                                                                                                                                                                                                                                      |
| BOT CHORD                                                              | 2-16=-76/42, 15-16=-32/42, 14-15=-32/42,<br>13-14=-32/42, 12-13=-32/42, 11-12=-32/42,<br>10-11=-32/42                                                             |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                              |                                                                                                                                                                                                                                      |
| WEBS                                                                   | 6-13=-269/15, 5-14=-285/56, 4-15=-281/47,<br>3-16=-299/54, 7-12=-284/53, 8-11=-286/54                                                                             |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                              |                                                                                                                                                                                                                                      |
| <b>NOTES</b>                                                           |                                                                                                                                                                   |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                              |                                                                                                                                                                                                                                      |
| 1) Unbalanced roof live loads have been considered for<br>this design. |                                                                                                                                                                   |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                              |                                                                                                                                                                                                                                      |





April 11, 2025

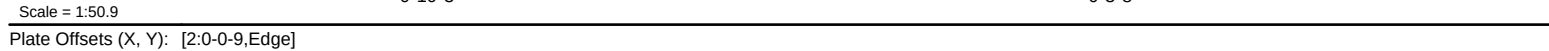
**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

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)

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A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Mar 20 2025 Print: 8.830 S Mar 20 2025 MiTek Industries, Inc. Thu Apr 10 08:29:15 Page: 1  
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|                                                                     |                                                                                                    |                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                 |
|---------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>LUMBER</b>                                                       |                                                                                                    | Wind: ASCE 7-16; Vult=120mph (3-second gust)                                                                                                                                                                                      | 14) N/A                                                                                                                                                                                                                         |
| TOP CHORD                                                           | 2x4 SP No.2                                                                                        | Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C                                                                                                                                  |                                                                                                                                                                                                                                 |
| BOT CHORD                                                           | 2x4 SP No.2                                                                                        | Exterior (2E) 0-3-8 to 3-3-8, Interior (1) 3-3-8 to 9-7-8, Exterior (2R) 9-7-8 to 12-7-8, Interior (1) 12-7-8 to 15-6-4                                                                                                           | 15) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads. |
| WEBS                                                                | 2x4 SP No.3                                                                                        | zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60                                                        | 16) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.                                        |
| OTHERS                                                              | 2x4 SP No.3                                                                                        |                                                                                                                                                                                                                                   | 17) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.                                                                                 |
| <b>BRACING</b>                                                      |                                                                                                    |                                                                                                                                                                                                                                   | <b>LOAD CASE(S)</b> Standard                                                                                                                                                                                                    |
| TOP CHORD                                                           | Structural wood sheathing directly applied, except end verticals.                                  |                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                 |
| BOT CHORD                                                           | Rigid ceiling directly applied.                                                                    |                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                 |
| <b>REACTIONS</b> (size)                                             |                                                                                                    | 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1. |                                                                                                                                                                                                                                 |
|                                                                     | 1=15-8-0, 2=15-8-0, 7=15-8-0, 8=15-8-0, 9=15-8-0, 10=15-8-0, 11=15-8-0                             | 4) TCELL: 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                                |                                                                                                                                                                                                                                 |
|                                                                     | Max Horiz 1=105 (LC 13)                                                                            | 5) Unbalanced snow loads have been considered for this design.                                                                                                                                                                    |                                                                                                                                                                                                                                 |
|                                                                     | Max Uplift 1=393 (LC 46), 2=-9 (LC 16), 7=-61 (LC 60), 8=-26 (LC 17), 10=-28 (LC 16)               | 6) Plates checked for a plus or minus 5 degree rotation about its center.                                                                                                                                                         |                                                                                                                                                                                                                                 |
|                                                                     | Max Grav 1=140 (LC 44), 2=662 (LC 46), 7=270 (LC 67), 8=393 (LC 66), 9=405 (LC 65), 10=446 (LC 34) | 7) Gable requires continuous bottom chord bearing.                                                                                                                                                                                |                                                                                                                                                                                                                                 |
| <b>FORCES</b> (lb) - Maximum Compression/Maximum Tension            |                                                                                                    | 8) Gable studs spaced at 4-0-0 oc.                                                                                                                                                                                                |                                                                                                                                                                                                                                 |
| TOP CHORD                                                           | 1-2=-129/235, 2-3=-111/226, 3-4=-115/117, 4-5=-110/111, 5-6=-91/58, 7-11=0/0, 6-7=-259/64          | 9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.                                                                                                                    |                                                                                                                                                                                                                                 |
| BOT CHORD                                                           | 2-10=-229/42, 9-10=-36/42, 8-9=-36/42, 7-8=-36/42                                                  | 10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.       |                                                                                                                                                                                                                                 |
| WEBS                                                                | 4-9=-318/15, 3-10=-345/111, 5-8=-321/93                                                            | 11) All bearings are assumed to be SP No.2 .                                                                                                                                                                                      |                                                                                                                                                                                                                                 |
| <b>NOTES</b>                                                        |                                                                                                    | 12) Bearing at joint(s) 7, 11 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.                                                             |                                                                                                                                                                                                                                 |
| 1) Unbalanced roof live loads have been considered for this design. |                                                                                                    | 13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 61 lb uplift at joint 7 and 393 lb uplift at joint 1.                                                                             |                                                                                                                                                                                                                                 |



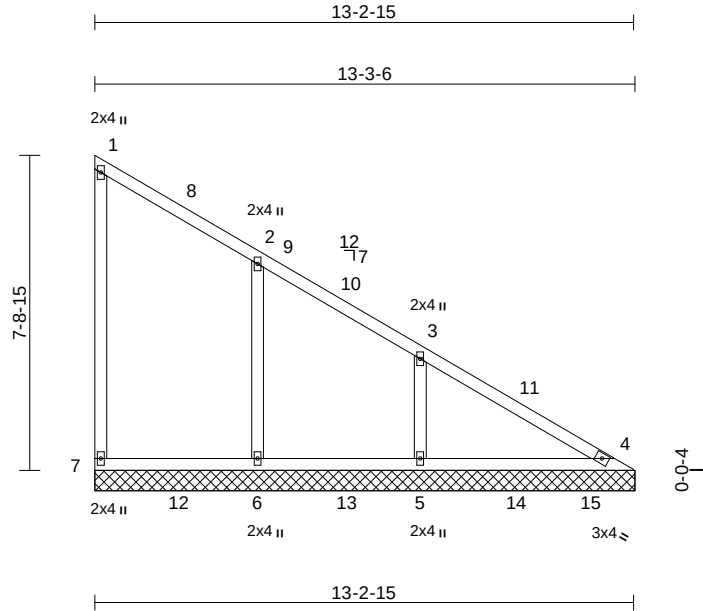
April 11, 2025

|                          |       |            |     |     |                                           |
|--------------------------|-------|------------|-----|-----|-------------------------------------------|
| Job                      | Truss | Truss Type | Qty | Ply | The Farm at Neills Creek Lot 00.0184 Roof |
| 2504-5093-A              | V2    | Valley     | 2   | 1   | 172666445                                 |
| Job Reference (optional) |       |            |     |     |                                           |

Structural, LLC, Thurmont, MD - 21788,

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ID:EKq2nKXzXnCMdhHFGns97zyAQwV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:56.6

| Loading      | (psf)     | Spacing         | 2-0-0           | CSI      | DEFL | in        | (loc) | l/defl | L/d | PLATES        | GRIP     |
|--------------|-----------|-----------------|-----------------|----------|------|-----------|-------|--------|-----|---------------|----------|
| TCLL (roof)  | 20.0      | Plate Grip DOL  | 1.15            | TC       | 0.62 | n/a       | -     | n/a    | 999 | MT20          | 244/190  |
| Snow (Pf/Pg) | 15.4/20.0 | Lumber DOL      | 1.15            | BC       | 0.63 | n/a       | -     | n/a    | 999 |               |          |
| TCDL         | 10.0      | Rep Stress Incr | YES             | WB       | 0.17 | Horiz(TL) | 0.00  | 4      | n/a |               |          |
| BCLL         | 0.0*      | Code            | IRC2021/TPI2014 | Matrix-S |      |           |       |        |     |               |          |
| BCDL         | 10.0      |                 |                 |          |      |           |       |        |     |               |          |
|              |           |                 |                 |          |      |           |       |        |     | Weight: 63 lb | FT = 20% |

#### LUMBER

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

#### BRACING

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

|                  |            |                                                            |
|------------------|------------|------------------------------------------------------------|
| <b>REACTIONS</b> | (size)     | 4=13-3-6, 5=13-3-6, 6=13-3-6, 7=13-3-6                     |
|                  | Max Horiz  | 7=-182 (LC 12)                                             |
|                  | Max Uplift | 5=-26 (LC 17), 6=-21 (LC 17), 7=-15 (LC 12)                |
|                  | Max Grav   | 4=331 (LC 45), 5=481 (LC 34), 6=440 (LC 34), 7=319 (LC 49) |

#### FORCES

|           |                                                       |
|-----------|-------------------------------------------------------|
|           | (lb) - Maximum Compression/Maximum Tension            |
| TOP CHORD | 1-7=-285/74, 1-2=-127/116, 2-3=-212/183, 3-4=-307/254 |
| BOT CHORD | 6-7=-219/292, 5-6=-219/292, 4-5=-219/292              |
| WEBS      | 2-6=-331/133, 3-5=-352/142                            |

#### NOTES

- 1) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior (1) 3-1-12 to 12-8-14 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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) Plates checked for a plus or minus 5 degree rotation about its center.
- 6) Gable requires continuous bottom chord bearing.
- 7) Gable studs spaced at 4-0-0 oc.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 10) All bearings are assumed to be SP No.2 .
- 11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 15 lb uplift at joint 7, 21 lb uplift at joint 6 and 26 lb uplift at joint 5.
- 12) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.

**LOAD CASE(S)** Standard



April 11,2025

**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)

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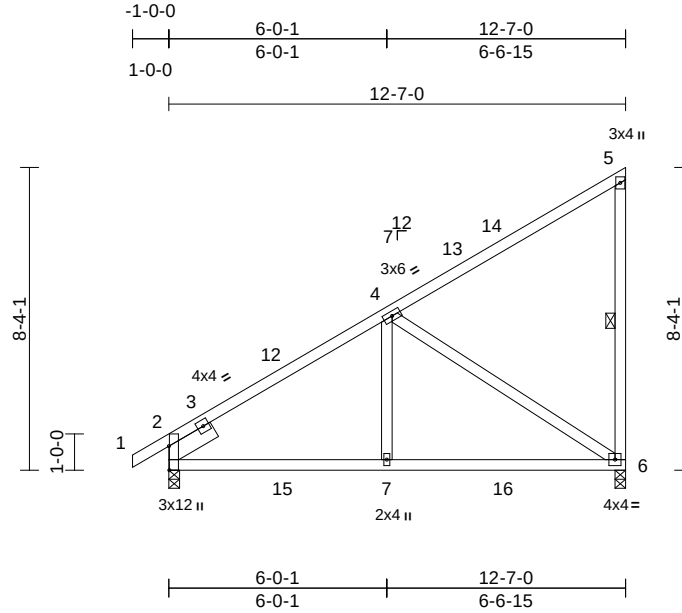
818 Soundside Road  
Edenton, NC 27932

|                          |       |            |     |     |                                           |
|--------------------------|-------|------------|-----|-----|-------------------------------------------|
| Job                      | Truss | Truss Type | Qty | Ply | The Farm at Neills Creek Lot 00.0184 Roof |
| T2504-5093-A             | B1    | Monopitch  | 7   | 1   | 172666446                                 |
| Job Reference (optional) |       |            |     |     |                                           |

Structural, LLC, Thurmont, MD - 21788,

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Page: 1



Scale = 1:63.5

Plate Offsets (X, Y): [2:0-7-15,Edge]

| Loading      | (psf)     | Spacing         | 2-0-0           | CSI       |      | DEFL     | in    | (loc) | l/defl | L/d | PLATES        | GRIP     |
|--------------|-----------|-----------------|-----------------|-----------|------|----------|-------|-------|--------|-----|---------------|----------|
| TCLL (roof)  | 20.0      | Plate Grip DOL  | 1.15            | TC        | 0.76 | Vert(LL) | -0.15 | 6-7   | >965   | 360 | MT20          | 244/190  |
| Snow (Pf/Pg) | 15.4/20.0 | Lumber DOL      | 1.15            | BC        | 0.40 | Vert(CT) | -0.20 | 6-7   | >762   | 240 |               |          |
| TCDL         | 10.0      | Rep Stress Incr | YES             | WB        | 0.65 | Horz(CT) | 0.02  | 2     | n/a    | n/a |               |          |
| BCLL         | 0.0*      | Code            | IRC2021/TPI2014 | Matrix-AS |      | Wind(LL) | -0.02 | 6-7   | >999   | 240 |               |          |
| BCDL         | 10.0      |                 |                 |           |      |          |       |       |        |     | Weight: 74 lb | FT = 20% |

#### LUMBER

TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP DSS  
WEBS 2x4 SP No.3  
SLIDER Left 2x6 SP No.2 -- 1-6-0

#### BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals.  
BOT CHORD Rigid ceiling directly applied.  
WEBS 1 Row at midpt 5-6

#### REACTIONS

(size) 2=0-3-8, 6=0-3-8  
Max Horiz 2=199 (LC 15)  
Max Uplift 6=-11 (LC 16)  
Max Grav 2=560 (LC 2), 6=549 (LC 23)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/41, 2-4=-621/215, 4-5=-170/138, 5-6=-307/110

BOT CHORD 2-7=-350/570, 6-7=-213/570

WEBS 4-7=0/366, 4-6=-586/160

#### NOTES

- 1) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 12-5-4 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 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- 5) Plates checked for a plus or minus 5 degree rotation about its center.
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 8) All bearings are assumed to be SP DSS .
- 9) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 6. This connection is for uplift only and does not consider lateral forces.
- 10) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 11) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



April 11, 2025

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

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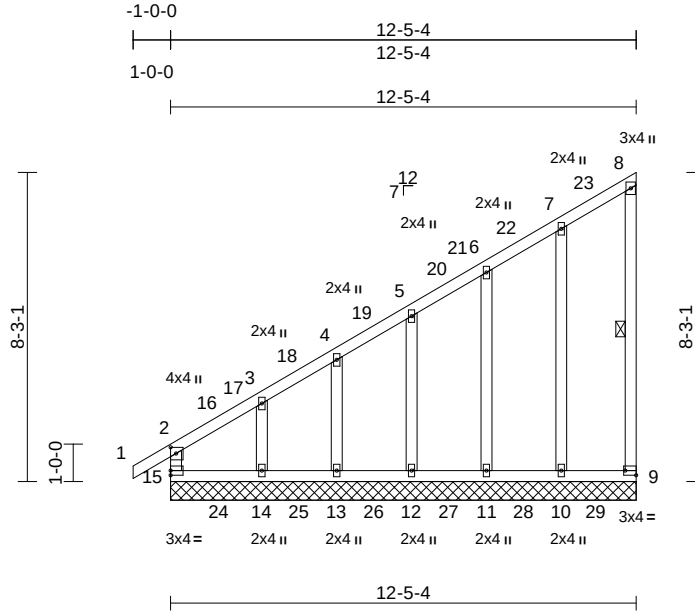


|                          |       |                           |     |     |                                           |
|--------------------------|-------|---------------------------|-----|-----|-------------------------------------------|
| Job                      | Truss | Truss Type                | Qty | Ply | The Farm at Neills Creek Lot 00.0184 Roof |
| 2504-5093-A              | B1G   | Monopitch Supported Gable | 1   | 1   | 172666447                                 |
| Job Reference (optional) |       |                           |     |     |                                           |

Structural, LLC, Thurmont, MD - 21788,

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Page: 1



Scale = 1:61.6

Plate Offsets (X, Y): [2:0-2-0,0-1-12], [9:Edge,0-1-8]

| Loading                | (psf)     | Spacing         | 2-0-0           | CSI       | DEFL | in       | (loc) | l/defl | L/d | PLATES | GRIP    |
|------------------------|-----------|-----------------|-----------------|-----------|------|----------|-------|--------|-----|--------|---------|
| TCLL (roof)            | 20.0      | Plate Grip DOL  | 1.15            | TC        | 0.59 | Vert(LL) | n/a   | -      | n/a | 999    | MT20    |
| Snow (Pf/Pg)           | 15.4/20.0 | Lumber DOL      | 1.15            | BC        | 0.25 | Vert(CT) | n/a   | -      | n/a | 999    | 244/190 |
| TCDL                   | 10.0      | Rep Stress Incr | YES             | WB        | 0.25 | Horz(CT) | 0.00  | 9      | n/a | n/a    |         |
| BCLL                   | 0.0*      | Code            | IRC2021/TPI2014 | Matrix-AS |      |          |       |        |     |        |         |
| BCDL                   | 10.0      |                 |                 |           |      |          |       |        |     |        |         |
| Weight: 85 lb FT = 20% |           |                 |                 |           |      |          |       |        |     |        |         |

#### LUMBER

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

#### BRACING

|           |                                                                   |
|-----------|-------------------------------------------------------------------|
| TOP CHORD | Structural wood sheathing directly applied, except end verticals. |
| BOT CHORD | Rigid ceiling directly applied.                                   |
| WEBS      | 1 Row at midpt 8-9                                                |

|           |            |                                                                                                               |
|-----------|------------|---------------------------------------------------------------------------------------------------------------|
| REACTIONS | (size)     | 9=12-5-4, 10=12-5-4, 11=12-5-4, 12=12-5-4, 13=12-5-4, 14=12-5-4, 15=12-5-4                                    |
|           | Max Horiz  | 15=201 (LC 13)                                                                                                |
|           | Max Uplift | 9=-24 (LC 13), 10=-11 (LC 16), 11=-7 (LC 16), 12=-16 (LC 16), 14=-78 (LC 13), 15=-33 (LC 12)                  |
| REACTIONS | Max Grav   | 9=284 (LC 65), 10=337 (LC 64), 11=332 (LC 63), 12=334 (LC 62), 13=330 (LC 61), 14=343 (LC 60), 15=320 (LC 59) |

#### FORCES

|           |                                            |                                                                                                                         |
|-----------|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| TOP CHORD | (lb) - Maximum Compression/Maximum Tension | 2-15=-300/150, 1-2=0/47, 2-3=-456/315, 3-4=-336/242, 4-5=-299/228, 5-6=-239/197, 6-7=-188/178, 7-8=-96/110, 8-9=-264/43 |
|           |                                            | 14-15=-110/144, 13-14=-110/144, 12-13=-110/144, 11-12=-110/144, 10-11=-110/144, 9-10=-110/144                           |
|           |                                            | 7-10=-278/159, 6-11=-278/105, 5-12=-281/94, 4-13=-283/71, 3-14=-291/209                                                 |

#### NOTES

- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Corner (3E) -1-0-0 to 2-0-0, Exterior(2N) 2-0-0 to 12-3-8 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 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- Plates checked for a plus or minus 5 degree rotation about its center.
- 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2 .

- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 33 lb uplift at joint 15, 24 lb uplift at joint 9, 11 lb uplift at joint 10, 7 lb uplift at joint 11, 16 lb uplift at joint 12 and 78 lb uplift at joint 14.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



April 11,2025

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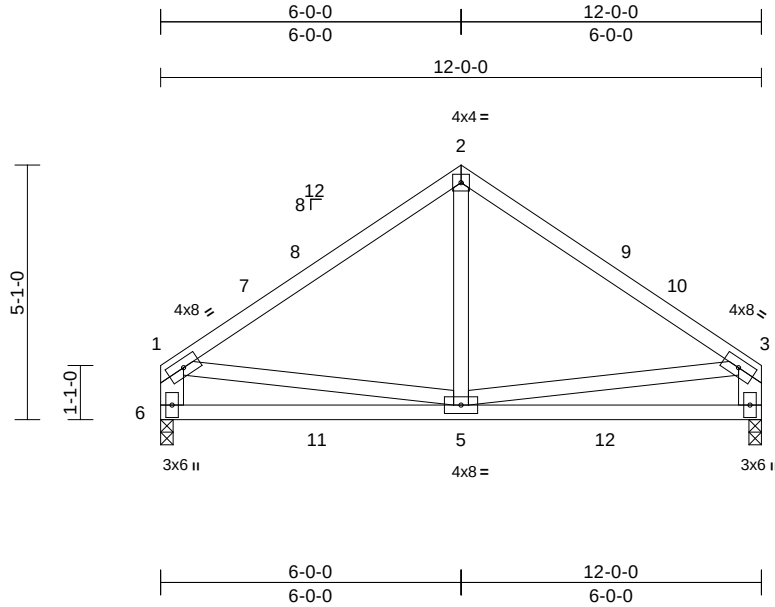
|                          |       |            |     |     |                                           |
|--------------------------|-------|------------|-----|-----|-------------------------------------------|
| Job                      | Truss | Truss Type | Qty | Ply | The Farm at Neills Creek Lot 00.0184 Roof |
| 2504-5093-A              | C1A   | Common     | 1   | 1   | 172666448                                 |
| Job Reference (optional) |       |            |     |     |                                           |

Structural, LLC, Thurmont, MD - 21788,

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Scale = 1:46

| 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        | 0.72 | Vert(LL) | -0.11 | 5-6   | >999   | 360 | MT20          | 244/190  |
| Snow (Pf/Pg) | 15.4/20.0 | Lumber DOL      | 1.15            | BC        | 0.80 | Vert(CT) | -0.13 | 5-6   | >999   | 240 |               |          |
| TCDL         | 10.0      | Rep Stress Incr | NO              | WB        | 0.38 | Horz(CT) | 0.00  | 4     | n/a    | n/a |               |          |
| BCLL         | 0.0*      | Code            | IRC2021/TPI2014 | Matrix-AS |      | Wind(LL) | 0.02  | 5-6   | >999   | 240 |               |          |
| BCDL         | 10.0      |                 |                 |           |      |          |       |       |        |     | Weight: 66 lb | FT = 20% |

#### LUMBER

|           |                                          |
|-----------|------------------------------------------|
| TOP CHORD | 2x4 SP No.2                              |
| BOT CHORD | 2x4 SP No.2                              |
| WEBS      | 2x4 SP No.3 *Except* 6-1,4-3:2x6 SP No.2 |

#### BRACING

|           |                                                                   |
|-----------|-------------------------------------------------------------------|
| TOP CHORD | Structural wood sheathing directly applied, except end verticals. |
| BOT CHORD | Rigid ceiling directly applied.                                   |

#### REACTIONS

|            |                                |
|------------|--------------------------------|
| (size)     | 4=0-3-0, 6=0-3-0               |
| Max Horiz  | 6=83 (LC 52)                   |
| Max Uplift | 4=-473 (LC 50), 6=-473 (LC 51) |
| Max Grav   | 4=766 (LC 43), 6=766 (LC 42)   |

#### FORCES

|           |                                                        |
|-----------|--------------------------------------------------------|
|           | (lb) - Maximum Compression/Maximum Tension             |
| TOP CHORD | 1-2=-951/848, 2-3=-951/851, 1-6=-719/624, 3-4=-716/628 |
| BOT CHORD | 5-6=-679/711, 4-5=-650/650                             |
| WEBS      | 2-5=-69/304, 1-5=-599/658, 3-5=-603/662                |

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-2-12 to 3-2-12, Interior (1) 3-2-12 to 6-0-0, Exterior(2R) 6-0-0 to 9-0-0, Interior (1) 9-0-0 to 11-9-4 zone; cantilever left and right exposed; end vertical left and right exposed; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.

- Plates checked for a plus or minus 5 degree rotation about its center.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2 .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 473 lb uplift at joint 6 and 473 lb uplift at joint 4.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss has been designed for a total drag load of 100 plf. Lumber DOL=(1.33) Plate grip DOL=(1.33) Connect truss to resist drag loads along bottom chord from 0-0-0 to 12-0-0 for 100.0 plf.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



April 11,2025

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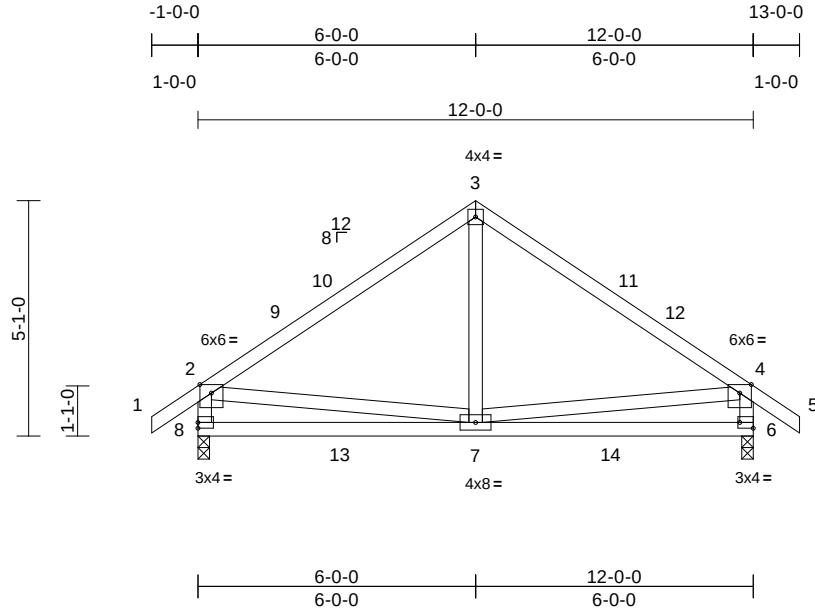
818 Soundside Road  
Edenton, NC 27932

|             |       |            |     |     |                                           |
|-------------|-------|------------|-----|-----|-------------------------------------------|
| Job         | Truss | Truss Type | Qty | Ply | The Farm at Neills Creek Lot 00.0184 Roof |
| 2504-5093-A | C1    | Common     | 4   | 1   | I72666449                                 |
|             |       |            |     |     | Job Reference (optional)                  |

Structural, LLC, Thurmont, MD - 21788,

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Page: 1



Scale = 1:49.8

Plate Offsets (X, Y): [6:Edge,0-1-8]

| Loading      | (psf)     | Spacing         | 2-0-0           | CSI       |      | DEFL     | in    | (loc) | l/defl | L/d | PLATES        | GRIP     |
|--------------|-----------|-----------------|-----------------|-----------|------|----------|-------|-------|--------|-----|---------------|----------|
| TCLL (roof)  | 20.0      | Plate Grip DOL  | 1.15            | TC        | 0.80 | Vert(LL) | -0.12 | 6-7   | >999   | 360 | MT20          | 244/190  |
| Snow (Pf/Pg) | 15.4/20.0 | Lumber DOL      | 1.15            | BC        | 0.76 | Vert(CT) | -0.14 | 6-7   | >977   | 240 |               |          |
| TCDL         | 10.0      | Rep Stress Incr | YES             | WB        | 0.12 | Horz(CT) | 0.00  | 6     | n/a    | n/a |               |          |
| BCLL         | 0.0*      | Code            | IRC2021/TPI2014 | Matrix-AS |      | Wind(LL) | 0.02  | 7-8   | >999   | 240 |               |          |
| BCDL         | 10.0      |                 |                 |           |      |          |       |       |        |     |               |          |
|              |           |                 |                 |           |      |          |       |       |        |     | Weight: 69 lb | FT = 20% |

#### LUMBER

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

#### BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals.  
BOT CHORD Rigid ceiling directly applied.

**REACTIONS** (size) 6=0-3-0, 8=0-3-0  
Max Horiz 8=95 (LC 15)  
Max Grav 6=537 (LC 2), 8=537 (LC 2)

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

TOP CHORD 1-2=0/52, 2-3=-484/199, 3-4=-484/199,  
4-5=0/52, 2-8=-482/198, 4-6=-482/198  
BOT CHORD 7-8=-130/323, 6-7=-98/323  
WEBS 3-7=-79/314, 2-7=-71/216, 4-7=-71/216

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 6-0-0, Exterior(2R) 6-0-0 to 9-0-0, Interior (1) 9-0-0 to 13-0-0 zone; cantilever left and right exposed; end vertical left and right exposed; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- Plates checked for a plus or minus 5 degree rotation about its center.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2 .
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

**LOAD CASE(S)** Standard



April 11, 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)

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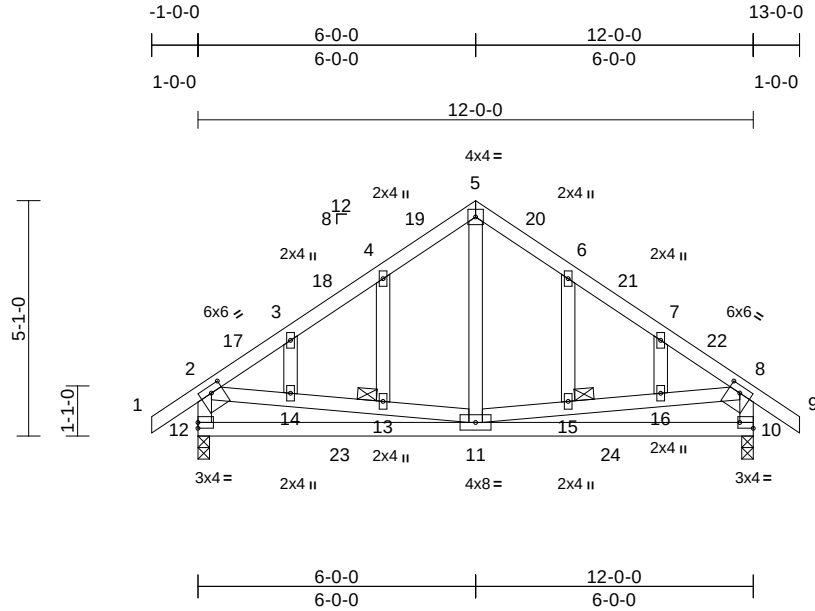
818 Soundside Road  
Edenton, NC 27932

|                          |       |                        |     |     |                                           |
|--------------------------|-------|------------------------|-----|-----|-------------------------------------------|
| Job                      | Truss | Truss Type             | Qty | Ply | The Farm at Neills Creek Lot 00.0184 Roof |
| 2504-5093-A              | C1G   | Common Supported Gable | 1   | 1   | 172666450                                 |
| Job Reference (optional) |       |                        |     |     |                                           |

Structural, LLC, Thurmont, MD - 21788,

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Page: 1



Scale = 1:49.8

Plate Offsets (X, Y): [2:0-3-0,0-1-12], [8:0-3-0,0-1-12], [10:Edge,0-1-8]

| Loading      | (psf)     | Spacing         | 2-0-0           | CSI       |      | DEFL     | in    | (loc) | l/defl | L/d | PLATES        | GRIP     |
|--------------|-----------|-----------------|-----------------|-----------|------|----------|-------|-------|--------|-----|---------------|----------|
| TCLL (roof)  | 20.0      | Plate Grip DOL  | 1.15            | TC        | 0.64 | Vert(LL) | -0.12 | 11-12 | >999   | 360 | MT20          | 244/190  |
| Snow (Pf/Pg) | 15.4/20.0 | Lumber DOL      | 1.15            | BC        | 0.76 | Vert(CT) | -0.14 | 11-12 | >971   | 240 |               |          |
| TCDL         | 10.0      | Rep Stress Incr | YES             | WB        | 0.55 | Horz(CT) | 0.00  | 10    | n/a    | n/a |               |          |
| BCLL         | 0.0*      | Code            | IRC2021/TPI2014 | Matrix-AS |      | Wind(LL) | 0.02  | 11-12 | >999   | 240 |               |          |
| BCDL         | 10.0      |                 |                 |           |      |          |       |       |        |     | Weight: 81 lb | FT = 20% |

#### LUMBER

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

#### BRACING

|           |                                                                   |
|-----------|-------------------------------------------------------------------|
| TOP CHORD | Structural wood sheathing directly applied, except end verticals. |
| BOT CHORD | Rigid ceiling directly applied.                                   |
| JOINTS    | 1 Brace at Jt(s): 13, 15                                          |

#### REACTIONS

|           |                              |
|-----------|------------------------------|
| (size)    | 10=0-3-0, 12=0-3-0           |
| Max Horiz | 12=95 (LC 15)                |
| Max Grav  | 10=537 (LC 2), 12=537 (LC 2) |

#### FORCES

|           |                                                                                                                                                             |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           | (lb) - Maximum Compression/Maximum Tension                                                                                                                  |
| TOP CHORD | 2-12=-479/197, 1-2=0/52, 2-3=-471/162, 3-4=-412/179, 4-5=-400/205, 5-6=-400/205, 6-7=-412/180, 7-8=-471/162, 8-9=0/52, 8-10=-479/197                        |
| BOT CHORD | 11-12=-116/285, 10-11=-87/285                                                                                                                               |
| WEBS      | 5-11=-108/305, 2-14=-48/225, 13-14=-56/223, 11-13=-61/228, 11-15=-61/228, 15-16=-56/223, 8-16=-48/225, 4-13=-118/35, 3-14=-75/39, 6-15=-118/35, 7-16=-75/39 |

#### NOTES

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

- 2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 6-0-0, Exterior(2R) 6-0-0 to 9-0-0, Interior (1) 9-0-0 to 13-0-0 zone; cantilever left and right exposed; end vertical left and right exposed; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=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
- 5) Unbalanced snow loads have been considered for this design.
- 6) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- 7) Plates checked for a plus or minus 5 degree rotation about its center.
- 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 12) All bearings are assumed to be SP No.2 .
- 13) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.

- 14) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



April 11, 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)

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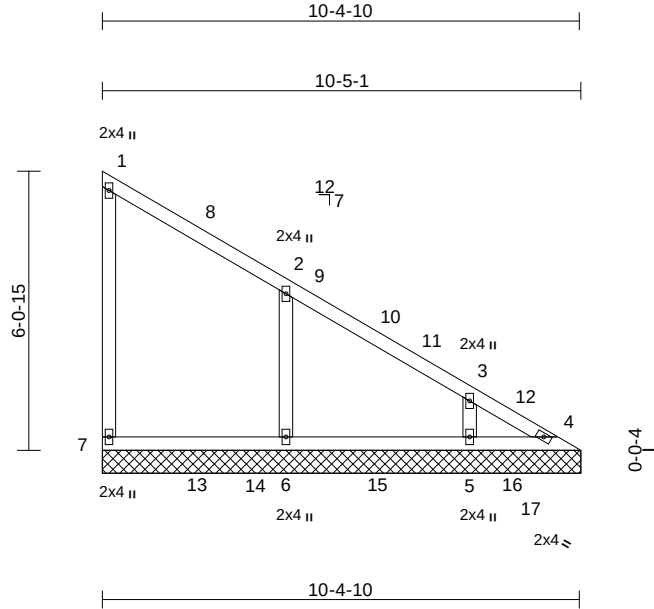
818 Soundside Road  
Edenton, NC 27932

|             |       |            |     |     |                                           |
|-------------|-------|------------|-----|-----|-------------------------------------------|
| Job         | Truss | Truss Type | Qty | Ply | The Farm at Neills Creek Lot 00.0184 Roof |
| 2504-5093-A | V3    | Valley     | 2   | 1   | Job Reference (optional)                  |
|             |       |            |     |     | I72666451                                 |

Structural, LLC, Thurmont, MD - 21788,

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Page: 1



|                |           |                 |                 |            |      |             |      |       |        |     |               |             |
|----------------|-----------|-----------------|-----------------|------------|------|-------------|------|-------|--------|-----|---------------|-------------|
| Scale = 1:50.2 |           |                 |                 |            |      |             |      |       |        |     |               |             |
| <b>Loading</b> | (psf)     | <b>Spacing</b>  | 2-0-0           | <b>CSI</b> |      | <b>DEFL</b> | in   | (loc) | l/defl | L/d | <b>PLATES</b> | <b>GRIP</b> |
| TCLL (roof)    | 20.0      | Plate Grip DOL  | 1.15            | TC         | 0.48 | Vert(LL)    | n/a  | -     | n/a    | 999 | MT20          | 244/190     |
| Snow (Pf/Pg)   | 15.4/20.0 | Lumber DOL      | 1.15            | BC         | 0.81 | Vert(TL)    | n/a  | -     | n/a    | 999 |               |             |
| TCDL           | 10.0      | Rep Stress Incr | YES             | WB         | 0.09 | Horiz(TL)   | 0.00 | 4     | n/a    | n/a |               |             |
| BCLL           | 0.0*      | Code            | IRC2021/TPI2014 | Matrix-S   |      |             |      |       |        |     |               |             |
| BCDL           | 10.0      |                 |                 |            |      |             |      |       |        |     | Weight: 47 lb | FT = 20%    |

#### LUMBER

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

#### BRACING

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

|                  |            |                                                            |
|------------------|------------|------------------------------------------------------------|
| <b>REACTIONS</b> | (size)     | 4=10-5-1, 5=10-5-1, 6=10-5-1, 7=10-5-1                     |
|                  | Max Horiz  | 7=-141 (LC 12)                                             |
|                  | Max Uplift | 4=-38 (LC 47), 5=-17 (LC 17), 6=-22 (LC 17), 7=-11 (LC 12) |
|                  | Max Grav   | 4=272 (LC 45), 5=384 (LC 51), 6=445 (LC 34), 7=315 (LC 49) |

#### FORCES

|           |                                                      |
|-----------|------------------------------------------------------|
|           | (lb) - Maximum Compression/Maximum Tension           |
| TOP CHORD | 1-7=-283/76, 1-2=-119/95, 2-3=-203/158, 3-4=-252/184 |
| BOT CHORD | 6-7=-151/224, 5-6=-151/224, 4-5=-151/224             |
| WEBS      | 2-6=-340/138, 3-5=-318/105                           |

#### NOTES

- 1) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-1-12 to 4-4-11, Interior (1) 4-4-11 to 9-10-9 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) Plates checked for a plus or minus 5 degree rotation about its center.
- 6) Gable requires continuous bottom chord bearing.
- 7) Gable studs spaced at 4-0-0 oc.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 10) All bearings are assumed to be SP No.3.
- 11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 11 lb uplift at joint 7, 38 lb uplift at joint 4, 22 lb uplift at joint 6 and 17 lb uplift at joint 5.
- 12) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.

**LOAD CASE(S)** Standard



April 11,2025

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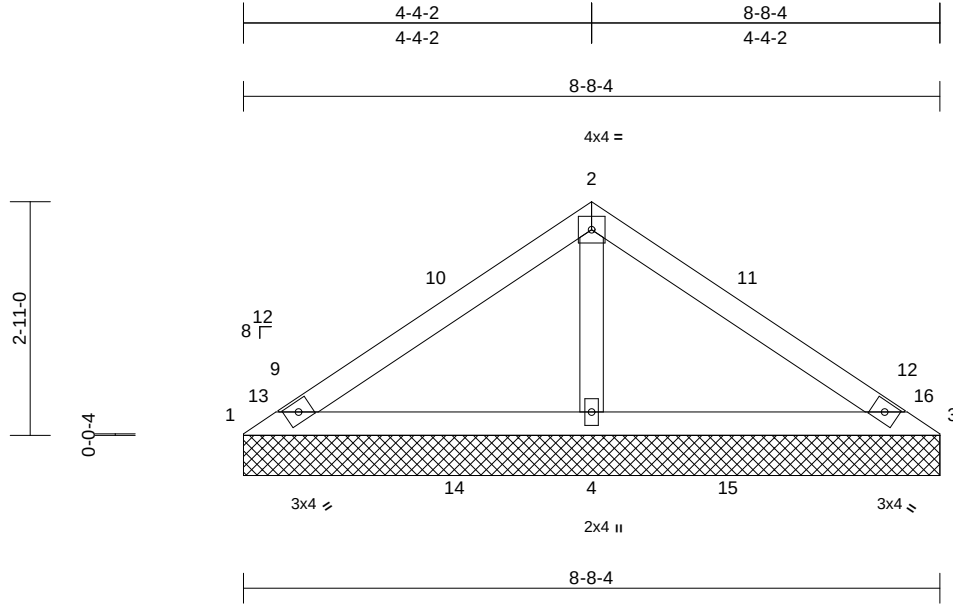


|             |       |            |     |     |                                           |
|-------------|-------|------------|-----|-----|-------------------------------------------|
| Job         | Truss | Truss Type | Qty | Ply | The Farm at Neills Creek Lot 00.0184 Roof |
| 2504-5093-A | VA2   | Valley     | 1   | 1   | Job Reference (optional)                  |
|             |       |            |     |     | I72666452                                 |

Structural, LLC, Thurmont, MD - 21788,

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Page: 1



Scale = 1:28.7

| Loading      | (psf)     | Spacing         | 2-0-0           | CSI       | DEFL | in        | (loc) | l/defl | L/d | PLATES        | GRIP     |
|--------------|-----------|-----------------|-----------------|-----------|------|-----------|-------|--------|-----|---------------|----------|
| TCLL (roof)  | 20.0      | Plate Grip DOL  | 1.15            | TC        | 0.52 | n/a       | -     | n/a    | 999 | MT20          | 244/190  |
| Snow (Pf/Pg) | 15.4/20.0 | Lumber DOL      | 1.15            | BC        | 0.72 | n/a       | -     | n/a    | 999 |               |          |
| TCDL         | 10.0      | Rep Stress Incr | YES             | WB        | 0.11 | Horiz(TL) | 0.00  | 4      | n/a |               |          |
| BCLL         | 0.0*      | Code            | IRC2021/TPI2014 | Matrix-AS |      |           |       |        |     |               |          |
| BCDL         | 10.0      |                 |                 |           |      |           |       |        |     | Weight: 30 lb | FT = 20% |

#### LUMBER

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

#### BRACING

TOP CHORD Structural wood sheathing directly applied.  
BOT CHORD Rigid ceiling directly applied.

#### REACTIONS

(size) 1=8-8-4, 3=8-8-4, 4=8-8-4  
Max Horiz 1=44 (LC 13)  
Max Uplift 1=-55 (LC 45), 3=-55 (LC 44)  
Max Grav 1=270 (LC 47), 3=270 (LC 51),  
4=631 (LC 2)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-232/324, 2-3=-232/324  
BOT CHORD 1-4=-259/173, 3-4=-259/173  
WEBS 2-4=-524/159

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust)  
Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-0-6 to 3-0-6, Interior (1) 3-0-6 to 4-4-8, Exterior(2R) 4-4-8 to 7-4-8, Interior (1) 7-4-8 to 8-8-10 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- Plates checked for a plus or minus 5 degree rotation about its center.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.3 .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 55 lb uplift at joint 1 and 55 lb uplift at joint 3.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



April 11,2025

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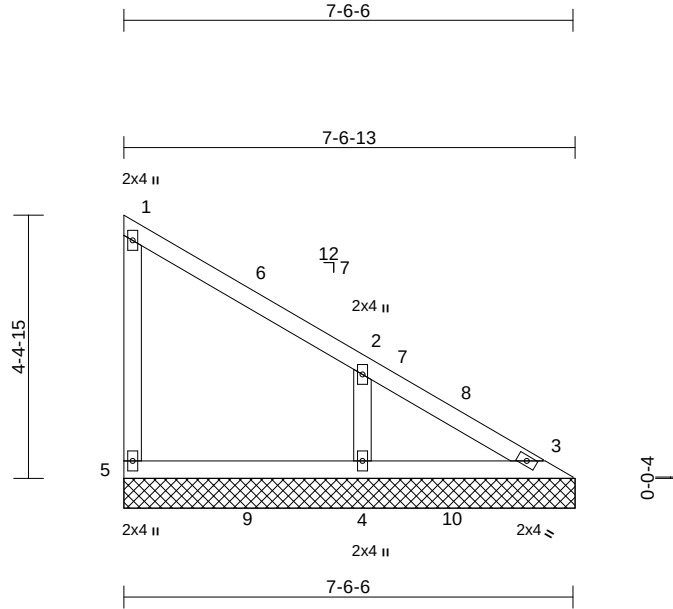
818 Soundside Road  
Edenton, NC 27932

|                          |       |            |     |     |                                           |
|--------------------------|-------|------------|-----|-----|-------------------------------------------|
| Job                      | Truss | Truss Type | Qty | Ply | The Farm at Neills Creek Lot 00.0184 Roof |
| 2504-5093-A              | V4    | Valley     | 2   | 1   | 172666453                                 |
| Job Reference (optional) |       |            |     |     |                                           |

Structural, LLC, Thurmont, MD - 21788,

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Page: 1



Scale = 1:38.6

| Loading                | (psf)     | Spacing         | 2-0-0           | CSI      | DEFL | in        | (loc) | l/defl | L/d | PLATES | GRIP    |
|------------------------|-----------|-----------------|-----------------|----------|------|-----------|-------|--------|-----|--------|---------|
| TCLL (roof)            | 20.0      | Plate Grip DOL  | 1.15            | TC       | 0.52 | Vert(LL)  | n/a   | -      | n/a | 999    | MT20    |
| Snow (Pf/Pg)           | 15.4/20.0 | Lumber DOL      | 1.15            | BC       | 0.86 | Vert(TL)  | n/a   | -      | n/a | 999    | 244/190 |
| TCDL                   | 10.0      | Rep Stress Incr | YES             | WB       | 0.06 | Horiz(TL) | 0.00  | 3      | n/a | n/a    |         |
| BCLL                   | 0.0*      | Code            | IRC2021/TPI2014 | Matrix-P |      |           |       |        |     |        |         |
| BCDL                   | 10.0      |                 |                 |          |      |           |       |        |     |        |         |
| Weight: 31 lb FT = 20% |           |                 |                 |          |      |           |       |        |     |        |         |

#### LUMBER

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

#### BRACING

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

|           |                                                      |
|-----------|------------------------------------------------------|
| REACTIONS | (size) 3=7-6-13, 4=7-6-13, 5=7-6-13                  |
|           | Max Horiz 5=-99 (LC 14)                              |
|           | Max Uplift 4=-22 (LC 17), 5=-6 (LC 12)               |
|           | Max Grav 3=293 (LC 43), 4=427 (LC 47), 5=314 (LC 46) |

|           |                                            |
|-----------|--------------------------------------------|
| FORCES    | (lb) - Maximum Compression/Maximum Tension |
| TOP CHORD | 1-5=-283/81, 1-2=-101/84, 2-3=-192/147     |
| BOT CHORD | 4-5=-120/179, 3-4=-120/179                 |
| WEBS      | 2-4=-339/150                               |

#### NOTES

- 1) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-1-12 to 4-4-11, Interior (1) 4-4-11 to 7-0-5 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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) Plates checked for a plus or minus 5 degree rotation about its center.
- 6) Gable requires continuous bottom chord bearing.
- 7) Gable studs spaced at 4-0-0 oc.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 10) All bearings are assumed to be SP No.3 .
- 11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 6 lb uplift at joint 5 and 22 lb uplift at joint 4.
- 12) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.

LOAD CASE(S) Standard



April 11, 2025

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

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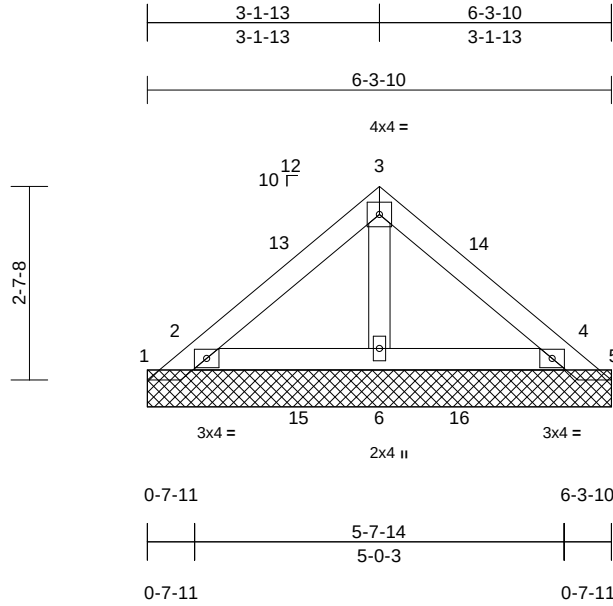
818 Soundside Road  
Edenton, NC 27932

|             |       |            |     |     |                                           |
|-------------|-------|------------|-----|-----|-------------------------------------------|
| Job         | Truss | Truss Type | Qty | Ply | The Farm at Neills Creek Lot 00.0184 Roof |
| 2504-5093-A | PB3   | Piggyback  | 11  | 1   | I72666454                                 |
|             |       |            |     |     | Job Reference (optional)                  |

Structural, LLC, Thurmont, MD - 21788,

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Scale = 1:31.3

| Loading      | (psf)     | Spacing         | 2-0-0           | CSI       | DEFL | in        | (loc) | l/defl | L/d | PLATES        | GRIP     |
|--------------|-----------|-----------------|-----------------|-----------|------|-----------|-------|--------|-----|---------------|----------|
| TCLL (roof)  | 20.0      | Plate Grip DOL  | 1.15            | TC        | 0.23 | n/a       | -     | n/a    | 999 | MT20          | 244/190  |
| Snow (Pf/Pg) | 15.4/20.0 | Lumber DOL      | 1.15            | BC        | 0.36 | n/a       | -     | n/a    | 999 |               |          |
| TCDL         | 10.0      | Rep Stress Incr | YES             | WB        | 0.04 | Horiz(TL) | 0.00  | 10     | n/a |               |          |
| BCLL         | 0.0*      | Code            | IRC2021/TPI2014 | Matrix-AS |      |           |       |        |     |               |          |
| BCDL         | 10.0      |                 |                 |           |      |           |       |        |     |               |          |
|              |           |                 |                 |           |      |           |       |        |     | Weight: 22 lb | FT = 20% |

#### LUMBER

|           |             |
|-----------|-------------|
| TOP CHORD | 2x4 SP No.2 |
| BOT CHORD | 2x4 SP No.3 |
| OTHERS    | 2x4 SP No.3 |

#### BRACING

|           |                                             |
|-----------|---------------------------------------------|
| TOP CHORD | Structural wood sheathing directly applied. |
| BOT CHORD | Rigid ceiling directly applied.             |

#### REACTIONS

|            |                                                                           |
|------------|---------------------------------------------------------------------------|
| (size)     | 1=6-3-10, 2=6-3-10, 4=6-3-10, 5=6-3-10, 6=6-3-10                          |
| Max Horiz  | 1=-39 (LC 14)                                                             |
| Max Uplift | 1=-238 (LC 46), 2=-29 (LC 16), 4=-25 (LC 17), 5=-236 (LC 47)              |
| Max Grav   | 1=215 (LC 44), 2=484 (LC 46), 4=474 (LC 47), 5=217 (LC 56), 6=332 (LC 63) |

#### FORCES

(lb) - Maximum Compression/Maximum Tension

|           |                                                     |
|-----------|-----------------------------------------------------|
| TOP CHORD | 1-2=-62/164, 2-3=-159/100, 3-4=-159/99, 4-5=-44/163 |
| BOT CHORD | 2-6=-90/55, 4-6=-90/55                              |
| WEBS      | 3-6=-199/2                                          |

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- Plates checked for a plus or minus 5 degree rotation about its center.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4'-0" oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3'-0" x 0'-0" tall by 2'-0" x 0'-0" wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.3 .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 238 lb uplift at joint 1 and 236 lb uplift at joint 5.
- N/A

- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard



April 11, 2025

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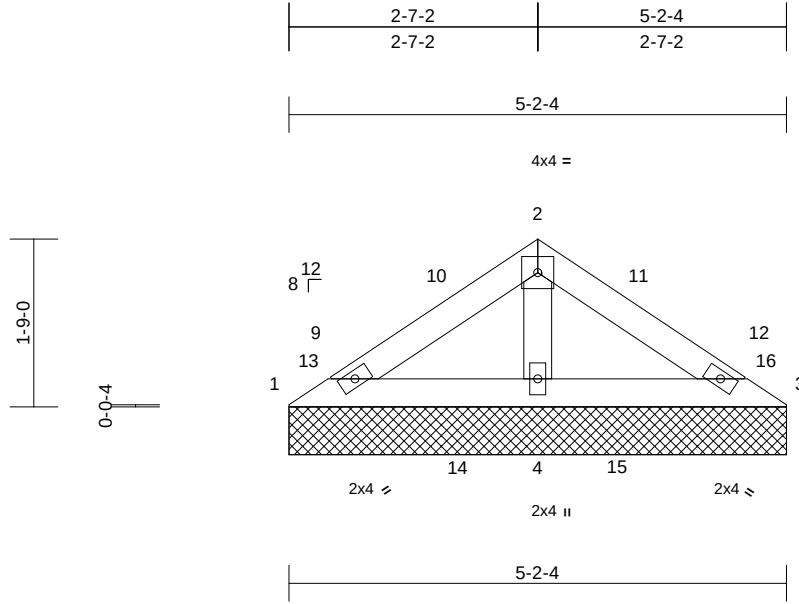
818 Soundside Road  
Edenton, NC 27932

|             |       |            |     |     |                                           |
|-------------|-------|------------|-----|-----|-------------------------------------------|
| Job         | Truss | Truss Type | Qty | Ply | The Farm at Neills Creek Lot 00.0184 Roof |
| 2504-5093-A | VA1   | Valley     | 1   | 1   | 172666455                                 |
|             |       |            |     |     | Job Reference (optional)                  |

Structural, LLC, Thurmont, MD - 21788,

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Page: 1



Scale = 1:24

| Loading      | (psf)     | Spacing         | 2-0-0           | CSI       | DEFL | in        | (loc) | l/defl | L/d | PLATES        | GRIP     |
|--------------|-----------|-----------------|-----------------|-----------|------|-----------|-------|--------|-----|---------------|----------|
| TCLL (roof)  | 20.0      | Plate Grip DOL  | 1.15            | TC        | 0.24 | n/a       | -     | n/a    | 999 | MT20          | 244/190  |
| Snow (Pf/Pg) | 15.4/20.0 | Lumber DOL      | 1.15            | BC        | 0.31 | n/a       | -     | n/a    | 999 |               |          |
| TCDL         | 10.0      | Rep Stress Incr | YES             | WB        | 0.06 | Horiz(TL) | 0.00  | 4      | n/a |               |          |
| BCLL         | 0.0*      | Code            | IRC2021/TPI2014 | Matrix-AS |      |           |       |        |     |               |          |
| BCDL         | 10.0      |                 |                 |           |      |           |       |        |     | Weight: 17 lb | FT = 20% |

#### LUMBER

|           |             |
|-----------|-------------|
| TOP CHORD | 2x4 SP No.2 |
| BOT CHORD | 2x4 SP No.3 |
| OTHERS    | 2x4 SP No.3 |

#### BRACING

|           |                                             |
|-----------|---------------------------------------------|
| TOP CHORD | Structural wood sheathing directly applied. |
| BOT CHORD | Rigid ceiling directly applied.             |

#### REACTIONS

|            |                                             |
|------------|---------------------------------------------|
| (size)     | 1=5-2-4, 3=5-2-4, 4=5-2-4                   |
| Max Horiz  | 1=-25 (LC 12)                               |
| Max Uplift | 1=-27 (LC 50), 3=-27 (LC 48)                |
| Max Grav   | 1=278 (LC 47), 3=278 (LC 51), 4=410 (LC 57) |

#### FORCES

|           |                                            |
|-----------|--------------------------------------------|
|           | (lb) - Maximum Compression/Maximum Tension |
| TOP CHORD | 1-2=-215/178, 2-3=-215/178                 |
| BOT CHORD | 1-4=-112/162, 3-4=-112/162                 |
| WEBS      | 2-4=-305/79                                |

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.

- Plates checked for a plus or minus 5 degree rotation about its center.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.3 .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 27 lb uplift at joint 1 and 27 lb uplift at joint 3.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

**LOAD CASE(S)** Standard



April 11, 2025

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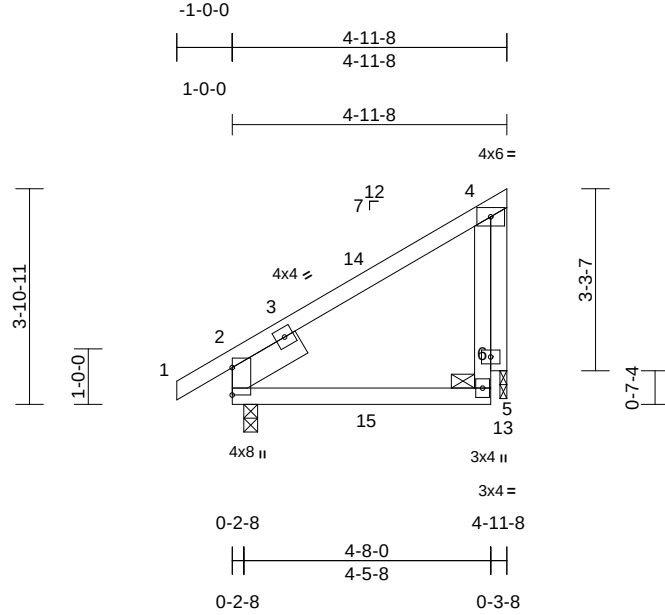
818 Soundside Road  
Edenton, NC 27932

|             |       |            |     |     |                                           |
|-------------|-------|------------|-----|-----|-------------------------------------------|
| Job         | Truss | Truss Type | Qty | Ply | The Farm at Neills Creek Lot 00.0184 Roof |
| 2504-5093-A | P1    | Monopitch  | 4   | 1   | 172666456                                 |
|             |       |            |     |     | Job Reference (optional)                  |

Structural, LLC, Thurmont, MD - 21788,

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Scale = 1:41.6

| Loading      | (psf)     | Spacing         | 2-0-0           | CSI       |      | DEFL     | in    | (loc) | l/defl | L/d | PLATES        | GRIP     |
|--------------|-----------|-----------------|-----------------|-----------|------|----------|-------|-------|--------|-----|---------------|----------|
| TCLL (roof)  | 20.0      | Plate Grip DOL  | 1.15            | TC        | 0.48 | Vert(LL) | -0.03 | 5-9   | >999   | 360 | MT20          | 244/190  |
| Snow (Pf/Pg) | 15.4/20.0 | Lumber DOL      | 1.15            | BC        | 0.51 | Vert(CT) | -0.04 | 5-9   | >999   | 240 |               |          |
| TCDL         | 10.0      | Rep Stress Incr | YES             | WB        | 0.00 | Horz(CT) | 0.01  | 2     | n/a    | n/a |               |          |
| BCLL         | 0.0*      | Code            | IRC2021/TPI2014 | Matrix-AS |      | Wind(LL) | 0.01  | 5-9   | >999   | 240 |               |          |
| BCDL         | 10.0      |                 |                 |           |      |          |       |       |        |     | Weight: 30 lb | FT = 20% |

#### LUMBER

|           |                           |
|-----------|---------------------------|
| TOP CHORD | 2x4 SP No.2               |
| BOT CHORD | 2x4 SP No.2               |
| WEBS      | 2x4 SP No.3               |
| OTHERS    | 2x4 SP No.3               |
| SLIDER    | Left 2x6 SP No.2 -- 1-6-0 |

#### BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals.

BOT CHORD 10-0-0 oc bracing.

**REACTIONS** (size) 2=0-3-0, 13=0-1-8  
Max Horiz 2=62 (LC 16)  
Max Uplift 13=30 (LC 13)  
Max Grav 2=400 (LC 40), 13=305 (LC 42)

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

TOP CHORD 1-2=0/41, 2-4=-161/120, 5-6=-51/292,

4-6=-81/193

BOT CHORD 2-5=-72/86

WEBS 4-13=-223/73

#### NOTES

- Wind: ASCE 7-16; Vult=120mph (3-second gust)  
Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 4-6-4 zone; cantilever left and right exposed; end vertical left and right exposed; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.

- Plates checked for a plus or minus 5 degree rotation about its center.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Bearings are assumed to be: Joint 2 SP No.2, Joint 13 SP No.3.
- Bearing at joint(s) 13 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate at joint(s) 13.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 13. This connection is for uplift only and does not consider lateral forces.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord.

**LOAD CASE(S)** Standard



April 11, 2025

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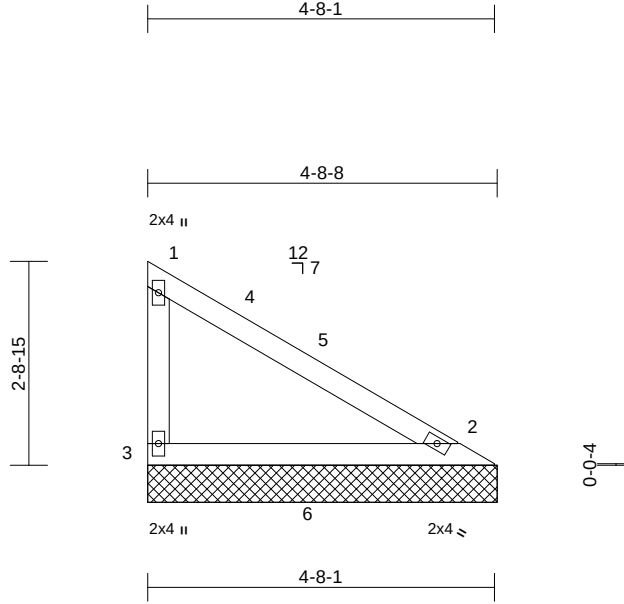


|             |       |            |     |     |                                           |
|-------------|-------|------------|-----|-----|-------------------------------------------|
| Job         | Truss | Truss Type | Qty | Ply | The Farm at Neills Creek Lot 00.0184 Roof |
| 2504-5093-A | V5    | Valley     | 2   | 1   | 172666457                                 |
|             |       |            |     |     | Job Reference (optional)                  |

Structural, LLC, Thurmont, MD - 21788,

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Page: 1



Scale = 1:31

| 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       | 0.71 | Vert(LL)  | n/a   | -      | n/a | 999    | MT20          | 244/190  |
| Snow (Pf/Pg) | 15.4/20.0 | Lumber DOL      | 1.15            | BC       | 0.71 | Vert(TL)  | n/a   | -      | n/a | 999    |               |          |
| TCDL         | 10.0      | Rep Stress Incr | YES             | WB       | 0.00 | Horiz(TL) | 0.00  | 2      | n/a | n/a    |               |          |
| BCLL         | 0.0*      | Code            | IRC2021/TPI2014 | Matrix-P |      |           |       |        |     |        |               |          |
| BCDL         | 10.0      |                 |                 |          |      |           |       |        |     |        | Weight: 17 lb | FT = 20% |

#### LUMBER

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

#### BRACING

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

#### REACTIONS (size)

|                                       |
|---------------------------------------|
| 2=4-8-8, 3=4-8-8                      |
| Max Horiz 3=-58 (LC 12)               |
| Max Uplift 3=-2 (LC 17)               |
| Max Grav 2=333 (LC 41), 3=333 (LC 39) |

#### FORCES (lb)

|           |                          |
|-----------|--------------------------|
| TOP CHORD | 1-3=-293/100, 1-2=-93/85 |
| BOT CHORD | 2-3=-76/120              |

#### NOTES

- 1) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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) Plates checked for a plus or minus 5 degree rotation about its center.
- 6) Gable requires continuous bottom chord bearing.

- 7) Gable studs spaced at 4-0-0 oc.
  - 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 9) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
  - 10) All bearings are assumed to be SP No.2.
  - 11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 2 lb uplift at joint 3.
  - 12) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- LOAD CASE(S)** Standard



April 11, 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))

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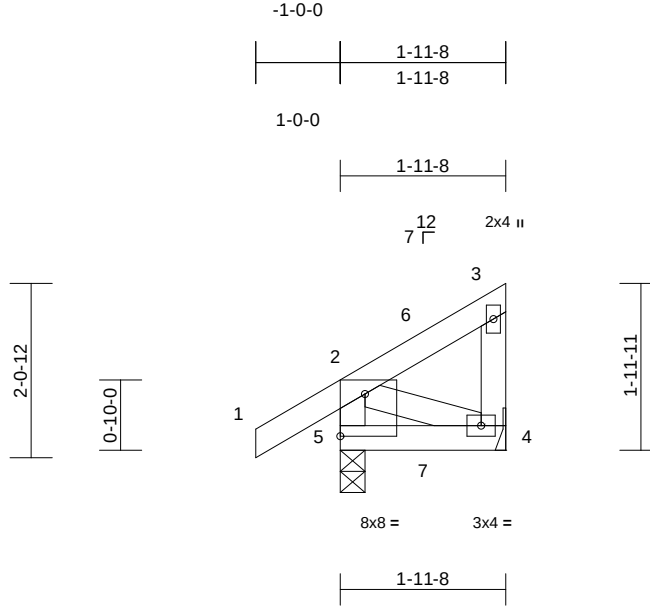
818 Soundside Road  
Edenton, NC 27932

|                          |       |            |     |     |                                           |
|--------------------------|-------|------------|-----|-----|-------------------------------------------|
| Job                      | Truss | Truss Type | Qty | Ply | The Farm at Neills Creek Lot 00.0184 Roof |
| 2504-5093-A              | F1    | Monopitch  | 2   | 1   | 172666458                                 |
| Job Reference (optional) |       |            |     |     |                                           |

Structural, LLC, Thurmont, MD - 21788,

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Page: 1



Scale = 1:27.3

Plate Offsets (X, Y): [5:Edge,0-6-0]

| 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        | 0.23 | Vert(LL) | -0.01 | 4-5   | >999   | 360 | MT20          | 244/190  |
| Snow (Pf/Pg) | 15.4/20.0 | Lumber DOL      | 1.15            | BC        | 0.23 | Vert(CT) | -0.01 | 4-5   | >999   | 240 |               |          |
| TCDL         | 10.0      | Rep Stress Incr | YES             | WB        | 0.03 | Horz(CT) | 0.00  | 4     | n/a    | n/a |               |          |
| BCLL         | 0.0*      | Code            | IRC2021/TPI2014 | Matrix-MP |      |          |       |       |        |     |               |          |
| BCDL         | 10.0      |                 |                 |           |      |          |       |       |        |     |               |          |
|              |           |                 |                 |           |      |          |       |       |        |     | Weight: 13 lb | FT = 20% |

#### LUMBER

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

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 1-11-8 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS

(size) 4= Mechanical, 5=0-3-8  
Max Horiz 5=45 (LC 15)  
Max Uplift 4=-13 (LC 13)  
Max Grav 4=278 (LC 45), 5=317 (LC 40)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/47, 2-3=-76/66, 3-4=-262/36,  
2-5=-300/100  
BOT CHORD 4-5=-120/56  
WEBS 2-4=-41/111

#### NOTES

- 1) Wind: ASCE 7-16; Vult=120mph (3-second gust)  
Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.

- 5) Plates checked for a plus or minus 5 degree rotation about its center.
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 8) Bearings are assumed to be: Joint 5 SP No.2 .
- 9) Refer to girder(s) for truss to truss connections.
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 13 lb uplift at joint 4.
- 11) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.

LOAD CASE(S) Standard



April 11, 2025

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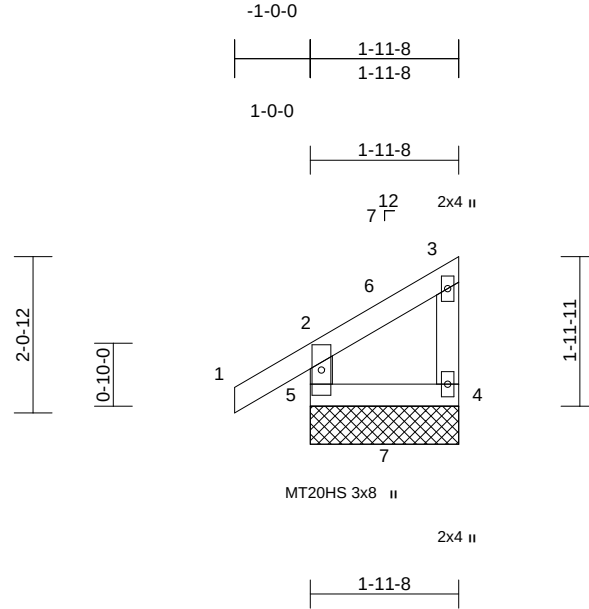
818 Soundside Road  
Edenton, NC 27932

|                          |       |                           |     |     |                                           |
|--------------------------|-------|---------------------------|-----|-----|-------------------------------------------|
| Job                      | Truss | Truss Type                | Qty | Ply | The Farm at Neills Creek Lot 00.0184 Roof |
| 2504-5093-A              | F1G   | Monopitch Supported Gable | 2   | 1   | 172666459                                 |
| Job Reference (optional) |       |                           |     |     |                                           |

Structural, LLC, Thurmont, MD - 21788,

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Page: 1



|                |           |                 |                 |            |      |             |      |       |        |     |               |             |
|----------------|-----------|-----------------|-----------------|------------|------|-------------|------|-------|--------|-----|---------------|-------------|
| <b>Loading</b> | (psf)     | <b>Spacing</b>  | 2-0-0           | <b>CSI</b> |      | <b>DEFL</b> | in   | (loc) | l/defl | L/d | <b>PLATES</b> | <b>GRIP</b> |
| TCLL (roof)    | 20.0      | Plate Grip DOL  | 1.15            | TC         | 0.17 | Vert(LL)    | n/a  | -     | n/a    | 999 | MT20          | 244/190     |
| Snow (Pf/Pg)   | 15.4/20.0 | Lumber DOL      | 1.15            | BC         | 0.19 | Vert(CT)    | n/a  | -     | n/a    | 999 | MT20HS        | 187/143     |
| TCDL           | 10.0      | Rep Stress Incr | YES             | WB         | 0.00 | Horz(CT)    | 0.00 | 4     | n/a    | n/a |               |             |
| BCLL           | 0.0*      | Code            | IRC2021/TPI2014 | Matrix-MR  |      |             |      |       |        |     |               |             |
| BCDL           | 10.0      |                 |                 |            |      |             |      |       |        |     | Weight: 11 lb | FT = 20%    |

#### LUMBER

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

#### BRACING

|           |                                                                                        |
|-----------|----------------------------------------------------------------------------------------|
| TOP CHORD | Structural wood sheathing directly applied or 1-11-8 oc purlins, except end verticals. |
| BOT CHORD | Rigid ceiling directly applied or 6-0-0 oc bracing.                                    |

#### REACTIONS (size)

|                                       |
|---------------------------------------|
| 4=1-11-8, 5=1-11-8                    |
| Max Horiz 5=45 (LC 13)                |
| Max Uplift 4=-13 (LC 13)              |
| Max Grav 4=278 (LC 45), 5=317 (LC 40) |

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

|           |                                                  |
|-----------|--------------------------------------------------|
| TOP CHORD | 2-5=-299/160, 1-2=0/47, 2-3=-101/44, 3-4=-262/81 |
| BOT CHORD | 4-5=-33/38                                       |

#### NOTES

- 1) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Corner (3E) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- 6) All plates are MT20 plates unless otherwise indicated.
- 7) Plates checked for a plus or minus 5 degree rotation about its center.
- 8) Gable requires continuous bottom chord bearing.
- 9) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 10) Gable studs spaced at 2-0-0 oc.
- 11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 12) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 13) All bearings are assumed to be SP No.2 .
- 14) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 13 lb uplift at joint 4.
- 15) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.

**LOAD CASE(S)** Standard



April 11, 2025

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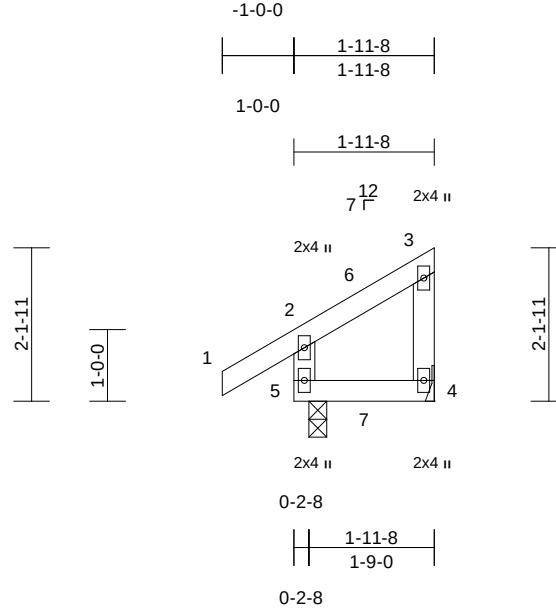
818 Soundside Road  
Edenton, NC 27932

|                          |       |            |     |     |                                           |
|--------------------------|-------|------------|-----|-----|-------------------------------------------|
| Job                      | Truss | Truss Type | Qty | Ply | The Farm at Neills Creek Lot 00.0184 Roof |
| 2504-5093-A              | M1    | Monopitch  | 1   | 1   | 172666460                                 |
| Job Reference (optional) |       |            |     |     |                                           |

Structural, LLC, Thurmont, MD - 21788,

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Page: 1



Scale = 1:32.2

| Loading      | (psf)     | Spacing         | 2-0-0           | CSI       |      | DEFL     | in   | (loc) | l/defl | L/d | PLATES        | GRIP     |
|--------------|-----------|-----------------|-----------------|-----------|------|----------|------|-------|--------|-----|---------------|----------|
| TCLL (roof)  | 20.0      | Plate Grip DOL  | 1.15            | TC        | 0.18 | Vert(LL) | 0.00 | 4-5   | >999   | 360 | MT20          | 244/190  |
| Snow (Pf/Pg) | 15.4/20.0 | Lumber DOL      | 1.15            | BC        | 0.21 | Vert(CT) | 0.00 | 4-5   | >999   | 240 |               |          |
| TCDL         | 10.0      | Rep Stress Incr | YES             | WB        | 0.00 | Horz(CT) | 0.00 | 4     | n/a    | n/a |               |          |
| BCLL         | 0.0*      | Code            | IRC2021/TPI2014 | Matrix-MR |      | Wind(LL) | 0.00 | 4-5   | >999   | 240 |               |          |
| BCDL         | 10.0      |                 |                 |           |      |          |      |       |        |     |               |          |
|              |           |                 |                 |           |      |          |      |       |        |     | Weight: 11 lb | FT = 20% |

#### LUMBER

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

#### BRACING

|           |                                                                                        |
|-----------|----------------------------------------------------------------------------------------|
| TOP CHORD | Structural wood sheathing directly applied or 1-11-8 oc purlins, except end verticals. |
| BOT CHORD | 6-0-0 oc bracing.                                                                      |

|                  |            |                              |
|------------------|------------|------------------------------|
| <b>REACTIONS</b> | (size)     | 4= Mechanical, 5=0-3-0       |
|                  | Max Horiz  | 5=49 (LC 13)                 |
|                  | Max Uplift | 4=-30 (LC 13), 5=-1 (LC 12)  |
|                  | Max Grav   | 4=278 (LC 42), 5=317 (LC 40) |

#### FORCES

(lb) - Maximum Compression/Maximum Tension

|           |                                                 |
|-----------|-------------------------------------------------|
| TOP CHORD | 1-2=0/47, 2-3=-97/47, 3-4=-262/60, 2-5=-299/104 |
| BOT CHORD | 4-5=-35/32                                      |

#### NOTES

- 1) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed; porch 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 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- 5) Plates checked for a plus or minus 5 degree rotation about its center.

- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 8) Bearings are assumed to be: Joint 5 SP No.2 .
- 9) Refer to girder(s) for truss to truss connections.
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 30 lb uplift at joint 4 and 1 lb uplift at joint 5.
- 11) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.

**LOAD CASE(S)** Standard



April 11,2025

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

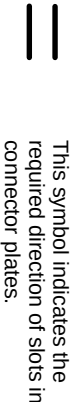
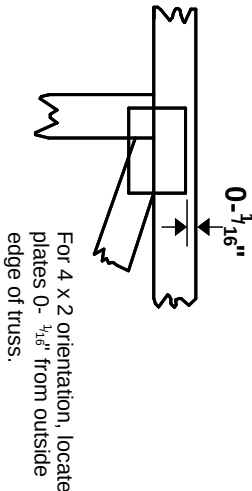
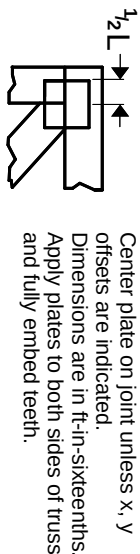
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall 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)

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Edenton, NC 27932

# Symbols

## PLATE LOCATION AND ORIENTATION



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

## PLATE SIZE

**4 X 4**

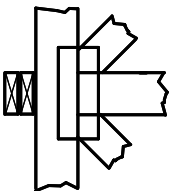
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## 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.

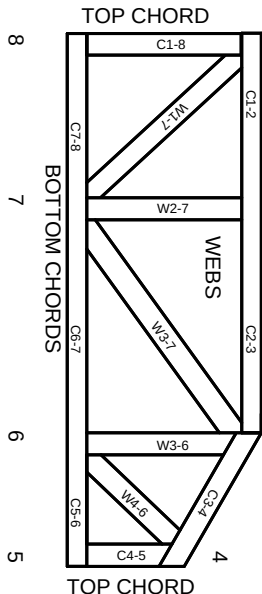
## Industry Standards:

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



1 2 3 Joint ID typ.



**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.

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# 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.