# Mark Morris, P.E.

#126, 1317-M, Summerville, SC 29483
843 209-5784, Fax (866)-213-4614


The truss drawing(s) listed below have been prepared by **Atlantic Building Components** under my direct supervision based on the parameters provided by the truss designers.

AST #: 28509
JOB: 21-5628-R01
JOB NAME: 49786-0226 WOODGROVE
Wind Code: 37
Wind Speed: Vult= 115mph
Exposure Category: B
Mean Roof Height (feet): 23
These truss designs comply with IRC 2015 as well as IRC 2018.
*29 Truss Design(s)*

Trusses:
PB01, PB02, PB03, PB04, PB05, R01, R02, R03, R04, R05, R06, R07, R08, R09, R10, R11, R12, R13, R14, VT01, VT02, VT03, VT04, VT05, VT06, VT07, VT08, VT09, VT10


**9/17/2021**
**Mark Morris**

***Warning !—Verify design parameters and read notes before use.***

This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI 1-03 Guide to *Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI

| Job | Truss | Truss Type | Qty | Ply | 49786-0226 WOODGROVE \| FUQUAY VARINA, NC |
|---|---|---|---|---|---|
| 21-5628-R01 | PB01 | GABLE | 2 | 1 | Job Reference (optional) **# 28509** |

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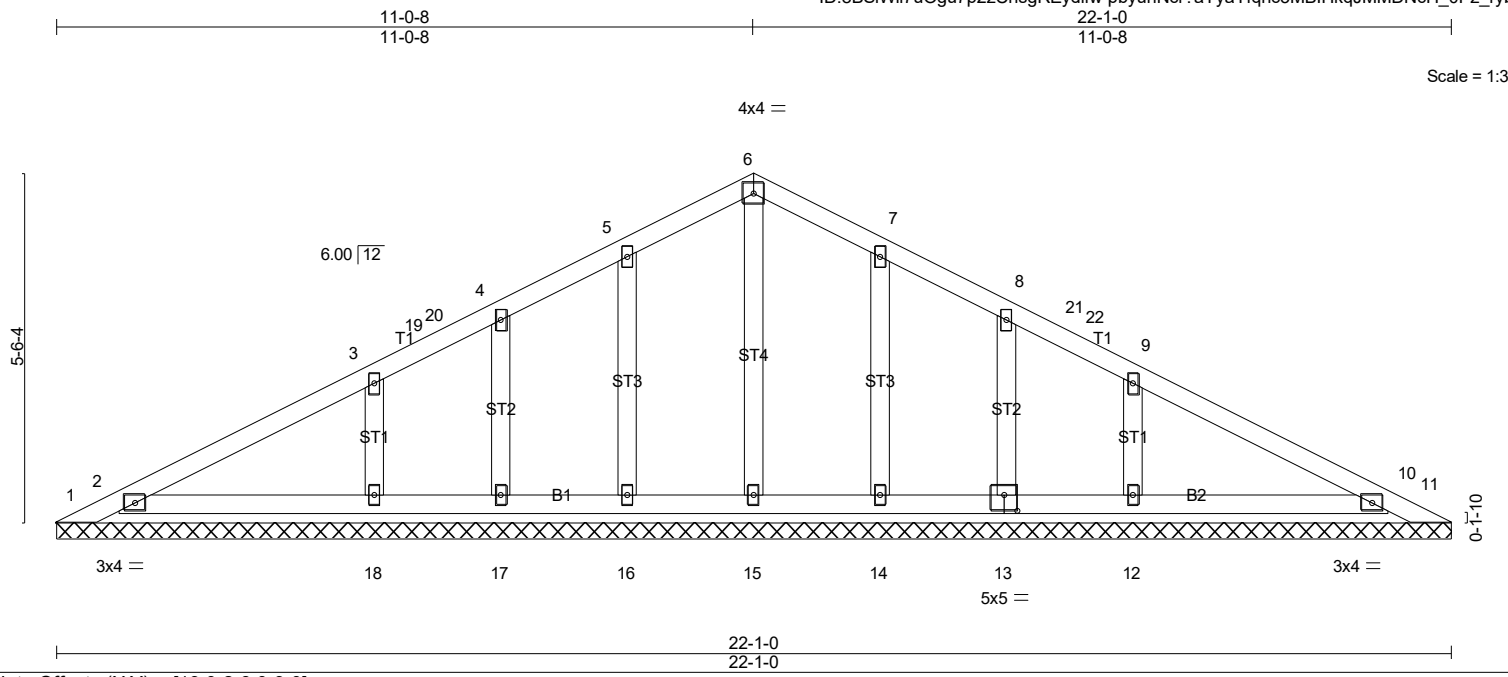


Plate Offsets (X,Y)-- [13:0-2-8,0-3-0]

| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.20 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| Snow (Pf) | 20.0 | Lumber DOL | 1.15 | BC | 0.16 | Vert(CT) | n/a | - | n/a | 999 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.07 | Horz(CT) | 0.00 | 10 | n/a | n/a | | |
| BCLL | 0.0 * | Code IRC2018/TPI2014 | | Matrix-SH | | | | | | | Weight: 99 lb | FT = 20% |
| BCDL | 10.0 | | | | | | | | | | | |

**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 or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** All bearings 22-1-0.
(lb) - Max Horz 1=65(LC 14)
Max Uplift All uplift 100 lb or less at joint(s) 2, 16, 10, 17, 18, 14, 13, 12 except 1=-105(LC 28), 11=-105(LC 35)
Max Grav All reactions 250 lb or less at joint(s) 1, 11, 15, 17, 13 except 2=326(LC 1), 16=256(LC 5), 10=327(LC 1), 18=288(LC 21), 14=255(LC 6), 12=288(LC 22)

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

**NOTES-** (14-17)
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-3-15 to 5-0-8, Interior(1) 5-0-8 to 6-2-14, Exterior(2R) 6-2-14 to 15-10-2, Interior(1) 15-10-2 to 16-11-8, Exterior(2E) 16-11-8 to 21-9-1 zone;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); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) All plates are 2x4 MT20 unless otherwise indicated.
7) Gable requires continuous bottom chord bearing.
8) Gable studs spaced at 2-0-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 16, 10, 17, 18, 14, 13, 12 except (jt=lb) 1=105, 11=105.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
13) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.


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14) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
15) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
16) Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
17) SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.

**LOAD CASE(S)** Standard


9/17/2021

| Job | Truss | Truss Type | Qty | Ply | 49786-0226 WOODGROVE \| FUQUAY VARINA, NC |
|---|---|---|---|---|---|
| 21-5628-R01 | PB02 | GABLE | 9 | 1 | Job Reference (optional) **# 28509** |

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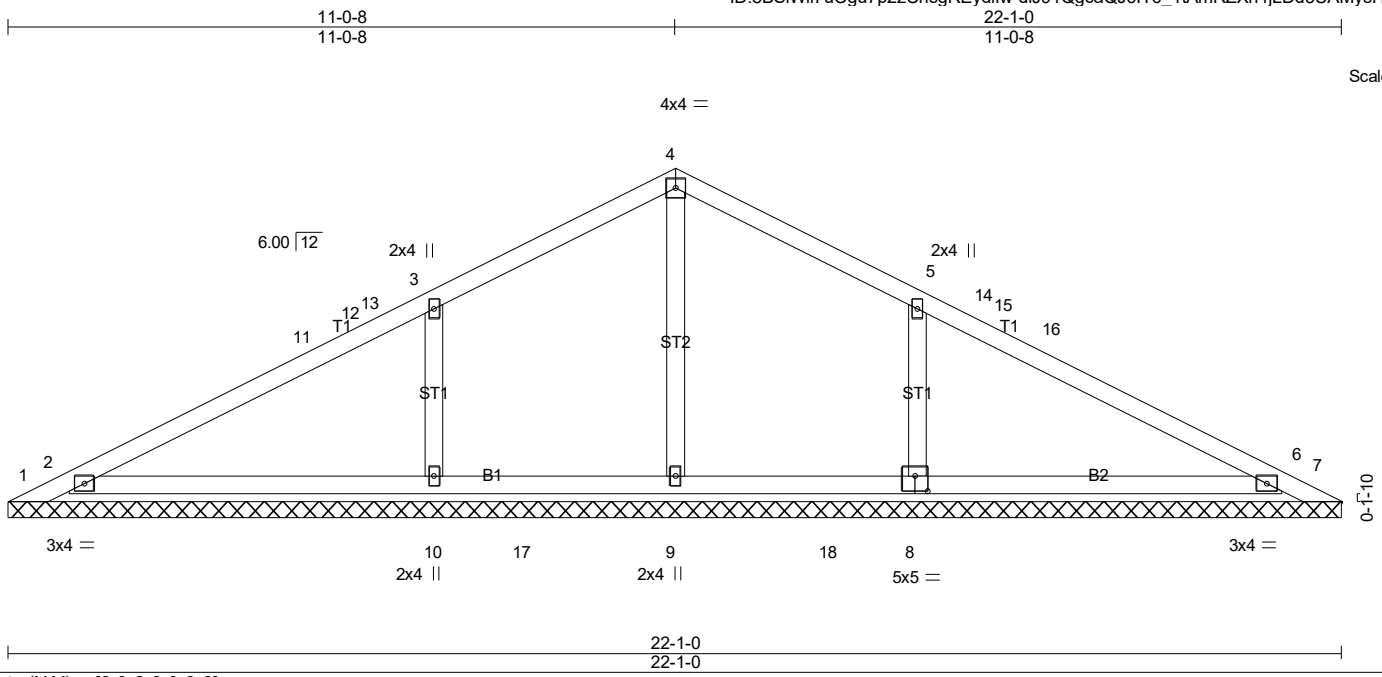


Plate Offsets (X,Y)-- [8:0-2-8,0-3-0]

| **LOADING** (psf) | | **SPACING-** | 2-0-0 | **CSI.** | | **DEFL.** | in | (loc) | l/defl | L/d | **PLATES** | **GRIP** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.47 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| Snow (Pf) | 20.0 | Lumber DOL | 1.15 | BC | 0.39 | Vert(CT) | n/a | - | n/a | 999 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.11 | Horz(CT) | 0.00 | 6 | n/a | n/a | | |
| BCLL | 0.0 * | Code IRC2018/TPI2014 | | Matrix-SH | | | | | | | Weight: 82 lb | FT = 20% |
| BCDL | 10.0 | | | | | | | | | | | |

**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 or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** All bearings 22-1-0.
(lb) - Max Horz 1=65(LC 14)
Max Uplift All uplift 100 lb or less at joint(s) 2, 10, 8, 6 except 1=-285(LC 1), 7=-286(LC 1)
Max Grav All reactions 250 lb or less at joint(s) 1, 7 except 2=589(LC 1), 9=389(LC 6), 10=560(LC 21), 8=557(LC 22), 6=593(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 3-10=-446/152, 5-8=-443/151

**NOTES-** (13-16)
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-3-15 to 5-1-8, Interior(1) 5-1-8 to 6-2-14, Exterior(2R) 6-2-14 to 15-10-2, Interior(1) 15-10-2 to 16-11-8, Exterior(2E) 16-11-8 to 21-9-1 zone;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); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 10, 8, 6 except (jt=lb) 1=285, 7=286.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.


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13) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
14) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
15) Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
16) SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.

**LOAD CASE(S)** Standard


9/17/2021

| Job | Truss | Truss Type | Qty | Ply | 49786-0226 WOODGROVE \| FUQUAY VARINA, NC |
|---|---|---|---|---|---|
| 21-5628-R01 | PB03 | GABLE | 2 | 2 | Job Reference (optional) **# 28509** |

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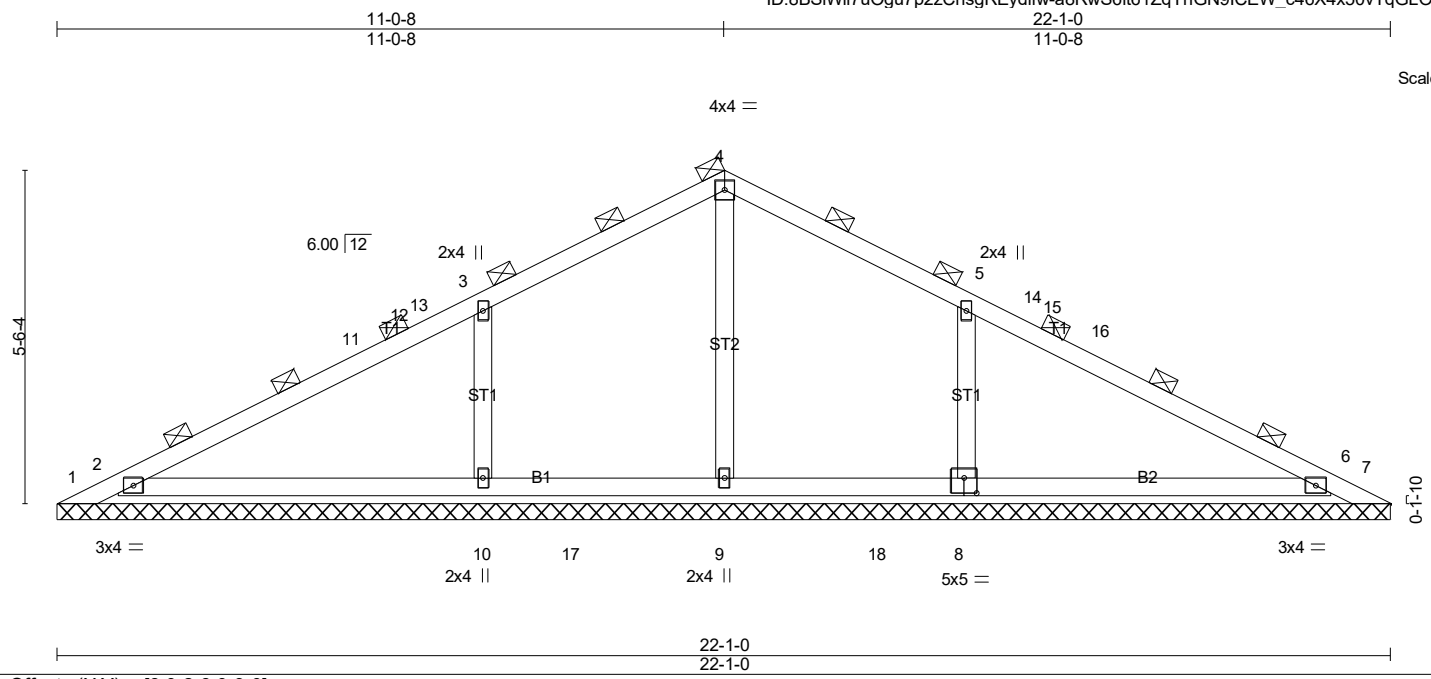



Plate Offsets (X,Y)-- [8:0-2-8,0-3-0]

| **LOADING** (psf) | | **SPACING-** 2-3-8 | **CSI.** | **DEFL.** in (loc) l/defl L/d | **PLATES** | **GRIP** |
|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL 1.15 | TC 0.31 | Vert(LL) n/a - n/a 999 | MT20 | 244/190 |
| Snow (Pf) | 20.0 | Lumber DOL 1.15 | BC 0.25 | Vert(CT) n/a - n/a 999 | | |
| TCDL | 10.0 | Rep Stress Incr NO | WB 0.05 | Horz(CT) 0.00 6 n/a n/a | | |
| BCLL | 0.0 * | Code IRC2018/TPI2014 | Matrix-SH | | Weight: 164 lb | FT = 20% |
| BCDL | 10.0 | | | | | |

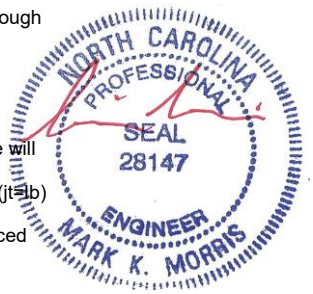
**LUMBER-**
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.3
OTHERS 2x4 SP No.3

**BRACING-**
TOP CHORD 2-0-0 oc purlins (6-0-0 max.)
(Switched from sheeted: Spacing > 2-0-0).
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** All bearings 22-1-0.
(lb) - Max Horz 1=74(LC 14)
Max Uplift All uplift 100 lb or less at joint(s) 10, 8, 6 except 1=-326(LC 1), 7=-328(LC 1), 2=-108(LC 14)
Max Grav All reactions 250 lb or less at joint(s) 1, 7 except 2=675(LC 1), 9=446(LC 6), 10=641(LC 21), 8=638(LC 22), 6=679(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 3-10=-511/174, 5-8=-508/173

**NOTES-** (16-19)
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-3-15 to 5-1-8, Interior(1) 5-1-8 to 6-2-14, Exterior(2R) 6-2-14 to 15-10-2, Interior(1) 15-10-2 to 16-11-8, Exterior(2E) 16-11-8 to 21-9-1 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
5) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
6) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
7) Unbalanced snow loads have been considered for this design.
8) Gable requires continuous bottom chord bearing.
9) Gable studs spaced at 4-0-0 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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 10, 8, 6 except (jt=lb) 1=326, 7=328, 2=108.
13) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
14) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.
15) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

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16) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
17) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
18) Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
19) SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.

**LOAD CASE(S)** Standard


9/17/2021

| Job | Truss | Truss Type | Qty | Ply | 49786-0226 WOODGROVE \| FUQUAY VARINA, NC |
|---|---|---|---|---|---|
| 21-5628-R01 | PB04 | GABLE | 2 | 4 | Job Reference (optional) **# 28509** |

8.430 s Feb 12 2021 MiTek Industries, Inc. Tue Sep 21 14:10:33 2021 Page 1
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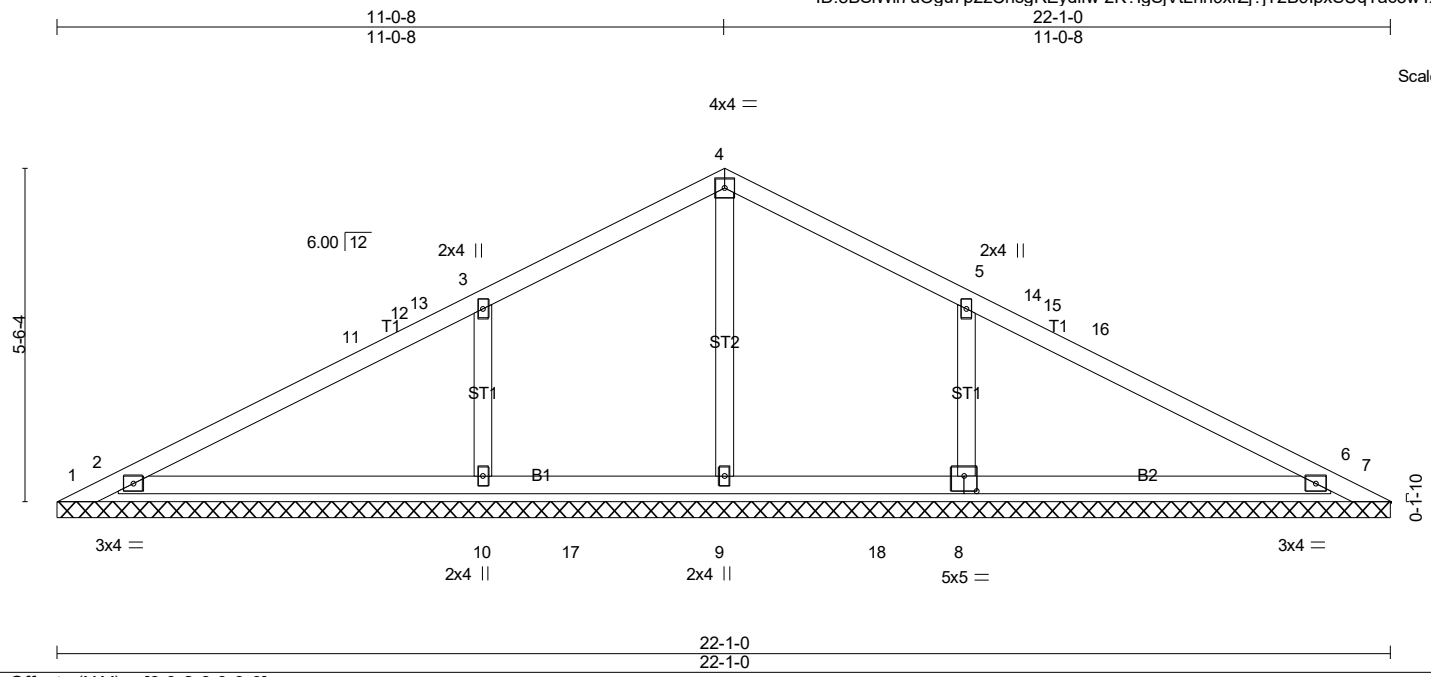


Plate Offsets (X,Y)-- [8:0-2-8,0-3-0]

| **LOADING** (psf) | | **SPACING-** 2-0-0 | **CSI.** | **DEFL.** in (loc) l/defl L/d | **PLATES** | **GRIP** |
|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL 1.15 | TC 0.12 | Vert(LL) n/a - n/a 999 | MT20 | 244/190 |
| Snow (Pf) | 20.0 | Lumber DOL 1.15 | BC 0.10 | Vert(CT) n/a - n/a 999 | | |
| TCDL | 10.0 | Rep Stress Incr YES | WB 0.03 | Horz(CT) 0.00 6 n/a n/a | | |
| BCLL | 0.0 * | Code IRC2018/TPI2014 | Matrix-SH | | Weight: 328 lb | FT = 20% |
| BCDL | 10.0 | | | | | |

**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 or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** All bearings 22-1-0.
(lb) - Max Horz 1=65(LC 14)
Max Uplift All uplift 100 lb or less at joint(s) 2, 10, 8, 6 except 1=-285(LC 1), 7=-286(LC 1)
Max Grav All reactions 250 lb or less at joint(s) 1, 7 except 2=589(LC 1), 9=389(LC 6), 10=560(LC 21), 8=557(LC 22), 6=593(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 3-10=-446/152, 5-8=-443/151

**NOTES-** (15-18)
1) 4-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-3-15 to 5-1-8, Interior(1) 5-1-8 to 6-2-14, Exterior(2R) 6-2-14 to 15-10-2, Interior(1) 15-10-2 to 16-11-8, Exterior(2E) 16-11-8 to 21-9-1 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
5) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
6) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
7) Unbalanced snow loads have been considered for this design.
8) Gable requires continuous bottom chord bearing.
9) Gable studs spaced at 4-0-0 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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 10, 8, 6 except (jt=lb) 1=285, 7=286.
13) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
14) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.


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15) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
16) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
17) Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
18) SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.

**LOAD CASE(S)** Standard


9/17/2021

| Job | Truss | Truss Type | Qty | Ply | 49786-0226 WOODGROVE \| FUQUAY VARINA, NC |
|---|---|---|---|---|---|
| 21-5628-R01 | PB05 | Piggyback | 7 | 1 | Job Reference (optional) **# 28509** |

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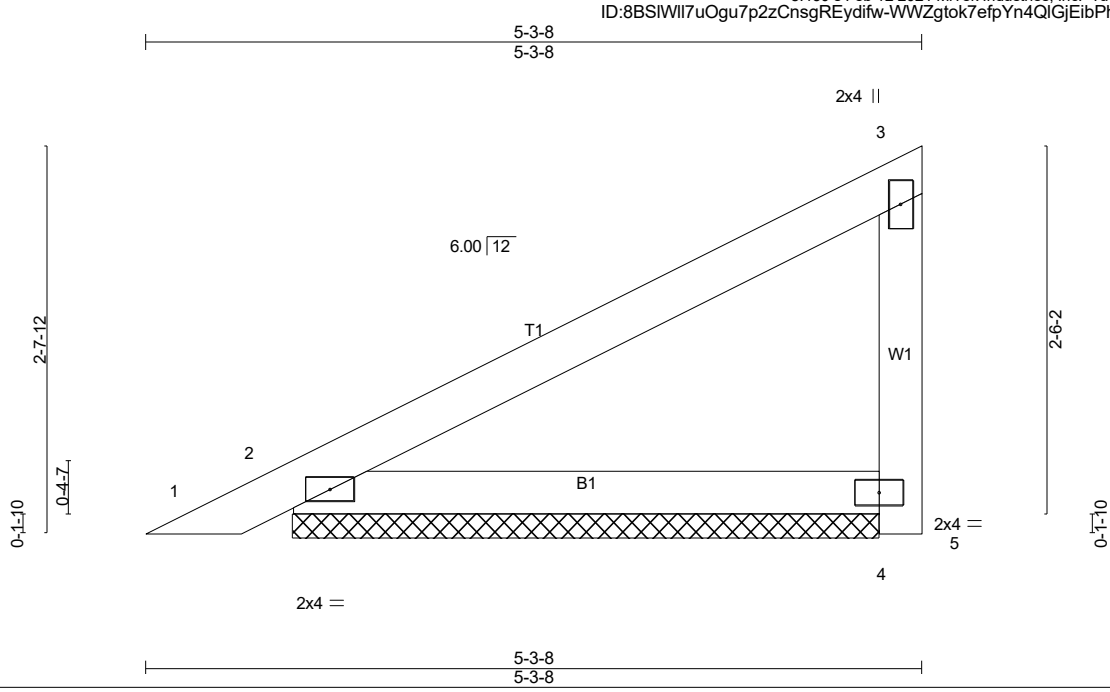


Scale = 1:15.7

| **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 | 0.48 | Vert(LL) | -0.00 | 1 | n/r | 180 | MT20 | 244/190 |
| Snow (Pf) | 20.0 | Lumber DOL | 1.15 | BC | 0.35 | Vert(CT) | 0.01 | 1 | n/r | 80 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.00 | Horz(CT) | 0.00 | 5 | n/a | n/a | | |
| BCLL | 0.0 * | Code IRC2018/TPI2014 | | Matrix-P | | | | | | | Weight: 18 lb | FT = 20% |
| BCDL | 10.0 | | | | | | | | | | | |

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

**BRACING-**
TOP CHORD Structural wood sheathing directly applied or 5-3-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 5=0/3-11-15 (min. 0-1-8), 2=210/3-11-15 (min. 0-1-8), 4=162/3-11-15 (min. 0-1-8)
Max Horz 2=66(LC 14)
Max Uplift2=-12(LC 14), 4=-31(LC 14)
Max Grav 2=302(LC 21), 4=229(LC 21)

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

**NOTES-** (11-14)
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone;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); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
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 20.0 psf on overhangs non-concurrent with other live loads.
5) Gable requires continuous bottom chord bearing.
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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 4.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.
11) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
12) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
13) Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
14) SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAINING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.

NORTH CAROLINA PROFESSIONAL SEAL 28147 ENGINEER MARK K. MORRIS

*9/17/2021*

**LOAD CASE(S)** Standard

**Warning - Verify design parameters and read notes before use.** This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI 1-03 Guide to *Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

| Job | Truss | Truss Type | Qty | Ply | 49786-0226 WOODGROVE \| FUQUAY VARINA, NC |
|---|---|---|---|---|---|
| 21-5628-R01 | R01 | GABLE | 1 | 1 | Job Reference (optional) **# 28509** |

8.430 s Feb 12 2021 MiTek Industries, Inc. Tue Sep 21 14:10:40 2021 Page 1
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0-6-8 7-2-12 1-0-0 6-11-4 5-3-8 5-5-4 7-1-8 7-1-8 2-4-12 5-9-0 4-10-4 4-8-8 5-1-12 0-6-8

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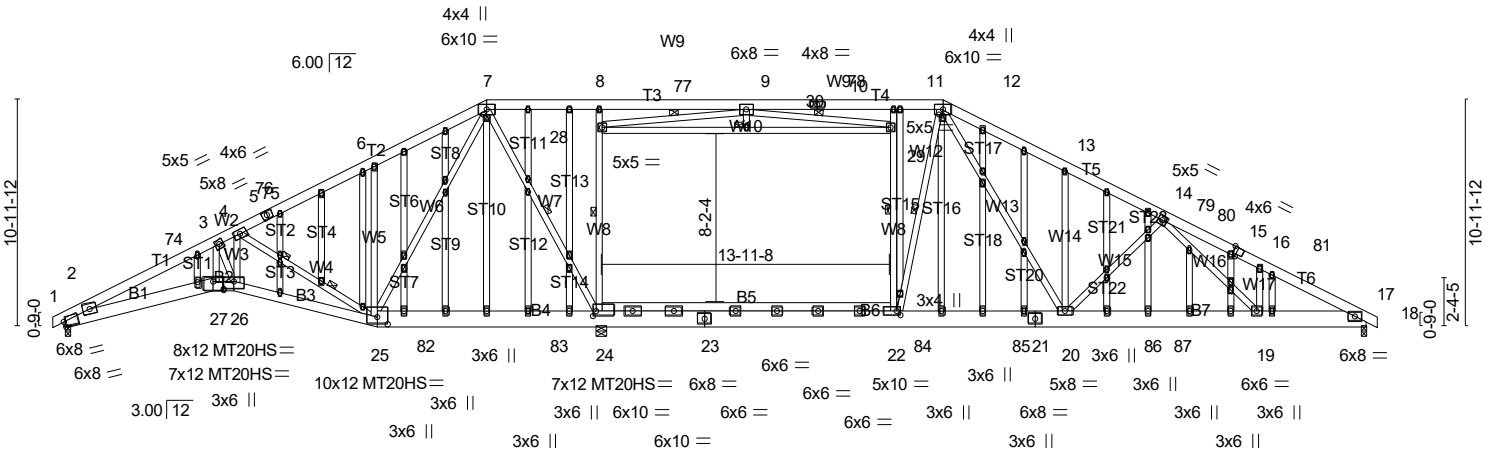


0-3-8 7-2-12 8-2-12 15-2-0 25-10-12 26-0-4 40-1-12 48-3-8 57-10-4 63-0-0
0-3-8 6-11-4 1-0-0 6-11-4 10-8-12 0-1-8 14-1-8 8-1-12 9-6-12 5-1-12

Plate Offsets (X,Y)-- [2:0-0-12,Edge], [7:0-1-5,0-2-0], [12:0-0-9,0-2-0], [15:0-2-3,Edge], [22:0-2-4,0-2-8], [24:0-1-12,0-3-0], [25:0-6-0,0-4-3], [26:0-6-0,0-4-4], [27:0-6-0,0-5-0]

| **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 | 0.95 | Vert(LL) | -0.71 | 20-22 | >621 | 240 | MT20 | 244/190 |
| Snow (Pf) | 20.0 | Lumber DOL | 1.15 | BC | 0.97 | Vert(CT) | -1.26 | 20-22 | >351 | 180 | MT20HS | 187/143 |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.93 | Horz(CT) | 0.33 | 17 | n/a | n/a | | |
| BCLL | 0.0 * | Code IRC2018/TPI2014 | | Matrix-SH | | Attic | -0.36 | 22-24 | 474 | 360 | Weight: 791 lb | FT = 20% |
| BCDL | 10.0 | | | | | | | | | | | |

**LUMBER-**
TOP CHORD 2x6 SP No.2
BOT CHORD 2x10 SP 2400F 2.0E *Except*
B5: 1-1/2x4-3/4 SP No.2, B1: 2x8 SP No.1, B2: 2x6 SP DSS
B3: 2x6 SP No.1
WEBS 2x4 SP No.3 *Except*
W8: 2x4 SP No.1, W10,W3: 2x4 SP No.2
OTHERS 2x4 SP No.3

**BRACING-**
TOP CHORD Structural wood sheathing directly applied or 1-7-8 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
7-10-10 oc bracing: 24-25
2-2-0 oc bracing: 22-24.
WEBS 1 Row at midpt 24-28, 22-29, 9-28, 9-29, 12-22, 7-24
2 Rows at 1/3 pts 4-25
JOINTS 1 Brace at Jt(s): 30
This truss requires both edges of the bottom chord be sheathed in the room area.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 24=1357/0-5-8 (min. 0-1-8), 17=2213/0-3-8 (min. 0-2-4), 2=1951/0-3-8 (min. 0-2-10)
Max Horz 2=-128(LC 19)
Max Uplift24=-28(LC 11), 17=-29(LC 15)
Max Grav 24=1760(LC 36), 17=2687(LC 46), 2=2313(LC 46)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-74=-7553/533, 3-74=-7420/550, 3-75=-6711/535, 4-75=-6684/538, 4-76=-3803/270, 5-76=-3789/273, 5-6=-3695/299, 6-7=-3824/409, 7-8=-3553/230, 8-77=-3239/195, 9-77=-3239/195, 9-78=-3710/228, 10-78=-3710/228, 10-11=-3710/228, 11-12=-3611/236, 12-13=-4777/433, 13-14=-4756/333, 14-79=-4792/462, 79-80=-4851/453, 15-80=-4867/452, 15-81=-4884/444, 16-81=-4899/443, 16-17=-5008/359
BOT CHORD 25-82=0/2941, 82-83=0/2946, 24-83=0/2946, 23-24=0/3596, 22-23=0/3599, 22-84=0/3434, 84-85=0/3433, 21-85=0/3424, 20-21=0/3437, 20-86=-158/4408, 86-87=-158/4408, 19-87=-158/4408, 17-19=-235/4353, 2-27=-401/6745, 26-27=-371/6438, 25-26=-287/6173
WEBS 24-28=-1343/192, 8-28=-963/166, 22-29=-767/255, 11-29=-410/364, 28-30=-210/1793, 29-30=-210/1793, 4-25=-3205/298, 7-25=-228/1087, 9-28=-2163/253, 9-29=-1759/219, 13-20=-548/164, 12-22=-351/774, 12-20=-296/1741, 14-20=-459/160, 4-26=-245/2588, 6-25=-712/190, 3-26=-949/243, 3-27=-84/1499, 7-24=-100/1410

**NOTES-** (20-23)
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-6-8 to 5-9-2, Exterior(2N) 5-9-2 to 14-1-14, Corner(3R) 14-1-14 to 26-9-2, Exterior(2N) 26-9-2 to 36-2-14, Corner(3R) 36-2-14 to 48-10-2, Exterior(2N) 48-10-2 to 57-2-14, Corner(3E) 57-2-14 to 63-6-8 zone;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); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.

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9/17/2021

Continued on page 2

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 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 to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI 1-03 Guide to *Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

**NOTES-** (20-23)

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 20.0 psf on overhangs non-concurrent with other live loads.
7) WARNING: This long span truss requires extreme care and experience for proper and safe handling and erection. For general handling and erection guidance, see Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses ("BCSI"), jointly produced by SBCA and TPI. The building owner or the owner's authorized agent shall contract with a qualified registered design professional for the design and inspection of the temporary installation restraint/bracing and the permanent individual truss member restraint/bracing. MiTek assumes no responsibility for truss manufacture, handling, erection, or bracing.
8) Provide adequate drainage to prevent water ponding.
9) All plates are MT20 plates unless otherwise indicated.
10) All plates are 2x4 MT20 unless otherwise indicated.
11) Gable studs spaced at 2-0-0 oc.
12) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
13) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
14) Ceiling dead load (5.0 psf) on member(s). 28-30, 29-30
15) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 22-24
16) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
17) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 24, 17.
18) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
19) Attic room checked for L/360 deflection.
20) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
21) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
22) Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
23) SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.

**LOAD CASE(S)** Standard


9/17/2021

| Job | Truss | Truss Type | Qty | Ply | 49786-0226 WOODGROVE \| FUQUAY VARINA, NC |
|---|---|---|---|---|---|
| 21-5628-R01 | R02 | ATTIC | 3 | 1 | Job Reference (optional) **# 28509** |

8.430 s Feb 12 2021 MiTek Industries, Inc. Tue Sep 21 14:10:43 2021 Page 1
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0-6-8 7-2-12 1-0-0 6-11-4 5-3-8 5-5-4 7-1-8 7-1-8 2-4-12 5-9-0 4-10-4 4-8-8 5-1-12 0-6-8

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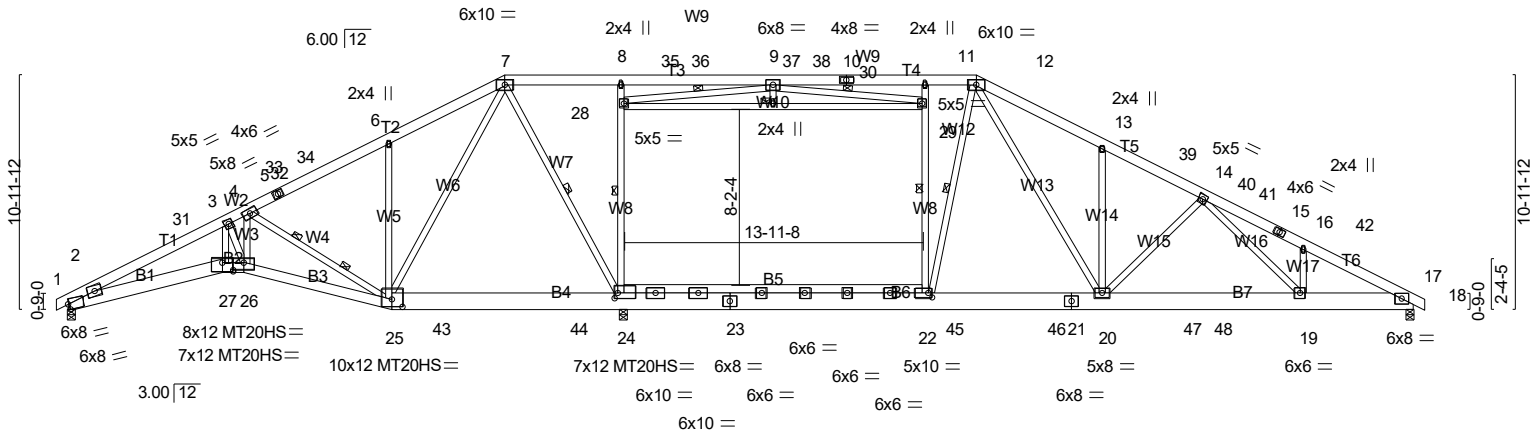


0-3-8 7-2-12 8-2-12 15-2-0 25-10-12 26-0-4 40-1-12 48-3-8 57-10-4 63-0-0
0-3-8 6-11-4 1-0-0 6-11-4 10-8-12 0-1-8 14-1-8 8-1-12 9-6-12 5-1-12

Plate Offsets (X,Y)-- [2:0-0-12,Edge], [22:0-2-4,0-2-8], [24:0-1-12,0-3-0], [25:0-6-0,0-4-3], [26:0-6-0,0-4-4], [27:0-6-0,0-5-0]

| **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 | 0.95 | Vert(LL) | -0.71 | 20-22 | >621 | 240 | MT20 | 244/190 |
| Snow (Pf) | 20.0 | Lumber DOL | 1.15 | BC | 0.97 | Vert(CT) | -1.26 | 20-22 | >351 | 180 | MT20HS | 187/143 |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.93 | Horz(CT) | 0.33 | 17 | n/a | n/a | | |
| BCLL | 0.0 * | Code | IRC2018/TPI2014 | Matrix-SH | | Attic | -0.36 | 22-24 | 474 | 360 | Weight: 621 lb | FT = 20% |
| BCDL | 10.0 | | | | | | | | | | | |

**LUMBER-**
TOP CHORD 2x6 SP No.2
BOT CHORD 2x10 SP 2400F 2.0E *Except*
B5: 1-1/2x4-3/4 SP No.2, B1: 2x8 SP No.1, B2: 2x6 SP DSS
B3: 2x6 SP No.1
WEBS 2x4 SP No.3 *Except*
W8: 2x4 SP No.1, W10,W3: 2x4 SP No.2

**BRACING-**
TOP CHORD Structural wood sheathing directly applied or 1-7-8 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
7-10-10 oc bracing: 24-25
2-2-0 oc bracing: 22-24.
WEBS 1 Row at midpt 24-28, 22-29, 9-28, 9-29, 12-22, 7-24
2 Rows at 1/3 pts 4-25
JOINTS 1 Brace at Jt(s): 30
This truss requires both edges of the bottom chord be sheathed in the room area.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 24=1357/0-5-8 (min. 0-1-8), 17=2213/0-3-8 (min. 0-2-4), 2=1951/0-3-8 (min. 0-2-10)
Max Horz 2=-128(LC 19)
Max Uplift24=-28(LC 11), 17=-29(LC 15)
Max Grav 24=1760(LC 36), 17=2687(LC 46), 2=2313(LC 46)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-31=-7553/51, 3-31=-7420/68, 3-32=-6711/87, 4-32=-6684/91, 4-33=-3803/56, 5-33=-3789/59, 5-34=-3695/70, 6-34=-3688/86, 6-7=-3824/176, 7-8=-3553/51, 8-35=-3239/35, 35-36=-3239/35, 9-36=-3239/35, 9-37=-3710/38, 37-38=-3710/38, 10-38=-3710/38, 10-11=-3710/38, 11-12=-3611/53, 12-13=-4777/150, 13-39=-4671/63, 14-39=-4756/44, 14-40=-4792/94, 40-41=-4850/85, 15-41=-4867/84, 15-42=-4884/76, 16-42=-4899/75, 16-17=-5008/26
BOT CHORD 25-43=0/2941, 43-44=0/2946, 24-44=0/2946, 23-24=0/3596, 22-23=0/3599, 22-45=0/3434, 45-46=0/3433, 21-46=0/3424, 20-21=0/3437, 20-47=0/4408, 47-48=0/4408, 19-48=0/4408, 17-19=0/4353, 2-27=0/6745, 26-27=0/6438, 25-26=0/6173
WEBS 24-28=-1343/140, 8-28=-963/126, 22-29=-767/255, 11-29=-410/364, 28-30=-155/1793, 29-30=-155/1793, 4-25=-3205/60, 7-25=-210/1087, 9-28=-2163/167, 9-29=-1759/188, 13-20=-548/145, 12-22=-351/774, 12-20=-175/1741, 14-20=-459/129, 4-26=-10/2588, 6-25=-712/163, 3-26=-949/92, 3-27=0/1499, 7-24=-100/1410

**NOTES-** (17-20)
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-6-8 to 5-9-2, Interior(1) 5-9-2 to 11-6-9, Exterior(2R) 11-6-9 to 29-4-7, Interior(1) 29-4-7 to 33-7-9, Exterior(2R) 33-7-9 to 51-5-7, Interior(1) 51-5-7 to 57-2-14, Exterior(2E) 57-2-14 to 63-6-8 zone;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); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.

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Continued on page 2

**NOTES-** (17-20)

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 20.0 psf on overhangs non-concurrent with other live loads.
6) WARNING: This long span truss requires extreme care and experience for proper and safe handling and erection. For general handling and erection guidance, see Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses ("BCSI"), jointly produced by SBCA and TPI. The building owner or the owner's authorized agent shall contract with a qualified registered design professional for the design and inspection of the temporary installation restraint/bracing and the permanent individual truss member restraint/bracing. MiTek assumes no responsibility for truss manufacture, handling, erection, or bracing.
7) Provide adequate drainage to prevent water ponding.
8) All plates are MT20 plates unless otherwise indicated.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
11) Ceiling dead load (5.0 psf) on member(s). 28-30, 29-30
12) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 22-24
13) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
14) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 24, 17.
15) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
16) Attic room checked for L/360 deflection.
17) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
18) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
19) Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
20) SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.

**LOAD CASE(S)** Standard

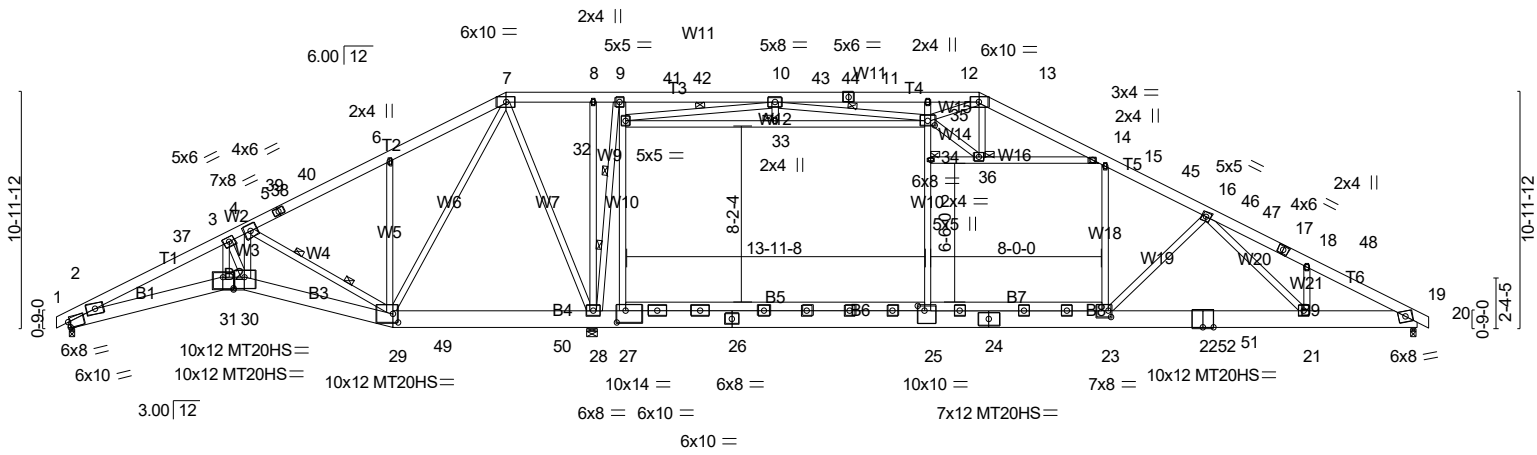

9/17/2021

| Job | Truss | Truss Type | Qty | Ply | 49786-0226 WOODGROVE \| FUQUAY VARINA, NC |
|---|---|---|---|---|---|
| 21-5628-R01 | R03 | ATTIC | 2 | 1 | Job Reference (optional) **# 28509** |

8.430 s Feb 12 2021 MiTek Industries, Inc. Tue Sep 21 14:10:47 2021 Page 1
ID:8BSIWlI7uOgu7p2zCnsgREydifw-d0rbcEuHaeSir4vFXyzld8kUDa0d6aigH5UhI0ybOtM

-0-6-8 | 7-2-12 | 8-2-12 | 15-2-0 | 20-5-8 | 24-8-0 | 25-10-12 | 33-0-4 | 40-1-12 | 42-6-8 | 48-3-8 | 53-1-12 | 57-10-4 | 63-0-0 | 63-6-8
0-6-8 | 7-2-12 | 1-0-0 | 6-11-4 | 5-3-8 | 4-2-8 | 1-2-12 | 7-1-8 | 7-1-8 | 2-4-12 | 5-9-0 | 4-10-4 | 4-8-8 | 5-1-12 | 0-6-8

Scale = 1:107.6




0-3-8 | 7-2-12 | 8-2-12 | 15-2-0 | 24-2-8 | 25-10-12 | 40-1-12 | 48-3-8 | 57-10-4 | 63-0-0
0-3-8 | 6-11-4 | 1-0-0 | 6-11-4 | 9-0-8 | 1-8-4 | 14-3-0 | 8-1-12 | 9-6-12 | 5-1-12

Plate Offsets (X,Y)-- [2:0-0-12,Edge], [23:0-1-8,0-3-8], [25:0-3-12,0-2-12], [27:0-5-0,0-6-8], [29:0-3-0,0-4-12], [30:0-6-0,0-6-4], [31:0-6-0,0-7-0], [35:0-4-0,0-2-8]

| **LOADING** (psf) | | **SPACING-** | 2-0-0 | **CSI.** | | **DEFL.** | in | (loc) | l/defl | L/d | **PLATES** | **GRIP** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.96 | Vert(LL) | -0.97 | 23-25 | >473 | 240 | MT20 | 244/190 |
| Snow (Pf) | 20.0 | Lumber DOL | 1.15 | BC | 1.00 | Vert(CT) | -1.68 | 23-25 | >274 | 180 | MT20HS | 187/143 |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.94 | Horz(CT) | 0.39 | 19 | n/a | n/a | | |
| BCLL | 0.0 * | Code IRC2018/TPI2014 | | Matrix-SH | | Attic | -0.37 | 25-27 | 458 | 360 | Weight: 662 lb | FT = 20% |
| BCDL | 10.0 | | | | | | | | | | | |

**LUMBER-**
TOP CHORD 2x6 SP No.2 *Except*
T3,T1: 2x6 SP No.1
BOT CHORD 2x10 SP 2400F 2.0E *Except*
B5,B7: 1-1/2x4-3/4 SP No.2, B1,B2: 2x8 SP DSS, B3: 2x8 SP No.1
WEBS 2x4 SP No.3 *Except*
W10,W9: 2x4 SP No.1, W12,W4,W18,W3,W16: 2x4 SP No.2

**BRACING-**
TOP CHORD Structural wood sheathing directly applied or 1-5-5 oc purlins.
BOT CHORD Rigid ceiling directly applied or 1-4-12 oc bracing.
WEBS 1 Row at midpt 10-32, 10-35
2 Rows at 1/3 pts 4-29, 9-28
JOINTS 1 Brace at Jt(s): 33, 34, 36
This truss requires both edges of the bottom chord be sheathed in the room area.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 2=2375/0-3-8 (min. 0-2-15), 28=737/0-5-8 (min. 0-1-8), 19=2662/0-3-8 (min. 0-2-14)
Max Horz 2=128(LC 14)
Max Uplift28=-177(LC 11)
Max Grav 2=3014(LC 46), 28=1190(LC 53), 19=3476(LC 46)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-37=-10205/0, 3-37=-10071/0, 3-38=-9196/0, 4-38=-9187/0, 4-39=-5335/0, 5-39=-5321/0, 5-40=-5226/0, 6-40=-5220/0, 6-7=-5338/65, 7-8=-4838/0, 8-9=-4838/0, 9-41=-5323/0, 41-42=-5323/0, 10-42=-5323/0, 10-43=-5770/0, 43-44=-5770/0, 11-44=-5770/0, 11-12=-5770/0, 12-13=-5706/0, 13-14=-4446/0, 14-15=-5566/0, 15-45=-5768/0, 16-45=-5917/0, 16-46=-6699/0, 46-47=-6721/0, 17-47=-6792/0, 17-48=-6802/0, 18-48=-6806/0, 18-19=-6994/0
BOT CHORD 29-49=0/4276, 49-50=0/4279, 28-50=0/4279, 27-28=0/5125, 26-27=0/5129, 25-26=0/5136, 24-25=0/5195, 23-24=0/5159, 23-51=0/5686, 22-51=0/5686, 22-52=0/5686, 21-52=0/5686, 19-21=0/6084, 2-31=0/9143, 30-31=0/8749, 29-30=0/8456
WEBS 27-32=0/1667, 9-32=0/1808, 25-34=0/1359, 34-35=0/1365, 12-35=-616/152, 32-33=-166/1932, 33-35=-166/1932, 4-29=-4194/0, 7-29=-214/1087, 10-32=-1870/225, 10-35=-1428/295, 15-23=0/525, 16-23=-914/154, 16-21=-126/737, 4-30=0/3413, 6-29=-689/160, 3-30=-976/68, 3-31=0/1808, 7-28=0/1899, 8-28=-6/454, 9-28=-3003/0, 14-36=-1238/84, 13-35=0/2136, 35-36=-1340/95, 13-36=-24/873

**NOTES-** (18-21)
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-6-8 to 5-9-2, Interior(1) 5-9-2 to 11-6-9, Exterior(2R) 11-6-9 to 29-4-7, Interior(1) 29-4-7 to 33-7-9, Exterior(2R) 33-7-9 to 51-5-7, Interior(1) 51-5-7 to 57-2-14, Exterior(2E) 57-2-14 to 63-6-8 zone;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); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
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 20.0 psf on overhangs non-concurrent with other live loads.

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Continued on page 2

| Job | Truss | Truss Type | Qty | Ply | 49786-0226 WOODGROVE \| FUQUAY VARINA, NC |
|---|---|---|---|---|---|
| 21-5628-R01 | R03 | ATTIC | 2 | 1 | Job Reference (optional) **# 28509** |



**NOTES-** (18-21)

6) WARNING: This long span truss requires extreme care and experience for proper and safe handling and erection. For general handling and erection guidance, see Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses ("BCSI"), jointly produced by SBCA and TPI. The building owner or the owner's authorized agent shall contract with a qualified registered design professional for the design and inspection of the temporary installation restraint/bracing and the permanent individual truss member restraint/bracing. MiTek assumes no responsibility for truss manufacture, handling, erection, or bracing.
7) Provide adequate drainage to prevent water ponding.
8) All plates are MT20 plates unless otherwise indicated.
9) All plates are 6x6 MT20 unless otherwise indicated.
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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
12) Ceiling dead load (5.0 psf) on member(s). 14-15, 32-33, 33-35, 34-36, 14-36
13) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 25-27, 23-25
14) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
15) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 28=177.
16) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
17) Attic room checked for L/360 deflection.
18) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
19) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
20) Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
21) SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.

**LOAD CASE(S)** Standard


9/17/2021

| Job | Truss | Truss Type | Qty | Ply | 49786-0226 WOODGROVE \| FUQUAY VARINA, NC |
|---|---|---|---|---|---|
| 21-5628-R01 | R04 | ATTIC | 1 | 2 | Job Reference (optional) **# 28509** |

8.430 s Feb 12 2021 MiTek Industries, Inc. Tue Sep 21 14:10:52 2021 Page 1
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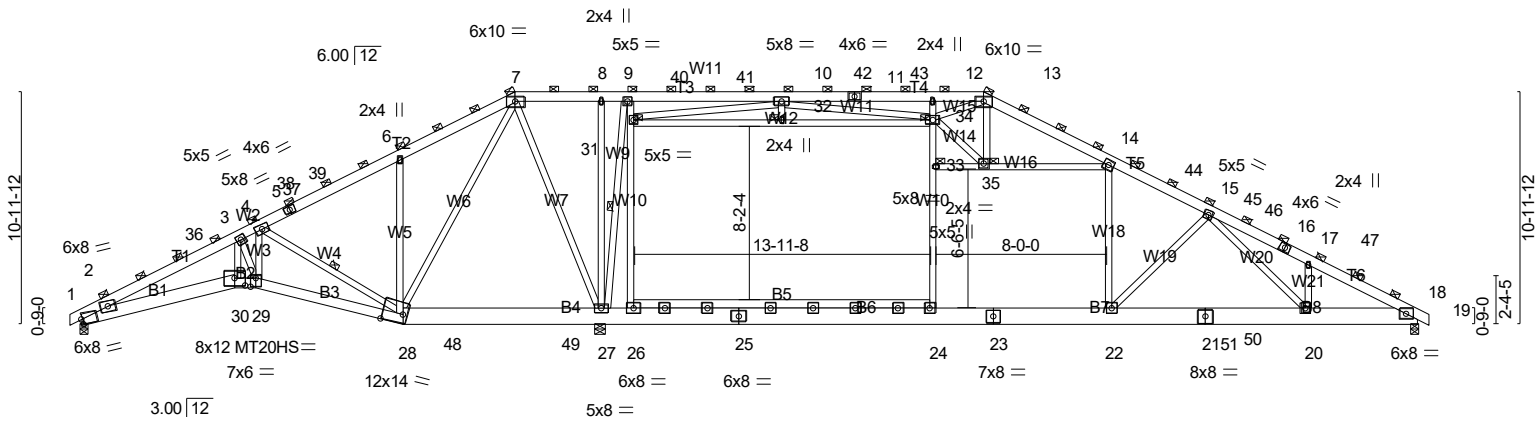
-0-6-8 7-2-12 8-2-12 15-2-0 20-5-8 24-8-0 25-10-12 33-0-4 40-1-12 42-6-8 48-3-8 53-1-12 57-10-4 63-0-0 63-6-8
0-6-8 7-2-12 1-0-0 6-11-4 5-3-8 4-2-8 1-2-12 7-1-8 7-1-8 2-4-12 5-9-0 4-10-4 4-8-8 5-1-12 0-6-8

Scale = 1:108.6




0-3-8 7-2-12 8-2-12 15-2-0 24-2-8 25-10-12 40-1-12 48-3-8 57-10-4 63-0-0
0-3-8 6-11-4 1-0-0 6-11-4 9-0-8 1-8-4 14-3-0 8-1-12 9-6-12 5-1-12

Plate Offsets (X,Y)-- [2:0-0-12,Edge], [28:0-11-12,0-5-4], [29:0-3-0,0-5-0], [30:0-6-0,0-4-4]

| **LOADING** (psf) | | **SPACING-** | 2-3-8 | **CSI.** | | **DEFL.** | in | (loc) | l/defl | L/d | **PLATES** | **GRIP** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.74 | Vert(LL) | -0.62 | 22-24 | >737 | 240 | MT20 | 244/190 |
| Snow (Pf) | 20.0 | Lumber DOL | 1.15 | BC | 0.97 | Vert(CT) | -1.08 | 22-24 | >427 | 180 | MT20HS | 187/143 |
| TCDL | 10.0 | Rep Stress Incr | NO | WB | 0.80 | Horz(CT) | 0.25 | 18 | n/a | n/a | | |
| BCLL | 0.0 * | Code | IRC2018/TPI2014 | Matrix-SH | | Attic | -0.23 | 24-26 | 749 | 360 | Weight: 1283 lb | FT = 20% |
| BCDL | 10.0 | | | | | | | | | | | |

**LUMBER-**
TOP CHORD 2x6 SP No.2
BOT CHORD 2x10 SP 2400F 2.0E *Except*
B5: 1-1/2x4-3/4 SP No.2, B1: 2x8 SP No.1, B2: 2x6 SP No.1
B3: 2x6 SP No.2
WEBS 2x4 SP No.3 *Except*
W10,W12,W18,W16: 2x4 SP No.2

**BRACING-**
TOP CHORD 2-0-0 oc purlins (3-10-7 max.)
(Switched from sheeted: Spacing > 2-0-0).
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 4-28, 9-27
JOINTS 1 Brace at Jt(s): 7, 31, 32, 33, 13, 34, 35
This truss requires both edges of the bottom chord be sheathed in the room area.

**REACTIONS.** (lb/size) 2=2739/0-3-8 (min. 0-1-15), 27=817/0-5-8 (min. 0-1-8), 18=3061/0-3-8 (min. 0-1-10)
Max Horz 2=146(LC 14)
Max Uplift27=-204(LC 11)
Max Grav 2=3473(LC 46), 27=1330(LC 53), 18=3995(LC 46)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-36=-11641/0, 3-36=-11488/0, 3-37=-10404/0, 4-37=-10394/0, 4-38=-6111/0, 5-38=-6083/0, 5-39=-5990/0, 6-39=-5979/0, 6-7=-6121/79, 7-8=-5613/0, 8-9=-5613/0, 9-40=-6104/0, 40-41=-6104/0, 10-41=-6104/0, 10-42=-6475/0, 42-43=-6475/0, 11-43=-6475/0, 11-12=-6475/0, 12-13=-6437/0, 13-14=-5249/0, 14-44=-6669/0, 15-44=-6840/0, 15-45=-7669/0, 45-46=-7695/0, 16-46=-7775/0, 16-47=-7788/0, 17-47=-7791/0, 17-18=-8008/0
BOT CHORD 28-48=0/4941, 48-49=0/4948, 27-49=0/4948, 26-27=0/5916, 25-26=0/5922, 24-25=0/5922, 23-24=0/5957, 22-23=0/5957, 22-50=0/6561, 21-50=0/6561, 21-51=0/6561, 20-51=0/6561, 18-20=0/6967, 2-30=0/10417, 29-30=0/9951, 28-29=0/9565
WEBS 26-31=0/1729, 9-31=0/1879, 24-33=0/1517, 33-34=0/1522, 12-34=-685/174, 17-20=-15/251, 31-32=-215/2216, 32-34=-215/2216, 4-28=-4680/0, 7-28=-255/1207, 10-31=-2176/278, 10-34=-1737/330, 14-22=0/653, 15-22=-1044/174, 15-20=-144/777, 4-29=0/3858, 6-28=-804/184, 3-29=-1357/70, 3-30=0/2306, 7-27=0/2257, 8-27=-9/487, 9-27=-3162/0, 14-35=-1322/86, 13-34=0/2229, 34-35=-1544/108, 13-35=-36/1174

**NOTES-** (21-24)
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x10 - 2 rows staggered at 0-9-0 oc, 1-1/2x4-3/4 - 2 rows staggered at 0-9-0 oc, 2x8 - 2 rows staggered at 0-9-0 oc, 2x6 - 2 rows staggered at 0-9-0 oc.
Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-6-8 to 5-9-2, Interior(1) 5-9-2 to 11-6-9, Exterior(2R) 11-6-9 to 29-4-7, Interior(1) 29-4-7 to 33-7-9, Exterior(2R) 33-7-9 to 51-5-7, Interior(1) 51-5-7 to 57-2-14, Exterior(2E) 57-2-14 to 63-6-8 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

NORTH CAROLINA PROFESSIONAL SEAL 28147 ENGINEER MARK K. MORRIS

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Continued on page 2

**NOTES-** (21-24)

5) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
6) Unbalanced snow loads have been considered for this design.
7) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
8) WARNING: This long span truss requires extreme care and experience for proper and safe handling and erection. For general handling and erection guidance, see Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses ("BCSI"), jointly produced by SBCA and TPI. The building owner or the owner's authorized agent shall contract with a qualified registered design professional for the design and inspection of the temporary installation restraint/bracing and the permanent individual truss member restraint/bracing. MiTek assumes no responsibility for truss manufacture, handling, erection, or bracing.
9) Provide adequate drainage to prevent water ponding.
10) All plates are MT20 plates unless otherwise indicated.
11) All plates are 6x6 MT20 unless otherwise indicated.
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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
14) Ceiling dead load (5.0 psf) on member(s). 31-32, 32-34, 33-35, 14-35
15) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 24-26, 22-24
16) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
17) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 27=204.
18) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
19) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
20) Attic room checked for L/360 deflection.
21) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
22) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
23) Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
24) SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.

**LOAD CASE(S)** Standard

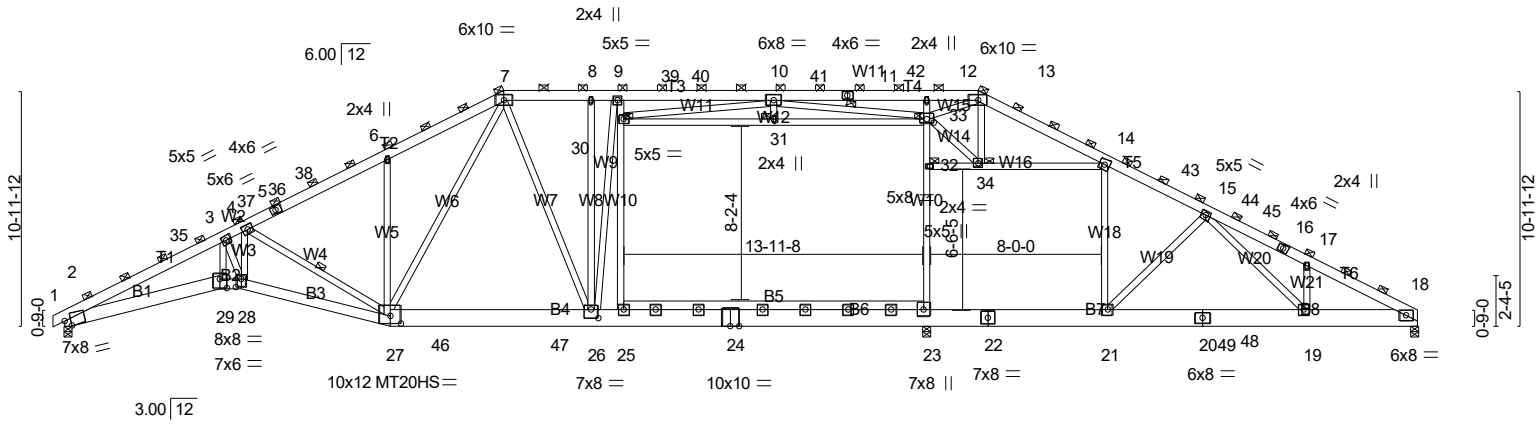

9/17/2021

| Job | Truss | Truss Type | Qty | Ply | 49786-0226 WOODGROVE \| FUQUAY VARINA, NC |
|---|---|---|---|---|---|
| 21-5628-R01 | R05 | ATTIC | 1 | 2 | Job Reference (optional) **# 28509** |

8.430 s Feb 12 2021 MiTek Industries, Inc. Tue Sep 21 14:10:57 2021 Page 1
ID:8BSlWll7uOgu7p2zCnsgREydifw-LyRNif?YDjiH2dgA72951F8JecSDS9Q8afvCfRybOtC

| -0-6-8 | 7-2-12 | 8-2-12 | 15-2-0 | 20-5-8 | 24-8-0 | 25-10-12 | 33-0-4 | 40-1-12 | 42-6-8 | 48-3-8 | 53-1-12 | 57-10-4 | 63-0-0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0-6-8 | 7-2-12 | 1-0-0 | 6-11-4 | 5-3-8 | 4-2-8 | 1-2-12 | 7-1-8 | 7-1-8 | 2-4-12 | 5-9-0 | 4-10-4 | 4-8-8 | 5-1-12 |

Scale = 1:107.3




| 0-3-8 | 7-2-12 | 8-2-12 | 15-2-0 | 24-8-0 | 25-10-12 | 40-1-12 | 48-3-8 | 57-10-4 | 63-0-0 |
|---|---|---|---|---|---|---|---|---|---|
| 0-3-8 | 6-11-4 | 1-0-0 | 6-11-4 | 9-6-0 | 1-2-12 | 14-3-0 | 8-1-12 | 9-6-12 | 5-1-12 |

Plate Offsets (X,Y)-- [2:0-3-7,0-3-7], [26:0-4-0,0-4-12], [27:0-6-0,0-4-3], [28:0-3-0,0-4-8], [29:0-4-0,0-5-0], [33:0-4-0,0-2-0]

| **LOADING** (psf) | | **SPACING-** | 2-3-8 | **CSI.** | | **DEFL.** | in | (loc) | l/defl | L/d | **PLATES** | **GRIP** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.51 | Vert(LL) | -0.54 | 26 | >895 | 240 | MT20 | 244/190 |
| Snow (Pf) | 20.0 | Lumber DOL | 1.15 | BC | 0.86 | Vert(CT) | -0.90 | 26-27 | >536 | 180 | MT20HS | 187/143 |
| TCDL | 10.0 | Rep Stress Incr | NO | WB | 0.67 | Horz(CT) | 0.21 | 18 | n/a | n/a | | |
| BCLL | 0.0 * | Code | IRC2018/TPI2014 | Matrix-SH | | Attic | -0.27 | 23-25 | 641 | 360 | Weight: 1280 lb | FT = 20% |
| BCDL | 10.0 | | | | | | | | | | | |

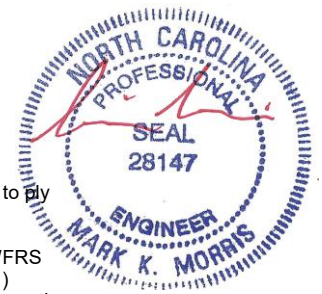
**LUMBER-**
TOP CHORD 2x6 SP No.2
BOT CHORD 2x10 SP 2400F 2.0E *Except*
B5: 1-1/2x4-3/4 SP No.2, B1: 2x8 SP No.2, B2: 2x6 SP No.1
B3: 2x6 SP No.2
WEBS 2x4 SP No.3 *Except*
W10,W12,W18,W16: 2x4 SP No.2

**BRACING-**
TOP CHORD 2-0-0 oc purlins (4-5-2 max.)
(Switched from sheeted: Spacing > 2-0-0).
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 4-27, 10-33
JOINTS 1 Brace at Jt(s): 7, 30, 31, 32, 13, 33, 34
This truss requires both edges of the bottom chord be sheathed in the room area.

**REACTIONS.** (lb/size) 23=1820/0-3-8 (min. 0-1-8), 18=2170/0-3-8 (min. 0-1-8), 2=2579/0-3-8 (min. 0-1-11)
Max Horz 2=149(LC 14)
Max Uplift2=-29(LC 14)
Max Grav 23=2841(LC 38), 18=2534(LC 45), 2=2973(LC 36)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-35=-9842/65, 3-35=-9689/85, 3-36=-8722/106, 4-36=-8712/110, 4-37=-5130/64, 5-37=-5127/68, 5-38=-5097/81, 6-38=-5090/99, 6-7=-5139/199, 7-8=-4661/79, 8-9=-4660/79, 9-39=-4467/33, 39-40=-4467/33, 10-40=-4467/33, 10-41=-344/2469, 41-42=-344/2469, 11-42=-344/2469, 11-12=-344/2469, 12-13=-330/2368, 13-14=-2579/119, 14-43=-4983/36, 15-43=-5046/14, 15-44=-4524/63, 44-45=-4557/52, 16-45=-4564/50, 16-17=-4612/41, 17-18=-4706/0
BOT CHORD 27-46=0/4181, 46-47=0/4186, 26-47=0/4187, 25-26=0/4579, 24-25=0/4577, 23-24=0/4577, 22-23=0/4553, 21-22=0/4553, 21-48=0/4393, 20-48=0/4393, 20-49=0/4393, 19-49=0/4393, 18-19=0/4082, 2-29=-157/8799, 28-29=-139/8397, 27-28=-96/8025
WEBS 25-30=-1309/227, 9-30=-1140/241, 23-32=-1024/181, 32-33=-1019/180, 12-33=-1019/131, 30-31=-1593/616, 31-33=-1593/616, 4-27=-3976/180, 7-27=-211/1614, 10-30=-824/1508, 10-33=-4929/213, 14-21=0/789, 15-21=-768/425, 15-19=-712/736, 4-28=-85/3252, 6-27=-779/188, 3-28=-1316/138, 3-29=-22/2058, 7-26=-38/1337, 8-26=-331/0, 9-26=-109/1090, 14-34=-2352/55, 13-33=-3574/166, 33-34=-3423/64, 13-34=-5/2492

**NOTES-** (21-24)
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x10 - 2 rows staggered at 0-9-0 oc, 1-1/2x4-3/4 - 2 rows staggered at 0-9-0 oc, 2x8 - 2 rows staggered at 0-9-0 oc, 2x6 - 2 rows staggered at 0-9-0 oc.
Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-6-8 to 5-9-2, Interior(1) 5-9-2 to 11-6-9, Exterior(2R) 11-6-9 to 29-4-7, Interior(1) 29-4-7 to 33-7-9, Exterior(2R) 33-7-9 to 51-5-7, Interior(1) 51-5-7 to 56-6-10, Exterior(2E) 56-6-10 to 62-10-4 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

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Continued on page 2

**NOTES-** (21-24)

5) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
6) Unbalanced snow loads have been considered for this design.
7) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
8) WARNING: This long span truss requires extreme care and experience for proper and safe handling and erection. For general handling and erection guidance, see Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses ("BCSI"), jointly produced by SBCA and TPI. The building owner or the owner's authorized agent shall contract with a qualified registered design professional for the design and inspection of the temporary installation restraint/bracing and the permanent individual truss member restraint/bracing. MiTek assumes no responsibility for truss manufacture, handling, erection, or bracing.
9) Provide adequate drainage to prevent water ponding.
10) All plates are MT20 plates unless otherwise indicated.
11) All plates are 6x6 MT20 unless otherwise indicated.
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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
14) Ceiling dead load (5.0 psf) on member(s). 30-31, 31-33, 32-34, 14-34
15) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 23-25, 21-23
16) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
17) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2.
18) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
19) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
20) Attic room checked for L/360 deflection.
21) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
22) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
23) Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
24) SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.

**LOAD CASE(S)** Standard


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| Job | Truss | Truss Type | Qty | Ply | 49786-0226 WOODGROVE \| FUQUAY VARINA, NC |
|---|---|---|---|---|---|
| 21-5628-R01 | R06 | ATTIC | 2 | 1 | **# 28509** |
| | | | | | Job Reference (optional) |

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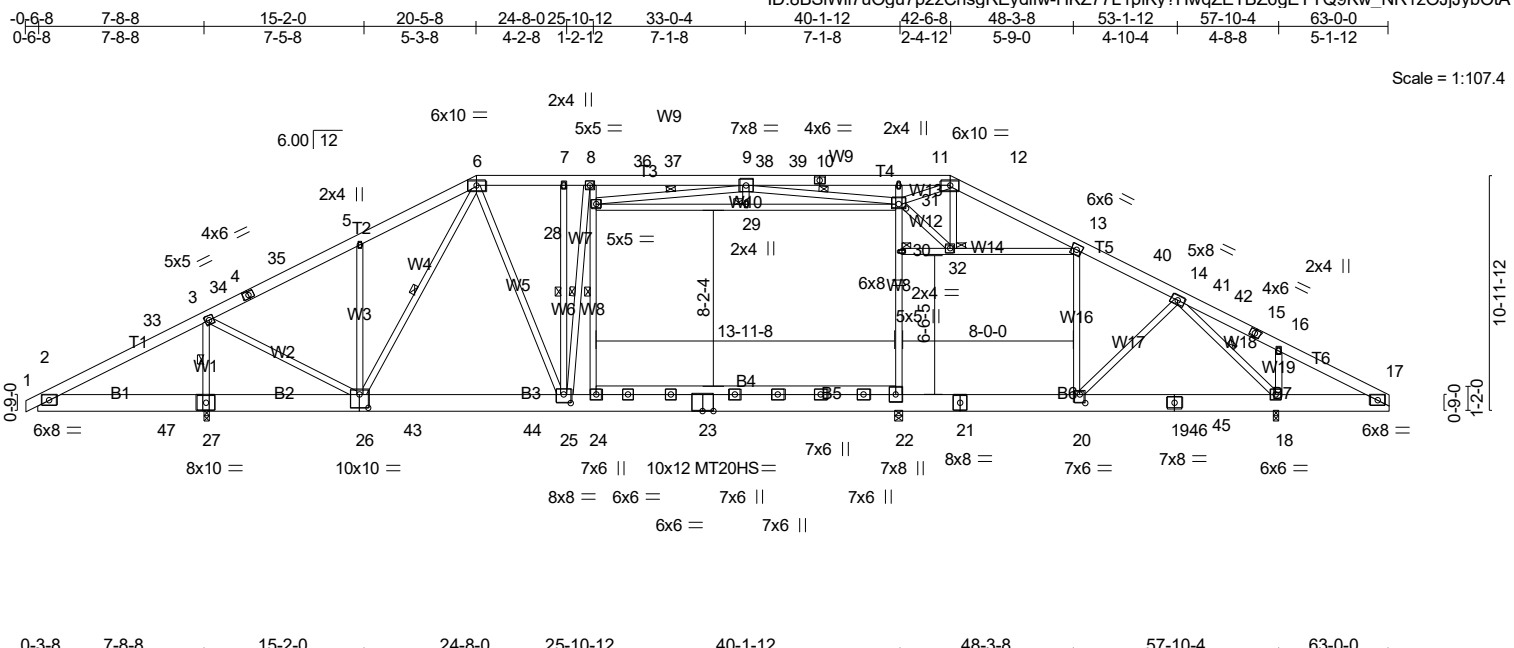
ID:8BSlWll7uOgu7p2zCnsgREydifw-HKZ77L1plKy?HwqZETBZ6gEYYQ9Kw_NR1zOJjJybOtA




| 0-3-8 | 7-8-8 | 15-2-0 | 24-8-0 | 25-10-12 | 40-1-12 | 48-3-8 | 57-10-4 | 63-0-0 |
|---|---|---|---|---|---|---|---|---|
| 0-3-8 | 7-5-0 | 7-5-8 | 9-6-0 | 1-2-12 | 14-3-0 | 8-1-12 | 9-6-12 | 5-1-12 |

Plate Offsets (X,Y)-- [20:0-3-0,0-4-12], [25:0-4-0,0-4-12], [26:0-5-0,0-7-8], [31:0-4-0,0-2-8]

| **LOADING** (psf) | | **SPACING-** | 2-0-0 | **CSI.** | | **DEFL.** | in | (loc) | l/defl | L/d | **PLATES** | **GRIP** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.87 | Vert(LL) | -0.61 | 22-24 | >637 | 240 | MT20 | 244/190 |
| Snow (Pf) | 20.0 | Lumber DOL | 1.15 | BC | 0.82 | Vert(CT) | -0.89 | 22-24 | >437 | 180 | MT20HS | 187/143 |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.96 | Horz(CT) | 0.05 | 18 | n/a | n/a | | |
| BCLL | 0.0 * | Code IRC2018/TPI2014 | | Matrix-SH | | Attic | 0.43 | 20-22 | 462 | 360 | Weight: 653 lb | FT = 20% |
| BCDL | 10.0 | | | | | | | | | | | |

**LUMBER-**
TOP CHORD 2x6 SP No.2
BOT CHORD 2x10 SP 2400F 2.0E *Except*
B4: 1-8/16x4-12/16 SP No.1, B5,B3: 2x10 SP No.1
B1,B2: 2x10 SP No.2
WEBS 2x4 SP No.3 *Except*
W8,W10,W16,W14,W2: 2x4 SP No.2

**BRACING-**
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 5-11-10 oc bracing.
WEBS 1 Row at midpt 24-28, 6-26, 9-28, 9-31, 14-18, 7-25, 8-25, 3-27
JOINTS 1 Brace at Jt(s): 29, 30, 32
This truss requires both edges of the bottom chord be sheathed in the room area.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 22=880/0-3-8 (min. 0-1-14), 18=2206/0-3-8 (min. 0-2-3), 27=2662/0-3-8 (min. 0-2-1)
Max Horz 27=129(LC 14)
Max Uplift 27=-18(LC 14)
Max Grav 22=1580(LC 38), 18=2614(LC 6), 27=3042(LC 46)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-33=-434/595, 3-33=-402/708, 3-34=-2266/9, 4-34=-2253/10, 4-35=-2218/22, 5-35=-2211/38, 5-6=-2247/96, 6-7=-2999/49, 7-8=-2998/49, 8-36=-3094/0, 36-37=-3094/0, 9-37=-3094/0, 9-38=-1631/303, 38-39=-1631/303, 10-39=-1631/303, 10-11=-1631/303, 11-12=-1544/278, 12-13=-2200/45, 13-40=-3229/8, 14-40=-3284/0, 14-41=-145/310, 41-42=-152/291, 15-42=-159/267, 16-17=-240/383
BOT CHORD 26-27=-529/421, 26-43=0/2442, 43-44=0/2442, 25-44=0/2442, 24-25=0/3047, 23-24=0/3040, 22-23=0/3040, 21-22=0/3009, 20-21=0/3009, 20-45=0/2052, 19-45=0/2052, 19-46=0/2052, 18-46=0/2052, 17-18=-269/237, 2-47=-529/427, 27-47=-529/427
WEBS 24-28=-677/278, 8-28=-350/357, 22-30=-499/221, 30-31=-496/220, 11-31=-808/122, 16-18=-409/114, 28-29=-234/1576, 29-31=-234/1576, 6-26=-919/36, 9-28=-1627/285, 9-31=-2872/145, 13-20=-286/138, 14-20=-27/1434, 14-18=-3351/12, 5-26=-678/165, 6-25=0/1633, 8-25=-277/28, 13-32=-1124/6, 12-31=-1086/171, 31-32=-1773/35, 12-32=0/1309, 3-27=-2821/278, 3-26=-118/2621

**NOTES-** (17-20)
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-6-8 to 5-9-2, Interior(1) 5-9-2 to 11-6-9, Exterior(2R) 11-6-9 to 29-4-7, Interior(1) 29-4-7 to 33-7-9, Exterior(2R) 33-7-9 to 51-5-7, Interior(1) 51-5-7 to 56-8-6, Exterior(2E) 56-8-6 to 63-0-0 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
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 20.0 psf on overhangs non-concurrent with other live loads.

NORTH CAROLINA PROFESSIONAL SEAL 28147 ENGINEER MARK K. MORRIS

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**NOTES-** (17-20)

6) WARNING: This long span truss requires extreme care and experience for proper and safe handling and erection. For general handling and erection guidance, see Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses ("BCSI"), jointly produced by SBCA and TPI. The building owner or the owner's authorized agent shall contract with a qualified registered design professional for the design and inspection of the temporary installation restraint/bracing and the permanent individual truss member restraint/bracing. MiTek assumes no responsibility for truss manufacture, handling, erection, or bracing.
7) Provide adequate drainage to prevent water ponding.
8) All plates are MT20 plates unless otherwise indicated.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
11) Ceiling dead load (5.0 psf) on member(s). 28-29, 29-31, 30-32, 13-32
12) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 22-24, 20-22
13) Bearing at joint(s) 27 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
14) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 27.
15) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
16) Attic room checked for L/360 deflection.
17) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
18) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
19) Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
20) SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.

**LOAD CASE(S)** Standard

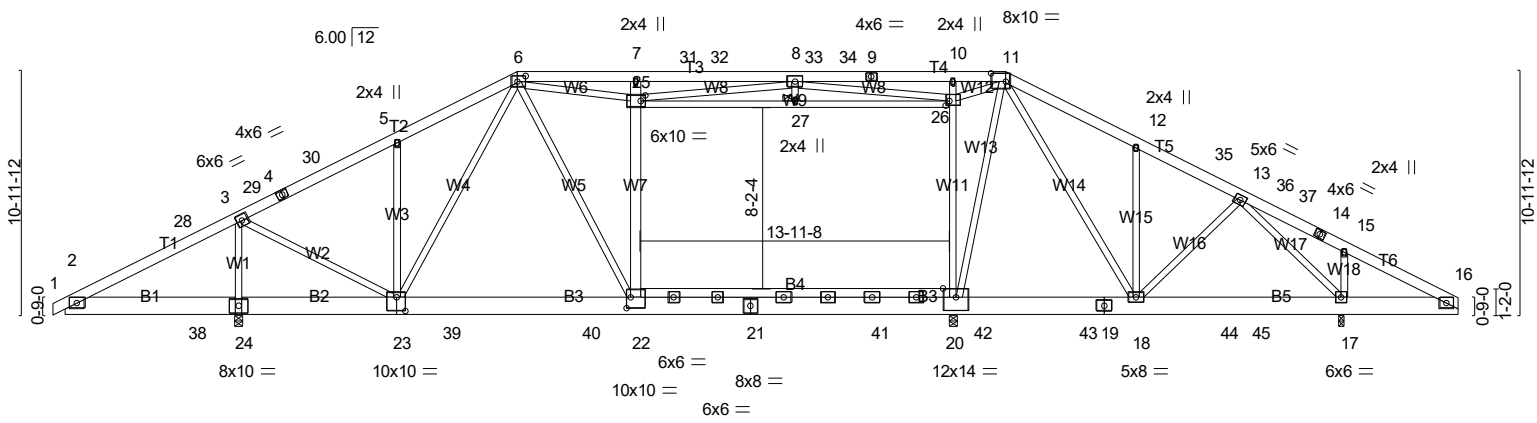

9/17/2021

| Job | Truss | Truss Type | Qty | Ply | 49786-0226 WOODGROVE \| FUQUAY VARINA, NC |
|---|---|---|---|---|---|
| 21-5628-R01 | R07 | ATTIC | 1 | 4 | Job Reference (optional) **# 28509** |

8.430 s Feb 12 2021 MiTek Industries, Inc. Tue Sep 21 14:11:07 2021 Page 1
ID:8BSlWll7uOgu7p2zCnsgREydifw-2t29o47qtozsE9R5i8KRRMZ?SevqodBctCKk?sybOt2

| -0-6-8 | 7-8-8 | 15-2-0 | 20-5-8 | 25-10-12 | 26-0-8 | 33-0-4 | 40-1-12 | 42-6-8 | 48-3-8 | 53-1-12 | 57-10-4 | 63-0-0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0-6-8 | 7-8-8 | 7-5-8 | 5-3-8 | 5-5-4 | 0-1-12 | 6-11-12 | 7-1-8 | 2-4-12 | 5-9-0 | 4-10-4 | 4-8-8 | 5-1-12 |

Scale = 1:104.2




| 7-8-8 | 15-2-0 | 25-10-12 | 40-1-12 | 48-3-8 | 57-10-4 | 63-0-0 |
|---|---|---|---|---|---|---|
| 7-8-8 | 7-5-8 | 10-8-12 | 14-3-0 | 8-1-12 | 9-6-12 | 5-1-12 |

Plate Offsets (X,Y)-- [6:0-4-8,0-3-0], [11:0-8-0,0-4-8], [22:0-2-4,0-6-0], [23:0-4-12,0-7-8], [25:0-2-8,0-3-0], [26:0-2-0,0-2-8]

| **LOADING** (psf) | | **SPACING-** | 2-0-0 | **CSI.** | | **DEFL.** | in | (loc) | l/defl | L/d | **PLATES** | **GRIP** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.55 | Vert(LL) | -0.40 | 22-23 | >959 | 240 | MT20 | 244/190 |
| Snow (Pf) | 20.0 | Lumber DOL | 1.15 | BC | 0.71 | Vert(CT) | -0.59 | 22-23 | >655 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.91 | Horz(CT) | 0.05 | 17 | n/a | n/a | | |
| BCLL | 0.0 * | Code | IRC2018/TPI2014 | Matrix-SH | | Attic | -0.20 | 20-22 | 850 | 360 | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 2603 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x6 SP No.2
BOT CHORD 2x10 SP 2400F 2.0E *Except*
B4: 1-1/2x4-3/4 SP No.2
WEBS 2x4 SP No.3 *Except*
W9,W2,W4,W5: 2x4 SP No.2, W11: 2x4 SP SS, W7: 2x6 SP No.2
W13: 2x4 SP No.1

**BRACING-**
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 2-24,23-24.
JOINTS 1 Brace at Jt(s): 27
This truss requires both edges of the bottom chord be sheathed in the room area.

**REACTIONS.** (lb/size) 17=6886/0-3-8 (min. 0-2-2), 20=-1555/0-3-8 (min. 0-1-8), 24=8284/0-3-8 (min. 0-2-2)
Max Horz 24=129(LC 14)
Max Uplift17=-429(LC 15), 20=-3065(LC 53), 24=-581(LC 14)
Max Grav 17=10313(LC 46), 20=368(LC 11), 24=12343(LC 54)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-28=-423/384, 3-28=-390/578, 3-29=-12211/593, 4-29=-12198/594, 4-30=-12185/606, 5-30=-12134/622, 5-6=-12149/679, 6-7=-19560/958, 7-31=-19819/968, 31-32=-19819/968, 8-32=-19819/968, 8-33=-8041/428, 33-34=-8041/428, 9-34=-8041/428, 9-10=-8041/428, 10-11=-8334/444, 11-12=-13325/652, 12-35=-13317/624, 13-35=-13338/605, 13-36=-1021/101, 36-37=-1029/94, 14-37=-1062/92, 14-15=-1076/82, 15-16=-996/54
BOT CHORD 2-38=-412/418, 24-38=-412/418, 23-24=-412/412, 23-39=-645/13723, 39-40=-645/13723, 22-40=-645/13723, 21-22=-876/18822, 21-41=-876/18826, 20-41=-877/18909, 20-42=-671/14990, 42-43=-671/14989, 19-43=-672/14981, 18-19=-670/14940, 18-44=-362/8989, 44-45=-362/8989, 17-45=-362/8989, 16-17=-17/910
WEBS 15-17=-482/136, 25-27=-2648/164, 26-27=-2648/164, 3-24=-12098/732, 3-23=-610/12582, 6-23=-5903/315, 8-25=-195/4025, 8-26=-8863/532, 12-18=-618/146, 11-18=-5911/349, 13-18=-198/4435, 13-17=-11859/529, 20-26=-6581/423, 10-26=-704/117, 22-25=-263/1274, 7-25=-456/425, 11-20=-867/16293, 11-26=-11443/575, 5-23=-649/162, 6-22=-526/11192, 6-25=-15/1048

**NOTES-** (21-24)
1) 4-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x10 - 3 rows staggered at 0-5-0 oc, 1-1/2x4-3/4 - 2 rows staggered at 0-7-0 oc.
Webs connected as follows: 2x4 - 1 row at 0-9-0 oc, 2x6 - 3 rows staggered at 0-5-0 oc.
Attach BC w/ 1/2" diam. bolts (ASTM A-307) in the center of the member w/washers at 4-0-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-6-8 to 5-9-2, Interior(1) 5-9-2 to 11-6-9, Exterior(2R) 11-6-9 to 29-4-7, Interior(1) 29-4-7 to 33-7-9, Exterior(2R) 33-7-9 to 51-5-7, Interior(1) 51-5-7 to 56-8-6, Exterior(2E) 56-8-6 to 63-0-0 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

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**NOTES-** (21-24)

5) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
6) Unbalanced snow loads have been considered for this design.
7) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
8) WARNING: This long span truss requires extreme care and experience for proper and safe handling and erection. For general handling and erection guidance, see Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses ("BCSI"), jointly produced by SBCA and TPI. The building owner or the owner's authorized agent shall contract with a qualified registered design professional for the design and inspection of the temporary installation restraint/bracing and the permanent individual truss member restraint/bracing. MiTek assumes no responsibility for truss manufacture, handling, erection, or bracing.
9) Provide adequate drainage to prevent water ponding.
10) All plates are 6x8 MT20 unless otherwise indicated.
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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
13) Ceiling dead load (5.0 psf) on member(s). 25-27, 26-27
14) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 20-22
15) Bearing at joint(s) 24 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
16) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 17=429, 20=3065, 24=581.
17) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
18) This truss has large uplift reaction(s) from gravity load case(s). Proper connection is required to secure truss against upward movement at the bearings. Building designer must provide for uplift reactions indicated.
19) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 10665 lb down and 639 lb up at 25-11-8, and 2932 lb down and 176 lb up at 36-7-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
20) Attic room checked for L/360 deflection.
21) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
22) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
23) Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
24) SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.

**LOAD CASE(S)** Standard

1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (plf)
   Vert: 1-6=-60, 6-11=-60, 11-16=-60, 2-22=-20, 25-26=-10, 20-22=-40, 16-20=-20
   Concentrated Loads (lb)
   Vert: 22=-6365(F) 41=-1750(F)


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| Job | Truss | Truss Type | Qty | Ply | 49786-0226 WOODGROVE \| FUQUAY VARINA, NC |
|---|---|---|---|---|---|
| 21-5628-R01 | R08 | PIGGYBACK BASE | 5 | 1 | Job Reference (optional) **# 28509** |

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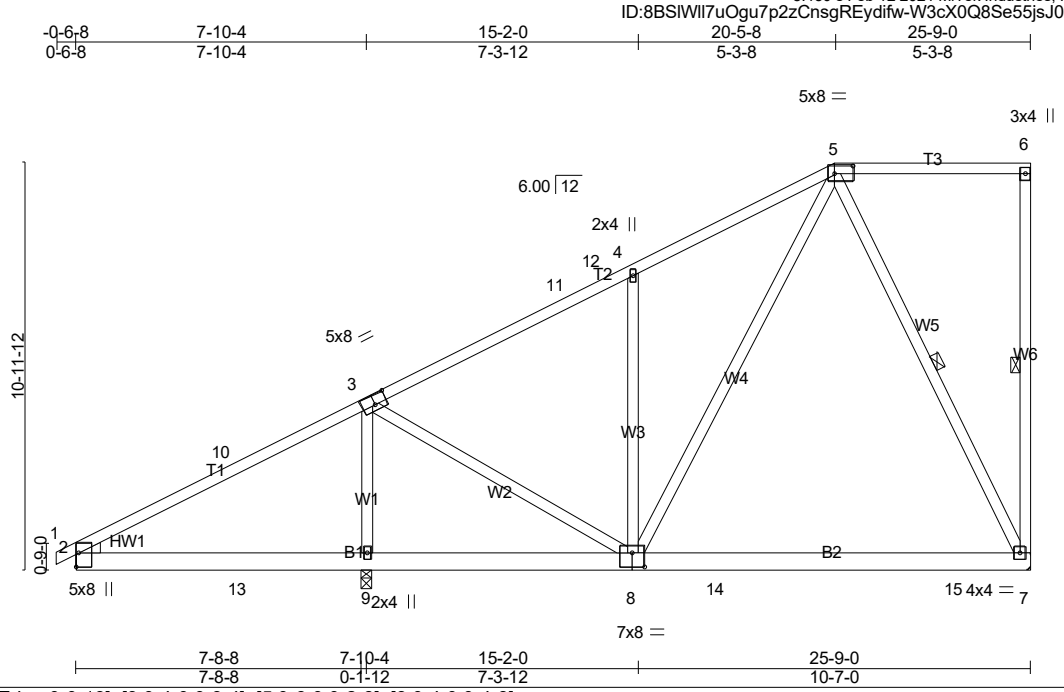


Plate Offsets (X,Y)-- [2:Edge,0-0-13], [3:0-4-0,0-3-4], [5:0-6-0,0-2-8], [8:0-4-0,0-4-8]

| **LOADING** (psf) | | **SPACING-** | 2-0-0 | **CSI.** | | **DEFL.** | in | (loc) | l/defl | L/d | **PLATES** | **GRIP** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.89 | Vert(LL) | -0.30 | 7-8 | >715 | 240 | MT20 | 244/190 |
| Snow (Pf) | 20.0 | Lumber DOL | 1.15 | BC | 0.81 | Vert(CT) | -0.42 | 7-8 | >513 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.81 | Horz(CT) | -0.00 | 7 | n/a | n/a | | |
| BCLL | 0.0 * | Code IRC2018/TPI2014 | | Matrix-SH | | | | | | | Weight: 182 lb | FT = 20% |
| BCDL | 10.0 | | | | | | | | | | | |

**LUMBER-**
TOP CHORD 2x4 SP No.2 *Except* T1: 2x4 SP No.1
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3
WEDGE
Left: 2x4 SP No.3

**BRACING-**
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 6-7, 5-7

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 7=556/Mechanical, 9=1525/0-3-8 (min. 0-2-3)
Max Horz 9=295(LC 14)
Max Uplift 7=-89(LC 14), 9=-62(LC 14)
Max Grav 7=776(LC 37), 9=1840(LC 36)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-10=-396/589, 3-10=-376/707, 3-11=-646/0, 11-12=-452/0, 4-12=-413/1, 4-5=-635/100, 6-7=-252/45
BOT CHORD 2-13=-517/379, 9-13=-517/379, 8-9=-517/124
WEBS 3-9=-1636/284, 3-8=-122/1042, 4-8=-691/165, 5-8=-116/516, 5-7=-506/135

**NOTES-** (11-14)
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-6-8 to 4-3-2, Interior(1) 4-3-2 to 13-8-1, Exterior(2R) 13-8-1 to 20-9-10, Exterior(2E) 20-9-10 to 25-7-4 zone; cantilever left exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
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 20.0 psf on overhangs non-concurrent with other live loads.
5) Provide adequate drainage to prevent water ponding.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 7, 9.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.


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11) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
12) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
13) Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
14) SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.

**LOAD CASE(S)** Standard


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| Job | Truss | Truss Type | Qty | Ply | 49786-0226 WOODGROVE \| FUQUAY VARINA, NC |
|---|---|---|---|---|---|
| 21-5628-R01 | R09 | PIGGYBACK BASE | 2 | 1 | Job Reference (optional) **# 28509** |

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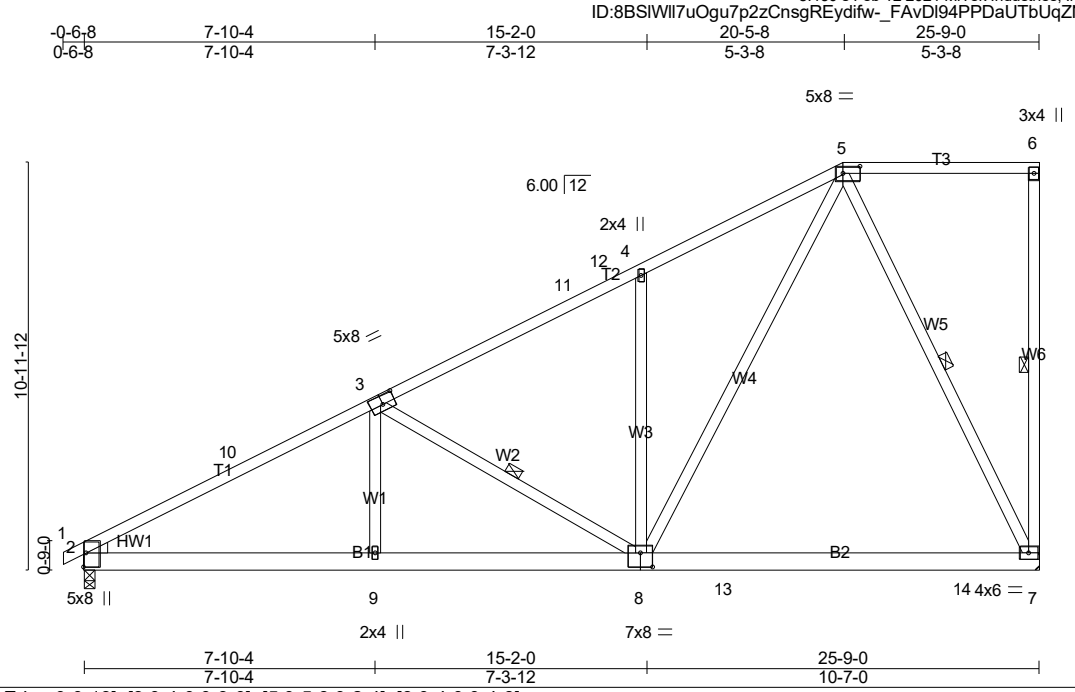


Plate Offsets (X,Y)-- [2:Edge,0-0-13], [3:0-4-0,0-3-0], [5:0-5-8,0-2-4], [8:0-4-0,0-4-8]

| **LOADING** (psf) | | **SPACING-** | 2-0-0 | **CSI.** | | **DEFL.** | in | (loc) | l/defl | L/d | **PLATES** | **GRIP** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.87 | Vert(LL) | -0.30 | 7-8 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf) | 20.0 | Lumber DOL | 1.15 | BC | 0.83 | Vert(CT) | -0.43 | 7-8 | >708 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.82 | Horz(CT) | 0.03 | 7 | n/a | n/a | | |
| BCLL | 0.0 * | Code IRC2018/TPI2014 | | Matrix-SH | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 182 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3
WEDGE
Left: 2x4 SP No.3

**BRACING-**
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 8-8-5 oc bracing.
WEBS 1 Row at midpt 6-7, 3-8, 5-7

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 7=1018/Mechanical, 2=1060/0-3-8 (min. 0-1-8)
Max Horz 2=295(LC 14)
Max Uplift 7=-108(LC 14), 2=-44(LC 14)
Max Grav 7=1239(LC 38), 2=1280(LC 36)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-10=-2137/34, 3-10=-1935/53, 3-11=-1450/0, 11-12=-1207/21, 4-12=-1158/29, 4-5=-1439/128, 6-7=-252/45
BOT CHORD 2-9=-267/1781, 8-9=-267/1781, 8-13=-67/496, 13-14=-67/496, 7-14=-67/496
WEBS 3-9=0/292, 3-8=-734/153, 4-8=-698/166, 5-8=-151/1436, 5-7=-1125/156

**NOTES-** (11-14)
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-6-8 to 4-3-2, Interior(1) 4-3-2 to 13-8-1, Exterior(2R) 13-8-1 to 20-9-10, Exterior(2E) 20-9-10 to 25-7-4 zone;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); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
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 20.0 psf on overhangs non-concurrent with other live loads.
5) Provide adequate drainage to prevent water ponding.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2 except (jt=lb) 7=108.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.


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11) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
12) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
13) Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
14) SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.

**LOAD CASE(S)** Standard


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| Job | Truss | Truss Type | Qty | Ply | 49786-0226 WOODGROVE \| FUQUAY VARINA, NC |
|---|---|---|---|---|---|
| 21-5628-R01 | R10 | ATTIC | 1 | 4 | Job Reference (optional) **# 28509** |

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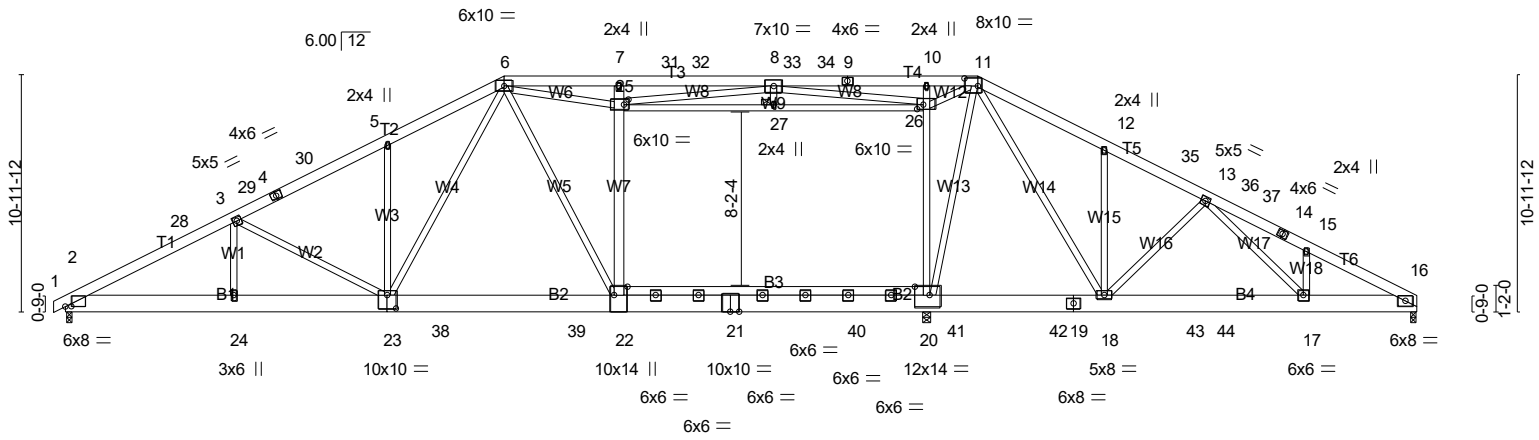
| -0-6-8 | 7-8-8 | 15-2-0 | 20-5-8 | 25-10-12 | 26-0-8 | 33-0-4 | 40-1-12 | 42-6-8 | 48-3-8 | 53-1-12 | 57-10-4 | 63-0-0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0-6-8 | 7-8-8 | 7-5-8 | 5-3-8 | 5-5-4 | 0-1-12 | 6-11-12 | 7-1-8 | 2-4-12 | 5-9-0 | 4-10-4 | 4-8-8 | 5-1-12 |

Scale = 1:107.4




| 7-8-8 | 15-2-0 | 25-10-12 | 40-1-12 | 48-3-8 | 57-10-4 | 63-0-0 |
|---|---|---|---|---|---|---|
| 7-8-8 | 7-5-8 | 10-8-12 | 14-3-0 | 8-1-12 | 9-6-12 | 5-1-12 |

Plate Offsets (X,Y)-- [2:0-3-6,0-0-2], [11:0-7-8,0-4-4], [20:0-8-4,Edge], [22:0-4-12,Edge], [23:0-5-0,0-7-8], [25:0-2-8,0-3-0], [26:0-3-8,0-2-8]

| **LOADING** (psf) | | **SPACING-** | 2-0-0 | **CSI.** | | **DEFL.** | in | (loc) | l/defl | L/d | **PLATES** | **GRIP** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.95 | Vert(LL) | -0.78 | 22-23 | >613 | 240 | MT20 | 244/190 |
| Snow (Pf) | 20.0 | Lumber DOL | 1.15 | BC | 0.93 | Vert(CT) | -1.16 | 22-23 | >411 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.99 | Horz(CT) | 0.11 | 16 | n/a | n/a | | |
| BCLL | 0.0 * | Code IRC2018/TPI2014 | | Matrix-SH | | Attic | -0.38 | 20-22 | 453 | 360 | Weight: 2604 lb | FT = 20% |
| BCDL | 10.0 | | | | | | | | | | | |

**LUMBER-**
TOP CHORD 2x6 SP No.2
BOT CHORD 2x10 SP 2400F 2.0E *Except*
B1: 2x10 SP No.2, B3: 1-1/2x4-3/4 SP No.2
WEBS 2x4 SP No.3 *Except*
W9,W8,W12: 2x4 SP No.2, W13: 2x4 SP No.1, W11: 2x4 SP SS
W7: 2x6 SP No.2

**BRACING-**
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
2-2-0 oc bracing: 23-24.
JOINTS 1 Brace at Jt(s): 27
This truss requires both edges of the bottom chord be sheathed in the room area.

**REACTIONS.** (lb/size) 2=6991/0-3-8 (min. 0-3-1), 20=-680/0-3-8 (min. 0-1-8), 16=6089/0-3-8 (min. 0-1-14)
Max Horz 2=129(LC 14)
Max Uplift2=-489(LC 14), 20=-1960(LC 36), 16=-342(LC 15)
Max Grav 2=10378(LC 48), 20=364(LC 14), 16=9056(LC 46)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-28=-21283/960, 3-28=-21171/978, 3-29=-21907/988, 4-29=-21835/989, 4-30=-21794/1001, 5-30=-21785/1016, 5-6=-21840/1115, 6-7=-26066/1204, 7-31=-26695/1229, 31-32=-26695/1229, 8-32=-26695/1229, 8-33=-4379/274, 33-34=-4379/274, 9-34=-4379/274, 9-10=-4379/274, 10-11=-4792/294, 11-12=-18252/876, 12-35=-18288/803, 13-35=-18343/789, 13-36=-17673/776, 36-37=-17732/767, 14-37=-17766/765, 14-15=-17785/760, 15-16=-18154/720
BOT CHORD 2-24=-920/18904, 23-24=-920/18904, 23-38=-836/18731, 38-39=-836/18731, 22-39=-836/18731, 21-22=-991/22033, 21-40=-991/22058, 20-40=-991/22098, 20-41=-764/17665, 41-42=-764/17664, 19-42=-766/17655, 18-19=-764/17607, 18-43=-622/16455, 43-44=-622/16455, 17-44=-622/16455, 16-17=-587/15907
WEBS 15-17=-21/719, 25-27=-3962/223, 26-27=-3962/223, 3-24=-773/115, 3-23=-134/1199, 5-23=-674/164, 6-23=-236/2531, 6-22=-390/7406, 8-25=-417/9103, 8-27=0/260, 8-26=-14518/756, 12-18=-501/140, 11-20=-963/18755, 11-18=-2352/217, 13-18=-422/140, 13-17=-968/154, 20-26=-10795/588, 10-26=-841/125, 22-25=-118/3030, 7-25=-263/706, 6-25=-160/4402, 11-26=-18947/869

**NOTES-** (19-22)
1) 4-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x10 - 2 rows staggered at 0-9-0 oc, 1-1/2x4-3/4 - 2 rows staggered at 0-9-0 oc.
Webs connected as follows: 2x4 - 1 row at 0-9-0 oc, 2x6 - 3 rows staggered at 0-5-0 oc.
Attach BC w/ 1/2" diam. bolts (ASTM A-307) in the center of the member w/washers at 4-0-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-6-8 to 5-9-2, Interior(1) 5-9-2 to 11-6-9, Exterior(2R) 11-6-9 to 29-4-7, Interior(1) 29-4-7 to 33-7-9, Exterior(2R) 33-7-9 to 51-5-7, Interior(1) 51-5-7 to 56-6-10, Exterior(2E) 56-6-10 to 62-10-4 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60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Continued on page 2

**Warning - Verify design parameters and read notes before use.** This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI 1-03 Guide to *Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

**NOTES-** (19-22)

5) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
6) Unbalanced snow loads have been considered for this design.
7) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
8) WARNING: This long span truss requires extreme care and experience for proper and safe handling and erection. For general handling and erection guidance, see Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses ("BCSI"), jointly produced by SBCA and TPI. The building owner or the owner's authorized agent shall contract with a qualified registered design professional for the design and inspection of the temporary installation restraint/bracing and the permanent individual truss member restraint/bracing. MiTek assumes no responsibility for truss manufacture, handling, erection, or bracing.
9) Provide adequate drainage to prevent water ponding.
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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
12) Ceiling dead load (5.0 psf) on member(s). 25-27, 26-27
13) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 20-22
14) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=489, 20=1960, 16=342.
15) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
16) This truss has large uplift reaction(s) from gravity load case(s). Proper connection is required to secure truss against upward movement at the bearings. Building designer must provide for uplift reactions indicated.
17) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 10665 lb down and 639 lb up at 25-10-12, and 922 lb down and 55 lb up at 36-7-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
18) Attic room checked for L/360 deflection.
19) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
20) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
21) Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
22) SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.

**LOAD CASE(S)** Standard

1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (plf)
   Vert: 1-6=-60, 6-11=-60, 11-16=-60, 2-22=-20, 20-22=-40, 16-20=-20, 25-26=-10
   Concentrated Loads (lb)
   Vert: 22=-6365(F) 40=-550(F)

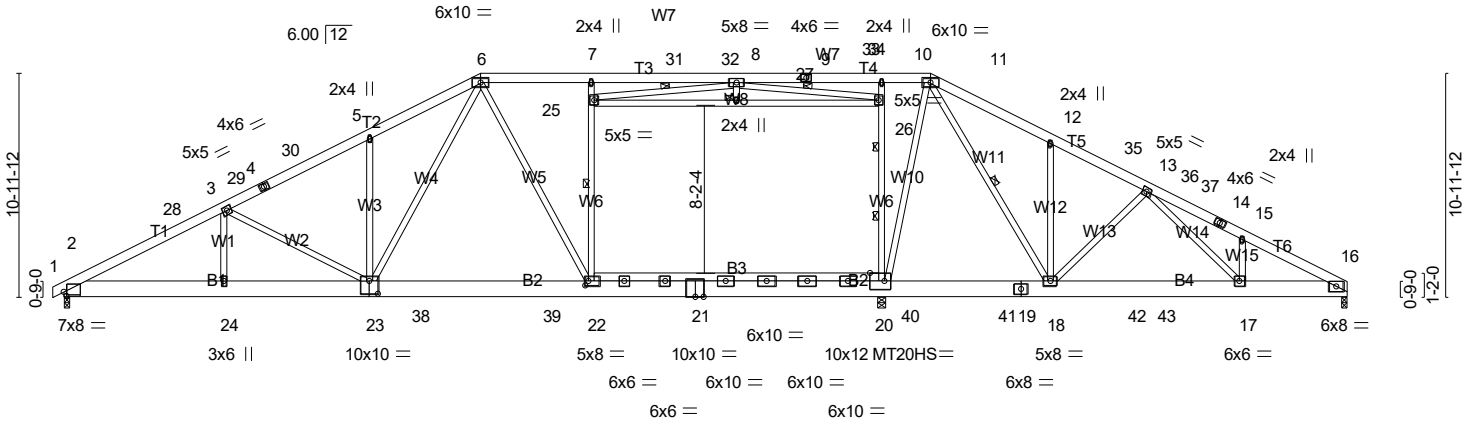

9/17/2021

| Job | Truss | Truss Type | Qty | Ply | 49786-0226 WOODGROVE \| FUQUAY VARINA, NC |
|---|---|---|---|---|---|
| 21-5628-R01 | R11 | ATTIC | 2 | 1 | **# 28509** |
| | | | | | Job Reference (optional) |

8.430 s Feb 12 2021 MiTek Industries, Inc. Tue Sep 21 14:11:16 2021 Page 1
ID:8BSlWll7uOgu7p2zCnsgREydifw-Hc5Yh9ETlZ5aqXdqkX?YIFRQRGwbPgPxx6?jpqybOsv

| -0-6-8 | 7-8-8 | 15-2-0 | 20-5-8 | 25-10-12 | 33-0-4 | 40-1-12 | 42-6-8 | 48-3-8 | 53-1-12 | 57-10-4 | 63-0-0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0-6-8 | 7-8-8 | 7-5-8 | 5-3-8 | 5-5-4 | 7-1-8 | 7-1-8 | 2-4-12 | 5-9-0 | 4-10-4 | 4-8-8 | 5-1-12 |

Scale = 1:113.1




| 7-8-8 | 15-2-0 | 25-10-12 | 40-1-12 | 48-3-8 | 57-10-4 | 63-0-0 |
|---|---|---|---|---|---|---|
| 7-8-8 | 7-5-8 | 10-8-12 | 14-3-0 | 8-1-12 | 9-6-12 | 5-1-12 |

Plate Offsets (X,Y)-- [2:0-1-10,0-2-6], [20:0-8-8,Edge], [22:0-1-12,0-2-8], [23:0-5-0,0-7-8]

| **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 | 0.99 | Vert(LL) | -0.65 | 22-23 | >735 | 240 | MT20 | 244/190 |
| Snow (Pf) | 20.0 | Lumber DOL | 1.15 | BC | 0.93 | Vert(CT) | -1.14 | 22-23 | >421 | 180 | MT20HS | 187/143 |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.98 | Horz(CT) | 0.11 | 16 | n/a | n/a | | |
| BCLL | 0.0 * | Code | IRC2018/TPI2014 | Matrix-SH | | Attic | -0.63 | 20-22 | 537 | 360 | Weight: 632 lb | FT = 20% |
| BCDL | 10.0 | | | | | | | | | | | |

**LUMBER-**
TOP CHORD 2x6 SP No.2
BOT CHORD 2x10 SP 2400F 2.0E *Except*
B1: 2x10 SP No.2, B3: 1-1/2x4-3/4 SP No.2
WEBS 2x4 SP No.3 *Except*
W6,W8: 2x4 SP No.2

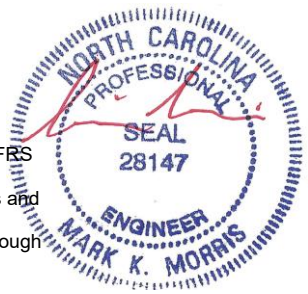
**BRACING-**
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
2-2-0 oc bracing: 23-24,20-22.
WEBS 1 Row at midpt 22-25, 8-25, 8-26, 11-18
2 Rows at 1/3 pts 20-26
JOINTS 1 Brace at Jt(s): 27
This truss requires both edges of the bottom chord be sheathed in the room area.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 2=2481/0-3-8 (min. 0-3-7), 20=739/0-3-8 (min. 0-1-8), 16=2259/0-3-8 (min. 0-2-3)
Max Horz 2=129(LC 18)
Max Uplift2=-13(LC 14), 20=-55(LC 15)
Max Grav 2=2896(LC 46), 20=1188(LC 38), 16=2674(LC 46)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-28=-5625/69, 3-28=-5464/87, 3-29=-5258/70, 4-29=-5186/71, 4-30=-5152/83, 5-30=-5149/99, 5-6=-5238/189, 6-7=-4700/69, 7-31=-4712/54, 31-32=-4712/54, 8-32=-4712/54, 8-33=-4393/56, 33-34=-4393/56, 9-34=-4393/56, 9-10=-4393/56, 10-11=-4682/71, 11-12=-4648/167, 12-35=-4602/80, 13-35=-4636/62, 13-36=-4989/116, 36-37=-5048/107, 14-37=-5066/106, 14-15=-5096/97, 15-16=-5215/47
BOT CHORD 2-24=-38/4912, 23-24=-38/4912, 23-38=0/4137, 38-39=0/4137, 22-39=0/4137, 21-22=0/4703, 20-21=0/4727, 20-40=0/4138, 40-41=0/4137, 19-41=0/4129, 18-19=0/4117, 18-42=0/4354, 42-43=0/4354, 17-43=0/4354, 16-17=0/4531
WEBS 22-25=-1000/163, 7-25=-656/146, 20-26=-1371/135, 10-26=-1016/119, 25-27=-164/1681, 26-27=-164/1681, 3-23=-574/147, 5-23=-679/166, 6-23=-170/1625, 6-22=0/1232, 8-25=-1738/193, 8-26=-2005/180, 12-18=-582/144, 11-20=-44/2363, 11-18=-246/899, 13-18=-558/130, 13-17=-77/357

**NOTES-** (17-20)
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-6-8 to 5-9-2, Interior(1) 5-9-2 to 11-6-9, Exterior(2R) 11-6-9 to 29-4-7, Interior(1) 29-4-7 to 33-7-9, Exterior(2R) 33-7-9 to 51-5-7, Interior(1) 51-5-7 to 56-6-10, Exterior(2E) 56-6-10 to 62-10-4 zone;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); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
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 20.0 psf on overhangs non-concurrent with other live loads.

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Continued on page 2

**NOTES-** (17-20)

6) WARNING: This long span truss requires extreme care and experience for proper and safe handling and erection. For general handling and erection guidance, see Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses ("BCSI"), jointly produced by SBCA and TPI. The building owner or the owner's authorized agent shall contract with a qualified registered design professional for the design and inspection of the temporary installation restraint/bracing and the permanent individual truss member restraint/bracing. MiTek assumes no responsibility for truss manufacture, handling, erection, or bracing.
7) Provide adequate drainage to prevent water ponding.
8) All plates are MT20 plates unless otherwise indicated.
9) The Fabrication Tolerance at joint 20 = 16%
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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
12) Ceiling dead load (5.0 psf) on member(s). 25-27, 26-27
13) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 20-22
14) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 20.
15) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
16) Attic room checked for L/360 deflection.
17) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
18) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
19) Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
20) SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.

**LOAD CASE(S)** Standard


9/17/2021

| Job | Truss | Truss Type | Qty | Ply | 49786-0226 WOODGROVE \| FUQUAY VARINA, NC |
|---|---|---|---|---|---|
| 21-5628-R01 | R12 | GABLE | 1 | 1 | Job Reference (optional) **# 28509** |

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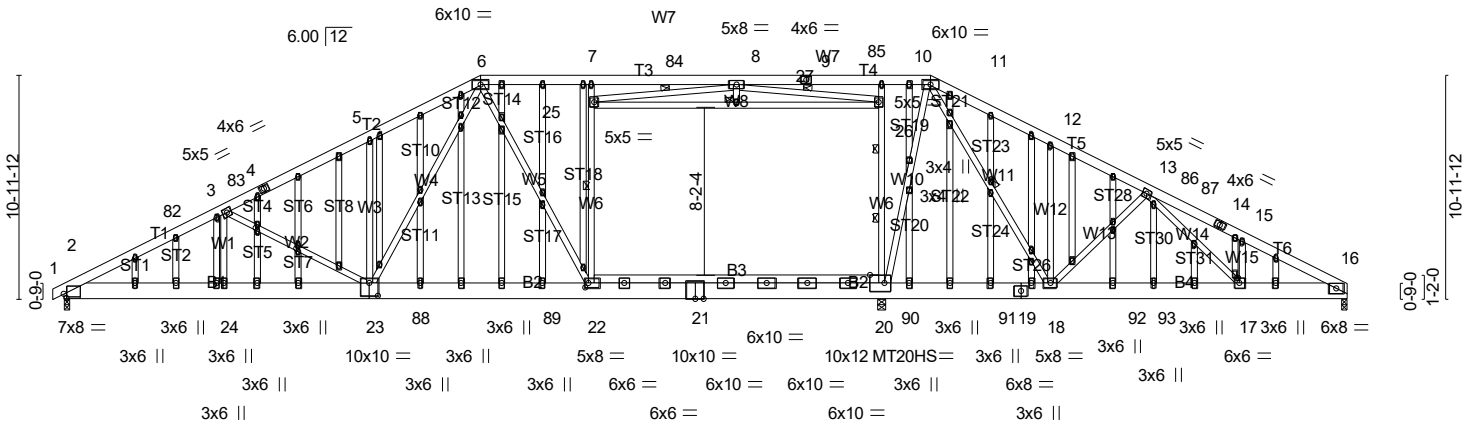
-0-6-8 7-8-8 15-2-0 20-5-8 25-10-12 33-0-4 40-1-12 42-6-8 48-3-8 53-1-12 57-10-4 63-0-0
0-6-8 7-8-8 7-5-8 5-3-8 5-5-4 7-1-8 7-1-8 2-4-12 5-9-0 4-10-4 4-8-8 5-1-12

Scale = 1:113.1




7-8-8 15-2-0 25-10-12 40-1-12 48-3-8 57-10-4 63-0-0
7-8-8 7-5-8 10-8-12 14-3-0 8-1-12 9-6-12 5-1-12

Plate Offsets (X,Y)-- [2:0-1-10,0-2-6], [20:0-8-8,Edge], [22:0-1-12,0-2-8], [23:0-5-0,0-7-8], [46:0-1-15,0-1-0], [49:0-1-15,0-1-0], [78:0-0-1,0-1-0]

| **LOADING** (psf) | | **SPACING-** | 2-0-0 | **CSI.** | | **DEFL.** | in | (loc) | l/defl | L/d | **PLATES** | **GRIP** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.99 | Vert(LL) | -0.65 | 22-23 | >735 | 240 | MT20 | 244/190 |
| Snow (Pf) | 20.0 | Lumber DOL | 1.15 | BC | 0.93 | Vert(CT) | -1.14 | 22-23 | >421 | 180 | MT20HS | 187/143 |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.98 | Horz(CT) | 0.11 | 16 | n/a | n/a | | |
| BCLL | 0.0 * | Code IRC2018/TPI2014 | | Matrix-SH | | Attic | -0.63 | 20-22 | 537 | 360 | Weight: 823 lb | FT = 20% |
| BCDL | 10.0 | | | | | | | | | | | |

**LUMBER-**
TOP CHORD 2x6 SP No.2
BOT CHORD 2x10 SP 2400F 2.0E *Except*
B1: 2x10 SP No.2, B3: 1-1/2x4-3/4 SP No.2
WEBS 2x4 SP No.3 *Except*
W6,W8: 2x4 SP No.2
OTHERS 2x4 SP No.3

**BRACING-**
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
2-2-0 oc bracing: 23-24,20-22.
WEBS 1 Row at midpt 22-25, 8-25, 8-26, 11-18
2 Rows at 1/3 pts 20-26
JOINTS 1 Brace at Jt(s): 27
This truss requires both edges of the bottom chord be sheathed in the room area.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 2=2481/0-3-8 (min. 0-3-7), 20=739/0-3-8 (min. 0-1-8), 16=2259/0-3-8 (min. 0-2-3)
Max Horz 2=129(LC 18)
Max Uplift2=-13(LC 14), 20=-55(LC 15)
Max Grav 2=2896(LC 46), 20=1188(LC 38), 16=2674(LC 46)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-82=-5625/445, 3-82=-5464/463, 3-83=-5258/382, 4-83=-5186/383, 4-5=-5149/410, 5-6=-5238/516, 6-7=-4700/316, 7-84=-4712/300, 8-84=-4712/300, 8-85=-4393/285, 9-85=-4393/285, 9-10=-4393/285, 10-11=-4682/317, 11-12=-4648/461, 12-13=-4636/360, 13-86=-4989/520, 86-87=-5048/510, 14-87=-5066/509, 14-15=-5096/501, 15-16=-5215/414
BOT CHORD 2-24=-300/4912, 23-24=-300/4912, 23-88=-5/4137, 88-89=-5/4137, 22-89=-5/4137, 21-22=0/4703, 20-21=0/4727, 20-90=0/4138, 90-91=0/4137, 19-91=0/4129, 18-19=0/4117, 18-92=-196/4354, 92-93=-196/4354, 17-93=-196/4354, 16-17=-292/4531
WEBS 22-25=-1000/167, 7-25=-656/146, 20-26=-1371/177, 10-26=-1016/153, 25-27=-202/1681, 26-27=-202/1681, 3-23=-574/202, 5-23=-679/179, 6-23=-257/1625, 6-22=0/1232, 8-25=-1738/222, 8-26=-2005/237, 12-18=-582/165, 11-20=-44/2363, 11-18=-246/899, 13-18=-558/172, 13-17=-141/357

**NOTES-** (20-23)
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-6-8 to 5-9-2, Exterior(2N) 5-9-2 to 14-1-14, Corner(3R) 14-1-14 to 26-9-2, Exterior(2N) 26-9-2 to 36-2-14, Corner(3R) 36-2-14 to 48-10-2, Exterior(2N) 48-10-2 to 56-6-10, Corner(3E) 56-6-10 to 62-10-4 zone;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); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
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 20.0 psf on overhangs non-concurrent with other live loads.

NORTH CAROLINA PROFESSIONAL SEAL 28147 ENGINEER MARK K. MORRIS

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Continued on page 2

**NOTES-** (20-23)

7) WARNING: This long span truss requires extreme care and experience for proper and safe handling and erection. For general handling and erection guidance, see Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses ("BCSI"), jointly produced by SBCA and TPI. The building owner or the owner's authorized agent shall contract with a qualified registered design professional for the design and inspection of the temporary installation restraint/bracing and the permanent individual truss member restraint/bracing. MiTek assumes no responsibility for truss manufacture, handling, erection, or bracing.
8) Provide adequate drainage to prevent water ponding.
9) All plates are MT20 plates unless otherwise indicated.
10) All plates are 2x4 MT20 unless otherwise indicated.
11) The Fabrication Tolerance at joint 20 = 16%
12) Gable studs spaced at 2-0-0 oc.
13) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
14) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
15) Ceiling dead load (5.0 psf) on member(s). 25-27, 26-27
16) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 20-22
17) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 20.
18) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
19) Attic room checked for L/360 deflection.
20) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
21) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
22) Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
23) SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.

**LOAD CASE(S)** Standard


9/17/2021

| Job | Truss | Truss Type | Qty | Ply | 49786-0226 WOODGROVE \| FUQUAY VARINA, NC |
|---|---|---|---|---|---|
| 21-5628-R01 | R13 | Common | 7 | 1 | Job Reference (optional) **# 28509** |

8.430 s Feb 12 2021 MiTek Industries, Inc. Tue Sep 21 14:11:22 2021 Page 1
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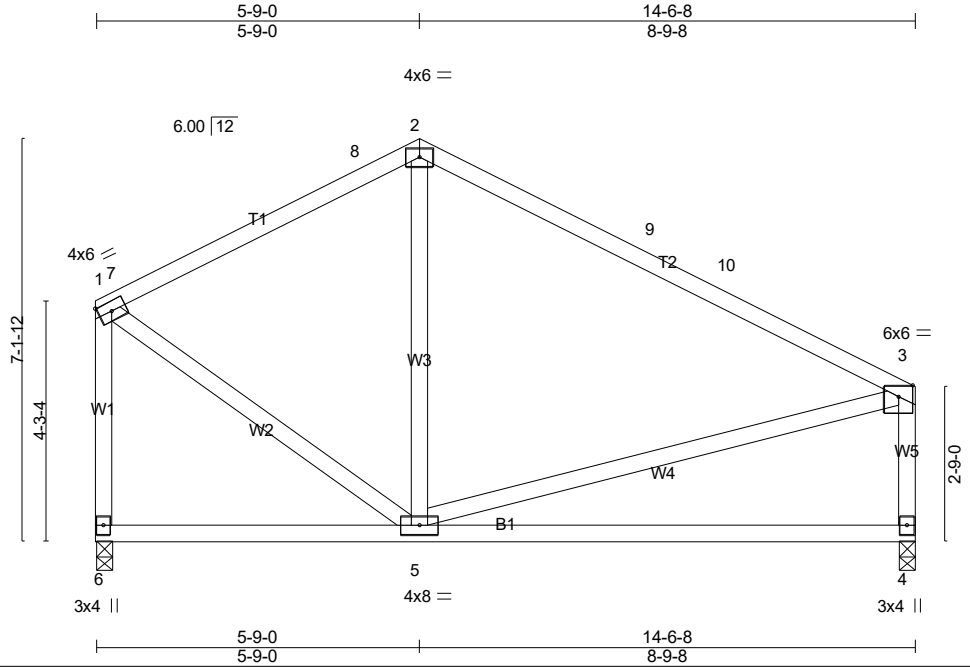


Scale = 1:40.9

| 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 | 0.78 | Vert(LL) | -0.14 | 4-5 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf) | 20.0 | Lumber DOL | 1.15 | BC | 0.57 | Vert(CT) | -0.28 | 4-5 | >600 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.18 | Horz(CT) | 0.00 | 4 | n/a | n/a | | |
| BCLL | 0.0 * | Code IRC2018/TPI2014 | | Matrix-SH | | | | | | | Weight: 88 lb | FT = 20% |
| BCDL | 10.0 | | | | | | | | | | | |

**LUMBER-**
TOP CHORD 2x4 SP No.2 *Except* T2: 2x4 SP SS
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* W5: 2x4 SP No.2

**BRACING-**
TOP CHORD Structural wood sheathing directly applied or 4-9-13 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 6=570/0-3-8 (min. 0-1-8), 4=570/0-3-8 (min. 0-1-8)
Max Horz 6=-77(LC 15)
Max Uplift 6=-25(LC 15), 4=-21(LC 15)
Max Grav 6=631(LC 20), 4=637(LC 21)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-7=-452/100, 7-8=-436/111, 2-8=-347/125, 2-9=-390/104, 9-10=-397/85, 3-10=-538/81, 1-6=-592/143, 3-4=-555/136
WEBS 1-5=-65/433, 3-5=0/255

**NOTES-** (9-12)
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-1-12 to 4-11-6, Exterior(2R) 4-11-6 to 9-7-2, Exterior(2E) 9-7-2 to 14-4-12 zone;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); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 6, 4.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
10) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
11) Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
12) SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.


*9/17/2021*

**LOAD CASE(S)** Standard

**Warning !—Verify design parameters and read notes before use.** This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI 1-03 Guide to *Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

| Job | Truss | Truss Type | Qty | Ply | 49786-0226 WOODGROVE \| FUQUAY VARINA, NC |
|---|---|---|---|---|---|
| 21-5628-R01 | R14 | Half Hip | 7 | 1 | Job Reference (optional) **# 28509** |

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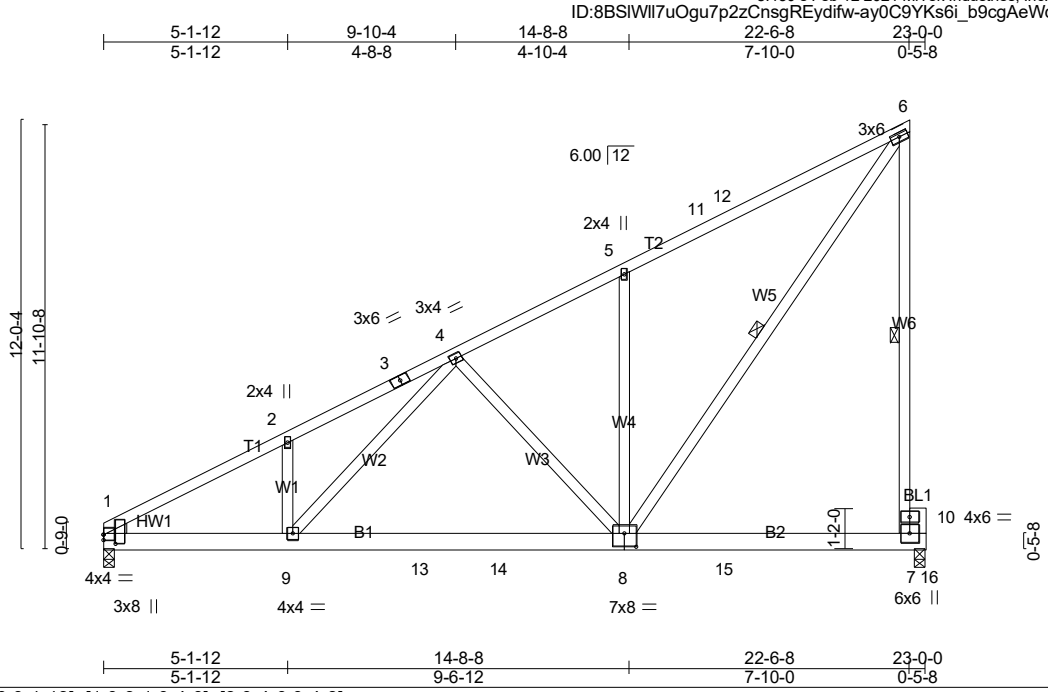


Plate Offsets (X,Y)-- [1:0-0-0,0-1-13], [1:0-3-1,0-4-0], [8:0-4-0,0-4-8]

| **LOADING** (psf) | | **SPACING-** | 2-0-0 | **CSI.** | | **DEFL.** | in | (loc) | l/defl | L/d | **PLATES** | **GRIP** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.95 | Vert(LL) | -0.10 | 7-8 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf) | 20.0 | Lumber DOL | 1.15 | BC | 0.48 | Vert(CT) | -0.16 | 8-9 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.62 | Horz(CT) | 0.02 | 7 | n/a | n/a | | |
| BCLL | 0.0 * | Code IRC2018/TPI2014 | | Matrix-SH | | | | | | | Weight: 165 lb | FT = 20% |
| BCDL | 10.0 | | | | | | | | | | | |

**LUMBER-**
TOP CHORD 2x4 SP SS *Except*
T1: 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3 *Except*
W6: 2x4 SP No.1
OTHERS 2x6 SP No.2
WEDGE
Left: 2x4 SP No.3

**BRACING-**
TOP CHORD Structural wood sheathing directly applied or 4-5-7 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 6-7, 6-8

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 1=899/0-3-8 (min. 0-1-8), 7=885/0-3-8 (min. 0-1-8)
Max Horz 1=324(LC 14)
Max Uplift1=-7(LC 14), 7=-169(LC 14)
Max Grav 1=925(LC 20), 7=1143(LC 5)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-1586/0, 2-3=-1531/55, 3-4=-1446/74, 4-5=-870/0, 5-11=-971/78, 11-12=-892/82, 6-12=-845/103, 7-10=-982/197, 6-10=-1004/202
BOT CHORD 1-9=-262/1306, 9-13=-204/978, 13-14=-204/978, 8-14=-204/978
WEBS 4-9=-88/498, 4-8=-397/116, 5-8=-560/191, 6-8=-217/1300

**NOTES-** (8-11)
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-1-12 to 5-1-12, Interior(1) 5-1-12 to 17-7-2, Exterior(2E) 17-7-2 to 22-4-12 zone;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); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1 except (jt=lb) 7=169.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.


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Continued on page 2

8) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
9) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
10) Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
11) SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.

**LOAD CASE(S)** Standard


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| Job | Truss | Truss Type | Qty | Ply | 49786-0226 WOODGROVE \| FUQUAY VARINA, NC |
|---|---|---|---|---|---|
| 21-5628-R01 | VT01 | GABLE | 1 | 1 | Job Reference (optional) **# 28509** |

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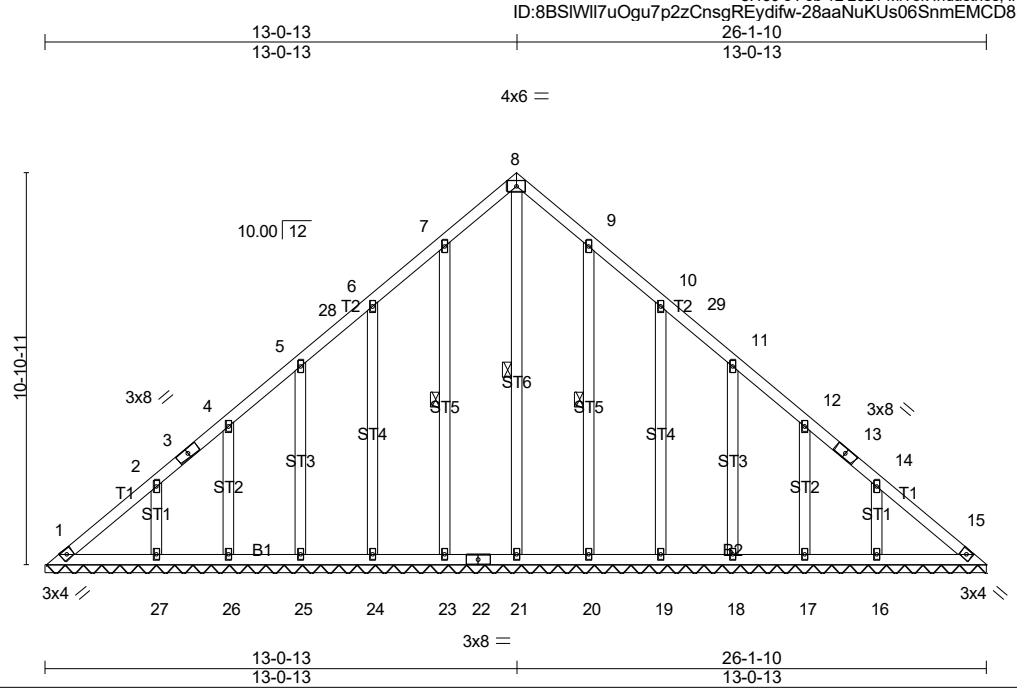


| **LOADING** (psf) | | **SPACING-** | 2-0-0 | **CSI.** | | **DEFL.** | in | (loc) | l/defl | L/d | **PLATES** | **GRIP** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.08 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| Snow (Pf) | 20.0 | Lumber DOL | 1.15 | BC | 0.10 | Vert(CT) | n/a | - | n/a | 999 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.12 | Horz(CT) | 0.01 | 15 | n/a | n/a | | |
| BCLL | 0.0 * | Code IRC2018/TPI2014 | | Matrix-SH | | | | | | | Weight: 183 lb | FT = 20% |
| BCDL | 10.0 | | | | | | | | | | | |

**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 or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 8-21, 7-23, 9-20

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** All bearings 26-1-10.
(lb) - Max Horz 1=-189(LC 8)
Max Uplift All uplift 100 lb or less at joint(s) 1, 23, 24, 25, 26, 27, 20, 19, 18, 17, 16, 15
Max Grav All reactions 250 lb or less at joint(s) 1, 26, 27, 17, 16, 15 except 21=275(LC 22), 23=264(LC 19), 24=252(LC 19), 25=267(LC 19), 20=261(LC 20), 19=253(LC 20), 18=267(LC 20)

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

**NOTES-** (10-13)
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-4-13 to 5-0-13, Interior(1) 5-0-13 to 8-3-3, Exterior(2R) 8-3-3 to 17-10-6, Interior(1) 17-10-6 to 20-11-3, Exterior(2E) 20-11-3 to 25-8-12 zone;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); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 23, 24, 25, 26, 27, 20, 19, 18, 17, 16, 15.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
11) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
12) Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
13) SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAINING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.


9/17/2021

**LOAD CASE(S)** Standard

**Warning - Verify design parameters and read notes before use.** This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI 1-03 Guide to *Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

| Job | Truss | Truss Type | Qty | Ply | 49786-0226 WOODGROVE \| FUQUAY VARINA, NC |
|---|---|---|---|---|---|
| 21-5628-R01 | VT02 | Valley | 1 | 1 | **# 28509** |
| | | | | | Job Reference (optional) |

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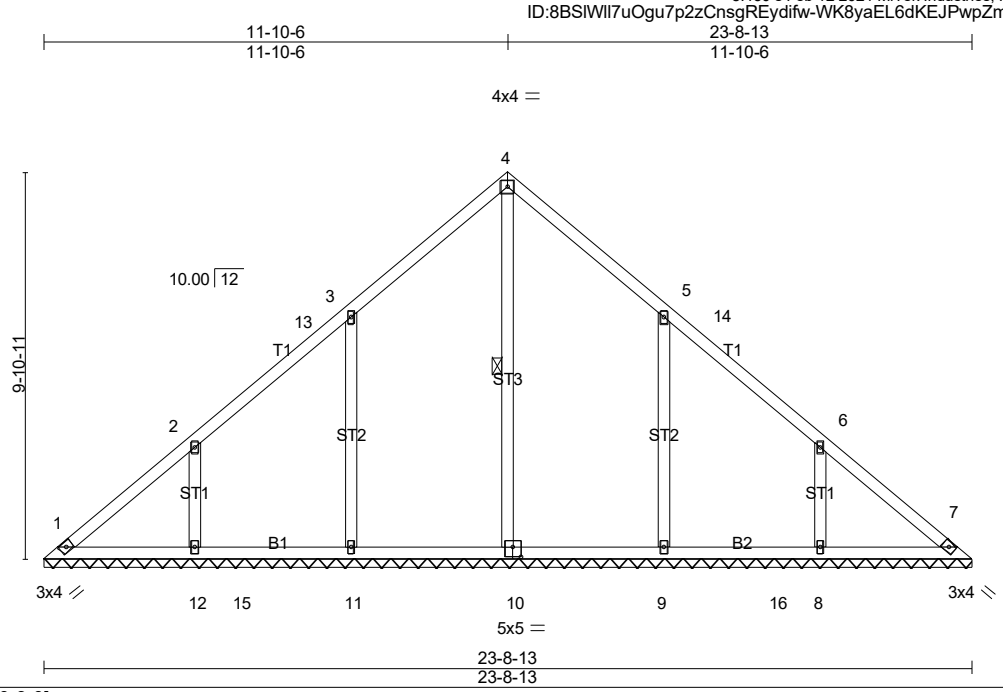


Plate Offsets (X,Y)-- [10:0-2-8,0-3-0]

| **LOADING** (psf) | | **SPACING-** 2-0-0 | **CSI.** | **DEFL.** in (loc) l/defl L/d | **PLATES** **GRIP** |
|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL 1.15 | TC 0.20 | Vert(LL) n/a - n/a 999 | MT20 244/190 |
| Snow (Pf) | 20.0 | Lumber DOL 1.15 | BC 0.40 | Vert(CT) n/a - n/a 999 | |
| TCDL | 10.0 | Rep Stress Incr YES | WB 0.20 | Horz(CT) 0.01 7 n/a n/a | |
| BCLL | 0.0 * | Code IRC2018/TPI2014 | Matrix-SH | | Weight: 119 lb FT = 20% |
| BCDL | 10.0 | | | | |

**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 or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 4-10

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** All bearings 23-8-13.
(lb) - Max Horz 1=171(LC 9)
Max Uplift All uplift 100 lb or less at joint(s) 1 except 11=-119(LC 12), 12=-112(LC 12), 9=-121(LC 13), 8=-112(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 1, 7 except 10=440(LC 22), 11=539(LC 19), 12=379(LC 19), 9=524(LC 20), 8=383(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 3-11=-271/162, 5-9=-270/162

**NOTES-** (10-13)
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-4-13 to 5-2-7, Interior(1) 5-2-7 to 7-0-13, Exterior(2R) 7-0-13 to 16-8-0, Interior(1) 16-8-0 to 18-6-6, Exterior(2E) 18-6-6 to 23-3-15 zone;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); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1 except (jt=lb) 11=119, 12=112, 9=121, 8=112.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.


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Continued on page 2

10) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
11) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
12) Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
13) SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.

**LOAD CASE(S)** Standard


9/17/2021

| Job | Truss | Truss Type | Qty | Ply | 49786-0226 WOODGROVE \| FUQUAY VARINA, NC |
|---|---|---|---|---|---|
| 21-5628-R01 | VT03 | Valley | 1 | 1 | **# 28509** |
| | | | | | Job Reference (optional) |

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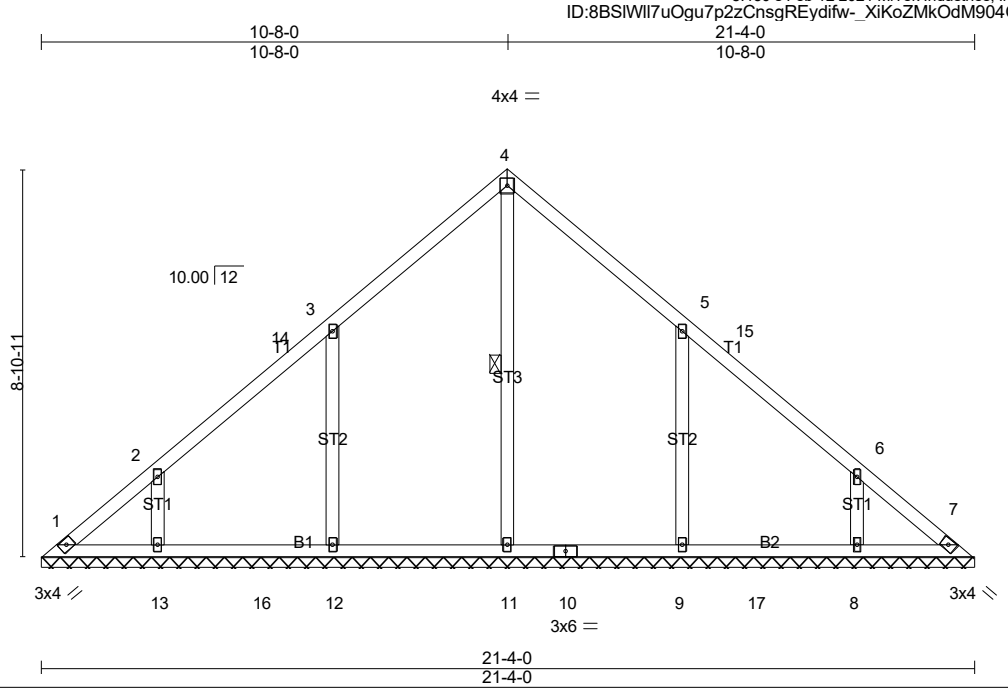



| **LOADING** (psf) | | **SPACING-** | 2-0-0 | **CSI.** | | **DEFL.** | in | (loc) | l/defl | L/d | **PLATES** | **GRIP** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.21 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| Snow (Pf) | 20.0 | Lumber DOL | 1.15 | BC | 0.39 | Vert(CT) | n/a | - | n/a | 999 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.14 | Horz(CT) | 0.00 | 7 | n/a | n/a | | |
| BCLL | 0.0 * | Code IRC2018/TPI2014 | | Matrix-SH | | | | | | | Weight: 104 lb | FT = 20% |
| BCDL | 10.0 | | | | | | | | | | | |

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

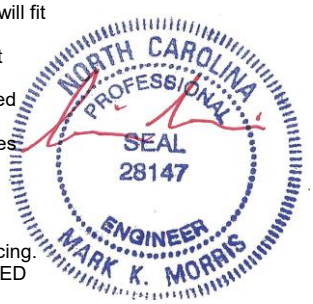
**BRACING-**
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 4-11

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** All bearings 21-4-0.
(lb) - Max Horz 1=-153(LC 8)
Max Uplift All uplift 100 lb or less at joint(s) 1, 7, 13, 8 except 12=-124(LC 12), 9=-124(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 1, 7 except 11=438(LC 22), 12=514(LC 19), 13=291(LC 19), 9=514(LC 20), 8=292(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 3-12=-277/166, 5-9=-277/165

**NOTES-** (10-13)
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-4-13 to 5-2-7, Interior(1) 5-2-7 to 5-10-6, Exterior(2R) 5-10-6 to 15-5-10, Interior(1) 15-5-10 to 16-1-9, Exterior(2E) 16-1-9 to 20-11-3 zone;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); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 7, 13, 8 except (jt=lb) 12=124, 9=124.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
11) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
12) Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
13) SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.




9/17/2021

**LOAD CASE(S)** Standard

**Warning !—Verify design parameters and read notes before use.** This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI 1-03 Guide to *Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

| Job | Truss | Truss Type | Qty | Ply | 49786-0226 WOODGROVE \| FUQUAY VARINA, NC |
|---|---|---|---|---|---|
| 21-5628-R01 | VT04 | Valley | 1 | 1 | Job Reference (optional) **# 28509** |

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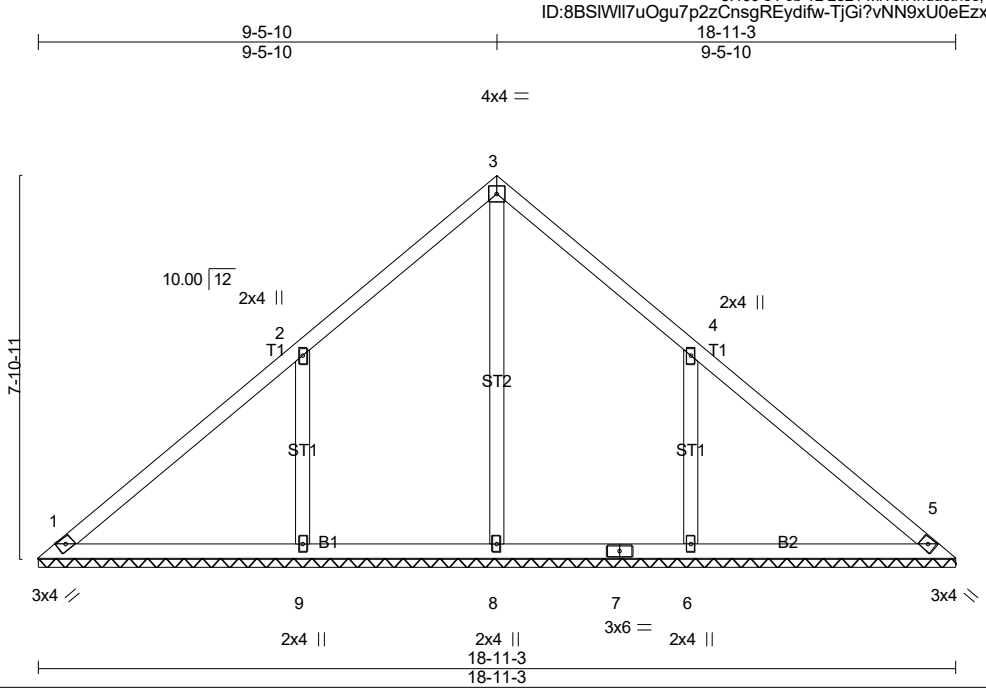



| **LOADING** (psf) | | **SPACING-** | 2-0-0 | **CSI.** | | **DEFL.** | in | (loc) | l/defl | L/d | **PLATES** | **GRIP** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.30 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| Snow (Pf) | 20.0 | Lumber DOL | 1.15 | BC | 0.40 | Vert(CT) | n/a | - | n/a | 999 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.16 | Horz(CT) | 0.00 | 5 | n/a | n/a | | |
| BCLL | 0.0 * | Code IRC2018/TPI2014 | | Matrix-SH | | | | | | | Weight: 86 lb | FT = 20% |
| BCDL | 10.0 | | | | | | | | | | | |

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

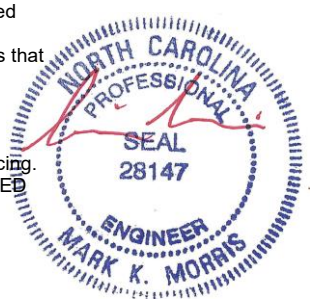
**BRACING-**
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** All bearings 18-11-3.
(lb) - Max Horz 1=-136(LC 8)
Max Uplift All uplift 100 lb or less at joint(s) 1 except 9=-157(LC 12), 6=-156(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 8=413(LC 22), 9=543(LC 19), 6=543(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 2-9=-330/190, 4-6=-330/190

**NOTES-** (9-12)
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-4-13 to 5-5-10, Exterior(2R) 5-5-10 to 13-5-10, Exterior(2E) 13-5-10 to 18-6-6 zone;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); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Gable requires continuous bottom chord bearing.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1 except (jt=lb) 9=157, 6=156.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
10) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
11) Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
12) SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.




**LOAD CASE(S)** Standard

*9/17/2021*

| Job | Truss | Truss Type | Qty | Ply | 49786-0226 WOODGROVE \| FUQUAY VARINA, NC |
|---|---|---|---|---|---|
| 21-5628-R01 | VT05 | Valley | 1 | 1 | Job Reference (optional) **# 28509** |

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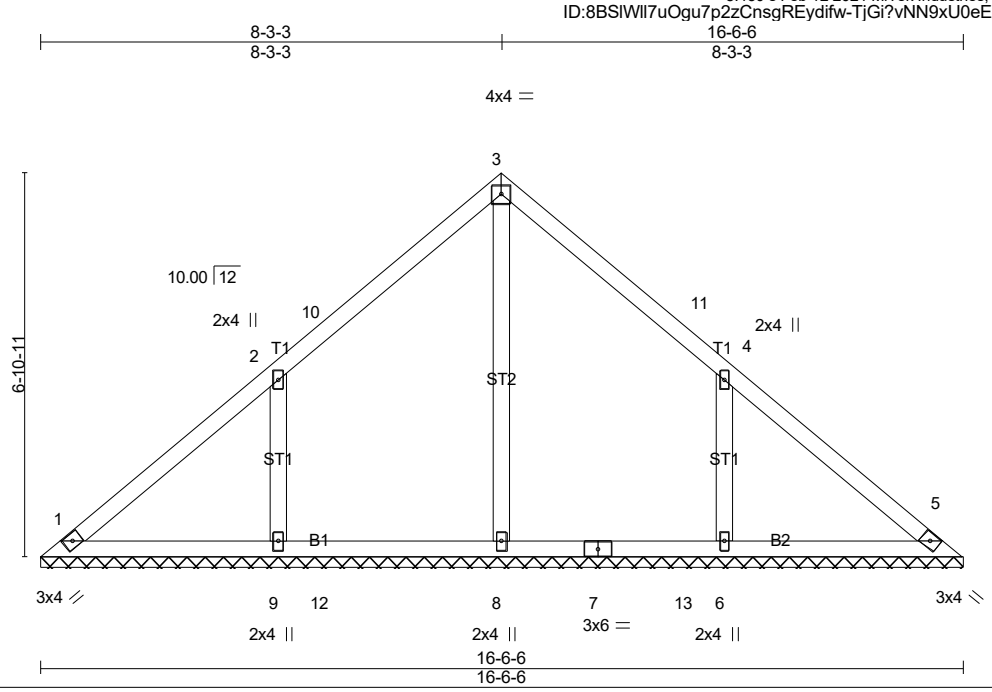



| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.21 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| Snow (Pf) | 20.0 | Lumber DOL | 1.15 | BC | 0.41 | Vert(CT) | n/a | - | n/a | 999 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.13 | Horz(CT) | 0.00 | 5 | n/a | n/a | | |
| BCLL | 0.0 * | Code IRC2018/TPI2014 | | Matrix-SH | | | | | | | Weight: 73 lb | FT = 20% |
| BCDL | 10.0 | | | | | | | | | | | |

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

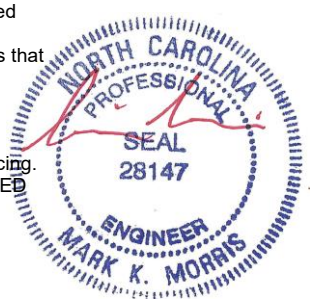
**BRACING-**
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** All bearings 16-6-6.
(lb) - Max Horz 1=-118(LC 8)
Max Uplift All uplift 100 lb or less at joint(s) 1 except 9=-133(LC 12), 6=-133(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 8=420(LC 22), 9=439(LC 19), 6=439(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 2-9=-282/165, 4-6=-282/165

**NOTES-** (9-12)
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-4-13 to 5-2-7, Exterior(2R) 5-2-7 to 11-3-15, Exterior(2E) 11-3-15 to 16-1-9 zone;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); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Gable requires continuous bottom chord bearing.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1 except (jt=lb) 9=133, 6=133.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
10) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
11) Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
12) SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.




**LOAD CASE(S)** Standard

*9/17/2021*

| Job | Truss | Truss Type | Qty | Ply | 49786-0226 WOODGROVE \| FUQUAY VARINA, NC |
|---|---|---|---|---|---|
| 21-5628-R01 | VT06 | Valley | 1 | 1 | Job Reference (optional) **# 28509** |

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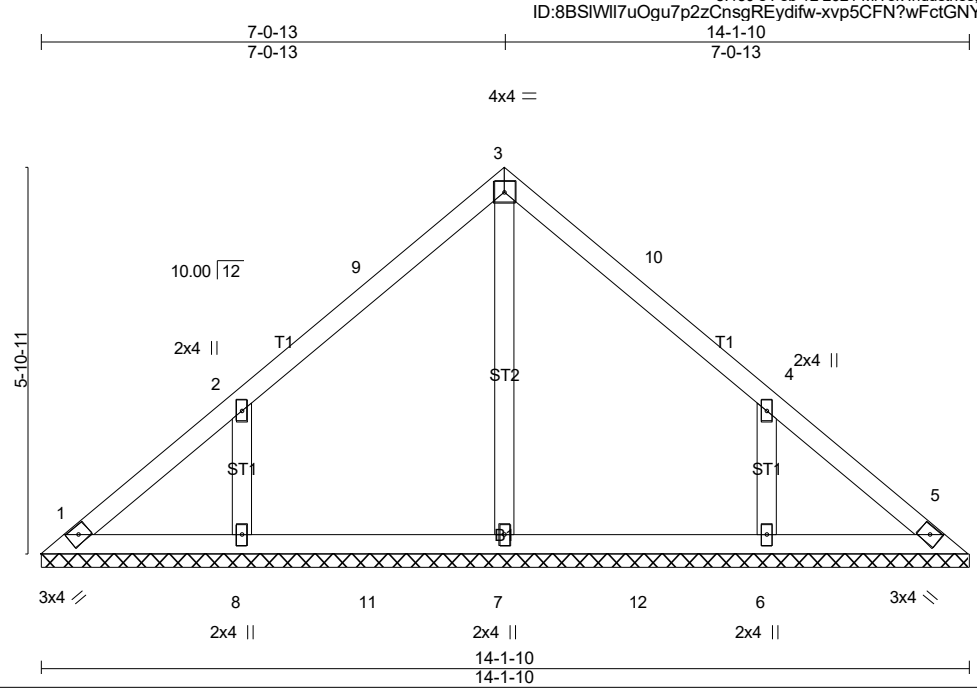



| **LOADING** (psf) | | **SPACING-** | 2-0-0 | **CSI.** | | **DEFL.** | in | (loc) | l/defl | L/d | **PLATES** | **GRIP** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.18 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| Snow (Pf) | 20.0 | Lumber DOL | 1.15 | BC | 0.31 | Vert(CT) | n/a | - | n/a | 999 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.10 | Horz(CT) | 0.00 | 5 | n/a | n/a | | |
| BCLL | 0.0 * | Code IRC2018/TPI2014 | | Matrix-SH | | | | | | | Weight: 61 lb | FT = 20% |
| BCDL | 10.0 | | | | | | | | | | | |

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

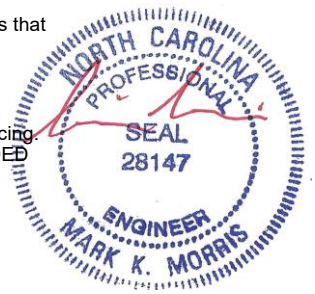
**BRACING-**
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** All bearings 14-1-10.
(lb) - Max Horz 1=-100(LC 8)
Max Uplift All uplift 100 lb or less at joint(s) 1 except 8=-115(LC 12), 6=-115(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 7=386(LC 19), 8=345(LC 19), 6=345(LC 20)

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

**NOTES-** (9-12)
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-4-13 to 5-2-7, Exterior(2R) 5-2-7 to 8-11-3, Exterior(2E) 8-11-3 to 13-8-12 zone;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); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Gable requires continuous bottom chord bearing.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1 except (jt=lb) 8=115, 6=115.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
10) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
11) Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
12) SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.




**LOAD CASE(S)** Standard

*9/17/2021*

| Job | Truss | Truss Type | Qty | Ply | 49786-0226 WOODGROVE \| FUQUAY VARINA, NC |
|---|---|---|---|---|---|
| 21-5628-R01 | VT07 | Valley | 1 | 1 | Job Reference (optional) **# 28509** |

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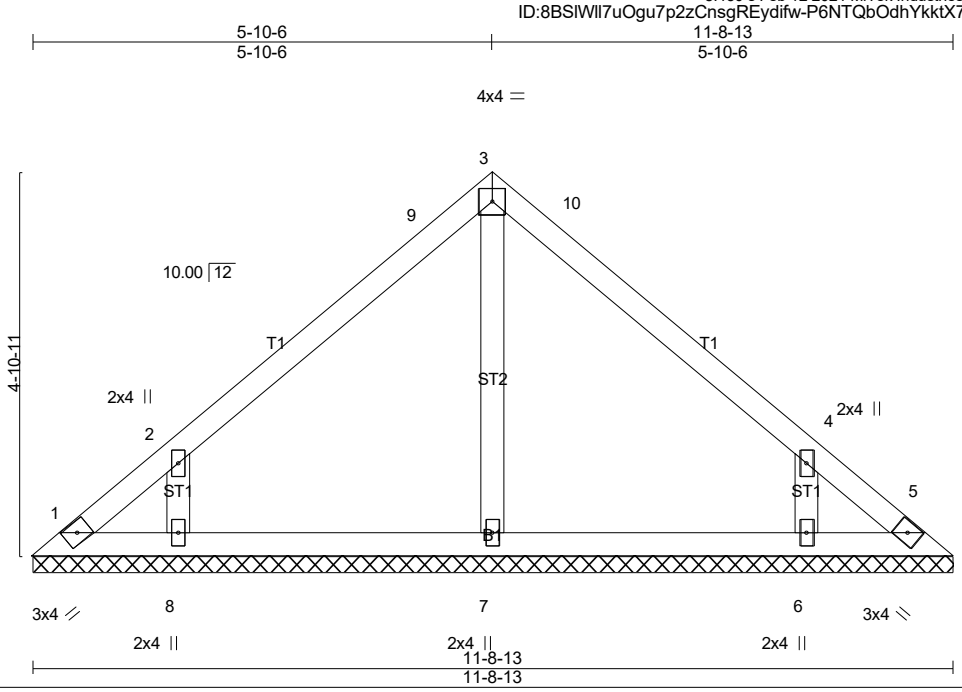



**LOADING** (psf)

| | |
|---|---|
| TCLL (roof) | 20.0 |
| Snow (Pf) | 20.0 |
| TCDL | 10.0 |
| BCLL | 0.0 * |
| BCDL | 10.0 |

| **SPACING-** | 2-0-0 |
|---|---|
| Plate Grip DOL | 1.15 |
| Lumber DOL | 1.15 |
| Rep Stress Incr | YES |
| Code IRC2018/TPI2014 | |

| **CSI.** | |
|---|---|
| TC | 0.19 |
| BC | 0.21 |
| WB | 0.07 |
| Matrix-SH | |

| **DEFL.** | in | (loc) | l/defl | L/d |
|---|---|---|---|---|
| Vert(LL) | n/a | - | n/a | 999 |
| Vert(CT) | n/a | - | n/a | 999 |
| Horz(CT) | 0.00 | 5 | n/a | n/a |

| **PLATES** | **GRIP** |
|---|---|
| MT20 | 244/190 |

Weight: 48 lb FT = 20%

**LUMBER-**

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

**BRACING-**

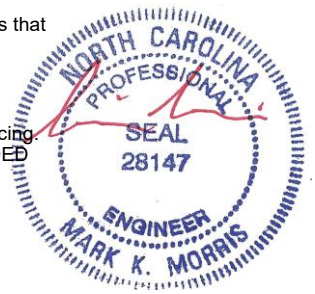
| | |
|---|---|
| TOP CHORD | Structural wood sheathing directly applied or 6-0-0 oc purlins. |
| BOT CHORD | Rigid ceiling directly applied or 10-0-0 oc bracing. |

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** All bearings 11-8-13.
(lb) - Max Horz 1=82(LC 9)
Max Uplift All uplift 100 lb or less at joint(s) 1, 5 except 8=-110(LC 12), 6=-110(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 1, 5, 7 except 8=303(LC 19), 6=302(LC 20)

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

**NOTES-** (9-12)
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-4-13 to 5-2-7, Exterior(2R) 5-2-7 to 6-6-6, Exterior(2E) 6-6-6 to 11-3-15 zone;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); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Gable requires continuous bottom chord bearing.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 5 except (jt=lb) 8=110, 6=110.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
10) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
11) Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
12) SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.




**LOAD CASE(S)** Standard

*9/17/2021*

| Job | Truss | Truss Type | Qty | Ply | 49786-0226 WOODGROVE \| FUQUAY VARINA, NC |
|---|---|---|---|---|---|
| 21-5628-R01 | VT08 | Valley | 1 | 1 | Job Reference (optional) **# 28509** |

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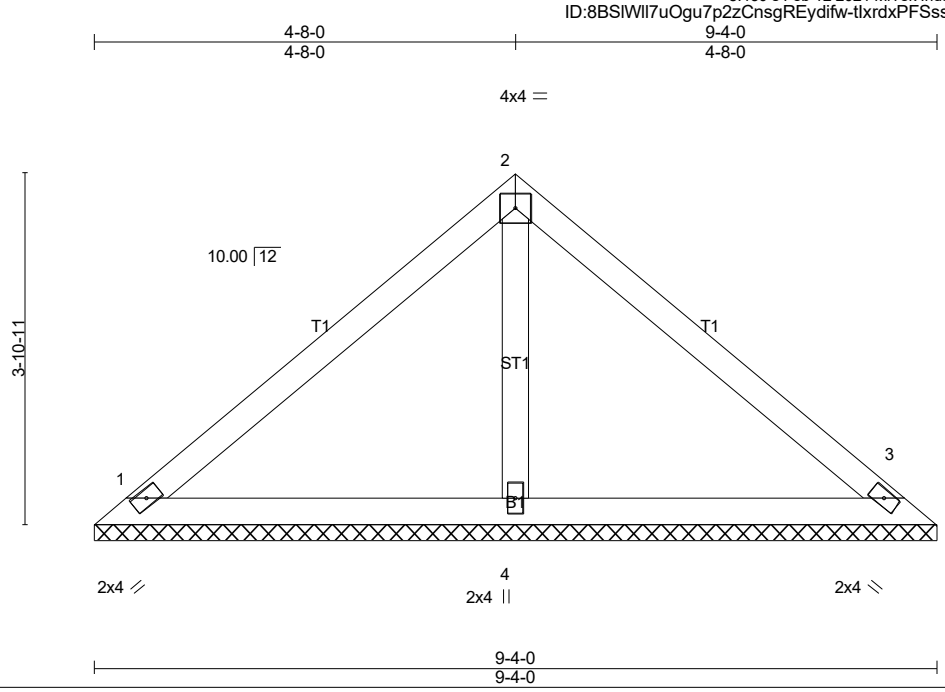


| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.23 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| Snow (Pf) | 20.0 | Lumber DOL | 1.15 | BC | 0.31 | Vert(CT) | n/a | - | n/a | 999 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.05 | Horz(CT) | 0.00 | 3 | n/a | n/a | | |
| BCLL | 0.0 * | Code IRC2018/TPI2014 | | Matrix-SH | | | | | | | Weight: 35 lb | FT = 20% |
| BCDL | 10.0 | | | | | | | | | | | |

**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 or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 1=175/9-4-0 (min. 0-1-8), 3=175/9-4-0 (min. 0-1-8), 4=332/9-4-0 (min. 0-1-8)
Max Horz 1=-64(LC 8)
Max Uplift1=-13(LC 13), 3=-21(LC 13)

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

**NOTES-** (9-12)
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone;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); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Gable requires continuous bottom chord bearing.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
10) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
11) Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
12) SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.

**LOAD CASE(S)** Standard


*9/17/2021*

| Job | Truss | Truss Type | Qty | Ply | 49786-0226 WOODGROVE \| FUQUAY VARINA, NC |
|---|---|---|---|---|---|
| 21-5628-R01 | VT09 | Valley | 1 | 1 | Job Reference (optional) **# 28509** |

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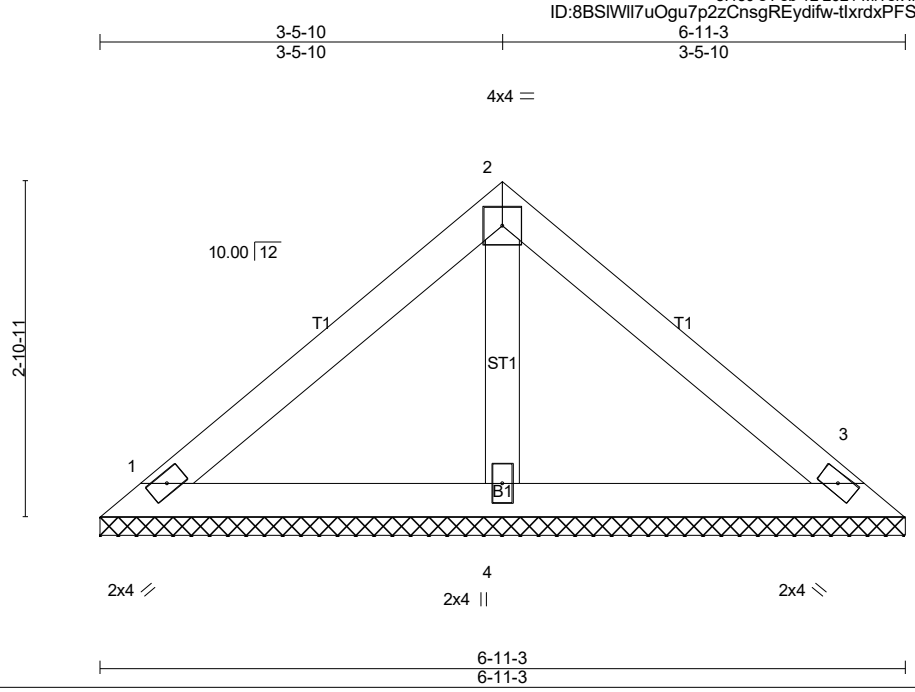


| **LOADING** (psf) | | **SPACING-** | 2-0-0 | **CSI.** | | **DEFL.** | in | (loc) | l/defl | L/d | **PLATES** | **GRIP** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.18 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| Snow (Pf) | 20.0 | Lumber DOL | 1.15 | BC | 0.16 | Vert(CT) | n/a | - | n/a | 999 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.03 | Horz(CT) | 0.00 | 3 | n/a | n/a | | |
| BCLL | 0.0 * | Code IRC2018/TPI2014 | | Matrix-P | | | | | | | Weight: 26 lb | FT = 20% |
| BCDL | 10.0 | | | | | | | | | | | |

**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 or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 1=140/6-11-3 (min. 0-1-8), 3=140/6-11-3 (min. 0-1-8), 4=210/6-11-3 (min. 0-1-8)
Max Horz 1=46(LC 11)
Max Uplift1=-18(LC 13), 3=-23(LC 13)

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

**NOTES-** (9-12)
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone;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); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Gable requires continuous bottom chord bearing.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
10) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
11) Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
12) SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.

**LOAD CASE(S)** Standard


*9/17/2021*

| Job | Truss | Truss Type | Qty | Ply | 49786-0226 WOODGROVE \| FUQUAY VARINA, NC |
|---|---|---|---|---|---|
| 21-5628-R01 | VT10 | Valley | 1 | 1 | Job Reference (optional) **# 28509** |

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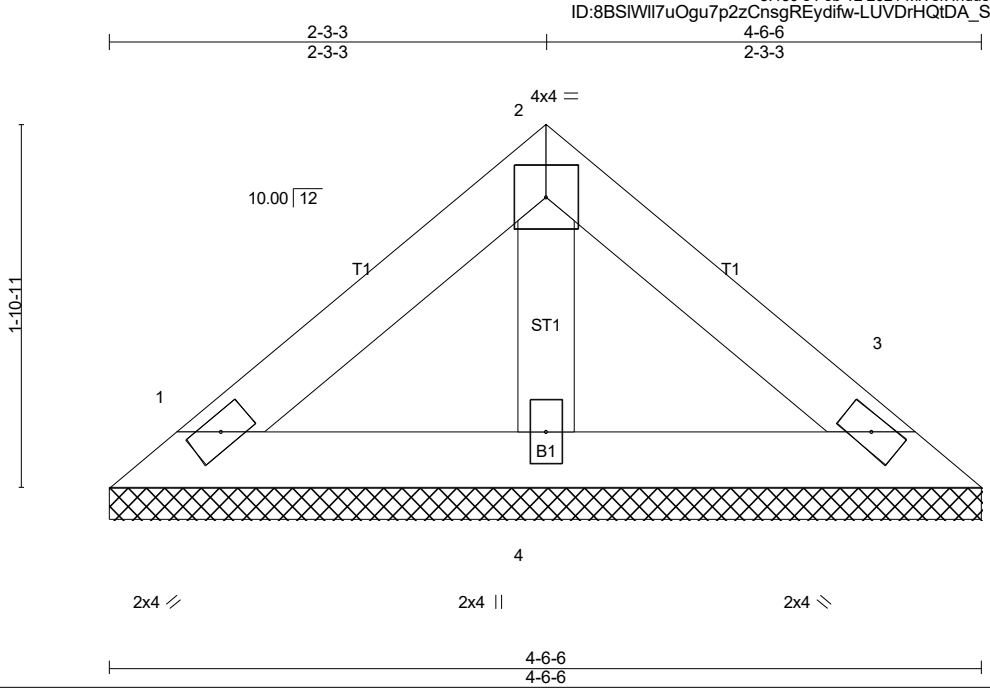


| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.06 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| Snow (Pf) | 20.0 | Lumber DOL | 1.15 | BC | 0.06 | Vert(CT) | n/a | - | n/a | 999 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.02 | Horz(CT) | 0.00 | 3 | n/a | n/a | | |
| BCLL | 0.0 * | Code IRC2018/TPI2014 | | Matrix-P | | | | | | | Weight: 16 lb | FT = 20% |
| BCDL | 10.0 | | | | | | | | | | | |

**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 or 4-6-6 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 1=85/4-6-6 (min. 0-1-8), 3=85/4-6-6 (min. 0-1-8), 4=128/4-6-6 (min. 0-1-8)
Max Horz 1=28(LC 9)
Max Uplift1=-11(LC 13), 3=-14(LC 13)

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

**NOTES-** (9-12)
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone;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); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Gable requires continuous bottom chord bearing.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
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**LOAD CASE(S)** Standard


*9/17/2021*