

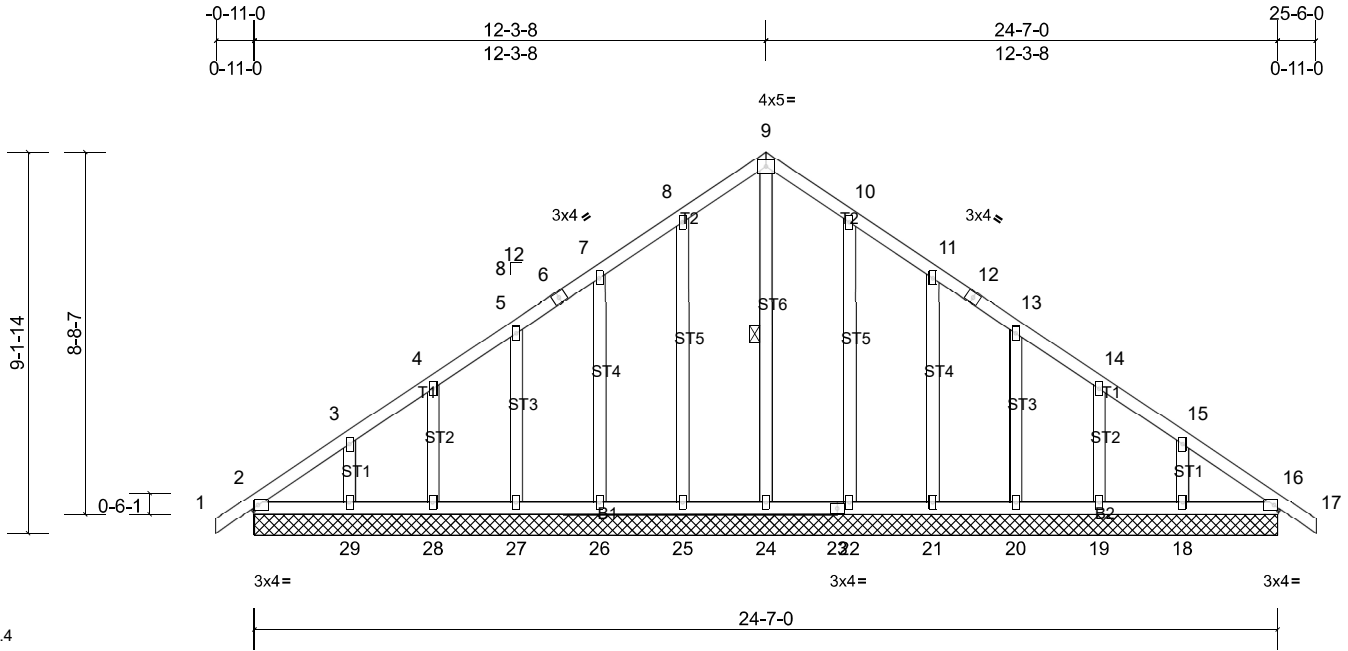
|                   |              |                                      |          |          |   |
|-------------------|--------------|--------------------------------------|----------|----------|---|
| Job<br>Q2201696pg | Truss<br>A01 | Truss Type<br>Common Supported Gable | Qty<br>1 | Ply<br>1 | Value Build Homes - Wheeler 23-53-9<br>Job Reference (optional) |
|-------------------|--------------|--------------------------------------|----------|----------|---|

Carolina Structural Systems, Star, NC 27356

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Scale = 1:55.4

| Loading     | (psf) | Spacing         | 1-11-4          | CSI       | DEFL | in       | (loc) | l/defl | L/d | PLATES | GRIP           |          |
|-------------|-------|-----------------|-----------------|-----------|------|----------|-------|--------|-----|--------|----------------|----------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.00            | TC        | 0.16 | Vert(LL) | n/a   | -      | n/a | 999    | MT20           | 244/190  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC        | 0.13 | Vert(CT) | n/a   | -      | n/a | 999    |                |          |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB        | 0.13 | Horz(CT) | 0.00  | 19     | n/a | n/a    |                |          |
| BCDL        | 10.0  | Code            | IRC2015/TPI2014 | Matrix-AS |      |          |       |        |     |        |                |          |
|             |       |                 |                 |           |      |          |       |        |     |        | Weight: 158 lb | FT = 20% |

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

**BRACING**  
 TOP CHORD Structural wood sheathing directly applied.  
 BOT CHORD Rigid ceiling directly applied.  
 WEBS 1 Row at midpt 9-24

**REACTIONS** All bearings 24-7-0.  
 (lb) - Max Horiz 2=145 (LC 11), 30=145 (LC 11)  
 Max Uplift All uplift 100 (lb) or less at joint(s)  
 2, 18, 19, 20, 21, 22, 25, 26, 27,  
 28, 29, 30  
 Max Grav All reactions 250 (lb) or less at joint  
 (s) 2, 19, 20, 21, 22, 25, 26, 27, 28,  
 29, 30 except 18=272 (LC 1),  
 24=319 (LC 1)

**FORCES** (lb) - Max. Comp./Max. Ten. - All forces 250  
 (lb) or less except when shown.  
 TOP CHORD 2-3=-76/261  
 WEBS 9-24=-280/45

- NOTES**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=120mph (3-second gust)  
 Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;  
 B=45ft; L=25ft; eave=2ft; Cat. II; Exp B; Enclosed;  
 MWFRS (directional) and C-C Corner (3) -0-11-0 to  
 2-3-8, Exterior (2) 2-3-8 to 12-3-8, Corner (3) 12-3-8 to  
 15-3-8, Exterior (2) 15-3-8 to 25-6-0 zone; cantilever left  
 and right exposed; end vertical left and right exposed; C-  
 C for members and forces & MWFRS for reactions  
 shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Truss designed for wind loads in the plane of the truss  
 only. For studs exposed to wind (normal to the face),  
 see Standard Industry Gable End Details as applicable,  
 or consult qualified building designer as per ANSI/TPI 1.
  - 4) All plates are 2x4 MT20 unless otherwise indicated.
  - 5) Gable requires continuous bottom chord bearing.
  - 6) Gable studs spaced at 2-0-0 oc.
  - 7) This truss has been designed for a 10.0 psf bottom  
 chord live load nonconcurrent with any other live loads.

- 8) \* This truss has been designed for a live load of 20.0psf  
 on the bottom chord in all areas where a rectangle  
 3-06-00 tall by 2-00-00 wide will fit between the bottom  
 chord and any other members.
- 9) Provide mechanical connection (by others) of truss to  
 bearing plate capable of withstanding 100 lb uplift at joint  
 (s) 2, 25, 26, 27, 28, 29, 22, 21, 20, 19, 18, 2.
- 10) This truss is designed in accordance with the 2015  
 International Residential Code sections R502.11.1 and  
 R802.10.2 and referenced standard ANSI/TPI 1.
- 11) This truss design requires that a minimum of 7/16"  
 structural wood sheathing be applied directly to the top  
 chord and 1/2" gypsum sheetrock be applied directly to  
 the bottom chord.

**LOAD CASE(S)** Standard

|            |       |            |     |     |                                     |
|------------|-------|------------|-----|-----|-------------------------------------|
| Job        | Truss | Truss Type | Qty | Ply | Value Build Homes - Wheeler 23-53-9 |
| Q2201696pg | A02   | Common     | 5   | 1   | Job Reference (optional)            |

Carolina Structural Systems, Star, NC 27356

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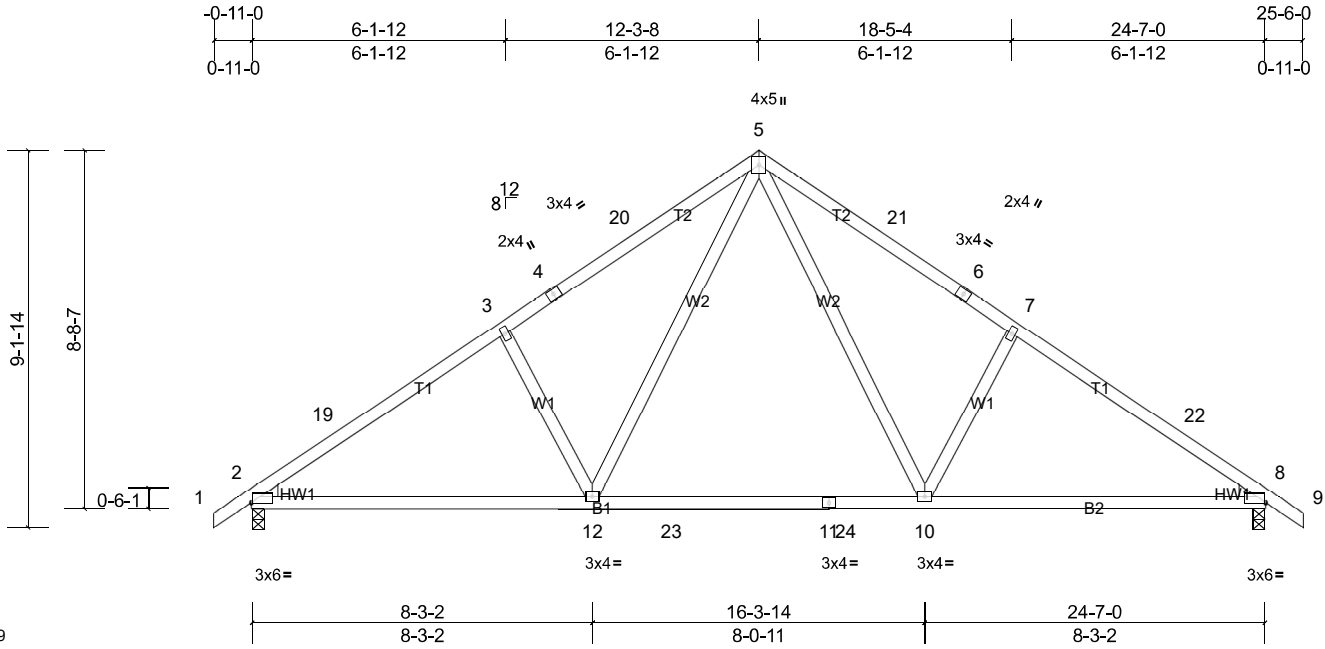


Plate Offsets (X, Y): [2:Edge,0-0-3], [8:Edge,0-0-3]

| Loading     | (psf) | Spacing         | 2-0-0           | CSI       | DEFL     | in    | (loc) | I/defl | L/d | PLATES         | GRIP     |
|-------------|-------|-----------------|-----------------|-----------|----------|-------|-------|--------|-----|----------------|----------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.00            | TC        | Vert(LL) | -0.21 | 10-12 | >999   | 360 | MT20           | 244/190  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC        | Vert(CT) | -0.29 | 10-12 | >999   | 240 |                |          |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB        | Horz(CT) | 0.03  | 8     | n/a    | n/a |                |          |
| BCDL        | 10.0  | Code            | IRC2015/TPI2014 | Matrix-AS | Wind(LL) | 0.03  | 12-15 | >999   | 240 | Weight: 126 lb | FT = 20% |

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

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

**REACTIONS** (lb/size) 2=1038/0-3-8, (min. 0-1-8),  
 8=1038/0-3-8, (min. 0-1-8)  
 Max Horiz 2=150 (LC 11)  
 Max Uplift 2=-30 (LC 12), 8=-30 (LC 12)

**FORCES** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-19=-1407/60, 3-19=-1318/95,  
 3-4=-1247/114, 4-20=-1147/132,  
 5-20=-1144/152, 5-21=-1144/152,  
 6-21=-1147/132, 6-7=-1247/114,  
 7-22=-1318/95, 8-22=-1407/60  
 BOT CHORD 2-12=-58/1169, 12-23=0/767, 11-23=0/767,  
 11-24=0/767, 10-24=0/767, 8-10=0/1096  
 WEBS 3-12=-340/140, 5-12=-30/587, 5-10=-30/587,  
 7-10=-340/140

- NOTES**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=25ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 12-3-8, Exterior (2) 12-3-8 to 15-3-8, Interior (1) 15-3-8 to 25-6-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 4) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.

- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 30 lb uplift at joint 2 and 30 lb uplift at joint 8.
- 6) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 7) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

**LOAD CASE(S)** Standard

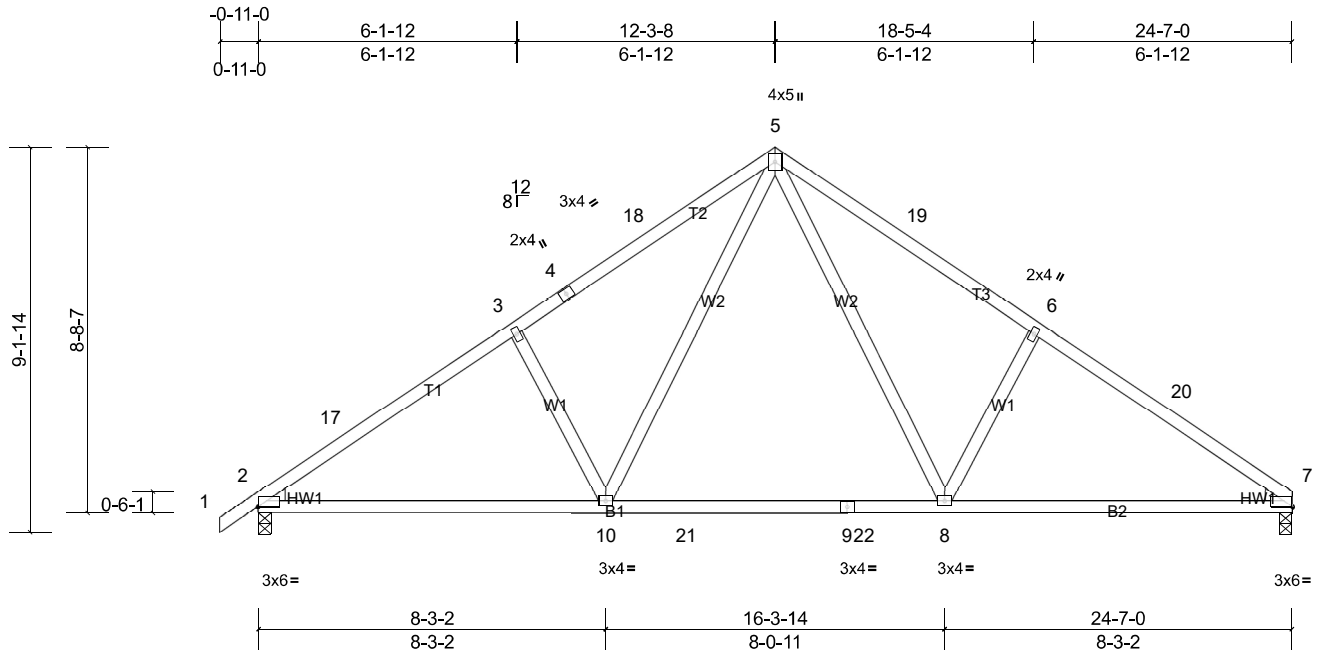
|                   |              |                      |          |          |   |
|-------------------|--------------|----------------------|----------|----------|---|
| Job<br>Q2201696pg | Truss<br>A03 | Truss Type<br>Common | Qty<br>2 | Ply<br>1 | Value Build Homes - Wheeler 23-53-9<br>Job Reference (optional) |
|-------------------|--------------|----------------------|----------|----------|---|

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Scale = 1:54.8

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

| Loading     | (psf) | Spacing         | 2-0-0           | CSI       | DEFL     | in    | (loc) | I/defl | L/d | PLATES         | GRIP     |
|-------------|-------|-----------------|-----------------|-----------|----------|-------|-------|--------|-----|----------------|----------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.00            | TC        | Vert(LL) | -0.21 | 8-10  | >999   | 360 | MT20           | 244/190  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC        | Vert(CT) | -0.29 | 8-10  | >999   | 240 |                |          |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB        | Horz(CT) | 0.03  | 7     | n/a    | n/a |                |          |
| BCDL        | 10.0  | Code            | IRC2015/TPI2014 | Matrix-AS | Wind(LL) | 0.03  | 8-13  | >999   | 240 | Weight: 124 lb | FT = 20% |

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

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

**REACTIONS** (lb/size) 2=1039/0-3-8, (min. 0-1-8),  
 7=982/0-3-8, (min. 0-1-8)  
 Max Horiz 2=147 (LC 11)  
 Max Uplift 2=-31 (LC 12), 7=-7 (LC 12)

**FORCES** (lb) - Max. Comp./Max. Ten. - All forces 250  
 (lb) or less except when shown.  
 TOP CHORD 2-17=-1408/60, 3-17=-1319/96,  
 3-4=-1249/115, 4-18=-1148/132,  
 5-18=-1145/152, 5-19=-1148/159,  
 6-19=-1252/139, 6-20=-1318/102,  
 7-20=-1411/80  
 BOT CHORD 2-10=-74/1164, 10-21=0/762, 9-21=0/762,  
 9-22=0/762, 8-22=0/762, 7-8=-8/1102  
 WEBS 5-8=-32/591, 6-8=-343/141, 5-10=-30/586,  
 3-10=-340/140

- NOTES**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=25ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 12-3-8, Exterior (2) 12-3-8 to 15-3-8, Interior (1) 15-3-8 to 24-7-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.

- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 7 lb uplift at joint 7 and 31 lb uplift at joint 2.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

**LOAD CASE(S)** Standard

|                   |              |                             |          |          |   |
|-------------------|--------------|-----------------------------|----------|----------|---|
| Job<br>Q2201696pg | Truss<br>A04 | Truss Type<br>Common Girder | Qty<br>1 | Ply<br>2 | Value Build Homes - Wheeler 23-53-9<br>Job Reference (optional) |
|-------------------|--------------|-----------------------------|----------|----------|---|

Carolina Structural Systems, Star, NC 27356

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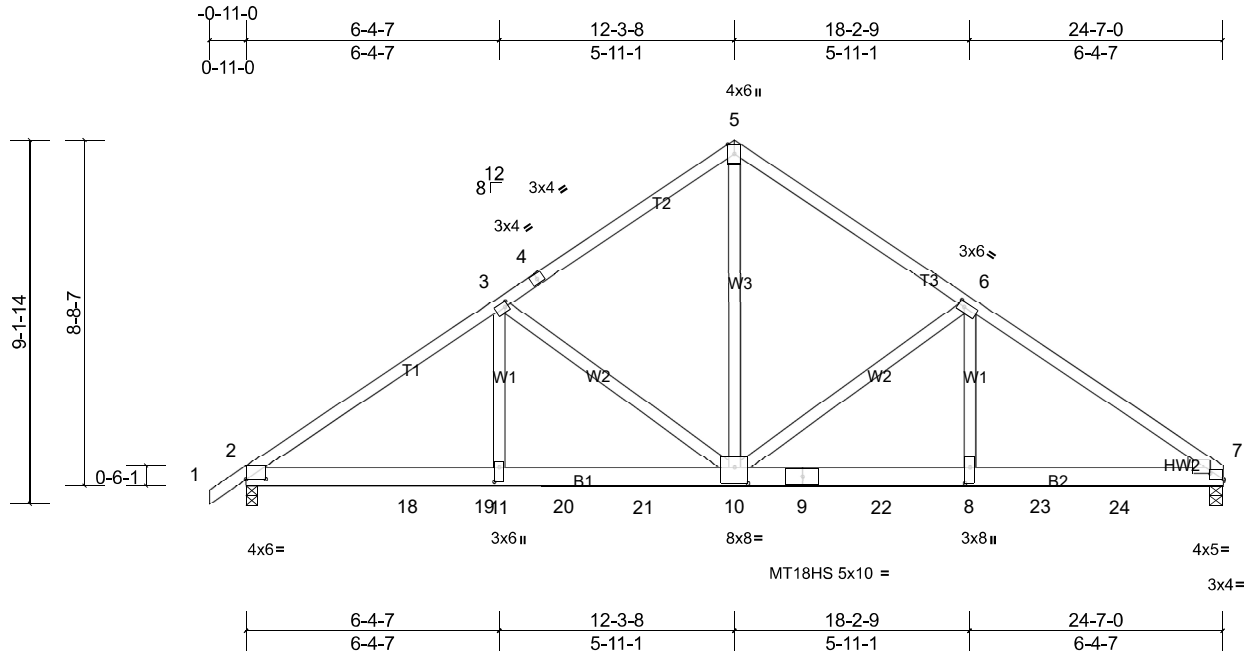


Plate Offsets (X, Y): [2:0-6-0,0-0-1], [3:0-1-0,0-1-8], [6:0-1-12,0-1-8], [7:0-4-0,0-1-14], [8:0-4-12,0-1-8], [10:0-4-0,0-4-12], [11:0-4-4,0-1-8]

| Loading     | (psf) | Spacing         | 2-0-0           | CSI       | DEFL | in (loc) | I/defl | L/d   | PLATES | GRIP |        |                         |
|-------------|-------|-----------------|-----------------|-----------|------|----------|--------|-------|--------|------|--------|-------------------------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.00            | TC        | 0.84 | Vert(LL) | -0.15  | 10-11 | >999   | 360  | MT20   | 244/190                 |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC        | 0.97 | Vert(CT) | -0.30  | 10-11 | >997   | 240  | MT18HS | 244/190                 |
| BCLL        | 0.0*  | Rep Stress Incr | NO              | WB        | 0.79 | Horz(CT) | 0.06   | 7     | n/a    | n/a  |        |                         |
| BCDL        | 10.0  | Code            | IRC2015/TPI2014 | Matrix-MS |      | Wind(LL) | -0.06  | 10-11 | >999   | 240  |        | Weight: 297 lb FT = 20% |

**LUMBER**  
TOP CHORD 2x4 SP No.2 \*Except\* T3:2x4 SP No.1  
BOT CHORD 2x6 SP No.1 \*Except\* B2:2x6 SP DSS  
WEBS 2x4 SP No.3 \*Except\* W3:2x4 SP No.2  
WEDGE Right: 2x4 SP No.3

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

**REACTIONS** (lb/size) 2=5053/0-3-8, (min. 0-3-3),  
7=6977/0-4-0, (min. 0-3-15)  
Max Horiz 2=147 (LC 7)  
Max Grav 2=5358 (LC 14), 7=7748 (LC 15)

**FORCES** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-8891/0, 3-4=-6537/0, 4-5=-6462/0,  
5-6=-6545/0, 6-7=-9891/0  
BOT CHORD 2-18=0/7412, 18-19=0/7412, 11-19=0/7412,  
11-20=0/7412, 20-21=0/7412, 10-21=0/7412,  
9-10=0/8192, 9-22=0/8192, 8-22=0/8192,  
8-23=0/8192, 23-24=0/8192, 7-24=0/8192  
WEBS 5-10=0/6864, 6-10=-3570/0, 6-8=0/3606,  
3-10=-2480/0, 3-11=0/2462

**NOTES**  
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.  
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.  
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.  
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.  
3) Unbalanced roof live loads have been considered for this design.  
4) Wind: ASCE 7-10; Vult=120mph (3-second gust)  
Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;  
B=45ft; L=25ft; eave=4ft; Cat. II; Exp B; Enclosed;  
MWFRRS (directional); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60

5) All plates are MT20 plates unless otherwise indicated.  
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.  
7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.  
8) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.  
9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 392 lb down and 29 lb up at 4-0-12, 1054 lb down at 6-0-0, 1054 lb down at 8-0-0, 1054 lb down at 10-0-0, 1054 lb down at 12-0-0, 1054 lb down at 14-0-0, 1054 lb down at 16-0-0, 1054 lb down at 18-0-0, 1054 lb down at 20-0-0, and 1235 lb down at 22-0-0, and 1239 lb down at 24-0-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

**LOAD CASE(S)** Standard  
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.00  
Uniform Loads (lb/ft)  
Vert: 1-5=-60, 5-7=-60, 12-15=-20  
Concentrated Loads (lb)  
Vert: 9=-950, 10=-950, 8=-950, 14=-1009, 18=-392, 19=-950, 20=-950, 21=-950, 22=-950, 23=-950, 24=-1005

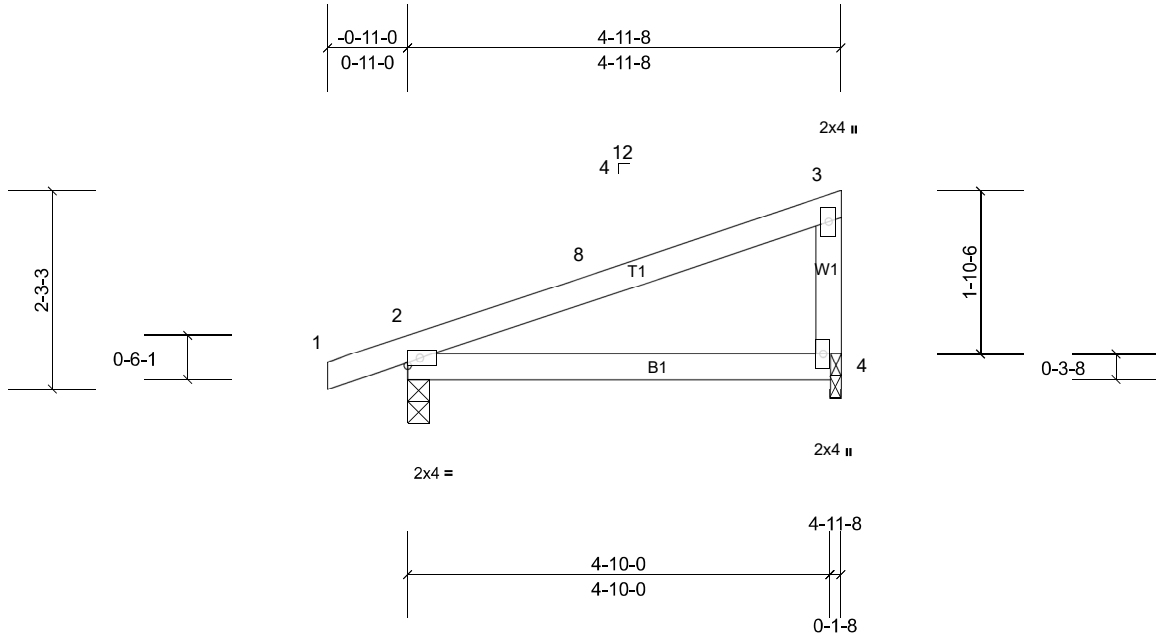
|            |       |            |     |     |                                     |
|------------|-------|------------|-----|-----|-------------------------------------|
| Job        | Truss | Truss Type | Qty | Ply | Value Build Homes - Wheeler 23-53-9 |
| Q2201696pg | B01   | Monopitch  | 14  | 1   | Job Reference (optional)            |

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Scale = 1:26.4

| Loading     | (psf) | Spacing         | 2-0-0           | CSI       | DEFL | in       | (loc) | I/defl | L/d  | PLATES | GRIP          |          |
|-------------|-------|-----------------|-----------------|-----------|------|----------|-------|--------|------|--------|---------------|----------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.00            | TC        | 0.32 | Vert(LL) | -0.02 | 4-7    | >999 | 360    | MT20          | 244/190  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC        | 0.23 | Vert(CT) | -0.05 | 4-7    | >999 | 240    |               |          |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB        | 0.00 | Horz(CT) | 0.01  | 2      | n/a  | n/a    |               |          |
| BCDL        | 10.0  | Code            | IRC2015/TPI2014 | Matrix-AS |      | Wind(LL) | 0.05  | 4-7    | >999 | 240    | Weight: 19 lb | FT = 20% |

**LUMBER**

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

**BRACING**

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

**REACTIONS** (lb/size) 2=253/0-3-0, (min. 0-1-8),  
 4=187/0-1-8, (min. 0-1-8)  
 Max Horiz 2=51 (LC 12)  
 Max Uplift 2=-59 (LC 12), 4=-48 (LC 12)

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

**NOTES**

- 1) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 4-9-12 zone; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 4) Bearing at joint(s) 4 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 5) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 4.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 59 lb uplift at joint 2 and 48 lb uplift at joint 4.
- 7) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 8) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

**LOAD CASE(S)** Standard

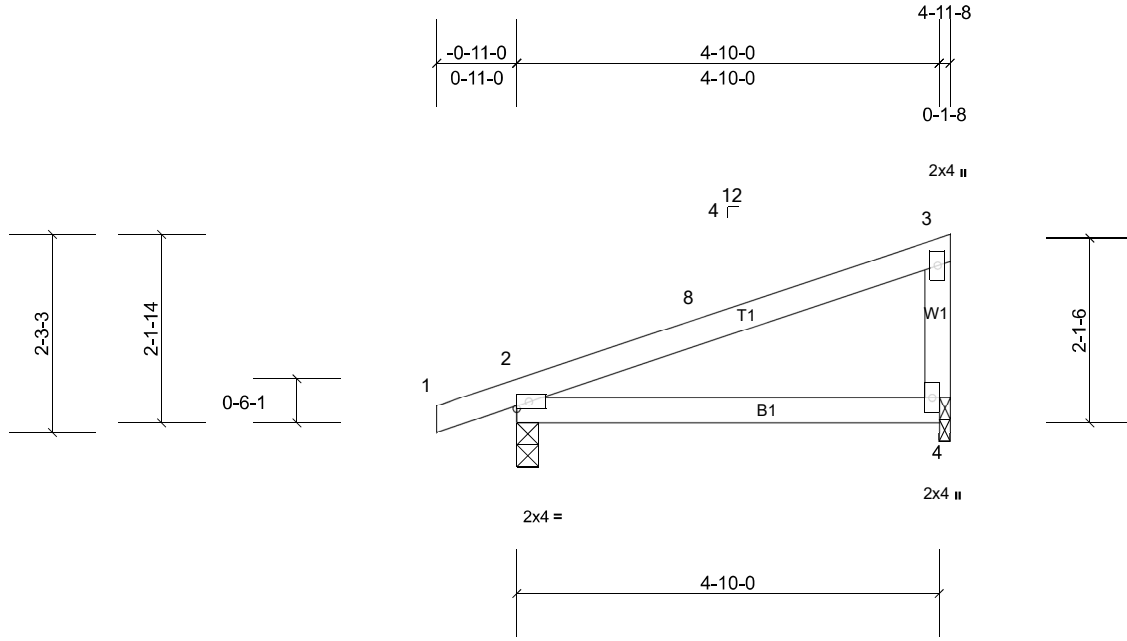
|            |       |            |     |     |                                     |
|------------|-------|------------|-----|-----|-------------------------------------|
| Job        | Truss | Truss Type | Qty | Ply | Value Build Homes - Wheeler 23-53-9 |
| Q2201696pg | B02   | Monopitch  | 3   | 1   | Job Reference (optional)            |

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Scale = 1:26.4

| Loading     | (psf) | Spacing         | 2-0-0           | CSI       | DEFL | in       | (loc) | I/defl | L/d  | PLATES | GRIP          |          |
|-------------|-------|-----------------|-----------------|-----------|------|----------|-------|--------|------|--------|---------------|----------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.00            | TC        | 0.32 | Vert(LL) | -0.02 | 4-7    | >999 | 360    | MT20          | 244/190  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC        | 0.23 | Vert(CT) | -0.05 | 4-7    | >999 | 240    |               |          |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB        | 0.03 | Horz(CT) | 0.01  | 2      | n/a  | n/a    |               |          |
| BCDL        | 10.0  | Code            | IRC2015/TPI2014 | Matrix-AS |      | Wind(LL) | 0.05  | 4-7    | >999 | 240    | Weight: 19 lb | FT = 20% |

**LUMBER**

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

**BRACING**

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

**REACTIONS** (lb/size) 2=253/0-3-0, (min. 0-1-8),  
 4=187/0-1-8, (min. 0-1-8)

Max Horiz 2=51 (LC 12)  
 Max Uplift 2=-59 (LC 12), 4=-48 (LC 12)

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

**NOTES**

- 1) Wind: ASCE 7-10; Vult=120mph (3-second gust)  
 Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;  
 B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed;  
 MWFRS (directional) and C-C Exterior (2) -0-11-0 to  
 2-1-0, Interior (1) 2-1-0 to 4-9-12 zone; porch left and  
 right exposed; C-C for members and forces & MWFRS  
 for reactions shown; Lumber DOL=1.60 plate grip  
 DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom  
 chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf  
 on the bottom chord in all areas where a rectangle  
 3-06-00 tall by 2-00-00 wide will fit between the bottom  
 chord and any other members.
- 4) Bearing at joint(s) 4 considers parallel to grain value  
 using ANSI/TPI 1 angle to grain formula. Building  
 designer should verify capacity of bearing surface.
- 5) Provide mechanical connection (by others) of truss to  
 bearing plate at joint(s) 4.
- 6) Provide mechanical connection (by others) of truss to  
 bearing plate capable of withstanding 59 lb uplift at joint  
 2 and 48 lb uplift at joint 4.
- 7) This truss is designed in accordance with the 2015  
 International Residential Code sections R502.11.1 and  
 R802.10.2 and referenced standard ANSI/TPI 1.
- 8) This truss design requires that a minimum of 7/16"  
 structural wood sheathing be applied directly to the top  
 chord and 1/2" gypsum sheetrock be applied directly to  
 the bottom chord.

**LOAD CASE(S)** Standard

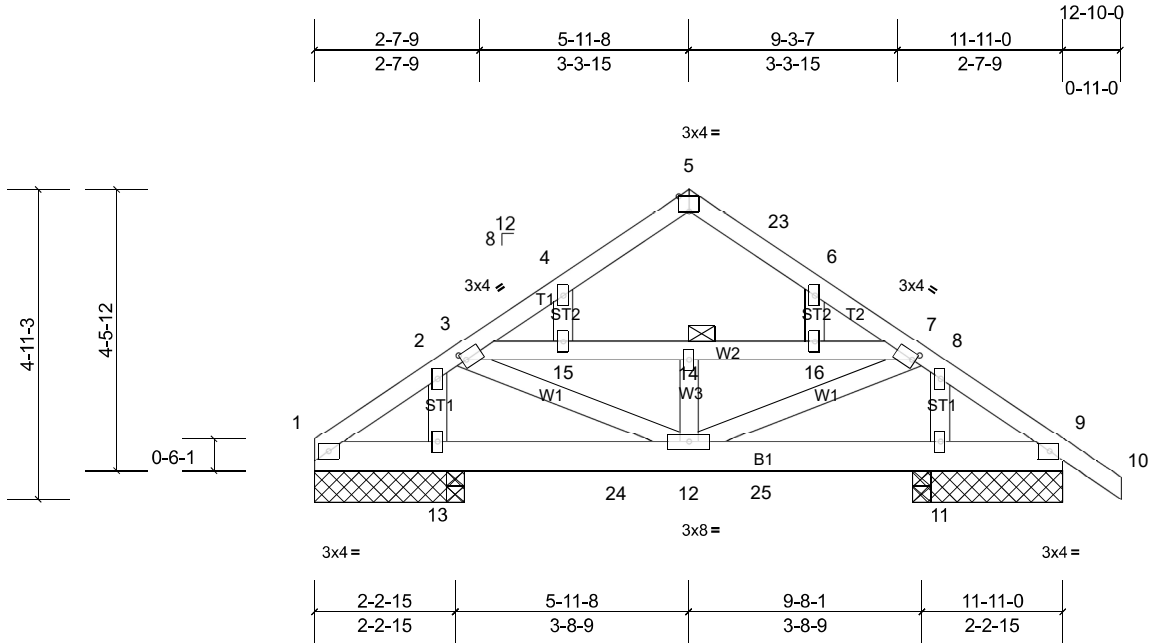
|            |       |               |     |     |                                     |
|------------|-------|---------------|-----|-----|-------------------------------------|
| Job        | Truss | Truss Type    | Qty | Ply | Value Build Homes - Wheeler 23-53-9 |
| Q2201696pg | C01   | Common Girder | 1   | 2   | Job Reference (optional)            |

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Scale = 1:36.7

Plate Offsets (X, Y): [3:0-0-12,0-1-8], [5:0-2-0,Edge], [7:0-0-12,0-1-8]

| Loading     | (psf) | Spacing         | 1-11-4          | CSI       | DEFL     | in   | (loc) | l/defl | L/d | PLATES         | GRIP     |
|-------------|-------|-----------------|-----------------|-----------|----------|------|-------|--------|-----|----------------|----------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.00            | TC        | Vert(LL) | 0.00 | 12    | >999   | 360 | MT20           | 244/190  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC        | Vert(CT) | 0.00 | 12    | >999   | 240 |                |          |
| BCLL        | 0.0*  | Rep Stress Incr | NO              | WB        | Horz(CT) | 0.00 | 9     | n/a    | n/a |                |          |
| BCDL        | 10.0  | Code            | IRC2015/TPI2014 | Matrix-MS | Wind(LL) | 0.00 | 12    | >999   | 240 | Weight: 161 lb | FT = 20% |

**LUMBER**

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

**BRACING**

- TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
- BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
- JOINTS 1 Brace at Jt(s): 14

**REACTIONS**

- All bearings 2-4-11.
- (lb) - Max Horiz 1=-73 (LC 6), 17=-73 (LC 6)
- Max Uplift All uplift 100 (lb) or less at joint(s) 1, 9, 17, 20
- Max Grav All reactions 250 (lb) or less at joint (s) 1, 9, 17, 20 except 11=327 (LC 1), 13=343 (LC 1)

**FORCES**

- (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
- TOP CHORD 2-3=-269/48, 7-8=-269/49

**NOTES**

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.  
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.  
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=120mph (3-second gust)  
Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60

- 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.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint (s) 1, 9, 1, 9.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 40 lb down and 16 lb up at 7-1-6 on top chord, and 9 lb down at 4-9-10, and 10 lb down at 5-11-8, and 9 lb down at 7-1-6 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

**LOAD CASE(S)** Standard

- Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.00  
Uniform Loads (lb/ft)  
Vert: 1-5=-58, 5-10=-58, 17-20=-19  
Concentrated Loads (lb)  
Vert: 12=-4, 24=-4, 25=-4

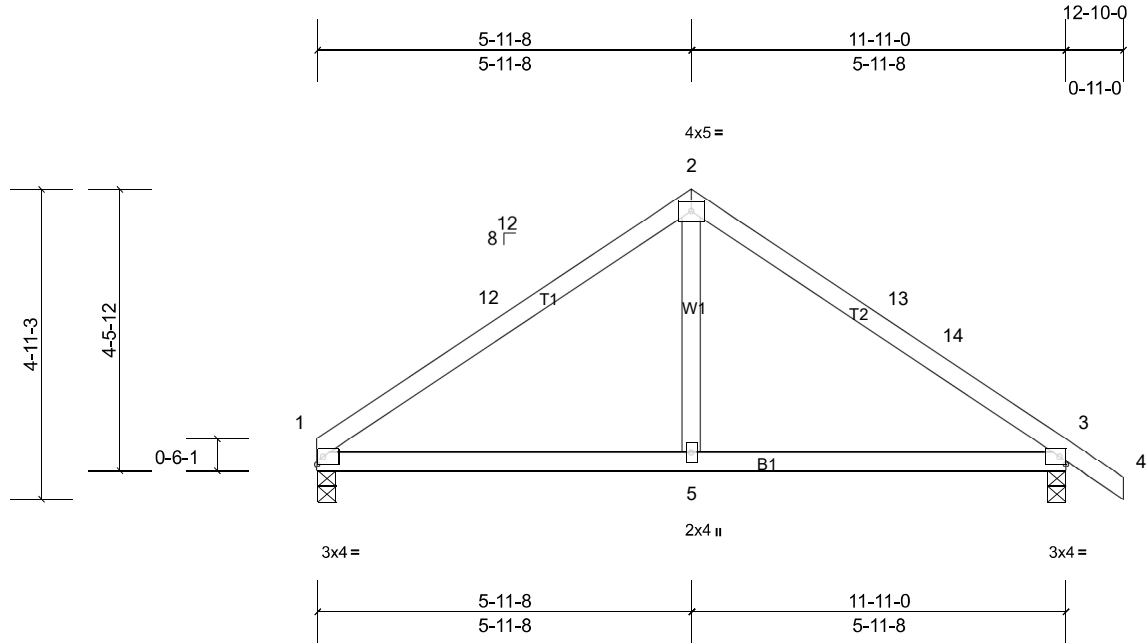
|            |       |            |     |     |                                     |
|------------|-------|------------|-----|-----|-------------------------------------|
| Job        | Truss | Truss Type | Qty | Ply | Value Build Homes - Wheeler 23-53-9 |
| Q2201696pg | C02   | Common     | 2   | 1   | Job Reference (optional)            |

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Scale = 1:36.7

| Loading     | (psf) | Spacing         | 2-0-0           | CSI       | DEFL | in       | (loc) | I/defl | L/d  | PLATES | GRIP          |          |
|-------------|-------|-----------------|-----------------|-----------|------|----------|-------|--------|------|--------|---------------|----------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.00            | TC        | 0.37 | Vert(LL) | -0.03 | 5-8    | >999 | 360    | MT20          | 244/190  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC        | 0.35 | Vert(CT) | -0.06 | 5-8    | >999 | 240    |               |          |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB        | 0.10 | Horz(CT) | 0.01  | 1      | n/a  | n/a    |               |          |
| BCDL        | 10.0  | Code            | IRC2015/TPI2014 | Matrix-AS |      | Wind(LL) | 0.02  | 5-8    | >999 | 240    | Weight: 47 lb | FT = 20% |

**LUMBER**

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

**LOAD CASE(S)** Standard

**BRACING**

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

**REACTIONS** (lb/size) 1=475/0-3-8, (min. 0-1-8),  
 3=534/0-3-8, (min. 0-1-8)  
 Max Horiz 1=-75 (LC 10)  
 Max Uplift 1=-2 (LC 12), 3=-28 (LC 12)

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

TOP CHORD 1-12=-569/54, 2-12=-476/75, 2-13=-478/71,  
 13-14=-479/51, 3-14=-570/46  
 BOT CHORD 1-5=-68/398, 3-5=0/398  
 WEBS 2-5=0/267

**NOTES**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=120mph (3-second gust)  
 Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;  
 B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed;  
 MWFRS (directional) and C-C Exterior (2) 0-0-0 to 3-0-0,  
 Interior (1) 3-0-0 to 5-11-8, Exterior (2) 5-11-8 to 8-11-8,  
 Interior (1) 8-11-8 to 12-10-0 zone; cantilever left and  
 right exposed; end vertical left and right exposed; C-C  
 for members and forces & MWFRS for reactions shown;  
 Lumber DOL=1.60 plate grip DOL=1.60
- This truss has been designed for a 10.0 psf bottom  
 chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf  
 on the bottom chord in all areas where a rectangle  
 3-06-00 tall by 2-00-00 wide will fit between the bottom  
 chord and any other members.
- Provide mechanical connection (by others) of truss to  
 bearing plate capable of withstanding 2 lb uplift at joint 1  
 and 28 lb uplift at joint 3.
- This truss is designed in accordance with the 2015  
 International Residential Code sections R502.11.1 and  
 R802.10.2 and referenced standard ANSI/TPI 1.
- This truss design requires that a minimum of 7/16"  
 structural wood sheathing be applied directly to the top  
 chord and 1/2" gypsum sheetrock be applied directly to  
 the bottom chord.



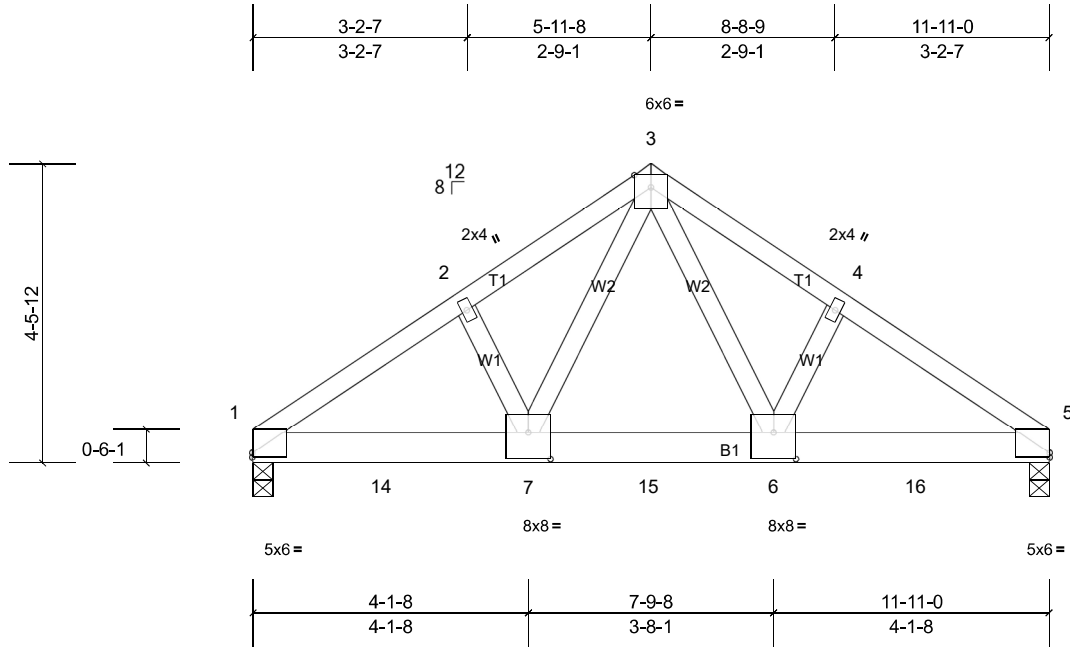
|                   |              |                             |          |          |   |
|-------------------|--------------|-----------------------------|----------|----------|---|
| Job<br>Q2201696pg | Truss<br>C03 | Truss Type<br>Common Girder | Qty<br>1 | Ply<br>2 | Value Build Homes - Wheeler 23-53-9<br>Job Reference (optional) |
|-------------------|--------------|-----------------------------|----------|----------|---|

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Scale = 1:34.5

Plate Offsets (X, Y): [1:Edge,0-0-13], [5:Edge,0-0-13], [6:0-4-0,0-4-12], [7:0-4-0,0-4-12]

| Loading     | (psf) | Spacing         | 2-0-0           | CSI       | DEFL     | in    | (loc) | I/defl | L/d | PLATES         | GRIP     |
|-------------|-------|-----------------|-----------------|-----------|----------|-------|-------|--------|-----|----------------|----------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.00            | TC        | Vert(LL) | -0.06 | 6-7   | >999   | 360 | MT20           | 244/190  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC        | Vert(CT) | -0.12 | 6-7   | >999   | 240 |                |          |
| BCLL        | 0.0*  | Rep Stress Incr | NO              | WB        | Horz(CT) | 0.02  | 5     | n/a    | n/a |                |          |
| BCDL        | 10.0  | Code            | IRC2015/TPI2014 | Matrix-MS | Wind(LL) | 0.00  | 7     | >999   | 240 | Weight: 136 lb | FT = 20% |

**LUMBER**

TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x6 SP No.1  
 WEBS 2x4 SP No.3

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 4-5-13 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (lb/size) 1=4350/0-3-8, (min. 0-2-15),  
 5=4276/0-3-8, (min. 0-2-15)  
 Max Horiz 1=68 (LC 7)  
 Max Grav 1=5018 (LC 13), 5=4950 (LC 14)

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

TOP CHORD 1-2=-7057/0, 2-3=-7002/0, 3-4=-6983/0,  
 4-5=-7039/0

BOT CHORD 1-14=0/5897, 7-14=0/5897, 7-15=0/4137,  
 6-15=0/4137, 6-16=0/5836, 5-16=0/5836  
 WEBS 3-7=0/4167, 3-6=0/4130

**NOTES**

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
 Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.  
 Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-5-0 oc.  
 Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=120mph (3-second gust)  
 Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;  
 B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed;  
 MWFRS (directional); cantilever left and right exposed ;  
 end vertical left and right exposed; Lumber DOL=1.60  
 plate grip DOL=1.60
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.

7) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

8) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1857 lb down at 1-11-0, 1814 lb down at 3-11-0, 1814 lb down at 5-11-0, and 1814 lb down at 7-11-0, and 1814 lb down at 9-11-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

**LOAD CASE(S)** Standard

- Dead + Roof Live (balanced): Lumber Increase=1.15,  
 Plate Increase=1.00  
 Uniform Loads (lb/ft)  
 Vert: 1-3=-60, 3-5=-60, 8-11=-20  
 Concentrated Loads (lb)  
 Vert: 7=-1522, 6=-1522, 14=-1584, 15=-1522,  
 16=-1522

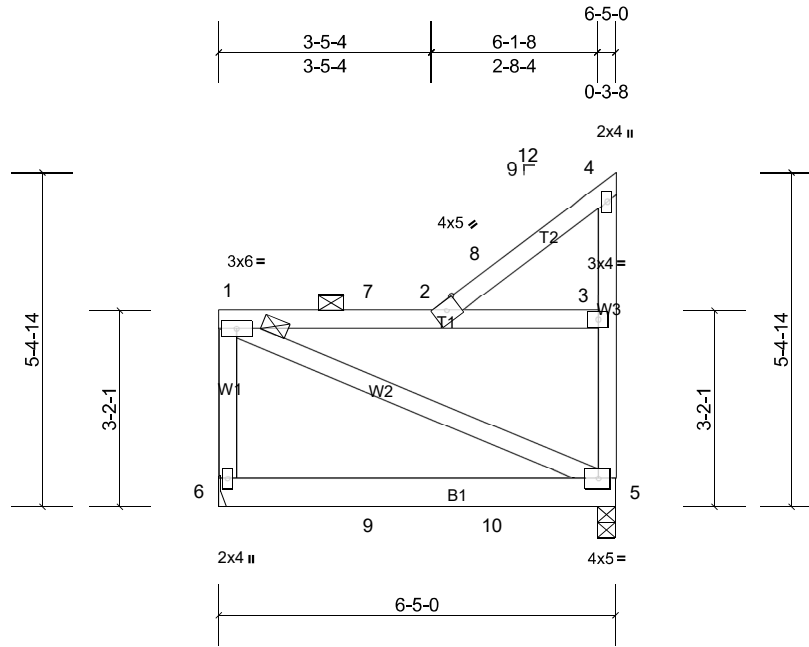
|                   |              |                                   |          |          |   |
|-------------------|--------------|-----------------------------------|----------|----------|---|
| Job<br>Q2201696pg | Truss<br>D01 | Truss Type<br>Roof Special Girder | Qty<br>1 | Ply<br>1 | Value Build Homes - Wheeler 23-53-9<br>Job Reference (optional) |
|-------------------|--------------|-----------------------------------|----------|----------|---|

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Scale = 1:37.3

| Loading     | (psf) | Spacing         | 2-0-0           | CSI       | DEFL | in       | (loc) | I/defl | L/d  | PLATES | GRIP                   |
|-------------|-------|-----------------|-----------------|-----------|------|----------|-------|--------|------|--------|------------------------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.00            | TC        | 0.85 | Vert(LL) | -0.02 | 5-6    | >999 | 360    | MT20 244/190           |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC        | 0.24 | Vert(CT) | -0.04 | 5-6    | >999 | 240    |                        |
| BCLL        | 0.0*  | Rep Stress Incr | NO              | WB        | 0.02 | Wind(LL) | 0.00  | 5-6    | >999 | 240    |                        |
| BCDL        | 10.0  | Code            | IRC2015/TPI2014 | Matrix-MS |      |          |       |        |      |        | Weight: 49 lb FT = 20% |

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

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 1-3.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (lb/size) 5=321/0-3-8, (min. 0-1-8), 6=412/  
Mechanical, (min. 0-1-8)  
Max Horiz 6=51 (LC 8)  
Max Uplift 5=-47 (LC 8), 6=-17 (LC 4)

**FORCES** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-6=-291/80

- NOTES**
- 1) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional); Lumber DOL=1.60 plate grip DOL=1.60
  - 2) Provide adequate drainage to prevent water ponding.
  - 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 4) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
  - 5) Refer to girder(s) for truss to truss connections.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 17 lb uplift at joint 6 and 47 lb uplift at joint 5.
  - 7) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 74 lb down and 33 lb up at 0-1-12, and 80 lb down and 33 lb up at 2-5-0, and 72 lb down and 39 lb up at 4-5-0 on top chord, and 47 lb down at 0-1-12, and 33 lb down at 2-5-0, and 33 lb down at 4-5-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

**LOAD CASE(S)** Standard  
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.00  
Uniform Loads (lb/ft)  
Vert: 1-2=-60, 2-4=-60, 5-6=-20  
Concentrated Loads (lb)  
Vert: 6=-35, 1=-65, 7=-43, 8=-43, 9=-28, 10=-28

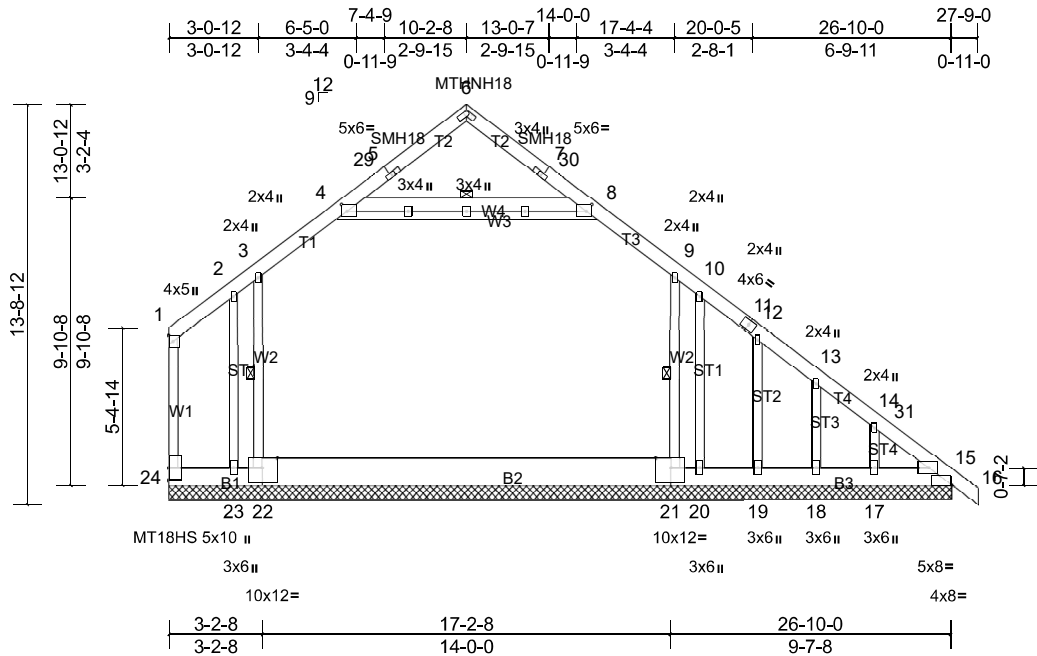
|                   |              |                                     |          |          |   |
|-------------------|--------------|-------------------------------------|----------|----------|---|
| Job<br>Q2201696pg | Truss<br>E01 | Truss Type<br>Attic Supported Gable | Qty<br>1 | Ply<br>1 | Value Build Homes - Wheeler 23-53-9<br>Job Reference (optional) |
|-------------------|--------------|-------------------------------------|----------|----------|---|

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Scale = 1:79.1

Plate Offsets (X, Y): [4:0-2-4,0-2-12], [5:0-1-0,0-1-0], [5:0-1-0,0-1-0], [6:0-2-1,0-2-12], [6:0-2-1,0-2-12], [7:0-1-0,0-1-0], [7:0-1-0,0-1-0], [8:0-2-4,0-2-12], [15:Edge,0-0-4]

| Loading     | (psf) | Spacing         | 2-0-0           | CSI       | DEFL | in (loc) | I/defl | L/d | PLATES | GRIP           |          |         |
|-------------|-------|-----------------|-----------------|-----------|------|----------|--------|-----|--------|----------------|----------|---------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.00            | TC        | 0.96 | Vert(LL) | n/a    | -   | n/a    | 999            | MT20     | 244/190 |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC        | 0.47 | Vert(CT) | n/a    | -   | n/a    | 999            | MT18HS   | 244/190 |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB        | 0.36 | Horz(CT) | 0.00   | 15  | n/a    | n/a            |          |         |
| BCDL        | 10.0  | Code            | IRC2015/TPI2014 | Matrix-AS |      |          |        |     |        |                |          |         |
|             |       |                 |                 |           |      |          |        |     |        | Weight: 279 lb | FT = 20% |         |

**LUMBER**  
TOP CHORD 2x6 SP No.2 \*Except\* T1,T3:2x6 SP No.1  
BOT CHORD 2x8 SP No.2 \*Except\* B2:2x12 SP No.2  
WEBS 2x4 SP No.2 \*Except\* W3:2x4 SP No.3,  
W4:2x6 SP No.2  
OTHERS 2x4 SP No.3

**BRACING**  
TOP CHORD Structural wood sheathing directly applied, except end verticals.  
BOT CHORD Rigid ceiling directly applied.  
WEBS 1 Row at midpt 9-21, 3-22, 4-8  
JOINTS 1 Brace at Jt(s): 5, 7

**REACTIONS** All bearings 26-10-0.  
(lb) - Max Horiz 24=-286 (LC 10)  
Max Uplift All uplift 100 (lb) or less at joint(s)  
15, 17, 19, 24 except 18=-408 (LC 18), 20=-1628 (LC 19), 23=-1804 (LC 20)  
Max Grav All reactions 250 (lb) or less at joint (s)  
15, 18, 19, 20, 23 except 17=879 (LC 18), 21=2819 (LC 19), 22=2574 (LC 20), 24=334 (LC 19)

**FORCES** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=0/471, 3-4=426/144, 4-29=-257/23, 8-30=-258/24, 8-9=-426/148, 9-10=-152/635, 12-13=-309/73, 13-14=-372/117, 14-31=-256/138, 15-31=-276/124  
BOT CHORD 23-24=-125/266, 22-23=-125/266, 21-22=-137/250, 20-21=-113/256, 19-20=-113/256, 18-19=-113/256, 17-18=-113/256, 15-17=-113/256  
WEBS 9-21=-1632/79, 3-22=-1450/14, 2-23=0/741, 10-20=-18/736, 14-17=-253/70

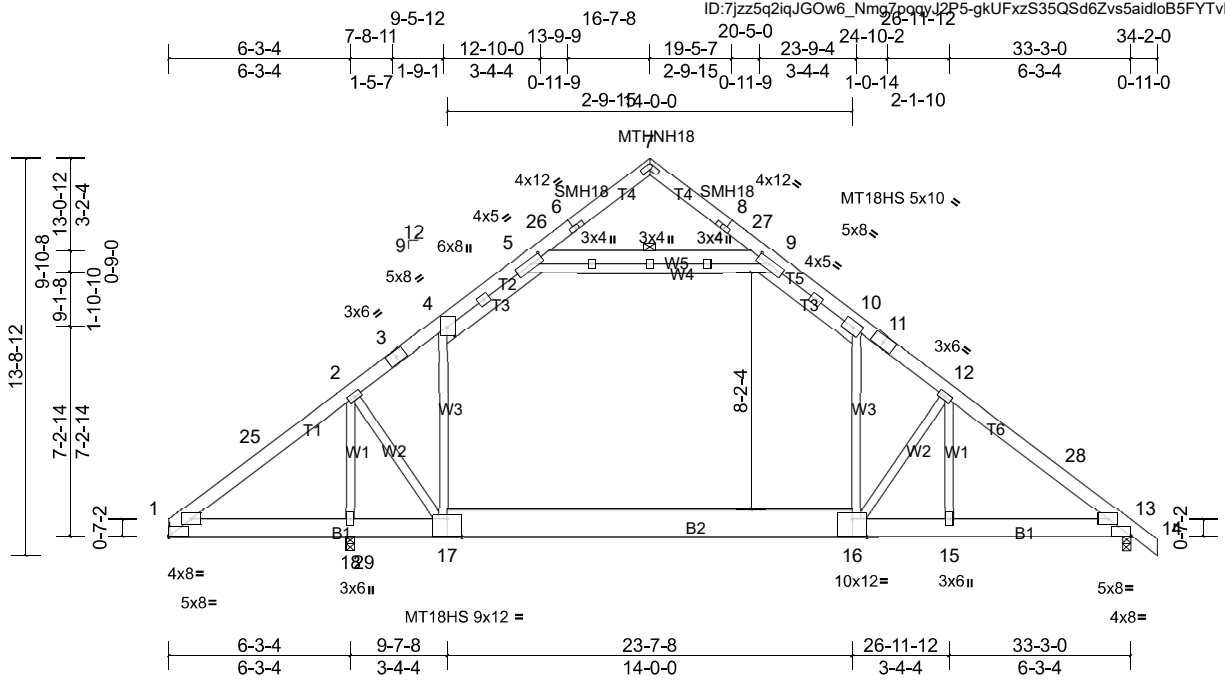
**NOTES**  
1) Unbalanced roof live loads have been considered for this design.

- Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TC DL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=27ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) 6-6-12 to 9-5-12, Interior (1) 9-5-12 to 16-7-8, Exterior (2) 16-7-8 to 19-7-8, Interior (1) 19-7-8 to 34-2-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- All plates are MT20 plates unless otherwise indicated.
- Attach MiTek MTHNH18 (Half and Half Plate) on each face of truss with MiTek NA11 nails (0.131" x 1.5") in pre-punched holes provided. All nail holes must be filled (6 Nails per side 12 nails total).
- See HINGE PLATE DETAILS for plate placement.
- Provisions must be made to prevent lateral movement of hinged member(s) during transportation.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Ceiling dead load (10.0 psf) on member(s). 3-4, 8-9, 4-8
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint (s) 24, 15, 19, 17 except (jt=lb) 23=1803, 20=1627, 18=407.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- 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) Attic room checked for L/360 deflection.  
**LOAD CASE(S)** Standard

|                   |              |                     |          |          |   |
|-------------------|--------------|---------------------|----------|----------|---|
| Job<br>Q2201696pg | Truss<br>G01 | Truss Type<br>Attic | Qty<br>8 | Ply<br>1 | Value Build Homes - Wheeler 23-53-9<br>Job Reference (optional) |
|-------------------|--------------|---------------------|----------|----------|---|

Carolina Structural Systems, Star, NC 27356 Run: 8.42 S Feb 11 2021 Print: 8.620 S Oct 13 2022 MiTek Industries, Inc. Tue Nov 29 16:38:04 Page: 1



Scale = 1:79.7

Plate Offsets (X, Y): [1:Edge,0-0-4], [4:0-3-12,0-3-4], [5:0-5-0,0-2-0], [6:0-1-0,0-1-0], [6:0-1-0,0-1-0], [7:0-2-1,0-2-12], [7:0-2-1,0-2-12], [8:0-1-0,0-1-0], [8:0-1-0,0-1-0], [9:0-5-0,0-2-0], [13:Edge,0-0-4], [16:0-6-0,Edge], [17:0-6-0,Edge]

| Loading     | (psf) | Spacing         | 2-0-0           | CSI       | 0.84 | DEFL     | in (loc) | l/defl | L/d  | PLATES | GRIP   |                         |
|-------------|-------|-----------------|-----------------|-----------|------|----------|----------|--------|------|--------|--------|-------------------------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.00            | TC        | 0.84 | Vert(LL) | -0.35    | 16-17  | >928 | 360    | MT20   | 244/190                 |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC        | 0.98 | Vert(CT) | -0.57    | 16-17  | >570 | 240    | MT18HS | 244/190                 |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB        | 0.77 | Horz(CT) | 0.03     | 13     | n/a  | n/a    |        |                         |
| BCDL        | 10.0  | Code            | IRC2015/TPI2014 | Matrix-AS |      | Wind(LL) | 0.08     | 16     | >999 | 240    |        | Weight: 327 lb FT = 20% |

**LUMBER**  
TOP CHORD 2x6 SP No.2 \*Except\* T2,T5:2x6 SP DSS, T6:2x6 SP No.1  
BOT CHORD 2x8 SP DSS \*Except\* B2:2x12 SP No.2  
WEBS 2x4 SP No.3 \*Except\* W3,W4:2x4 SP No.2, W5:2x6 SP No.2

**BRACING**  
TOP CHORD Structural wood sheathing directly applied.  
BOT CHORD Rigid ceiling directly applied.  
WEBS 1 Row at midpt 5-9  
JOINTS 1 Brace at Jt(s): 6, 8

**REACTIONS** (lb/size) 1=970/ Mechanical, (min. 0-1-8), 13=1466/0-3-8, (min. 0-1-12), 18=705/0-3-8, (min. 0-1-8)  
Max Horiz 1=-239 (LC 10)  
Max Grav 1=1068 (LC 23), 13=1725 (LC 23), 18=1419 (LC 22)

**FORCES** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-25=-1491/18, 2-25=-1359/40, 2-3=-2319/0, 3-4=-2233/0, 4-5=-1532/52, 5-26=-260/29, 9-27=-260/29, 9-10=-1508/44, 10-11=-2052/0, 11-12=-2138/0, 12-28=-2385/0, 13-28=-2517/0  
BOT CHORD 1-18=0/1052, 18-29=0/1052, 17-29=0/1052, 16-17=0/1418, 15-16=0/1969, 13-15=0/1969  
WEBS 4-17=0/1285, 10-16=0/1068, 5-9=-1393/82, 2-18=-1880/0, 2-17=-26/943, 12-15=0/491, 12-16=-1031/62

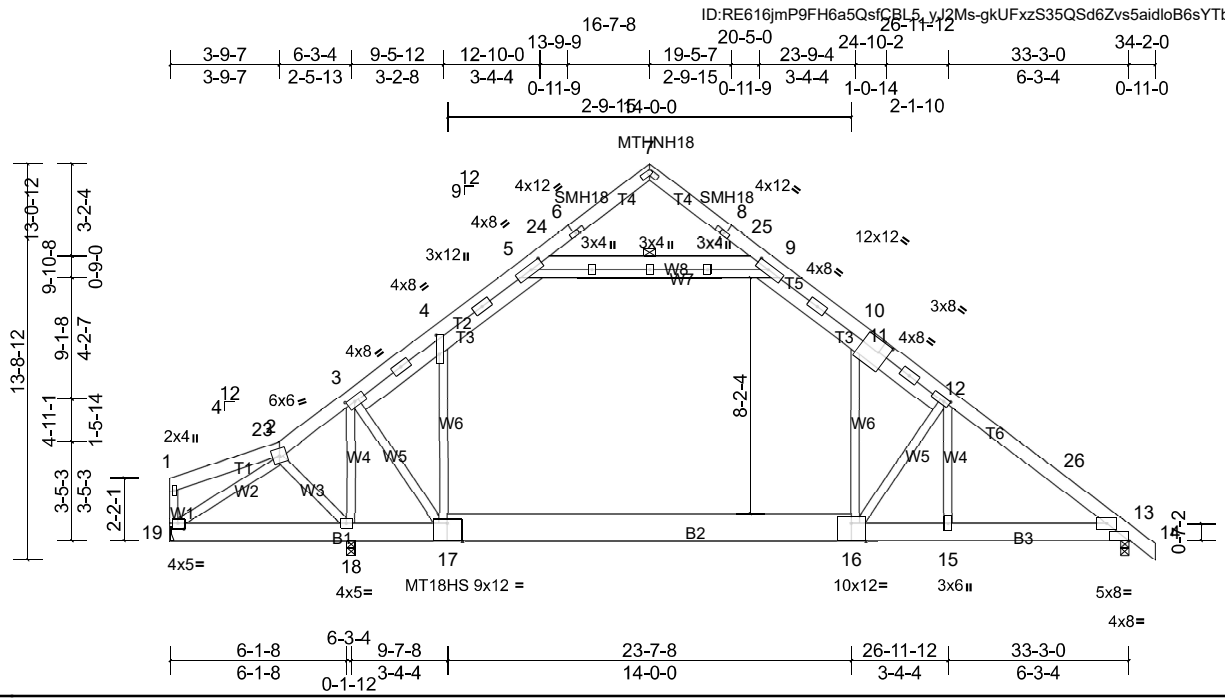
**NOTES**  
1) Unbalanced roof live loads have been considered for this design.  
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=33ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) 0-0-0 to 3-3-14, Interior (1) 3-3-14 to 16-7-8, Exterior (2) 16-7-8 to 19-11-6, Interior (1) 19-11-6 to 34-2-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- All plates are MT20 plates unless otherwise indicated.
- Attach MiTek MTHNH18 (Half and Half Plate) on each face of truss with MiTek NA11 nails (0.131" x 1.5") in pre-punched holes provided. All nail holes must be filled (6 Nails per side 12 nails total).
- See HINGE PLATE DETAILS for plate placement.
- Provisions must be made to prevent lateral movement of hinged member(s) during transportation.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Ceiling dead load (10.0 psf) on member(s). 4-5, 9-10, 5-9
- Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 16-17
- Refer to girder(s) for truss to truss connections.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- Attic room checked for L/360 deflection.

**LOAD CASE(S)** Standard

|                   |              |                     |          |          |   |
|-------------------|--------------|---------------------|----------|----------|---|
| Job<br>Q2201696pg | Truss<br>G02 | Truss Type<br>Attic | Qty<br>2 | Ply<br>1 | Value Build Homes - Wheeler 23-53-9<br>Job Reference (optional) |
|-------------------|--------------|---------------------|----------|----------|---|

Carolina Structural Systems, Star, NC 27356 Run: 8.42 S Feb 11 2021 Print: 8.620 S Oct 13 2022 MiTek Industries, Inc. Tue Nov 29 16:38:04 Page: 1



Scale = 1:79.9  
Plate Offsets (X, Y): [3:0-3-8,0-2-0], [4:0-8-5,0-1-4], [5:0-5-0,0-2-0], [6:0-1-0,0-1-0], [6:0-1-0,0-1-0], [7:0-2-1,0-2-12], [7:0-2-1,0-2-12], [8:0-1-0,0-1-0], [8:0-1-0,0-1-0], [9:0-5-0,0-2-0], [11:0-4-0,0-4-12], [12:0-2-8,0-1-8], [13:Edge,0-0-4], [16:0-6-0,Edge], [17:0-6-0,Edge], [19:0-2-8,0-1-12]

| Loading     | (psf) | Spacing         | 2-0-0           | CSI       | DEFLL    | in    | (loc) | l/defl | L/d | PLATES | GRIP    |
|-------------|-------|-----------------|-----------------|-----------|----------|-------|-------|--------|-----|--------|---------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.00            | TC        | Vert(LL) | -0.29 | 16-17 | >999   | 360 | MT20   | 244/190 |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC        | Vert(CT) | -0.52 | 16-17 | >620   | 240 | MT18HS | 244/190 |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB        | Horz(CT) | 0.03  | 13    | n/a    | n/a |        |         |
| BCDL        | 10.0  | Code            | IRC2015/TPI2014 | Matrix-AS | Wind(LL) | 0.07  | 16    | >999   | 240 |        |         |

Weight: 353 lb FT = 20%

**LUMBER**  
TOP CHORD 2x6 SP No.2  
BOT CHORD 2x8 SP DSS \*Except\* B2:2x12 SP No.2  
WEBS 2x4 SP No.3 \*Except\* W6,W1:2x4 SP No.2, W8:2x6 SP No.2

**BRACING**  
TOP CHORD Structural wood sheathing directly applied, except end verticals.  
BOT CHORD Rigid ceiling directly applied.  
WEBS 1 Row at midpt 5-9  
JOINTS 1 Brace at Jt(s): 6, 8

**REACTIONS (lb/size)**  
13=1527/0-3-8, (min. 0-1-13),  
18=711/0-3-8, (min. 0-1-8),  
19=1025/ Mechanical, (min. 0-1-8)  
Max Horiz 19=220 (LC 11)  
Max Grav 13=1809 (LC 19), 18=1243 (LC 24), 19=1255 (LC 19)

**FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.**  
TOP CHORD 2-3=-1640/0, 3-4=-2437/0, 4-5=-1542/21, 5-24=-260/29, 9-25=-260/29, 9-10=-1522/14, 10-11=-2223/0, 11-12=-2259/0, 12-26=-2500/0, 13-26=-2649/0  
BOT CHORD 18-19=0/1171, 17-18=0/1186, 16-17=0/1506, 15-16=0/2047, 13-15=0/2047  
WEBS 4-17=0/1493, 10-16=0/1281, 5-9=-1498/30, 3-18=-1792/0, 3-17=-27/886, 2-19=-1565/0, 12-15=0/430, 12-16=-993/22

- Attach MiTek MTHNH18 (Half and Half Plate) on each face of truss with MiTek NA11 nails (0.131" x 1.5") in pre-punched holes provided. All nail holes must be filled (6 Nails per side 12 nails total).
- See HINGE PLATE DETAILS for plate placement.
- Provisions must be made to prevent lateral movement of hinged member(s) during transportation.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Ceiling dead load (5.0 psf) on member(s). 4-5, 9-10, 5-9; Wall dead load (5.0psf) on member(s).4-17, 10-16
- Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 16-17
- Refer to girder(s) for truss to truss connections.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- Attic room checked for L/360 deflection.

**LOAD CASE(S)** Standard

- NOTES**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=33ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) 5-1-12 to 8-5-10, Interior (1) 8-5-10 to 21-7-8, Exterior (2) 21-7-8 to 24-11-6, Interior (1) 24-11-6 to 39-2-0 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - All plates are MT20 plates unless otherwise indicated.

|            |       |            |     |     |                                     |
|------------|-------|------------|-----|-----|-------------------------------------|
| Job        | Truss | Truss Type | Qty | Ply | Value Build Homes - Wheeler 23-53-9 |
| Q2201696pg | G03   | Attic      | 4   | 1   | Job Reference (optional)            |

Carolina Structural Systems, Star, NC 27356 Run: 8.62 S Oct 13 2022 Print: 8.620 S Oct 13 2022 MiTek Industries, Inc. Tue Nov 29 16:38:05 Page: 1

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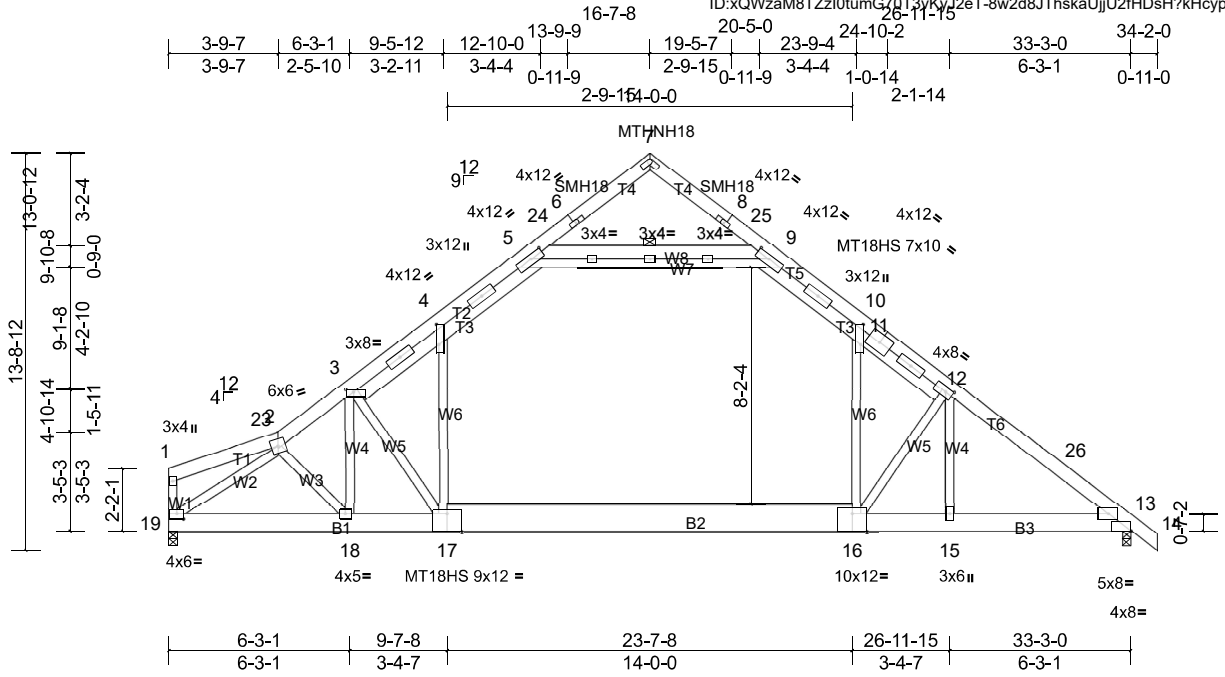


Plate Offsets (X, Y): [3:0-3-4,0-1-0], [4:0-8-9,0-1-0], [5:0-5-4,0-1-12], [6:0-1-0,0-1-0], [6:0-1-0,0-1-0], [7:0-2-1,0-2-12], [7:0-2-1,0-2-12], [8:0-1-0,0-1-0], [8:0-1-0,0-1-0], [9:0-5-4,0-1-12], [10:0-8-9,0-1-0], [12:0-3-0,0-2-0], [13:Edge,0-0-4], [16:0-6-0,Edge], [17:0-6-0,Edge], [19:0-2-12,0-2-4]

| Loading     | (psf) | Spacing         | 2-0-0           | CSI       | DEFL | in (loc) | l/defl | L/d   | PLATES | GRIP |        |         |
|-------------|-------|-----------------|-----------------|-----------|------|----------|--------|-------|--------|------|--------|---------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.00            | TC        | 0.80 | Vert(LL) | -0.29  | 16-17 | >999   | 360  | MT20   | 244/190 |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC        | 0.99 | Vert(CT) | -0.51  | 16-17 | >777   | 240  | MT18HS | 244/190 |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB        | 1.00 | Horz(CT) | 0.04   | 13    | n/a    | n/a  |        |         |
| BCDL        | 10.0  | Code            | IRC2015/TPI2014 | Matrix-AS |      | Wind(LL) | -0.12  | 15-16 | >999   | 240  |        |         |

Weight: 353 lb FT = 20%

**LUMBER**  
TOP CHORD 2x6 SP No.2 \*Except\* T2,T5,T3:2x6 SP No.1  
BOT CHORD 2x8 SP No.1 \*Except\* B2:2x12 SP No.2  
WEBS 2x4 SP No.3 \*Except\* W6,W7,W1:2x4 SP No.2, W8:2x6 SP No.2

**BRACING**  
TOP CHORD Structural wood sheathing directly applied, except end verticals.  
BOT CHORD Rigid ceiling directly applied.  
WEBS 1 Row at midpt 5-9  
JOINTS 1 Brace at Jt(s): 6, 8

**REACTIONS** (lb/size) 13=1658/0-3-8, (min. 0-2-5), 19=1604/0-3-8, (min. 0-2-3)  
Max Horiz 19=220 (LC 11)  
Max Grav 13=1944 (LC 19), 19=1877 (LC 18)

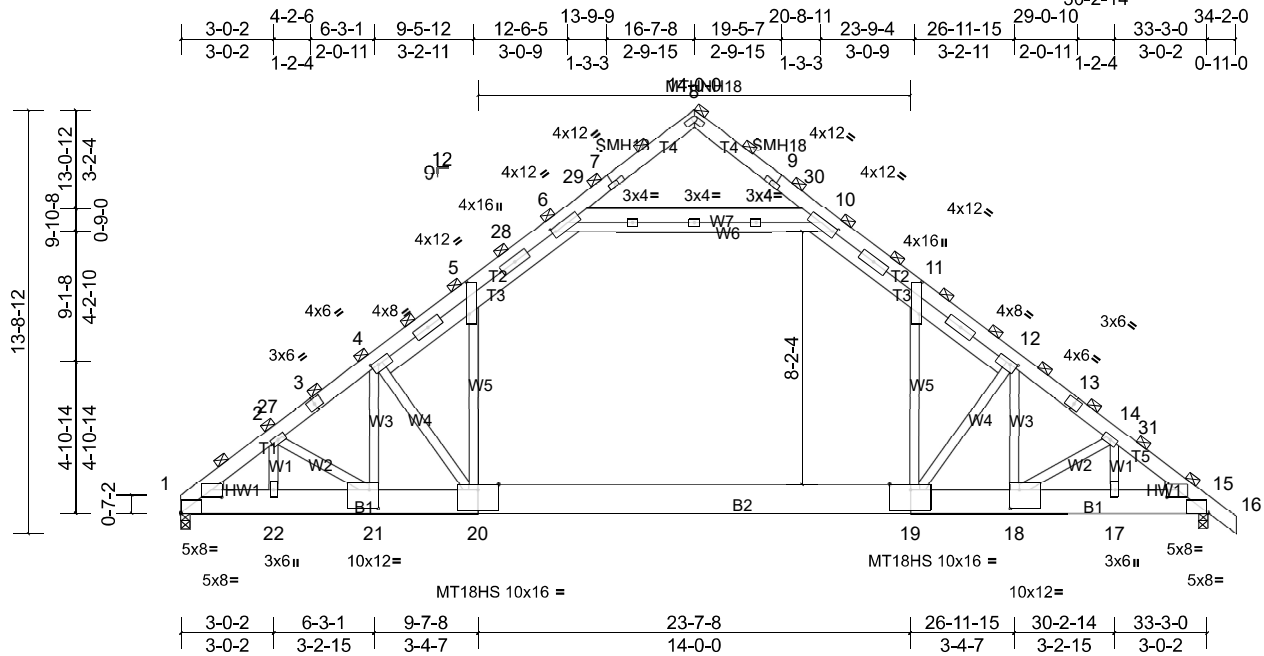
**FORCES** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-2642/0, 3-4=-2813/0, 4-5=-1737/0, 5-24=-263/28, 9-25=-263/28, 9-10=-1734/0, 10-11=-2772/0, 11-12=-2791/0, 12-26=-2692/0, 13-26=-2824/0  
BOT CHORD 18-19=0/2272, 17-18=0/2309, 16-17=0/1917, 15-16=0/2206, 13-15=0/2206  
WEBS 4-17=0/1758, 10-16=0/1758, 5-9=-1739/0, 3-17=-725/20, 3-18=-646/286, 2-19=-2518/0, 12-15=-506/373, 12-16=-854/47

**NOTES**  
1) Unbalanced roof live loads have been considered for this design.  
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=33ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) 5-1-12 to 8-5-10, Interior (1) 8-5-10 to 21-7-8, Exterior (2) 21-7-8 to 24-11-6, Interior (1) 24-11-6 to 39-2-0 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) All plates are MT20 plates unless otherwise indicated.

- 4) Attach MiTek MTHNH18 (Half and Half Plate) on each face of truss with MiTek NA11 nails (0.131" x 1.5") in pre-punched holes provided. All nail holes must be filled (6 Nails per side 12 nails total).
- 5) See HINGE PLATE DETAILS for plate placement.
- 6) Provisions must be made to prevent lateral movement of hinged member(s) during transportation.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 9) Ceiling dead load (5.0 psf) on member(s). 4-5, 9-10, 5-9; Wall dead load (5.0psf) on member(s).4-17, 10-16
- 10) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 16-17
- 11) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 12) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- 13) Attic room checked for L/360 deflection.

**LOAD CASE(S)** Standard

|            |       |              |     |     |                                     |
|------------|-------|--------------|-----|-----|-------------------------------------|
| Job        | Truss | Truss Type   | Qty | Ply | Value Build Homes - Wheeler 23-53-9 |
| Q2201696pg | G04   | Attic Girder | 4   | 2   | Job Reference (optional)            |



Scale = 1:74.7  
 Plate Offsets (X, Y): [1:Edge,0-0-4], [1:1-4-0,0-6-2], [4:0-2-12,0-1-8], [5:1-0-5,0-1-0], [6:0-1-5,0-1-12], [7:0-1-0,0-1-0], [7:0-1-0,0-1-0], [8:0-2-1,0-2-12], [8:0-2-1,0-2-12], [9:0-1-0,0-1-0], [9:0-1-0,0-1-0], [10:0-1-5,0-1-12], [11:1-0-5,0-1-0], [12:0-2-12,0-1-8], [15:Edge,0-0-4], [15:1-4-0,0-6-2], [18:0-3-8,0-7-4], [21:0-3-8,0-7-4]

| Loading     | (psf) | Spacing         | 4-2-10          | CSI       | (psf) | DEFL     | in (loc) | l/defl | L/d  | PLATES | GRIP   |                         |
|-------------|-------|-----------------|-----------------|-----------|-------|----------|----------|--------|------|--------|--------|-------------------------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.00            | TC        | 0.75  | Vert(LL) | -0.28    | 19-20  | >999 | 360    | MT20   | 244/190                 |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC        | 0.83  | Vert(CT) | -0.63    | 19-20  | >632 | 240    | MT18HS | 244/190                 |
| BCLL        | 0.0*  | Rep Stress Incr | NO              | WB        | 0.69  | Horz(CT) | 0.05     | 15     | n/a  | n/a    |        |                         |
| BCDL        | 10.0  | Code            | IRC2015/TPI2014 | Matrix-MS |       | Wind(LL) | -0.07    | 20     | >999 | 240    |        | Weight: 745 lb FT = 20% |

- LUMBER**
- TOP CHORD 2x6 SP DSS \*Except\* T4,T1,T5:2x6 SP No.2
  - BOT CHORD 2x10 SP DSS \*Except\* B2:2x12 SP DSS
  - WEBS 2x4 SP No.3 \*Except\* W5,W6:2x4 SP No.2, W7:2x6 SP No.2
  - WEDGE Left: 2x4 SP No.3 Right: 2x4 SP No.3
- BRACING**
- TOP CHORD 2-0-0 oc purlins (4-6-3 max.) (Switched from sheeted: Spacing > 2-0-0).
  - BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
  - JOINTS 1 Brace at Jt(s): 7, 9, 8
- REACTIONS** (lb/size)
- 1=5869/0-3-8, (min. 0-3-2), 15=3833/0-3-8, (min. 0-2-5)
  - Max Horiz 1=-504 (LC 10)
  - Max Grav 1=7268 (LC 22), 15=4569 (LC 23)
- FORCES** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
- TOP CHORD 1-2=-10347/0, 2-27=-9504/0, 3-27=-9503/0, 3-4=-8976/0, 4-5=-7653/0, 5-28=-4737/0, 6-28=-4439/0, 6-29=-549/61, 7-29=-470/69, 7-8=-295/104, 8-9=-295/104, 9-30=-470/70, 10-30=-549/61, 10-11=-4581/0, 11-12=-7471/0, 12-13=-6333/0, 13-14=-6510/0, 14-31=-6751/0, 15-31=-6829/0
  - BOT CHORD 1-22=0/8482, 21-22=0/8482, 20-21=0/7823, 19-20=0/5084, 18-19=0/5174, 17-18=0/5365, 15-17=0/5365
  - WEBS 11-19=0/4839, 5-20=0/4252, 6-10=-4706/0, 4-20=-4777/0, 4-21=0/2670, 12-18=-2589/0, 12-19=-1038/614, 2-21=-793/0, 2-22=-96/382, 14-17=0/382, 14-18=-323/14
- NOTES**
- 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, 2x12 - 2 rows staggered at 0-9-0 oc.  
 Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
  - All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
  - Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=33ft, eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) 0-0-0 to 3-3-14, Interior (1) 3-3-14 to 16-7-8, Exterior (2) 16-7-8 to 19-11-6, Interior (1) 19-11-6 to 34-2-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - This truss is not designed to support a ceiling and is not intended for use where aesthetics are a consideration.
  - All plates are MT20 plates unless otherwise indicated.
  - Attach MiTek MTHNH18 (Half and Half Plate) on each face of truss with MiTek NA11 nails (0.131" x 1.5") in pre-punched holes provided. All nail holes must be filled (6 Nails per side 12 nails total).
  - See HINGE PLATE DETAILS for plate placement.
  - Provisions must be made to prevent lateral movement of hinged member(s) during transportation.
  - The Fabrication Tolerance at joint 20 = 8%, joint 19 = 8%
  - Bearing capacity is increased by the plate at joint(s) 1. Plate must be within 1/4 in of bearing surface.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
  - Ceiling dead load (10.0 psf) on member(s). 5-6, 10-11, 6-10
  - Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 19-20
  - This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - Load case(s) 1, 2 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.
  - Attic room checked for L/360 deflection.
- LOAD CASE(S) Standard**
- Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.00  
 Uniform Loads (lb/ft)  
 Vert: 6-28=-169, 6-29=-127, 7-29=-139, 7-8=-124, 8-9=-124, 9-30=-139, 10-30=-127, 10-11=-169, 11-16=-127, 1-20=-106, 19-20=-63, 15-19=-42, 6-10=-42  
 Horz: 7-29=15, 7-8=-5, 8-9=5, 9-30=-15  
 Trapezoidal Loads (lb/ft)  
 Vert: 1=-410-to-23=-399, 23=-399-to-2=-377, 2=-377-to-27=-373, 27=-373-to-3=-362, 3=-362-to-4=-342, 4=-342-to-5=-306, 5=-349-to-28=-332  
 Horz: 7-29=12, 7-8=-4, 8-9=4, 9-30=-12  
 Trapezoidal Loads (lb/ft)  
 Vert: 1=-388-to-23=-378, 23=-378-to-2=-356, 2=-356-to-27=-352, 27=-352-to-3=-341, 3=-341-to-4=-320, 4=-320-to-5=-285, 5=-328-to-28=-311
  - Dead + 0.75 Roof Live (balanced) + 0.75 Attic Floor:  
 Lumber Increase=1.15, Plate Increase=1.00  
 Uniform Loads (lb/ft)  
 Vert: 6-28=-148, 6-29=-105, 7-29=-116, 7-8=-103, 8-9=-103, 9-30=-116, 10-30=-105, 10-11=-148, 11-16=-105, 1-20=-201, 19-20=-190, 15-19=-42, 6-10=-42  
 Horz: 7-29=12, 7-8=-4, 8-9=4, 9-30=-12  
 Trapezoidal Loads (lb/ft)  
 Vert: 1=-388-to-23=-378, 23=-378-to-2=-356, 2=-356-to-27=-352, 27=-352-to-3=-341, 3=-341-to-4=-320, 4=-320-to-5=-285, 5=-328-to-28=-311

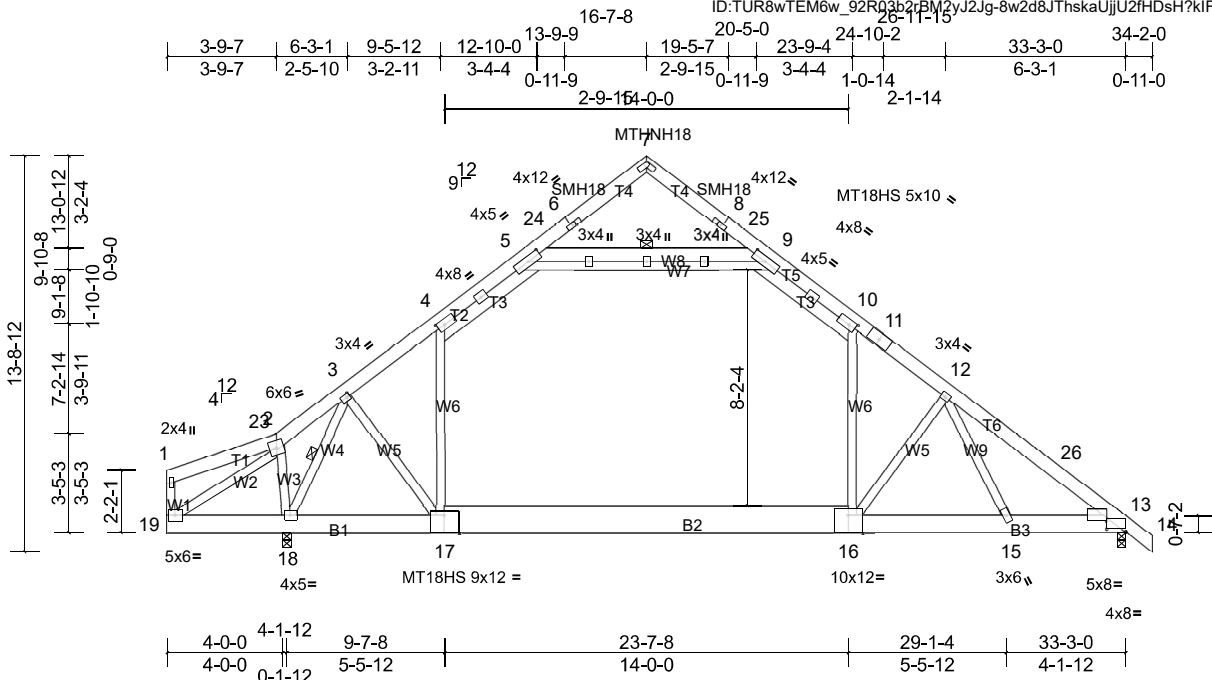
|            |       |            |     |     |                                     |
|------------|-------|------------|-----|-----|-------------------------------------|
| Job        | Truss | Truss Type | Qty | Ply | Value Build Homes - Wheeler 23-53-9 |
| Q2201696pg | G05   | Attic      | 6   | 1   | Job Reference (optional)            |

Carolina Structural Systems, Star, NC 27356

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Scale = 1:79.9

Plate Offsets (X, Y): [3:0-1-0,0-1-8], [4:0-3-4,0-2-0], [5:0-5-8,0-2-0], [6:0-1-0,0-1-0], [6:0-1-0,0-1-0], [7:0-2-1,0-2-12], [7:0-2-1,0-2-12], [8:0-1-0,0-1-0], [8:0-1-0,0-1-0], [9:0-5-8,0-2-0], [10:0-3-4,0-2-0], [13:0-8-0,0-1-8], [13:0-8-1,0-4-10], [16:0-6-0,Edge], [17:0-6-0,Edge]

| Loading     | (psf) | Spacing         | 1-7-3           | CSI       |      | DEFL     | in (loc) | l/defl | L/d  | PLATES | GRIP           |          |
|-------------|-------|-----------------|-----------------|-----------|------|----------|----------|--------|------|--------|----------------|----------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.00            | TC        | 0.76 | Vert(LL) | -0.34    | 16-17  | >999 | 360    | MT20           | 244/190  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC        | 0.87 | Vert(CT) | -0.61    | 16-17  | >575 | 240    | MT18HS         | 244/190  |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB        | 0.51 | Horz(CT) | 0.02     | 13     | n/a  | n/a    |                |          |
| BCDL        | 10.0  | Code            | IRC2015/TPI2014 | Matrix-AS |      | Wind(LL) | -0.13    | 15-16  | >999 | 240    |                |          |
|             |       |                 |                 |           |      |          |          |        |      |        | Weight: 338 lb | FT = 20% |

**LUMBER**  
TOP CHORD 2x6 SP No.2 \*Except\* T2,T5:2x6 SP DSS, T6:2x6 SP No.1  
BOT CHORD 2x8 SP DSS \*Except\* B2:2x12 SP No.2  
WEBS 2x4 SP No.3 \*Except\* W6,W7,W1:2x4 SP No.2, W8:2x6 SP No.2

**BRACING**  
TOP CHORD Structural wood sheathing directly applied, except end verticals.  
BOT CHORD Rigid ceiling directly applied.  
WEBS 1 Row at midpt 5-9, 3-18  
JOINTS 1 Brace at Jt(s): 6, 8

**REACTIONS (lb/size)**  
13=1150/0-3-8, (min. 0-1-8),  
18=1463/0-3-8, (min. 0-1-12)  
Max Horiz 18=-198 (LC 10)  
Max Grav 13=1351 (LC 19), 18=1704 (LC 21)

**FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.**  
TOP CHORD 2-3=-41/379, 3-4=-1700/0, 4-5=-1104/0, 9-10=-1102/0, 10-11=-1629/0, 11-12=-1699/0, 12-26=-2002/0, 13-26=-2107/0  
BOT CHORD 17-18=0/806, 16-17=0/1147, 15-16=0/1501, 13-15=0/1647  
WEBS 4-17=0/1005, 10-16=0/969, 5-9=-1004/7, 3-17=0/662, 3-18=-2399/0, 2-19=-92/308, 12-15=-33/580, 12-16=-754/5

- Attach MiTek MTHNH18 (Half and Half Plate) on each face of truss with MiTek NA11 nails (0.131" x 1.5") in pre-punched holes provided. All nail holes must be filled (6 Nails per side 12 nails total).
  - See HINGE PLATE DETAILS for plate placement.
  - Provisions must be made to prevent lateral movement of hinged member(s) during transportation.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
  - Ceiling dead load (5.0 psf) on member(s). 4-5, 9-10, 5-9; Wall dead load (5.0psf) on member(s).4-17, 10-16
  - Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 16-17
  - This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
  - Attic room checked for L/360 deflection.
- LOAD CASE(S)** Standard

- NOTES**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=33ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) 5-1-12 to 8-5-10, Interior (1) 8-5-10 to 21-7-8, Exterior (2) 21-7-8 to 24-11-6, Interior (1) 24-11-6 to 39-2-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - All plates are MT20 plates unless otherwise indicated.



|                   |              |                            |          |          |   |
|-------------------|--------------|----------------------------|----------|----------|---|
| Job<br>Q2201696pg | Truss<br>G06 | Truss Type<br>Attic Girder | Qty<br>1 | Ply<br>2 | Value Build Homes - Wheeler 23-53-9<br>Job Reference (optional) |
|-------------------|--------------|----------------------------|----------|----------|---|

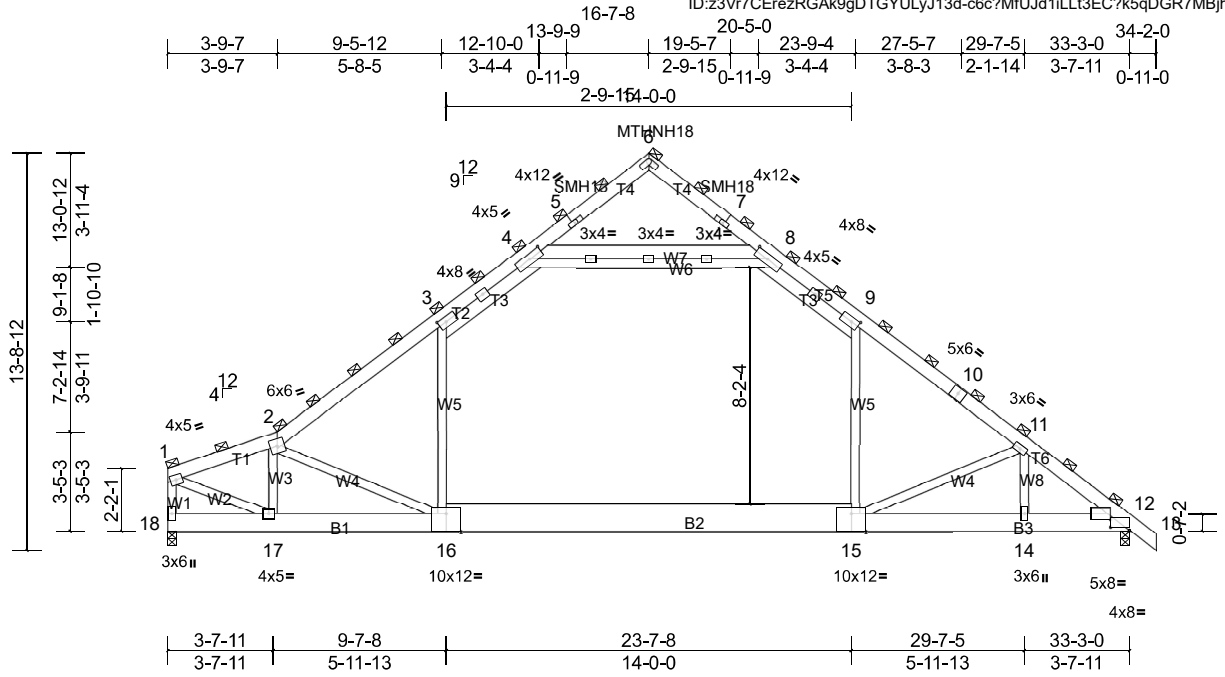


Plate Offsets (X, Y): [3:0-3-4,0-2-0], [4:0-5-8,0-2-0], [5:0-1-0,0-1-0], [5:0-1-0,0-1-0], [6:0-2-1,0-2-12], [6:0-2-1,0-2-12], [7:0-1-0,0-1-0], [7:0-1-0,0-1-0], [8:0-5-8,0-2-0], [9:0-3-4,0-2-0], [12:0-8-0,0-1-8], [12:0-8-1,0-4-10], [15:0-6-0,Edge], [16:0-6-0,Edge]

| Loading     | (psf) | Spacing         | 2-7-10          | CSI       | DEFLL | in (loc) | l/defl | L/d   | PLATES | GRIP |        |                         |
|-------------|-------|-----------------|-----------------|-----------|-------|----------|--------|-------|--------|------|--------|-------------------------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.00            | TC        | 0.88  | Vert(LL) | -0.33  | 15-16 | >999   | 360  | MT20   | 244/190                 |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC        | 0.83  | Vert(CT) | -0.57  | 15-16 | >698   | 240  | MT18HS | 244/190                 |
| BCLL        | 0.0*  | Rep Stress Incr | NO              | WB        | 0.66  | Horz(CT) | 0.03   | 12    | n/a    | n/a  |        |                         |
| BCDL        | 10.0  | Code            | IRC2015/TPI2014 | Matrix-MS |       | Wind(LL) | -0.12  | 14-15 | >999   | 240  |        | Weight: 658 lb FT = 20% |

**LUMBER**  
TOP CHORD 2x6 SP No.2 \*Except\* T2,T5:2x6 SP DSS  
BOT CHORD 2x8 SP No.2 \*Except\* B2:2x12 SP No.2  
WEBS 2x4 SP No.3 \*Except\* W5,W6,W1:2x4 SP No.2, W7:2x6 SP No.2

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

**JOINTS**  
1 Brace at Jt(s): 2, 5, 7, 1, 6

**REACTIONS** (lb/size)  
12=2127/0-3-8, (min. 0-1-8),  
18=2146/0-3-8, (min. 0-1-8)  
Max Horiz 18=-327 (LC 6)  
Max Grav 12=2503 (LC 15), 18=2505 (LC 14)

**FORCES** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-2=-3182/0, 2-3=-3453/0, 3-4=-2324/0, 4-5=-347/20, 7-8=-347/21, 8-9=-2321/0, 9-10=-3243/0, 10-11=-3451/0, 11-12=-3874/0, 1-18=-2422/0  
BOT CHORD 17-18=-260/325, 16-17=0/3300, 15-16=0/2433, 14-15=0/3214, 12-14=0/3214  
WEBS 2-17=-1607/0, 2-16=-993/3, 3-16=0/1510, 9-15=0/1645, 4-8=-2195/0, 1-17=0/3274, 11-14=-577/361, 11-15=-1148/98

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=33ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- All plates are MT20 plates unless otherwise indicated.
- Attach MiTek MTHNH18 (Half and Half Plate) on each face of truss with MiTek NA11 nails (0.131" x 1.5") in pre-punched holes provided. All nail holes must be filled (6 Nails per side 12 nails total).
- See HINGE PLATE DETAILS for plate placement.
- Provisions must be made to prevent lateral movement of hinged member(s) during transportation.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Ceiling dead load (10.0 psf) on member(s). 2-3, 3-4, 8-9, 4-8
- Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 15-16
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- Attic room checked for L/360 deflection.

- NOTES**
- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.  
Bottom chords connected as follows: 2x8 - 2 rows staggered at 0-9-0 oc, 2x12 - 2 rows staggered at 0-9-0 oc.  
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
  - All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.

**LOAD CASE(S)** Standard

|                   |              |                     |          |          |   |
|-------------------|--------------|---------------------|----------|----------|---|
| Job<br>Q2201696pg | Truss<br>G07 | Truss Type<br>Attic | Qty<br>4 | Ply<br>1 | Value Build Homes - Wheeler 23-53-9<br>Job Reference (optional) |
|-------------------|--------------|---------------------|----------|----------|---|

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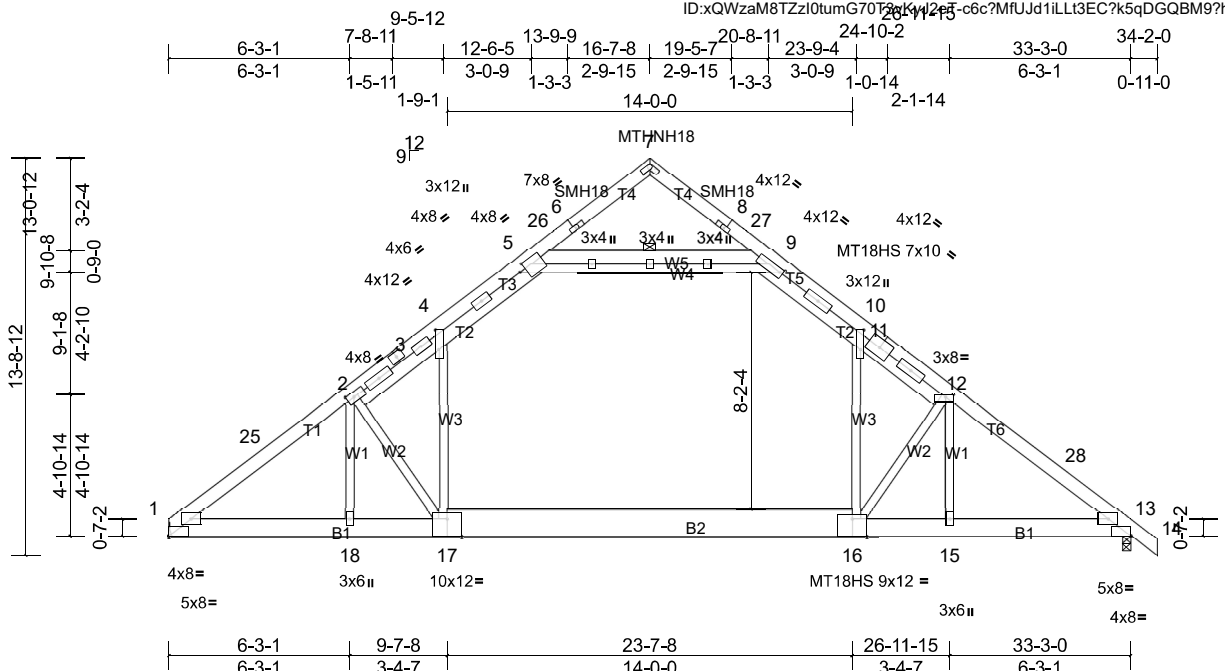


Plate Offsets (X, Y): [1:Edge,0-0-4], [2:0-3-0,0-2-0], [4:0-8-5,0-1-4], [5:0-2-11,0-2-8], [6:0-1-0,0-1-0], [6:0-1-0,0-1-0], [7:0-2-1,0-2-12], [7:0-2-1,0-2-12], [8:0-1-0,0-1-0], [8:0-1-0,0-1-0], [9:0-1-5,0-1-12], [10:0-8-5,0-1-4], [12:0-3-4,0-1-0], [13:Edge,0-0-4], [16:0-6-0,Edge], [17:0-6-0,Edge]

| Loading     | (psf) | Spacing         | 2-0-0           | CSI       | DEFL     | in (loc) | I/defl | L/d  | PLATES | GRIP           |          |
|-------------|-------|-----------------|-----------------|-----------|----------|----------|--------|------|--------|----------------|----------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.00            | TC        | Vert(LL) | -0.31    | 16-17  | >999 | 360    | MT20           | 244/190  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC        | Vert(CT) | -0.50    | 16-17  | >796 | 240    | MT18HS         | 244/190  |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB        | Horz(CT) | 0.04     | 13     | n/a  | n/a    |                |          |
| BCDL        | 10.0  | Code            | IRC2015/TPI2014 | Matrix-AS | Wind(LL) | -0.12    | 17-18  | >999 | 240    |                |          |
|             |       |                 |                 |           |          |          |        |      |        | Weight: 342 lb | FT = 20% |

**LUMBER**  
TOP CHORD 2x6 SP No.2  
BOT CHORD 2x8 SP No.1 \*Except\* B2:2x12 SP No.2  
WEBS 2x4 SP No.3 \*Except\* W3,W4:2x4 SP No.2, W5:2x6 SP No.2

**BRACING**  
TOP CHORD Structural wood sheathing directly applied.  
BOT CHORD Rigid ceiling directly applied.  
WEBS 1 Row at midpt 5-9  
JOINTS 1 Brace at Jt(s): 6, 8

**REACTIONS** (lb/size) 1=1542/ Mechanical, (min. 0-1-8), 13=1599/0-3-8, (min. 0-2-4)  
Max Horiz 1=-239 (LC 10)  
Max Grav 1=1834 (LC 18), 13=1884 (LC 19)

**FORCES** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-25=-2736/0, 2-25=-2605/0, 2-3=-2662/0, 3-4=-2670/0, 4-5=-1738/19, 5-26=-263/28, 9-27=-263/28, 9-10=-1738/18, 10-11=-2668/0, 11-12=-2692/0, 12-28=-2599/0, 13-28=-2730/0  
BOT CHORD 1-18=0/2320, 17-18=0/2320, 16-17=0/1869, 15-16=0/2131, 13-15=0/2131  
WEBS 10-16=0/1580, 4-17=0/1584, 5-9=-1686/49, 2-17=-821/100, 2-18=-474/410, 12-15=-477/404, 12-16=-811/90

- 4) Attach MiTek MTHNH18 (Half and Half Plate) on each face of truss with MiTek NA11 nails (0.131" x 1.5") in pre-punched holes provided. All nail holes must be filled (6 Nails per side 12 nails total).
- 5) See HINGE PLATE DETAILS for plate placement.
- 6) Provisions must be made to prevent lateral movement of hinged member(s) during transportation.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 9) Ceiling dead load (10.0 psf) on member(s). 4-5, 9-10, 5-9
- 10) Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 16-17
- 11) Refer to girder(s) for truss to truss connections.
- 12) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 13) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- 14) Attic room checked for L/360 deflection.

**LOAD CASE(S)** Standard

- NOTES**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=33ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) 0-0-0 to 3-3-14, Interior (1) 3-3-14 to 16-7-8, Exterior (2) 16-7-8 to 19-11-6, Interior (1) 19-11-6 to 34-2-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) All plates are MT20 plates unless otherwise indicated.

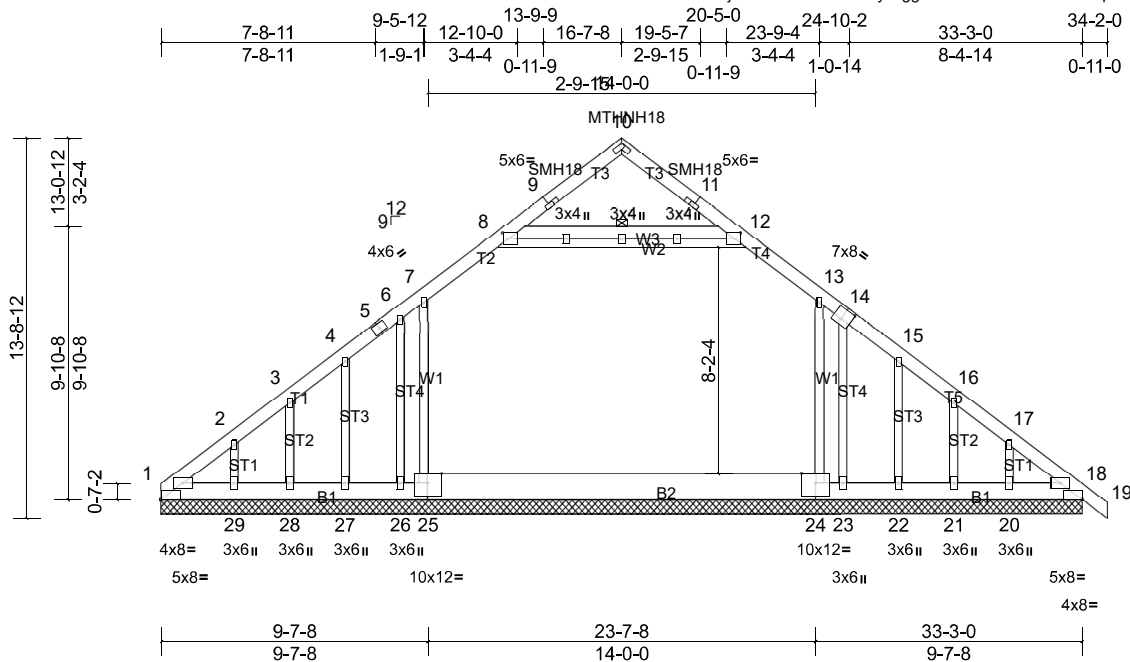
|                   |              |                                     |          |          |   |
|-------------------|--------------|-------------------------------------|----------|----------|---|
| Job<br>Q2201696pg | Truss<br>G08 | Truss Type<br>Attic Supported Gable | Qty<br>1 | Ply<br>1 | Value Build Homes - Wheeler 23-53-9<br>Job Reference (optional) |
|-------------------|--------------|-------------------------------------|----------|----------|---|

Carolina Structural Systems, Star, NC 27356

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Scale = 1:83.2

Plate Offsets (X, Y): [1:Edge,0-0-4], [8:0-2-4,0-2-12], [9:0-1-0,0-1-0], [9:0-1-0,0-1-0], [10:0-2-1,0-2-12], [10:0-2-1,0-2-12], [11:0-1-0,0-1-0], [11:0-1-0,0-1-0], [12:0-2-4,0-2-12], [14:0-4-0,0-4-8], [18:Edge,0-0-4], [18:1-1-5,0-4-8]

| Loading     | (psf) | Spacing         | 2-0-0           | CSI       | 0.36 | DEFL     | in   | (loc) | l/defl | L/d | PLATES         | GRIP     |
|-------------|-------|-----------------|-----------------|-----------|------|----------|------|-------|--------|-----|----------------|----------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.00            | TC        | 0.36 | Vert(LL) | n/a  | -     | n/a    | 999 | MT20           | 244/190  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC        | 0.50 | Vert(CT) | n/a  | -     | n/a    | 999 | MT18HS         | 244/190  |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB        | 0.41 | Horz(CT) | 0.01 | 18    | n/a    | n/a |                |          |
| BCDL        | 10.0  | Code            | IRC2015/TPI2014 | Matrix-AS |      |          |      |       |        |     | Weight: 324 lb | FT = 20% |

**LUMBER**  
TOP CHORD 2x6 SP No.2  
BOT CHORD 2x8 SP No.2 \*Except\* B2:2x12 SP No.2  
WEBS 2x4 SP No.2 \*Except\* W3:2x4 SP No.3, W3:2x6 SP No.2  
OTHERS 2x4 SP No.3

**BRACING**  
TOP CHORD Structural wood sheathing directly applied.  
BOT CHORD Rigid ceiling directly applied.  
WEBS 1 Row at midpt 8-12  
JOINTS 1 Brace at Jt(s): 9, 11

**REACTIONS** All bearings 33-3-0.  
(b) - Max Horiz 1=-239 (LC 10)  
Max Uplift All uplift 100 (lb) or less at joint(s) 20, 21, 22, 27, 28, 29 except 23=-1063 (LC 16), 26=-1060 (LC 16)  
Max Grav All reactions 250 (lb) or less at joint (s) 20, 21, 22, 23, 26, 28, 29 except 1=600 (LC 1), 18=667 (LC 1), 24=1585 (LC 25), 25=1584 (LC 24), 27=254 (LC 19)

**FORCES** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-2=-872/0, 2-3=-892/0, 3-4=-893/25, 4-5=-883/84, 5-6=-818/88, 6-7=-862/132, 7-8=-887/153, 8-9=-257/29, 11-12=-257/29, 12-13=-887/153, 13-14=-853/132, 14-15=-885/87, 15-16=-893/26, 16-17=-892/0, 17-18=-874/0  
BOT CHORD 1-29=0/691, 28-29=0/691, 27-28=0/691, 26-27=0/691, 25-26=0/691, 24-25=0/683, 23-24=0/684, 22-23=0/684, 21-22=0/684, 20-21=0/684, 18-20=0/684  
WEBS 13-24=-501/261, 7-25=-500/266, 8-12=-593/203

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

- Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=33ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner (3) 0-0-0 to 3-3-14, Exterior (2) 3-3-14 to 16-7-8, Corner (3) 16-7-8 to 19-11-6, Exterior (2) 19-11-6 to 34-2-0 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- All plates are MT20 plates unless otherwise indicated.
- All plates are 2x4 MT20 unless otherwise indicated.
- Attach MiTek MTHNH18 (Half and Half Plate) on each face of truss with MiTek NA111 nails (0.131" x 1.5") in pre-punched holes provided. All nail holes must be filled (6 Nails per side 12 nails total).
- See HINGE PLATE DETAILS for plate placement.
- Provisions must be made to prevent lateral movement of hinged member(s) during transportation.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Ceiling dead load (10.0 psf) on member(s). 7-8, 12-13, 8-12
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint (s) 27, 28, 29, 22, 21, 20 except (jt=lb) 26=1059, 23=1062.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

- 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.
  - Attic room checked for L/360 deflection.
- LOAD CASE(S)** Standard

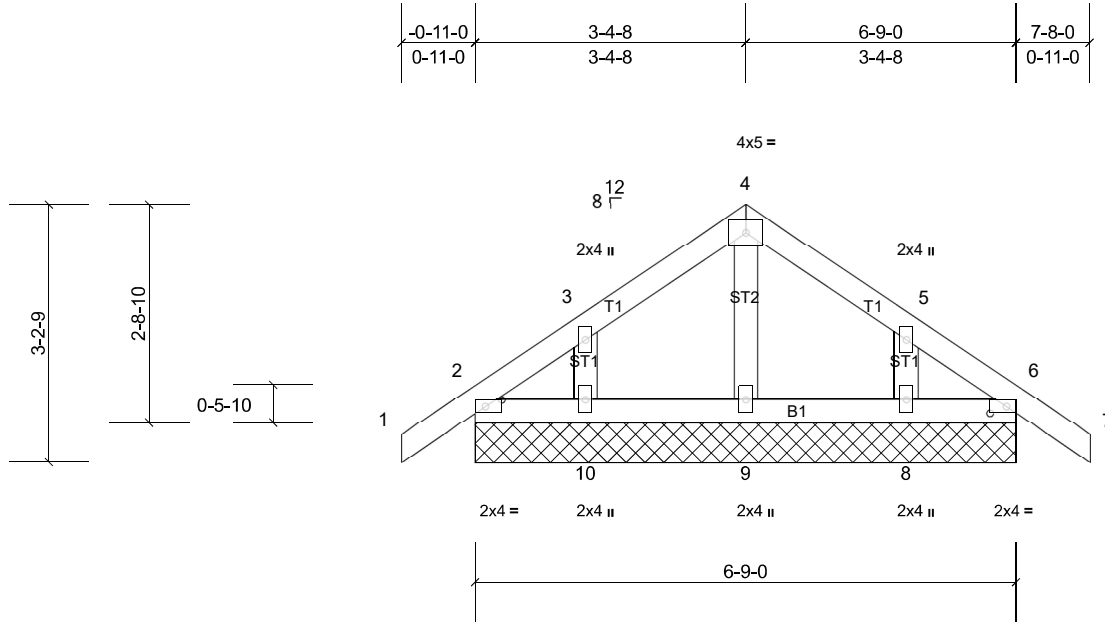
|                   |              |                                      |          |          |   |
|-------------------|--------------|--------------------------------------|----------|----------|---|
| Job<br>Q2201696pg | Truss<br>H01 | Truss Type<br>Common Supported Gable | Qty<br>2 | Ply<br>1 | Value Build Homes - Wheeler 23-53-9<br>Job Reference (optional) |
|-------------------|--------------|--------------------------------------|----------|----------|---|

Carolina Structural Systems, Star, NC 27356

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Scale = 1:28.7

Plate Offsets (X, Y): [2:0-1-9,Edge], [6:0-1-9,Edge]

| Loading     | (psf) | Spacing         | 1-11-4          | CSI       | DEFL | in       | (loc) | I/defl | L/d | PLATES | GRIP          |          |
|-------------|-------|-----------------|-----------------|-----------|------|----------|-------|--------|-----|--------|---------------|----------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.00            | TC        | 0.10 | Vert(LL) | n/a   | -      | n/a | 999    | MT20          | 244/190  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC        | 0.05 | Vert(CT) | n/a   | -      | n/a | 999    |               |          |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB        | 0.05 | Horz(CT) | 0.00  | 6      | n/a | n/a    |               |          |
| BCDL        | 10.0  | Code            | IRC2015/TPI2014 | Matrix-AS |      |          |       |        |     |        | Weight: 32 lb | FT = 20% |

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

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

**REACTIONS** All bearings 6-9-0.  
 (lb) - Max Horiz 2=47 (LC 11), 11=47 (LC 11)  
 Max Uplift All uplift 100 (lb) or less at joint(s)  
 2, 8, 10, 11  
 Max Grav All reactions 250 (lb) or less at joint  
 (s) 2, 8, 10, 11 except 9=258 (LC 1)

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

- NOTES**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner (3) -0-11-0 to 2-1-0, Exterior (2) 2-1-0 to 3-4-8, Corner (3) 3-4-8 to 6-9-0, Exterior (2) 6-9-0 to 7-8-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - Gable requires continuous bottom chord bearing.
  - Gable studs spaced at 2-0-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint (s) 2, 10, 8, 2.

- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

**LOAD CASE(S)** Standard

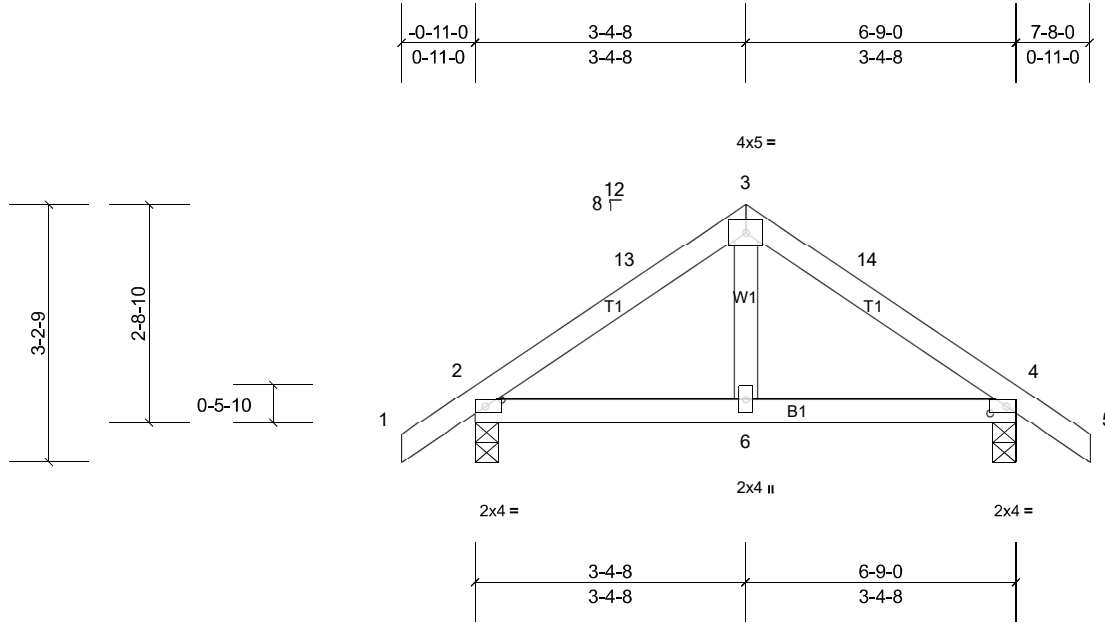
|                   |              |                      |           |          |   |
|-------------------|--------------|----------------------|-----------|----------|---|
| Job<br>Q2201696pg | Truss<br>H02 | Truss Type<br>Common | Qty<br>10 | Ply<br>1 | Value Build Homes - Wheeler 23-53-9<br>Job Reference (optional) |
|-------------------|--------------|----------------------|-----------|----------|---|

Carolina Structural Systems, Star, NC 27356

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Scale = 1:28.7

Plate Offsets (X, Y): [2:0-1-9,Edge], [4:0-1-9,Edge]

| Loading     | (psf) | Spacing         | 2-0-0           | CSI       | DEFL | in       | (loc) | I/defl | L/d  | PLATES | GRIP          |          |
|-------------|-------|-----------------|-----------------|-----------|------|----------|-------|--------|------|--------|---------------|----------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.00            | TC        | 0.13 | Vert(LL) | 0.00  | 6-9    | >999 | 360    | MT20          | 244/190  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC        | 0.12 | Vert(CT) | -0.01 | 6-9    | >999 | 240    |               |          |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB        | 0.06 | Horz(CT) | 0.00  | 2      | n/a  | n/a    |               |          |
| BCDL        | 10.0  | Code            | IRC2015/TPI2014 | Matrix-AS |      | Wind(LL) | 0.00  | 6-12   | >999 | 240    | Weight: 29 lb | FT = 20% |

**LUMBER**

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

**BRACING**

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

**REACTIONS** (lb/size) 2=325/0-3-8, (min. 0-1-8),  
 4=325/0-3-8, (min. 0-1-8)

Max Horiz 2=49 (LC 11)

Max Uplift 2=-25 (LC 12), 4=-25 (LC 12)

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

TOP CHORD 2-13=-292/38, 4-14=-292/38

**NOTES**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=120mph (3-second gust)  
 Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;  
 B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed;  
 MWFRS (directional) and C-C Exterior (2) -0-11-0 to  
 2-1-0, Interior (1) 2-1-0 to 3-4-8, Exterior (2) 3-4-8 to  
 6-9-0, Interior (1) 6-9-0 to 7-8-0 zone; cantilever left and  
 right exposed; end vertical left and right exposed; C-C  
 for members and forces & MWFRS for reactions shown;  
 Lumber DOL=1.60 plate grip DOL=1.60
- 3) This truss has been designed for a 10.0 psf bottom  
 chord live load nonconcurrent with any other live loads.
- 4) \* This truss has been designed for a live load of 20.0psf  
 on the bottom chord in all areas where a rectangle  
 3-06-00 tall by 2-00-00 wide will fit between the bottom  
 chord and any other members.
- 5) Provide mechanical connection (by others) of truss to  
 bearing plate capable of withstanding 25 lb uplift at joint  
 2 and 25 lb uplift at joint 4.
- 6) This truss is designed in accordance with the 2015  
 International Residential Code sections R502.11.1 and  
 R802.10.2 and referenced standard ANSI/TPI 1.
- 7) This truss design requires that a minimum of 7/16"  
 structural wood sheathing be applied directly to the top  
 chord and 1/2" gypsum sheetrock be applied directly to  
 the bottom chord.

**LOAD CASE(S)** Standard

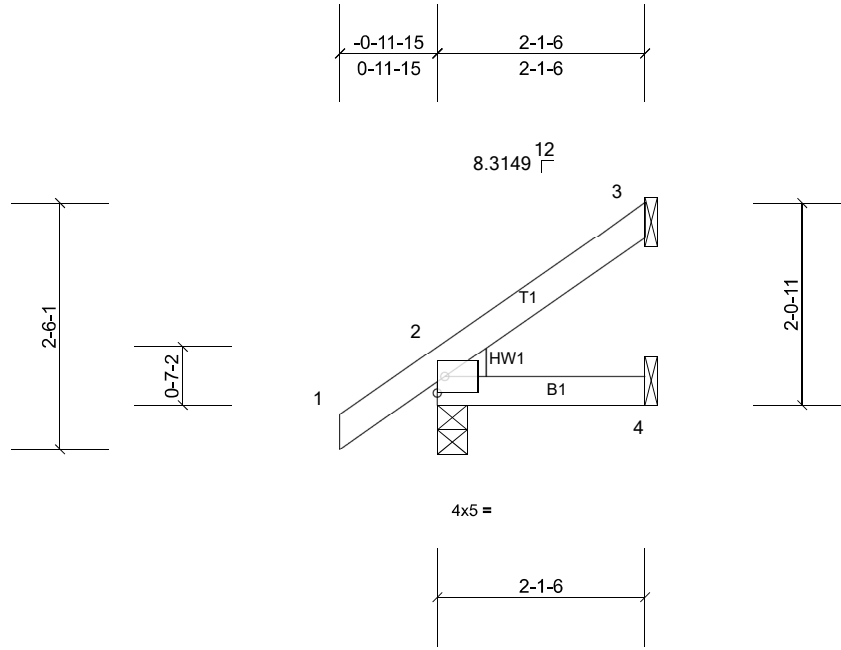
|                   |              |                         |          |          |   |
|-------------------|--------------|-------------------------|----------|----------|---|
| Job<br>Q2201696pg | Truss<br>J01 | Truss Type<br>Jack-Open | Qty<br>2 | Ply<br>1 | Value Build Homes - Wheeler 23-53-9<br>Job Reference (optional) |
|-------------------|--------------|-------------------------|----------|----------|---|

Carolina Structural Systems, Star, NC 27356

Run: 8.42 S Feb 11 2021 Print: 8.620 S Oct 13 2022 MiTek Industries, Inc. Tue Nov 29 16:38:07

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Scale = 1:23.5

| Loading     | (psf) | Spacing         | 1-11-4          | CSI       | DEFL | in       | (loc) | I/defl | L/d  | PLATES | GRIP          |          |
|-------------|-------|-----------------|-----------------|-----------|------|----------|-------|--------|------|--------|---------------|----------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.00            | TC        | 0.07 | Vert(LL) | 0.00  | 4-7    | >999 | 360    | MT20          | 244/190  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC        | 0.05 | Vert(CT) | 0.00  | 7      | >999 | 240    |               |          |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB        | 0.00 | Horz(CT) | 0.00  | 3      | n/a  | n/a    |               |          |
| BCDL        | 10.0  | Code            | IRC2015/TPI2014 | Matrix-MP |      | Wind(LL) | 0.00  | 4-7    | >999 | 240    | Weight: 10 lb | FT = 20% |

#### LUMBER

TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x4 SP No.2  
 WEDGE Left: 2x4 SP No.2

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 2-1-6 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (lb/size) 2=151/0-3-10, (min. 0-1-8), 3=44/  
 Mechanical, (min. 0-1-8), 4=22/  
 Mechanical, (min. 0-1-8)  
 Max Horiz 2=59 (LC 12)  
 Max Uplift 2=-15 (LC 12), 3=-16 (LC 12)  
 Max Grav 2=151 (LC 1), 3=45 (LC 17), 4=34 (LC 3)

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

#### NOTES

- 1) Wind: ASCE 7-10; Vult=120mph (3-second gust)  
 Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;  
 B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed;  
 MWFRS (directional) and C-C Corner (3) zone;  
 cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 16 lb uplift at joint 3 and 15 lb uplift at joint 2.
- 6) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard

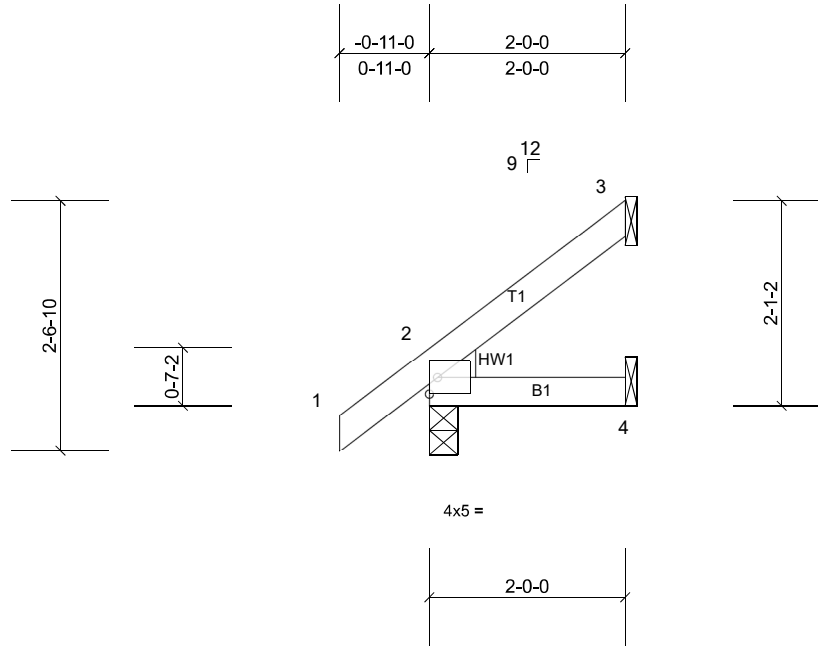
|                   |              |                         |          |          |   |
|-------------------|--------------|-------------------------|----------|----------|---|
| Job<br>Q2201696pg | Truss<br>J02 | Truss Type<br>Jack-Open | Qty<br>1 | Ply<br>1 | Value Build Homes - Wheeler 23-53-9<br>Job Reference (optional) |
|-------------------|--------------|-------------------------|----------|----------|---|

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Scale = 1:23.5

| Loading     | (psf) | Spacing         | 1-11-4          | CSI       | DEFL | in       | (loc) | l/defl | L/d  | PLATES | GRIP         |          |
|-------------|-------|-----------------|-----------------|-----------|------|----------|-------|--------|------|--------|--------------|----------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.00            | TC        | 0.06 | Vert(LL) | 0.00  | 4-7    | >999 | 360    | MT20         | 244/190  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC        | 0.05 | Vert(CT) | 0.00  | 7      | >999 | 240    |              |          |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB        | 0.00 | Horz(CT) | 0.00  | 3      | n/a  | n/a    |              |          |
| BCDL        | 10.0  | Code            | IRC2015/TPI2014 | Matrix-MP |      | Wind(LL) | 0.00  | 4-7    | >999 | 240    | Weight: 9 lb | FT = 20% |

#### LUMBER

TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x4 SP No.2  
 WEDGE Left: 2x4 SP No.2

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 2-0-0 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (lb/size) 2=143/0-3-8, (min. 0-1-8), 3=43/  
 Mechanical, (min. 0-1-8), 4=22/  
 Mechanical, (min. 0-1-8)  
 Max Horiz 2=60 (LC 12)  
 Max Uplift 2=-11 (LC 12), 3=-17 (LC 12)  
 Max Grav 2=143 (LC 1), 3=45 (LC 17), 4=34 (LC 3)

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

#### NOTES

- 1) Wind: ASCE 7-10; Vult=120mph (3-second gust)  
 Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;  
 B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed;  
 MWFRS (directional) and C-C Exterior (2) zone;  
 cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 17 lb uplift at joint 3 and 11 lb uplift at joint 2.
- 6) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard

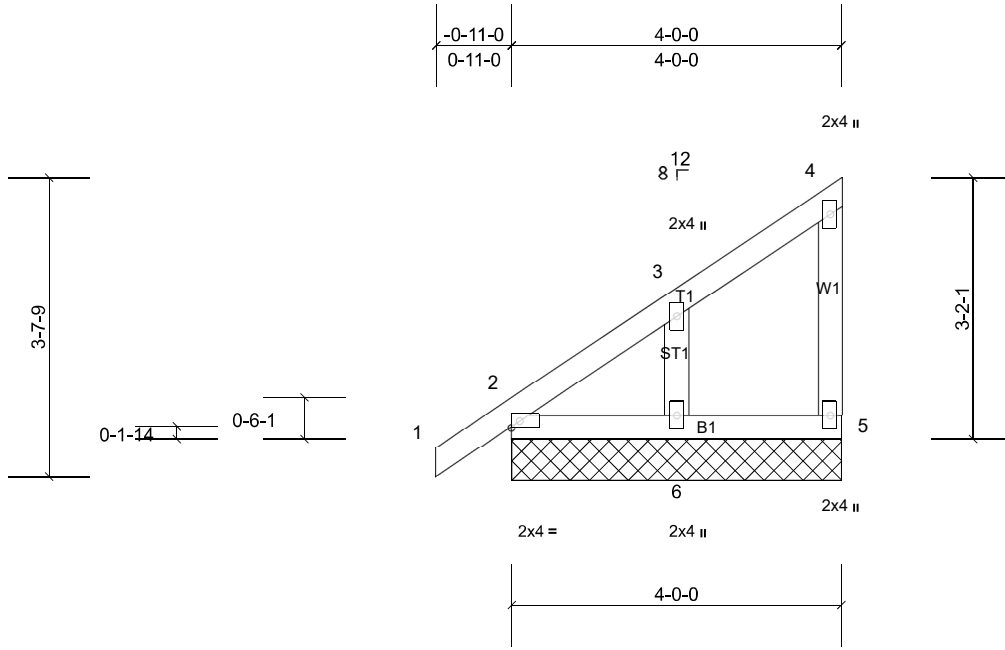
|            |       |                           |     |     |                                     |
|------------|-------|---------------------------|-----|-----|-------------------------------------|
| Job        | Truss | Truss Type                | Qty | Ply | Value Build Homes - Wheeler 23-53-9 |
| Q2201696pg | J03   | Monopitch Supported Gable | 1   | 1   | Job Reference (optional)            |

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Scale = 1:28

| Loading     | (psf) | Spacing         | 2-0-0           | CSI       | DEFL | in       | (loc) | l/defl | L/d | PLATES | GRIP          |          |
|-------------|-------|-----------------|-----------------|-----------|------|----------|-------|--------|-----|--------|---------------|----------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.00            | TC        | 0.13 | Vert(LL) | n/a   | -      | n/a | 999    | MT20          | 244/190  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC        | 0.03 | Vert(CT) | n/a   | -      | n/a | 999    |               |          |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB        | 0.03 | Horz(CT) | n/a   | -      | n/a | n/a    |               |          |
| BCDL        | 10.0  | Code            | IRC2015/TPI2014 | Matrix-AS |      |          |       |        |     |        | Weight: 21 lb | FT = 20% |

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

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

**REACTIONS** All bearings 4-0-0.  
(lb) - Max Horiz 2=88 (LC 11), 7=88 (LC 11)  
Max Uplift All uplift 100 (lb) or less at joint(s) 2, 5, 6, 7  
Max Grav All reactions 250 (lb) or less at joint (s) 2, 5, 6, 7

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

- NOTES**
- 1) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner (3) -0-11-0 to 2-0-0, Exterior (2) 2-0-0 to 3-10-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - 3) Gable requires continuous bottom chord bearing.
  - 4) Gable studs spaced at 2-0-0 oc.
  - 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
  - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint (s) 2, 5, 6, 2.
  - 8) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 2, 7.

- 9) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 10) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- LOAD CASE(S)** Standard



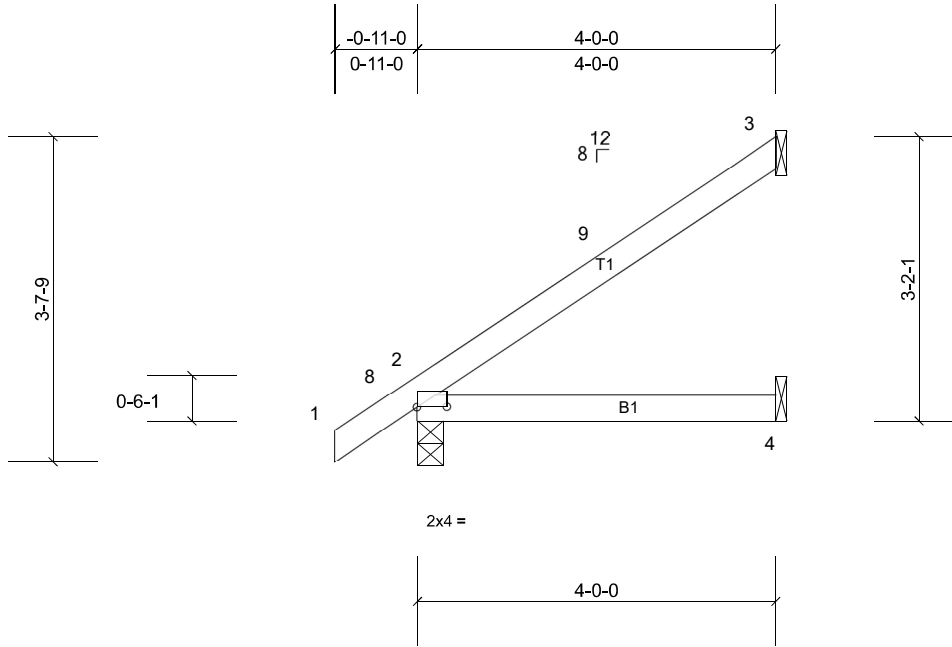
|                   |              |                         |          |          |   |
|-------------------|--------------|-------------------------|----------|----------|---|
| Job<br>Q2201696pg | Truss<br>J04 | Truss Type<br>Jack-Open | Qty<br>3 | Ply<br>1 | Value Build Homes - Wheeler 23-53-9<br>Job Reference (optional) |
|-------------------|--------------|-------------------------|----------|----------|---|

Carolina Structural Systems, Star, NC 27356

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Scale = 1:25.7

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

| Loading     | (psf) | Spacing         | 2-0-0           | CSI       | DEFL | in       | (loc) | I/defl | L/d  | PLATES | GRIP          |          |
|-------------|-------|-----------------|-----------------|-----------|------|----------|-------|--------|------|--------|---------------|----------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.00            | TC        | 0.21 | Vert(LL) | -0.01 | 4-7    | >999 | 360    | MT20          | 244/190  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC        | 0.16 | Vert(CT) | -0.02 | 4-7    | >999 | 240    |               |          |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB        | 0.00 | Horz(CT) | 0.00  | 3      | n/a  | n/a    |               |          |
| BCDL        | 10.0  | Code            | IRC2015/TPI2014 | Matrix-AS |      | Wind(LL) | 0.01  | 4-7    | >999 | 240    | Weight: 15 lb | FT = 20% |

#### LUMBER

TOP CHORD 2x4 SP No.2

BOT CHORD 2x4 SP No.2

#### BRACING

TOP CHORD Structural wood sheathing directly applied.

BOT CHORD Rigid ceiling directly applied.

**REACTIONS** (lb/size) 2=219/0-3-8, (min. 0-1-8), 3=103/  
Mechanical, (min. 0-1-8), 4=48/  
Mechanical, (min. 0-1-8)  
Max Horiz 2=87 (LC 12)  
Max Uplift 2=-3 (LC 12), 3=-36 (LC 12)  
Max Grav 2=219 (LC 1), 3=103 (LC 1), 4=73  
(LC 3)

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

#### NOTES

- 1) Wind: ASCE 7-10; Vult=120mph (3-second gust)  
Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;  
B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed;  
MWFRS (directional) and C-C Exterior (2) -0-11-0 to  
2-1-0, Interior (1) 2-1-0 to 3-11-4 zone; cantilever left and  
right exposed; end vertical left and right exposed; C-C  
for members and forces & MWFRS for reactions shown;  
Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom  
chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf  
on the bottom chord in all areas where a rectangle  
3-06-00 tall by 2-00-00 wide will fit between the bottom  
chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to  
bearing plate capable of withstanding 36 lb uplift at joint  
3 and 3 lb uplift at joint 2.
- 6) This truss is designed in accordance with the 2015  
International Residential Code sections R502.11.1 and  
R802.10.2 and referenced standard ANSI/TPI 1.
- 7) This truss design requires that a minimum of 7/16"  
structural wood sheathing be applied directly to the top  
chord and 1/2" gypsum sheetrock be applied directly to the  
bottom chord.

**LOAD CASE(S)** Standard

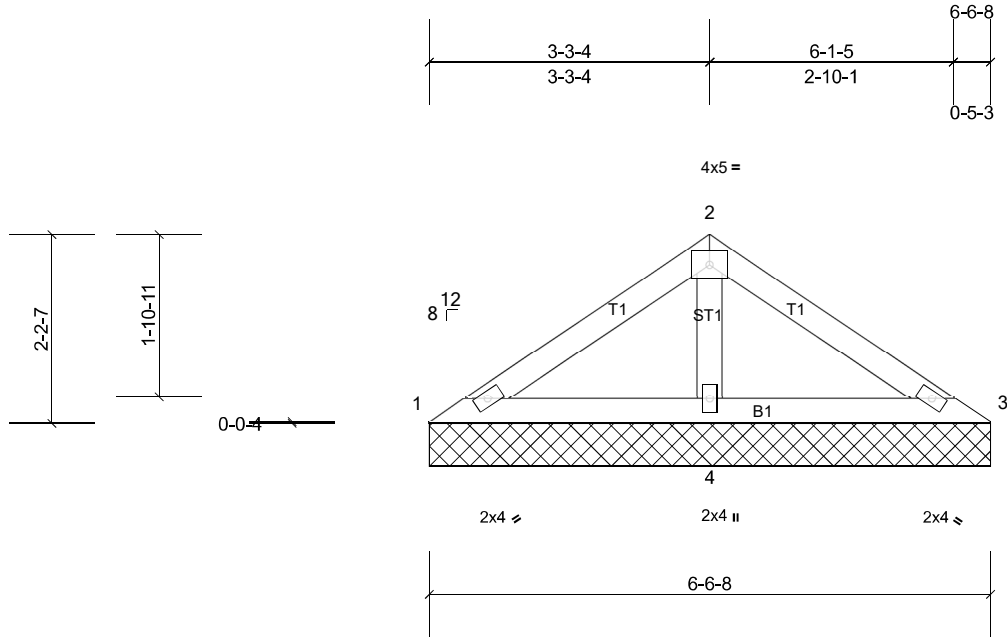
|            |       |            |     |     |                                     |
|------------|-------|------------|-----|-----|-------------------------------------|
| Job        | Truss | Truss Type | Qty | Ply | Value Build Homes - Wheeler 23-53-9 |
| Q2201696pg | V01   | Valley     | 1   | 1   | Job Reference (optional)            |

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Scale = 1:26.9

| Loading     | (psf) | Spacing         | 2-0-0           | CSI       | DEFL | in        | (loc) | l/defl | L/d | PLATES | GRIP          |          |
|-------------|-------|-----------------|-----------------|-----------|------|-----------|-------|--------|-----|--------|---------------|----------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.00            | TC        | 0.12 | Vert(LL)  | n/a   | -      | n/a | 999    | MT20          | 244/190  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC        | 0.21 | Vert(TL)  | n/a   | -      | n/a | 999    |               |          |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB        | 0.06 | Horiz(TL) | 0.00  | 3      | n/a | n/a    |               |          |
| BCDL        | 10.0  | Code            | IRC2015/TPI2014 | Matrix-AS |      |           |       |        |     |        | Weight: 22 lb | FT = 20% |

**LUMBER**

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

**LOAD CASE(S)** Standard

**BRACING**

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

**REACTIONS** (lb/size) 1=49/6-6-8, (min. 0-1-8),  
 3=49/6-6-8, (min. 0-1-8),  
 4=425/6-6-8, (min. 0-1-8)  
 Max Horiz 1=-34 (LC 10)  
 Max Uplift 4=-11 (LC 12)  
 Max Grav 1=69 (LC 21), 3=69 (LC 22), 4=425 (LC 1)

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

**WEBS** 2-4=-293/73

**NOTES**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Gable requires continuous bottom chord bearing.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 11 lb uplift at joint 4.
- 7) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 8) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

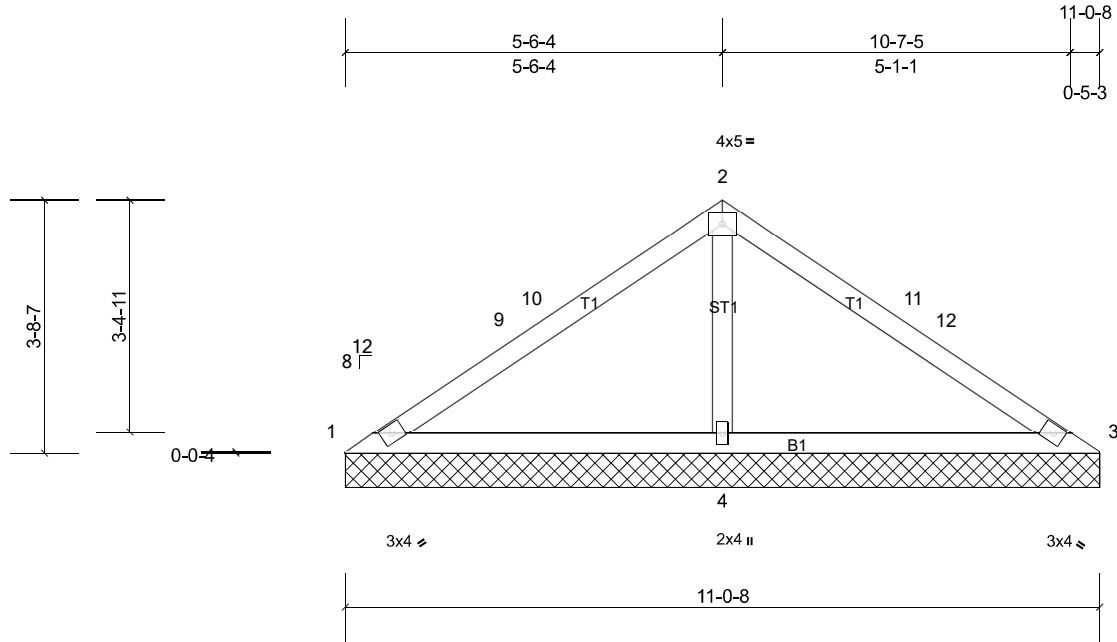
|            |       |            |     |     |                                     |
|------------|-------|------------|-----|-----|-------------------------------------|
| Job        | Truss | Truss Type | Qty | Ply | Value Build Homes - Wheeler 23-53-9 |
| Q2201696pg | V02   | Valley     | 1   | 1   | Job Reference (optional)            |

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Scale = 1:33.7

| Loading     | (psf) | Spacing         | 2-0-0           | CSI       | DEFL      | in   | (loc) | I/defl | L/d | PLATES        | GRIP     |
|-------------|-------|-----------------|-----------------|-----------|-----------|------|-------|--------|-----|---------------|----------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.00            | TC        | Vert(LL)  | n/a  | -     | n/a    | 999 | MT20          | 244/190  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC        | Vert(TL)  | n/a  | -     | n/a    | 999 |               |          |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB        | Horiz(TL) | 0.00 | 3     | n/a    | n/a |               |          |
| BCDL        | 10.0  | Code            | IRC2015/TPI2014 | Matrix-AS |           |      |       |        |     | Weight: 39 lb | FT = 20% |

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

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

**REACTIONS** (lb/size) 1=31/11-0-8, (min. 0-1-8),  
 3=31/11-0-8, (min. 0-1-8),  
 4=821/11-0-8, (min. 0-1-8)  
 Max Horiz 1=-60 (LC 10)  
 Max Uplift 1=-33 (LC 22), 3=-33 (LC 21),  
 4=-30 (LC 12)  
 Max Grav 1=78 (LC 21), 3=78 (LC 22), 4=821  
 (LC 1)

**FORCES** (lb) - Max. Comp./Max. Ten. - All forces 250  
 (lb) or less except when shown.  
 TOP CHORD 1-9=-67/282, 9-10=-46/292, 2-10=-45/382,  
 2-11=-45/382, 11-12=-46/292, 3-12=-60/282  
 BOT CHORD 1-4=-268/95, 3-4=-268/95  
 WEBS 2-4=-647/137

- NOTES**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=120mph (3-second gust)  
 Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;  
 B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed;  
 MWFRS (directional) and C-C Exterior (2) 0-0-6 to 3-0-6,  
 Interior (1) 3-0-6 to 5-6-10, Exterior (2) 5-6-10 to 8-6-10,  
 Interior (1) 8-6-10 to 11-0-14 zone; cantilever left and  
 right exposed; end vertical left and right exposed; C-C  
 for members and forces & MWFRS for reactions shown;  
 Lumber DOL=1.60 plate grip DOL=1.60
  - Gable requires continuous bottom chord bearing.
  - This truss has been designed for a 10.0 psf bottom  
 chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf  
 on the bottom chord in all areas where a rectangle  
 3-06-00 tall by 2-00-00 wide will fit between the bottom  
 chord and any other members.
  - Provide mechanical connection (by others) of truss to  
 bearing plate capable of withstanding 33 lb uplift at joint  
 1, 33 lb uplift at joint 3 and 30 lb uplift at joint 4.

- This truss is designed in accordance with the 2015  
 International Residential Code sections R502.11.1 and  
 R802.10.2 and referenced standard ANSI/TPI 1.
  - This truss design requires that a minimum of 7/16"  
 structural wood sheathing be applied directly to the top  
 chord and 1/2" gypsum sheetrock be applied directly to  
 the bottom chord.
- LOAD CASE(S)** Standard

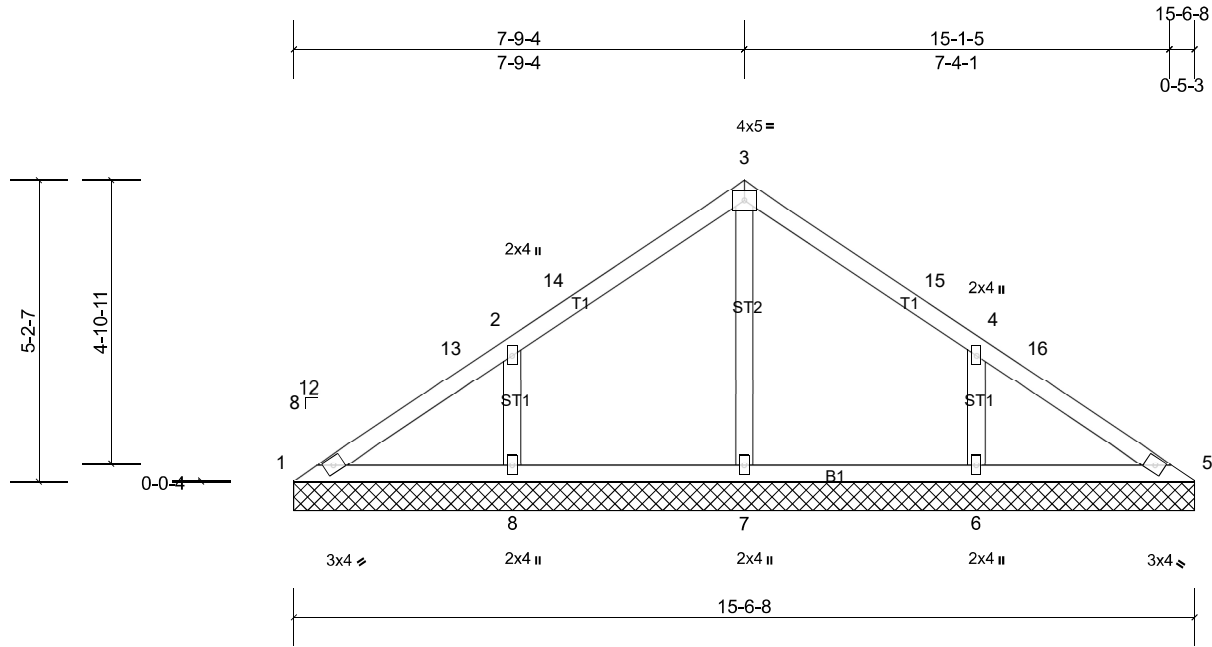
|                   |              |                      |          |          |   |
|-------------------|--------------|----------------------|----------|----------|---|
| Job<br>Q2201696pg | Truss<br>V03 | Truss Type<br>Valley | Qty<br>1 | Ply<br>1 | Value Build Homes - Wheeler 23-53-9<br>Job Reference (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  | 1.00            | TC        | 0.20 | Vert(LL)  | n/a   | -      | n/a | 999    | MT20          | 244/190  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC        | 0.11 | Vert(TL)  | n/a   | -      | n/a | 999    |               |          |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB        | 0.13 | Horiz(TL) | 0.00  | 5      | n/a | n/a    |               |          |
| BCDL        | 10.0  | Code            | IRC2015/TPI2014 | Matrix-AS |      |           |       |        |     |        | Weight: 62 lb | FT = 20% |

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

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

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

**LOAD CASE(S)** Standard

**REACTIONS** All bearings 15-6-8.  
(lb) - Max Horiz 1=-85 (LC 10)  
Max Uplift All uplift 100 (lb) or less at joint(s) 6, 8  
Max Grav All reactions 250 (lb) or less at joint (s) 1, 5 except 6=362 (LC 22), 7=343 (LC 1), 8=362 (LC 21)

**FORCES** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
WEBS 3-7=-272/0, 2-8=-261/110, 4-6=-261/110

- NOTES**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) 0-0-6 to 3-0-6, Interior (1) 3-0-6 to 7-9-10, Exterior (2) 7-9-10 to 10-9-10, Interior (1) 10-9-10 to 15-6-14 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Gable requires continuous bottom chord bearing.
  - 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint (s) 8, 6.
  - 7) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

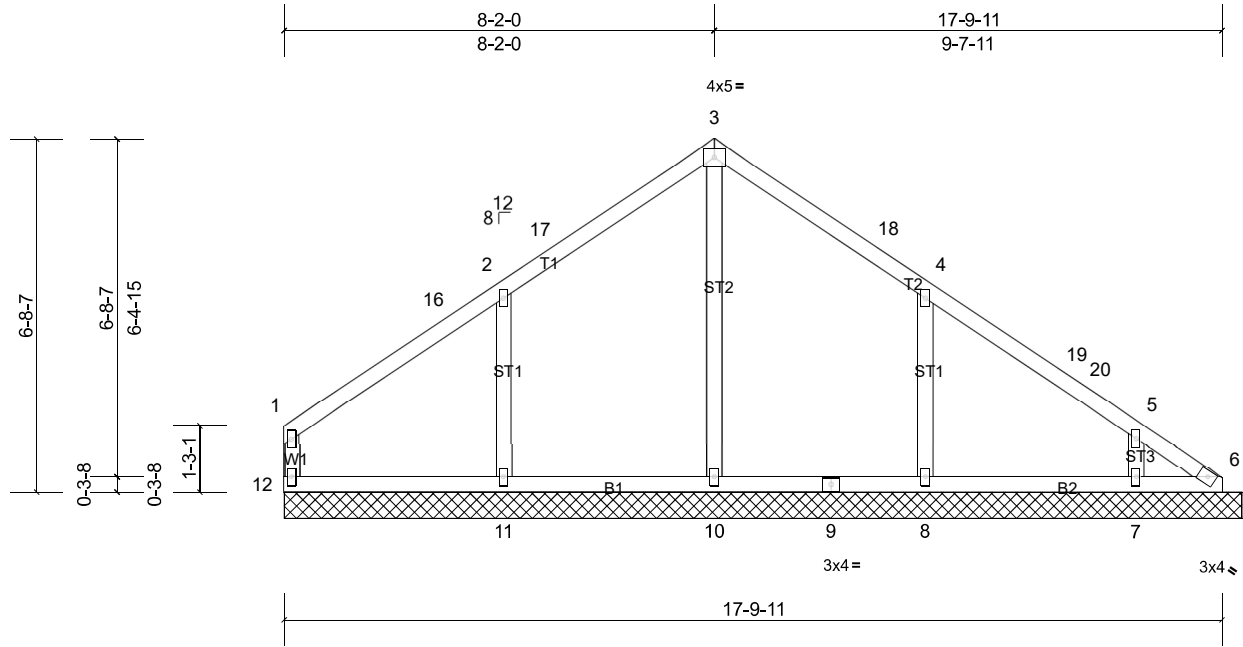
|            |       |            |     |     |                                     |
|------------|-------|------------|-----|-----|-------------------------------------|
| Job        | Truss | Truss Type | Qty | Ply | Value Build Homes - Wheeler 23-53-9 |
| Q2201696pg | V04   | Valley     | 1   | 1   | Job Reference (optional)            |

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Scale = 1:43.7

| Loading     | (psf) | Spacing         | 2-0-0           | CSI       | DEFL | in        | (loc) | l/defl | L/d | PLATES | GRIP          |          |
|-------------|-------|-----------------|-----------------|-----------|------|-----------|-------|--------|-----|--------|---------------|----------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.00            | TC        | 0.20 | Vert(LL)  | n/a   | -      | n/a | 999    | MT20          | 244/190  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC        | 0.19 | Vert(TL)  | n/a   | -      | n/a | 999    |               |          |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB        | 0.15 | Horiz(TL) | 0.00  | 6      | n/a | n/a    |               |          |
| BCDL        | 10.0  | Code            | IRC2015/TPI2014 | Matrix-AS |      |           |       |        |     |        | Weight: 80 lb | FT = 20% |

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

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

**REACTIONS** All bearings 18-2-4.  
 (lb) - Max Horiz 12=-122 (LC 10)  
 Max Uplift All uplift 100 (lb) or less at joint(s) 6, 7, 8, 11, 12, 15  
 Max Grav All reactions 250 (lb) or less at joint (s) 6, 12, 15 except 7=307 (LC 1), 8=400 (LC 18), 10=379 (LC 18), 11=434 (LC 17)

**FORCES** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 WEBS 2-11=-278/123, 4-8=-259/121

- NOTES**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) 0-1-12 to 3-1-12, Interior (1) 3-1-12 to 8-2-0, Exterior (2) 8-2-0 to 11-2-0, Interior (1) 11-2-0 to 17-8-14 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) All plates are 2x4 MT20 unless otherwise indicated.
  - 4) Gable requires continuous bottom chord bearing.
  - 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 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) 12, 6, 11, 8, 7, 6.

- 8) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 9) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- LOAD CASE(S)** Standard

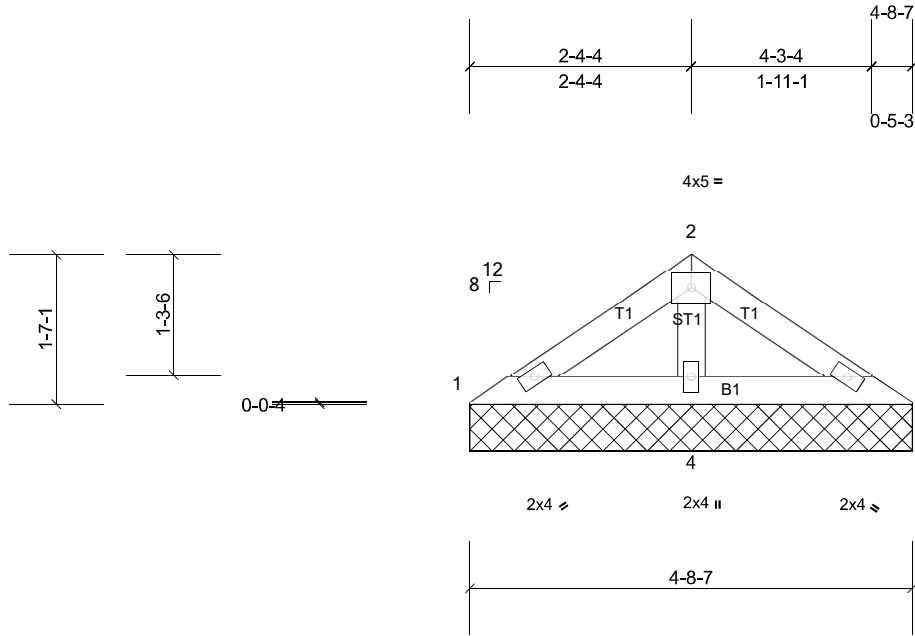
|            |       |            |     |     |                                     |
|------------|-------|------------|-----|-----|-------------------------------------|
| Job        | Truss | Truss Type | Qty | Ply | Value Build Homes - Wheeler 23-53-9 |
| Q2201696pg | V05   | Valley     | 1   | 1   | Job Reference (optional)            |

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Scale = 1:24.5

| Loading     | (psf) | Spacing         | 2-0-0           | CSI       | DEFL | in        | (loc) | l/defl | L/d | PLATES | GRIP          |          |
|-------------|-------|-----------------|-----------------|-----------|------|-----------|-------|--------|-----|--------|---------------|----------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.00            | TC        | 0.05 | Vert(LL)  | n/a   | -      | n/a | 999    | MT20          | 244/190  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC        | 0.11 | Vert(TL)  | n/a   | -      | n/a | 999    |               |          |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB        | 0.03 | Horiz(TL) | n/a   | -      | n/a | n/a    |               |          |
| BCDL        | 10.0  | Code            | IRC2015/TPI2014 | Matrix-AS |      |           |       |        |     |        | Weight: 15 lb | FT = 20% |

**LUMBER**

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

**BRACING**

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

**REACTIONS** (lb/size) 1=51/4-8-7, (min. 0-1-8),  
 3=51/4-8-7, (min. 0-1-8),  
 4=275/4-8-7, (min. 0-1-8)  
 Max Horiz 1=24 (LC 10)  
 Max Uplift 4=3 (LC 12)  
 Max Grav 1=61 (LC 21), 3=61 (LC 22), 4=275 (LC 1)

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

**NOTES**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Gable requires continuous bottom chord bearing.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 3 lb uplift at joint 4.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

**LOAD CASE(S)** Standard

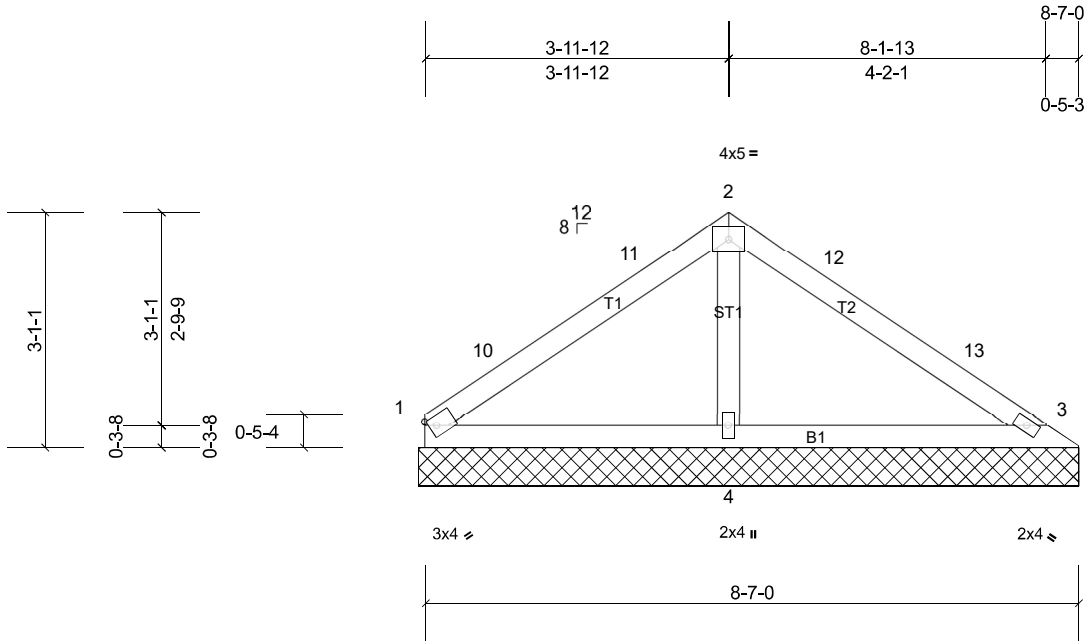
|                   |              |                      |          |          |   |
|-------------------|--------------|----------------------|----------|----------|---|
| Job<br>Q2201696pg | Truss<br>V06 | Truss Type<br>Valley | Qty<br>1 | Ply<br>1 | Value Build Homes - Wheeler 23-53-9<br>Job Reference (optional) |
|-------------------|--------------|----------------------|----------|----------|---|

Carolina Structural Systems, Star, NC 27356

Run: 8.62 S Oct 13 2022 Print: 8.620 S Oct 13 2022 MiTek Industries, Inc. Tue Nov 29 16:38:07

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Scale = 1:30.3

| Loading     | (psf) | Spacing         | 2-0-0           | CSI       | DEFL | in        | (loc) | I/defl | L/d | PLATES | GRIP          |          |
|-------------|-------|-----------------|-----------------|-----------|------|-----------|-------|--------|-----|--------|---------------|----------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.00            | TC        | 0.26 | Vert(LL)  | n/a   | -      | n/a | 999    | MT20          | 244/190  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC        | 0.38 | Vert(TL)  | n/a   | -      | n/a | 999    |               |          |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB        | 0.12 | Horiz(TL) | 0.00  | 3      | n/a | n/a    |               |          |
| BCDL        | 10.0  | Code            | IRC2015/TPI2014 | Matrix-AS |      |           |       |        |     |        | Weight: 31 lb | FT = 20% |

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

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

**REACTIONS** All bearings 8-8-2.  
(lb) - Max Horiz 1=47 (LC 10)  
Max Uplift All uplift 100 (lb) or less at joint(s)  
1, 3, 4, 9  
Max Grav All reactions 250 (lb) or less at joint  
(s) 1, 3, 9 except 4=665 (LC 1)

**FORCES** (lb) - Max. Comp./Max. Ten. - All forces 250  
(lb) or less except when shown.  
TOP CHORD 1-10=-42/261, 10-11=-27/274, 2-11=-23/312,  
2-12=-20/319, 12-13=-23/274  
WEBS 2-4=-503/94

- NOTES**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) -0-1-3 to 2-10-13, Interior (1) 2-10-13 to 3-11-12, Exterior (2) 3-11-12 to 6-11-12, Interior (1) 6-11-12 to 8-1-9 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Gable requires continuous bottom chord bearing.
  - 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint (s) 1, 3, 4, 3.
  - 7) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 9.

- 8) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 9) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

**LOAD CASE(S)** Standard

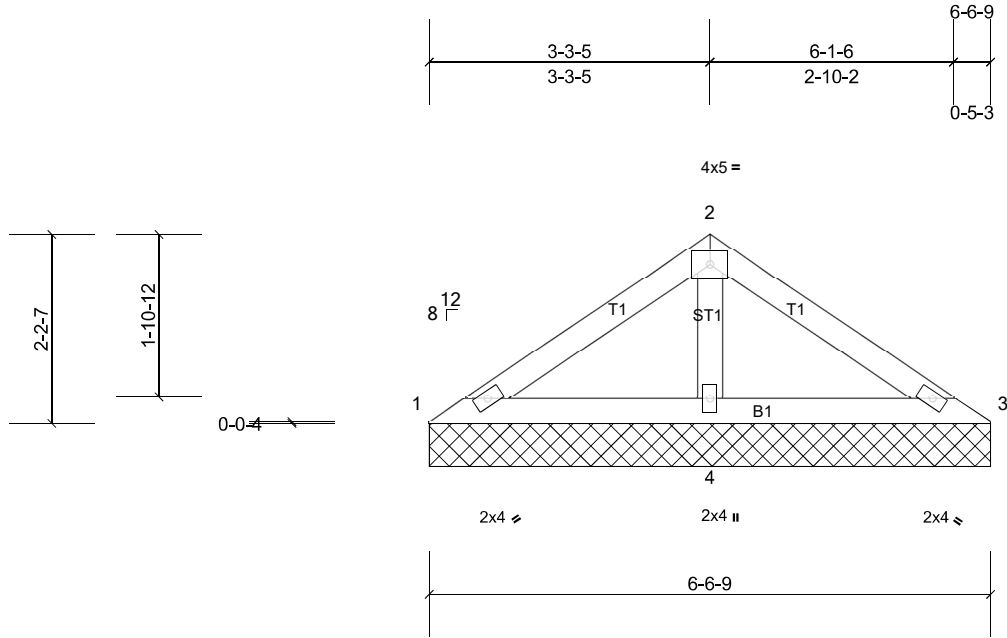
|                   |              |                      |          |          |   |
|-------------------|--------------|----------------------|----------|----------|---|
| Job<br>Q2201696pg | Truss<br>V07 | Truss Type<br>Valley | Qty<br>2 | Ply<br>1 | Value Build Homes - Wheeler 23-53-9<br>Job Reference (optional) |
|-------------------|--------------|----------------------|----------|----------|---|

Carolina Structural Systems, Star, NC 27356

Run: 8.42 S Feb 11 2021 Print: 8.620 S Oct 13 2022 MiTek Industries, Inc. Tue Nov 29 16:38:08

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Scale = 1:26.9

| Loading     | (psf) | Spacing         | 2-0-0           | CSI       | DEFL | in        | (loc) | l/defl | L/d | PLATES | GRIP          |          |
|-------------|-------|-----------------|-----------------|-----------|------|-----------|-------|--------|-----|--------|---------------|----------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.00            | TC        | 0.12 | Vert(LL)  | n/a   | -      | n/a | 999    | MT20          | 244/190  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC        | 0.21 | Vert(TL)  | n/a   | -      | n/a | 999    |               |          |
| BCLL        | 0.0*  | Rep Stress Incr | YES             | WB        | 0.06 | Horiz(TL) | 0.00  | 3      | n/a | n/a    |               |          |
| BCDL        | 10.0  | Code            | IRC2015/TPI2014 | Matrix-AS |      |           |       |        |     |        | Weight: 22 lb | FT = 20% |

**LUMBER**

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

**LOAD CASE(S)** Standard

**BRACING**

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

**REACTIONS** (lb/size) 1=49/6-6-9, (min. 0-1-8),  
 3=49/6-6-9, (min. 0-1-8),  
 4=426/6-6-9, (min. 0-1-8)  
 Max Horiz 1=34 (LC 11)  
 Max Uplift 4=-11 (LC 12)  
 Max Grav 1=69 (LC 21), 3=69 (LC 22), 4=426 (LC 1)

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

**WEBS** 2-4=-293/73

**NOTES**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Gable requires continuous bottom chord bearing.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 11 lb uplift at joint 4.
- 7) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 8) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.