



RE: 2531623  
Summit/23 Hawthorn

**MiTek USA, Inc.**

16023 Swingley Ridge Rd  
Chesterfield, MO 63017  
314-434-1200

**Site Information:**

Customer: Project Name: 2531623  
Lot/Block:  
Address:  
City:

Model:  
Subdivision:  
State:

RELEASE FOR  
CONSTRUCTION  
AS NOTED ON PLANS REVIEW  
DEVELOPMENT SERVICES  
LEE'S SUMMIT, MISSOURI  
12/02/2020

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

Design Code: IRC2018/TPI2014  
Wind Code: N/A  
Roof Load: 45.0 psf

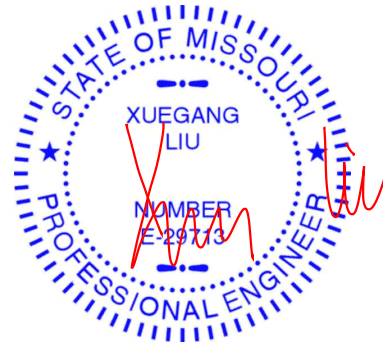
Design Program: MiTek 20/20 8.2  
Wind Speed: 115 mph  
Floor Load: N/A psf

This package includes 75 individual, dated Truss Design Drawings and 0 Additional Drawings.

| No. | Seal#     | Truss Name | Date      | No. | Seal#     | Truss Name | Date      |
|-----|-----------|------------|-----------|-----|-----------|------------|-----------|
| 1   | I43532817 | A1         | 11/9/2020 | 21  | I43532837 | CJ3        | 11/9/2020 |
| 2   | I43532818 | A2         | 11/9/2020 | 22  | I43532838 | CJ4        | 11/9/2020 |
| 3   | I43532819 | A3         | 11/9/2020 | 23  | I43532839 | D1         | 11/9/2020 |
| 4   | I43532820 | A4         | 11/9/2020 | 24  | I43532840 | D2         | 11/9/2020 |
| 5   | I43532821 | A5         | 11/9/2020 | 25  | I43532841 | D3         | 11/9/2020 |
| 6   | I43532822 | A6         | 11/9/2020 | 26  | I43532842 | D4         | 11/9/2020 |
| 7   | I43532823 | A7         | 11/9/2020 | 27  | I43532843 | D5         | 11/9/2020 |
| 8   | I43532824 | A9         | 11/9/2020 | 28  | I43532844 | D6         | 11/9/2020 |
| 9   | I43532825 | A10        | 11/9/2020 | 29  | I43532845 | D7         | 11/9/2020 |
| 10  | I43532826 | B1         | 11/9/2020 | 30  | I43532846 | D8         | 11/9/2020 |
| 11  | I43532827 | B2         | 11/9/2020 | 31  | I43532847 | E1         | 11/9/2020 |
| 12  | I43532828 | B3         | 11/9/2020 | 32  | I43532848 | E2         | 11/9/2020 |
| 13  | I43532829 | B4         | 11/9/2020 | 33  | I43532849 | E3         | 11/9/2020 |
| 14  | I43532830 | C1         | 11/9/2020 | 34  | I43532850 | E4         | 11/9/2020 |
| 15  | I43532831 | C2         | 11/9/2020 | 35  | I43532851 | E5         | 11/9/2020 |
| 16  | I43532832 | C3         | 11/9/2020 | 36  | I43532852 | E6         | 11/9/2020 |
| 17  | I43532833 | C4         | 11/9/2020 | 37  | I43532853 | E7         | 11/9/2020 |
| 18  | I43532834 | C5         | 11/9/2020 | 38  | I43532854 | E8         | 11/9/2020 |
| 19  | I43532835 | CJ1        | 11/9/2020 | 39  | I43532855 | E9         | 11/9/2020 |
| 20  | I43532836 | CJ2        | 11/9/2020 | 40  | I43532856 | E10        | 11/9/2020 |

The truss drawing(s) referenced above have been prepared by  
MiTek USA, Inc. under my direct supervision  
based on the parameters provided by Builders FirstSource (Valley Center).  
Truss Design Engineer's Name: Liu, Xuegang  
My license renewal date for the state of Missouri is December 31, 2022.  
Missouri COA: 001193

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



November 09, 2020



RE: 2531623 - Summit/23 Hawthorn

**MiTek USA, Inc.**

16023 Swingley Ridge Rd  
Chesterfield, MO 63017  
314-434-1200

**Site Information:**

Project Customer:      Project Name: 2531623

Lot/Block:

Subdivision:

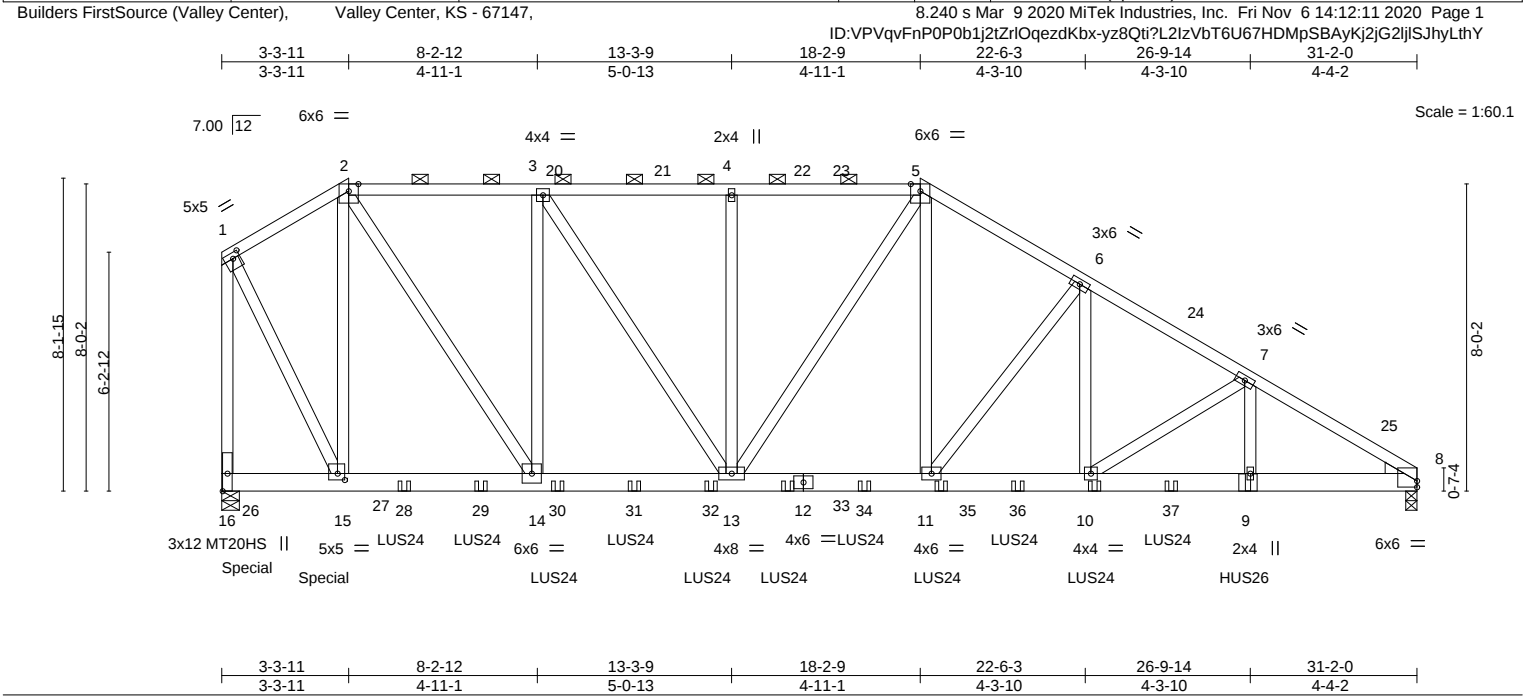
Address:

City, County:

State:

| No. | Seal#     | Truss Name | Date      |
|-----|-----------|------------|-----------|
| 41  | I43532857 | J1         | 11/9/2020 |
| 42  | I43532858 | J2         | 11/9/2020 |
| 43  | I43532859 | J3         | 11/9/2020 |
| 44  | I43532860 | J4         | 11/9/2020 |
| 45  | I43532861 | J5         | 11/9/2020 |
| 46  | I43532862 | J6         | 11/9/2020 |
| 47  | I43532863 | J7         | 11/9/2020 |
| 48  | I43532864 | J8         | 11/9/2020 |
| 49  | I43532865 | K1         | 11/9/2020 |
| 50  | I43532866 | K2         | 11/9/2020 |
| 51  | I43532867 | K3         | 11/9/2020 |
| 52  | I43532868 | LG1        | 11/9/2020 |
| 53  | I43532869 | LG2        | 11/9/2020 |
| 54  | I43532870 | LG3        | 11/9/2020 |
| 55  | I43532871 | LG4        | 11/9/2020 |
| 56  | I43532872 | LG5        | 11/9/2020 |
| 57  | I43532873 | LG6        | 11/9/2020 |
| 58  | I43532874 | PB1        | 11/9/2020 |
| 59  | I43532875 | PB2        | 11/9/2020 |
| 60  | I43532876 | PB3        | 11/9/2020 |
| 61  | I43532877 | V1         | 11/9/2020 |
| 62  | I43532878 | V2         | 11/9/2020 |
| 63  | I43532879 | V3         | 11/9/2020 |
| 64  | I43532880 | V4         | 11/9/2020 |
| 65  | I43532881 | V5         | 11/9/2020 |
| 66  | I43532882 | V6         | 11/9/2020 |
| 67  | I43532883 | V7         | 11/9/2020 |
| 68  | I43532884 | V8         | 11/9/2020 |
| 69  | I43532885 | V9         | 11/9/2020 |
| 70  | I43532886 | V10        | 11/9/2020 |
| 71  | I43532887 | V11        | 11/9/2020 |
| 72  | I43532888 | V12        | 11/9/2020 |
| 73  | I43532889 | V13        | 11/9/2020 |
| 74  | I43532890 | V14        | 11/9/2020 |
| 75  | I43532891 | V15        | 11/9/2020 |

|         |       |            |     |     |                          |           |
|---------|-------|------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type | Qty | Ply | Summit/23 Hawthorn       | 143532817 |
| 2531623 | A1    | Hip Girder | 1   | 2   | Job Reference (optional) |           |



|                      |                      |            |                               |                |             |
|----------------------|----------------------|------------|-------------------------------|----------------|-------------|
| <b>LOADING</b> (psf) | <b>SPACING</b>       | <b>CSI</b> | <b>DEFL.</b>                  | <b>PLATES</b>  | <b>GRIP</b> |
| TCLL (roof) 25.0     | 2-0-0                | TC 0.64    | in (loc) l/defl L/d           | MT20           | 197/144     |
| Snow (Pf) 20.0       | Plate Grip DOL 1.15  | BC 0.69    | Vert(LL) -0.15 11-13 >999 240 | MT20HS         | 148/108     |
| TCDL 10.0            | Lumber DOL 1.15      | WB 0.56    | Vert(CT) -0.26 11-13 >999 180 |                |             |
| BCLL 0.0             | Rep Stress Incr NO   | Matrix-MS  | Horz(CT) 0.06 8 n/a n/a       |                |             |
| BCDL 10.0            | Code IRC2018/TPI2014 |            |                               | Weight: 386 lb | FT = 20%    |

|                                                          |                                                                                                                                            |
|----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| <b>LUMBER-</b>                                           | <b>BRACING-</b>                                                                                                                            |
| TOP CHORD 2x4 SPF No.2                                   | TOP CHORD Structural wood sheathing directly applied or 3-11-14 oc purlins, except end verticals, and 2-0-0 oc purlins (5-3-15 max.): 2-5. |
| BOT CHORD 2x6 SPF No.2 *Except* 8-12: 2x6 SPF 2100F 1.8E | BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.                                                                             |
| WEBS 2x4 SPF No.2                                        |                                                                                                                                            |
| WEDGE                                                    |                                                                                                                                            |
| Right: 2x4 SP No.3                                       |                                                                                                                                            |

|                   |                                                                                                                                                                                         |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>REACTIONS.</b> | (size) 8=0-3-8, 16=0-5-8                                                                                                                                                                |
|                   | Max Horz 16=-240(LC 10)                                                                                                                                                                 |
|                   | Max Uplift 8=-681(LC 12), 16=-796(LC 12)                                                                                                                                                |
|                   | Max Grav 8=4530(LC 2), 16=5185(LC 2)                                                                                                                                                    |
| <b>FORCES.</b>    | (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.                                                                                                            |
| TOP CHORD         | 1-2=-2208/443, 2-3=-4068/777, 3-4=-5119/951, 4-5=-5121/952, 5-6=-5915/1050, 6-7=-7107/1174, 7-8=-7856/1216, 1-16=-4817/798                                                              |
| BOT CHORD         | 14-15=-242/1930, 13-14=-570/4066, 11-13=-719/5032, 10-11=-900/6100, 9-10=-998/6693, 8-9=-998/6693                                                                                       |
| WEBS              | 2-15=-2513/456, 2-14=-686/3974, 3-14=-2062/356, 3-13=-317/1913, 4-13=-602/90, 5-13=-215/421, 5-11=-414/2492, 6-11=-1807/279, 6-10=-217/1638, 7-10=-939/116, 7-9=-43/680, 1-15=-640/4108 |

|                                                                                                                                                                                                                                                                                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NOTES-</b>                                                                                                                                                                                                                                                                       |
| 1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:<br>Top chords connected as follows: 2x4 - 1 row at 0-7-0 oc.<br>Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.<br>Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.       |
| 2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.                            |
| 3) Unbalanced roof live loads have been considered for this design.                                                                                                                                                                                                                 |
| 4) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCCL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=31ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60 |
| 5) TCCL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10                                                                                                    |
| 6) Unbalanced snow loads have been considered for this design.                                                                                                                                                                                                                      |
| 7) Provide adequate drainage to prevent water ponding.                                                                                                                                                                                                                              |
| 8) All plates are MT20 plates unless otherwise indicated.                                                                                                                                                                                                                           |
| 9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.                                                                                                                                                                      |
| 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 8=681, 16=796.                                                                                                                             |

|         |       |            |     |     |                          |           |
|---------|-------|------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type | Qty | Ply | Summit/23 Hawthorn       | I43532817 |
| 2531623 | A1    | Hip Girder | 1   | 2   | Job Reference (optional) |           |

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Fri Nov 6 14:12:11 2020 Page 2  
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- NOTES-**
- 11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - 13) Use Simpson Strong-Tie LUS24 (4-10d Girder, 2-10d Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 4-9-2 from the left end to 24-9-2 to connect truss(es) to front face of bottom chord.
  - 14) Use Simpson Strong-Tie HUS26 (14-10d Girder, 4-10d Truss) or equivalent at 26-9-2 from the left end to connect truss(es) to front face of bottom chord.
  - 15) Fill all nail holes where hanger is in contact with lumber.
  - 16) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 486 lb down and 56 lb up at 0-9-2, and 482 lb down and 60 lb up at 2-9-2 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

- LOAD CASE(S)** Standard
- 1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
  - Uniform Loads (plf)
    - Vert: 1-2=-60, 2-5=-60, 5-8=-60, 16-17=-20
  - Concentrated Loads (lb)
    - Vert: 10=-420(F) 9=-832(F) 26=-430(F) 27=-426(F) 28=-420(F) 29=-420(F) 30=-420(F) 31=-420(F) 32=-420(F) 33=-420(F) 34=-420(F) 35=-420(F) 36=-420(F) 37=-420(F)

|         |       |            |     |     |                    |           |
|---------|-------|------------|-----|-----|--------------------|-----------|
| Job     | Truss | Truss Type | Qty | Ply | Summit/23 Hawthorn | 143532818 |
| 2531623 | A2    | Hip        | 1   | 1   |                    |           |

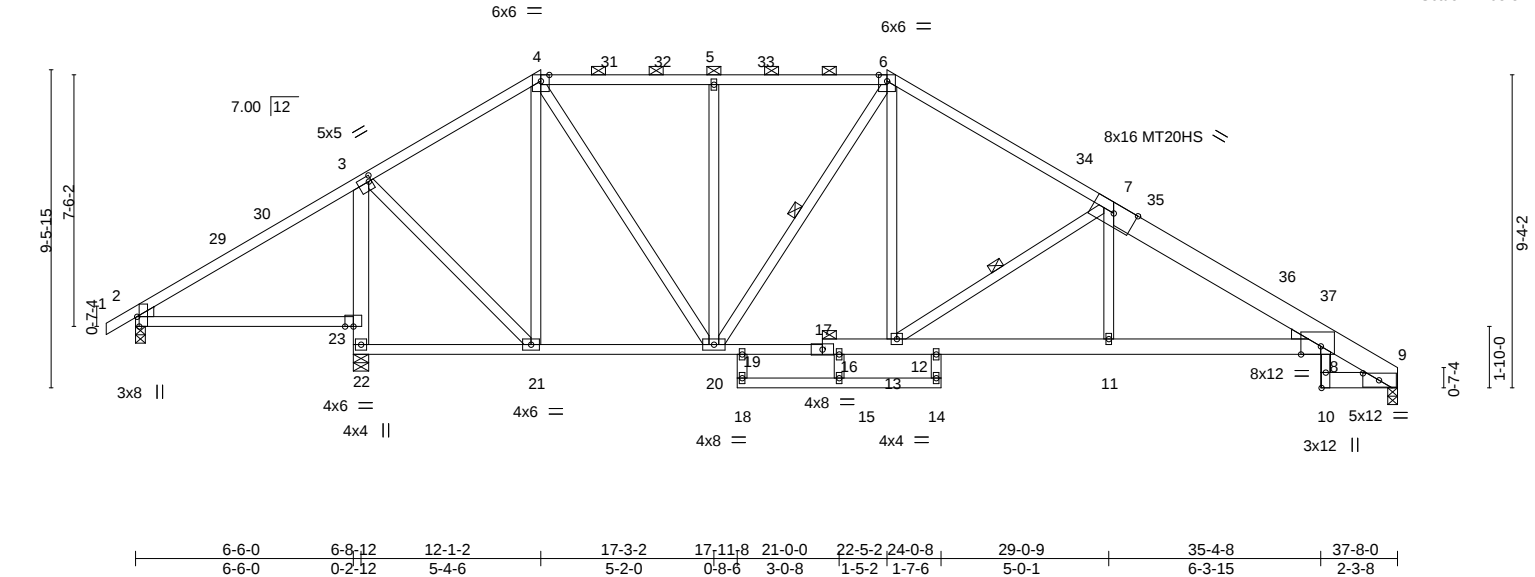
Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Fri Nov 6 14:12:24 2020 Page 1

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|         |       |        |        |         |        |        |        |        |        |
|---------|-------|--------|--------|---------|--------|--------|--------|--------|--------|
| -0-10-8 | 6-6-0 | 12-1-2 | 17-3-2 | 17-11-8 | 22-5-2 | 24-0-8 | 29-0-9 | 35-4-8 | 37-8-0 |
| 0-10-8  | 6-6-0 | 5-7-2  | 5-2-0  | 0-8-6   | 4-5-10 | 1-7-6  | 5-0-1  | 6-3-15 | 2-3-8  |

Scale = 1:68.8



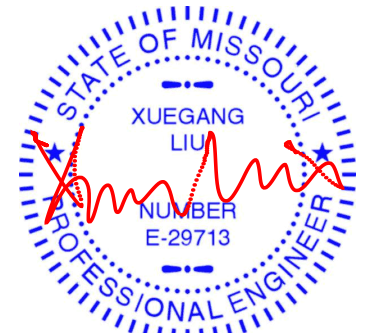
| Plate Offsets (X,Y)-- [2:0-0,2-0,0-4], [2:0-0,5-0,4-8], [2:0-3-8,Edge], [3:0-1-0,0-2-0], [8:0-7-2,Edge], [9:0-5-12,0-2-8] |      |                      |  |       |  |           |      |          |       |                     |      |        |                |         |          |  |
|---------------------------------------------------------------------------------------------------------------------------|------|----------------------|--|-------|--|-----------|------|----------|-------|---------------------|------|--------|----------------|---------|----------|--|
| LOADING (psf)                                                                                                             |      | SPACING-             |  | 2-0-0 |  | CSI.      |      | DEFL.    |       | in (loc) l/defl L/d |      | PLATES |                | GRIP    |          |  |
| TCLL (roof)                                                                                                               | 25.0 | Plate Grip DOL       |  | 1.15  |  | TC        | 0.94 | Vert(LL) | -0.21 | 8-11                | >999 | 240    | MT20           | 197/144 |          |  |
| Snow (Pf)                                                                                                                 | 20.0 | Lumber DOL           |  | 1.15  |  | BC        | 0.59 | Vert(CT) | -0.35 | 8-11                | >999 | 180    | MT20HS         | 148/108 |          |  |
| TCDL                                                                                                                      | 10.0 | Rep Stress Incr      |  | YES   |  | WB        | 0.98 | Horz(CT) | 0.17  | 9                   | n/a  | n/a    |                |         |          |  |
| BCLL                                                                                                                      | 0.0  | Code IRC2018/TPI2014 |  |       |  | Matrix-AS |      |          |       |                     |      |        | Weight: 212 lb |         | FT = 20% |  |
| BCDL                                                                                                                      | 10.0 |                      |  |       |  |           |      |          |       |                     |      |        |                |         |          |  |

|                                                                                      |                                                                                                     |
|--------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| <b>LUMBER-</b>                                                                       | <b>BRACING-</b>                                                                                     |
| TOP CHORD 2x4 SPF No.2 *Except*<br>7-9: 2x8 SP 2400F 2.0E                            | TOP CHORD Structural wood sheathing directly applied, except<br>2-0-0 oc purlins (5-0-5 max.): 4-6. |
| BOT CHORD 2x4 SPF No.2 *Except*<br>3-22,9-10: 2x6 SPF No.2, 8-17: 2x6 SPF 2100F 1.8E | BOT CHORD Rigid ceiling directly applied.                                                           |
| WEBS 2x4 SPF No.2                                                                    | WEBS 1 Row at midpt 7-13, 6-20                                                                      |
| WEDGE                                                                                | JOINTS 1 Brace at Jt(s): 16                                                                         |
| Left: 2x4 SPF No.2, Right: 2x4 SP No.3                                               |                                                                                                     |

|                   |                                        |
|-------------------|----------------------------------------|
| <b>REACTIONS.</b> | (size) 2=0-3-8, 22=0-5-8, 9=0-3-8      |
|                   | Max Horz 22=692(LC 39)                 |
|                   | Max Uplift 22=203(LC 16), 9=97(LC 16)  |
|                   | Max Grav 22=2402(LC 39), 9=1404(LC 39) |

|                |                                                                                                                                                                           |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>FORCES.</b> | (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.                                                                                              |
| TOP CHORD      | 2-3=-89/849, 3-4=-726/141, 4-5=-1116/175, 5-6=-1116/176, 6-7=-1538/185,<br>7-8=-2542/193, 8-9=-946/85                                                                     |
| BOT CHORD      | 22-23=-2348/223, 3-23=-2219/238, 21-22=-633/189, 20-21=0/609, 19-20=0/1207,<br>16-19=0/1142, 13-16=0/1142, 12-13=-72/2152, 11-12=-74/2221, 8-11=-76/2209,<br>8-10=-25/475 |
| WEBS           | 3-21=-90/1378, 4-21=-849/109, 6-13=-25/729, 7-13=-1276/152, 7-11=0/348,<br>5-20=-631/82, 6-20=-556/41, 4-20=-85/938                                                       |

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=38ft; eave=5ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) -0-10-8 to 2-10-11, Interior(1) 2-10-11 to 12-1-2, Exterior(2R) 12-1-2 to 17-3-2, Interior(1) 17-3-2 to 22-5-2, Exterior(2R) 22-5-2 to 27-9-1, Interior(1) 27-9-1 to 37-6-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
  - Provide adequate drainage to prevent water ponding.
  - All plates are MT20 plates unless otherwise indicated.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - Bearing at joint(s) 9 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.



November 9,2020

Continued on page 2

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**  
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

**MiTek**  
 16023 Swingley Ridge Rd  
 Chesterfield, MO 63017

|                          |       |            |     |     |                    |
|--------------------------|-------|------------|-----|-----|--------------------|
| Job                      | Truss | Truss Type | Qty | Ply | Summit/23 Hawthorn |
| 2531623                  | A2    | Hip        | 1   | 1   | I43532818          |
| Job Reference (optional) |       |            |     |     |                    |

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

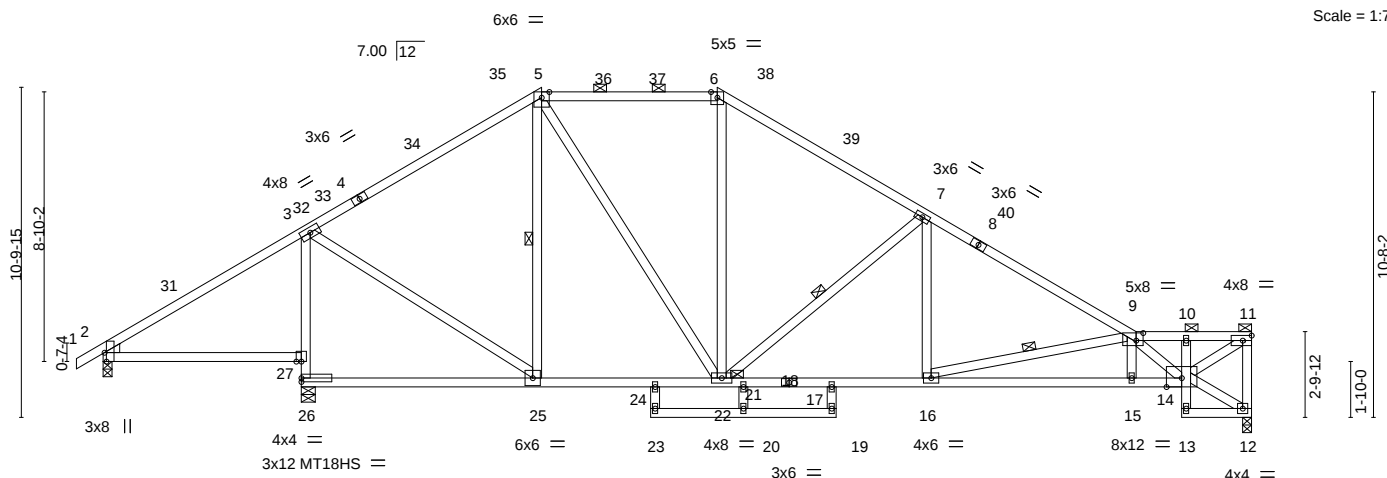
8.240 s Mar 9 2020 MiTek Industries, Inc. Fri Nov 6 14:12:24 2020 Page 2  
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- NOTES-**
- 11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 9 except (jt=lb) 22=203.
  - 12) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 2.
  - 13) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 14) 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.
  - 15) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

8.240 s Mar 9 2020 MiTek Industries, Inc. Fri Nov 6 14:12:28 2020 Page 1  
ID:VPVvEnP0P0b1i2tZrIQezdKhx-vEgrBWC?2X6574vIcC5CYPr?in4sXPvYfNspCvI thH

|        |       |        |         |         |         |         |         |         |        |        |
|--------|-------|--------|---------|---------|---------|---------|---------|---------|--------|--------|
| 0-10-8 | 6-6-0 | 14-4-9 | 17-11-8 | 20-1-11 | 24-0-8  | 27-0-2  | 28-11-9 | 33-10-9 | 35-4-8 | 37-8-0 |
| 0-10-8 | 6-6-0 | 7-10-9 | 3-6-15  | 2-2-3   | 3-10-13 | 2-11-10 | 1-11-6  | 4-11-1  | 5-5-15 | 2-3-8  |

Scale = 1:75.6



|                       |                |               |               |                  |         |        |        |         |         |        |        |
|-----------------------|----------------|---------------|---------------|------------------|---------|--------|--------|---------|---------|--------|--------|
|                       | 6-6-0          | 6-8-12        | 14-4-9        | 17-11-8          | 20-1-11 | 21-0-0 | 24-0-8 | 27-0-2  | 33-10-9 | 35-4-8 | 37-8-0 |
|                       | 6-6-0          | 0-2-12        | 7-7-13        | 3-6-15           | 2-2-3   | 0-10-5 | 3-0-8  | 2-11-10 | 6-10-7  | 1-5-15 | 2-3-8  |
| Plate Offsets (X,Y)-- | [2:0-3-8.Edøe] | [2:0-5-0-4-8] | [2:0-2-0-0-4] | [9:0-2-12-0-3-0] |         |        |        |         |         |        |        |

[illegible]

**LUMBER-**

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2  
WEDGE  
Left: 2x4 SPF No.2

**BRACING-**

|           |                                                                                                                  |
|-----------|------------------------------------------------------------------------------------------------------------------|
| TOP CHORD | Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (4-0-14 max.): 5-6, 9-11. |
| BOT CHORD | Rigid ceiling directly applied.                                                                                  |
| WEBS      | 1 Row at midpt 5-25, 9-16, 7-22                                                                                  |
| JOINTS    | 1 Brace at Jt(s): 11, 21                                                                                         |

### REACTIONS.

(size) 12=0-3-8, 2=0-3-8, 26=0-5-8  
 Max Horz 26=531(LC 29)  
 Max Uplift 12=-100(LC 16), 26=-201(LC 16)  
 Max Grav 12=1440(LC 41), 26=2489(LC 41)

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

|           |                                                                                                                                                                    |
|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TOP CHORD | 2-3=-92/706, 3-5=-1084/201, 5-6=-1116/251, 6-7=-1498/251, 7-9=-2499/255, 9-10=-1794/167, 10-11=-1725/164, 11-12=-1376/151                                          |
| BOT CHORD | 26-27=-2415/290, 3-27=-2310/305, 25-26=-520/184, 24-25=-35/748, 22-24=-29/690, 21-22=-183/1972, 17-21=-183/1972, 16-17=-189/2030, 15-16=-329/3312, 14-15=-334/3306 |
| WEBS      | 3-25=-88/1394, 5-25=-614/108, 5-22=-83/693, 6-22=-7/262, 9-14=-2062/187, 11-14=-217/2142, 9-16=-1312/152, 7-16=0/467, 7-22=-1177/174                               |

**NOTES-**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=38ft; eave=5ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) -0-10-8 to 2-10-11, Interior(1) 2-10-11 to 14-4-9, Exterior(2R) 14-4-9 to 18-1-12, Interior(1) 18-1-12 to 20-1-11, Exterior(2R) 20-1-11 to 23-10-15, Interior(1) 23-10-15 to 37-6-4 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 6) Provide adequate drainage to prevent water ponding.
- 7) All plates are MT20 plates unless otherwise indicated.
- 8) All plates are 2x4 MT20 unless otherwise indicated.
- 9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 12 except (jt=lb) 26=201.
- 11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 2.
- 12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and Controlled Wood Standard ANSI/TPI 1.



November 9.2020



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16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|         |       |              |     |     |                          |           |
|---------|-------|--------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type   | Qty | Ply | Summit/23 Hawthorn       | I43532819 |
| 2531623 | A3    | Roof Special | 1   | 1   | Job Reference (optional) |           |

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

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Job Reference (optional)

ID:VPVqyEnP0P0b1j2tZrIQgezdkbx-nO17iZHmdMtEr?MyzTCcngv2wD8nx54O2ogAdsvLthB

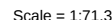


Plate Offsets (X,Y)-- [2:0-0,2,0-0,4], [2:0-0-5,0-4-8], [2:0-3-8,Edge], [5:0-4-0,0-2-4], [7:0-9-12,0-2-4], [10:0-3-0,Edge], [15:0-5-8,0-5-4], [17:0-3-12,0-3-4], [21:0-2-4,0-2-0], [22:0-3-8,0-1-8]

**BRACING-**

|           |                                                                                                                   |
|-----------|-------------------------------------------------------------------------------------------------------------------|
| TOP CHORD | Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (3-2-11 max.): 5-7, 10-12. |
| BOT CHORD | Rigid ceiling directly applied. Except:<br>1 Row at midpt 6-21                                                    |
| WEBS      | 1 Row at midpt 5-22, 7-21, 7-19                                                                                   |

(size) 13=0-3-8, 2=0-3-8, 23=0-5-8  
 Max Horz 23=551(LC 53)  
 Max Uplift 13=-99(LC 16), 23=-202(LC 16)  
 Max Grav 13=1357(LC 41), 23=2430(LC 41)

|           |                                                                                                                                                                                                 |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TOP CHORD | 2-3=-95/794, 3-5=-795/181, 5-6=-1024/238, 6-7=-1017/238, 7-8=-1683/315<br>8-9=-1778/250, 9-10=-3565/330, 10-11=-3211/258, 11-12=-1888/191, 12-13=-1279/153                                      |
| BOT CHORD | 23-24=-2369/283, 3-24=-2248/297, 22-23=-562/195, 21-22=-31/645, 6-21=-512/84,<br>8-17=-384/126, 16-17=-231/2071, 15-16=-255/2008, 11-15=-1048/60                                                |
| WEBS      | 3-22=-101/1356, 5-22=-727/117, 5-21=-100/778, 19-21=-66/998, 7-19=-648/55,<br>17-19=-17/1130, 7-17=-168/1551, 9-17=-862/153, 9-16=-71/1294, 10-16=-1981/218,<br>11-16=-761/592, 12-15=-248/2225 |

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TC DL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=38ft; eave=5ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) -0-10-8 to 2-10-11, Interior(1) 2-10-11 to 12-11-9, Exterior(2R) 12-11-9 to 16-8-12, Interior(1) 16-8-12 to 21-6-11, Exterior(2R) 21-6-11 to 25-3-15, Interior(1) 25-3-15 to 37-6-4 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) TCDL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 6) Provide adequate drainage to prevent water ponding.
- 7) All plates are MT20 plates unless otherwise indicated.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 13 except (jt=lb) 23=202.
- 10) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 2.
- 11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



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|         |       |                |     |     |                          |           |
|---------|-------|----------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type     | Qty | Ply | Summit/23 Hawthorn       | I43532820 |
| 2531623 | A4    | Piggyback Base | 1   | 1   | Job Reference (optional) |           |

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

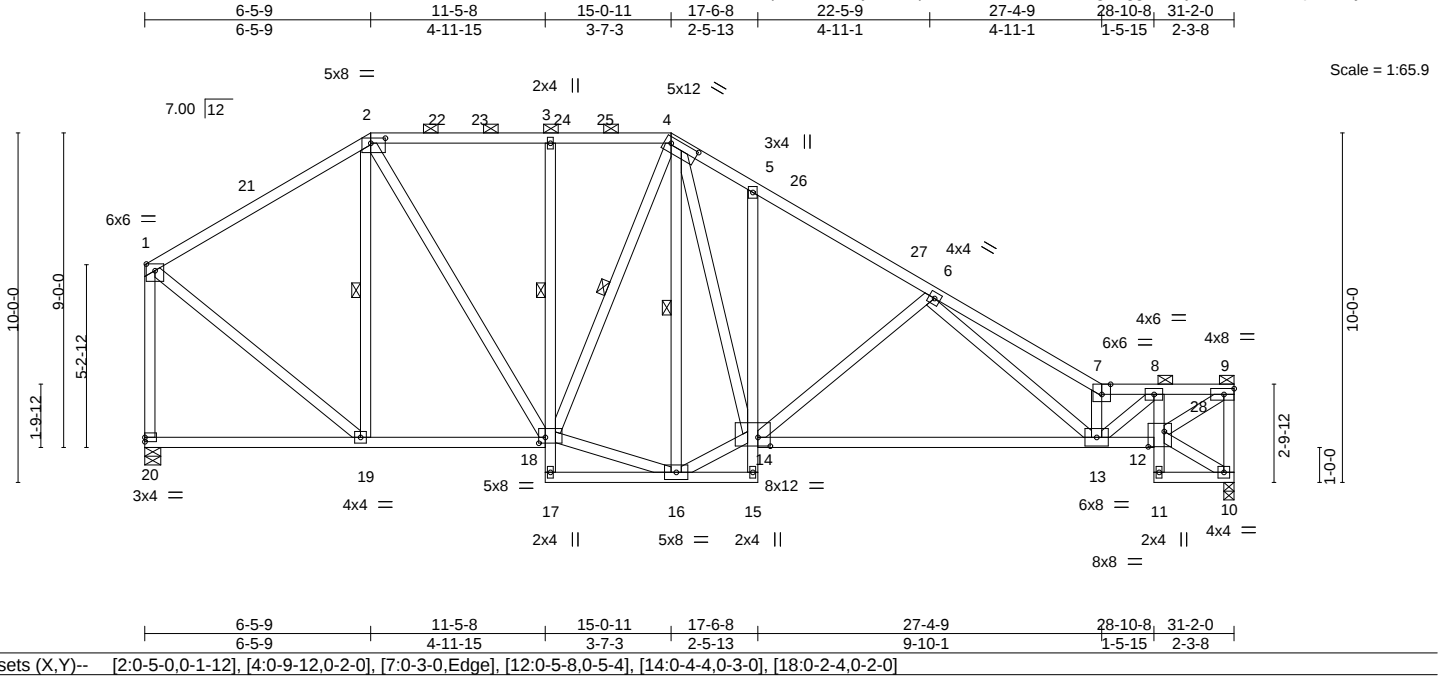
|         |       |                |     |     |                    |           |
|---------|-------|----------------|-----|-----|--------------------|-----------|
| Job     | Truss | Truss Type     | Qty | Ply | Summit/23 Hawthorn | I43532821 |
| 2531623 | A5    | Piggyback Base | 3   | 1   |                    |           |

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

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Job Reference (optional)



| Plate Offsets (X,Y)-- [2:0-5-0,0-1-12], [4:0-9-12,0-2-0], [7:0-3-0,Edge], [12:0-5-8,0-5-4], [14:0-4-4,0-3-0], [18:0-2-4,0-2-0] |      |                      |      |           |      |                |             |            |     |                |          |
|--------------------------------------------------------------------------------------------------------------------------------|------|----------------------|------|-----------|------|----------------|-------------|------------|-----|----------------|----------|
| LOADING (psf)                                                                                                                  |      | SPACING- 2-0-0       |      | CSI.      |      | DEFL. in (loc) |             | L/defl L/d |     | PLATES         | GRIP     |
| TCLL (roof)                                                                                                                    | 25.0 | Plate Grip DOL       | 1.15 | TC        | 0.86 | Vert(LL)       | -0.25 13-14 | >999       | 240 | MT20           | 197/144  |
| Snow (Pf)                                                                                                                      | 20.0 | Lumber DOL           | 1.15 | BC        | 0.80 | Vert(CT)       | -0.57 13-14 | >652       | 180 |                |          |
| TCDL                                                                                                                           | 10.0 | Rep Stress Incr      | YES  | WB        | 0.69 | Horz(CT)       | 0.15 10     | n/a        | n/a |                |          |
| BCLL                                                                                                                           | 0.0  | Code IRC2018/TPI2014 |      | Matrix-AS |      |                |             |            |     | Weight: 194 lb | FT = 20% |
| BCDL                                                                                                                           | 10.0 |                      |      |           |      |                |             |            |     |                |          |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (3-1-1 max.): 2-4, 7-9.  
BOT CHORD Rigid ceiling directly applied. Except:  
WEBS 1 Row at midpt 3-18  
1 Row at midpt 2-19, 4-18, 4-16

#### REACTIONS.

(size) 10=0-3-8, 20=0-5-8  
Max Horz 20=-253(LC 14)  
Max Uplift 10=-111(LC 16), 20=-114(LC 16)  
Max Grav 10=1461(LC 40), 20=1499(LC 40)

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

TOP CHORD 1-2=-1120/211, 2-3=-1163/258, 3-4=-1158/258, 4-5=-1905/333, 5-6=-2002/269,  
6-7=-3841/353, 7-8=-3464/279, 8-9=-2040/204, 9-10=-1380/162, 1-20=-1438/189  
BOT CHORD 18-19=-61/831, 3-18=-505/78, 5-14=-380/121, 13-14=-251/2276, 12-13=-271/2172,  
8-12=-1126/67  
WEBS 2-19=-507/137, 2-18=-95/720, 16-18=-81/1172, 4-18=-108/293, 4-16=-762/66,  
14-16=-35/1295, 4-14=-175/1633, 6-14=-876/152, 6-13=-69/1343, 7-13=-2114/229,  
8-13=-77/1710, 9-12=-264/2404, 1-19=-120/1013

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=31ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) 0-1-12 to 3-3-2, Interior(1) 3-3-2 to 6-5-9, Exterior(2R) 6-5-9 to 9-7-0, Interior(1) 9-7-0 to 15-0-11, Exterior(2R) 15-0-11 to 18-2-2, Interior(1) 18-2-2 to 31-0-4 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 10=111, 20=114.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



November 9, 2020

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**

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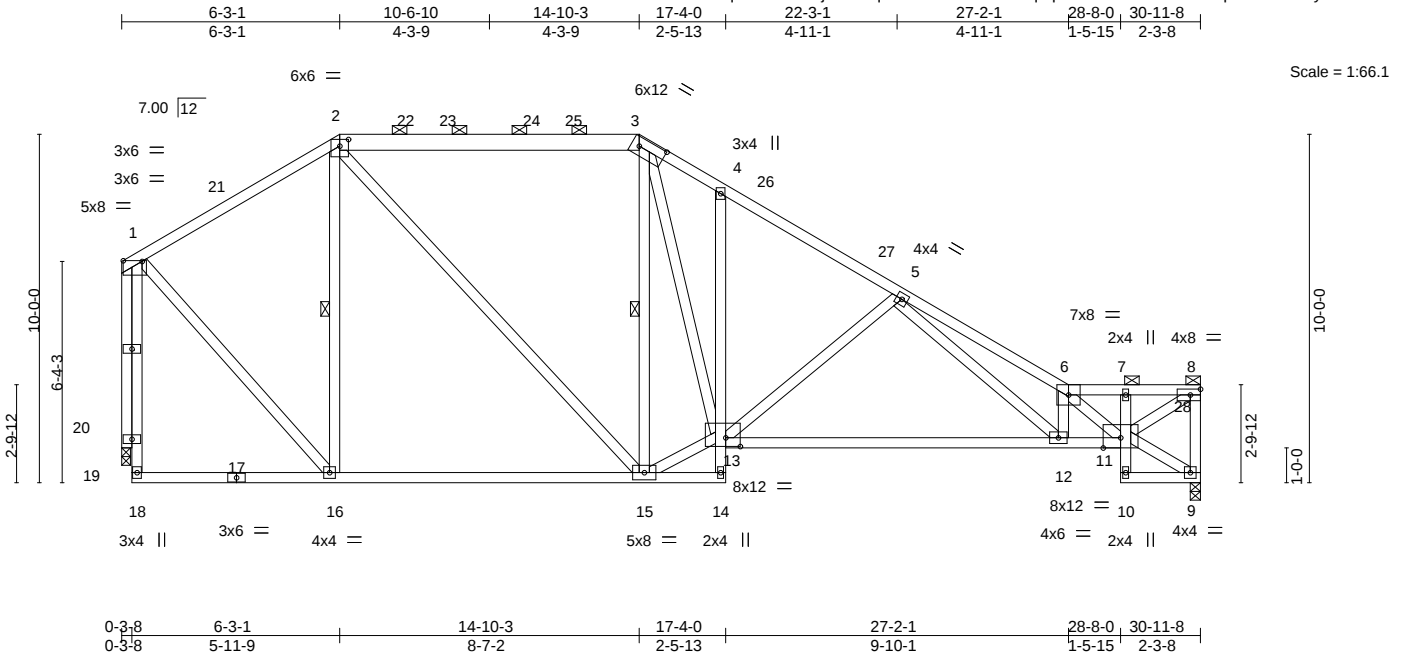
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|         |       |                |     |     |                    |           |
|---------|-------|----------------|-----|-----|--------------------|-----------|
| Job     | Truss | Truss Type     | Qty | Ply | Summit/23 Hawthorn | 143532822 |
| 2531623 | A6    | Piggyback Base | 1   | 1   |                    |           |

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ID:VPVqvFnP0P0b1j2tZr1OqezdKbx-YxW8NINlqt6pEzRR8LU6MERUSsupfct2mbvOyLth3



Scale = 1:66.1

| Plate Offsets (X,Y)-- [1:0-6-8,Edge], [2:0-3-0,0-2-5], [3:0-9-4,0-3-0], [13:0-5-0,0-3-0] |      |                      |      |           |      |                           |             |             |     |                |          |
|------------------------------------------------------------------------------------------|------|----------------------|------|-----------|------|---------------------------|-------------|-------------|-----|----------------|----------|
| LOADING (psf)                                                                            |      | SPACING- 2-0-0       |      | CSI.      |      | DEFL. in (loc) l/defl L/d |             | PLATES GRIP |     |                |          |
| TCLL (roof)                                                                              | 25.0 | Plate Grip DOL       | 1.15 | TC        | 0.82 | Vert(LL)                  | -0.25 12-13 | >999        | 240 | MT20           | 197/144  |
| Snow (Pf)                                                                                | 20.0 | Lumber DOL           | 1.15 | BC        | 0.88 | Vert(CT)                  | -0.55 12-13 | >665        | 180 |                |          |
| TCDL                                                                                     | 10.0 | Rep Stress Incr      | YES  | WB        | 0.95 | Horz(CT)                  | 0.16 9      | n/a         | n/a |                |          |
| BCLL                                                                                     | 0.0  | Code IRC2018/TPI2014 |      | Matrix-AS |      |                           |             |             |     | Weight: 186 lb | FT = 20% |
| BCDL                                                                                     | 10.0 |                      |      |           |      |                           |             |             |     |                |          |

#### LUMBER-

TOP CHORD 2x4 SPF No.2 \*Except\*  
2-3: 2x6 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2  
OTHERS 2x4 SPF No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (3-9-12 max.): 2-3, 6-8.  
BOT CHORD Rigid ceiling directly applied.  
WEBS 1 Row at midpt 2-16, 3-15

#### REACTIONS.

(size) 9=0-3-8, 20=0-3-0  
Max Horz 20=178(LC 15)  
Max Uplift 9=99(LC 16), 20=123(LC 16)  
Max Grav 9=1452(LC 41), 20=1446(LC 41)

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

TOP CHORD 1-2=-983/179, 2-3=-1168/245, 3-4=-1866/295, 4-5=-1982/236, 5-6=-3827/327,  
6-7=-1808/176, 7-8=-1736/166, 8-9=-1373/146  
BOT CHORD 15-16=-18/734, 4-13=-346/95, 12-13=-221/2257, 11-12=-277/3317  
WEBS 1-16=-85/952, 2-16=-555/127, 2-15=-80/651, 3-15=-848/123, 13-15=0/1317,  
3-13=-159/1558, 5-13=-876/154, 5-12=-72/1349, 6-12=-715/150, 6-11=-2057/102,  
8-11=-213/2158, 1-20=-1449/164

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=31ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) 0-5-4 to 3-6-6, Interior(1) 3-6-6 to 6-3-1, Exterior(2R) 6-3-1 to 9-4-4, Interior(1) 9-4-4 to 14-10-3, Exterior(2R) 14-10-3 to 17-11-6, Interior(1) 17-11-6 to 30-9-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Bearing at joint(s) 20 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 9 except (jt=lb) 20=123.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



November 9,2020

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Chesterfield, MO 63017

|         |       |                |     |     |                    |           |
|---------|-------|----------------|-----|-----|--------------------|-----------|
| Job     | Truss | Truss Type     | Qty | Ply | Summit/23 Hawthorn | 143532823 |
| 2531623 | A7    | Piggyback Base | 4   | 1   |                    |           |

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

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|       |        |         |        |        |        |                 |
|-------|--------|---------|--------|--------|--------|-----------------|
| 6-5-9 | 10-9-2 | 15-0-11 | 17-6-8 | 22-5-9 | 27-4-9 | 28-10-8,30-10-8 |
| 6-5-9 | 4-3-9  | 4-3-9   | 2-5-13 | 4-11-1 | 4-11-1 | 1-5-15 2-0-0    |

Scale = 1:65.5

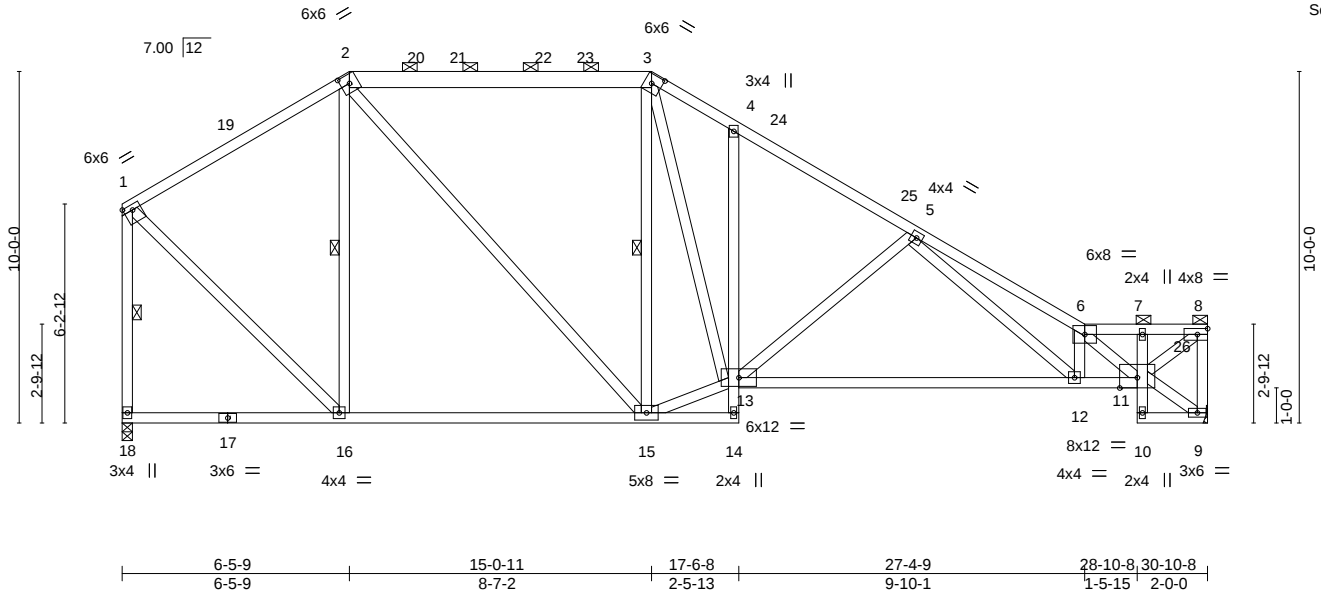


Plate Offsets (X,Y)-- [1:Edge,0-1-12], [2:0-3-0,0-2-15], [3:0-3-8,0-3-0]

|                      |                      |              |             |              |           |              |               |            |                |             |
|----------------------|----------------------|--------------|-------------|--------------|-----------|--------------|---------------|------------|----------------|-------------|
| <b>LOADING</b> (psf) | <b>SPACING-</b>      | <b>2-0-0</b> | <b>CSI.</b> | <b>DEFL.</b> | <b>in</b> | <b>(loc)</b> | <b>l/defl</b> | <b>L/d</b> | <b>PLATES</b>  | <b>GRIP</b> |
| TCLL (roof) 25.0     | Plate Grip DOL       | 1.15         | TC 0.82     | Vert(LL)     | -0.24     | 12-13        | >999          | 240        | MT20           | 197/144     |
| Snow (Pf) 20.0       | Lumber DOL           | 1.15         | BC 0.86     | Vert(CT)     | -0.54     | 12-13        | >686          | 180        |                |             |
| TCDL 10.0            | Rep Stress Incr      | YES          | WB 0.65     | Horz(CT)     | 0.14      | 9            | n/a           | n/a        |                |             |
| BCLL 0.0             | Code IRC2018/TPI2014 |              | Matrix-AS   |              |           |              |               |            |                |             |
| BCDL 10.0            |                      |              |             |              |           |              |               |            | Weight: 180 lb | FT = 20%    |

#### LUMBER-

TOP CHORD 2x4 SPF No.2 \*Except\*  
2-3: 2x6 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (3-10-5 max.): 2-3, 6-8.  
BOT CHORD Rigid ceiling directly applied.  
WEBS 1 Row at midpt 2-16, 3-15, 1-18

#### REACTIONS.

(size) 9=Mechanical, 18=0-3-8  
Max Horz 18=-277(LC 14)  
Max Uplift 9=-109(LC 16), 18=-114(LC 16)  
Max Grav 9=1460(LC 40), 18=1485(LC 40)

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

TOP CHORD 1-2=-1015/213, 2-3=-1148/255, 3-4=-1852/324, 4-5=-1964/272, 5-6=-3590/337,  
6-7=-1562/159, 7-8=-1493/148, 8-9=-1379/164, 1-18=-1432/192  
BOT CHORD 15-16=-667/51, 4-13=-352/98, 12-13=-251/2203, 11-12=-297/3098  
WEBS 2-16=-543/169, 2-15=-93/616, 3-15=-776/110, 13-15=-27/1297, 3-13=-164/1486,  
5-13=-825/148, 5-12=-50/1143, 6-12=-575/135, 6-11=-2094/131, 8-11=-223/1978,  
1-16=-132/1005

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=31ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) 0-1-12 to 3-2-13, Interior(1) 3-2-13 to 6-5-9, Exterior(2R) 6-5-9 to 9-6-10, Interior(1) 9-6-10 to 15-0-11, Exterior(2R) 15-0-11 to 18-1-12, Interior(1) 18-1-12 to 30-8-12 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 9=109, 18=114.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



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**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



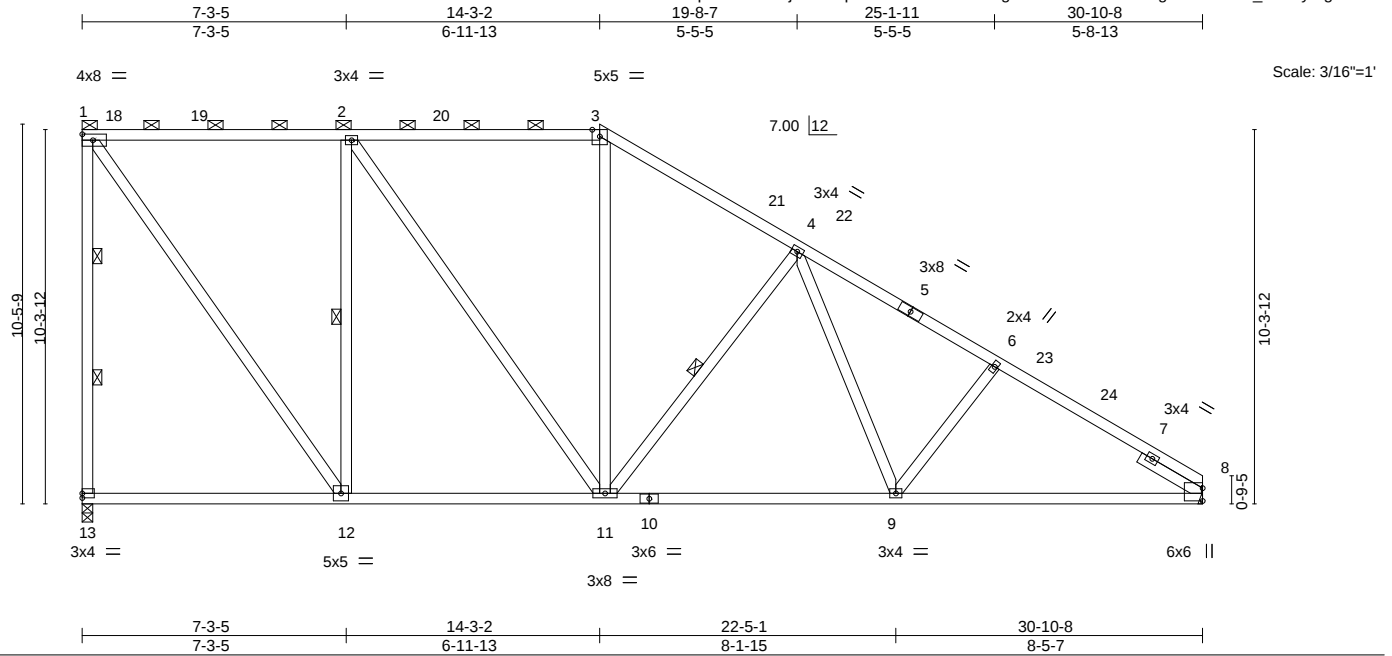
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|         |       |            |     |     |                    |           |
|---------|-------|------------|-----|-----|--------------------|-----------|
| Job     | Truss | Truss Type | Qty | Ply | Summit/23 Hawthorn | 143532824 |
| 2531623 | A9    | Half Hip   | 1   | 1   |                    |           |

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

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| LOADING (psf)    | SPACING-             | CS.       | DEFL.          | in   | (loc) | l/defl | L/d | PLATES | GRIP    |
|------------------|----------------------|-----------|----------------|------|-------|--------|-----|--------|---------|
| TCLL (roof) 25.0 | 2-0-0                | TC 0.84   | Vert(LL) -0.14 | 9-11 | >999  | 240    |     | MT20   | 197/144 |
| Snow (Pf) 20.0   | Plate Grip DOL 1.15  | BC 0.81   | Vert(CT) -0.27 | 9-11 | >999  | 180    |     |        |         |
| TCDL 10.0        | Lumber DOL 1.15      | WB 0.50   | Horz(CT) 0.07  | 8    | n/a   | n/a    |     |        |         |
| BCLL 0.0         | Rep Stress Incr YES  | Matrix-AS |                |      |       |        |     |        |         |
| BCDL 10.0        | Code IRC2018/TPI2014 |           |                |      |       |        |     |        |         |

Weight: 159 lb FT = 20%

#### LUMBER-

TOP CHORD 2x4 SPF No.2 \*Except\*  
1-3: 2x4 SPF 1650F 1.5E  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2  
SLIDER Right 2x4 SPF No.2 2-0-0

#### BRACING-

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (5-10-6 max.): 1-3.  
Rigid ceiling directly applied.  
BOT CHORD  
WEBS 1 Row at midpt 2-12, 4-11  
2 Rows at 1/3 pts 1-13

#### REACTIONS.

(size) 13=0-3-8, 8=Mechanical  
Max Horz 13=-346(LC 14)  
Max Uplift 13=-135(LC 12), 8=-104(LC 16)  
Max Grav 13=1589(LC 34), 8=1480(LC 35)

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

TOP CHORD 1-13=-1520/164, 1-2=-879/185, 2-3=-1079/212, 3-4=-1393/213, 4-6=-2102/216,  
6-8=-2281/195  
BOT CHORD 12-13=-232/309, 11-12=0/879, 9-11=-29/1565, 8-9=-105/1893  
WEBS 1-12=-140/1482, 2-12=-1066/195, 2-11=-117/668, 3-11=-5/306, 4-11=-816/137,  
4-9=-23/403, 6-9=-303/113

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=31ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) 0-1-12 to 3-2-13, Interior(1) 3-2-13 to 14-3-2, Exterior(2R) 14-3-2 to 18-7-9, Interior(1) 18-7-9 to 30-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 13=135, 8=104.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



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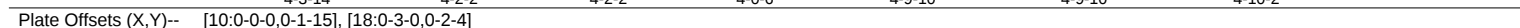
**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



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Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Grain Crain Hwy, Suite 203 Waldorf, MD 20601



|         |       |                 |     |     |                          |
|---------|-------|-----------------|-----|-----|--------------------------|
| Job     | Truss | Truss Type      | Qty | Ply | Summit/23 Hawthorn       |
| 2531623 | A10   | HALF HIP GIRDER | 1   | 2   | I43532825                |
|         |       |                 |     |     | Job Reference (optional) |

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

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ID:VPVqvFnPOP0b1j2tZrIOqezdKbx-BiBqmn6\_w36DAslD8WyKDjKiGaRkfh0NqdRR7gyLthP

- NOTES-**
- 11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - 13) Use Simpson Strong-Tie LUS24 (4-10d Girder, 2-10d Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 0-9-2 from the left end to 24-9-2 to connect truss(es) to back face of bottom chord.
  - 14) Use Simpson Strong-Tie HUS26 (14-10d Girder, 4-10d Truss) or equivalent at 26-9-2 from the left end to connect truss(es) to back face of bottom chord.
  - 15) Fill all nail holes where hanger is in contact with lumber.

- LOAD CASE(S)** Standard
- 1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
    - Uniform Loads (plf)
      - Vert: 1-6=-60, 6-11=-60, 19-20=-20
    - Concentrated Loads (lb)
      - Vert: 17=-483(B) 16=-483(B) 14=-490(B) 27=-494(B) 28=-490(B) 29=-490(B) 30=-490(B) 31=-483(B) 32=-483(B) 33=-473(B) 34=-473(B) 35=-473(B) 36=-473(B) 37=-893(B)

|         |       |                         |     |     |                    |           |
|---------|-------|-------------------------|-----|-----|--------------------|-----------|
| Job     | Truss | Truss Type              | Qty | Ply | Summit/23 Hawthorn | I43532826 |
| 2531623 | B1    | Common Structural Gable | 1   | 1   |                    |           |

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Fri Nov 6 14:12:51 2020 Page 1

ID:VPVqvFnP0P0b1j2tZrIOqezdKbx-nfZYGURdb0qOd9ASX?c\_F61Q4?nQnDxyyRaiNyltgw

0-10-8 8-1-12 16-0-0 23-10-4 32-0-0 32-10-8  
0-10-8 8-1-12 7-10-4 7-10-4 8-1-12 0-10-8

6x6 =

Scale = 1:72.0

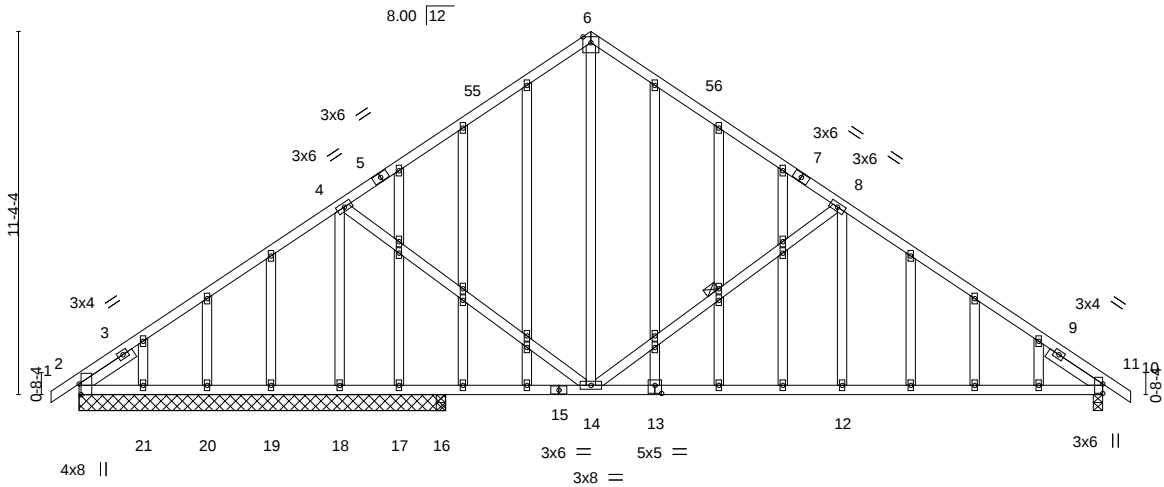


Plate Offsets (X,Y)-- [2:0-4-1,Edge], [10:Edge,0-0-0], [13:0-2-8,0-3-0]

| LOADING (psf)    | SPACING-             | CSL       | DEFL.          | in (loc) | L/defl | L/d | PLATES | GRIP    |
|------------------|----------------------|-----------|----------------|----------|--------|-----|--------|---------|
| TCLL (roof) 25.0 | 2-0-0                | TC 0.61   | Vert(LL) -0.07 | 12-14    | >999   | 240 | MT20   | 197/144 |
| Snow (Pf) 20.0   | Plate Grip DOL 1.15  | BC 0.51   | Vert(CT) -0.15 | 12-14    | >999   | 180 |        |         |
| TCDL 10.0        | Lumber DOL 1.15      | WB 0.68   | Horz(CT) 0.01  | 10       | n/a    | n/a |        |         |
| BCLL 0.0         | Rep Stress Incr YES  | Matrix-AS |                |          |        |     |        |         |
| BCDL 10.0        | Code IRC2018/TPI2014 |           |                |          |        |     |        |         |

Weight: 208 lb FT = 20%

**LUMBER-**  
TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2  
OTHERS 2x4 SPF No.2  
SLIDER Left 2x4 SPF No.2 2-0-0, Right 2x4 SPF No.2 2-0-0

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied.  
BOT CHORD Rigid ceiling directly applied.  
WEBS 1 Row at midpt 8-14

**REACTIONS.** All bearings 11-5-8 except (jt=length) 10=0-3-8, 16=0-3-8.  
(lb) - Max Horz 2=248(LC 13)  
Max Uplift All uplift 100 lb or less at joint(s) 2, 18, 17, 20, 21 except 10=135(LC 14)  
Max Grav All reactions 250 lb or less at joint(s) 17, 19, 20, 16, 2 except 2=271(LC 30), 18=1200(LC 2), 10=1140(LC 2), 21=330(LC 24)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-4=-202/520, 4-6=-819/246, 6-8=-819/246, 8-10=-1178/219  
BOT CHORD 12-14=-65/1087, 10-12=-65/1087  
WEBS 6-14=-104/290, 8-14=-697/178, 8-12=0/335, 4-14=0/522, 4-18=-1157/128

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=32ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) -0-10-8 to 2-3-14, Interior(1) 2-3-14 to 16-0-0, Exterior(2R) 16-0-0 to 19-2-6, Interior(1) 19-2-6 to 32-10-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 18, 17, 20, 21, 2 except (jt=lb) 10=135.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 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.



November 9,2020

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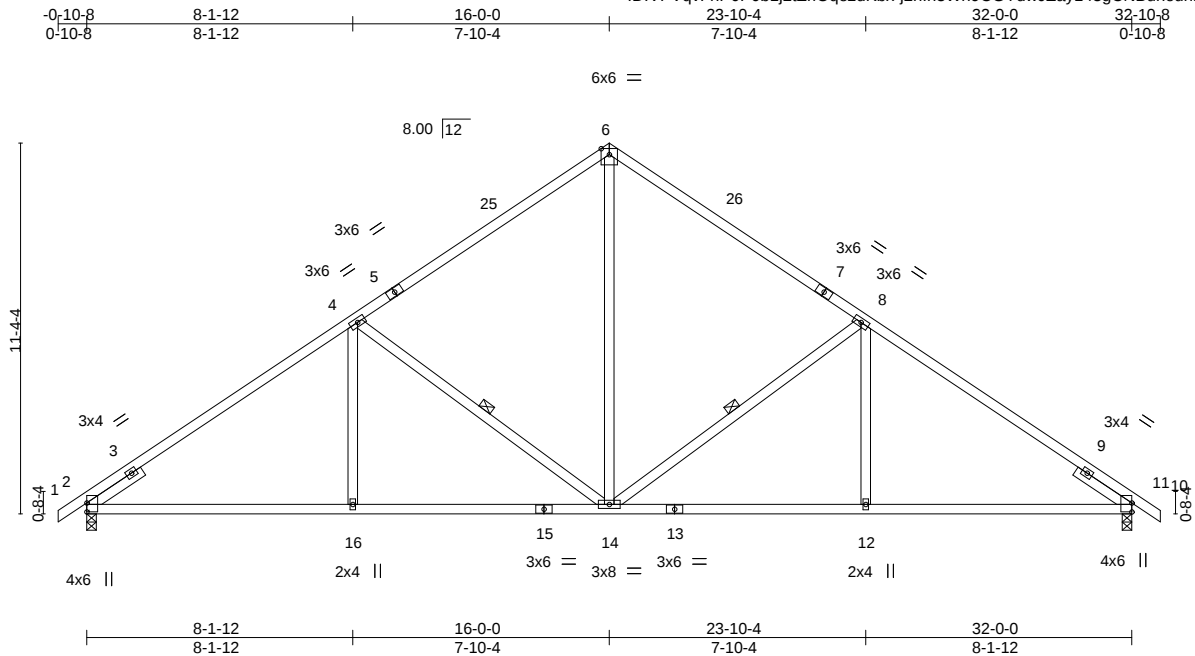


16023 Swingley Ridge Rd  
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|         |       |            |     |     |                          |           |
|---------|-------|------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type | Qty | Ply | Summit/23 Hawthorn       | 143532827 |
| 2531623 | B2    | Common     | 8   | 1   | Job Reference (optional) |           |

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

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|                                                       |      |                      |      |           |      |                           |       |       |      |             |                |          |
|-------------------------------------------------------|------|----------------------|------|-----------|------|---------------------------|-------|-------|------|-------------|----------------|----------|
| Plate Offsets (X,Y)-- [2:Edge,0-0-0], [10:Edge,0-0-0] |      |                      |      |           |      |                           |       |       |      |             |                |          |
| LOADING (psf)                                         |      | SPACING- 2-0-0       |      | CSI.      |      | DEFL. in (loc) l/defl L/d |       |       |      | PLATES GRIP |                |          |
| TCLL (roof)                                           | 25.0 | Plate Grip DOL       | 1.15 | TC        | 0.60 | Vert(LL)                  | -0.08 | 12-14 | >999 | 240         | MT20           | 197/144  |
| Snow (Pf)                                             | 20.0 | Lumber DOL           | 1.15 | BC        | 0.54 | Vert(CT)                  | -0.19 | 12-14 | >999 | 180         |                |          |
| TCDL                                                  | 10.0 | Rep Stress Incr      | YES  | WB        | 0.29 | Horz(CT)                  | 0.07  | 10    | n/a  | n/a         |                |          |
| BCLL                                                  | 0.0  | Code IRC2018/TPI2014 |      | Matrix-AS |      |                           |       |       |      |             | Weight: 134 lb | FT = 20% |
| BCDL                                                  | 10.0 |                      |      |           |      |                           |       |       |      |             |                |          |

**LUMBER-**  
TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2  
SLIDER Left 2x4 SPF No.2 2-0-0, Right 2x4 SPF No.2 2-0-0

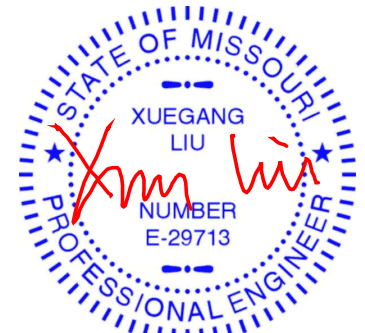
**BRACING-**  
TOP CHORD Structural wood sheathing directly applied.  
BOT CHORD Rigid ceiling directly applied.  
WEBS 1 Row at midpt 8-14, 4-14

**REACTIONS.** (size) 2=0-3-8, 10=0-3-8  
Max Horz 2=248(LC 13)  
Max Uplift 2=-143(LC 14), 10=-143(LC 14)  
Max Grav 2=1501(LC 2), 10=1501(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-4=-1783/248, 4-6=-1451/274, 6-8=-1451/274, 8-10=-1783/248  
BOT CHORD 2-16=-86/1583, 14-16=-86/1583, 12-14=-88/1583, 10-12=-88/1583  
WEBS 6-14=-135/911, 8-14=-665/178, 8-12=0/313, 4-14=-665/178, 4-16=0/313

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=32ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) -0-10-8 to 2-3-14, Interior(1) 2-3-14 to 16-0-0, Exterior(2R) 16-0-0 to 19-2-6, Interior(1) 19-2-6 to 32-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=143, 10=143.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 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.



November 9,2020

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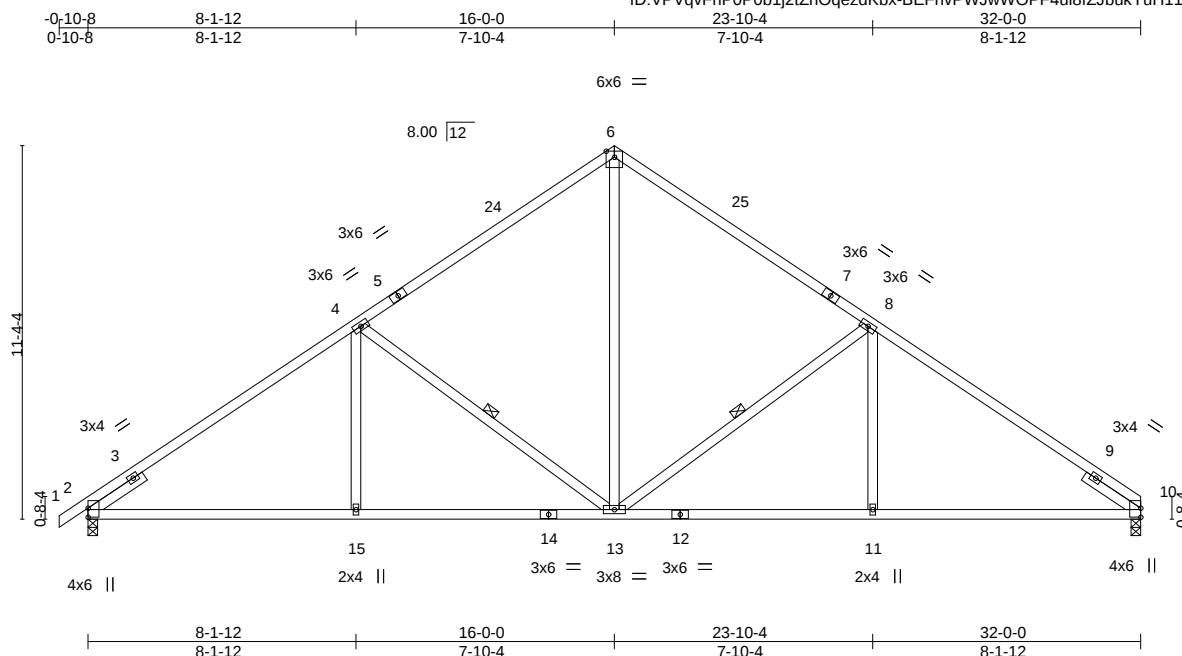


16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|         |       |            |     |     |                          |           |
|---------|-------|------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type | Qty | Ply | Summit/23 Hawthorn       | 143532828 |
| 2531623 | B3    | Common     | 3   | 1   | Job Reference (optional) |           |

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Fri Nov 6 14:12:54 2020 Page 1  
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Scale = 1:70.0

|                                                       |      |                      |      |             |      |                |      |
|-------------------------------------------------------|------|----------------------|------|-------------|------|----------------|------|
| Plate Offsets (X,Y)-- [2:Edge,0-0-0], [10:Edge,0-0-0] |      |                      |      |             |      |                |      |
| <b>LOADING</b> (psf)                                  |      | <b>SPACING-</b>      |      | <b>CSI.</b> |      | <b>DEFL.</b>   |      |
| TCLL (roof)                                           | 25.0 | 2-0-0                |      | TC          | 0.60 | in (loc)       | L/d  |
| Snow (Pf)                                             | 20.0 | Plate Grip DOL       | 1.15 | BC          | 0.54 | Vert(LL)       | >999 |
| TCDL                                                  | 10.0 | Lumber DOL           | 1.15 | WB          | 0.30 | Vert(CT)       | >999 |
| BCLL                                                  | 0.0  | Rep Stress Incr      | YES  | Matrix-AS   |      | Horz(CT)       | 0.07 |
| BCDL                                                  | 10.0 | Code IRC2018/TPI2014 |      |             |      |                | n/a  |
|                                                       |      |                      |      |             |      | <b>PLATES</b>  |      |
|                                                       |      |                      |      |             |      | <b>GRIP</b>    |      |
|                                                       |      |                      |      |             |      | MT20           |      |
|                                                       |      |                      |      |             |      | 197/144        |      |
|                                                       |      |                      |      |             |      | Weight: 133 lb |      |
|                                                       |      |                      |      |             |      | FT = 20%       |      |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2  
SLIDER Left 2x4 SPF No.2 2-0-0, Right 2x4 SPF No.2 2-0-0

#### BRACING-

TOP CHORD Structural wood sheathing directly applied.  
BOT CHORD Rigid ceiling directly applied.  
WEBS 1 Row at midpt 8-13, 4-13

#### REACTIONS.

(size) 2=0-3-8, 10=0-3-8  
Max Horz 2=244(LC 13)  
Max Uplift 2=-144(LC 14), 10=-117(LC 14)  
Max Grav 2=1502(LC 2), 10=1439(LC 2)

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

TOP CHORD 2-4=-1784/248, 4-6=-1452/274, 6-8=-1453/274, 8-10=-1787/249  
BOT CHORD 2-15=-114/1584, 13-15=-114/1584, 11-13=-109/1587, 10-11=-109/1587  
WEBS 6-13=-136/913, 8-13=-669/178, 8-11=0/313, 4-13=-665/178, 4-15=0/313

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=32ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) -0-10-8 to 2-3-14, Interior(1) 2-3-14 to 16-0-0, Exterior(2R) 16-0-0 to 19-2-6, Interior(1) 19-2-6 to 32-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=144, 10=117.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 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.



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|         |       |                        |     |     |                          |           |
|---------|-------|------------------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type             | Qty | Ply | Summit/23 Hawthorn       | I43532829 |
| 2531623 | B4    | Common Supported Gable | 1   | 1   | Job Reference (optional) |           |

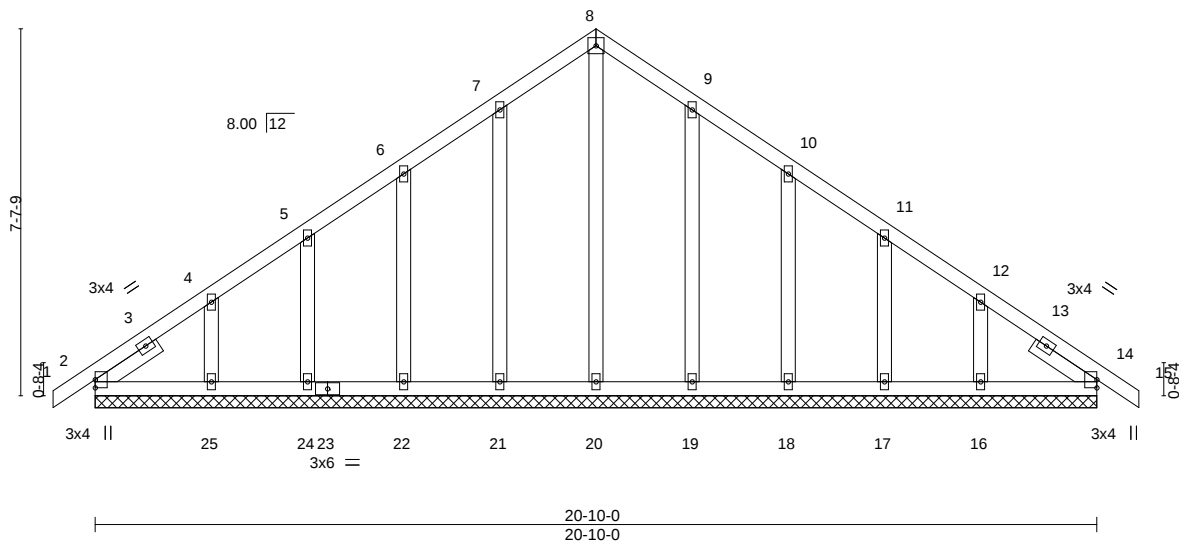
Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Fri Nov 6 14:12:56 2020 Page 1  
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0-10-8 10-5-0 20-10-0 21-8-8  
0-10-8 10-5-0 10-5-0 0-10-8

4x4 =

Scale: 1/4"=1'



| LOADING (psf)    | SPACING-             | CSI.     | DEFL.         | in (loc) | l/defl | L/d | PLATES         | GRIP     |
|------------------|----------------------|----------|---------------|----------|--------|-----|----------------|----------|
| TCLL (roof) 25.0 | 2-0-0                | TC 0.06  | Vert(LL) 0.00 | 14       | n/r    | 120 | MT20           | 197/144  |
| Snow (Pf) 20.0   | Plate Grip DOL 1.15  | BC 0.04  | Vert(CT) 0.00 | 14       | n/r    | 120 |                |          |
| TCDL 10.0        | Lumber DOL 1.15      | WB 0.14  | Horz(CT) 0.00 | 14       | n/a    | n/a |                |          |
| BCLL 0.0         | Rep Stress Incr YES  | Matrix-S |               |          |        |     |                |          |
| BCDL 10.0        | Code IRC2018/TPI2014 |          |               |          |        |     |                |          |
|                  |                      |          |               |          |        |     | Weight: 101 lb | FT = 20% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
OTHERS 2x4 SPF No.2  
SLIDER Left 2x4 SPF No.2 1-6-7, Right 2x4 SPF No.2 1-6-7

#### BRACING-

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

#### REACTIONS.

All bearings 20-10-0.  
(lb) - Max Horz 2=-160(LC 12)  
Max Uplift All uplift 100 lb or less at joint(s) 2, 21, 22, 24, 25, 19, 18, 17, 16  
Max Grav All reactions 250 lb or less at joint(s) 2, 20, 21, 22, 24, 25, 19, 18, 17, 16, 14

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

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCCL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=2ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner(3E) -0-10-8 to 2-5-0, Exterior(2N) 2-5-0 to 10-5-0, Corner(3R) 10-5-0 to 13-5-0, Exterior(2N) 13-5-0 to 21-8-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- All plates are 2x4 MT20 unless otherwise indicated.
- 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 21, 22, 24, 25, 19, 18, 17, 16.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



November 9, 2020

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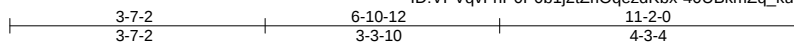
|                |             |                               |          |          |                                                |
|----------------|-------------|-------------------------------|----------|----------|------------------------------------------------|
| Job<br>2531623 | Truss<br>C1 | Truss Type<br>Half Hip Girder | Qty<br>1 | Ply<br>2 | Summit/23 Hawthorn<br>Job Reference (optional) |
|----------------|-------------|-------------------------------|----------|----------|------------------------------------------------|

I43532830

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

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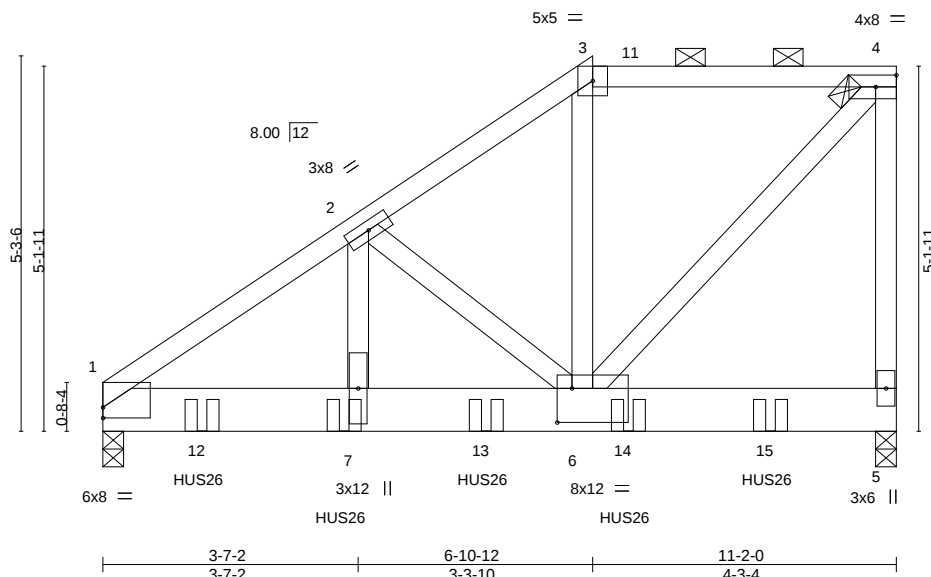


Plate Offsets (X,Y)-- [1:0-0-0,0-1-13], [3:0-0-0,0-0-0], [6:0-2-8,0-5-12]

| LOADING (psf)    | SPACING-             | CSI.      | DEFL.          | in (loc) | l/defl | L/d | PLATES         | GRIP     |
|------------------|----------------------|-----------|----------------|----------|--------|-----|----------------|----------|
| TCLL (roof) 25.0 | 2-0-0                | TC 0.21   | Vert(LL) -0.03 | 6-7      | >999   | 240 | MT20           | 197/144  |
| Snow (Pf) 20.0   | Plate Grip DOL 1.15  | BC 0.21   | Vert(CT) -0.06 | 6-7      | >999   | 180 |                |          |
| TCDL 10.0        | Lumber DOL 1.15      | WB 0.48   | Horz(CT) 0.01  | 5        | n/a    | n/a |                |          |
| BCLL 0.0         | Rep Stress Incr NO   | Matrix-MS |                |          |        |     |                |          |
| BCDL 10.0        | Code IRC2018/TPI2014 |           |                |          |        |     | Weight: 144 lb | FT = 20% |

**LUMBER-**

TOP CHORD 2x4 SPF No.2  
 BOT CHORD 2x8 SP 2400F 2.0E  
 WEBS 2x4 SPF No.2

**BRACING-**

TOP CHORD Structural wood sheathing directly applied or 5-6-13 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 3-4.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 1=0-3-8, 5=0-3-8

Max Horz 1=162(LC 33)  
 Max Uplift 1=-329(LC 10), 5=-357(LC 7)  
 Max Grav 1=4106(LC 1), 5=3993(LC 1)

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

TOP CHORD 1-2=-4989/422, 2-3=-3270/312, 3-4=-2661/277, 4-5=-3041/290  
 BOT CHORD 1-7=-404/4104, 6-7=-404/4104  
 WEBS 2-7=-143/1970, 2-6=-1812/196, 3-6=-150/1553, 4-6=-343/3905

**NOTES-**

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
 Top chords connected as follows: 2x4 - 1 row at 0-7-0 oc.  
 Bottom chords connected as follows: 2x8 - 2 rows staggered at 0-7-0 oc.  
 Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional); cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 1=329, 5=357.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- Use Simpson Strong-Tie HUS26 (14-10d Girder, 4-10d Truss) or equivalent spaced at 2-0-0 oc max. starting at 1-4-12 from the left end to 9-4-12 to connect truss(es) to front face of bottom chord.
- Fill all nail holes where hanger is in contact with lumber.

LOAD CASE(S) Standard



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Continued on page 2

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|         |       |                 |     |     |                          |
|---------|-------|-----------------|-----|-----|--------------------------|
| Job     | Truss | Truss Type      | Qty | Ply | Summit/23 Hawthorn       |
| 2531623 | C1    | Half Hip Girder | 1   | 2   | I43532830                |
|         |       |                 |     |     | Job Reference (optional) |

**LOAD CASE(S)** Standard

1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (plf)

Vert: 1-3=-60, 3-4=-60, 5-8=-20

Concentrated Loads (lb)

Vert: 7=-1440(F) 12=-1460(F) 13=-1440(F) 14=-1440(F) 15=-1440(F)

|         |       |              |     |     |                    |           |
|---------|-------|--------------|-----|-----|--------------------|-----------|
| Job     | Truss | Truss Type   | Qty | Ply | Summit/23 Hawthorn | 143532831 |
| 2531623 | C2    | Roof Special | 1   | 1   |                    |           |

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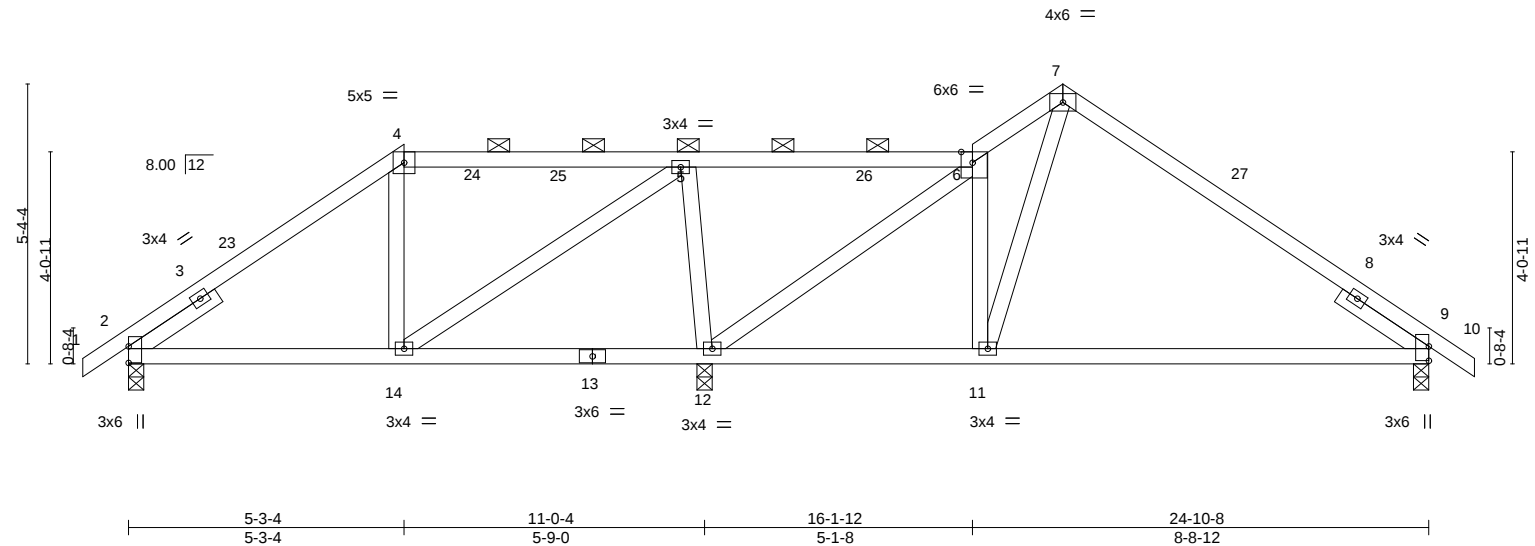
8.240 s Mar 9 2020 MiTek Industries, Inc. Fri Nov 6 14:13:00 2020 Page 1

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Job Reference (optional)

0-10-8 5-3-4 10-8-8 16-1-12 17-10-8 24-10-8 25-9-0  
0-10-8 5-3-4 5-5-4 5-5-4 1-8-12 7-0-0 0-10-8

Scale = 1:44.1



|                                                                                        |      |                      |      |             |      |              |                  |                |          |
|----------------------------------------------------------------------------------------|------|----------------------|------|-------------|------|--------------|------------------|----------------|----------|
| Plate Offsets (X,Y)-- [2:Edge,0-0-0], [4:0-0-0,0-0-0], [6:0-2-10,Edge], [9:Edge,0-0-0] |      |                      |      |             |      |              |                  |                |          |
| <b>LOADING</b> (psf)                                                                   |      | <b>SPACING-</b>      |      | <b>CSI.</b> |      | <b>DEFL.</b> |                  | <b>PLATES</b>  |          |
| TCLL (roof)                                                                            | 25.0 | Plate Grip DOL       | 1.15 | TC          | 0.48 | in (loc)     | l/defl           | MT20           | 197/144  |
| Snow (Pf)                                                                              | 20.0 | Lumber DOL           | 1.15 | BC          | 0.45 | Vert(LL)     | -0.10 11-21 >999 |                |          |
| TCDL                                                                                   | 10.0 | Rep Stress Incr      | YES  | WB          | 0.46 | Vert(CT)     | -0.23 11-21 >711 |                |          |
| BCLL                                                                                   | 0.0  | Code IRC2018/TPI2014 |      | Matrix-AS   |      | Horz(CT)     | -0.02 9 n/a n/a  |                |          |
| BCDL                                                                                   | 10.0 |                      |      |             |      |              |                  | Weight: 100 lb | FT = 20% |

**LUMBER-**  
TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2  
SLIDER Left 2x4 SPF No.2 2-0-0, Right 2x4 SPF No.2 2-0-0

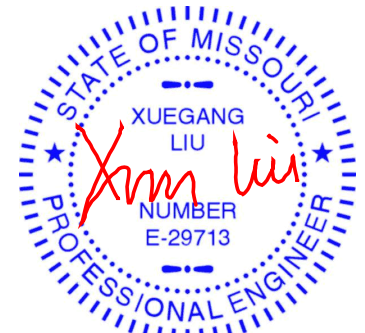
**BRACING-**  
TOP CHORD Structural wood sheathing directly applied, except  
2-0-0 oc purlins (6-0-0 max.): 4-6.  
BOT CHORD Rigid ceiling directly applied.

**REACTIONS.** (size) 2=0-3-8, 12=0-3-8, 9=0-3-8  
Max Horz 2=112(LC 13)  
Max Uplift 2=-96(LC 14), 12=-39(LC 14), 9=-100(LC 14)  
Max Grav 2=570(LC 2), 12=1097(LC 2), 9=694(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-4=-523/134, 4-5=-422/151, 6-7=-701/208, 7-9=-588/150  
BOT CHORD 2-14=-31/426, 11-12=-47/591, 9-11=-17/473  
WEBS 5-14=0/409, 5-12=-660/102, 6-12=-640/31, 7-11=-97/370

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=25ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 5-3-4, Exterior(2R) 5-3-4 to 8-3-4, Interior(1) 8-3-4 to 17-10-8, Exterior(2R) 17-10-8 to 20-10-8, Interior(1) 20-10-8 to 25-9-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 12, 9.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



November 9, 2020

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**

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16023 Swingley Ridge Rd  
Chesterfield, MO 63017

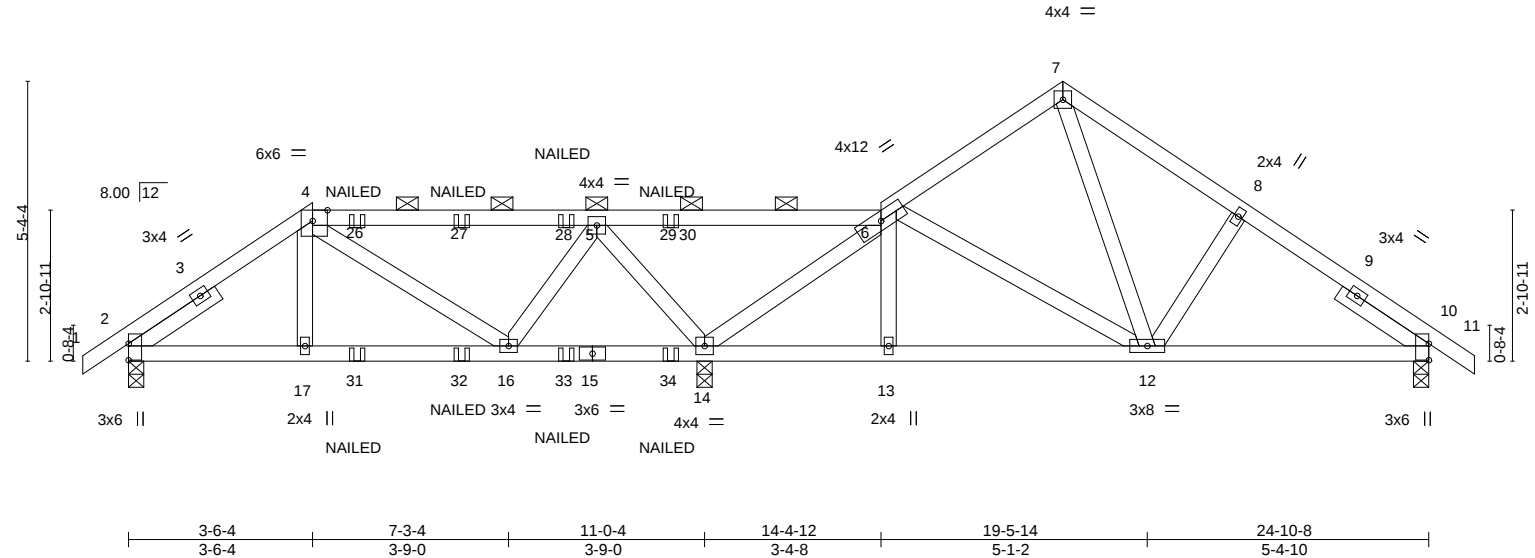
|                          |       |                     |     |     |                    |           |
|--------------------------|-------|---------------------|-----|-----|--------------------|-----------|
| Job                      | Truss | Truss Type          | Qty | Ply | Summit/23 Hawthorn | 143532832 |
| 2531623                  | C3    | Roof Special Girder | 1   | 1   |                    |           |
| Job Reference (optional) |       |                     |     |     |                    |           |

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Fri Nov 6 14:13:03 2020 Page 1  
ID:VPVqvFnP0P0b1j2tZrLQgezdkbx-QzH4oUdzoHX7qT4U92DQTnc17wAoEHPijpLC7gyLtgk

0-10-8 3-6-4 8-11-8 14-4-12 17-10-8 21-2-12 24-10-8 25-9-0  
0-10-8 3-6-4 5-5-4 5-5-4 3-5-12 3-4-4 3-7-12 0-10-8

Scale = 1:44.1



|                                                                       |      |                      |      |             |      |              |        |                |          |
|-----------------------------------------------------------------------|------|----------------------|------|-------------|------|--------------|--------|----------------|----------|
| Plate Offsets (X,Y)-- [2:Edge,0-0-0], [4:0-3-6,Edge], [10:Edge,0-0-0] |      |                      |      |             |      |              |        |                |          |
| <b>LOADING</b> (psf)                                                  |      | <b>SPACING-</b>      |      | <b>CSI.</b> |      | <b>DEFL.</b> |        | <b>PLATES</b>  |          |
| TCLL (roof)                                                           | 25.0 | Plate Grip DOL       | 1.15 | TC          | 0.82 | in (loc)     | l/defl | MT20           | GRIP     |
| Snow (Pf)                                                             | 20.0 | Lumber DOL           | 1.15 | BC          | 0.24 | -0.02 16-17  | >999   |                | 197/144  |
| TCDL                                                                  | 10.0 | Rep Stress Incr      | NO   | WB          | 0.35 | -0.03 12-13  | >999   |                |          |
| BCLL                                                                  | 0.0  | Code IRC2018/TPI2014 |      | Matrix-MS   |      | 0.01 10      | n/a    |                |          |
| BCDL                                                                  | 10.0 |                      |      |             |      |              |        | Weight: 105 lb | FT = 20% |

|                |                                                   |                 |                                                                        |
|----------------|---------------------------------------------------|-----------------|------------------------------------------------------------------------|
| <b>LUMBER-</b> |                                                   | <b>BRACING-</b> |                                                                        |
| TOP CHORD      | 2x4 SPF No.2                                      | TOP CHORD       | Structural wood sheathing directly applied or 6-0-0 oc purlins, except |
| BOT CHORD      | 2x4 SPF No.2                                      |                 | 2-0-0 oc purlins (6-0-0 max.): 4-6.                                    |
| WEBS           | 2x4 SPF No.2                                      | BOT CHORD       | Rigid ceiling directly applied or 10-0-0 oc bracing.                   |
| SLIDER         | Left 2x4 SPF No.2 2-0-0, Right 2x4 SPF No.2 2-0-0 |                 |                                                                        |

|                   |                                             |
|-------------------|---------------------------------------------|
| <b>REACTIONS.</b> |                                             |
| (size)            | 2=0-3-8, 14=0-3-8, 10=0-3-8                 |
| Max Horz          | 2=-112(LC 8)                                |
| Max Uplift        | 2=-79(LC 10), 14=-148(LC 10), 10=-96(LC 34) |
| Max Grav          | 2=554(LC 26), 14=1644(LC 1), 10=576(LC 2)   |

|                                                                              |                                                                                  |
|------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| <b>FORCES.</b>                                                               |                                                                                  |
| (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown. |                                                                                  |
| TOP CHORD                                                                    | 2-4=-566/83, 4-5=-345/63, 5-6=-16/604, 6-7=-429/111, 7-8=-507/142, 8-10=-516/118 |
| BOT CHORD                                                                    | 2-17=-46/509, 16-17=-50/504, 13-14=-73/291, 12-13=-71/296, 10-12=-27/466         |
| WEBS                                                                         | 5-16=0/360, 5-14=-1219/165, 6-14=-1004/91, 7-12=-80/277                          |

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=25ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
  - TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
  - Provide adequate drainage to prevent water ponding.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 10 except (jt=lb) 14=148.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidelines.
  - In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

|                                                      |  |
|------------------------------------------------------|--|
| <b>LOAD CASE(S)</b> Standard                         |  |
| 1) Dead + Snow (balanced): Lumber Increase=1.15      |  |
| Uniform Loads (plf)                                  |  |
| Vert: 1-4=-60, 4-6=-60, 6-7=-60, 7-11=-60, 18-22=-20 |  |



November 9,2020

Continued on page 2

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**  
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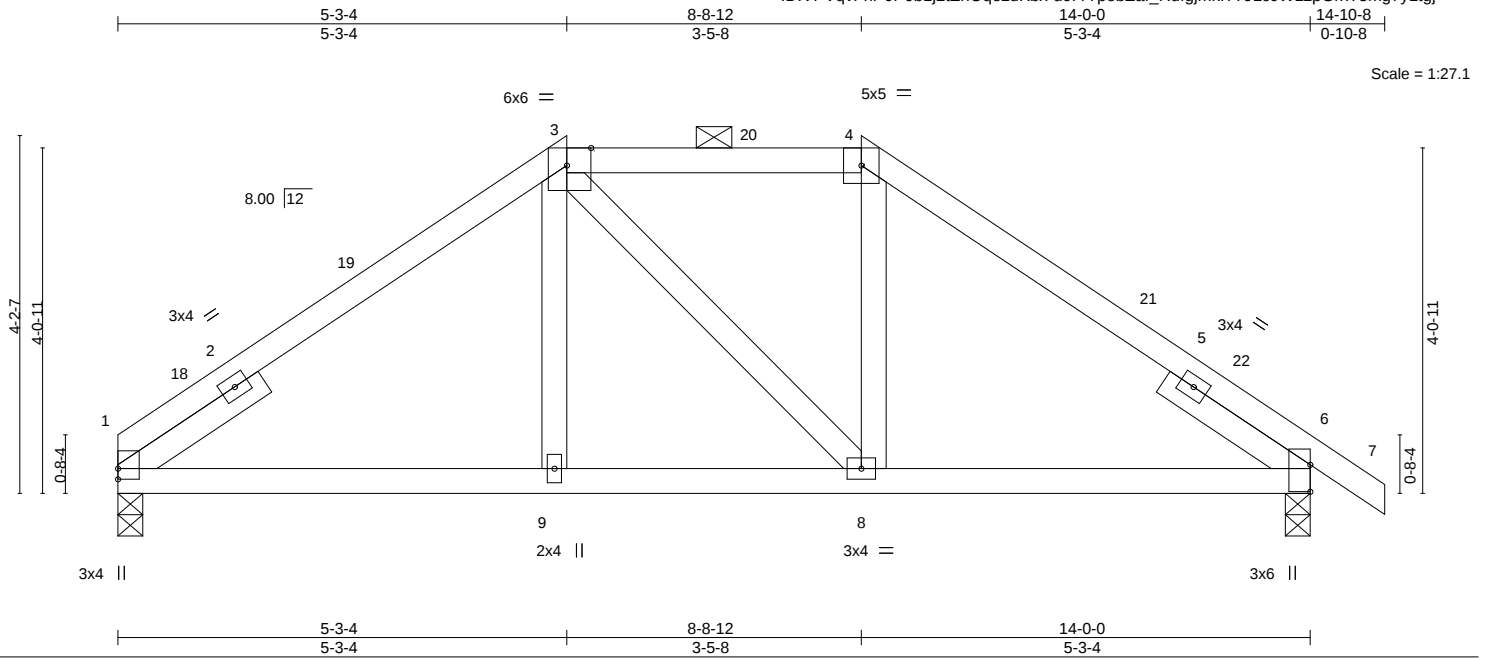
|                          |       |                     |     |     |                    |
|--------------------------|-------|---------------------|-----|-----|--------------------|
| Job                      | Truss | Truss Type          | Qty | Ply | Summit/23 Hawthorn |
| 2531623                  | C3    | Roof Special Girder | 1   | 1   | I43532832          |
| Job Reference (optional) |       |                     |     |     |                    |

**LOAD CASE(S)** Standard  
Concentrated Loads (lb)  
Vert: 26=-106(B) 27=-106(B) 28=-106(B) 29=-106(B) 31=-43(B) 32=-43(B) 33=-43(B) 34=-43(B)

|         |       |            |     |     |                          |           |
|---------|-------|------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type | Qty | Ply | Summit/23 Hawthorn       | 143532833 |
| 2531623 | C4    | Hip        | 1   | 1   | Job Reference (optional) |           |

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Fri Nov 6 14:13:04 2020 Page 1  
ID:VPVqvFnP0P0b1j2tZrIOqezdKbx-u9rT?pebZaf\_Rdfgjmkt?9LcJWLzpxGrxT5mg7yLtgj



|                                                                       |      |                      |       |             |      |              |                     |               |             |
|-----------------------------------------------------------------------|------|----------------------|-------|-------------|------|--------------|---------------------|---------------|-------------|
| Plate Offsets (X,Y)-- [3:0-3-6,Edge], [4:0-0-0,0-0-0], [6:Edge,0-0-0] |      |                      |       |             |      |              |                     |               |             |
| <b>LOADING</b> (psf)                                                  |      | <b>SPACING-</b>      | 2-0-0 | <b>CSI.</b> |      | <b>DEFL.</b> | in (loc) l/defl L/d | <b>PLATES</b> | <b>GRIP</b> |
| TCLL (roof)                                                           | 25.0 | Plate Grip DOL       | 1.15  | TC          | 0.20 | Vert(LL)     | -0.02 9-12 >999 240 | MT20          | 197/144     |
| Snow (Pf)                                                             | 20.0 | Lumber DOL           | 1.15  | BC          | 0.22 | Vert(CT)     | -0.03 9-12 >999 180 |               |             |
| TCDL                                                                  | 10.0 | Rep Stress Incr      | YES   | WB          | 0.05 | Horz(CT)     | 0.01 6 n/a n/a      |               |             |
| BCLL                                                                  | 0.0  | Code IRC2018/TPI2014 |       | Matrix-AS   |      |              |                     | Weight: 54 lb | FT = 20%    |
| BCDL                                                                  | 10.0 |                      |       |             |      |              |                     |               |             |

**LUMBER-**  
TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2  
SLIDER Left 2x4 SPF No.2 2-0-0, Right 2x4 SPF No.2 2-0-0

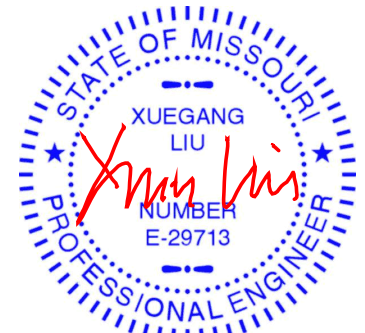
**BRACING-**  
TOP CHORD Structural wood sheathing directly applied, except  
2-0-0 oc purlins (6-0-0 max.): 3-4.  
BOT CHORD Rigid ceiling directly applied.

**REACTIONS.** (size) 1=0-3-8, 6=0-3-8  
Max Horz 1=-82(LC 12)  
Max Uplift 1=-50(LC 14), 6=-78(LC 14)  
Max Grav 1=628(LC 2), 6=693(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-3=-687/152, 3-4=-568/165, 4-6=-718/147  
BOT CHORD 1-9=-35/575, 8-9=-35/571, 6-8=-25/572

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCCL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior(1) 3-0-0 to 5-3-4, Exterior(2E) 5-3-4 to 8-8-12, Exterior(2R) 8-8-12 to 12-11-11, Interior(1) 12-11-11 to 14-10-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCCL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); PF=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 6.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



November 9, 2020

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Chesterfield, MO 63017

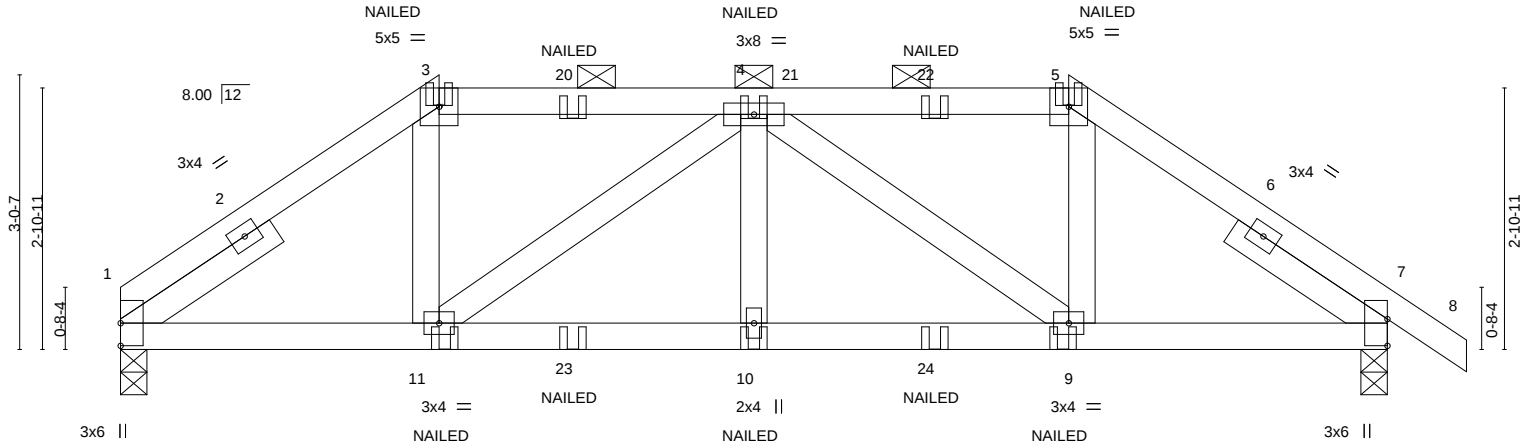
|         |       |            |     |     |                    |           |
|---------|-------|------------|-----|-----|--------------------|-----------|
| Job     | Truss | Truss Type | Qty | Ply | Summit/23 Hawthorn | 143532834 |
| 2531623 | C5    | Hip Girder | 1   | 1   |                    |           |

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Fri Nov 6 14:13:06 2020 Page 1  
ID:VPVqvFnP0P0b1j2tZr1OqezdKbx-rYzDQVgr5CvhwP3rBm75QEgS78NRgP8Pnask?yLtgH



Scale = 1:25.5



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

|                      |                      |             |                              |               |             |
|----------------------|----------------------|-------------|------------------------------|---------------|-------------|
| <b>LOADING</b> (psf) | <b>SPACING-</b>      | <b>CSI.</b> | <b>DEFL.</b>                 | <b>PLATES</b> | <b>GRIP</b> |
| TCLL (roof) 25.0     | 2-0-0                | TC 0.30     | in (loc) l/defl L/d          | MT20          | 197/144     |
| Snow (Pf) 20.0       | Plate Grip DOL 1.15  | BC 0.51     | Vert(LL) -0.04 9-10 >999 240 |               |             |
| TCDL 10.0            | Lumber DOL 1.15      | WB 0.20     | Vert(CT) -0.07 9-10 >999 180 |               |             |
| BCLL 0.0             | Rep Stress Incr NO   | Matrix-MS   | Horz(CT) 0.03 7 n/a n/a      |               |             |
| BCDL 10.0            | Code IRC2018/TPI2014 |             |                              | Weight: 57 lb | FT = 20%    |

**LUMBER-**  
TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2  
SLIDER Left 2x4 SPF No.2 2-0-0, Right 2x4 SPF No.2 2-0-0

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 4-10-3 oc purlins, except  
2-0-0 oc purlins (5-4-12 max.): 3-5.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 1=0-3-8, 7=0-3-8  
Max Horz 1=-57(LC 8)  
Max Uplift 1=-89(LC 10), 7=-117(LC 10)  
Max Grav 1=931(LC 1), 7=987(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-3=-1300/145, 3-4=-1032/139, 4-5=-1026/136, 5-7=-1295/142  
BOT CHORD 1-11=-68/1053, 10-11=-109/1505, 9-10=-109/1505, 7-9=-53/1047  
WEBS 3-11=0/419, 4-11=-585/72, 4-9=-592/71, 5-9=0/419

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCCL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- TCCL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1 except (jt=lb) 7=117.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidelines.
- In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

#### LOAD CASE(S) Standard

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-3=-60, 3-5=-60, 5-8=-60, 12-16=-20



November 9,2020

Continued on page 2

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Chesterfield, MO 63017

|         |       |            |     |     |                          |           |
|---------|-------|------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type | Qty | Ply | Summit/23 Hawthorn       | I43532834 |
| 2531623 | C5    | Hip Girder | 1   | 1   | Job Reference (optional) |           |

**LOAD CASE(S)** Standard  
 Concentrated Loads (lb)  
 Vert: 3=-106(B) 5=-106(B) 11=-43(B) 10=-43(B) 9=-43(B) 4=-106(B) 20=-106(B) 22=-106(B) 23=-43(B) 24=-43(B)

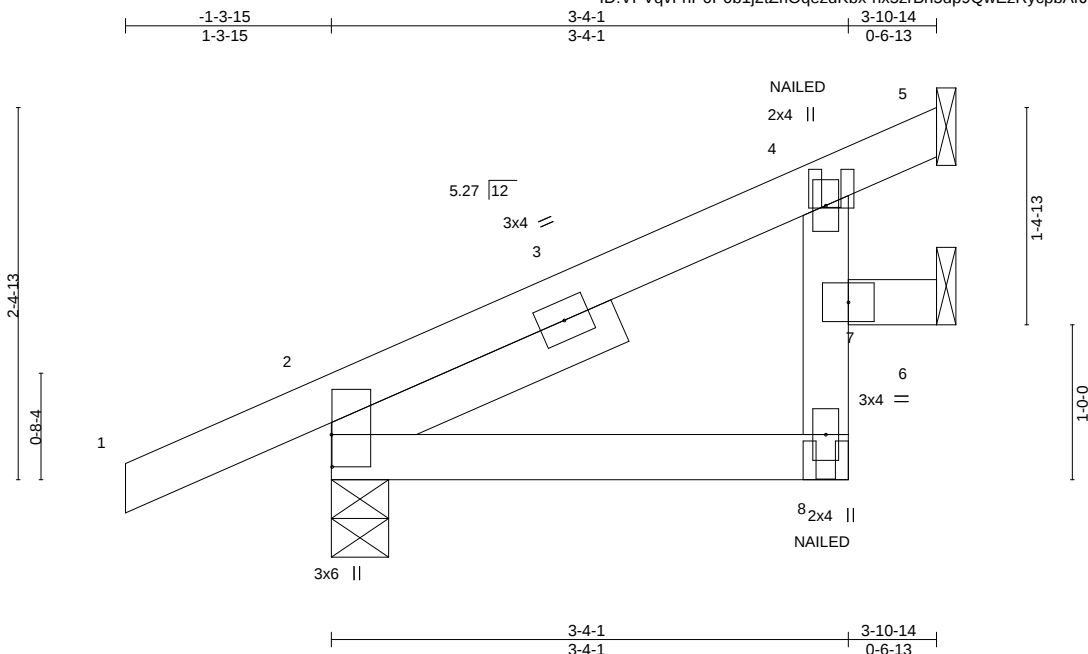
|         |       |                  |     |     |                          |           |
|---------|-------|------------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type       | Qty | Ply | Summit/23 Hawthorn       | I43532835 |
| 2531623 | CJ1   | Jack-Open Girder | 1   | 1   | Job Reference (optional) |           |

Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Fri Nov 6 14:13:08 2020 Page 1

ID:VPVqvFnP0P0b1j2tZrIQezdKbx-nx5ZrBh5dp9QwEzRycpbArJ2zxv5vd3Rs53zpuYltgf



Scale = 1:14.9

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

| LOADING (psf)    | SPACING-             | CSI.      | DEFL.          | in | (loc) | l/defl | L/d | PLATES | GRIP    |
|------------------|----------------------|-----------|----------------|----|-------|--------|-----|--------|---------|
| TCLL (roof) 25.0 | Plate Grip DOL 1.15  | TC 0.18   | Vert(LL) -0.00 | 11 | >999  | 240    |     | MT20   | 197/144 |
| Snow (Pf) 20.0   | Lumber DOL 1.15      | BC 0.17   | Vert(CT) -0.00 | 8  | >999  | 180    |     |        |         |
| TCDL 10.0        | Rep Stress Incr NO   | WB 0.00   | Horz(CT) 0.00  | 6  | n/a   | n/a    |     |        |         |
| BCLL 0.0         | Code IRC2018/TPI2014 | Matrix-MR |                |    |       |        |     |        |         |
| BCDL 10.0        |                      |           |                |    |       |        |     |        |         |

Weight: 15 lb FT = 20%

**LUMBER-**  
TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
SLIDER Left 2x4 SPF No.2 2-0-0

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 3-10-14 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 5=Mechanical, 2=0-4-7, 6=Mechanical  
Max Horz 2=71(LC 12)  
Max Uplift 5=-9(LC 12), 2=-47(LC 12), 6=-19(LC 12)  
Max Grav 5=58(LC 17), 2=357(LC 17), 6=138(LC 17)

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

#### NOTES-

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 2, 6.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidelines.
- In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

#### LOAD CASE(S) Standard

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-5=-60, 8-9=-20, 6-7=-20  
Concentrated Loads (lb)  
Vert: 8=-4(F)



November 9,2020

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16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|         |       |                     |     |     |                          |           |
|---------|-------|---------------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type          | Qty | Ply | Summit/23 Hawthorn       | 143532836 |
| 2531623 | CJ2   | Diagonal Hip Girder | 1   | 1   | Job Reference (optional) |           |

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Fri Nov 6 14:13:10 2020 Page 1  
ID:VPVqvFnP0P0b1j2tZr1OqezdKbx-jJCkGtjM9QP7AY6q40r3FGPJTkX6NXYkPY4tmyLtgd

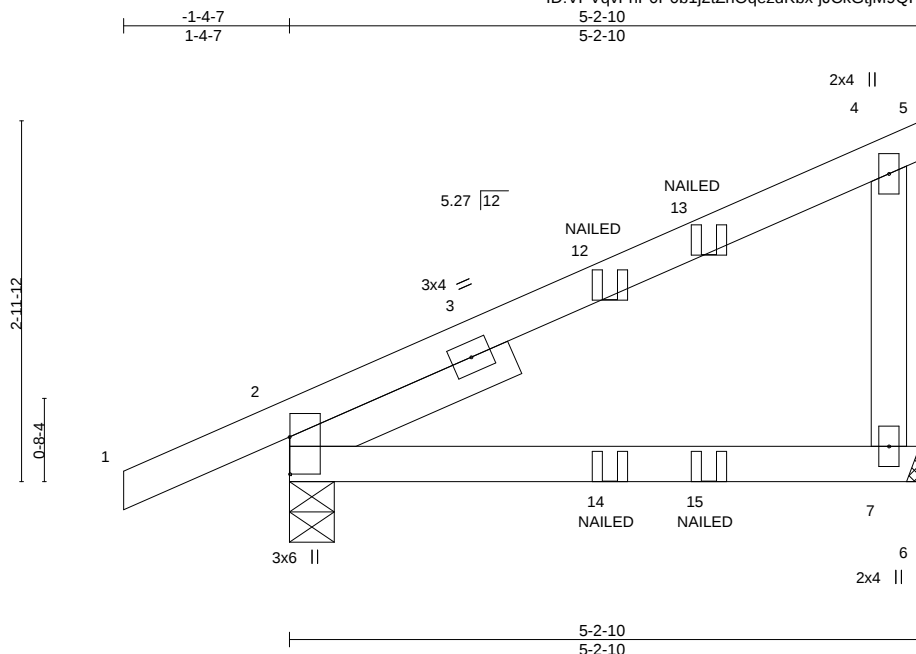


Plate Offsets (X,Y)-- [2:0-3-11,0-0-1]

| LOADING (psf)    | SPACING-             | CSI.      | DEFL.          | in   | (loc) | l/defl | L/d | PLATES        | GRIP     |
|------------------|----------------------|-----------|----------------|------|-------|--------|-----|---------------|----------|
| TCLL (roof) 25.0 | Plate Grip DOL 1.15  | TC 0.50   | Vert(LL) -0.05 | 7-10 | >999  | 240    |     | MT20          | 197/144  |
| Snow (Pf) 20.0   | Lumber DOL 1.15      | BC 0.33   | Vert(CT) -0.08 | 7-10 | >748  | 180    |     |               |          |
| TCDL 10.0        | Rep Stress Incr NO   | WB 0.00   | Horz(CT) 0.02  | 2    | n/a   | n/a    |     |               |          |
| BCLL 0.0         | Code IRC2018/TPI2014 | Matrix-MP |                |      |       |        |     |               |          |
| BCDL 10.0        |                      |           |                |      |       |        |     | Weight: 19 lb | FT = 20% |

**LUMBER-**  
TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2  
SLIDER Left 2x4 SPF No.2 2-0-0

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 5-2-10 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 7=Mechanical, 2=0-4-7  
Max Horz 2=96(LC 33)  
Max Uplift 7=-27(LC 9), 2=-61(LC 12)  
Max Grav 7=304(LC 17), 2=371(LC 17)

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

#### NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional); cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) Refer to girder(s) for truss to truss connections.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 7, 2.
- 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 9) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidelines.
- 10) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

#### LOAD CASE(S) Standard

- 1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-4=-60, 4-5=-60, 6-8=-20  
Concentrated Loads (lb)  
Vert: 13=-8(B) 14=2(F) 15=-14(B)



November 9, 2020

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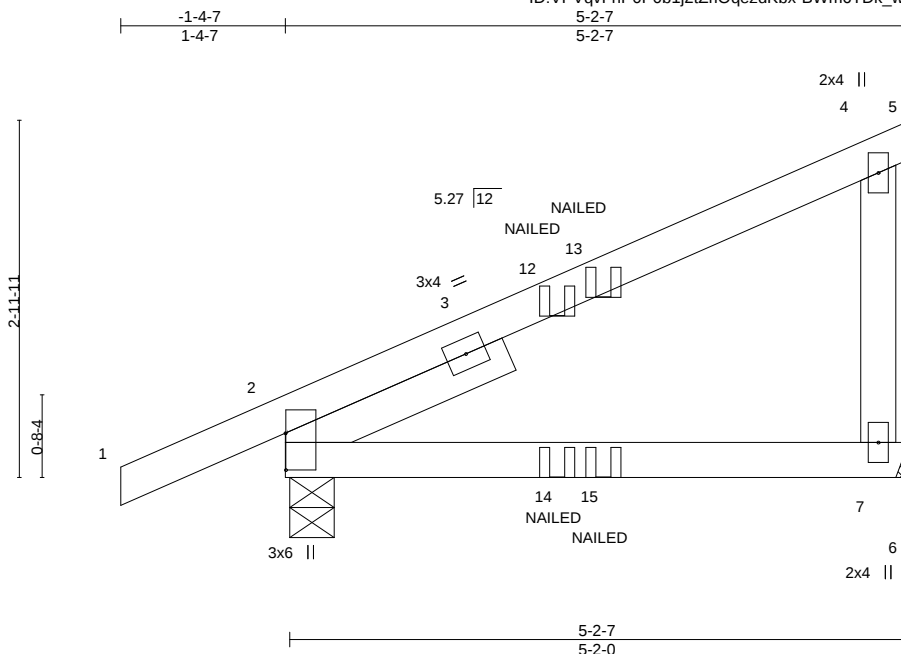


16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|                          |       |                     |     |     |                    |           |
|--------------------------|-------|---------------------|-----|-----|--------------------|-----------|
| Job                      | Truss | Truss Type          | Qty | Ply | Summit/23 Hawthorn | 143532837 |
| 2531623                  | CJ3   | Diagonal Hip Girder | 2   | 1   |                    |           |
| Job Reference (optional) |       |                     |     |     |                    |           |

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Fri Nov 6 14:13:11 2020 Page 1  
ID:VPVqvFnP0P0b1j2tZrOqezdKbx-BWm6TDk\_wkX\_nhh0dkMlnTxUJ8tM6\_otY3HdQDyLtgC



Scale = 1:19.2

Plate Offsets (X,Y)-- [2:0-3-11,0-0-1]

| LOADING (psf) |      | SPACING-        |                 | CSI.      |      | DEFL.    |       | PLATES        |  | GRIP     |  |
|---------------|------|-----------------|-----------------|-----------|------|----------|-------|---------------|--|----------|--|
| TCLL (roof)   | 25.0 | Plate Grip DOL  | 1.15            | TC        | 0.49 | Vert(LL) | -0.05 | MT20          |  | 197/144  |  |
| Snow (Pf)     | 20.0 | Lumber DOL      | 1.15            | BC        | 0.33 | Vert(CT) | -0.08 |               |  |          |  |
| TCDL          | 10.0 | Rep Stress Incr | NO              | WB        | 0.00 | Horz(CT) | 0.02  |               |  |          |  |
| BCLL          | 0.0  | Code            | IRC2018/TPI2014 | Matrix-MP |      |          |       |               |  |          |  |
| BCDL          | 10.0 |                 |                 |           |      |          |       |               |  |          |  |
|               |      |                 |                 |           |      |          |       | Weight: 19 lb |  | FT = 20% |  |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2  
SLIDER Left 2x4 SPF No.2 2-0-0

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 5-2-7 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS.

(size) 7=Mechanical, 2=0-4-7  
Max Horz 2=96(LC 11)  
Max Uplift 7=-21(LC 9), 2=-61(LC 12)  
Max Grav 7=296(LC 17), 2=370(LC 17)

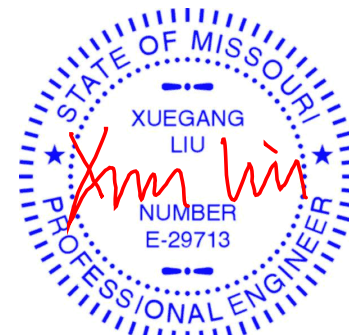
**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

#### NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional); cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) Refer to girder(s) for truss to truss connections.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 7, 2.
- 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 9) "NAILED" indicates 2-12d (0.148"x3.25") toe-nails per NDS guidelines.
- 10) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

#### LOAD CASE(S) Standard

- 1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-4=-60, 4-5=-60, 6-8=-20  
Concentrated Loads (lb)  
Vert: 14=-6(F) 15=2(B)



November 9, 2020

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16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|         |       |                     |     |     |                          |           |
|---------|-------|---------------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type          | Qty | Ply | Summit/23 Hawthorn       | 143532838 |
| 2531623 | CJ4   | Diagonal Hip Girder | 1   | 1   | Job Reference (optional) |           |

Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

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ID:VPVqvFnP0P0b1j2tZrIQeqzdKbx-fikUgZkch2frPrGCBRTXKhUcfYCoR20nj1ByfyLtgb

-1-3-15  
1-3-15

5-5-8  
5-5-8

Scale = 1:18.2

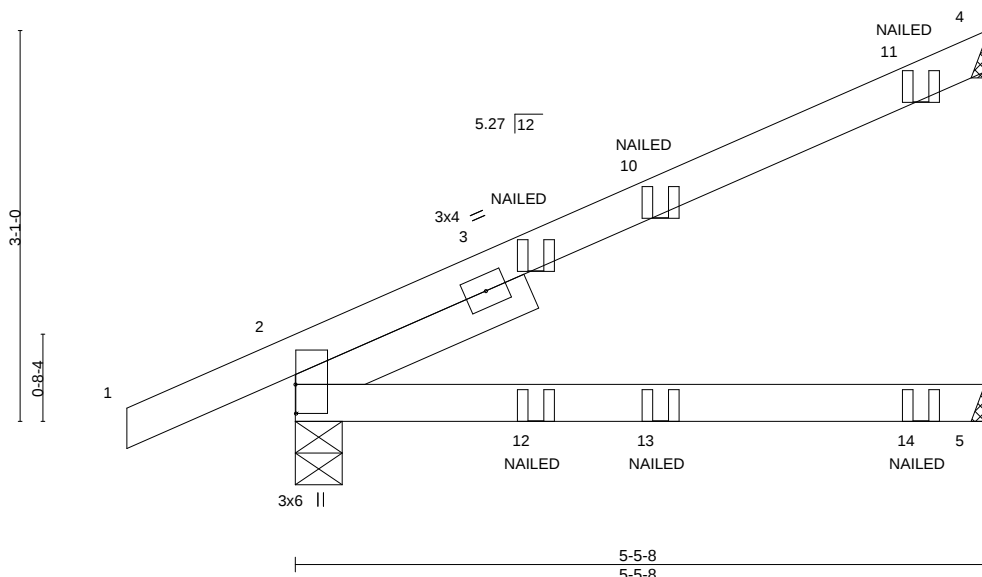


Plate Offsets (X,Y)-- [2:0-2-12,0-0-1]

| LOADING (psf)    | SPACING-             | 2-0-0 | CSI.      | DEFL.    | in    | (loc) | l/defl | L/d | PLATES        | GRIP     |
|------------------|----------------------|-------|-----------|----------|-------|-------|--------|-----|---------------|----------|
| TCLL (roof) 25.0 | Plate Grip DOL       | 1.15  | TC 0.64   | Vert(LL) | -0.07 | 5-8   | >900   | 240 | MT20          | 197/144  |
| Snow (Pf) 20.0   | Lumber DOL           | 1.15  | BC 0.43   | Vert(CT) | -0.12 | 5-8   | >535   | 180 |               |          |
| TCDL 10.0        | Rep Stress Incr      | NO    | WB 0.00   | Horz(CT) | 0.03  | 2     | n/a    | n/a |               |          |
| BCLL 0.0         | Code IRC2018/TPI2014 |       | Matrix-MP |          |       |       |        |     |               |          |
| BCDL 10.0        |                      |       |           |          |       |       |        |     | Weight: 17 lb | FT = 20% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
SLIDER Left 2x4 SPF No.2 2-0-0

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 5-5-8 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS.

(size) 4=Mechanical, 2=0-4-7, 5=Mechanical  
Max Horz 2=90(LC 12)  
Max Uplift 4=-62(LC 12), 2=-47(LC 12)  
Max Grav 4=260(LC 17), 2=401(LC 17), 5=124(LC 7)

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

#### NOTES-

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4, 2.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- "NAILED" indicates 2-12d (0.148"x3.25") toe-nails per NDS guidelines.
- In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

#### LOAD CASE(S) Standard

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-4=-60, 5-6=-20  
Concentrated Loads (lb)  
Vert: 11=-87(F) 12=-4(F) 13=-1(B) 14=-39(F)



November 9, 2020

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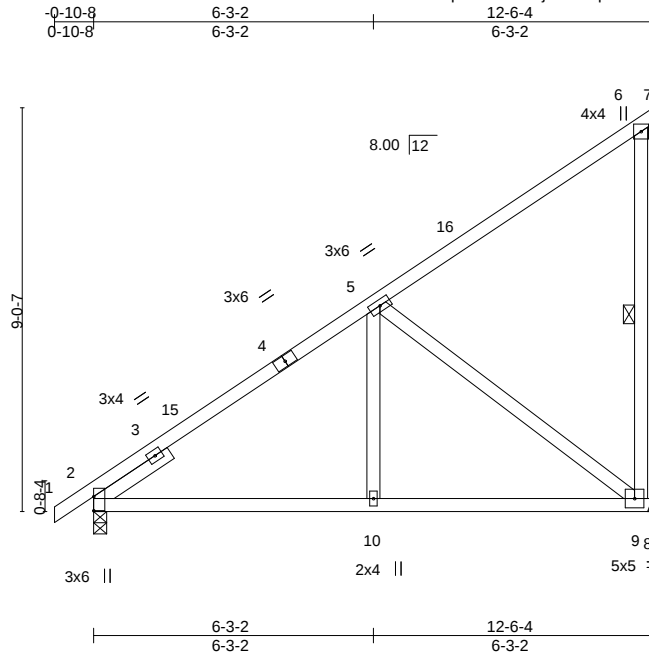


16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|                          |       |             |     |     |                    |
|--------------------------|-------|-------------|-----|-----|--------------------|
| Job                      | Truss | Truss Type  | Qty | Ply | Summit/23 Hawthorn |
| 2531623                  | D1    | Jack-Closed | 5   | 1   | 143532839          |
| Job Reference (optional) |       |             |     |     |                    |

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

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ID:VPVqvFnP0P0b1j2tZrIQezdKbx-8uusuulERLni1?rPI9Omtu1rUyaAamxA0NmK05yLtga



Scale = 1:51.6

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

| LOADING (psf)    | SPACING-             | CSI.      | DEFL.          | in (loc) | l/defl | L/d | PLATES        | GRIP     |
|------------------|----------------------|-----------|----------------|----------|--------|-----|---------------|----------|
| TCLL (roof) 25.0 | 2-0-0                | TC 0.38   | Vert(LL) -0.04 | 9-10     | >999   | 240 | MT20          | 197/144  |
| Snow (Pf) 20.0   | Plate Grip DOL 1.15  | BC 0.31   | Vert(CT) -0.07 | 9-10     | >999   | 180 |               |          |
| TCDL 10.0        | Lumber DOL 1.15      | WB 0.54   | Horz(CT) 0.01  | 2        | n/a    | n/a |               |          |
| BCLL 0.0         | Rep Stress Incr YES  | Matrix-AS |                |          |        |     |               |          |
| BCDL 10.0        | Code IRC2018/TPI2014 |           |                |          |        |     | Weight: 58 lb | FT = 20% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2  
SLIDER Left 2x4 SPF No.2 2-0-0

#### BRACING-

TOP CHORD Structural wood sheathing directly applied, except end verticals.  
BOT CHORD Rigid ceiling directly applied.  
WEBS 1 Row at midpt 6-9

#### REACTIONS.

(size) 2=0-3-8, 9=Mechanical  
Max Horz 2=306(LC 13)  
Max Uplift 2=-55(LC 14), 9=-103(LC 11)  
Max Grav 2=615(LC 2), 9=581(LC 24)

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

TOP CHORD 2-5=-574/124  
BOT CHORD 2-10=-245/474, 9-10=-245/474  
WEBS 5-10=0/271, 5-9=-551/194

#### NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 12-6-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCDL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 3) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) Refer to girder(s) for truss to truss connections.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2 except (jt=lb) 9=103.
- 7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 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.



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Chesterfield, MO 63017

|                          |       |             |     |     |                    |
|--------------------------|-------|-------------|-----|-----|--------------------|
| Job                      | Truss | Truss Type  | Qty | Ply | Summit/23 Hawthorn |
| 2531623                  | D2    | Jack-Closed | 1   | 1   | 143532840          |
| Job Reference (optional) |       |             |     |     |                    |

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

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Scale = 1:52.5

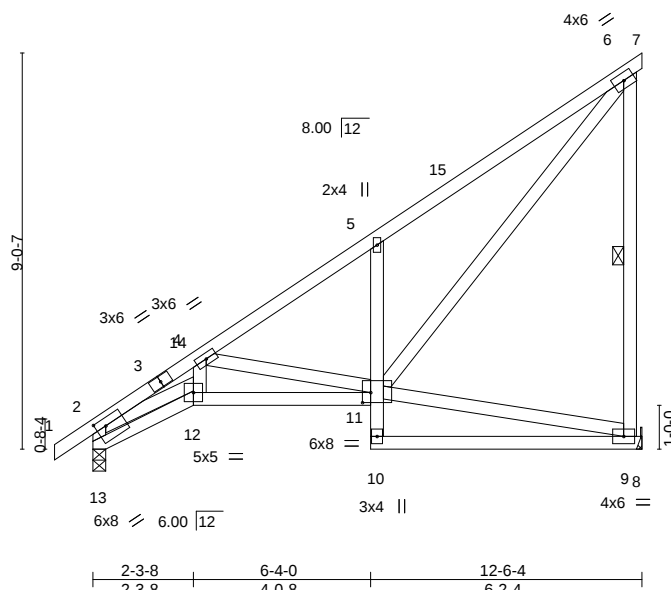


Plate Offsets (X,Y)-- [11:0-2-4,0-2-12], [13:0-2-12,0-2-0], [13:0-1-15,0-0-4]

| LOADING (psf) | SPACING- | CSI.                 | DEFL.     | in   | (loc)    | I/defl | L/d  | PLATES        | GRIP     |
|---------------|----------|----------------------|-----------|------|----------|--------|------|---------------|----------|
| TCLL (roof)   | 25.0     | Plate Grip DOL       | TC        | 0.33 | Vert(LL) | -0.04  | 9-10 | >999          | 240      |
| Snow (Pf)     | 20.0     | Lumber DOL           | BC        | 0.30 | Vert(CT) | -0.08  | 9-10 | >999          | 180      |
| TCDL          | 10.0     | Rep Stress Incr      | WB        | 0.53 | Horz(CT) | 0.04   | 9    | n/a           | n/a      |
| BCLL          | 0.0      | Code IRC2018/TPI2014 | Matrix-AS |      |          |        |      |               |          |
| BCDL          | 10.0     |                      |           |      |          |        |      |               |          |
|               |          |                      |           |      |          |        |      | Weight: 73 lb | FT = 20% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied, except end verticals.  
BOT CHORD Rigid ceiling directly applied.  
WEBS 1 Row at midpt 6-9

#### REACTIONS.

(size) 13=0-3-8, 9=Mechanical  
Max Horz 13=310(LC 11)  
Max Uplift 13=-58(LC 14), 9=-106(LC 11)  
Max Grav 13=619(LC 2), 9=575(LC 24)

#### FORCES.

(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-13=-627/137, 2-4=-1276/266, 4-5=-635/110, 5-6=-716/228, 6-9=-507/299  
BOT CHORD 12-13=-509/454, 11-12=-609/1058, 5-11=-415/246  
WEBS 2-12=-193/933, 4-12=-238/410, 4-11=-536/318, 6-11=-357/812

#### NOTES-

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 12-6-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Refer to girder(s) for truss to truss connections.
- Bearing at joint(s) 13 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 13 except (jt=lb) 9=106.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 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.



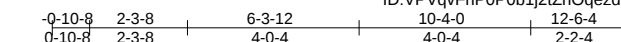
November 9,2020

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**

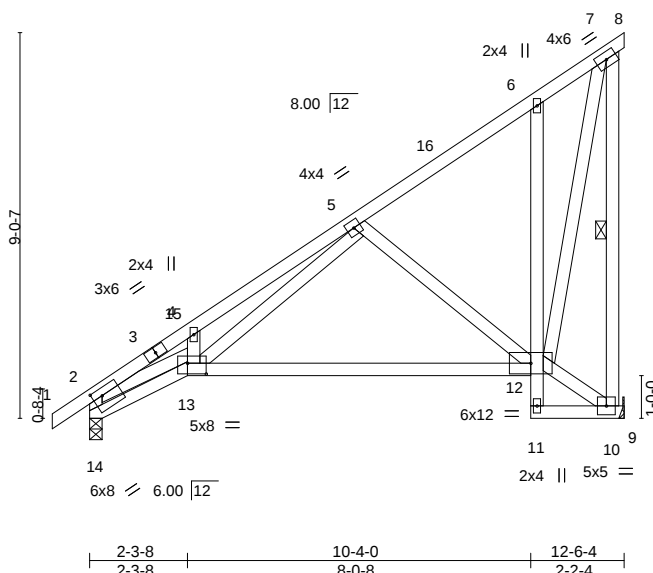
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd  
Chesterfield, MO 63017



Scale = 1:54.0



|                                                                              |      |                       |      |             |      |                                  |                      |                    |          |
|------------------------------------------------------------------------------|------|-----------------------|------|-------------|------|----------------------------------|----------------------|--------------------|----------|
| Plate Offsets (X,Y)-- [13:0-5-4,0-3-0], [14:0-2-12,0-2-0], [14:0-1-15,0-0-4] |      |                       |      |             |      |                                  |                      |                    |          |
| <b>LOADING</b> (psf)                                                         |      | <b>SPACING-</b> 2-0-0 |      | <b>CSI.</b> |      | <b>DEFL.</b> in (loc) l/defl L/d |                      | <b>PLATES GRIP</b> |          |
| TCLL (roof)                                                                  | 25.0 | Plate Grip DOL        | 1.15 | TC          | 0.32 | Vert(LL)                         | -0.13 12-13 >999 240 | MT20               | 197/144  |
| Snow (Pf)                                                                    | 20.0 | Lumber DOL            | 1.15 | BC          | 0.46 | Vert(CT)                         | -0.28 12-13 >523 180 |                    |          |
| TCDL                                                                         | 10.0 | Rep Stress Incr       | YES  | WB          | 0.25 | Horz(CT)                         | 0.05 10 n/a n/a      |                    |          |
| BCLL                                                                         | 0.0  | Code IRC2018/TPI2014  |      | Matrix-AS   |      |                                  |                      | Weight: 77 lb      | FT = 20% |
| BCDL                                                                         | 10.0 |                       |      |             |      |                                  |                      |                    |          |

|                |              |                 |                                                                   |
|----------------|--------------|-----------------|-------------------------------------------------------------------|
| <b>LUMBER-</b> |              | <b>BRACING-</b> |                                                                   |
| TOP CHORD      | 2x4 SPF No.2 | TOP CHORD       | Structural wood sheathing directly applied, except end verticals. |
| BOT CHORD      | 2x4 SPF No.2 | BOT CHORD       | Rigid ceiling directly applied.                                   |
| WEBS           | 2x4 SPF No.2 | WEBS            | 1 Row at midpt 7-10                                               |

**REACTIONS.** (size) 14=0-3-8, 10=Mechanical  
 Max Horz 14=310(LC 11)  
 Max Uplift 14=-58(LC 14), 10=-106(LC 11)  
 Max Grav 14=619(LC 2), 10=575(LC 24)

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

|           |                                                                       |
|-----------|-----------------------------------------------------------------------|
| TOP CHORD | 2-14=656/128, 2-4=1325/243, 4-5=1314/332, 5-6=321/108, 7-10=574/252   |
| BOT CHORD | 13-14=612/456, 12-13=307/514                                          |
| WEBS      | 2-13=166/974, 5-13=446/875, 5-12=425/200, 10-12=115/256, 7-12=263/629 |

NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDD=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 12-6-4 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 3) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) Refer to girder(s) for truss to truss connections.
- 6) Bearing at joint(s) 14 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 14 except (jt=lb) 10=106.
- 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 9) 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.



November 9.2020

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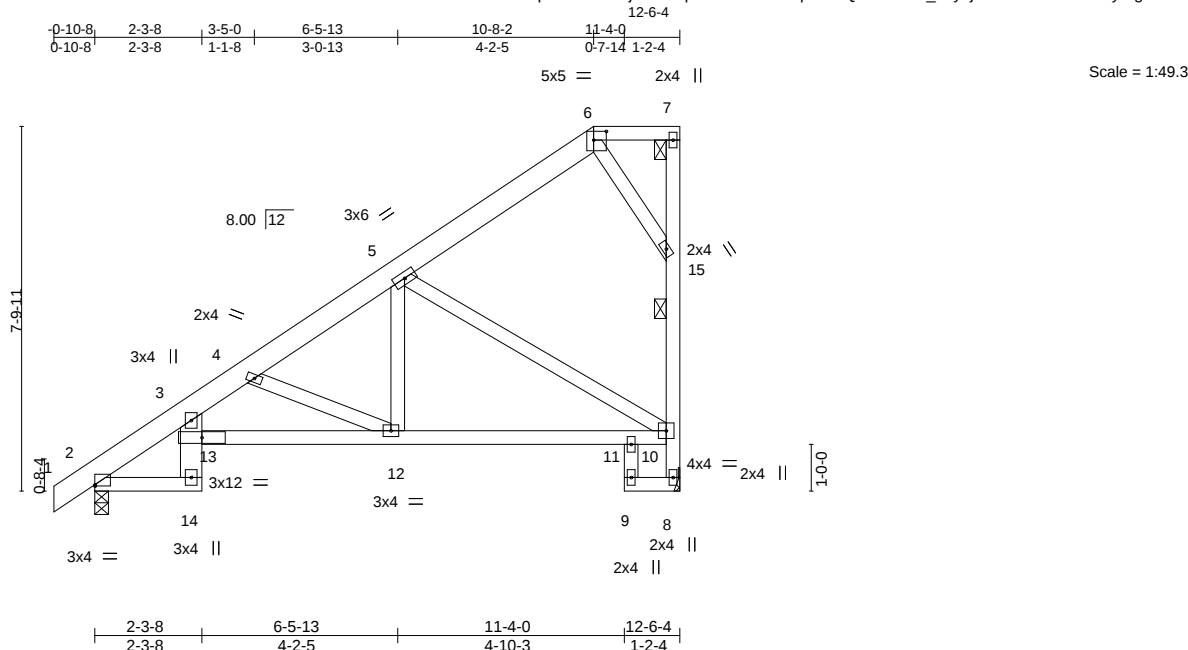


16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|         |       |            |     |     |                    |
|---------|-------|------------|-----|-----|--------------------|
| Job     | Truss | Truss Type | Qty | Ply | Summit/23 Hawthorn |
| 2531623 | D4    | Half Hip   | 1   | 1   | I43532842          |

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Fri Nov 6 14:13:18 2020 Page 1  
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|                                                        |      |                      |  |              |  |             |      |              |       |               |      |               |      |          |
|--------------------------------------------------------|------|----------------------|--|--------------|--|-------------|------|--------------|-------|---------------|------|---------------|------|----------|
| Plate Offsets (X,Y)-- [2:0-0-0,0-0-5], [6:0-3-4,0-2-4] |      |                      |  |              |  |             |      |              |       |               |      |               |      |          |
| <b>LOADING</b> (psf)                                   |      | <b>SPACING-</b>      |  | <b>2-0-0</b> |  | <b>CSI.</b> |      | <b>DEFL.</b> |       | <b>PLATES</b> |      | <b>GRIP</b>   |      |          |
| TCLL (roof)                                            | 25.0 | Plate Grip DOL       |  | 1.15         |  | TC          | 0.28 | Vert(LL)     | -0.03 | 11-12         | >999 | 240           | MT20 | 197/144  |
| Snow (Pf)                                              | 20.0 | Lumber DOL           |  | 1.15         |  | BC          | 0.35 | Vert(CT)     | -0.06 | 11-12         | >999 | 180           |      |          |
| TCDL                                                   | 10.0 | Rep Stress Incr      |  | YES          |  | WB          | 0.47 | Horz(CT)     | 0.05  | 8             | n/a  | n/a           |      |          |
| BCLL                                                   | 0.0  | Code IRC2018/TPI2014 |  |              |  | Matrix-AS   |      |              |       |               |      |               |      |          |
| BCDL                                                   | 10.0 |                      |  |              |  |             |      |              |       |               |      | Weight: 73 lb |      | FT = 20% |

#### LUMBER-

TOP CHORD 2x6 SPF No.2 \*Except\*  
6-7: 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2 \*Except\*  
3-14: 2x6 SPF No.2  
WEBS 2x4 SPF No.2

#### BRACING-

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

#### REACTIONS.

(size) 8=Mechanical, 2=0-3-8  
Max Horz 2=268(LC 13)  
Max Uplift 8=94(LC 11), 2=61(LC 14)  
Max Grav 8=555(LC 2), 2=620(LC 2)

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

TOP CHORD 2-3=-648/103, 3-4=-975/149, 4-5=-682/106, 8-10=-529/219  
BOT CHORD 2-14=-246/439, 12-13=-476/985, 11-12=-308/562, 10-11=-349/603  
WEBS 5-12=-13/349, 5-10=-581/239, 4-12=-458/181

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) 0-10-8 to 1-11-4, Interior(1) 1-11-4 to 10-8-2, Exterior(2E) 10-8-2 to 12-4-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 8, 2.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



November 9, 2020

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16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|         |       |            |     |     |                          |           |
|---------|-------|------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type | Qty | Ply | Summit/23 Hawthorn       | 143532843 |
| 2531623 | D5    | Half Hip   | 1   | 1   | Job Reference (optional) |           |

Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Fri Nov 6 14:13:19 2020 Page 1

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|        |       |       |        |        |        |
|--------|-------|-------|--------|--------|--------|
| 0-10-8 | 2-3-8 | 4-3-9 | 8-11-2 | 11-4-0 | 12-6-4 |
| 0-10-8 | 2-3-8 | 2-0-1 | 4-7-9  | 2-4-14 | 1-2-4  |

Scale = 1:41.6

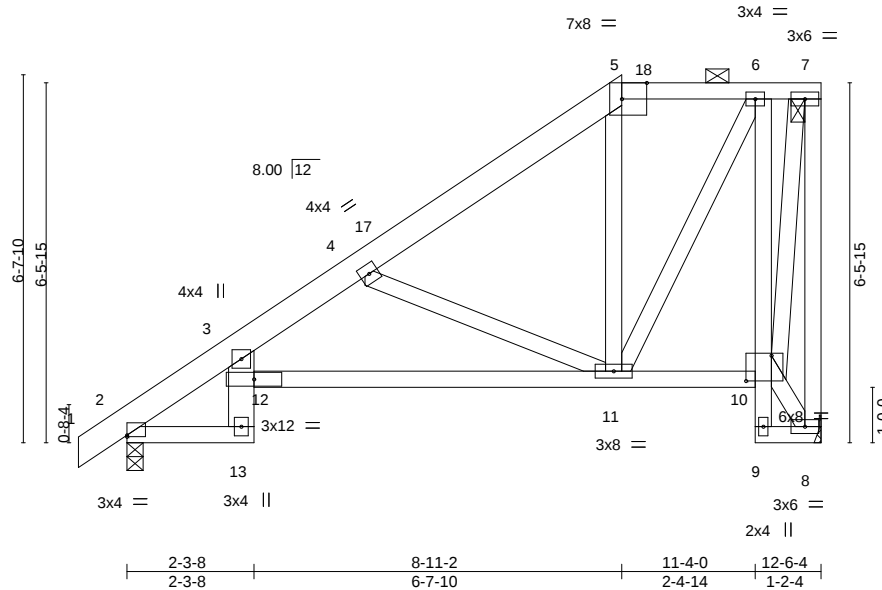


Plate Offsets (X,Y)-- [2:0-0-0,0-0-5], [5:0-5-6,Edge], [10:0-5-8,0-5-8]

| LOADING (psf)    | SPACING-             | CSI.      | DEFL.          | in (loc) | l/defl | L/d | PLATES        | GRIP     |
|------------------|----------------------|-----------|----------------|----------|--------|-----|---------------|----------|
| TCLL (roof) 25.0 | Plate Grip DOL 1.15  | TC 0.38   | Vert(LL) -0.06 | 11-12    | >999   | 240 | MT20          | 197/144  |
| Snow (Pf) 20.0   | Lumber DOL 1.15      | BC 0.36   | Vert(CT) -0.14 | 11-12    | >999   | 180 |               |          |
| TCDL 10.0        | Rep Stress Incr YES  | WB 0.24   | Horz(CT) 0.06  | 8        | n/a    | n/a |               |          |
| BCLL 0.0         | Code IRC2018/TPI2014 | Matrix-AS |                |          |        |     | Weight: 80 lb | FT = 20% |
| BCDL 10.0        |                      |           |                |          |        |     |               |          |

#### LUMBER-

TOP CHORD 2x6 SPF No.2 \*Except\*  
5-7: 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2 \*Except\*  
3-13: 2x6 SPF No.2  
WEBS 2x4 SPF No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied, except end verticals, and  
2-0-0 oc purlins (6-0-0 max.): 5-7.  
BOT CHORD Rigid ceiling directly applied.

#### REACTIONS.

(size) 8=Mechanical, 2=0-3-8  
Max Horz 2=222(LC 13)  
Max Uplift 8=-83(LC 11), 2=-65(LC 14)  
Max Grav 8=555(LC 2), 2=620(LC 2)

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

TOP CHORD 2-3=-636/103, 3-4=-854/147, 4-5=-468/101, 5-6=-300/119, 7-8=-477/183  
BOT CHORD 2-13=-237/414, 11-12=-433/839, 6-10=-479/225  
WEBS 6-11=-179/468, 7-10=-212/412, 4-11=-574/272

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) 0-10-8 to 1-11-4, Interior(1) 1-11-4 to 8-11-2, Exterior(2E) 8-11-2 to 12-4-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 8, 2.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



November 9,2020

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Chesterfield, MO 63017

|         |       |            |     |     |                          |           |
|---------|-------|------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type | Qty | Ply | Summit/23 Hawthorn       | I43532844 |
| 2531623 | D6    | Half Hip   | 1   | 1   | Job Reference (optional) |           |

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

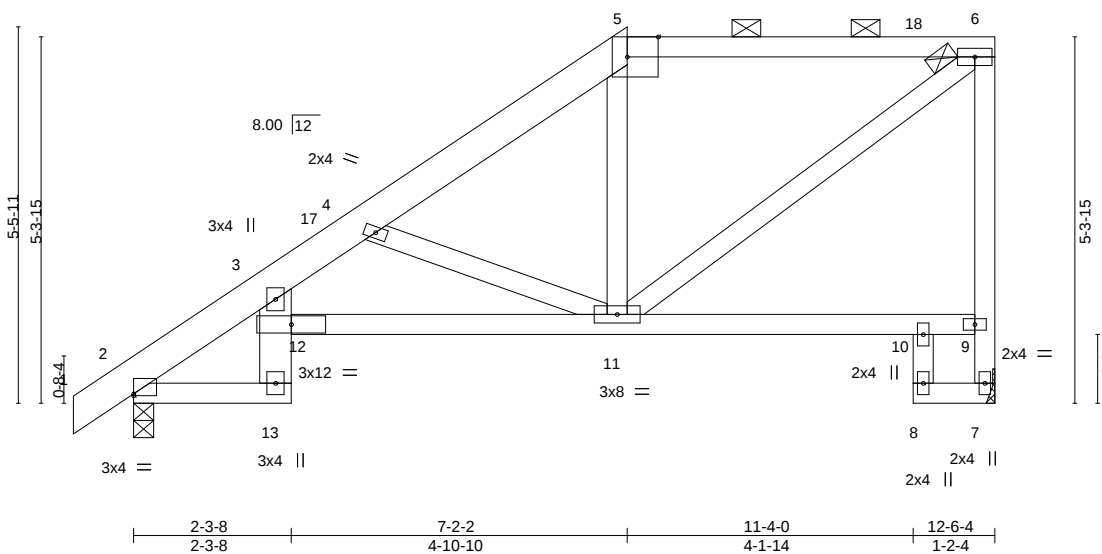
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|        |       |        |        |        |        |
|--------|-------|--------|--------|--------|--------|
| 0-10-8 | 2-3-8 | 3-6-3  | 7-2-2  | 11-4-0 | 12-6-4 |
| 0-10-8 | 2-3-8 | 1-2-11 | 3-7-14 | 4-1-14 | 1-2-4  |

7x8 =

3x6 =

Scale = 1:33.5



| Plate Offsets (X,Y)-- [2:0-0-0,0-0-5], [5:0-5-6,Edge] |      |                       |      |             |      |                                  |       |       |      |               |               |          |
|-------------------------------------------------------|------|-----------------------|------|-------------|------|----------------------------------|-------|-------|------|---------------|---------------|----------|
| <b>LOADING</b> (psf)                                  |      | <b>SPACING-</b> 2-0-0 |      | <b>CSI.</b> |      | <b>DEFL.</b> in (loc) l/defl L/d |       |       |      | <b>PLATES</b> | <b>GRIP</b>   |          |
| TCLL (roof)                                           | 25.0 | Plate Grip DOL        | 1.15 | TC          | 0.32 | Vert(LL)                         | -0.03 | 11-12 | >999 | 240           | MT20          | 197/144  |
| Snow (Pf)                                             | 20.0 | Lumber DOL            | 1.15 | BC          | 0.36 | Vert(CT)                         | -0.06 | 11-12 | >999 | 180           |               |          |
| TCDL                                                  | 10.0 | Rep Stress Incr       | YES  | WB          | 0.14 | Horz(CT)                         | 0.04  | 7     | n/a  | n/a           |               |          |
| BCLL                                                  | 0.0  | Code IRC2018/TPI2014  |      | Matrix-AS   |      |                                  |       |       |      |               | Weight: 63 lb | FT = 20% |
| BCDL                                                  | 10.0 |                       |      |             |      |                                  |       |       |      |               |               |          |

#### LUMBER-

TOP CHORD 2x6 SPF No.2 \*Except\*  
5-6: 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2 \*Except\*  
3-13: 2x6 SPF No.2  
WEBS 2x4 SPF No.2

#### BRACING-

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

#### REACTIONS.

(size) 7=Mechanical, 2=0-3-8  
Max Horz 2=182(LC 13)  
Max Uplift 7=-75(LC 11), 2=-68(LC 14)  
Max Grav 7=555(LC 2), 2=620(LC 2)

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

TOP CHORD 2-3=-647/108, 3-4=-971/217, 4-5=-628/121, 5-6=-469/135, 7-9=-532/145, 6-9=-501/156  
BOT CHORD 2-13=-220/419, 11-12=-465/954  
WEBS 6-11=-189/545, 4-11=-522/266

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) -0-10-8 to 1-11-4, Interior(1) 1-11-4 to 7-2-2, Exterior(2R) 7-2-2 to 11-5-0, Interior(1) 11-5-0 to 12-4-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 7, 2.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



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16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|         |       |            |     |     |                    |           |
|---------|-------|------------|-----|-----|--------------------|-----------|
| Job     | Truss | Truss Type | Qty | Ply | Summit/23 Hawthorn | I43532845 |
| 2531623 | D7    | Half Hip   | 1   | 1   |                    |           |

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Fri Nov 6 14:13:22 2020 Page 1  
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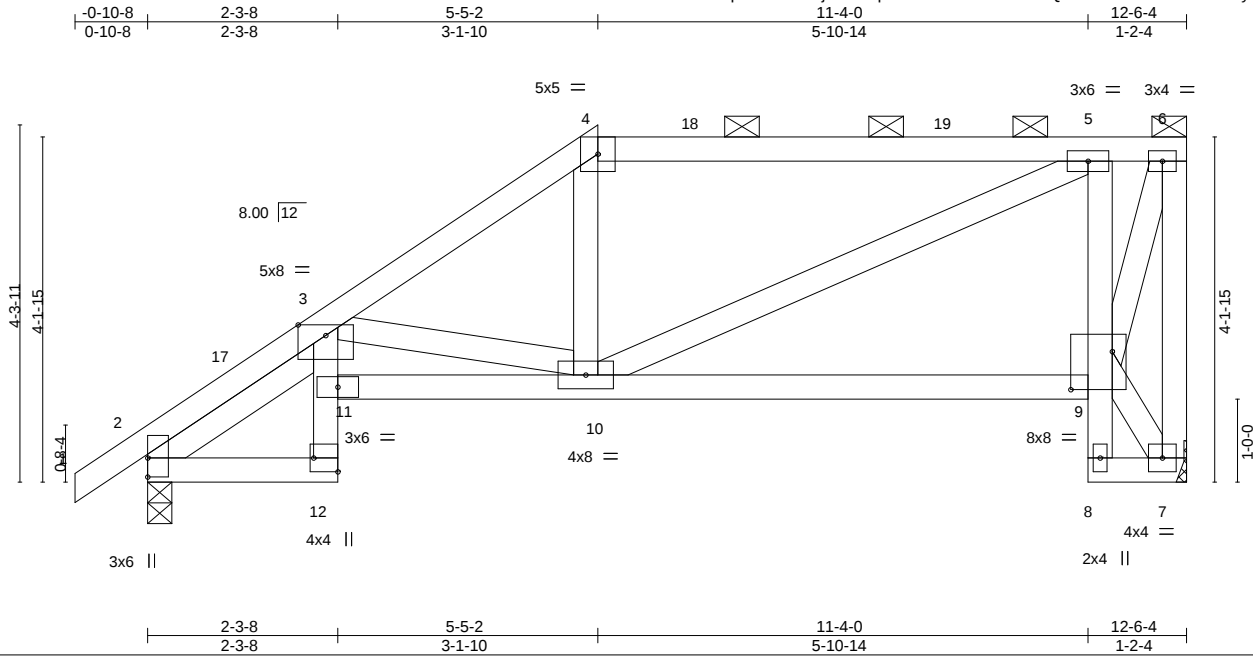


Plate Offsets (X,Y)-- [2:Edge,0-0-0], [4:0-0-0,0-0-0], [9:0-6-0,0-5-8], [12:Edge,0-3-8]

| LOADING (psf)    | SPACING-             | CSL       | DEFL.          | in (loc) | l/defl | L/d | PLATES        | GRIP     |
|------------------|----------------------|-----------|----------------|----------|--------|-----|---------------|----------|
| TCLL (roof) 25.0 | 2-0-0                | TC 0.43   | Vert(LL) -0.04 | 10-11    | >999   | 240 | MT20          | 197/144  |
| Snow (Pf) 20.0   | Plate Grip DOL 1.15  | BC 0.75   | Vert(CT) -0.08 | 9-10     | >999   | 180 |               |          |
| TCDL 10.0        | Lumber DOL 1.15      | WB 0.17   | Horz(CT) 0.08  | 7        | n/a    | n/a |               |          |
| BCLL 0.0         | Rep Stress Incr YES  | Matrix-AS |                |          |        |     |               |          |
| BCDL 10.0        | Code IRC2018/TPI2014 |           |                |          |        |     | Weight: 62 lb | FT = 20% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2  
SLIDER Left 2x4 SPF No.2 2-5-2

#### BRACING-

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

#### REACTIONS.

(size) 7=Mechanical, 2=0-3-8  
Max Horz 2=141(LC 13)  
Max Uplift 7=70(LC 11), 2=70(LC 14)  
Max Grav 7=555(LC 2), 2=620(LC 2)

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

TOP CHORD 2-3=-421/100, 3-4=-784/151, 4-5=-641/162, 6-7=-509/135  
BOT CHORD 2-12=-246/528, 10-11=-496/1054, 9-10=-122/298, 5-9=-586/206  
WEBS 3-10=-453/264, 5-10=-133/383, 6-9=-205/674

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) -0-10-8 to 2-2-13, Interior(1) 2-2-13 to 5-5-2, Exterior(2R) 5-5-2 to 9-8-0, Interior(1) 9-8-0 to 12-4-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 7, 2.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



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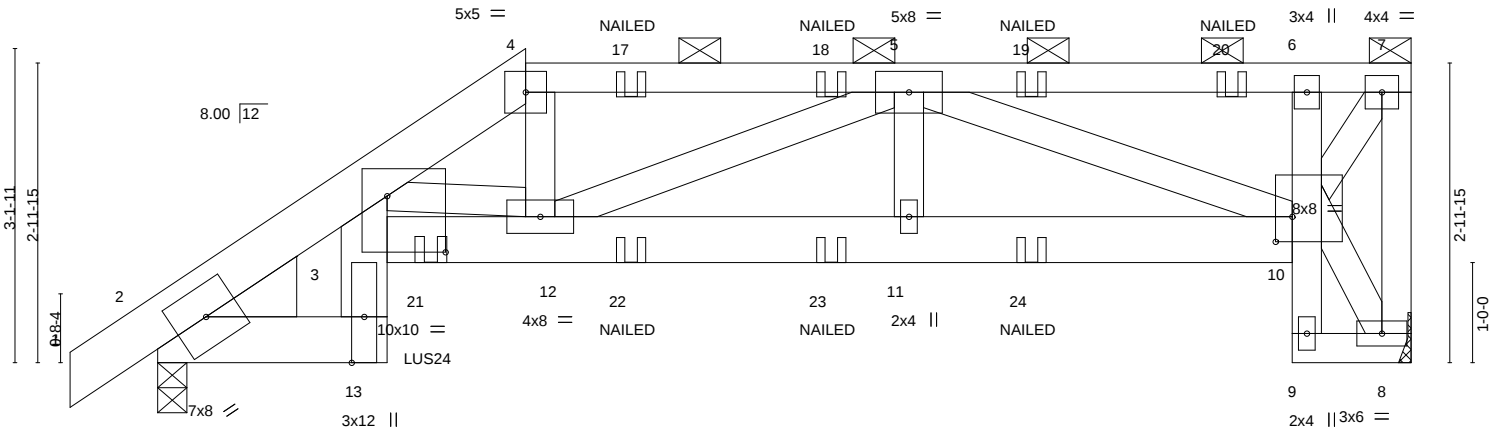
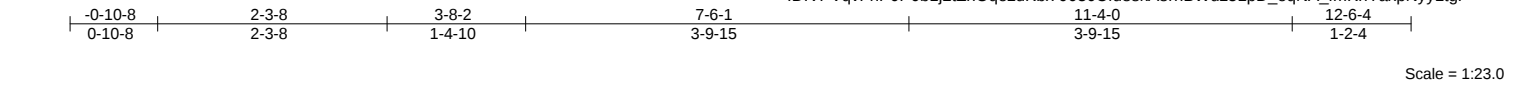


16023 Swingley Ridge Rd  
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|         |       |                 |     |     |                    |           |
|---------|-------|-----------------|-----|-----|--------------------|-----------|
| Job     | Truss | Truss Type      | Qty | Ply | Summit/23 Hawthorn | 143532846 |
| 2531623 | D8    | Half Hip Girder | 1   | 1   |                    |           |

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

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|                                                                                              |  |                      |  |        |  |           |  |                     |  |                        |  |
|----------------------------------------------------------------------------------------------|--|----------------------|--|--------|--|-----------|--|---------------------|--|------------------------|--|
|                                                                                              |  | 2-3-8                |  | 3-8-2  |  | 7-6-1     |  | 11-4-0              |  | 12-6-4                 |  |
|                                                                                              |  | 2-3-8                |  | 1-4-10 |  | 3-9-15    |  | 3-9-15              |  | 1-2-4                  |  |
| Plate Offsets (X,Y)-- [2:0-3-8,0-0-0], [2:0-9-14,0-1-15], [3:0-7-0,0-6-12], [10:0-2-0,0-3-0] |  |                      |  |        |  |           |  |                     |  |                        |  |
|                                                                                              |  |                      |  |        |  |           |  |                     |  |                        |  |
| LOADING (psf)                                                                                |  | SPACING-             |  | 2-0-0  |  | CSI.      |  | DEFL.               |  | in (loc) l/defl L/d    |  |
| TCLL (roof) 25.0                                                                             |  | Plate Grip DOL       |  | 1.15   |  | TC 0.76   |  | Vert(LL) -0.10 3-12 |  | >999 240               |  |
| Snow (Pf) 20.0                                                                               |  | Lumber DOL           |  | 1.15   |  | BC 0.93   |  | Vert(CT) -0.16 3-12 |  | >922 180               |  |
| TCDL 10.0                                                                                    |  | Rep Stress Incr      |  | NO     |  | WB 0.43   |  | Horz(CT) 0.16 8     |  | n/a n/a                |  |
| BCLL 0.0                                                                                     |  | Code IRC2018/TPI2014 |  |        |  | Matrix-MS |  |                     |  |                        |  |
| BCDL 10.0                                                                                    |  |                      |  |        |  |           |  |                     |  | Weight: 72 lb FT = 20% |  |

#### LUMBER-

TOP CHORD 2x6 SP 2400F 2.0E \*Except\*  
4-7: 2x4 SPF No.2  
BOT CHORD 2x6 SPF No.2 \*Except\*  
6-9,8-9: 2x4 SPF No.2  
WEBS 2x4 SPF No.2  
WEDGE  
Left: 2x8 SP 2400F 2.0E

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (4-2-2 max.): 4-7.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS.

(size) 8=Mechanical, 2=0-3-8  
Max Horz 2=100(LC 9)  
Max Uplift 8=-144(LC 7), 2=-161(LC 10)  
Max Grav 8=913(LC 1), 2=985(LC 1)

#### FORCES.

(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 3-15=-874/145, 3-4=-1742/273, 4-5=-1801/297, 5-6=-605/102, 6-7=-510/89, 7-8=-861/153  
BOT CHORD 3-13=-118/619, 3-12=-336/1758, 11-12=-329/1854, 10-11=-329/1854, 6-10=-350/97  
WEBS 5-10=-1349/212, 7-10=-198/1044

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional); cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 8=144, 2=161.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- Use Simpson Strong-Tie LUS24 (4-10d Girder, 2-10d Truss, Single Ply Girder) or equivalent at 2-8-12 from the left end to connect truss(es) to back face of bottom chord.
- Fill all nail holes where hanger is in contact with lumber.
- "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidelines.

Continue to Page 2  
On the CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).



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16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|                          |       |                 |     |     |                    |
|--------------------------|-------|-----------------|-----|-----|--------------------|
| Job                      | Truss | Truss Type      | Qty | Ply | Summit/23 Hawthorn |
| 2531623                  | D8    | Half Hip Girder | 1   | 1   | I43532846          |
| Job Reference (optional) |       |                 |     |     |                    |

**LOAD CASE(S)** Standard

1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (plf)

Vert: 1-3=-60, 3-4=-60, 4-7=-60, 13-14=-20, 3-10=-20, 8-9=-20

Concentrated Loads (lb)

Vert: 17=-85(B) 18=-85(B) 19=-85(B) 20=-115(B) 21=-254(B) 22=-78(B) 23=-78(B) 24=-78(B)

|         |       |                 |     |     |                    |           |
|---------|-------|-----------------|-----|-----|--------------------|-----------|
| Job     | Truss | Truss Type      | Qty | Ply | Summit/23 Hawthorn | 143532847 |
| 2531623 | E1    | Half Hip Girder | 1   | 1   |                    |           |

Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

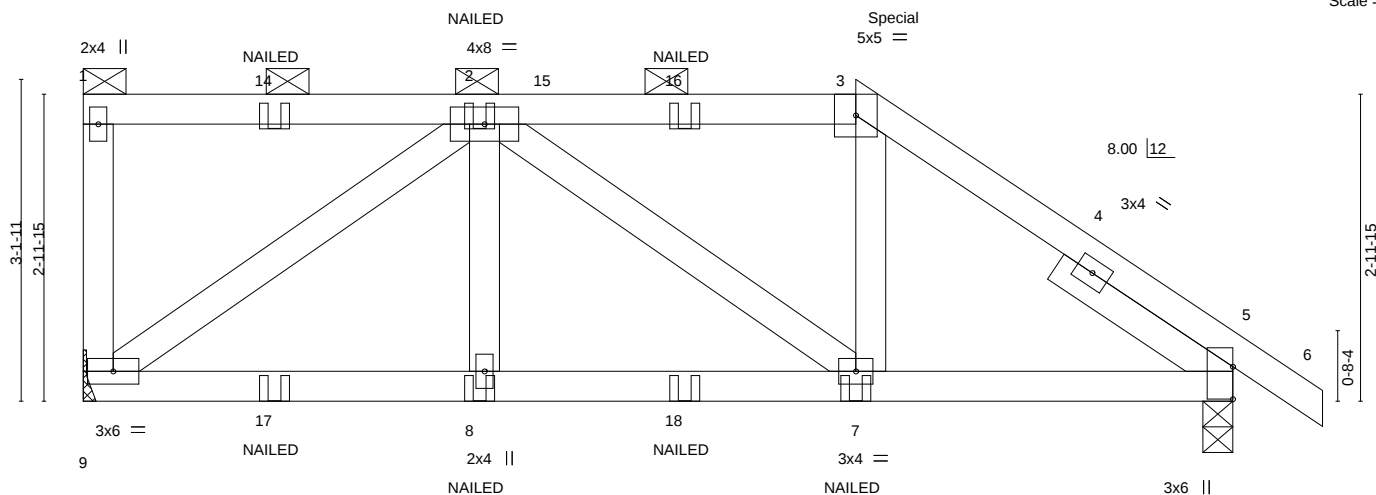
8.240 s Mar 9 2020 MiTek Industries, Inc. Fri Nov 6 14:13:26 2020 Page 1

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Job Reference (optional)

|         |       |        |        |
|---------|-------|--------|--------|
| 3-10-15 | 7-6-6 | 11-2-8 | 12-1-0 |
| 3-10-15 | 3-7-7 | 3-8-2  | 0-10-8 |

Scale = 1:22.5



|                       |                                 |
|-----------------------|---------------------------------|
| Plate Offsets (X,Y)-- | [3:0-0-0,0-0-0], [5:Edge,0-0-0] |
|-----------------------|---------------------------------|

|                      |                 |                 |                 |              |      |       |        |     |               |             |
|----------------------|-----------------|-----------------|-----------------|--------------|------|-------|--------|-----|---------------|-------------|
| <b>LOADING</b> (psf) | <b>SPACING-</b> | 2-0-0           | <b>CSI.</b>     | <b>DEFL.</b> | in   | (loc) | l/defl | L/d | <b>PLATES</b> | <b>GRIP</b> |
| TCLL (roof)          | 25.0            | Plate Grip DOL  | 1.15            | TC           | 0.32 |       |        |     | MT20          | 197/144     |
| Snow (Pf)            | 20.0            | Lumber DOL      | 1.15            | BC           | 0.45 |       |        |     |               |             |
| TCDL                 | 10.0            | Rep Stress Incr | NO              | WB           | 0.41 |       |        |     |               |             |
| BCLL                 | 0.0             | Code            | IRC2018/TPI2014 | Matrix-MS    |      |       |        |     |               |             |
| BCDL                 | 10.0            |                 |                 |              |      |       |        |     | Weight: 48 lb | FT = 20%    |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
 BOT CHORD 2x4 SPF No.2  
 WEBS 2x4 SPF No.2  
 SLIDER Right 2x4 SPF No.2 2-0-0

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 5-5-6 oc purlins, except end verticals, and 2-0-0 oc purlins (5-11-8 max.): 1-3.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS.

(size) 5=0-3-8, 9=Mechanical  
 Max Horz 9=100(LC 8)  
 Max Uplift 5=97(LC 10), 9=96(LC 6)  
 Max Grav 5=845(LC 1), 9=852(LC 1)

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

TOP CHORD 2-3=-854/114, 3-5=-1070/112  
 BOT CHORD 8-9=-62/927, 7-8=-62/927, 5-7=-33/862  
 WEBS 2-9=-1109/126

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional); cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 9.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidelines.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 207 lb down and 97 lb up at 7-6-6 on top chord. The design/selection of such connection device(s) is the responsibility of others.
- In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

#### LOAD CASE(S) Standard

1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15



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Continued on page 2

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16023 Swingley Ridge Rd  
 Chesterfield, MO 63017

|         |       |                 |     |     |                          |           |
|---------|-------|-----------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type      | Qty | Ply | Summit/23 Hawthorn       | I43532847 |
| 2531623 | E1    | Half Hip Girder | 1   | 1   | Job Reference (optional) |           |

**LOAD CASE(S)** Standard

Uniform Loads (plf)

Vert: 1-3=-60, 3-6=-60, 9-10=-20

Concentrated Loads (lb)

Vert: 3=-181(B) 2=-115(B) 8=-47(B) 7=-92(B) 14=-115(B) 16=-115(B) 17=-47(B) 18=-47(B)

|         |       |            |     |     |                    |           |
|---------|-------|------------|-----|-----|--------------------|-----------|
| Job     | Truss | Truss Type | Qty | Ply | Summit/23 Hawthorn | I43532848 |
| 2531623 | E2    | Half Hip   | 1   | 1   |                    |           |

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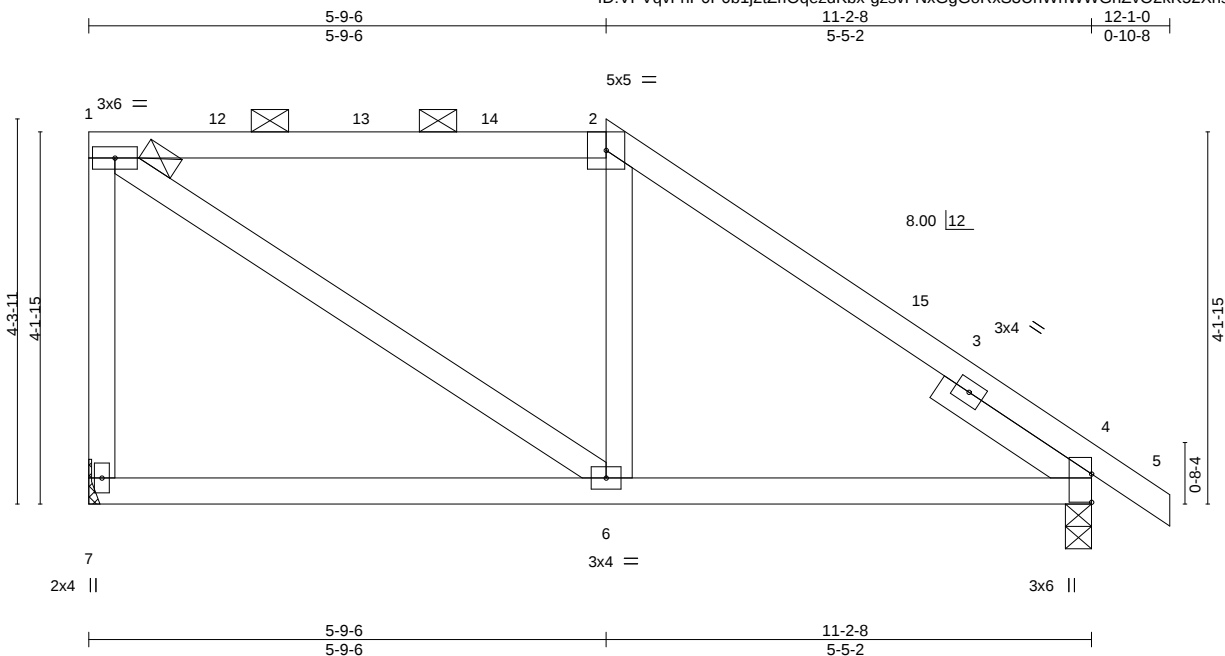


Plate Offsets (X,Y)-- [2:0-0-0,0-0-0], [4:Edge,0-0-0]

| LOADING (psf)    | SPACING-             | CSI.      | DEFL.          | in  | (loc) | I/defl | L/d | PLATES        | GRIP     |
|------------------|----------------------|-----------|----------------|-----|-------|--------|-----|---------------|----------|
| TCLL (roof) 25.0 | Plate Grip DOL 1.15  | TC 0.42   | Vert(LL) -0.03 | 6-7 | >999  | 240    |     | MT20          | 197/144  |
| Snow (Pf) 20.0   | Lumber DOL 1.15      | BC 0.25   | Vert(CT) -0.05 | 6-7 | >999  | 180    |     |               |          |
| TCDL 10.0        | Rep Stress Incr YES  | WB 0.14   | Horz(CT) 0.01  | 4   | n/a   | n/a    |     |               |          |
| BCLL 0.0         | Code IRC2018/TPI2014 | Matrix-AS |                |     |       |        |     |               |          |
| BCDL 10.0        |                      |           |                |     |       |        |     | Weight: 46 lb | FT = 20% |

**LUMBER-**  
TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2  
SLIDER Right 2x4 SPF No.2 2-0-0

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

**REACTIONS.** (size) 7=Mechanical, 4=0-3-8  
Max Horz 7=-141(LC 12)  
Max Uplift 7=-64(LC 10), 4=-65(LC 14)  
Max Grav 7=495(LC 2), 4=561(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-7=-442/155, 1-2=-411/147, 2-4=-510/122  
BOT CHORD 4-6=0/405  
WEBS 1-6=-173/449

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior(1) 3-1-12 to 5-9-6, Exterior(2R) 5-9-6 to 10-0-5, Interior(1) 10-0-5 to 12-1-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 7, 4.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



November 9,2020

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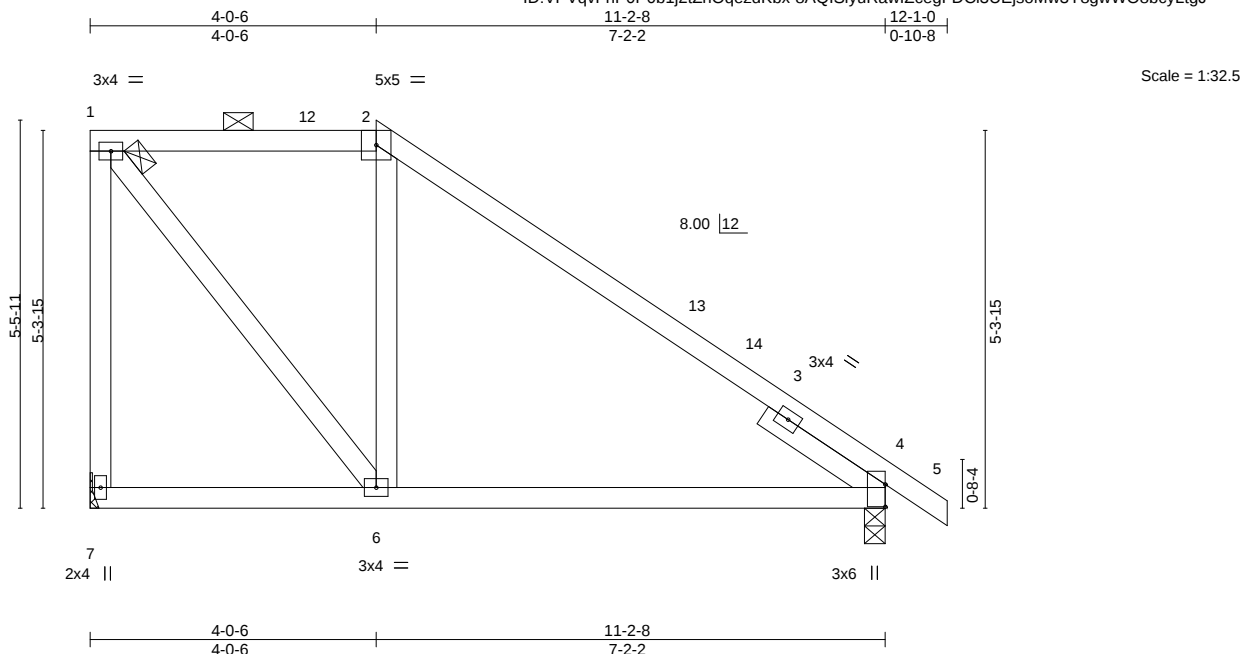


16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|         |       |            |     |     |                          |           |
|---------|-------|------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type | Qty | Ply | Summit/23 Hawthorn       | 143532849 |
| 2531623 | E3    | Half Hip   | 1   | 1   | Job Reference (optional) |           |

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Fri Nov 6 14:13:30 2020 Page 1  
ID:VPVqvFnP0P0b1j2tZrIQeqzdKbx-8AQISiyuRawlZcegFDCI3UEjsMw3Y8gwWO8bcyLtgJ



|                                                       |      |                      |      |             |      |              |                 |               |          |
|-------------------------------------------------------|------|----------------------|------|-------------|------|--------------|-----------------|---------------|----------|
| Plate Offsets (X,Y)-- [2:0-0-0,0-0-0], [4:Edge,0-0-0] |      |                      |      |             |      |              |                 |               |          |
| <b>LOADING</b> (psf)                                  |      | <b>SPACING-</b>      |      | <b>CSI.</b> |      | <b>DEFL.</b> |                 | <b>PLATES</b> |          |
| TCLL (roof)                                           | 25.0 | Plate Grip DOL       | 1.15 | TC          | 0.47 | in (loc)     | L/defl          | MT20          | GRIP     |
| Snow (Pf)                                             | 20.0 | Lumber DOL           | 1.15 | BC          | 0.38 | Vert(LL)     | -0.06 6-10 >999 |               | 197/144  |
| TCDL                                                  | 10.0 | Rep Stress Incr      | YES  | WB          | 0.15 | Vert(CT)     | -0.13 6-10 >999 |               |          |
| BCLL                                                  | 0.0  | Code IRC2018/TPI2014 |      | Matrix-AS   |      | Horz(CT)     | -0.02 4 n/a n/a |               |          |
| BCDL                                                  | 10.0 |                      |      |             |      |              |                 | Weight: 49 lb | FT = 20% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2  
SLIDER Right 2x4 SPF No.2 2-0-0

#### BRACING-

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

#### REACTIONS.

(size) 7=Mechanical, 4=0-3-8  
Max Horz 7=-181(LC 12)  
Max Uplift 7=-71(LC 10), 4=-62(LC 14)  
Max Grav 7=495(LC 2), 4=561(LC 2)

#### FORCES.

(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-7=-487/183, 1-2=-317/149, 2-4=-431/112  
BOT CHORD 4-6=0/313  
WEBS 1-6=-217/502

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior(1) 3-1-12 to 4-0-6, Exterior(2R) 4-0-6 to 8-3-5, Interior(1) 8-3-5 to 12-1-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 7, 4.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



November 9,2020

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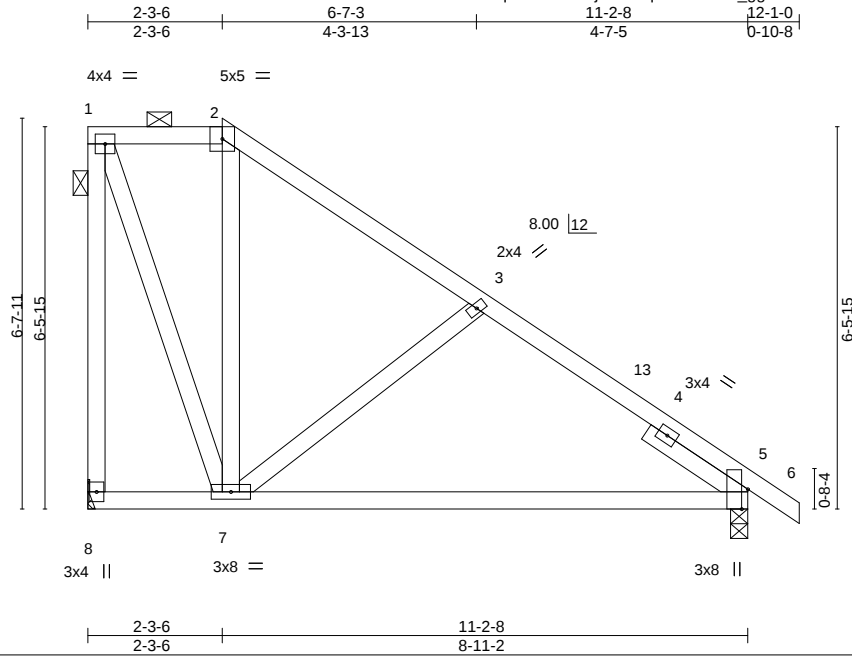
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|         |       |            |     |     |                    |           |
|---------|-------|------------|-----|-----|--------------------|-----------|
| Job     | Truss | Truss Type | Qty | Ply | Summit/23 Hawthorn | 143532850 |
| 2531623 | E4    | Half Hip   | 1   | 1   |                    |           |

Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Fri Nov 6 14:13:31 2020 Page 1  
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Scale = 1:39.1

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

| LOADING (psf)    | SPACING-             | CSI.      | DEFL.          | in   | (loc) | I/defl | L/d | PLATES        | GRIP     |
|------------------|----------------------|-----------|----------------|------|-------|--------|-----|---------------|----------|
| TCLL (roof) 25.0 | Plate Grip DOL 1.15  | TC 0.23   | Vert(LL) -0.10 | 7-11 | >999  | 240    |     | MT20          | 197/144  |
| Snow (Pf) 20.0   | Lumber DOL 1.15      | BC 0.42   | Vert(CT) -0.20 | 7-11 | >655  | 180    |     |               |          |
| TCDL 10.0        | Rep Stress Incr YES  | WB 0.16   | Horz(CT) -0.01 | 5    | n/a   | n/a    |     |               |          |
| BCLL 0.0         | Code IRC2018/TPI2014 | Matrix-AS |                |      |       |        |     |               |          |
| BCDL 10.0        |                      |           |                |      |       |        |     | Weight: 58 lb | FT = 20% |

**LUMBER-**  
TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2  
SLIDER Right 2x4 SPF No.2 2-0-0

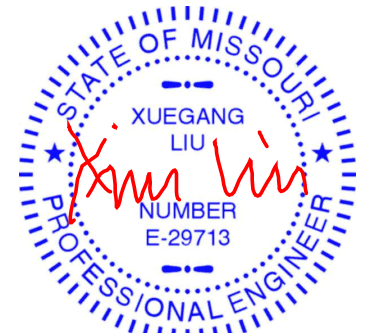
**BRACING-**  
TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 1-2.  
BOT CHORD Rigid ceiling directly applied.

**REACTIONS.** (size) 8=Mechanical, 5=0-3-8  
Max Horz 8=-222(LC 12)  
Max Uplift 8=-79(LC 10), 5=-59(LC 14)  
Max Grav 8=495(LC 2), 5=561(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-8=-517/172, 2-3=-303/115, 3-5=-674/130  
BOT CHORD 7-8=-186/294, 5-7=-5/410  
WEBS 1-7=-198/495, 3-7=-314/174

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) 0-1-12 to 2-3-6, Exterior(2R) 2-3-6 to 6-8-10, Interior(1) 6-8-10 to 12-1-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 8, 5.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



November 9,2020

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16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|                          |       |              |     |     |                    |
|--------------------------|-------|--------------|-----|-----|--------------------|
| Job                      | Truss | Truss Type   | Qty | Ply | Summit/23 Hawthorn |
| 2531623                  | E5    | Roof Special | 1   | 1   | I43532851          |
| Job Reference (optional) |       |              |     |     |                    |

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

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0-6-6 5-8-11 11-2-8 12-1-0  
0-6-6 5-2-5 5-5-13 0-10-8

Scale = 1:46.4

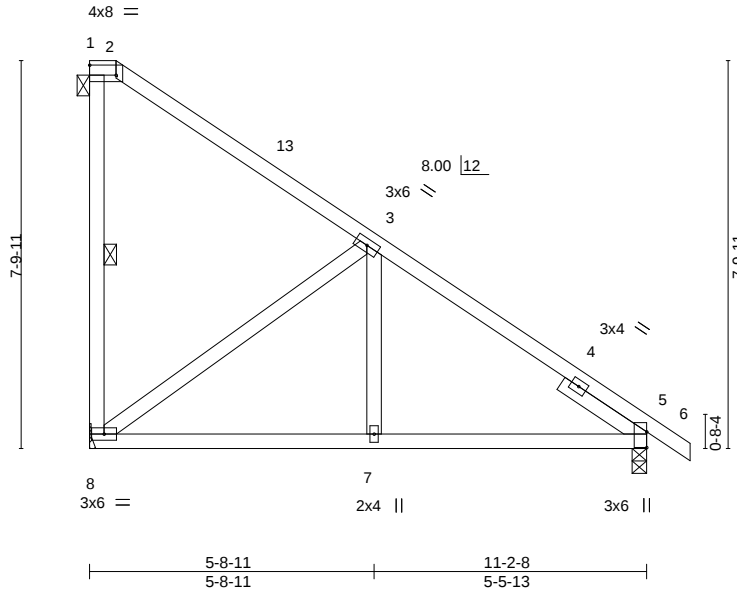


Plate Offsets (X,Y)-- [1:0-1-12,0-0-0], [1:Edge,0-2-7], [2:0-0-0,0-1-12], [5:Edge,0-0-0]

| LOADING (psf)    | SPACING-             | CSL       | DEFL.          | in (loc) | l/defl | L/d | PLATES        | GRIP     |
|------------------|----------------------|-----------|----------------|----------|--------|-----|---------------|----------|
| TCLL (roof) 25.0 | 2-0-0                | TC 0.31   | Vert(LL) -0.03 | 7-8      | >999   | 240 | MT20          | 197/144  |
| Snow (Pf) 20.0   | Plate Grip DOL 1.15  | BC 0.25   | Vert(CT) -0.05 | 7-8      | >999   | 180 |               |          |
| TCDL 10.0        | Lumber DOL 1.15      | WB 0.40   | Horz(CT) 0.01  | 5        | n/a    | n/a |               |          |
| BCLL 0.0         | Rep Stress Incr YES  | Matrix-AS |                |          |        |     |               |          |
| BCDL 10.0        | Code IRC2018/TPI2014 |           |                |          |        |     | Weight: 52 lb | FT = 20% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2  
SLIDER Right 2x4 SPF No.2 2-0-0

#### BRACING-

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 1-2.  
BOT CHORD Rigid ceiling directly applied.  
WEBS 1 Row at midpt 1-8

#### REACTIONS.

(size) 5=0-3-8, 8=Mechanical  
Max Horz 8=-267(LC 12)  
Max Uplift 5=-55(LC 14), 8=-92(LC 10)  
Max Grav 5=561(LC 2), 8=508(LC 25)

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

TOP CHORD 3-5=-413/126  
BOT CHORD 7-8=0/421, 5-7=0/421  
WEBS 3-8=-494/238

#### NOTES-

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) 0-1-12 to 0-6-6, Exterior(2R) 0-6-6 to 3-6-6, Interior(1) 3-6-6 to 12-1-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 8.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



November 9, 2020

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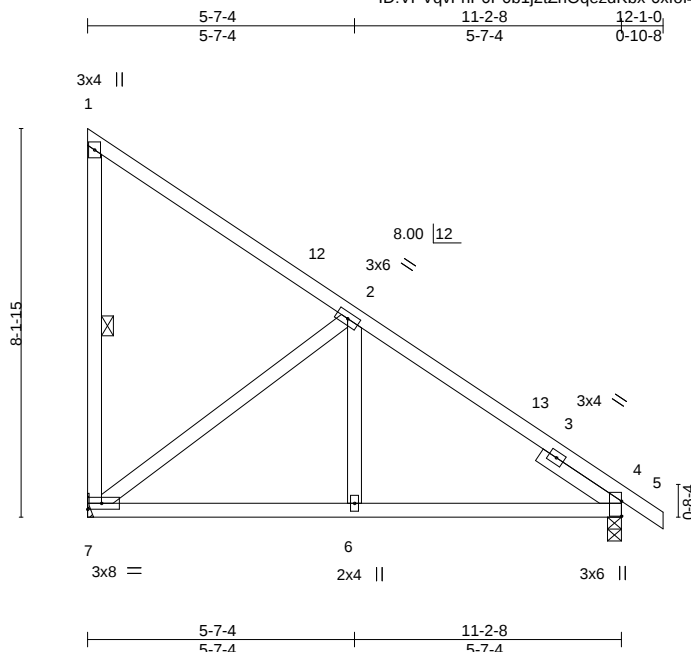


16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|         |       |              |     |     |                          |           |
|---------|-------|--------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type   | Qty | Ply | Summit/23 Hawthorn       | I43532852 |
| 2531623 | E6    | Roof Special | 7   | 1   | Job Reference (optional) |           |

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Fri Nov 6 14:13:34 2020 Page 1  
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Scale: 1/4"=1'

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

| LOADING (psf)    | SPACING-             | CSI.      | DEFL.          | in (loc) | l/defl | L/d | PLATES        | GRIP     |
|------------------|----------------------|-----------|----------------|----------|--------|-----|---------------|----------|
| TCLL (roof) 25.0 | 2-0-0                | TC 0.32   | Vert(LL) -0.03 | 6-7      | >999   | 240 | MT20          | 197/144  |
| Snow (Pf) 20.0   | Plate Grip DOL 1.15  | BC 0.25   | Vert(CT) -0.05 | 6-7      | >999   | 180 |               |          |
| TCDL 10.0        | Lumber DOL 1.15      | WB 0.40   | Horz(CT) 0.01  | 4        | n/a    | n/a |               |          |
| BCLL 0.0         | Rep Stress Incr YES  | Matrix-AS |                |          |        |     |               |          |
| BCDL 10.0        | Code IRC2018/TPI2014 |           |                |          |        |     | Weight: 52 lb | FT = 20% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2  
SLIDER Right 2x4 SPF No.2 2-0-0

#### BRACING-

TOP CHORD Structural wood sheathing directly applied, except end verticals.  
BOT CHORD Rigid ceiling directly applied.  
WEBS 1 Row at midpt 1-7

#### REACTIONS.

(size) 4=0-3-8, 7=Mechanical  
Max Horz 7=-275(LC 12)  
Max Uplift 4=-55(LC 14), 7=-93(LC 10)  
Max Grav 4=561(LC 2), 7=513(LC 25)

#### FORCES.

(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-4=-508/119  
BOT CHORD 6-7=0/422, 4-6=0/422  
WEBS 2-7=-496/188

#### NOTES-

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) 0-1-12 to 4-4-11, Interior(1) 4-4-11 to 12-1-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4, 7.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 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.



November 9, 2020

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**

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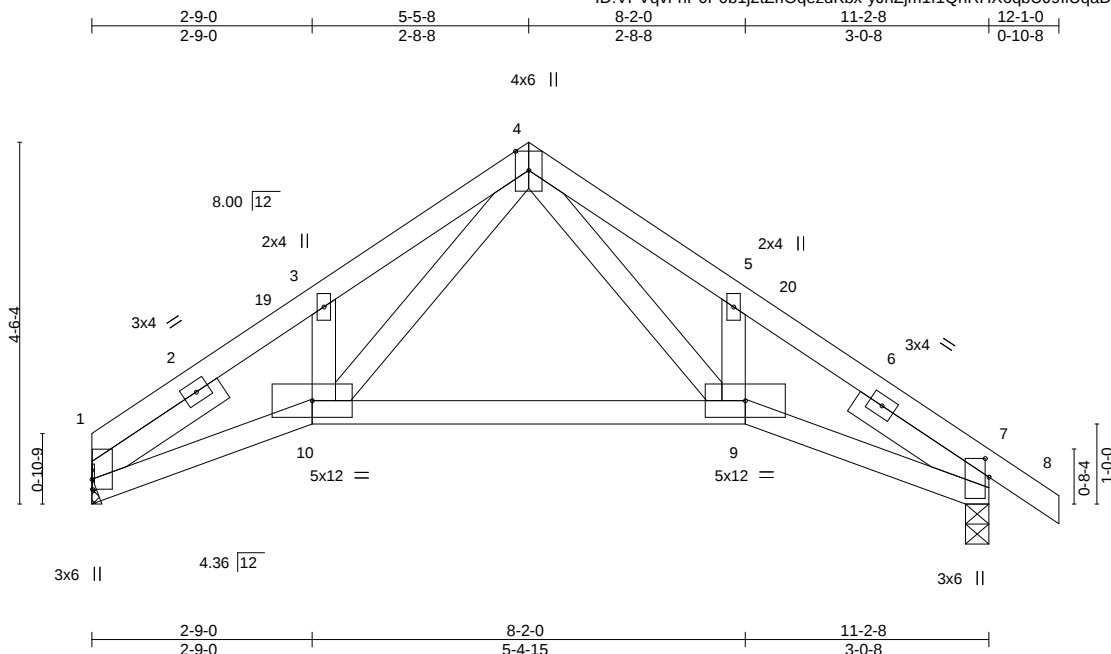


16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|         |       |              |     |     |                          |           |
|---------|-------|--------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type   | Qty | Ply | Summit/23 Hawthorn       | I43532853 |
| 2531623 | E7    | Roof Special | 2   | 1   | Job Reference (optional) |           |

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Fri Nov 6 14:13:36 2020 Page 1  
ID:VPVqvFnP0P0b1j2tZrIQezdKbx-yJnZjm1f1QhRHx6qbUJ9llUqaDQkTH?ZlSrSoGyLtgD



Scale = 1:28.8

|                                                         |      |                 |                 |             |      |              |            |               |             |
|---------------------------------------------------------|------|-----------------|-----------------|-------------|------|--------------|------------|---------------|-------------|
| Plate Offsets (X,Y)-- [1:0-1-8,0-0-1], [7:0-2-13,0-0-9] |      |                 |                 |             |      |              |            |               |             |
| <b>LOADING</b> (psf)                                    |      | <b>SPACING-</b> | 2-0-0           | <b>CSI.</b> |      | <b>DEFL.</b> | in (loc)   | L/def         | L/d         |
| TCLL (roof)                                             | 25.0 | Plate Grip DOL  | 1.15            | TC          | 0.13 | Vert(LL)     | -0.04 9-10 | >999          | 240         |
| Snow (Pf)                                               | 20.0 | Lumber DOL      | 1.15            | BC          | 0.29 | Vert(CT)     | -0.10 9-10 | >999          | 180         |
| TCDL                                                    | 10.0 | Rep Stress Incr | YES             | WB          | 0.13 | Horz(CT)     | 0.04 7     | n/a           | n/a         |
| BCLL                                                    | 0.0  | Code            | IRC2018/TPI2014 | Matrix-AS   |      |              |            |               |             |
| BCDL                                                    | 10.0 |                 |                 |             |      |              |            |               |             |
|                                                         |      |                 |                 |             |      |              |            | <b>PLATES</b> | <b>GRIP</b> |
|                                                         |      |                 |                 |             |      |              |            | MT20          | 197/144     |
|                                                         |      |                 |                 |             |      |              |            | Weight: 46 lb | FT = 20%    |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2  
SLIDER Left 2x4 SPF No.2 2-0-0, Right 2x4 SPF No.2 2-0-0

#### BRACING-

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

#### REACTIONS.

(size) 1=Mechanical, 7=0-3-8  
Max Horz 1=-88(LC 12)  
Max Uplift 1=-40(LC 14), 7=-68(LC 14)  
Max Grav 1=502(LC 2), 7=568(LC 2)

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

TOP CHORD 1-3=-935/175, 3-4=-882/265, 4-5=-946/284, 5-7=-988/188  
BOT CHORD 1-10=-67/770, 9-10=0/439, 7-9=-85/818  
WEBS 4-10=-131/471, 4-9=-156/518

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) 0-0-0 to 2-10-12, Interior(1) 2-10-12 to 5-5-8, Exterior(2R) 5-5-8 to 8-5-8, Interior(1) 8-5-8 to 12-1-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Refer to girder(s) for truss to truss connections.
- Bearing at joint(s) 7 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 7.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 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.



November 9, 2020

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16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|         |       |              |     |     |                    |           |
|---------|-------|--------------|-----|-----|--------------------|-----------|
| Job     | Truss | Truss Type   | Qty | Ply | Summit/23 Hawthorn | I43532854 |
| 2531623 | E8    | Roof Special | 3   | 1   |                    |           |

Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Fri Nov 6 14:13:37 2020 Page 1

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4x6 ||

Scale = 1:29.1

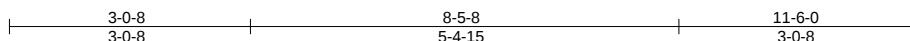
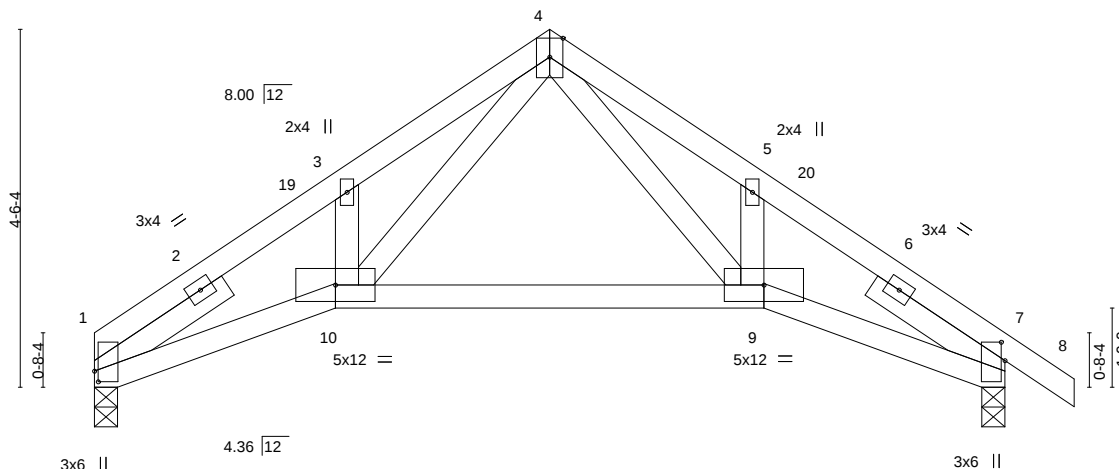


Plate Offsets (X,Y)-- [1:0-1-10,0-0-9], [7:0-2-13,0-0-9]

| LOADING (psf)    | SPACING-             | CSI.      | DEFL.    | in    | (loc) | l/defl | L/d | PLATES        | GRIP     |
|------------------|----------------------|-----------|----------|-------|-------|--------|-----|---------------|----------|
| TCLL (roof) 25.0 | 2-0-0                | TC 0.13   | Vert(LL) | -0.04 | 9-10  | >999   | 240 | MT20          | 197/144  |
| Snow (Pf) 20.0   | Plate Grip DOL 1.15  | BC 0.26   | Vert(CT) | -0.10 | 9-10  | >999   | 180 |               |          |
| TCDL 10.0        | Lumber DOL 1.15      | WB 0.13   | Horz(CT) | 0.04  | 7     | n/a    | n/a |               |          |
| BCLL 0.0         | Rep Stress Incr YES  | Matrix-AS |          |       |       |        |     |               |          |
| BCDL 10.0        | Code IRC2018/TPI2014 |           |          |       |       |        |     | Weight: 47 lb | FT = 20% |

**LUMBER-**  
TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2  
SLIDER Left 2x4 SPF No.2 2-0-0, Right 2x4 SPF No.2 2-0-0

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

**REACTIONS.** (size) 1=0-3-8, 7=0-3-8  
Max Horz 1=-90(LC 12)  
Max Uplift 1=-41(LC 14), 7=-69(LC 14)  
Max Grav 1=515(LC 2), 7=581(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-3=-1032/190, 3-4=-991/283, 4-5=-976/284, 5-7=-1021/189  
BOT CHORD 1-10=-85/861, 9-10=0/462, 7-9=-88/844  
WEBS 4-9=-153/521, 4-10=-151/566

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCCL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) 0-0-0 to 3-2-4, Interior(1) 3-2-4 to 5-9-0, Exterior(2R) 5-9-0 to 8-9-0, Interior(1) 8-9-0 to 12-4-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCCL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Bearing at joint(s) 1, 7 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 7.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 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.



November 9, 2020

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16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|         |       |              |     |     |                          |           |
|---------|-------|--------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type   | Qty | Ply | Summit/23 Hawthorn       | I43532855 |
| 2531623 | E9    | Roof Special | 1   | 1   | Job Reference (optional) |           |

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

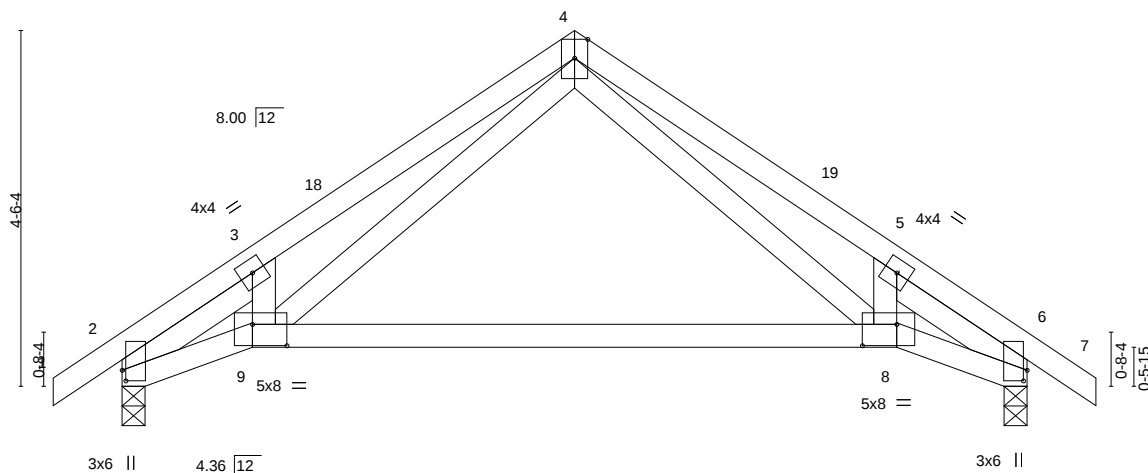
8.240 s Mar 9 2020 MiTek Industries, Inc. Fri Nov 6 14:13:39 2020 Page 1

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|         |        |       |        |        |        |
|---------|--------|-------|--------|--------|--------|
| -0-10-8 | 1-7-14 | 5-9-0 | 9-10-2 | 11-6-0 | 12-4-8 |
| 0-10-8  | 1-7-14 | 4-1-2 | 4-1-2  | 1-7-14 | 0-10-8 |

4x6 ||

Scale = 1:29.3



|                       |                                                                      |
|-----------------------|----------------------------------------------------------------------|
| Plate Offsets (X,Y)-- | [2:0-1-10,0-0-9], [6:0-1-10,0-0-9], [8:0-5-4,0-3-4], [9:0-5-4,0-3-4] |
|-----------------------|----------------------------------------------------------------------|

| LOADING (psf) | SPACING- | CSI.                 | DEFL.     | in   | (loc) | I/defl | L/d | PLATES        | GRIP     |
|---------------|----------|----------------------|-----------|------|-------|--------|-----|---------------|----------|
| TCLL (roof)   | 25.0     | 2-0-0                | TC        | 0.19 |       |        |     | MT20          | 197/144  |
| Snow (Pf)     | 20.0     | Plate Grip DOL 1.15  | BC        | 0.45 |       |        |     |               |          |
| TCDL          | 10.0     | Lumber DOL 1.15      | WB        | 0.15 |       |        |     |               |          |
| BCLL          | 0.0      | Rep Stress Incr YES  | Matrix-AS |      |       |        |     |               |          |
| BCDL          | 10.0     | Code IRC2018/TPI2014 |           |      |       |        |     |               |          |
|               |          |                      |           |      |       |        |     | Weight: 50 lb | FT = 20% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
 BOT CHORD 2x4 SPF No.2  
 WEBS 2x4 SPF No.2  
 SLIDER Left 2x4 SPF No.2 2-0-12, Right 2x4 SPF No.2 2-0-12

#### BRACING-

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

#### REACTIONS.

(size) 2=0-3-8, 6=0-3-8  
 Max Horz 2=94(LC 13)  
 Max Uplift 2=-69(LC 14), 6=-69(LC 14)  
 Max Grav 2=579(LC 2), 6=579(LC 2)

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

TOP CHORD 2-3=-395/85, 3-4=-1033/281, 4-5=-1033/288, 5-6=-395/89  
 BOT CHORD 2-9=-69/902, 8-9=-4/395, 6-8=-80/884  
 WEBS 4-8=-144/591, 4-9=-138/617

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 5-9-0, Exterior(2R) 5-9-0 to 8-9-0, Interior(1) 8-9-0 to 12-4-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Bearing at joint(s) 2, 6 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 6.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 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.



November 9, 2020

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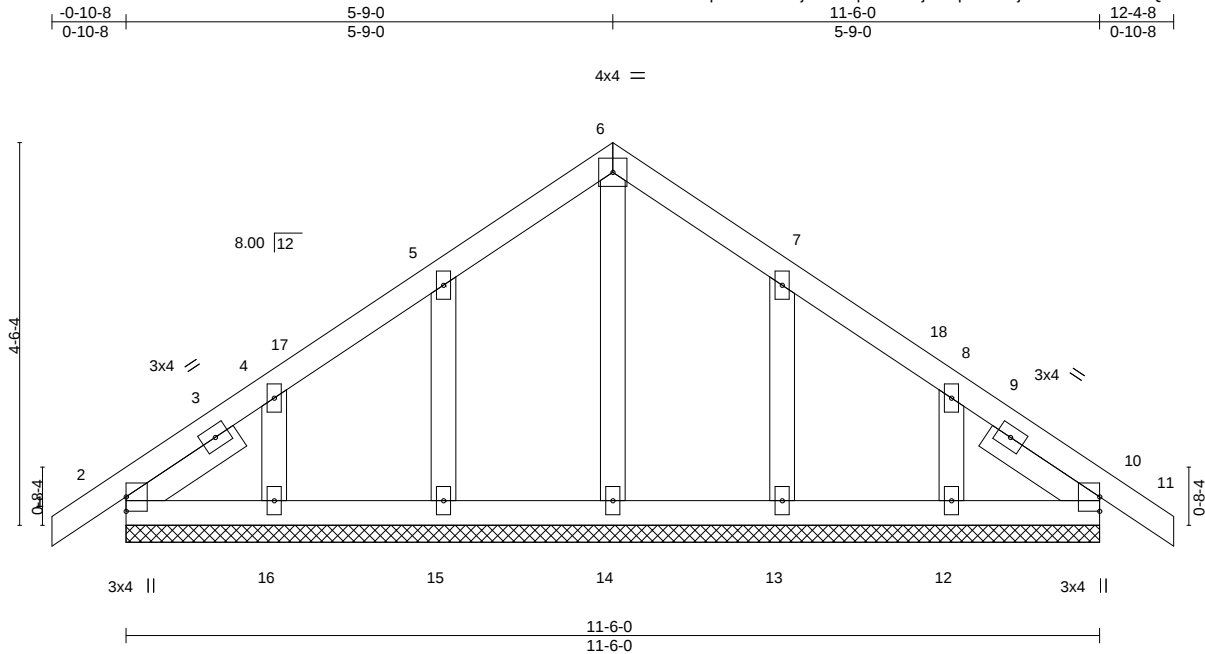


16023 Swingley Ridge Rd  
 Chesterfield, MO 63017

|         |       |                        |     |     |                          |           |
|---------|-------|------------------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type             | Qty | Ply | Summit/23 Hawthorn       | I43532856 |
| 2531623 | E10   | Common Supported Gable | 1   | 1   | Job Reference (optional) |           |

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

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Scale = 1:27.2

| LOADING (psf)    | SPACING-             | CSI.     | DEFL.          | in | (loc) | l/defl | L/d | PLATES        | GRIP     |
|------------------|----------------------|----------|----------------|----|-------|--------|-----|---------------|----------|
| TCLL (roof) 25.0 | 2-0-0                | TC 0.05  | Vert(LL) -0.00 | 10 | n/r   | 120    |     | MT20          | 197/144  |
| Snow (Pf) 20.0   | Plate Grip DOL 1.15  | BC 0.02  | Vert(CT) -0.00 | 11 | n/r   | 120    |     |               |          |
| TCDL 10.0        | Lumber DOL 1.15      | WB 0.03  | Horz(CT) 0.00  | 10 | n/a   | n/a    |     |               |          |
| BCLL 0.0         | Rep Stress Incr YES  | Matrix-S |                |    |       |        |     |               |          |
| BCDL 10.0        | Code IRC2018/TPI2014 |          |                |    |       |        |     |               |          |
|                  |                      |          |                |    |       |        |     | Weight: 49 lb | FT = 20% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
OTHERS 2x4 SPF No.2  
SLIDER Left 2x4 SPF No.2 1-6-9, Right 2x4 SPF No.2 1-6-9

#### BRACING-

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

#### REACTIONS.

All bearings 11-6-0.  
(lb) - Max Horz 2=94(LC 12)  
Max Uplift All uplift 100 lb or less at joint(s) 2, 10, 15, 16, 13, 12  
Max Grav All reactions 250 lb or less at joint(s) 2, 10, 14, 15, 16, 13, 12

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

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=2ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner(3E) -0-10-8 to 2-1-8, Exterior(2N) 2-1-8 to 5-9-0, Corner(3R) 5-9-0 to 8-9-0, Exterior(2N) 8-9-0 to 12-4-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- All plates are 2x4 MT20 unless otherwise indicated.
- 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 10, 15, 16, 13, 12.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



November 9, 2020

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Chesterfield, MO 63017

|                |             |                         |          |          |                                                |           |
|----------------|-------------|-------------------------|----------|----------|------------------------------------------------|-----------|
| Job<br>2531623 | Truss<br>J1 | Truss Type<br>Jack-Open | Qty<br>4 | Ply<br>1 | Summit/23 Hawthorn<br>Job Reference (optional) | I43532857 |
|----------------|-------------|-------------------------|----------|----------|------------------------------------------------|-----------|

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Fri Nov 6 14:13:39 2020 Page 1

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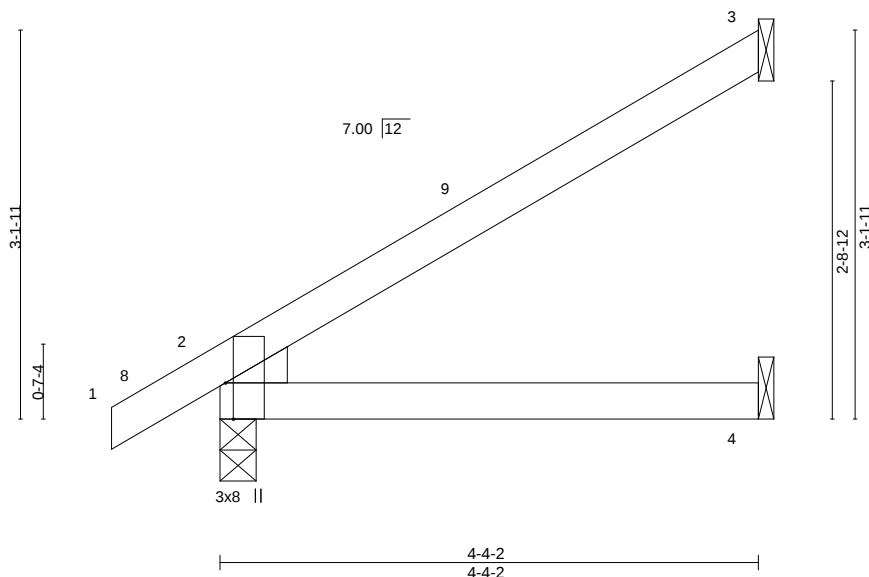


Plate Offsets (X,Y)-- [2:0-0-2,0-0-4], [2:0-0-5,0-4-8], [2:0-3-8,Edge]

| LOADING (psf)    | SPACING-             | CSI.      | DEFL.          | in  | (loc) | l/defl | L/d | PLATES        | GRIP     |
|------------------|----------------------|-----------|----------------|-----|-------|--------|-----|---------------|----------|
| TCLL (roof) 25.0 | Plate Grip DOL 1.15  | TC 0.31   | Vert(LL) -0.03 | 4-7 | >999  | 240    |     | MT20          | 197/144  |
| Snow (Pf) 20.0   | Lumber DOL 1.15      | BC 0.24   | Vert(CT) -0.05 | 4-7 | >999  | 180    |     |               |          |
| TCDL 10.0        | Rep Stress Incr YES  | WB 0.00   | Horz(CT) 0.01  | 2   | n/a   | n/a    |     |               |          |
| BCLL 0.0         | Code IRC2018/TPI2014 | Matrix-AS |                |     |       |        |     |               |          |
| BCDL 10.0        |                      |           |                |     |       |        |     |               |          |
|                  |                      |           |                |     |       |        |     | Weight: 13 lb | FT = 20% |

#### LUMBER-

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

#### BRACING-

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

**REACTIONS.** (size) 3=Mechanical, 2=0-3-8, 4=Mechanical  
Max Horz 2=91(LC 16)  
Max Uplift 3=-43(LC 16), 2=-20(LC 16)  
Max Grav 3=175(LC 21), 2=324(LC 21), 4=78(LC 7)

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

#### NOTES-

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 4-3-6 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 2.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 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.



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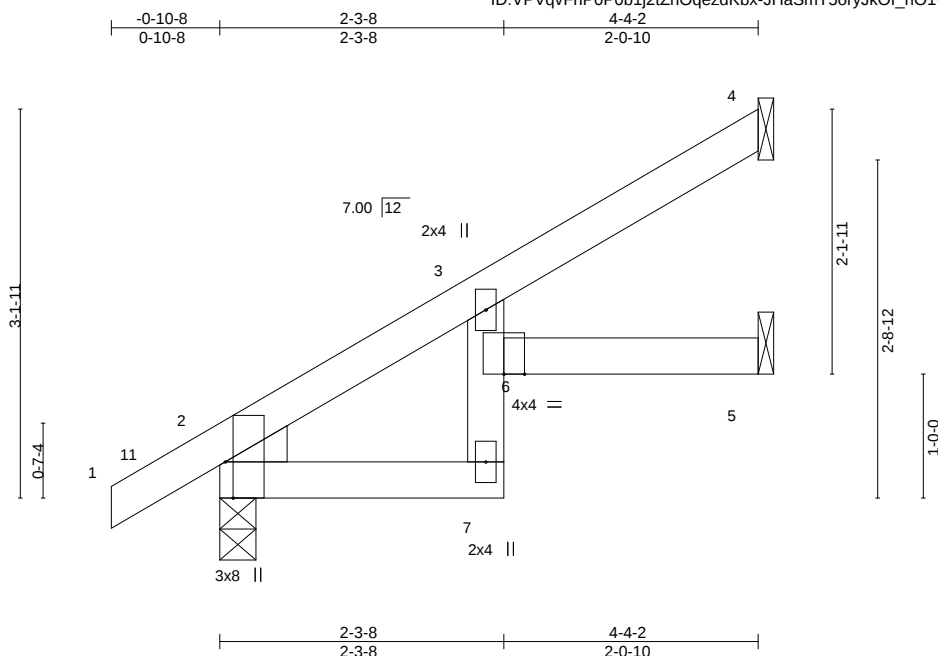


16023 Swingley Ridge Rd  
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|                          |       |            |     |     |                    |           |
|--------------------------|-------|------------|-----|-----|--------------------|-----------|
| Job                      | Truss | Truss Type | Qty | Ply | Summit/23 Hawthorn | I43532858 |
| 2531623                  | J2    | Jack-Open  | 3   | 1   |                    |           |
| Job Reference (optional) |       |            |     |     |                    |           |

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

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ID:VPVqvFnP0P0b1j2tZr1OqezdKbx-JHaSmT5oryJkOI\_nO1vK?oBgCE6U8YEISjZDTTyLtg8



Scale = 1:18.6

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

| LOADING (psf)    | SPACING-             | CSI.      | DEFL.    | in    | (loc) | I/defl | L/d | PLATES        | GRIP     |
|------------------|----------------------|-----------|----------|-------|-------|--------|-----|---------------|----------|
| TCLL (roof) 25.0 | 2-0-0                | TC 0.20   | Vert(LL) | -0.03 | 5-6   | >999   | 240 | MT20          | 197/144  |
| Snow (Pf) 20.0   | Plate Grip DOL 1.15  | BC 0.32   | Vert(CT) | -0.04 | 5-6   | >999   | 180 |               |          |
| TCDL 10.0        | Lumber DOL 1.15      | WB 0.00   | Horz(CT) | 0.02  | 5     | n/a    | n/a |               |          |
| BCLL 0.0         | Rep Stress Incr YES  | Matrix-AS |          |       |       |        |     |               |          |
| BCDL 10.0        | Code IRC2018/TPI2014 |           |          |       |       |        |     | Weight: 14 lb | FT = 20% |

#### LUMBER-

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

#### BRACING-

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

**REACTIONS.** (size) 4=Mechanical, 2=0-3-8, 5=Mechanical  
Max Horz 2=91(LC 16)  
Max Uplift 4=-32(LC 16), 2=-20(LC 16), 5=-6(LC 16)  
Max Grav 4=145(LC 21), 2=324(LC 21), 5=98(LC 21)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-258/10

#### NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) -0-10-8 to 2-0-14, Interior(1) 2-0-14 to 4-3-6 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) Refer to girder(s) for truss to truss connections.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4, 2, 5.
- 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 9) 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.



November 9, 2020

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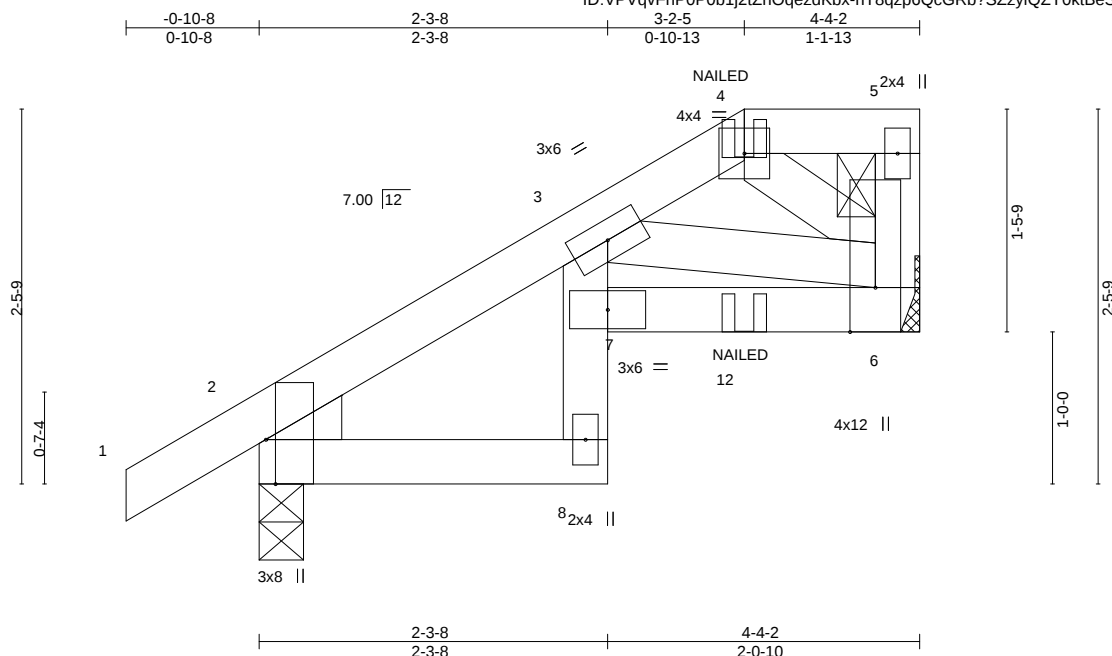
|         |       |                 |     |     |                    |           |
|---------|-------|-----------------|-----|-----|--------------------|-----------|
| Job     | Truss | Truss Type      | Qty | Ply | Summit/23 Hawthorn | I43532859 |
| 2531623 | J3    | Half Hip Girder | 1   | 1   |                    |           |

Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

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Scale = 1:15.2

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

| LOADING (psf) | SPACING- | 2-0-0                | CSI. | DEFL.     | in   | (loc) | I/defl | L/d | PLATES        | GRIP     |
|---------------|----------|----------------------|------|-----------|------|-------|--------|-----|---------------|----------|
| TCLL (roof)   | 25.0     | Plate Grip DOL       | 1.15 | TC        | 0.12 |       |        |     | MT20          | 197/144  |
| Snow (Pf)     | 20.0     | Lumber DOL           | 1.15 | BC        | 0.34 |       |        |     |               |          |
| TCDL          | 10.0     | Rep Stress Incr      | NO   | WB        | 0.06 |       |        |     |               |          |
| BCLL          | 0.0      | Code IRC2018/TPI2014 |      | Matrix-MP |      |       |        |     |               |          |
| BCDL          | 10.0     |                      |      |           |      |       |        |     | Weight: 18 lb | FT = 20% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2  
WEDGE  
Left: 2x4 SPF No.2

#### BRACING-

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

#### REACTIONS.

(size) 2=0-3-8, 6=Mechanical  
Max Horz 2=63(LC 9)  
Max Uplift 2=-46(LC 12), 6=-49(LC 9)  
Max Grav 2=381(LC 32), 6=273(LC 32)

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

BOT CHORD 6-7=-77/448  
WEBS 3-6=-393/59

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional); cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 6.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- "NAILED" indicates 2-12d (0.148"x3.25") toe-nails per NDS guidelines.
- In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

#### LOAD CASE(S) Standard

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-4=-60, 4-5=-60, 8-9=-20, 6-7=-20



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Continued on page 2

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Chesterfield, MO 63017

|                          |       |                 |     |     |                    |
|--------------------------|-------|-----------------|-----|-----|--------------------|
| Job                      | Truss | Truss Type      | Qty | Ply | Summit/23 Hawthorn |
| 2531623                  | J3    | Half Hip Girder | 1   | 1   | I43532859          |
| Job Reference (optional) |       |                 |     |     |                    |

**LOAD CASE(S)** Standard  
Concentrated Loads (lb)  
Vert: 12=-113(F)

|                |             |                         |          |          |                                                |           |
|----------------|-------------|-------------------------|----------|----------|------------------------------------------------|-----------|
| Job<br>2531623 | Truss<br>J4 | Truss Type<br>Jack-Open | Qty<br>9 | Ply<br>1 | Summit/23 Hawthorn<br>Job Reference (optional) | I43532860 |
|----------------|-------------|-------------------------|----------|----------|------------------------------------------------|-----------|

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0-10-8 4-2-0  
0-10-8 4-2-0

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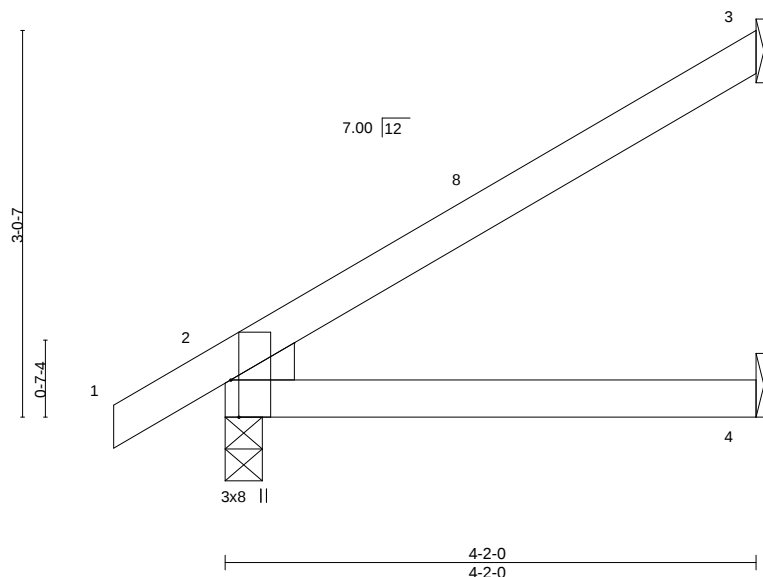


Plate Offsets (X,Y)-- [2:0-0-2,0-0-4], [2:0-0-5,0-4-8], [2:0-3-8,Edge]

| LOADING (psf)    | SPACING-             | 2-0-0 | CSI.      | DEFL.    | in    | (loc) | l/defl | L/d | PLATES        | GRIP     |
|------------------|----------------------|-------|-----------|----------|-------|-------|--------|-----|---------------|----------|
| TCLL (roof) 25.0 | Plate Grip DOL       | 1.15  | TC 0.28   | Vert(LL) | -0.02 | 4-7   | >999   | 240 | MT20          | 197/144  |
| Snow (Pf) 20.0   | Lumber DOL           | 1.15  | BC 0.22   | Vert(CT) | -0.04 | 4-7   | >999   | 180 |               |          |
| TCDL 10.0        | Rep Stress Incr      | YES   | WB 0.00   | Horz(CT) | 0.01  | 2     | n/a    | n/a |               |          |
| BCLL 0.0         | Code IRC2018/TPI2014 |       | Matrix-AS |          |       |       |        |     | Weight: 12 lb | FT = 20% |
| BCDL 10.0        |                      |       |           |          |       |       |        |     |               |          |

#### LUMBER-

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

#### BRACING-

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

**REACTIONS.** (size) 3=Mechanical, 2=0-3-8, 4=Mechanical  
Max Horz 2=88(LC 16)  
Max Uplift 3=-41(LC 16), 2=-20(LC 16)  
Max Grav 3=166(LC 21), 2=331(LC 21), 4=75(LC 7)

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

#### NOTES-

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 4-1-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 2.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 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.



November 9, 2020

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Chesterfield, MO 63017

|                          |       |            |     |     |                    |           |
|--------------------------|-------|------------|-----|-----|--------------------|-----------|
| Job                      | Truss | Truss Type | Qty | Ply | Summit/23 Hawthorn | I43532861 |
| 2531623                  | J5    | Jack-Open  | 1   | 1   |                    |           |
| Job Reference (optional) |       |            |     |     |                    |           |

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8.240 s Mar 9 2020 MiTek Industries, Inc. Fri Nov 6 14:13:44 2020 Page 1  
ID:VPVqvFnP0P0b1j2tZrI0qezdKbx-ksGaOV7g8thJFmjM39S1dRpCCRC1Lvzk8hnt4oyLtg5

-0-10-8  
0-10-8  
2-8-5  
2-8-5

Scale = 1:13.8

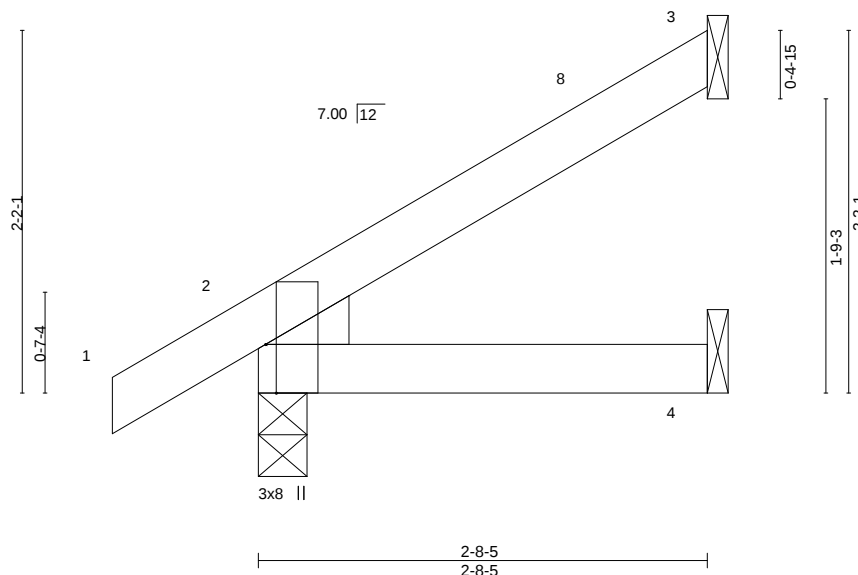


Plate Offsets (X,Y)-- [2:0-0-2,0-0-4], [2:0-0-5,0-4-8], [2:0-3-8,Edge]

| LOADING (psf)    | SPACING-        | 2-0-0           | CSI.      | DEFL.    | in    | (loc) | I/defl | L/d | PLATES       | GRIP     |
|------------------|-----------------|-----------------|-----------|----------|-------|-------|--------|-----|--------------|----------|
| TCLL (roof) 25.0 | Plate Grip DOL  | 1.15            | TC 0.09   | Vert(LL) | -0.00 | 4-7   | >999   | 240 | MT20         | 197/144  |
| Snow (Pf) 20.0   | Lumber DOL      | 1.15            | BC 0.07   | Vert(CT) | -0.01 | 4-7   | >999   | 180 |              |          |
| TCDL 10.0        | Rep Stress Incr | YES             | WB 0.00   | Horz(CT) | 0.00  | 2     | n/a    | n/a |              |          |
| BCLL 0.0         | Code            | IRC2018/TPI2014 | Matrix-MP |          |       |       |        |     | Weight: 9 lb | FT = 20% |
| BCDL 10.0        |                 |                 |           |          |       |       |        |     |              |          |

#### LUMBER-

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

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 2-8-5 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 3=Mechanical, 2=0-3-8, 4=Mechanical  
Max Horz 2=64(LC 16)  
Max Uplift 3=24(LC 16), 2=23(LC 16)  
Max Grav 3=93(LC 21), 2=237(LC 21), 4=47(LC 7)

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

#### NOTES-

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 2-7-9 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
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 2.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



November 9, 2020

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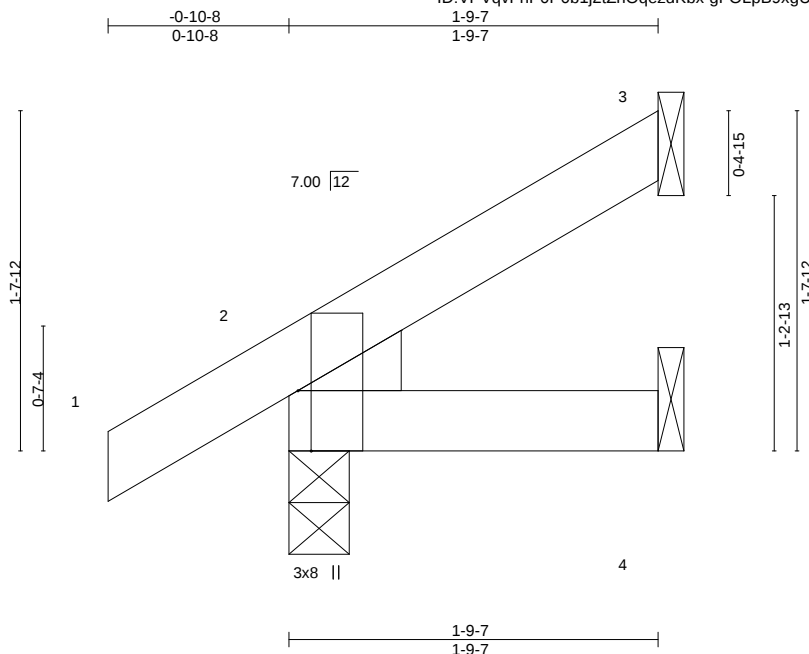


16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|                          |       |            |     |     |                    |           |
|--------------------------|-------|------------|-----|-----|--------------------|-----------|
| Job                      | Truss | Truss Type | Qty | Ply | Summit/23 Hawthorn | I43532862 |
| 2531623                  | J6    | Jack-Open  | 2   | 1   |                    |           |
| Job Reference (optional) |       |            |     |     |                    |           |

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Fri Nov 6 14:13:46 2020 Page 1  
ID:VPVqvFnP0P0b1j2tZrOqezdKbx-gFOLpB9xgUx0U4tlBaUVisuY5FvEppT1b?G\_9hyLtg3



Scale = 1:11.1

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

| LOADING (psf)    | SPACING-             | CSL       | DEFL.    | in    | (loc) | I/defl | L/d | PLATES       | GRIP     |
|------------------|----------------------|-----------|----------|-------|-------|--------|-----|--------------|----------|
| TCLL (roof) 25.0 | 2-0-0                | TC 0.07   | Vert(LL) | -0.00 | 7     | >999   | 240 | MT20         | 197/144  |
| Snow (Pf) 20.0   | Plate Grip DOL 1.15  | BC 0.03   | Vert(CT) | -0.00 | 7     | >999   | 180 |              |          |
| TCDL 10.0        | Lumber DOL 1.15      | WB 0.00   | Horz(CT) | 0.00  | 3     | n/a    | n/a |              |          |
| BCLL 0.0         | Rep Stress Incr YES  | Matrix-MP |          |       |       |        |     |              |          |
| BCDL 10.0        | Code IRC2018/TPI2014 |           |          |       |       |        |     | Weight: 6 lb | FT = 20% |

#### LUMBER-

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

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 1-9-7 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 3=Mechanical, 2=0-3-8, 4=Mechanical  
Max Horz 2=50(LC 16)  
Max Uplift 3=-15(LC 16), 2=-26(LC 16)  
Max Grav 3=53(LC 21), 2=189(LC 21), 4=30(LC 7)

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

#### NOTES-

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 2.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



November 9, 2020

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16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|         |       |            |     |     |                          |           |
|---------|-------|------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type | Qty | Ply | Summit/23 Hawthorn       | 143532863 |
| 2531623 | J7    | Jack-Open  | 1   | 1   | Job Reference (optional) |           |

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Fri Nov 6 14:13:47 2020 Page 1

ID:VPVqvFnP0P0b1j2tZr1OqezdKbx-8Ryj1W9ZR04t6DRxkl?kF3RhFfD2YGjAqf0Xh7yLtg2

-0-10-8 3-9-9  
0-10-8 3-9-9

Scale = 1:17.0

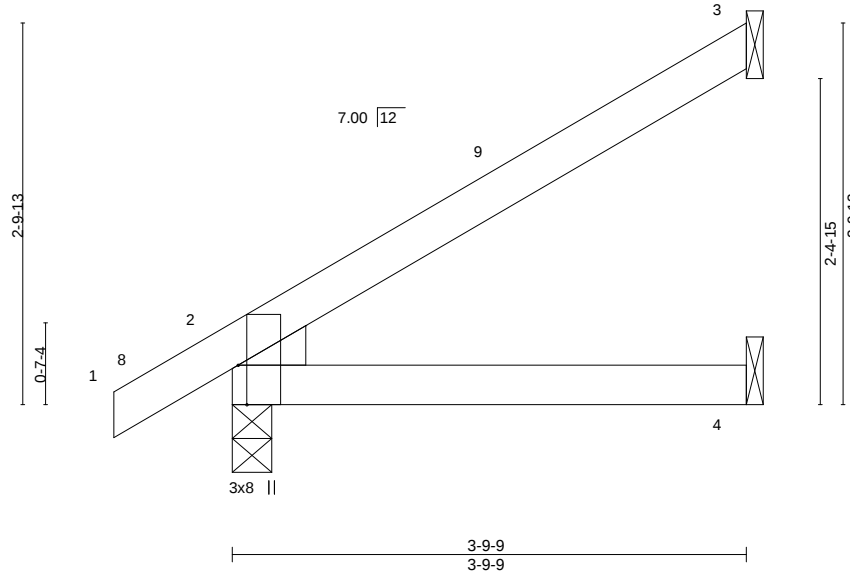


Plate Offsets (X,Y)-- [2:0-0-2,0-0-4], [2:0-0-5,0-4-8], [2:0-3-8,Edge]

| LOADING (psf)    | SPACING-             | 2-0-0 | CSI.      | DEFL.    | in    | (loc) | I/defl | L/d | PLATES        | GRIP     |
|------------------|----------------------|-------|-----------|----------|-------|-------|--------|-----|---------------|----------|
| TCLL (roof) 25.0 | Plate Grip DOL       | 1.15  | TC 0.23   | Vert(LL) | -0.02 | 4-7   | >999   | 240 | MT20          | 197/144  |
| Snow (Pf) 20.0   | Lumber DOL           | 1.15  | BC 0.18   | Vert(CT) | -0.03 | 4-7   | >999   | 180 |               |          |
| TCDL 10.0        | Rep Stress Incr      | YES   | WB 0.00   | Horz(CT) | 0.01  | 2     | n/a    | n/a |               |          |
| BCLL 0.0         | Code IRC2018/TPI2014 |       | Matrix-MP |          |       |       |        |     | Weight: 11 lb | FT = 20% |
| BCDL 10.0        |                      |       |           |          |       |       |        |     |               |          |

#### LUMBER-

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

#### BRACING-

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

**REACTIONS.** (size) 3=Mechanical, 2=0-3-8, 4=Mechanical  
Max Horz 2=82(LC 16)  
Max Uplift 3=37(LC 16), 2=21(LC 16)  
Max Grav 3=146(LC 21), 2=307(LC 21), 4=69(LC 7)

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

#### NOTES-

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 3-8-13 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 2.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



November 9, 2020

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16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|         |       |            |     |     |                          |           |
|---------|-------|------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type | Qty | Ply | Summit/23 Hawthorn       | 143532864 |
| 2531623 | J8    | Jack-Open  | 1   | 1   | Job Reference (optional) |           |

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Fri Nov 6 14:13:48 2020 Page 1

ID:VPVqvFnP0P0b1j2tZrIQeqzdKbx-cdV5EsABC6CkjN071?XznHzuc3aoHjyK3Jl5DZyLtg1

-0-10-8  
0-10-8  
1-6-2  
1-6-2

Scale = 1:10.3

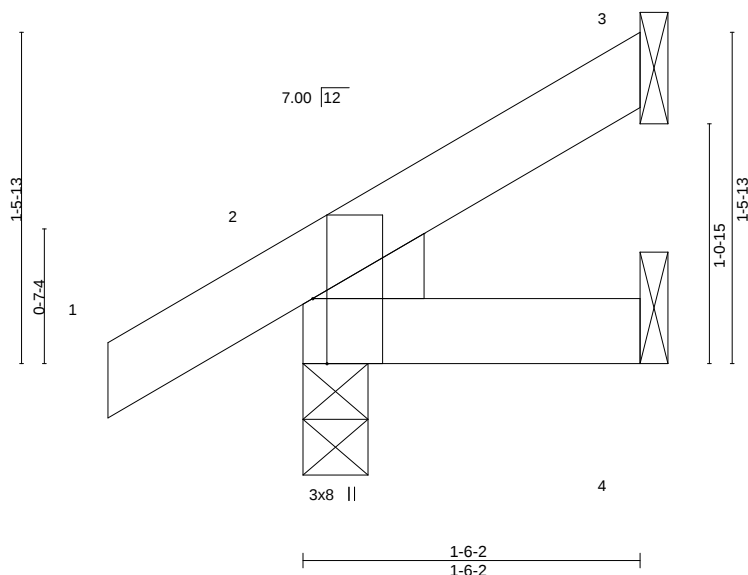


Plate Offsets (X,Y)-- [2:0-0-2,0-0-4], [2:0-0-5,0-4-8], [2:0-3-8,Edge]

| LOADING (psf)    | SPACING-             | 2-0-0 | CSI.      | DEFL.    | in    | (loc) | I/defl | L/d | PLATES       | GRIP     |
|------------------|----------------------|-------|-----------|----------|-------|-------|--------|-----|--------------|----------|
| TCLL (roof) 25.0 | Plate Grip DOL       | 1.15  | TC 0.06   | Vert(LL) | 0.00  | 7     | >999   | 240 | MT20         | 197/144  |
| Snow (Pf) 20.0   | Lumber DOL           | 1.15  | BC 0.02   | Vert(CT) | -0.00 | 7     | >999   | 180 |              |          |
| TCDL 10.0        | Rep Stress Incr      | YES   | WB 0.00   | Horz(CT) | 0.00  | 3     | n/a    | n/a |              |          |
| BCLL 0.0         | Code IRC2018/TPI2014 |       | Matrix-MP |          |       |       |        |     | Weight: 6 lb | FT = 20% |
| BCDL 10.0        |                      |       |           |          |       |       |        |     |              |          |

#### LUMBER-

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

#### BRACING-

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

**REACTIONS.** (size) 3=Mechanical, 2=0-3-8, 4=Mechanical  
Max Horz 2=46(LC 16)  
Max Uplift 3=-11(LC 16), 2=-28(LC 16)  
Max Grav 3=40(LC 21), 2=175(LC 21), 4=24(LC 7)

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

#### NOTES-

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 2.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



November 9, 2020

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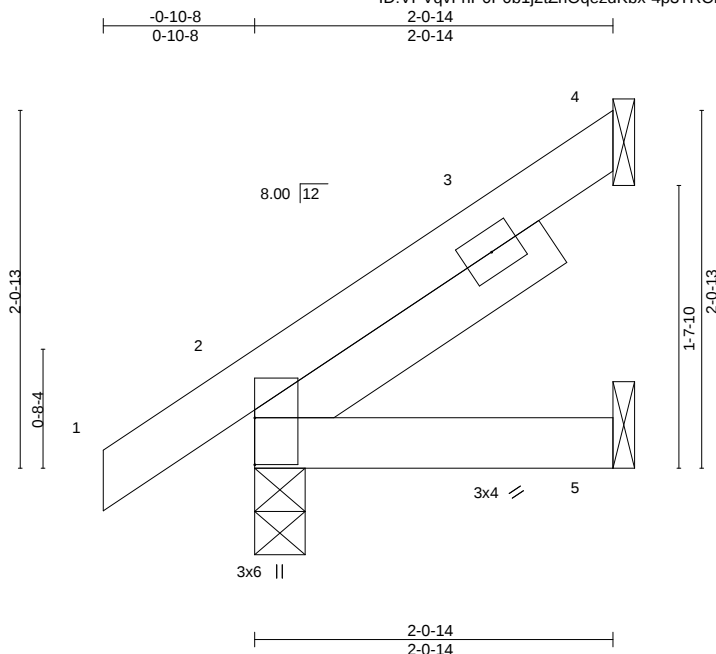
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|                |             |                         |          |          |                                                |           |
|----------------|-------------|-------------------------|----------|----------|------------------------------------------------|-----------|
| Job<br>2531623 | Truss<br>K1 | Truss Type<br>Jack-Open | Qty<br>1 | Ply<br>1 | Summit/23 Hawthorn<br>Job Reference (optional) | I43532865 |
|----------------|-------------|-------------------------|----------|----------|------------------------------------------------|-----------|

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

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ID:VPVqvFnP0P0b1j2tZrOqezdKbx-4p3TRCBpzPKbLXbKsj2CKUW4WSwx0ACTizVemOyLtg0



Scale = 1:13.3

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

| LOADING (psf)    | SPACING-        | 2-0-0           | CSI.      | DEFL.    | in    | (loc) | I/defl | L/d | PLATES       | GRIP     |
|------------------|-----------------|-----------------|-----------|----------|-------|-------|--------|-----|--------------|----------|
| TCLL (roof) 25.0 | Plate Grip DOL  | 1.15            | TC 0.05   | Vert(LL) | -0.00 | 8     | >999   | 240 | MT20         | 197/144  |
| Snow (Pf) 20.0   | Lumber DOL      | 1.15            | BC 0.03   | Vert(CT) | -0.00 | 8     | >999   | 180 |              |          |
| TCDL 10.0        | Rep Stress Incr | YES             | WB 0.00   | Horz(CT) | 0.00  | 2     | n/a    | n/a |              |          |
| BCLL 0.0         | Code            | IRC2018/TPI2014 | Matrix-MP |          |       |       |        |     | Weight: 9 lb | FT = 20% |
| BCDL 10.0        |                 |                 |           |          |       |       |        |     |              |          |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
SLIDER Left 2x4 SPF No.2 2-0-0

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 2-0-14 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS.

(size) 4=Mechanical, 2=0-3-8, 5=Mechanical  
Max Horz 2=62(LC 14)  
Max Uplift 4=-23(LC 14), 2=-20(LC 14)  
Max Grav 4=58(LC 24), 2=165(LC 2), 5=32(LC 5)

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

#### NOTES-

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4, 2.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



November 9,2020

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ID:VPVqvFnP0P0b12lZrI0gezdkBx-Y0drfYCRkJSszsAWQOZrti3E sG9IdScWdEBISyLtg?



|                |              |                 |                                                                                       |
|----------------|--------------|-----------------|---------------------------------------------------------------------------------------|
| <b>LUMBER-</b> |              | <b>BRACING-</b> |                                                                                       |
| TOP CHORD      | 2x4 SPF No.2 | TOP CHORD       | Structural wood sheathing directly applied or 1-8-4 oc purlins, except end verticals. |
| BOT CHORD      | 2x4 SPF No.2 | BOT CHORD       | Rigid ceiling directly applied or 10-0-0 oc bracing.                                  |
| WEBS           | 2x4 SPF No.2 |                 |                                                                                       |

**REACTIONS.** (size) 3=Mechanical, 4=Mechanical, 5=0-3-8  
 Max Horz 5=68(LC 14)  
 Max Uplift 3=-17(LC 14), 5=-25(LC 14)  
 Max Grav 3=39(LC 24), 4=27(LC 5), 5=164(LC 2)

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

NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TC DL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCDL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 3) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) Refer to girder(s) for truss to truss connections.
- 6) Bearing at joint(s) 5 considers parallel to grain value using ANSI/TP1 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 5.
- 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TP1 1.



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Chesterfield, MO 63017

|         |       |            |     |     |                          |           |
|---------|-------|------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type | Qty | Ply | Summit/23 Hawthorn       | I43532867 |
| 2531623 | K3    | Jack-Open  | 1   | 1   | Job Reference (optional) |           |

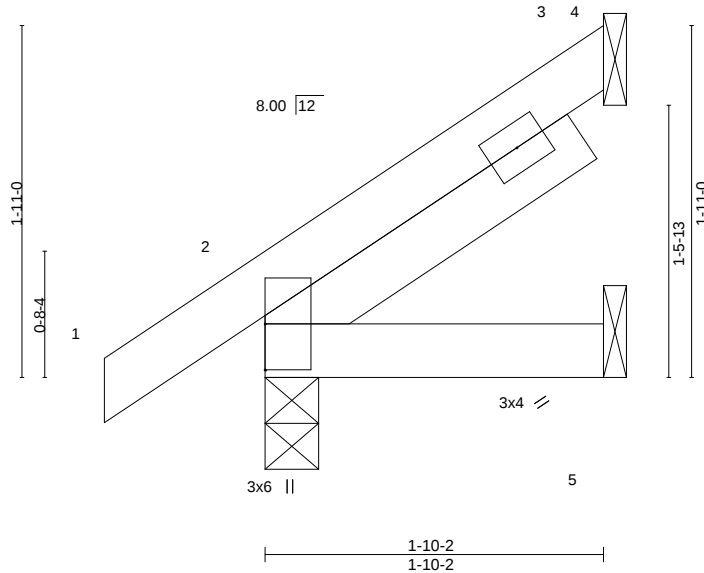
Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Fri Nov 6 14:13:51 2020 Page 1

ID:VPVqvFnP0P0b1j2tZrOqezdKbx-OCBEsuC3V1aJarliz84gPvbQ0GcZU4imIH\_lquyLtg\_



Scale = 1:12.5



| LOADING (psf) |      | SPACING-             |      | CSI.      |      | DEFL.    |                  | PLATES |  | GRIP    |  |
|---------------|------|----------------------|------|-----------|------|----------|------------------|--------|--|---------|--|
| TCLL (roof)   | 25.0 | Plate Grip DOL       | 1.15 | TC        | 0.05 | Vert(LL) | -0.00 8 >999 240 | MT20   |  | 197/144 |  |
| Snow (Pf)     | 20.0 | Lumber DOL           | 1.15 | BC        | 0.02 | Vert(CT) | -0.00 8 >999 180 |        |  |         |  |
| TCDL          | 10.0 | Rep Stress Incr      | YES  | WB        | 0.00 | Horz(CT) | 0.00 3 n/a n/a   |        |  |         |  |
| BCLL          | 0.0  | Code IRC2018/TPI2014 |      | Matrix-MP |      |          |                  |        |  |         |  |
| BCDL          | 10.0 |                      |      |           |      |          |                  |        |  |         |  |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
SLIDER Left 2x4 SPF No.2 2-0-0

#### BRACING-

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

#### REACTIONS.

(size) 2=0-3-8, 5=Mechanical, 3=Mechanical  
Max Horz 2=59(LC 14)  
Max Uplift 2=-20(LC 14), 3=-22(LC 14)  
Max Grav 2=158(LC 2), 5=28(LC 5), 3=55(LC 24)

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

#### NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 3) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) Refer to girder(s) for truss to truss connections.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 3.
- 7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



November 9, 2020

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16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|                          |       |            |     |     |                    |
|--------------------------|-------|------------|-----|-----|--------------------|
| Job                      | Truss | Truss Type | Qty | Ply | Summit/23 Hawthorn |
| 2531623                  | LG1   | GABLE      | 1   | 1   | I43532868          |
| Job Reference (optional) |       |            |     |     |                    |

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

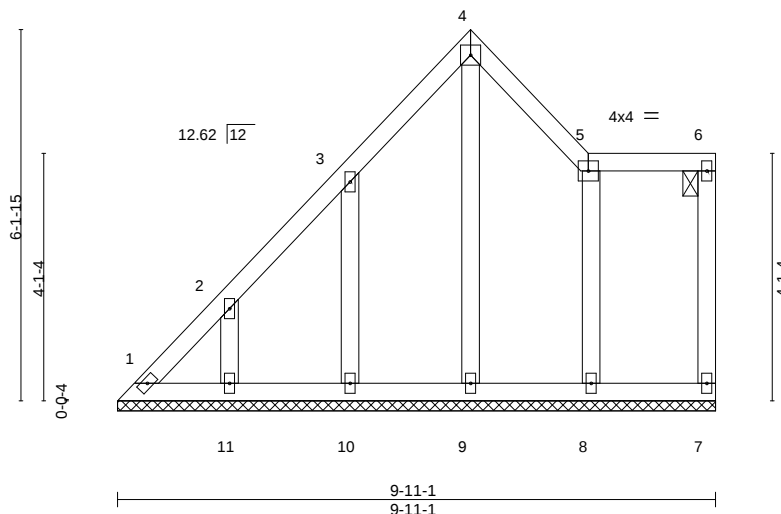
8.240 s Mar 9 2020 MiTek Industries, Inc. Fri Nov 6 14:13:52 2020 Page 1

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|        |        |        |
|--------|--------|--------|
| 5-10-5 | 7-9-12 | 9-11-1 |
| 5-10-5 | 1-11-7 | 2-1-5  |

4x4 =

Scale = 1:38.2



| LOADING (psf)    | SPACING-             | CSI.     | DEFL.          | in (loc) | l/defl | L/d | PLATES        | GRIP     |
|------------------|----------------------|----------|----------------|----------|--------|-----|---------------|----------|
| TCLL (roof) 25.0 | 2-0-0                | TC 0.08  | Vert(LL) n/a   | -        | n/a    | 999 | MT20          | 197/144  |
| Snow (Pf) 20.0   | Plate Grip DOL 1.15  | BC 0.04  | Vert(CT) n/a   | -        | n/a    | 999 |               |          |
| TCDL 10.0        | Lumber DOL 1.15      | WB 0.09  | Horz(CT) -0.00 | 7        | n/a    | n/a |               |          |
| BCLL 0.0         | Rep Stress Incr YES  | Matrix-S |                |          |        |     | Weight: 46 lb | FT = 20% |
| BCDL 10.0        | Code IRC2018/TPI2014 |          |                |          |        |     |               |          |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2  
OTHERS 2x4 SPF No.2

#### 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.): 5-6.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS.

All bearings 9-11-1.  
(lb) - Max Horz 1=183(LC 13)  
Max Uplift All uplift 100 lb or less at joint(s) 1, 7, 9, 10, 11, 8  
Max Grav All reactions 250 lb or less at joint(s) 1, 7, 9, 10, 11, 8

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

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCCL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) 0-4-1 to 3-4-1, Interior(1) 3-4-1 to 5-10-5, Exterior(2E) 5-10-5 to 7-9-12, Interior(1) 7-9-12 to 9-9-5 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Provide adequate drainage to prevent water ponding.
- All plates are 2x4 MT20 unless otherwise indicated.
- 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 7, 9, 10, 11, 8.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



November 9, 2020

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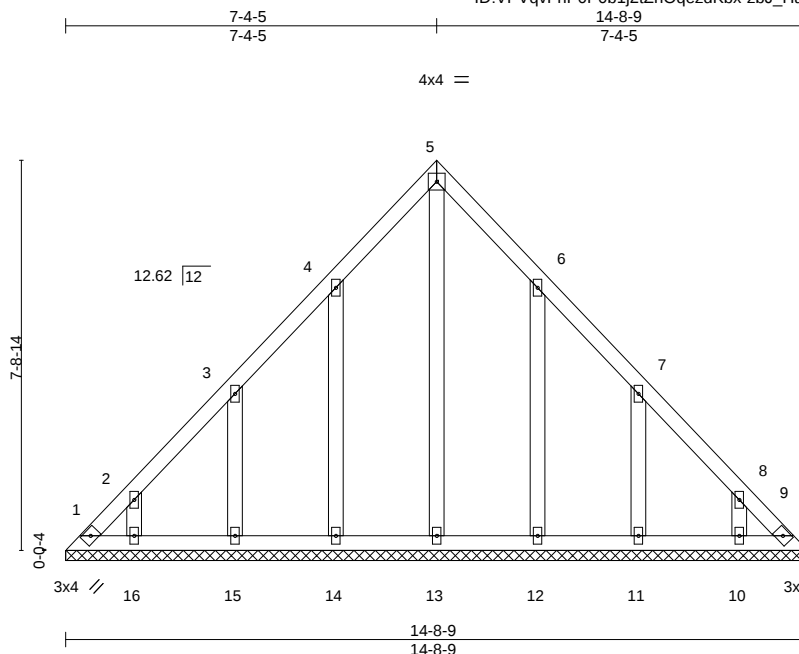
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|                          |       |            |     |     |                    |
|--------------------------|-------|------------|-----|-----|--------------------|
| Job                      | Truss | Truss Type | Qty | Ply | Summit/23 Hawthorn |
| 2531623                  | LG2   | GABLE      | 1   | 1   | I43532869          |
| Job Reference (optional) |       |            |     |     |                    |

Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

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| LOADING (psf) |      | SPACING-             |      | CSI.     |      | DEFL.    |        | PLATES        |  | GRIP     |  |
|---------------|------|----------------------|------|----------|------|----------|--------|---------------|--|----------|--|
| TCLL (roof)   | 25.0 | Plate Grip DOL       | 1.15 | TC       | 0.05 | in (loc) | l/defl | MT20          |  | 197/144  |  |
| Snow (Pf)     | 20.0 | Lumber DOL           | 1.15 | BC       | 0.02 | n/a      | n/a    |               |  |          |  |
| TCDL          | 10.0 | Rep Stress Incr      | YES  | WB       | 0.12 | n/a      | n/a    |               |  |          |  |
| BCLL          | 0.0  | Code IRC2018/TPI2014 |      | Matrix-S |      | 0.00     | 9      |               |  |          |  |
| BCDL          | 10.0 |                      |      |          |      |          |        | Weight: 68 lb |  | FT = 20% |  |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
OTHERS 2x4 SPF No.2

#### BRACING-

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

#### REACTIONS.

All bearings 14-8-9.  
(lb) - Max Horz 1=-183(LC 12)  
Max Uplift All uplift 100 lb or less at joint(s) 1, 9, 14, 15, 16, 12, 11, 10  
Max Grav All reactions 250 lb or less at joint(s) 1, 9, 13, 14, 15, 16, 12, 11, 10

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

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) 0-4-1 to 3-4-5, Interior(1) 3-4-5 to 7-4-5, Exterior(2R) 7-4-5 to 10-4-5, Interior(1) 10-4-5 to 14-4-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- All plates are 2x4 MT20 unless otherwise indicated.
- 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 9, 14, 15, 16, 12, 11, 10.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



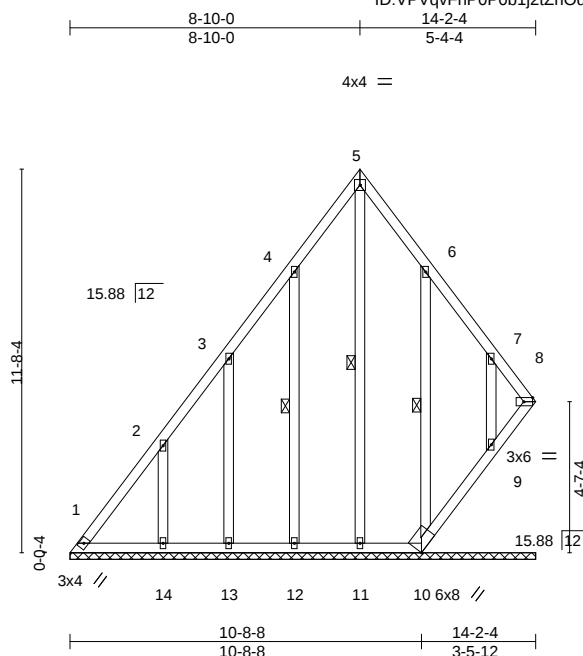
November 9, 2020

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16023 Swingley Ridge Rd  
Chesterfield, MO 63017

[illegible]

|                |              |                 |                                                                 |
|----------------|--------------|-----------------|-----------------------------------------------------------------|
| <b>LUMBER-</b> |              | <b>BRACING-</b> |                                                                 |
| TOP CHORD      | 2x4 SPF No.2 | TOP CHORD       | Structural wood sheathing directly applied or 6-0-0 oc purlins. |
| BOT CHORD      | 2x4 SPF No.2 | BOT CHORD       | Rigid ceiling directly applied or 10-0-0 oc bracing.            |
| OTHERS         | 2x4 SPF No.2 | WEBS            | 1 Row at midpt                      5-11, 4-12, 6-10            |

**REACTIONS.** All bearings 14-2-4.  
(lb) - Max Horz 1=-265(LC 12)  
Max Uplift All uplift 100 lb or less at joint(s) 9 except 1=-147(LC 12), 8=-217(LC 13), 10=-221(LC 14),  
12=-110(LC 14), 13=-104(LC 14), 14=-148(LC 14)  
Max Grav All reactions 250 lb or less at joint(s) 1, 8, 11, 12, 13, 9 except 10=306(LC 24), 14=305(LC 23)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-2=-346/312  
 WEBS 2-14=-262/199

**NOTES-**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDF=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) 0-3-8 to 3-0-8, Interior(1) 3-3-8 to 8-10-0, Exterior(2R) 8-10-0 to 11-10-0, Interior(1) 11-10-0 to 14-0-1 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 4) All plates are 2x4 MT20 unless otherwise indicated.
- 5) Gable requires continuous bottom chord bearing.
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 9 except (jt=lb) 1=147, 8=217, 10=221, 12=110, 13=104, 14=148.
- 8) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 8, 9.
- 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



November 9.2020



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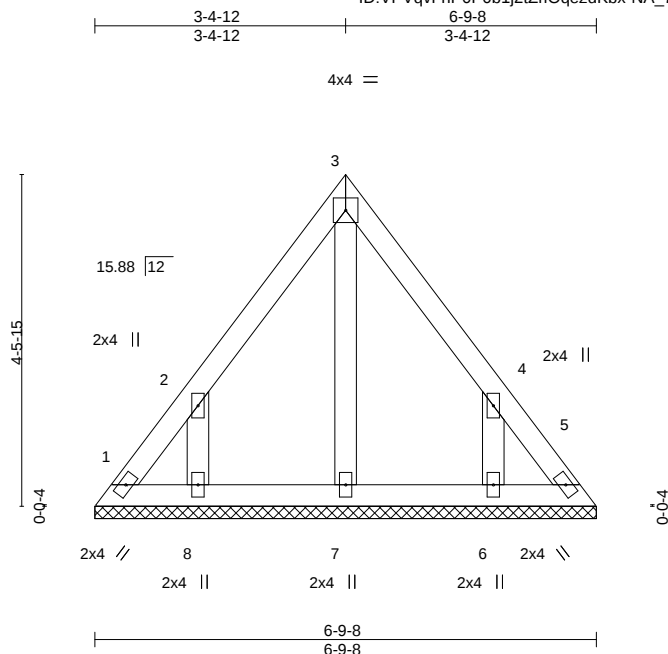
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|                          |       |            |     |     |                    |
|--------------------------|-------|------------|-----|-----|--------------------|
| Job                      | Truss | Truss Type | Qty | Ply | Summit/23 Hawthorn |
| 2531623                  | LG4   | GABLE      | 1   | 1   | I43532871          |
| Job Reference (optional) |       |            |     |     |                    |

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Fri Nov 6 14:13:56 2020 Page 1

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Scale = 1:31.2

| LOADING (psf)    | SPACING-             | CSI.     | DEFL.         | in (loc) | l/defl | L/d | PLATES        | GRIP     |
|------------------|----------------------|----------|---------------|----------|--------|-----|---------------|----------|
| TCLL (roof) 25.0 | 2-0-0                | TC 0.07  | Vert(LL) n/a  | -        | n/a    | 999 | MT20          | 197/144  |
| Snow (Pf) 20.0   | Plate Grip DOL 1.15  | BC 0.03  | Vert(CT) n/a  | -        | n/a    | 999 |               |          |
| TCDL 10.0        | Lumber DOL 1.15      | WB 0.03  | Horz(CT) 0.00 | 5        | n/a    | n/a |               |          |
| BCLL 0.0         | Rep Stress Incr YES  | Matrix-P |               |          |        |     | Weight: 27 lb | FT = 20% |
| BCDL 10.0        | Code IRC2018/TPI2014 |          |               |          |        |     |               |          |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
OTHERS 2x4 SPF No.2

#### BRACING-

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

#### REACTIONS.

All bearings 6-9-8.  
(lb) - Max Horz 1=112(LC 13)  
Max Uplift All uplift 100 lb or less at joint(s) 1, 5 except 8=-116(LC 14), 6=-116(LC 14)  
Max Grav All reactions 250 lb or less at joint(s) 1, 5, 7, 8, 6

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

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 5 except (jt=lb) 8=116, 6=116.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



November 9,2020

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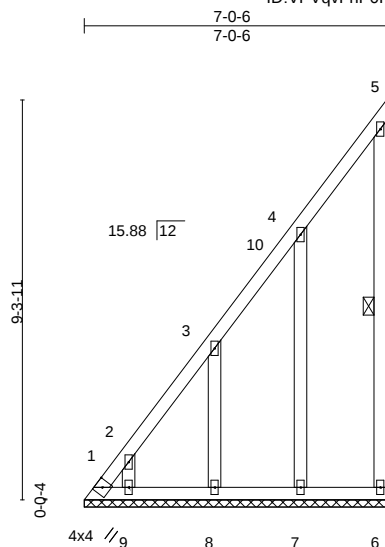
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|                          |       |            |     |     |                    |
|--------------------------|-------|------------|-----|-----|--------------------|
| Job                      | Truss | Truss Type | Qty | Ply | Summit/23 Hawthorn |
| 2531623                  | LG5   | GABLE      | 1   | 1   | I43532872          |
| Job Reference (optional) |       |            |     |     |                    |

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Fri Nov 6 14:13:57 2020 Page 1

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Scale = 1:53.6

| LOADING (psf)    | SPACING-             | CS.      | DEFL.    | in   | (loc) | l/defl | L/d | PLATES        | GRIP     |
|------------------|----------------------|----------|----------|------|-------|--------|-----|---------------|----------|
| TCLL (roof) 25.0 | 2-0-0                | TC 0.73  | Vert(LL) | n/a  | -     | n/a    | 999 | MT20          | 197/144  |
| Snow (Pf) 20.0   | Plate Grip DOL 1.15  | BC 0.03  | Vert(CT) | n/a  | -     | n/a    | 999 |               |          |
| TCDL 10.0        | Lumber DOL 1.15      | WB 0.16  | Horz(CT) | 0.00 | 6     | n/a    | n/a |               |          |
| BCLL 0.0         | Rep Stress Incr YES  | Matrix-P |          |      |       |        |     |               |          |
| BCDL 10.0        | Code IRC2018/TPI2014 |          |          |      |       |        |     | Weight: 42 lb | FT = 20% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2  
OTHERS 2x4 SPF No.2

#### BRACING-

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

#### REACTIONS.

All bearings 7-0-6.  
(lb) - Max Horz 1=304(LC 11)  
Max Uplift All uplift 100 lb or less at joint(s) 9 except 1=242(LC 12), 6=135(LC 13), 7=115(LC 14), 8=116(LC 14)  
Max Grav All reactions 250 lb or less at joint(s) 6, 7, 8, 9 except 1=317(LC 11)

#### FORCES.

(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-2=-690/681, 2-3=-566/563, 3-4=-405/414

#### NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner(3) 0-3-8 to 4-6-7, Exterior(2R) 4-6-7 to 6-10-10 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 9 except (jt=lb) 1=242, 6=135, 7=115, 8=116.
- 7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



November 9, 2020

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**

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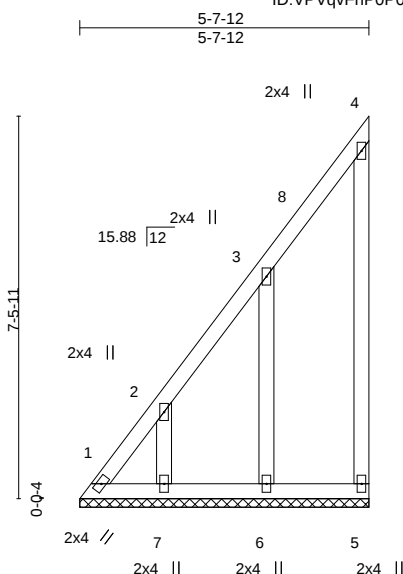


16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|                          |       |            |     |     |                    |
|--------------------------|-------|------------|-----|-----|--------------------|
| Job                      | Truss | Truss Type | Qty | Ply | Summit/23 Hawthorn |
| 2531623                  | LG6   | GABLE      | 1   | 1   | I43532873          |
| Job Reference (optional) |       |            |     |     |                    |

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Fri Nov 6 14:13:58 2020 Page 1  
ID:VPVqvFnP0P0b1j2tZrOqezdKbx-JY6tKHITrASKwwn2u6iJBOOW\_5?3dD9oMtAcZ\_yLft



Scale = 1:45.0

| LOADING (psf) |      | SPACING-             |      | CSI.     |      | DEFL.    |        | PLATES |               | GRIP     |  |
|---------------|------|----------------------|------|----------|------|----------|--------|--------|---------------|----------|--|
| TCLL (roof)   | 25.0 | Plate Grip DOL       | 1.15 | TC       | 0.46 | in (loc) | l/defl | L/d    | MT20          | 197/144  |  |
| Snow (Pf)     | 20.0 | Lumber DOL           | 1.15 | BC       | 0.03 | n/a      | n/a    | 999    |               |          |  |
| TCDL          | 10.0 | Rep Stress Incr      | YES  | WB       | 0.08 | n/a      | n/a    | 999    |               |          |  |
| BCLL          | 0.0  | Code IRC2018/TPI2014 |      | Matrix-P |      | 0.00     | 5      | n/a    |               |          |  |
| BCDL          | 10.0 |                      |      |          |      |          |        |        | Weight: 31 lb | FT = 20% |  |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2  
OTHERS 2x4 SPF No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 5-7-12 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS.

All bearings 5-7-12.  
(lb) - Max Horz 1=240(LC 11)  
Max Uplift All uplift 100 lb or less at joint(s) except 1=-151(LC 12), 5=-105(LC 13), 6=-119(LC 14), 7=-104(LC 14)  
Max Grav All reactions 250 lb or less at joint(s) 1, 5, 6, 7

#### FORCES.

(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-2=-526/523, 2-3=-383/389  
WEBS 3-6=-250/236

#### NOTES-

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Corner(3) 0-3-8 to 4-6-7, Exterior(2R) 4-6-7 to 5-6-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 151 lb uplift at joint 1, 105 lb uplift at joint 5, 119 lb uplift at joint 6 and 104 lb uplift at joint 7.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



November 9, 2020

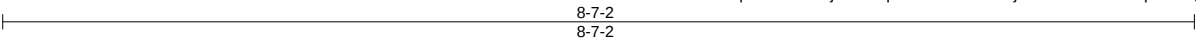
**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**

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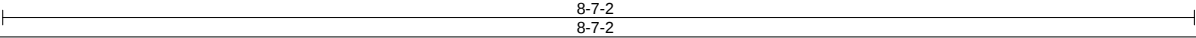
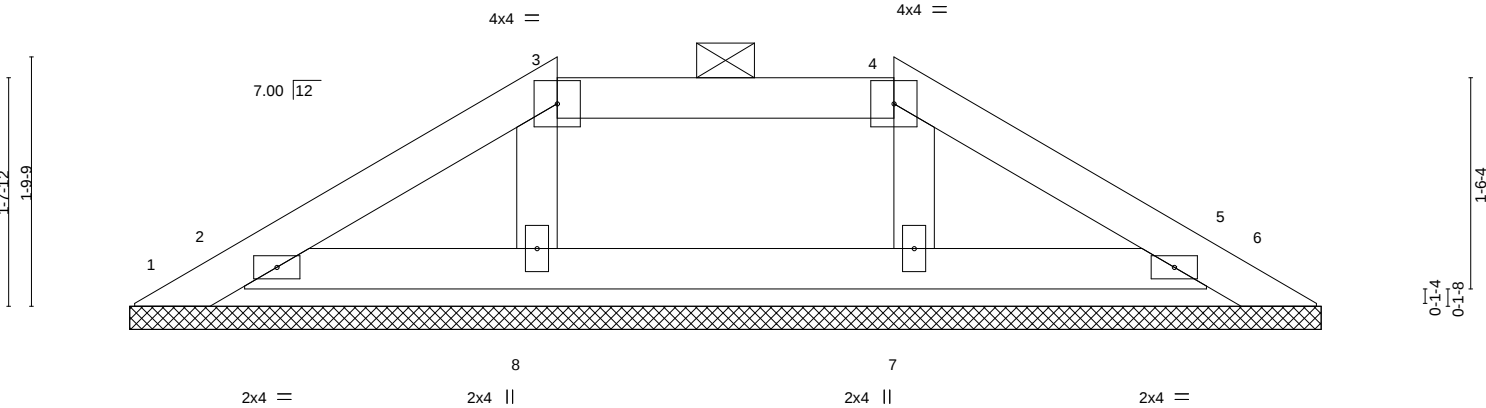


16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|         |       |            |     |     |                          |           |
|---------|-------|------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type | Qty | Ply | Summit/23 Hawthorn       | I43532874 |
| 2531623 | PB1   | GABLE      | 1   | 1   | Job Reference (optional) |           |



Scale = 1:16.6



| LOADING (psf) |      | SPACING-        |                 | CSI.     |      | DEFL.    |      | PLATES |  | GRIP    |  |
|---------------|------|-----------------|-----------------|----------|------|----------|------|--------|--|---------|--|
| TCLL (roof)   | 25.0 | Plate Grip DOL  | 1.15            | TC       | 0.16 | Vert(LL) | n/a  | MT20   |  | 197/144 |  |
| Snow (Pf)     | 20.0 | Lumber DOL      | 1.15            | BC       | 0.04 | Vert(CT) | n/a  |        |  |         |  |
| TCDL          | 10.0 | Rep Stress Incr | YES             | WB       | 0.02 | Horz(CT) | 0.00 |        |  |         |  |
| BCLL          | 0.0  | Code            | IRC2018/TPI2014 | Matrix-P |      |          |      |        |  |         |  |
| BCDL          | 10.0 |                 |                 |          |      |          |      |        |  |         |  |

| LUMBER-   |              | BRACING-  |                                                                                                            |
|-----------|--------------|-----------|------------------------------------------------------------------------------------------------------------|
| TOP CHORD | 2x4 SPF No.2 | TOP CHORD | Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 3-4. |
| BOT CHORD | 2x4 SPF No.2 | BOT CHORD | Rigid ceiling directly applied or 10-0-0 oc bracing.                                                       |
| WEBS      | 2x4 SPF No.2 |           |                                                                                                            |

**REACTIONS.** All bearings 8-7-2.  
(lb) - Max Horz 1=31(LC 15)  
Max Uplift All uplift 100 lb or less at joint(s) 1, 6, 2, 5, 8, 7  
Max Grav All reactions 250 lb or less at joint(s) 1, 6, 8, 7 except 2=299(LC 39), 5=299(LC 39)

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

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - Provide adequate drainage to prevent water ponding.
  - 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.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 6, 2, 5, 8, 7.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

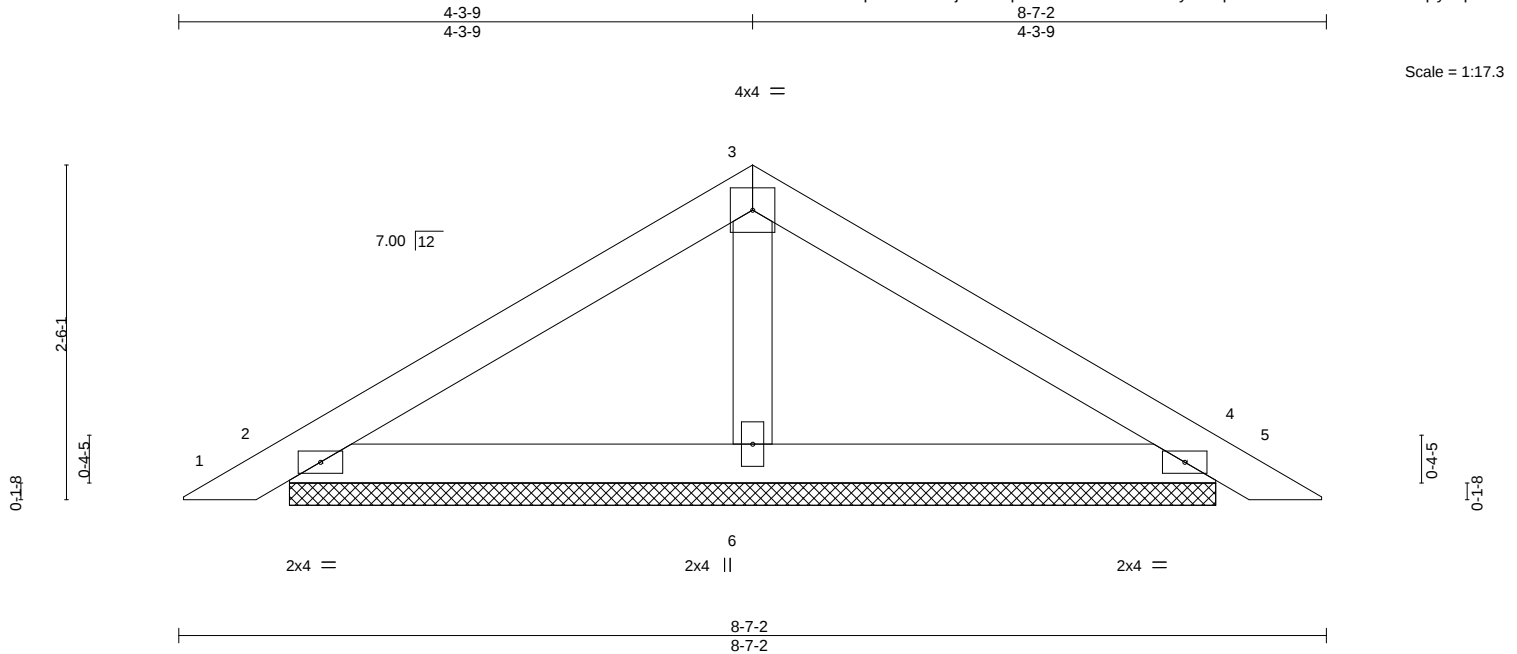


November 9,2020

|         |       |            |     |     |                    |           |
|---------|-------|------------|-----|-----|--------------------|-----------|
| Job     | Truss | Truss Type | Qty | Ply | Summit/23 Hawthorn | 143532875 |
| 2531623 | PB2   | Piggyback  | 7   | 1   |                    |           |

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Fri Nov 6 14:14:02 2020 Page 1  
ID:VPVqvFnP0P0b1j2tZrIQeqzdKbx-CKMOAfLzvPylPX5p7xnFMEZEkiLoZ2zNHU8qilyLtfp



| LOADING (psf)    | SPACING-             | CS.      | DEFL.         | in (loc) | l/defl | L/d | PLATES        | GRIP     |
|------------------|----------------------|----------|---------------|----------|--------|-----|---------------|----------|
| TCLL (roof) 25.0 | 2-0-0                | TC 0.28  | Vert(LL) 0.01 | 5        | n/r    | 120 | MT20          | 197/144  |
| Snow (Pf) 20.0   | Plate Grip DOL 1.15  | BC 0.10  | Vert(CT) 0.01 | 5        | n/r    | 120 |               |          |
| TCDL 10.0        | Lumber DOL 1.15      | WB 0.03  | Horz(CT) 0.00 | 4        | n/a    | n/a |               |          |
| BCLL 0.0         | Rep Stress Incr YES  | Matrix-P |               |          |        |     |               |          |
| BCDL 10.0        | Code IRC2018/TPI2014 |          |               |          |        |     | Weight: 21 lb | FT = 20% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
OTHERS 2x4 SPF No.2

#### BRACING-

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

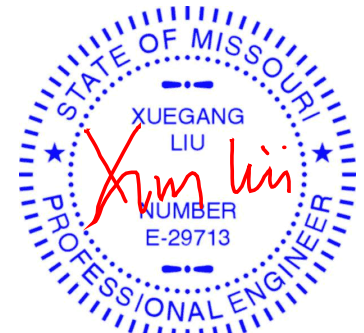
#### REACTIONS.

(size) 2=6-11-4, 4=6-11-4, 6=6-11-4  
Max Horz 2=-47(LC 14)  
Max Uplift 2=-45(LC 16), 4=-45(LC 16)  
Max Grav 2=253(LC 21), 4=253(LC 22), 6=291(LC 2)

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

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) 0-3-11 to 3-3-11, Interior(1) 3-3-11 to 4-3-9, Exterior(2R) 4-3-9 to 7-3-9, Interior(1) 7-3-9 to 8-3-7 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 4.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.



November 9, 2020

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16023 Swingley Ridge Rd  
Chesterfield, MO 63017

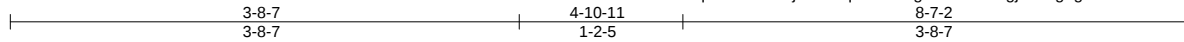
|         |       |            |     |     |                    |           |
|---------|-------|------------|-----|-----|--------------------|-----------|
| Job     | Truss | Truss Type | Qty | Ply | Summit/23 Hawthorn | I43532876 |
| 2531623 | PB3   | Piggyback  | 1   | 1   |                    |           |

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

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Job Reference (optional)



Scale = 1:16.8

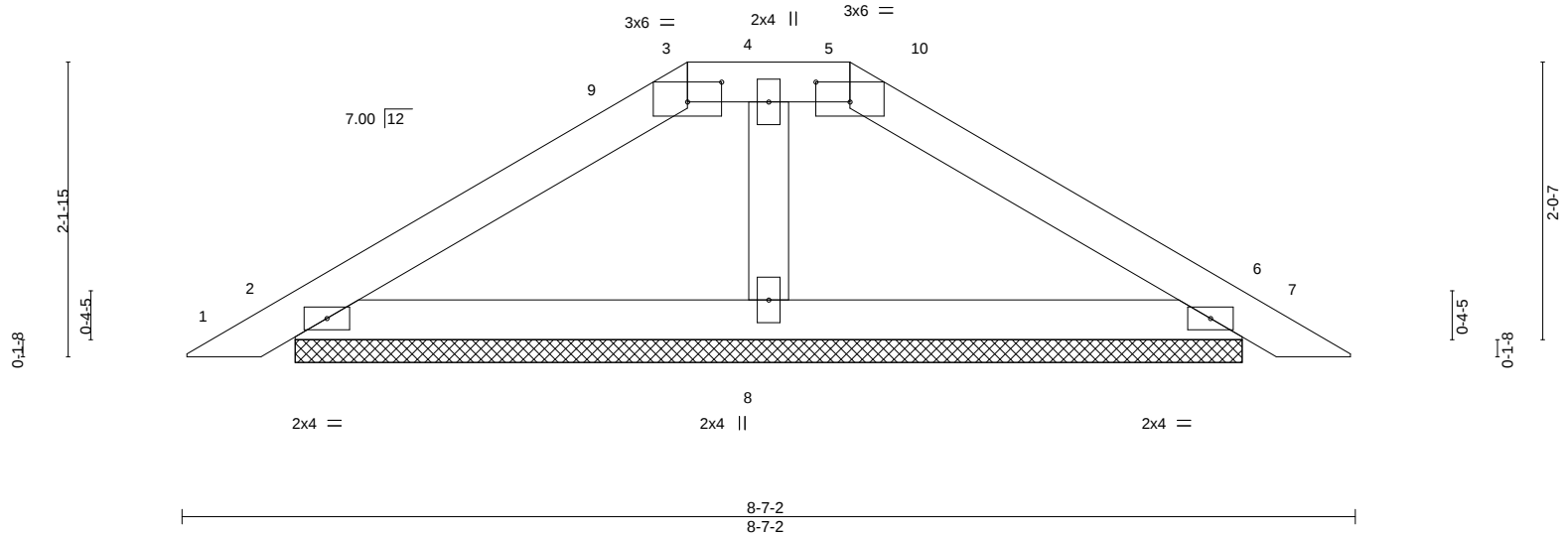


Plate Offsets (X,Y)-- [3:0-3-0,0-1-12], [5:0-3-0,0-1-12]

| LOADING (psf) | SPACING- | 2-0-0                | CSI. | DEFL.    | in   | (loc) | l/defl | L/d | PLATES        | GRIP     |
|---------------|----------|----------------------|------|----------|------|-------|--------|-----|---------------|----------|
| TCLL (roof)   | 25.0     | Plate Grip DOL       | 1.15 | TC       | 0.15 |       |        |     | MT20          | 197/144  |
| Snow (Pf)     | 20.0     | Lumber DOL           | 1.15 | BC       | 0.11 |       |        |     |               |          |
| TCDL          | 10.0     | Rep Stress Incr      | YES  | WB       | 0.02 |       |        |     |               |          |
| BCLL          | 0.0      | Code IRC2018/TPI2014 |      | Matrix-S |      |       |        |     |               |          |
| BCDL          | 10.0     |                      |      |          |      |       |        |     | Weight: 21 lb | FT = 20% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
OTHERS 2x4 SPF No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 3-5.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS.

(size) 2=6-11-4, 6=6-11-4, 8=6-11-4  
Max Horz 2=40(LC 14)  
Max Uplift 2=45(LC 16), 6=45(LC 16)  
Max Grav 2=300(LC 39), 6=300(LC 39), 8=287(LC 39)

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

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) 0-3-11 to 3-3-11, Interior(1) 3-3-11 to 3-8-7, Exterior(2E) 3-8-7 to 8-3-7 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 6.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



November 9, 2020

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**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

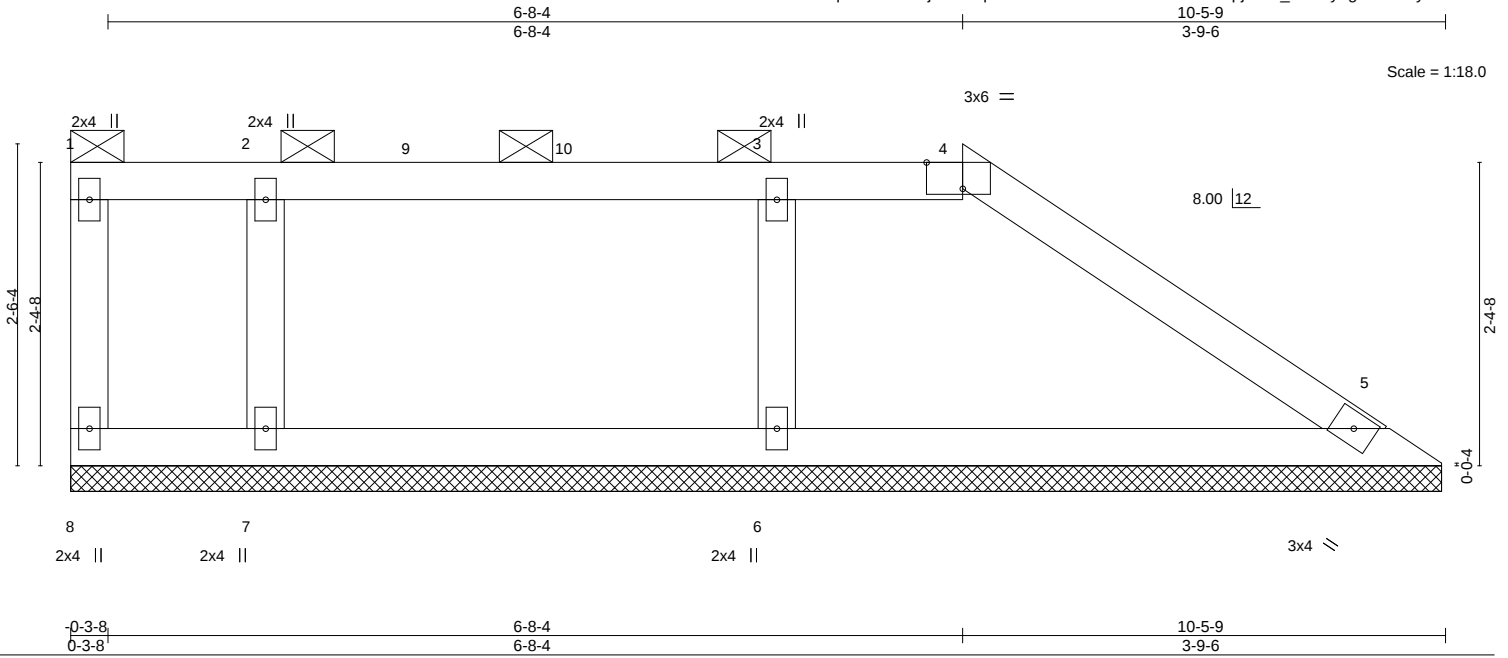


16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|         |       |            |     |     |                          |           |
|---------|-------|------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type | Qty | Ply | Summit/23 Hawthorn       | 143532877 |
| 2531623 | V1    | Valley     | 1   | 1   | Job Reference (optional) |           |

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Fri Nov 6 14:14:04 2020 Page 1  
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|                                      |      |                      |      |          |      |          |        |                        |         |
|--------------------------------------|------|----------------------|------|----------|------|----------|--------|------------------------|---------|
| Plate Offsets (X,Y)-- [4:0-3-6,Edge] |      |                      |      |          |      |          |        |                        |         |
| LOADING (psf)                        |      | SPACING-             |      | CSI.     |      | DEFL.    |        | PLATES                 |         |
| TCLL (roof)                          | 25.0 | 2-0-0                |      | TC       | 0.29 | in (loc) | l/defl | L/d                    | GRIP    |
| Snow (Pf)                            | 20.0 | Plate Grip DOL       | 1.15 | BC       | 0.15 | n/a      | -      | n/a                    | 197/144 |
| TCDL                                 | 10.0 | Lumber DOL           | 1.15 | WB       | 0.05 | n/a      | -      | n/a                    |         |
| BCLL                                 | 0.0  | Rep Stress Incr      | YES  | Matrix-S |      | 0.00     | 5      | n/a                    |         |
| BCDL                                 | 10.0 | Code IRC2018/TPI2014 |      |          |      |          |        |                        |         |
|                                      |      |                      |      |          |      |          |        | Weight: 31 lb FT = 20% |         |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2  
OTHERS 2x4 SPF No.2

#### 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.): 1-4.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS.

All bearings 10-8-11.  
(lb) - Max Horz 8=-73(LC 12)  
Max Uplift All uplift 100 lb or less at joint(s) 5, 8, 6, 7  
Max Grav All reactions 250 lb or less at joint(s) 5, 8 except 6=466(LC 2), 7=273(LC 30)

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

WEBS 3-6=-348/179

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) -0-1-12 to 2-10-4, Interior(1) 2-10-4 to 6-8-4, Exterior(2E) 6-8-4 to 9-11-13 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Provide adequate drainage to prevent water ponding.
- 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 8, 6, 7.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



November 9, 2020

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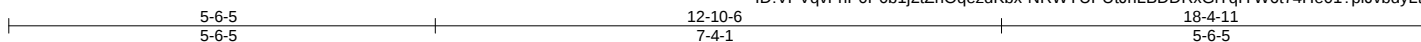
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|         |       |            |     |     |                    |           |
|---------|-------|------------|-----|-----|--------------------|-----------|
| Job     | Truss | Truss Type | Qty | Ply | Summit/23 Hawthorn | I43532878 |
| 2531623 | V2    | Valley     | 1   | 1   |                    |           |

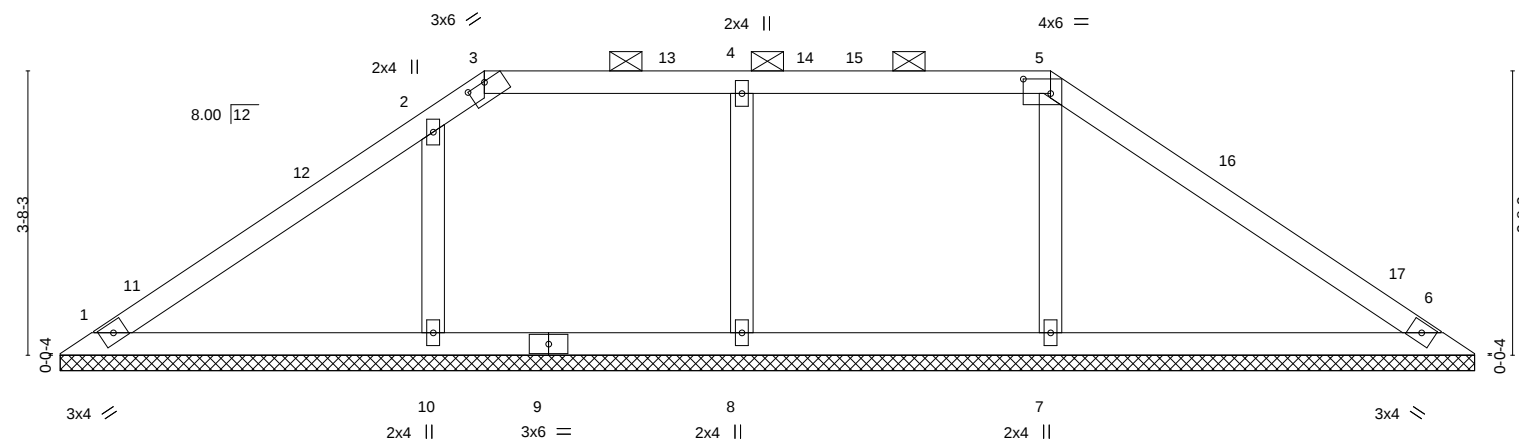
Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Fri Nov 6 14:14:13 2020 Page 1

ID:VPVqvFnP0P0b1j2tZrLOqezdKbx-NRWYUPUtJnLBDDRxGtQlYW6t74He01?piJvbdyLfte



Scale = 1:29.9



0-0-6  
0-0-6

18-4-11  
18-4-5

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

| LOADING (psf) |      | SPACING-        |                 | CSI.     |      | DEFL. |       |        |     | PLATES        | GRIP     |
|---------------|------|-----------------|-----------------|----------|------|-------|-------|--------|-----|---------------|----------|
| TCLL (roof)   | 25.0 | Plate Grip DOL  | 1.15            | TC       | 0.35 | in    | (loc) | l/defl | L/d | MT20          | 197/144  |
| Snow (Pf)     | 20.0 | Lumber DOL      | 1.15            | BC       | 0.17 | n/a   | -     | n/a    | 999 |               |          |
| TCDL          | 10.0 | Rep Stress Incr | YES             | WB       | 0.07 | n/a   | -     | n/a    | 999 |               |          |
| BCLL          | 0.0  | Code            | IRC2018/TPI2014 | Matrix-S |      | 0.00  | 6     | n/a    | n/a |               |          |
| BCDL          | 10.0 |                 |                 |          |      |       |       |        |     | Weight: 53 lb | FT = 20% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
OTHERS 2x4 SPF No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 3-5.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

#### REACTIONS.

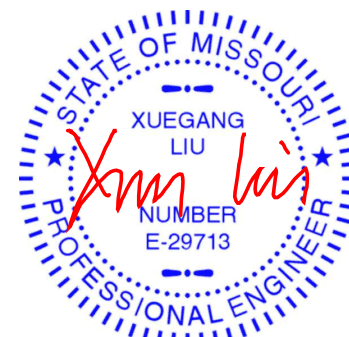
All bearings 18-3-15.  
(lb) - Max Horz 1=-72(LC 12)  
Max Uplift All uplift 100 lb or less at joint(s) 6, 7, 8, 10  
Max Grav All reactions 250 lb or less at joint(s) 1, 6 except 7=457(LC 2), 8=355(LC 29), 10=437(LC 29)

#### FORCES.

(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
WEBS 5-7=-331/113, 4-8=-293/63, 2-10=-328/132

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) 0-5-12 to 3-5-12, Interior(1) 3-5-12 to 5-6-5, Exterior(2R) 5-6-5 to 9-9-4, Interior(1) 9-9-4 to 12-10-6, Exterior(2R) 12-10-6 to 17-1-4, Interior(1) 17-1-4 to 17-10-15 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Provide adequate drainage to prevent water ponding.
- 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 6, 7, 8, 10.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



November 9, 2020

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16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|         |       |            |     |     |                          |           |
|---------|-------|------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type | Qty | Ply | Summit/23 Hawthorn       | 143532879 |
| 2531623 | V3    | Valley     | 1   | 1   | Job Reference (optional) |           |

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Fri Nov 6 14:14:14 2020 Page 1  
ID:VPVqvFnP0P0b1j2tZrIQeqzdKbx-rd4whlUV45T2rN?7qT\_3rl2KGXRkNt381M2T73yLtfD

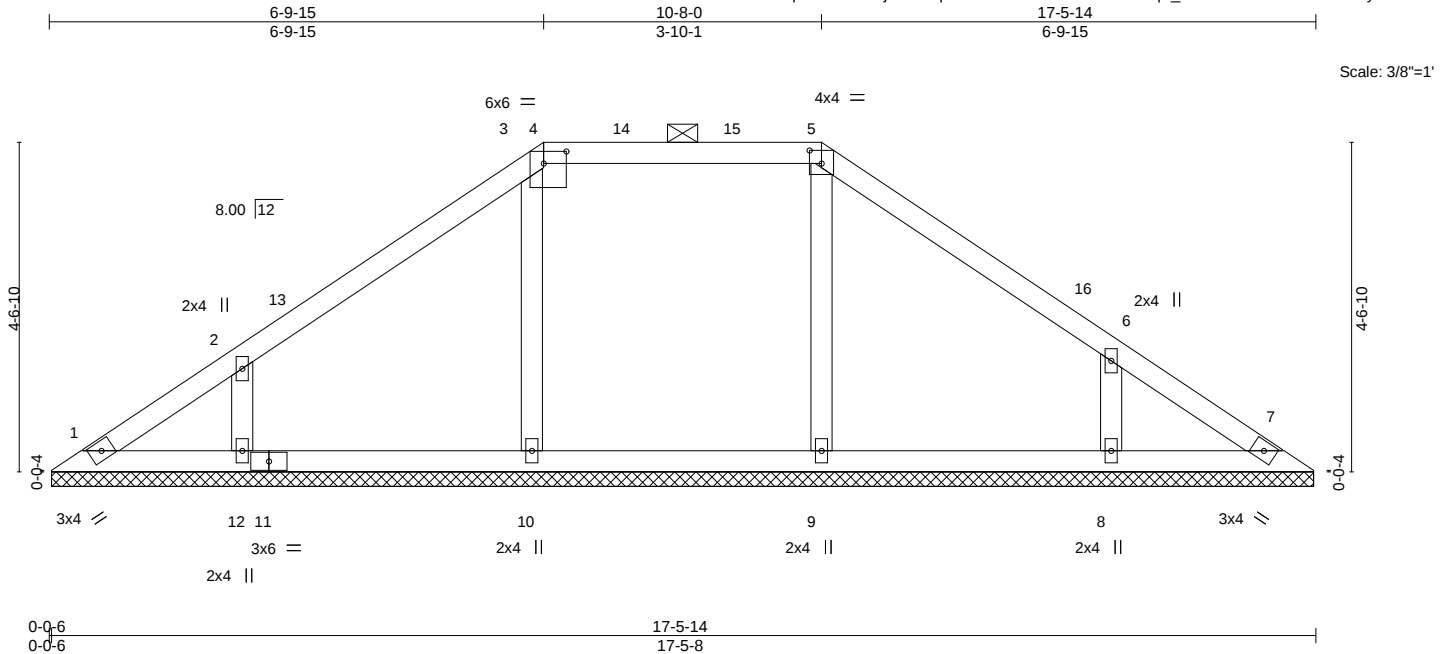


Plate Offsets (X,Y)-- [3:0-1-12,0-1-3], [4:0-3-12,0-2-0], [4:0-0-0,0-1-12], [5:0-2-0,0-2-3]

| LOADING (psf)    | SPACING-             | CSL      | DEFL.         | in | (loc) | l/defl | L/d | PLATES        | GRIP     |
|------------------|----------------------|----------|---------------|----|-------|--------|-----|---------------|----------|
| TCLL (roof) 25.0 | Plate Grip DOL 1.15  | TC 0.18  | Vert(LL) n/a  | -  | n/a   | 999    |     | MT20          | 197/144  |
| Snow (Pf) 20.0   | Lumber DOL 1.15      | BC 0.09  | Vert(CT) n/a  | -  | n/a   | 999    |     |               |          |
| TCDL 10.0        | Rep Stress Incr YES  | WB 0.09  | Horz(CT) 0.00 | 7  | n/a   | n/a    |     |               |          |
| BCLL 0.0         | Code IRC2018/TPI2014 | Matrix-S |               |    |       |        |     |               |          |
| BCDL 10.0        |                      |          |               |    |       |        |     | Weight: 54 lb | FT = 20% |

**LUMBER-**  
TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
OTHERS 2x4 SPF No.2

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

**REACTIONS.** All bearings 17-5-2.  
(lb) - Max Horz 1=91(LC 12)  
Max Uplift All uplift 100 lb or less at joint(s) 1, 10, 12, 8  
Max Grav All reactions 250 lb or less at joint(s) 1, 7 except 9=327(LC 2), 10=362(LC 29), 12=324(LC 23), 8=342(LC 24)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
**WEBS** 3-10=-280/77, 2-12=-254/129, 6-8=-270/134

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) 0-5-12 to 3-5-12, Interior(1) 3-5-12 to 6-9-15, Exterior(2E) 6-9-15 to 10-8-0, Exterior(2R) 10-8-0 to 14-8-0, Interior(1) 14-8-0 to 17-0-2 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
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Provide adequate drainage to prevent water ponding.
- 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 10, 12, 8.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



November 9, 2020

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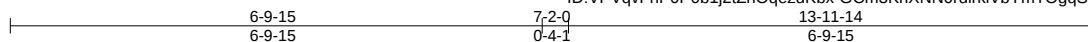
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|         |       |            |     |     |                          |           |
|---------|-------|------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type | Qty | Ply | Summit/23 Hawthorn       | I43532880 |
| 2531623 | V4    | GABLE      | 1   | 1   | Job Reference (optional) |           |

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

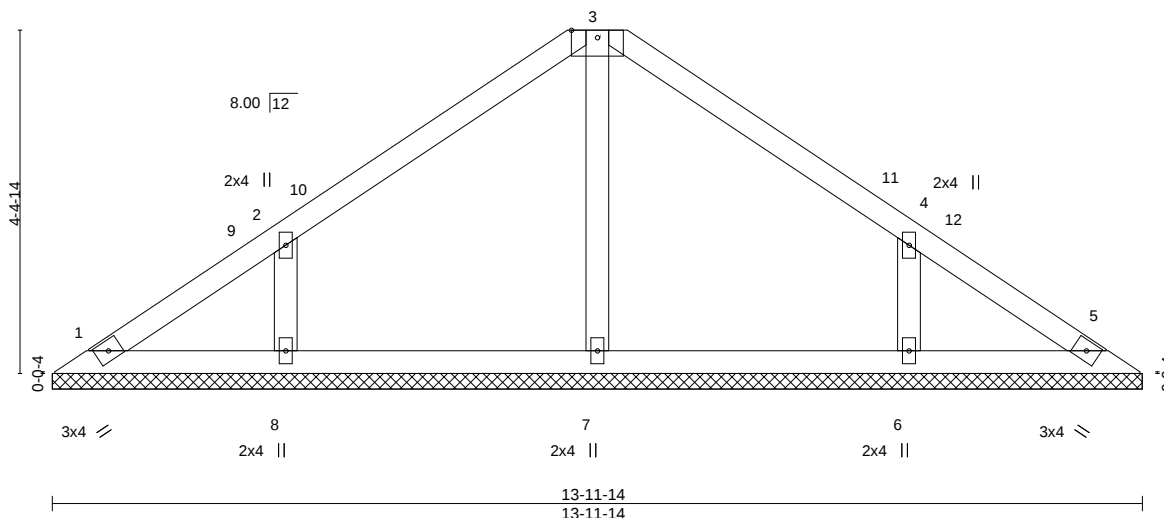
8.240 s Mar 9 2020 MiTek Industries, Inc. Fri Nov 6 14:14:17 2020 Page 1

ID:VPVqvFnP0P0b1j2tZrIQeqzdKbx-GCm3KnXNN0rdirkVbYmTOggSITMap\_bkKH7kOyLfta



4x8 =  
0-9-4

Scale = 1:29.6



| LOADING (psf) |      | SPACING-        |                 | CSI.     |      | DEFL.    |      | PLATES |  | GRIP    |  |
|---------------|------|-----------------|-----------------|----------|------|----------|------|--------|--|---------|--|
| TCLL (roof)   | 25.0 | Plate Grip DOL  | 1.15            | TC       | 0.18 | Vert(LL) | n/a  | MT20   |  | 197/144 |  |
| Snow (Pf)     | 20.0 | Lumber DOL      | 1.15            | BC       | 0.10 | Vert(CT) | n/a  |        |  |         |  |
| TCDL          | 10.0 | Rep Stress Incr | YES             | WB       | 0.07 | Horz(CT) | 0.00 |        |  |         |  |
| BCLL          | 0.0  | Code            | IRC2018/TPI2014 | Matrix-S |      |          |      |        |  |         |  |
| BCDL          | 10.0 |                 |                 |          |      |          |      |        |  |         |  |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
OTHERS 2x4 SPF No.2

#### BRACING-

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

#### REACTIONS.

All bearings 13-11-14.  
(lb) - Max Horz 1=-91(LC 12)  
Max Uplift All uplift 100 lb or less at joint(s) 8, 6  
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 7=297(LC 2), 8=357(LC 29), 6=349(LC 30)

#### FORCES.

(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
WEBS 2-8=-285/150, 4-6=-276/151

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCCL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) 0-5-12 to 3-5-12, Interior(1) 3-5-12 to 7-0-15, Exterior(2R) 7-0-15 to 11-3-14, Interior(1) 11-3-14 to 13-6-2 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 8, 6.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



November 9, 2020

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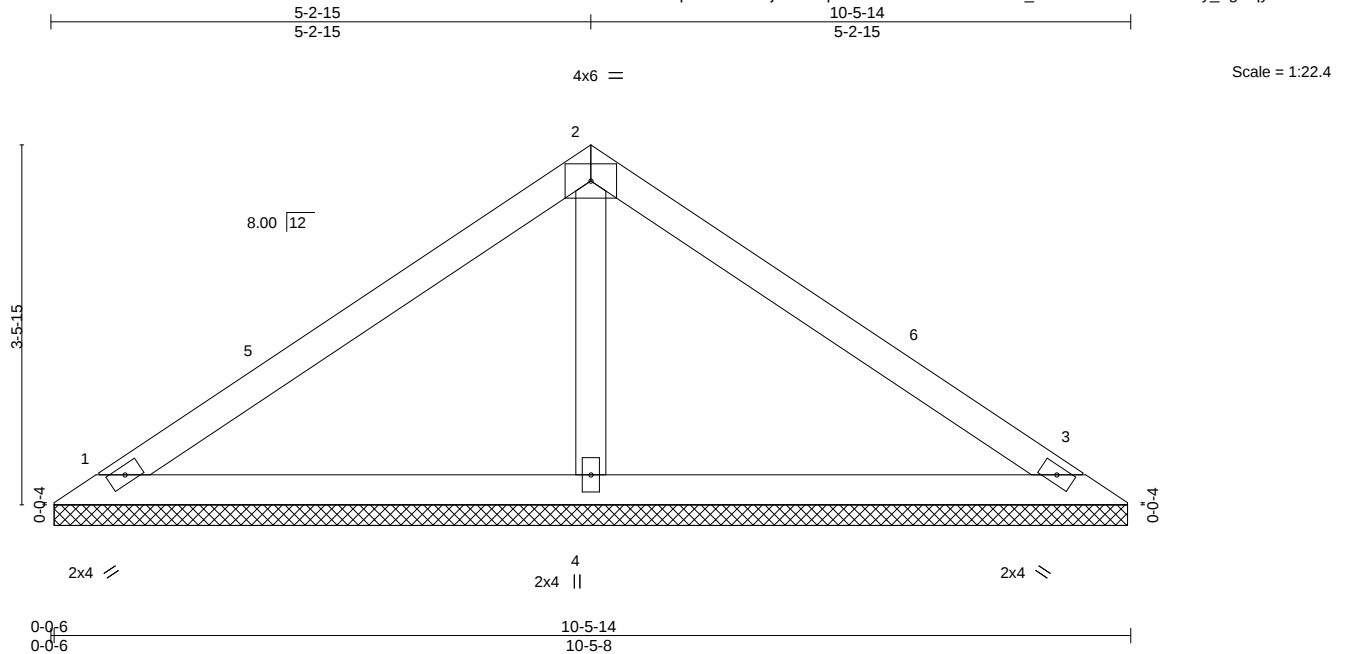


16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|         |       |            |     |     |                          |           |
|---------|-------|------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type | Qty | Ply | Summit/23 Hawthorn       | I43532881 |
| 2531623 | V5    | Valley     | 1   | 1   | Job Reference (optional) |           |

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Fri Nov 6 14:14:18 2020 Page 1  
ID:VPVqvFnP0P0b1j2tZrIOqezdKbx-kPJRX7X?8KzUK\_Ju3l3??bDz58o9JHUKy\_OgGqyLtfZ



| LOADING (psf)    | SPACING-             | CSI.     | DEFL.    | in   | (loc) | l/defl | L/d | PLATES        | GRIP     |
|------------------|----------------------|----------|----------|------|-------|--------|-----|---------------|----------|
| TCLL (roof) 25.0 | 2-0-0                | TC 0.32  | Vert(LL) | n/a  | -     | n/a    | 999 | MT20          | 197/144  |
| Snow (Pf) 20.0   | Plate Grip DOL 1.15  | BC 0.19  | Vert(CT) | n/a  | -     | n/a    | 999 |               |          |
| TCDL 10.0        | Lumber DOL 1.15      | WB 0.06  | Horz(CT) | 0.00 | 3     | n/a    | n/a |               |          |
| BCLL 0.0         | Rep Stress Incr YES  | Matrix-S |          |      |       |        |     | Weight: 28 lb | FT = 20% |
| BCDL 10.0        | Code IRC2018/TPI2014 |          |          |      |       |        |     |               |          |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
OTHERS 2x4 SPF No.2

#### BRACING-

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

#### REACTIONS.

(size) 1=10-5-2, 3=10-5-2, 4=10-5-2  
Max Horz 1=-68(LC 12)  
Max Uplift 1=-28(LC 14), 3=-28(LC 14), 4=-13(LC 14)  
Max Grav 1=211(LC 2), 3=211(LC 2), 4=436(LC 2)

#### FORCES.

(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
WEBS 2-4=-291/99

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCCL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) 0-5-12 to 3-5-12, Interior(1) 3-5-12 to 5-2-15, Exterior(2R) 5-2-15 to 8-2-15, Interior(1) 8-2-15 to 10-0-2 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
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3, 4.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



November 9, 2020

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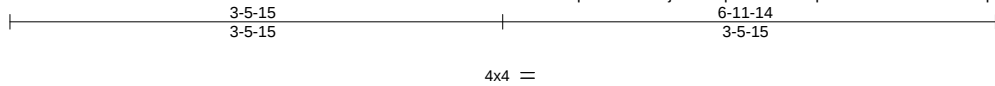


16023 Swingley Ridge Rd  
Chesterfield, MO 63017

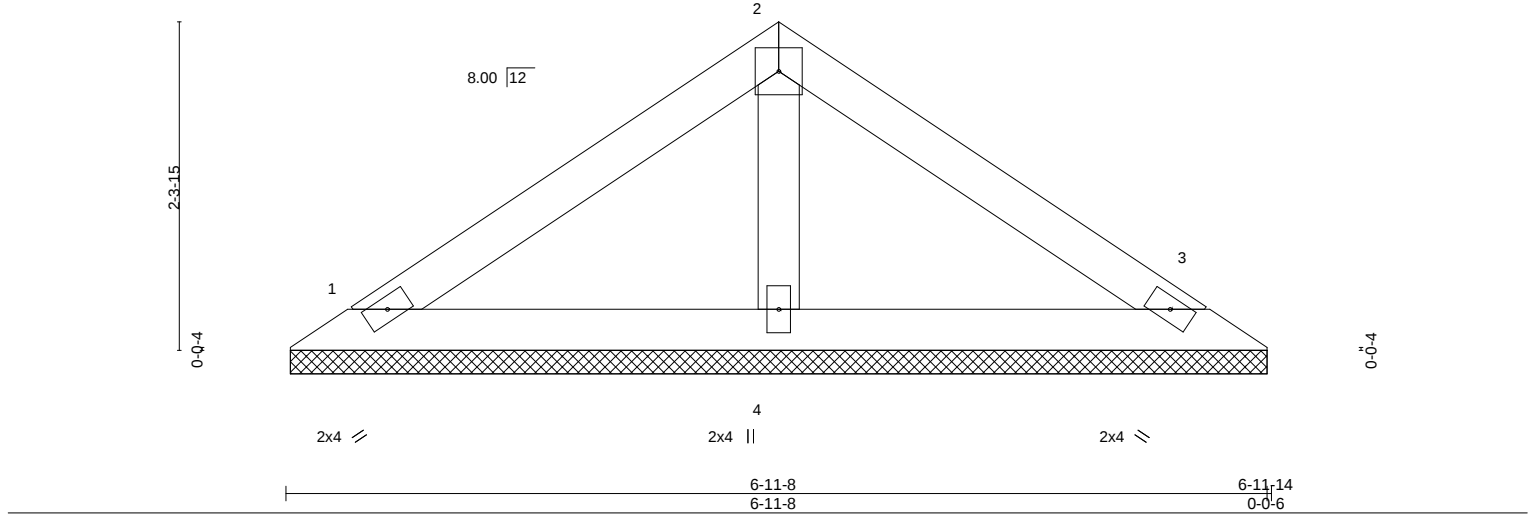
|         |       |            |     |     |                          |           |
|---------|-------|------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type | Qty | Ply | Summit/23 Hawthorn       | I43532882 |
| 2531623 | V6    | Valley     | 1   | 1   | Job Reference (optional) |           |

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Fri Nov 6 14:14:19 2020 Page 1  
ID:VPVqvFnP0P0b1j2tZrOqezdKbx-CbtpkTYevd6Lx8u5c0aEYpmAEY9A2kGuBemEoGyLtfY



Scale = 1:16.3



| LOADING (psf)    | SPACING-             | CSI.     | DEFL.    | in   | (loc) | l/defl | L/d | PLATES        | GRIP     |
|------------------|----------------------|----------|----------|------|-------|--------|-----|---------------|----------|
| TCLL (roof) 25.0 | 2-0-0                | TC 0.16  | Vert(LL) | n/a  | -     | n/a    | 999 | MT20          | 197/144  |
| Snow (Pf) 20.0   | Plate Grip DOL 1.15  | BC 0.08  | Vert(CT) | n/a  | -     | n/a    | 999 |               |          |
| TCDL 10.0        | Lumber DOL 1.15      | WB 0.02  | Horz(CT) | 0.00 | 3     | n/a    | n/a |               |          |
| BCLL 0.0         | Rep Stress Incr YES  | Matrix-P |          |      |       |        |     |               |          |
| BCDL 10.0        | Code IRC2018/TPI2014 |          |          |      |       |        |     | Weight: 18 lb | FT = 20% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
OTHERS 2x4 SPF No.2

#### BRACING-

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

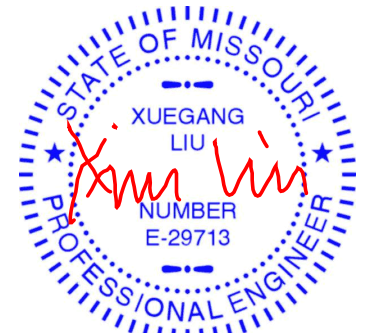
#### REACTIONS.

(size) 1=6-11-2, 3=6-11-2, 4=6-11-2  
Max Horz 1=-43(LC 12)  
Max Uplift 1=-24(LC 14), 3=-24(LC 14)  
Max Grav 1=147(LC 2), 3=147(LC 2), 4=249(LC 2)

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

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



November 9, 2020

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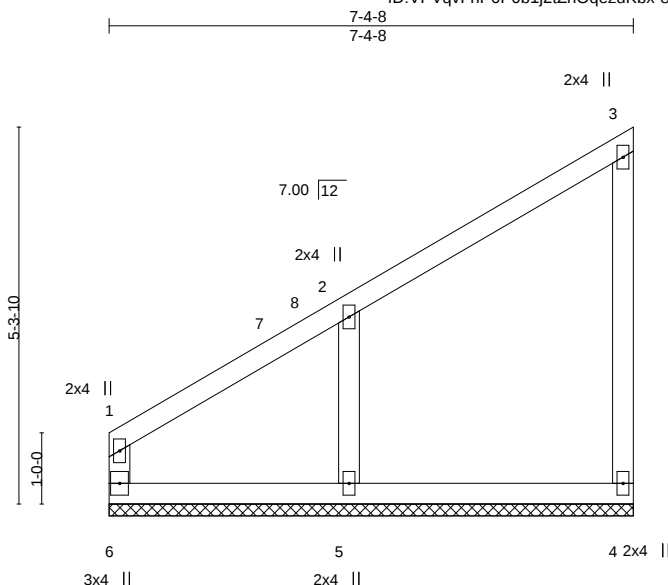
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|                          |       |            |     |     |                    |
|--------------------------|-------|------------|-----|-----|--------------------|
| Job                      | Truss | Truss Type | Qty | Ply | Summit/23 Hawthorn |
| 2531623                  | V7    | Valley     | 1   | 1   | I43532883          |
| Job Reference (optional) |       |            |     |     |                    |

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Fri Nov 6 14:14:21 2020 Page 1

ID:VPVqvFnP0P0b1j2tZrOqzdKbx-8z?Z99auRFM3BS2TkRcidErVdMpVWeAAeyFKt9yLtfW



Scale = 1:32.4

| LOADING (psf) |      | SPACING-             |      | CSI.     |      | DEFL.    |        | PLATES |               | GRIP     |  |
|---------------|------|----------------------|------|----------|------|----------|--------|--------|---------------|----------|--|
| TCLL (roof)   | 25.0 | Plate Grip DOL       | 1.15 | TC       | 0.23 | in (loc) | l/defl | L/d    | MT20          | 197/144  |  |
| Snow (Pf)     | 20.0 | Lumber DOL           | 1.15 | BC       | 0.15 | n/a      | -      | n/a    |               |          |  |
| TCDL          | 10.0 | Rep Stress Incr      | YES  | WB       | 0.06 | n/a      | -      | n/a    |               |          |  |
| BCLL          | 0.0  | Code IRC2018/TPI2014 |      | Matrix-R |      | Horz(CT) | -0.00  | 4      | n/a           | n/a      |  |
| BCDL          | 10.0 |                      |      |          |      |          |        |        | Weight: 27 lb | FT = 20% |  |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2  
OTHERS 2x4 SPF No.2

#### BRACING-

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

#### REACTIONS.

(size) 6=7-4-8, 4=7-4-8, 5=7-4-8  
Max Horz 6=169(LC 13)  
Max Uplift 4=-27(LC 13), 5=-93(LC 16)  
Max Grav 6=149(LC 28), 4=190(LC 20), 5=455(LC 20)

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

WEBS 2-5=-371/223

#### NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) 0-1-12 to 3-4-8, Interior(1) 3-4-8 to 7-2-12 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.
- 4) Gable requires continuous bottom chord bearing.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4, 5.
- 7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



November 9, 2020

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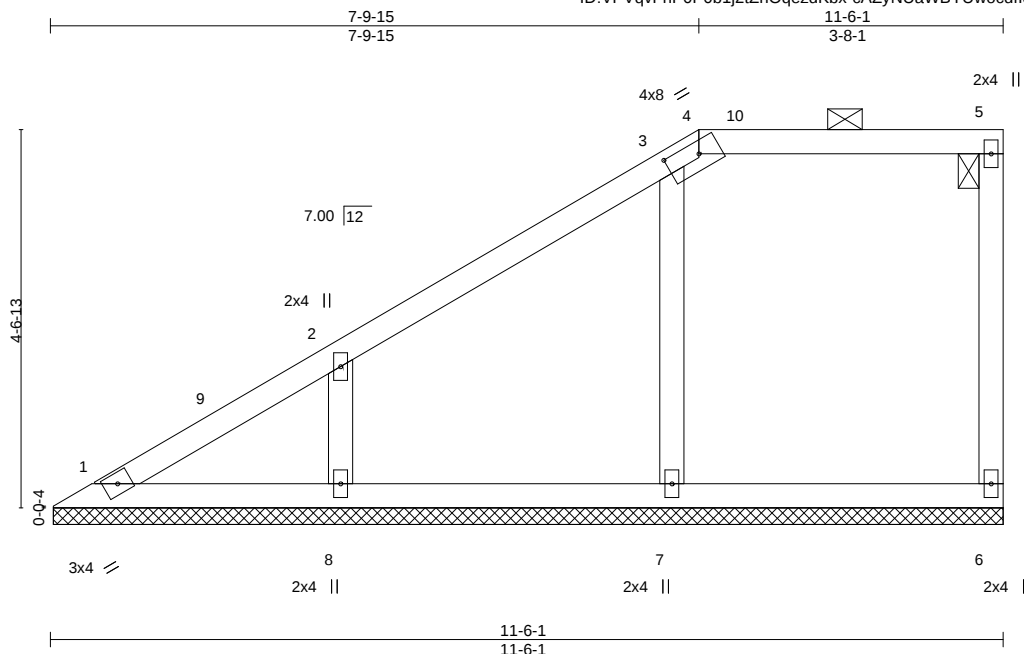


16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|         |       |            |     |     |                    |           |
|---------|-------|------------|-----|-----|--------------------|-----------|
| Job     | Truss | Truss Type | Qty | Ply | Summit/23 Hawthorn | I43532884 |
| 2531623 | V8    | Valley     | 1   | 1   |                    |           |

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Fri Nov 6 14:14:22 2020 Page 1  
ID:VPVqvFnP0P0b1j2tZrIOqezdKbx-cAZyNUaWBYUwocdf188xAROfpMARB4?Ktc\_uPbyLtfV



Scale = 1:27.8

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

| LOADING (psf)    | SPACING-        | 2-0-0           | CSI.     | DEFL.    | in    | (loc) | I/defl | L/d | PLATES        | GRIP     |
|------------------|-----------------|-----------------|----------|----------|-------|-------|--------|-----|---------------|----------|
| TCLL (roof) 25.0 | Plate Grip DOL  | 1.15            | TC 0.27  | Vert(LL) | n/a   | -     | n/a    | 999 | MT20          | 197/144  |
| Snow (Pf) 20.0   | Lumber DOL      | 1.15            | BC 0.11  | Vert(CT) | n/a   | -     | n/a    | 999 |               |          |
| TCDL 10.0        | Rep Stress Incr | YES             | WB 0.09  | Horz(CT) | -0.00 | 6     | n/a    | n/a |               |          |
| BCLL 0.0         | Code            | IRC2018/TPI2014 | Matrix-S |          |       |       |        |     | Weight: 38 lb | FT = 20% |
| BCDL 10.0        |                 |                 |          |          |       |       |        |     |               |          |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2  
OTHERS 2x4 SPF No.2

#### BRACING-

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

#### REACTIONS.

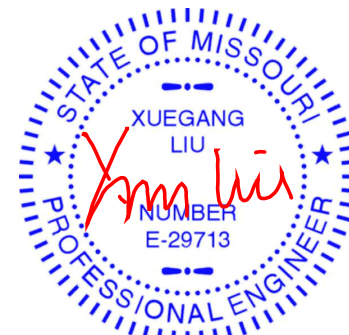
All bearings 11-5-10.  
(lb) - Max Horz 1=149(LC 13)  
Max Uplift All uplift 100 lb or less at joint(s) 6, 7, 8  
Max Grav All reactions 250 lb or less at joint(s) 1, 6 except 7=383(LC 35), 8=505(LC 35)

#### FORCES.

(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
WEBS 3-7=-297/167, 2-8=-424/135

#### NOTES-

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) 0-6-8 to 3-6-1, Interior(1) 3-6-1 to 7-9-15, Exterior(2E) 7-9-15 to 11-4-5 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Provide adequate drainage to prevent water ponding.
- 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 6, 7, 8.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



November 9, 2020

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16023 Swingley Ridge Rd  
Chesterfield, MO 63017

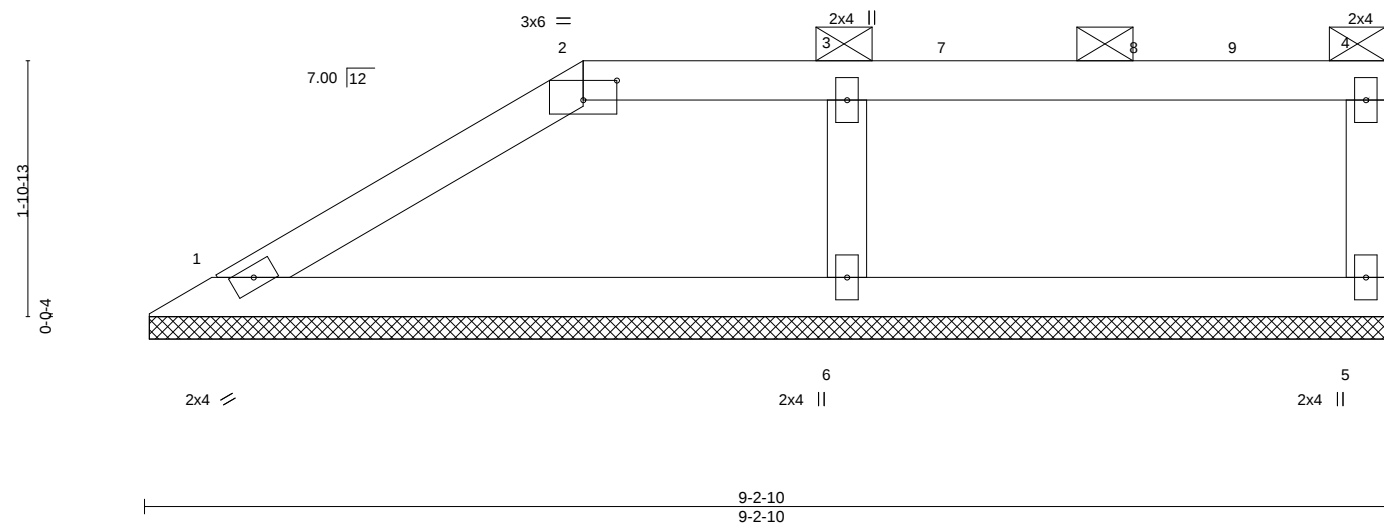
|         |       |            |     |     |                          |           |
|---------|-------|------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type | Qty | Ply | Summit/23 Hawthorn       | I43532885 |
| 2531623 | V9    | Valley     | 1   | 1   | Job Reference (optional) |           |

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Fri Nov 6 14:14:23 2020 Page 1  
ID:VPVqvFnP0P0b1j2tZrIOqezdKbx-4M7Kaqb8yscnQmCsrsfAifwq99Vy\_YkT6GkRx2yLtfU



Scale = 1:17.1



| Plate Offsets (X,Y)-- |      | [2:0-3-0,0-1-12] |  | 9-2-10          |  | 9-2-10      |      |              |      |                 |     |               |  |            |  |               |               |             |  |
|-----------------------|------|------------------|--|-----------------|--|-------------|------|--------------|------|-----------------|-----|---------------|--|------------|--|---------------|---------------|-------------|--|
| <b>LOADING</b> (psf)  |      | <b>SPACING-</b>  |  | <b>2-0-0</b>    |  | <b>CSI.</b> |      | <b>DEFL.</b> |      | <b>in (loc)</b> |     | <b>l/defl</b> |  | <b>L/d</b> |  | <b>PLATES</b> |               | <b>GRIP</b> |  |
| TCLL (roof)           | 25.0 | Plate Grip DOL   |  | 1.15            |  | TC          | 0.30 | Vert(LL)     | n/a  | -               | n/a | 999           |  |            |  |               | MT20          | 197/144     |  |
| Snow (Pf)             | 20.0 | Lumber DOL       |  | 1.15            |  | BC          | 0.15 | Vert(CT)     | n/a  | -               | n/a | 999           |  |            |  |               |               |             |  |
| TCDL                  | 10.0 | Rep Stress Incr  |  | YES             |  | WB          | 0.06 | Horz(CT)     | 0.00 | 5               | n/a | n/a           |  |            |  |               |               |             |  |
| BCLL                  | 0.0  | Code             |  | IRC2018/TPI2014 |  | Matrix-S    |      |              |      |                 |     |               |  |            |  |               | Weight: 24 lb | FT = 20%    |  |
| BCDL                  | 10.0 |                  |  |                 |  |             |      |              |      |                 |     |               |  |            |  |               |               |             |  |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2  
OTHERS 2x4 SPF No.2

#### 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.): 2-4.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS.

(size) 1=9-2-3, 5=9-2-3, 6=9-2-3  
Max Horz 1=56(LC 15)  
Max Uplift 1=-15(LC 16), 5=-18(LC 13), 6=-46(LC 13)  
Max Grav 1=241(LC 35), 5=209(LC 34), 6=532(LC 34)

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

WEBS 3-6=-430/136

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) 0-6-8 to 3-3-2, Exterior(2R) 3-3-2 to 7-6-0, Interior(1) 7-6-0 to 9-0-14 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
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Provide adequate drainage to prevent water ponding.
- 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 5, 6.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



November 9, 2020

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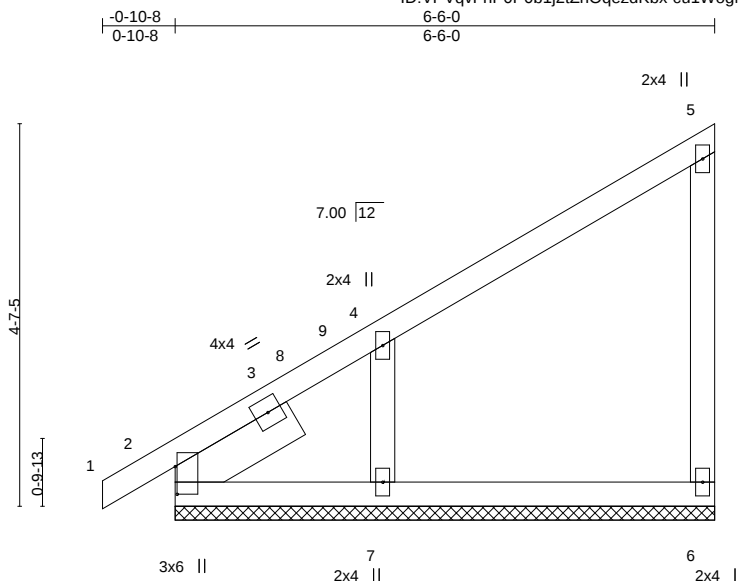
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|                          |       |            |     |     |                    |
|--------------------------|-------|------------|-----|-----|--------------------|
| Job                      | Truss | Truss Type | Qty | Ply | Summit/23 Hawthorn |
| 2531623                  | V10   | Valley     | 1   | 1   | 143532886          |
| Job Reference (optional) |       |            |     |     |                    |

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

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ID:VPVqvFnP0P0b1j2tZrOqezdKbx-cu1WogNsCKLKG\_pOo4Ky\_sAmMvNZmPOqzSNUJ4yLtfm



Scale = 1:27.8

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

| LOADING (psf)    | SPACING-             | CSI.     | DEFL.          | in | (loc) | l/defl | L/d | PLATES        | GRIP     |
|------------------|----------------------|----------|----------------|----|-------|--------|-----|---------------|----------|
| TCLL (roof) 25.0 | Plate Grip DOL 1.15  | TC 0.25  | Vert(LL) 0.00  | 1  | n/r   | 120    |     | MT20          | 197/144  |
| Snow (Pf) 20.0   | Lumber DOL 1.15      | BC 0.10  | Vert(CT) -0.00 | 1  | n/r   | 120    |     |               |          |
| TCDL 10.0        | Rep Stress Incr YES  | WB 0.05  | Horz(CT) 0.00  | 6  | n/a   | n/a    |     |               |          |
| BCLL 0.0         | Code IRC2018/TPI2014 | Matrix-P |                |    |       |        |     |               |          |
| BCDL 10.0        |                      |          |                |    |       |        |     | Weight: 27 lb | FT = 20% |

**LUMBER-**  
TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2  
OTHERS 2x4 SPF No.2  
SLIDER Left 2x6 SPF No.2 1-7-12

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

**REACTIONS.** (size) 6=6-6-0, 2=6-6-0, 7=6-6-0  
Max Horz 2=147(LC 13)  
Max Uplift 6=-27(LC 13), 2=-14(LC 17), 7=-77(LC 16)  
Max Grav 6=183(LC 21), 2=149(LC 29), 7=443(LC 21)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-4=-256/183  
WEBS 4-7=-361/232

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 6-4-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - 3) Unbalanced snow loads have been considered for this design.
  - 4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
  - 5) Gable requires continuous bottom chord bearing.
  - 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 6, 2, 7.
  - 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



November 9, 2020

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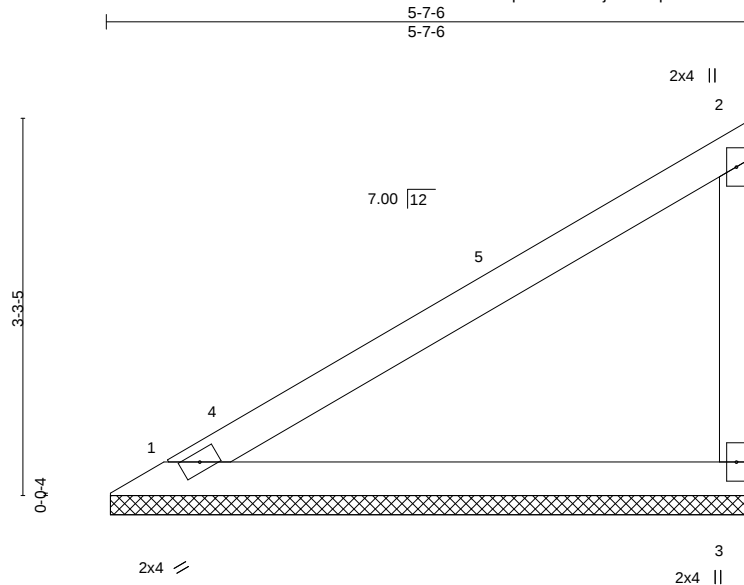


16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|                |              |                      |          |          |                                                |           |
|----------------|--------------|----------------------|----------|----------|------------------------------------------------|-----------|
| Job<br>2531623 | Truss<br>V11 | Truss Type<br>Valley | Qty<br>1 | Ply<br>1 | Summit/23 Hawthorn<br>Job Reference (optional) | I43532887 |
|----------------|--------------|----------------------|----------|----------|------------------------------------------------|-----------|

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Fri Nov 6 14:14:07 2020 Page 1  
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Scale = 1:20.0

| LOADING (psf)    | SPACING-             | CSI.     | DEFL.         | in (loc) | l/defl | L/d | PLATES        | GRIP     |
|------------------|----------------------|----------|---------------|----------|--------|-----|---------------|----------|
| TCLL (roof) 25.0 | 2-0-0                | TC 0.65  | Vert(LL) n/a  | -        | n/a    | 999 | MT20          | 197/144  |
| Snow (Pf) 20.0   | Plate Grip DOL 1.15  | BC 0.25  | Vert(CT) n/a  | -        | n/a    | 999 |               |          |
| TCDL 10.0        | Lumber DOL 1.15      | WB 0.00  | Horz(CT) 0.00 | 3        | n/a    | n/a |               |          |
| BCLL 0.0         | Rep Stress Incr YES  | Matrix-P |               |          |        |     | Weight: 16 lb | FT = 20% |
| BCDL 10.0        | Code IRC2018/TPI2014 |          |               |          |        |     |               |          |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 5-7-6 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS.

(size) 1=5-6-15, 3=5-6-15  
Max Horz 1=100(LC 13)  
Max Uplift 1=-14(LC 16), 3=-29(LC 13)  
Max Grav 1=286(LC 20), 3=286(LC 20)

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

#### NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) 0-6-8 to 3-6-8, Interior(1) 3-6-8 to 5-5-10 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.
- 4) Gable requires continuous bottom chord bearing.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
- 7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



November 9, 2020

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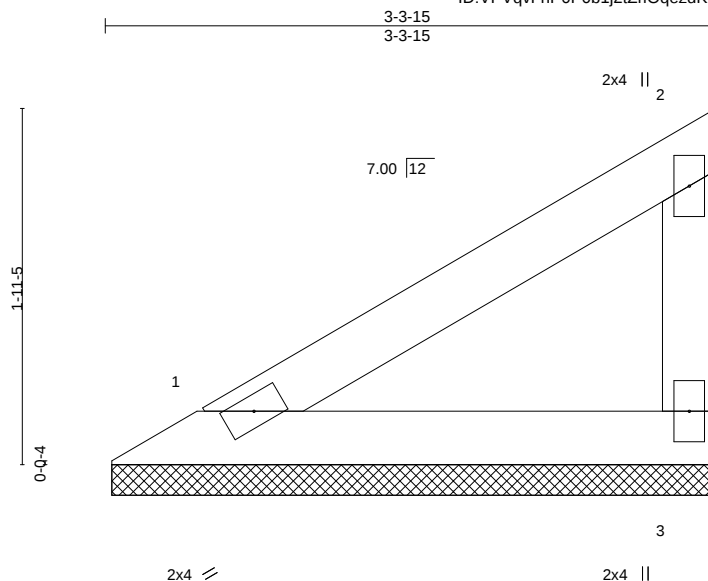


16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|                |              |                      |          |          |                                                |
|----------------|--------------|----------------------|----------|----------|------------------------------------------------|
| Job<br>2531623 | Truss<br>V12 | Truss Type<br>Valley | Qty<br>1 | Ply<br>1 | Summit/23 Hawthorn<br>Job Reference (optional) |
|----------------|--------------|----------------------|----------|----------|------------------------------------------------|

I43532888

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Fri Nov 6 14:14:09 2020 Page 1  
ID:VPVqvFnP0P0b1j2tZrIQezdKbx-VgH1e2QMFZrmlc7A1wPu8iLTzWk0iD9Pu4LiSryLtfi

Scale = 1:12.6

| LOADING (psf)    | SPACING-             | CSI.     | DEFL.         | in (loc) | l/defl | L/d | PLATES       | GRIP     |
|------------------|----------------------|----------|---------------|----------|--------|-----|--------------|----------|
| TCLL (roof) 25.0 | 2-0-0                | TC 0.15  | Vert(LL) n/a  | -        | n/a    | 999 | MT20         | 197/144  |
| Snow (Pf) 20.0   | Plate Grip DOL 1.15  | BC 0.07  | Vert(CT) n/a  | -        | n/a    | 999 |              |          |
| TCDL 10.0        | Lumber DOL 1.15      | WB 0.00  | Horz(CT) 0.00 | 3        | n/a    | n/a |              |          |
| BCLL 0.0         | Rep Stress Incr YES  | Matrix-P |               |          |        |     | Weight: 9 lb | FT = 20% |
| BCDL 10.0        | Code IRC2018/TPI2014 |          |               |          |        |     |              |          |

**LUMBER-**

TOP CHORD 2x4 SPF No.2  
 BOT CHORD 2x4 SPF No.2  
 WEBS 2x4 SPF No.2

**BRACING-**

TOP CHORD Structural wood sheathing directly applied or 3-3-15 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.**

(size) 1=3-3-8, 3=3-3-8  
 Max Horz 1=54(LC 15)  
 Max Uplift 1=-7(LC 16), 3=-15(LC 13)  
 Max Grav 1=141(LC 20), 3=141(LC 20)

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

**NOTES-**

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



November 9, 2020

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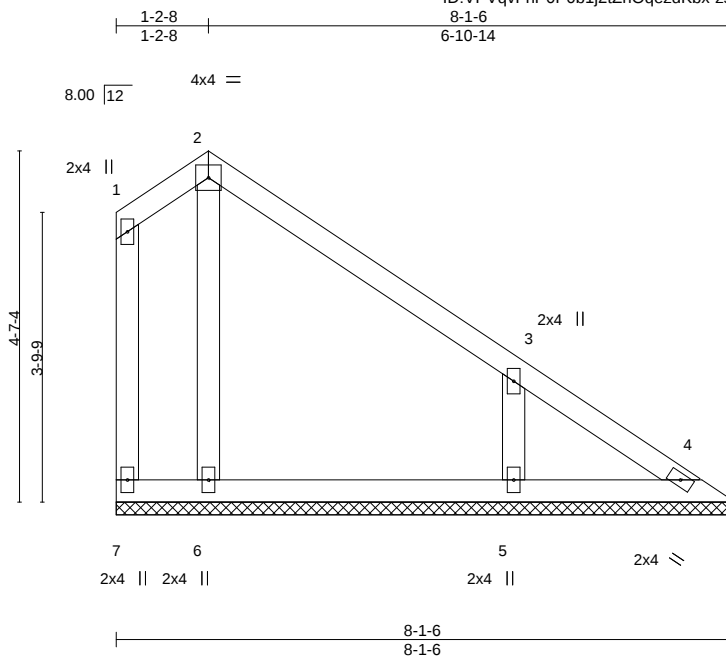


16023 Swingley Ridge Rd  
 Chesterfield, MO 63017

|                          |       |            |     |     |                    |
|--------------------------|-------|------------|-----|-----|--------------------|
| Job                      | Truss | Truss Type | Qty | Ply | Summit/23 Hawthorn |
| 2531623                  | V13   | Valley     | 1   | 1   | I43532889          |
| Job Reference (optional) |       |            |     |     |                    |

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Fri Nov 6 14:14:10 2020 Page 1  
ID:VPVqvFnP0P0b1j2tZrIOqezdKbx-zsqPsOR\_0szdMmiMbdw7hwudxw43RgcZ7k4F\_lyLtfh



Scale = 1:30.2

| LOADING (psf)    | SPACING-             | CSI.     | DEFL.    | in (loc) | l/defl | L/d | PLATES        | GRIP     |
|------------------|----------------------|----------|----------|----------|--------|-----|---------------|----------|
| TCLL (roof) 25.0 | 2-0-0                | TC 0.20  | Vert(LL) | n/a      | -      | n/a | MT20          | 197/144  |
| Snow (Pf) 20.0   | Plate Grip DOL 1.15  | BC 0.08  | Vert(CT) | n/a      | -      | n/a |               |          |
| TCDL 10.0        | Lumber DOL 1.15      | WB 0.05  | Horz(CT) | 0.00     | 4      | n/a |               |          |
| BCLL 0.0         | Rep Stress Incr YES  | Matrix-P |          |          |        |     |               |          |
| BCDL 10.0        | Code IRC2018/TPI2014 |          |          |          |        |     | Weight: 30 lb | FT = 20% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2  
OTHERS 2x4 SPF No.2

#### BRACING-

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

#### REACTIONS.

All bearings 8-1-0.  
(lb) - Max Horz 7=-140(LC 12)  
Max Uplift All uplift 100 lb or less at joint(s) 7, 4, 6, 5  
Max Grav All reactions 250 lb or less at joint(s) 7, 4, 6 except 5=369(LC 24)

#### FORCES.

(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
WEBS 3-5=-296/242

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) 0-1-12 to 1-2-8, Exterior(2R) 1-2-8 to 4-2-8, Interior(1) 4-2-8 to 7-7-9 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
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 7, 4, 6, 5.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



November 9,2020

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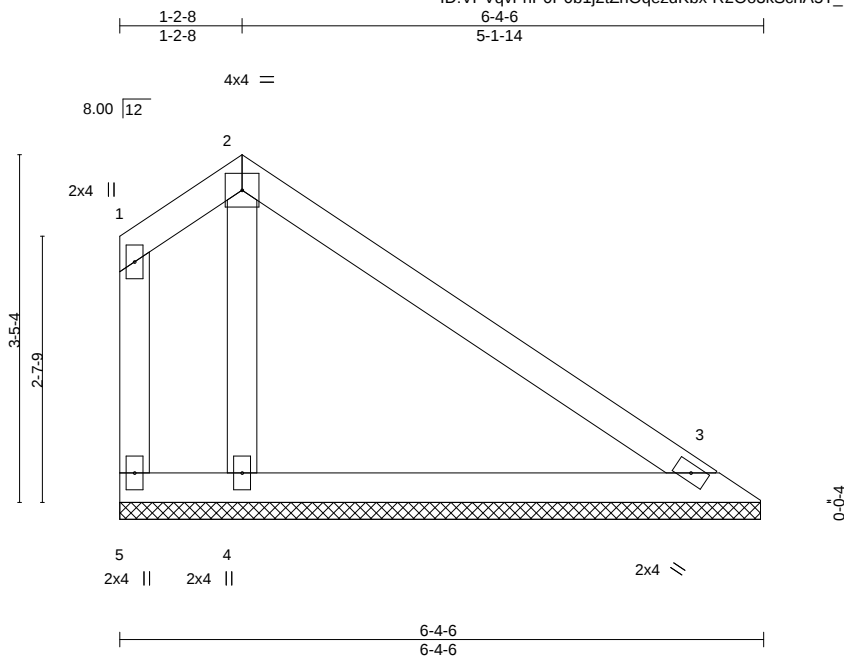
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|                          |              |                      |          |          |                                 |
|--------------------------|--------------|----------------------|----------|----------|---------------------------------|
| Job<br>2531623           | Truss<br>V14 | Truss Type<br>Valley | Qty<br>1 | Ply<br>1 | Summit/23 Hawthorn<br>I43532890 |
| Job Reference (optional) |              |                      |          |          |                                 |

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Fri Nov 6 14:14:11 2020 Page 1

ID:VPVqvFnP0P0b1j2tZrIQeqzdKbx-R2Oo3kScnA5T\_vHY8KRMD7QIDKP8A72iLOqoWkyLtfq



Scale = 1:22.8

| LOADING (psf) |      | SPACING-             |      | CSI.     |      | DEFL.    |      | in (loc) |     | l/defl |  | L/d |  | PLATES |  | GRIP    |  |
|---------------|------|----------------------|------|----------|------|----------|------|----------|-----|--------|--|-----|--|--------|--|---------|--|
| TCLL (roof)   | 25.0 | Plate Grip DOL       | 1.15 | TC       | 0.42 | Vert(LL) | n/a  | -        | n/a | 999    |  |     |  | MT20   |  | 197/144 |  |
| Snow (Pf)     | 20.0 | Lumber DOL           | 1.15 | BC       | 0.15 | Vert(CT) | n/a  | -        | n/a | 999    |  |     |  |        |  |         |  |
| TCDL          | 10.0 | Rep Stress Incr      | YES  | WB       | 0.04 | Horz(CT) | 0.00 | 3        | n/a | n/a    |  |     |  |        |  |         |  |
| BCLL          | 0.0  | Code IRC2018/TPI2014 |      | Matrix-P |      |          |      |          |     |        |  |     |  |        |  |         |  |
| BCDL          | 10.0 |                      |      |          |      |          |      |          |     |        |  |     |  |        |  |         |  |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2  
OTHERS 2x4 SPF No.2

#### BRACING-

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

#### REACTIONS.

(size) 5=6-4-0, 3=6-4-0, 4=6-4-0  
Max Horz 5=99(LC 12)  
Max Uplift 5=53(LC 5), 3=24(LC 14), 4=10(LC 10)  
Max Grav 5=21(LC 23), 3=201(LC 2), 4=314(LC 24)

#### FORCES.

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

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) 0-1-12 to 1-2-8, Exterior(2R) 1-2-8 to 4-2-8, Interior(1) 4-2-8 to 5-10-9 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 3, 4.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



November 9, 2020

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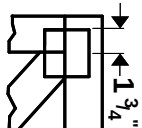


16023 Swingley Ridge Rd  
Chesterfield, MO 63017

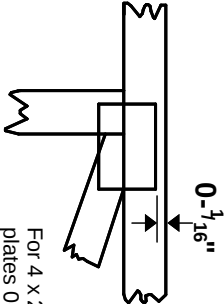


# Symbols

## PLATE LOCATION AND ORIENTATION



Center plate on joint unless X, Y offsets are indicated. Dimensions are in ft-in-sixteenths. Apply plates to both sides of truss and fully embed teeth.



For 4 x 2 orientation, locate plates 0-  $\frac{1}{16}$ " from outside edge of truss.

—  
—  
This symbol indicates the required direction of slots in connector plates.

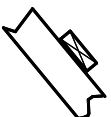
**\* Plate location details available in MITek 20120 software or upon request.**

## PLATE SIZE

4 X 4

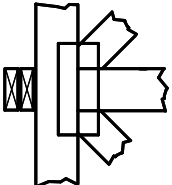
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## LATERAL BRACING LOCATION



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

## BEARING



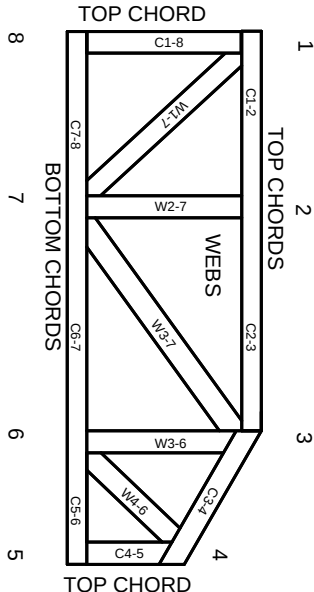
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

## Industry Standards:

ANSI/TP1.1: National Design Specification for Metal Plate Connected Wood Truss Construction.  
DSB-89: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

# Numbering System

6-4-8 dimensions shown in ft-in-sixteenths (Drawings not to scale)



**JOINTS ARE GENERALLY NUMBERED/LETTERED CLOCKWISE AROUND THE TRUSS STARTING AT THE JOINT FARTHEST TO THE LEFT.**

**CHORDS AND WEBS ARE IDENTIFIED BY END JOINT NUMBERS/LETTERS.**

## PRODUCT CODE APPROVALS

ICC-ES Reports:

ESR-1311, ESR-1352, ESR1988  
ER-3907, ESR-2362, ESR-1397, ESR-3282

Trusses are designed for wind loads in the plane of the truss unless otherwise shown.

Lumber design values are in accordance with ANSI/TP1 1 section 6.3 These truss designs rely on lumber values established by others.

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MITek Engineering Reference Sheet: MII-7473 rev. 5/19/2020



# General Safety Notes

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

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