



RE: 2745269  
Summit/25 Woodside/MO

MiTek USA, Inc.  
16023 Swingley Ridge Rd  
Chesterfield, MO 63017  
314-434-1200

**Site Information:**

Customer: Project Name: 2745269  
Lot/Block:  
Address:  
City:

Model:  
Subdivision:  
State:

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

Design Code: IRC2018/TPI2014  
Wind Code: N/A  
Roof Load: 55.0 psf

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

This package includes 62 individual, dated Truss Design Drawings and 0 Additional Drawings.

| No. | Seal#     | Truss Name | Date     | No. | Seal#     | Truss Name | Date     |
|-----|-----------|------------|----------|-----|-----------|------------|----------|
| 1   | I44187958 | A1         | 4/9/2021 | 21  | I44187978 | CJ1        | 4/9/2021 |
| 2   | I44187959 | A2         | 4/9/2021 | 22  | I44187979 | CJ2        | 4/9/2021 |
| 3   | I44187960 | A3         | 4/9/2021 | 23  | I44187980 | CJ3        | 4/9/2021 |
| 4   | I44187961 | A4         | 4/9/2021 | 24  | I44187981 | CJ4        | 4/9/2021 |
| 5   | I44187962 | A5         | 4/9/2021 | 25  | I44187982 | CJ5        | 4/9/2021 |
| 6   | I44187963 | A6         | 4/9/2021 | 26  | I44187983 | CJ6        | 4/9/2021 |
| 7   | I44187964 | A7         | 4/9/2021 | 27  | I44187984 | CJ7        | 4/9/2021 |
| 8   | I44187965 | A8         | 4/9/2021 | 28  | I44187985 | CJ8        | 4/9/2021 |
| 9   | I44187966 | A9         | 4/9/2021 | 29  | I44187986 | J1         | 4/9/2021 |
| 10  | I44187967 | A10        | 4/9/2021 | 30  | I44187987 | J2         | 4/9/2021 |
| 11  | I44187968 | A11        | 4/9/2021 | 31  | I44187988 | J3         | 4/9/2021 |
| 12  | I44187969 | A12        | 4/9/2021 | 32  | I44187989 | J4         | 4/9/2021 |
| 13  | I44187970 | A13        | 4/9/2021 | 33  | I44187990 | J5         | 4/9/2021 |
| 14  | I44187971 | A14        | 4/9/2021 | 34  | I44187991 | J6         | 4/9/2021 |
| 15  | I44187972 | A15        | 4/9/2021 | 35  | I44187992 | J7         | 4/9/2021 |
| 16  | I44187973 | A16        | 4/9/2021 | 36  | I44187993 | J8         | 4/9/2021 |
| 17  | I44187974 | A17        | 4/9/2021 | 37  | I44187994 | J9         | 4/9/2021 |
| 18  | I44187975 | A18        | 4/9/2021 | 38  | I44187995 | J10        | 4/9/2021 |
| 19  | I44187976 | B1         | 4/9/2021 | 39  | I44187996 | J11        | 4/9/2021 |
| 20  | I44187977 | B2         | 4/9/2021 | 40  | I44187997 | J12        | 4/9/2021 |

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: Sevier, Scott  
My license renewal date for the state of Missouri is December 31, 2021.  
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.



April 09, 2021



RE: 2745269 - Summit/25 Woodside/MO

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

**Site Information:**

Project Customer:      Project Name: 2745269

Lot/Block:

Subdivision:

Address:

City, County:

State:

| No. | Seal#     | Truss Name | Date     |
|-----|-----------|------------|----------|
| 41  | I44187998 | J13        | 4/9/2021 |
| 42  | I44187999 | J14        | 4/9/2021 |
| 43  | I44188000 | J15        | 4/9/2021 |
| 44  | I44188001 | J16        | 4/9/2021 |
| 45  | I44188002 | J17        | 4/9/2021 |
| 46  | I44188003 | J18        | 4/9/2021 |
| 47  | I44188004 | J19        | 4/9/2021 |
| 48  | I44188005 | J20        | 4/9/2021 |
| 49  | I44188006 | J21        | 4/9/2021 |
| 50  | I44188007 | J22        | 4/9/2021 |
| 51  | I44188008 | J23        | 4/9/2021 |
| 52  | I44188009 | J24        | 4/9/2021 |
| 53  | I44188010 | J25        | 4/9/2021 |
| 54  | I44188011 | LG1        | 4/9/2021 |
| 55  | I44188012 | LG2        | 4/9/2021 |
| 56  | I44188013 | LG3        | 4/9/2021 |
| 57  | I44188014 | LG4        | 4/9/2021 |
| 58  | I44188015 | LG5        | 4/9/2021 |
| 59  | I44188016 | LG6        | 4/9/2021 |
| 60  | I44188017 | LG7        | 4/9/2021 |
| 61  | I44188018 | V1         | 4/9/2021 |
| 62  | I44188019 | V2         | 4/9/2021 |

|         |       |                     |     |     |                       |           |
|---------|-------|---------------------|-----|-----|-----------------------|-----------|
| Job     | Truss | Truss Type          | Qty | Ply | Summit/25 Woodside/MO | 144187958 |
| 2745269 | A1    | Roof Special Girder | 1   | 1   |                       |           |

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

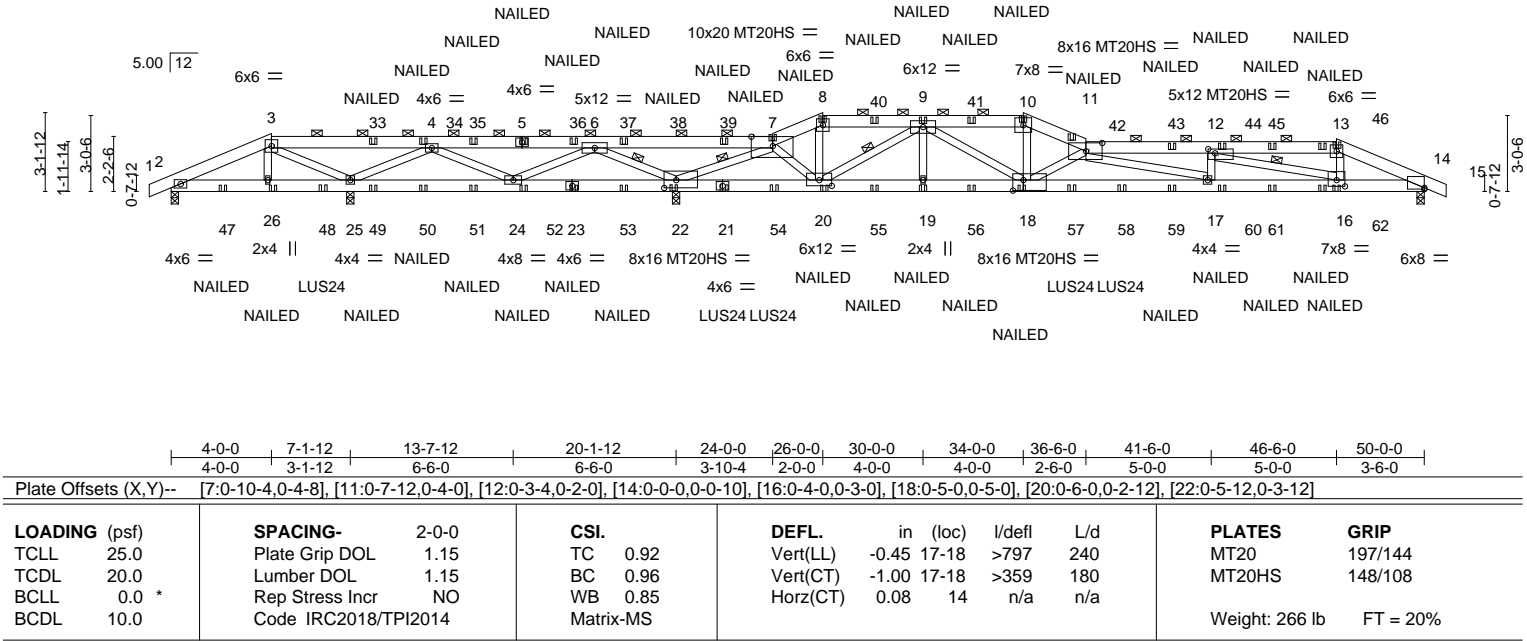
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MiTek Industries, Inc.
Thu Dec 31 09:29:40 2020
Page 1

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0-10-8
4-0-0
10-4-12
16-10-12
24-0-0
26-0-0
30-0-0
34-0-0
36-6-0
41-6-0
46-6-0
50-0-0
50-10-8

0-10-8
4-0-0
6-4-12
6-6-0
7-1-4
2-0-0
4-0-0
4-0-0
2-6-0
5-0-0
5-0-0
3-6-0
0-10-8

Scale = 1:91.9



|  |   |
|--|---|
| <b>LUMBER-</b>   | <b>BRACING-</b>   |
| TOP CHORD 2x6 SPF No.2 *Except*<br>3-5,11-13,5-7: 2x6 SPF 2100F 1.8E                   | TOP CHORD Structural wood sheathing directly applied or 2-7-8 oc purlins, except 2-0-0 oc purlins (2-8-5 max.): 3-7, 8-10, 11-13. |
| BOT CHORD 2x6 SP 2400F 2.0E *Except*<br>18-21: 2x6 SPF 2100F 1.8E, 21-23: 2x6 SPF No.2 | BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 24-25,20-22 2-11-8 oc bracing: 22-24.    |
| WEBS 2x4 SPF No.2 *Except*<br>7-22: 2x4 SPF 1650F 1.5E                                 | WEBS 1 Row at midpt 7-22, 9-20, 12-16, 6-22   |

**REACTIONS.** All bearings 0-3-8 except (jt=length) 22=0-8-13 (input: 0-3-8).  
 (lb) - Max Horz 2=26(LC 30)  
 Max Uplift All uplift 100 lb or less at joint(s) 25 except 22=587(LC 4), 14=210(LC 9)  
 Max Grav All reactions 250 lb or less at joint(s) except 2=669(LC 1), 25=801(LC 21), 22=5624(LC 1), 14=2322(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-825/26, 4-6=-328/2335, 6-7=-832/7692, 7-8=-1507/228, 8-9=-1330/210, 9-10=-5944/690, 10-11=-6439/737, 11-12=-8867/890, 12-13=-4467/447, 13-14=-5000/478  
 BOT CHORD 2-26=-13/742, 25-26=-14/714, 24-25=-687/43, 22-24=-4193/445, 20-22=-945/91, 19-20=-503/4265, 18-19=-503/4265, 17-18=-1044/9747, 16-17=-853/8865, 14-16=-410/4597  
 WEBS 3-26=0/349, 3-25=-1066/87, 7-22=-7481/879, 7-20=-317/3082, 9-20=-3495/412, 9-18=-169/2001, 10-18=-194/2028, 11-18=-4493/485, 11-17=-924/210, 12-17=0/682, 12-16=-4590/471, 13-16=-72/1417, 4-25=-176/735, 4-24=-1907/369, 6-24=-87/2117, 6-22=-4095/532

- 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=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) interior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
  - Provide adequate drainage to prevent water ponding.
  - All plates are MT20 plates unless otherwise indicated.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - WARNING:** Required bearing size at joint(s) 22 greater than input bearing size.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 25 except (jt=lb) 22=587, 14=210.
  - 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.
- Our graphic representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



January 4,2021

|         |       |                     |     |     |                          |           |
|---------|-------|---------------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type          | Qty | Ply | Summit/25 Woodside/MO    | I44187958 |
| 2745269 | A1    | Roof Special Girder | 1   | 1   | Job Reference (optional) |           |

- NOTES-**
- 11) Use Simpson Strong-Tie LUS24 (4-10d Girder, 2-10d Truss, Single Ply Girder) or equivalent spaced at 16-0-0 oc max. starting at 6-0-12 from the left end to 37-11-4 to connect truss(es) to back face of bottom chord.
  - 12) Fill all nail holes where hanger is in contact with lumber.
  - 13) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidelines.
  - 14) 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 + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15

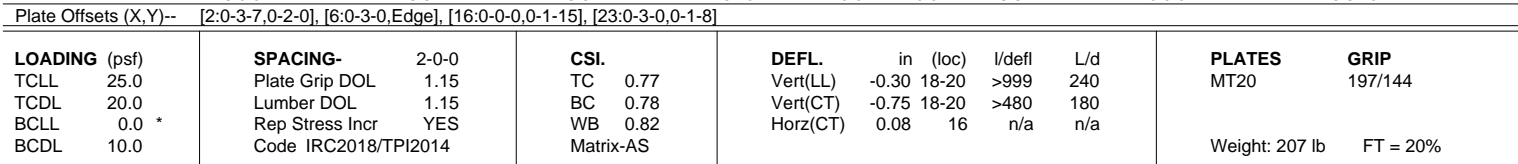
Uniform Loads (plf)

Vert: 1-3=-90, 3-7=-90, 7-8=-90, 8-10=-90, 10-11=-90, 11-13=-90, 13-15=-90, 27-30=-20

Concentrated Loads (lb)

Vert: 5=-60(B) 8=-90(B) 10=-90(B) 13=-0(B) 23=-27(B) 26=-207(B) 20=-111(B) 19=-111(B) 18=-111(B) 9=-90(B) 16=-126(B) 21=-259(B) 33=-60(B) 34=-60(B) 35=-60(B) 36=-60(B) 37=-60(B) 38=-107(B) 40=-90(B) 41=-90(B) 43=-45(B) 44=-57(B) 45=-57(B) 46=-57(B) 47=-135(B) 48=-215(B) 49=-27(B) 50=-27(B) 51=-27(B) 52=-27(B) 53=-27(B) 54=-214(B) 55=-111(B) 56=-111(B) 57=-214(B) 58=-266(B) 59=-61(B) 60=-41(B) 61=-41(B) 62=-41(B)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.240 s Mar 9 2020 MiTek Industries, Inc. Thu Dec 31 09:30:00 2020 Page 1  
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 -0-10-8 6-0-0 10-4-5 16-9-7 20-1-12 26-0-0 28-0-0 32-0-0 34-8-6 39-8-6 44-8-6 50-0-0 50-10-8  
 0-10-8 6-0-0 4-4-5 6-5-2 3-4-5 5-10-4 2-0-0 4-0-0 2-8-6 5-0-0 5-0-0 5-3-10 0-10-8  
 Scale = 1:91.8



**LUMBER-**  
**TOP CHORD** 2x6 SPF No.2 \*Except\*  
 1-4,4-6,14-17: 2x4 SPF No.2, 6-9: 2x4 SPF 1650F 1.5E  
**BOT CHORD** 2x4 SPF 1650F 1.5E \*Except\*  
 22-24: 2x4 SPF No.2  
**WEBS** 2x4 SPF No.2  
**OTHERS** 2x4 SPF No.2  
**SLIDER** Left 2x4 SPF No.2 2-6-0. Right 2x4 SPF No.2 2-6-0

|                  |   |
|------------------|---|
| <b>BRACING-</b>  |   |
| <b>TOP CHORD</b> | Structural wood sheathing directly applied, except<br>2-0-0 oc purlins (3-8-3 max.): 4-9, 10-11, 12-14. |
| <b>BOT CHORD</b> | Rigid ceiling directly applied.   |
| <b>WEBS</b>      | 1 Row at midpt 9-23   |

**REACTIONS.** All bearings 0-3-8 except (jt=length) 23=0-5-3 (input: 0-3-8).  
 (lb) - Max Horz 2=33(LC 12)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 26, 16  
 Max Grav All reactions 250 lb or less at joint(s) except 2=592(LC 1), 26=498(LC 25),  
 16=1447(LC 1), 23=3327(LC 1)

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

**TOP CHORD** 2-4=-525/133, 4-5=-322/129, 5-7=-77/39, 7-8=-174/2880, 8-9=-174/2880,  
9-10=-1107/149, 10-11=-975/149, 11-12=-3579/302, 12-13=-3387/268, 13-14=-2293/200,  
14-16=-2576/190

**BOT CHORD** 2-27=-65/477, 26-27=-65/469, 25-26=-102/338, 23-25=-1521/123, 21-23=-362/505,  
20-21=-106/1950, 18-20=-264/3502, 16-18=-114/2327

**WEBS** 4-26=-427/57, 9-23=-3675/320, 9-21=0/1026, 11-21=-1304/103, 11-20=-120/2274,  
12-20=-1605/177, 13-18=-1336/171, 14-18=0/701, 8-23=-441/78, 5-26=-113/470,  
5-25=-971/161, 7-25=-42/1158, 7-23=-1867/174

**NOTES-**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCFL=6.0psf; BCFL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) interior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 6-0-0, Exterior(2R) 6-0-0 to 9-0-0, Interior(1) 9-0-0 to 28-0-0, Exterior(2R) 28-0-0 to 31-0-0, Interior(1) 31-0-0 to 32-0-0, Exterior(2E) 32-0-0 to 34-8-6, Interior(1) 34-8-6 to 44-8-6, Exterior(2R) 44-8-6 to 47-8-6, Interior(1) 47-8-6 to 50-10-8 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
- 3) Provide adequate drainage to prevent water ponding.
- 4) All plates are 3x6 MT20 unless otherwise indicated.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 7) WARNING: Required bearing size at joint(s) 23 greater than input bearing size.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 26, 16.
- 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R502.10.2 and referenced standard ANSI/TPI 1.

Continued on page 2



January 4, 2021



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITER REFERENCE PAGE MH-747.5 (REV. 3/19/2020) 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 Code**

**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/25 Woodside/MO    | I44187959 |
| 2745269 | A2    | Roof Special | 1   | 1   | Job Reference (optional) |           |

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

16023 Swingley Ridge Rd  
Chesterfield, MO 63017



|         |       |              |     |     |                       |           |
|---------|-------|--------------|-----|-----|-----------------------|-----------|
| Job     | Truss | Truss Type   | Qty | Ply | Summit/25 Woodside/MO | 144187961 |
| 2745269 | A4    | Roof Special | 1   | 1   |                       |           |

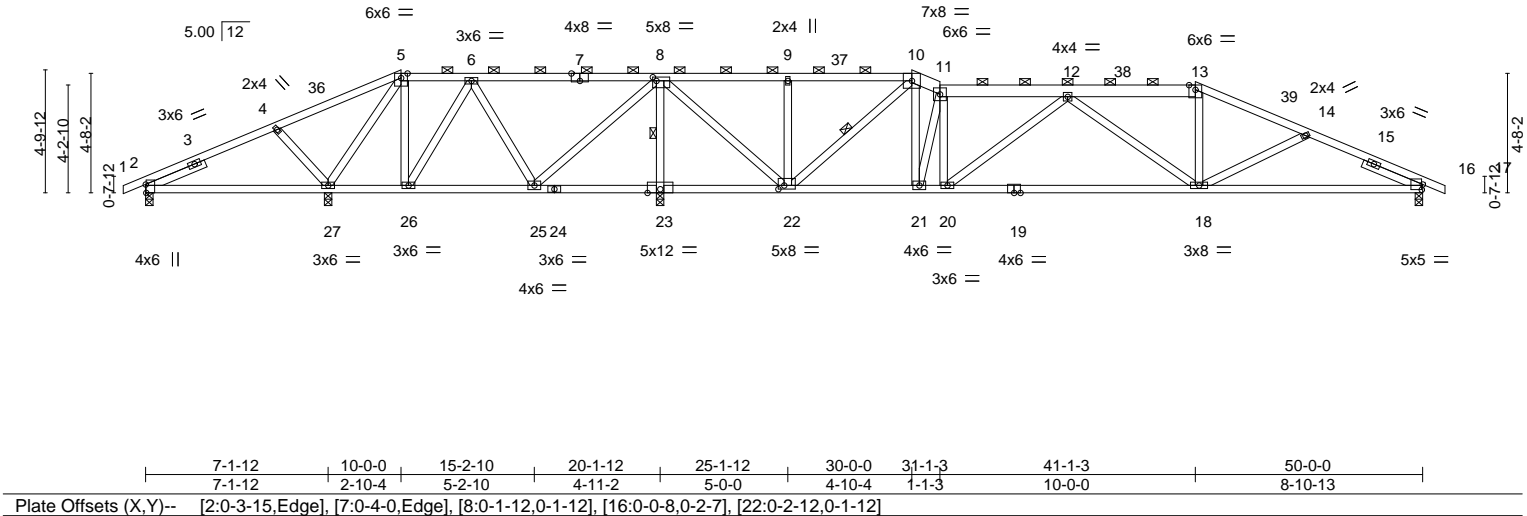
Builders FirstSource (Valley Center),
Valley Center, KS - 67147,

8.240 s Mar 9 2020
MiTek Industries, Inc.
Thu Dec 31 09:30:03 2020
Page 1

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-0-10-8    5-1-12    10-0-0    12-9-1    17-8-3    20-1-12    25-1-12    30-0-0    31-1-3    36-1-3    41-1-3    45-4-14    50-0-0    50-10-8  
0-10-8    5-1-12    4-10-4    2-9-1    4-11-2    2-5-9    5-0-0    4-10-4    1-1-3    5-0-0    5-0-0    4-3-10    4-7-2    0-10-8

Scale = 1:90.2



| LOADING (psf) | SPACING-             | 2-0-0 | CSI.      | DEFL.    | in (loc)    | l/defl | L/d | PLATES         | GRIP     |
|---------------|----------------------|-------|-----------|----------|-------------|--------|-----|----------------|----------|
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.86   | Vert(LL) | -0.21 18-20 | >999   | 240 | MT20           | 197/144  |
| TCDL 20.0     | Lumber DOL           | 1.15  | BC 0.84   | Vert(CT) | -0.52 18-20 | >691   | 180 |                |          |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.59   | Horz(CT) | 0.05 16     | n/a    | n/a |                |          |
| BCDL 10.0     | Code IRC2018/TPI2014 |       | Matrix-AS |          |             |        |     | Weight: 223 lb | FT = 20% |

|  |   |
|--|---|
| <b>LUMBER-</b>   | <b>BRACING-</b>   |
| TOP CHORD 2x4 SPF No.2 *Except*<br>10-11,11-13: 2x6 SPF No.2 | TOP CHORD Structural wood sheathing directly applied, except<br>2-0-0 oc purlins (5-0-6 max.): 5-10, 11-13. |
| BOT CHORD 2x4 SPF No.2                                       | BOT CHORD Rigid ceiling directly applied.   |
| WEBS 2x4 SPF No.2  | WEBS 1 Row at midpt 8-23, 10-22   |
| SLIDER Left 2x4 SPF No.2 2-6-0, Right 2x4 SPF No.2 2-6-0     |   |

**REACTIONS.** All bearings 0-3-8.  
 (lb) - Max Horz 2=42(LC 16)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 27, 16, 23  
 Max Grav All reactions 250 lb or less at joint(s) except 2=402(LC 25), 27=809(LC 25), 16=1460(LC 26), 23=3167(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-4=-502/88, 4-5=-21/300, 6-8=-4/722, 10-11=-1446/178, 11-12=-1711/164, 12-13=-2052/190, 13-14=-2271/185, 14-16=-2526/217  
 BOT CHORD 25-26=-298/92, 23-25=-1685/177, 22-23=-1685/177, 21-22=-33/1316, 20-21=-39/1684, 18-20=-119/2237, 16-18=-141/2278  
 WEBS 4-27=-523/121, 5-27=-338/49, 10-21=-69/1280, 11-21=-1367/29, 11-20=0/687, 12-20=-675/106, 13-18=0/460, 6-26=0/259, 6-25=-885/111, 8-25=-46/1309, 8-23=-3057/242, 8-22=-155/2387, 9-22=-395/85, 10-22=-1623/127

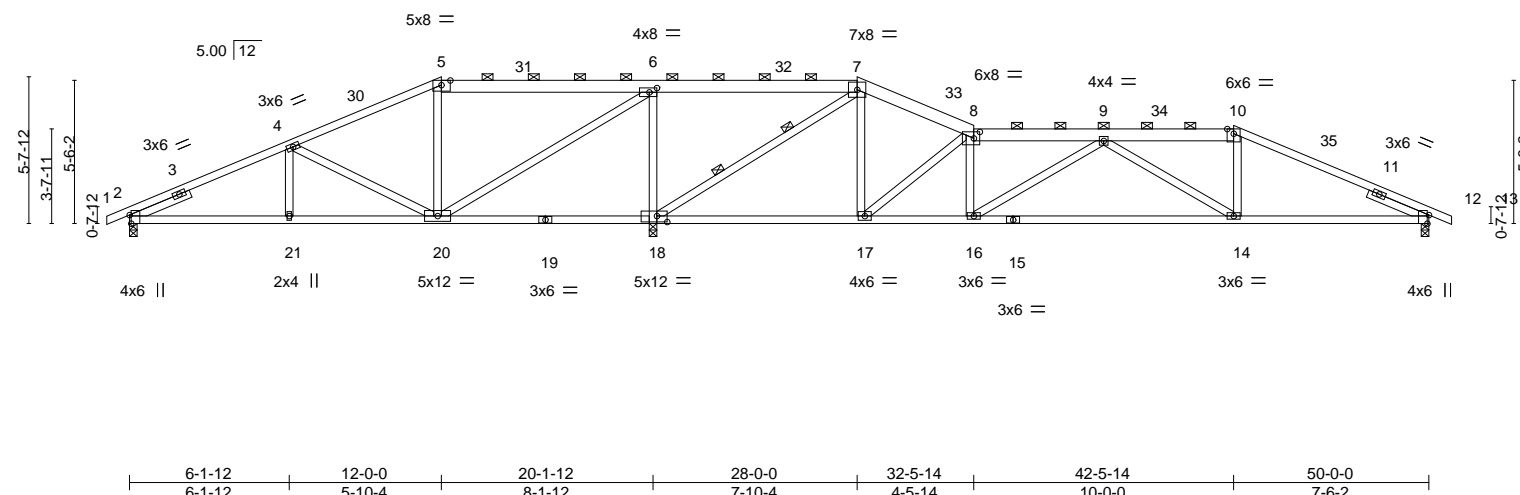
- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) interior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 10-0-0, Exterior(2R) 10-0-0 to 12-9-1, Interior(1) 12-9-1 to 30-0-0, Exterior(2E) 30-0-0 to 31-1-3, Interior(1) 31-1-3 to 41-1-3, Exterior(2R) 41-1-3 to 44-1-3, Interior(1) 44-1-3 to 50-10-8 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
  - Provide adequate drainage to prevent water ponding.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Bearing at joint(s) 23 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, 27, 16, 23.
  - 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.



January 4,2021



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 ID:ggMHuYjvKTSNSqRK\_pqYByzXhju-sNOWZyXk8MuWegCDwpjkWDJIAQRoYPcQ?xp7oly3Ua0  
 -0-10-8 6-1-12 12-0-0 20-0-0 20-1-12 28-0-0 32-5-14 37-5-14 42-5-14 50-0-0 50-10-8  
 0-10-8 6-1-12 5-10-4 8-0-0 0-1-12 7-10-4 4-5-14 5-0-0 5-0-0 7-6-2 0-10-8  
 Scale = 1:88.7



|  |       |                       |      |             |      |                                  |                      |                    |          |
|--|-------|-----------------------|------|-------------|------|----------------------------------|----------------------|--------------------|----------|
| Plate Offsets (X,Y)-- [2:0-3-15,Edge], [5:0-4-2,Edge], [6:0-3-8,0-2-0], [8:0-2-12,0-3-0], [12:0-3-15,Edge], [18:0-4-12,0-2-12] |       |                       |      |             |      |                                  |                      |                    |          |
| <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   | 25.0  | Plate Grip DOL        | 1.15 | TC          | 0.87 | Vert(LL)                         | -0.28 14-16 >999 240 | MT20               | 197/144  |
| TCDL   | 20.0  | Lumber DOL            | 1.15 | BC          | 0.89 | Vert(CT)                         | -0.65 14-16 >550 180 |                    |          |
| BCLL   | 0.0 * | Rep Stress Incr       | YES  | WB          | 0.88 | Horz(CT)                         | 0.05 12 n/a n/a      |                    |          |
| BCDL   | 10.0  | Code IRC2018/TPI2014  |      | Matrix-AS   |      |                                  |                      | Weight: 218 lb     | FT = 20% |

|                 |   |
|-----------------|---|
| <b>LUMBER-</b>  |   |
| TOP CHORD       | 2x6 SPF No.2 *Except*   |
|                 | 1-5,10-13; 2x4 SPF No.2   |
| BOT CHORD       | 2x4 SPF No.2  |
| WEBS            | 2x4 SPF No.2  |
| SLIDER          | Left 2x4 SPF No.2 2-6-0, Right 2x4 SPF No.2 2-6-0   |
| <b>BRACING-</b> |   |
| TOP CHORD       | Structural wood sheathing directly applied, except<br>2-0-0 oc purlins (5-0-3 max.): 5-7, 8-10. |
| BOT CHORD       | Rigid ceiling directly applied.   |
| WEBS            | 2 Rows at 1/3 pts                  7-18   |

**REACTIONS.** (size) 2=0-3-8, 12=0-3-8, 18=0-3-8  
 Max Horiz 2=50(LC 12)  
 Max Uplift 2=-42(LC 12), 12=-33(LC 13)  
 Max Grav 2=830(LC 25), 12=1390(LC 26), 18=3616(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
**TOP CHORD** 2-4=970/106, 4-5=392/399, 5-6=288/320, 6-7=0/1878, 7-8=611/150, 8-9=1872/210, 9-10=2063/217, 10-12=2240/192  
**BOT CHORD** 2-21=88/971, 20-21=88/971, 18-20=1876/153, 17-18=0/469, 16-17=100/1891, 14-16=164/2377, 12-14=105/2073  
**WEBS** 4-20=833/101, 5-20=597/106, 6-20=115/2112, 6-18=1942/217, 7-18=2720/167, 7-17=24/1159, 8-17=1748/138, 8-16=0/512, 9-16=632/96, 9-14=380/88, 10-14=0/445

**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=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) interior zone and C-C Exterior(2R) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 12-0-0, Exterior(2R) 12-0-0 to 15-0-0, Interior(1) 15-0-0 to 28-0-0, Exterior(2R) 28-0-0 to 31-0-0, Interior(1) 31-0-0 to 42-5-14, Exterior(2R) 42-5-14 to 45-5-14, Interior(1) 45-5-14 to 50-10-8 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
- 3) Provide adequate drainage to prevent water ponding.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 6) Bearing at joint(s) 18 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) 2, 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.
- 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.
- 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



January 4, 2021



**WARNING – Velly design parameters are listed below and included with the key reference to AISC M14-15 16f, 17f, 18f, 19f, 20f, 21f, 22f, 23f, 24f, 25f, 26f, 27f, 28f, 29f, 30f, 31f, 32f, 33f, 34f, 35f, 36f, 37f, 38f, 39f, 40f, 41f, 42f, 43f, 44f, 45f, 46f, 47f, 48f, 49f, 50f, 51f, 52f, 53f, 54f, 55f, 56f, 57f, 58f, 59f, 60f, 61f, 62f, 63f, 64f, 65f, 66f, 67f, 68f, 69f, 70f, 71f, 72f, 73f, 74f, 75f, 76f, 77f, 78f, 79f, 80f, 81f, 82f, 83f, 84f, 85f, 86f, 87f, 88f, 89f, 90f, 91f, 92f, 93f, 94f, 95f, 96f, 97f, 98f, 99f, 100f, 101f, 102f, 103f, 104f, 105f, 106f, 107f, 108f, 109f, 110f, 111f, 112f, 113f, 114f, 115f, 116f, 117f, 118f, 119f, 120f, 121f, 122f, 123f, 124f, 125f, 126f, 127f, 128f, 129f, 130f, 131f, 132f, 133f, 134f, 135f, 136f, 137f, 138f, 139f, 140f, 141f, 142f, 143f, 144f, 145f, 146f, 147f, 148f, 149f, 150f, 151f, 152f, 153f, 154f, 155f, 156f, 157f, 158f, 159f, 160f, 161f, 162f, 163f, 164f, 165f, 166f, 167f, 168f, 169f, 170f, 171f, 172f, 173f, 174f, 175f, 176f, 177f, 178f, 179f, 180f, 181f, 182f, 183f, 184f, 185f, 186f, 187f, 188f, 189f, 190f, 191f, 192f, 193f, 194f, 195f, 196f, 197f, 198f, 199f, 200f, 201f, 202f, 203f, 204f, 205f, 206f, 207f, 208f, 209f, 210f, 211f, 212f, 213f, 214f, 215f, 216f, 217f, 218f, 219f, 220f, 221f, 222f, 223f, 224f, 225f, 226f, 227f, 228f, 229f, 230f, 231f, 232f, 233f, 234f, 235f, 236f, 237f, 238f, 239f, 240f, 241f, 242f, 243f, 244f, 245f, 246f, 247f, 248f, 249f, 250f, 251f, 252f, 253f, 254f, 255f, 256f, 257f, 258f, 259f, 260f, 261f, 262f, 263f, 264f, 265f, 266f, 267f, 268f, 269f, 270f, 271f, 272f, 273f, 274f, 275f, 276f, 277f, 278f, 279f, 280f, 281f, 282f, 283f, 284f, 285f, 286f, 287f, 288f, 289f, 290f, 291f, 292f, 293f, 294f, 295f, 296f, 297f, 298f, 299f, 300f, 301f, 302f, 303f, 304f, 305f, 306f, 307f, 308f, 309f, 310f, 311f, 312f, 313f, 314f, 315f, 316f, 317f, 318f, 319f, 320f, 321f, 322f, 323f, 324f, 325f, 326f, 327f, 328f, 329f, 330f, 331f, 332f, 333f, 334f, 335f, 336f, 337f, 338f, 339f, 340f, 341f, 342f, 343f, 344f, 345f, 346f, 347f, 348f, 349f, 350f, 351f, 352f, 353f, 354f, 355f, 356f, 357f, 358f, 359f, 360f, 361f, 362f, 363f, 364f, 365f, 366f, 367f, 368f, 369f, 370f, 371f, 372f, 373f, 374f, 375f, 376f, 377f, 378f, 379f, 380f, 381f, 382f, 383f, 384f, 385f, 386f, 387f, 388f, 389f, 390f, 391f, 392f, 393f, 394f, 395f, 396f, 397f, 398f, 399f, 400f, 401f, 402f, 403f, 404f, 405f, 406f, 407f, 408f, 409f, 410f, 411f, 412f, 413f, 414f, 415f, 416f, 417f, 418f, 419f, 420f, 421f, 422f, 423f, 424f, 425f, 426f, 427f, 428f, 429f, 430f, 431f, 432f, 433f, 434f, 435f, 436f, 437f, 438f, 439f, 440f, 441f, 442f, 443f, 444f, 445f, 446f, 447f, 448f, 449f, 450f, 451f, 452f, 453f, 454f, 455f, 456f, 457f, 458f, 459f, 460f, 461f, 462f, 463f, 464f, 465f, 466f, 467f, 468f, 469f, 470f, 471f, 472f, 473f, 474f, 475f, 476f, 477f, 478f, 479f, 480f, 481f, 482f, 483f, 484f, 485f, 486f, 487f, 488f, 489f, 490f, 491f, 492f, 493f, 494f, 495f, 496f, 497f, 498f, 499f, 500f, 501f, 502f, 503f, 504f, 505f, 506f, 507f, 508f, 509f, 510f, 511f, 512f, 513f, 514f, 515f, 516f, 517f, 518f, 519f, 520f, 521f, 522f, 523f, 524f, 525f, 526f, 527f, 528f, 529f, 530f, 531f, 532f, 533f, 534f, 535f, 536f, 537f, 538f, 539f, 540f, 541f, 542f, 543f, 544f, 545f, 546f, 547f, 548f, 549f, 550f, 551f, 552f, 553f, 554f, 555f, 556f, 557f, 558f, 559f, 560f, 561f, 562f, 563f, 564f, 565f, 566f, 567f, 568f, 569f, 570f, 571f, 572f, 573f, 574f, 575f, 576f, 577f, 578f, 579f, 580f, 581f, 582f, 583f, 584f, 585f, 586f, 587f, 588f, 589f, 590f, 591f, 592f, 593f, 594f, 595f, 596f, 597f, 598f, 599f, 600f, 601f, 602f, 603f, 604f, 605f, 606f, 607f, 608f, 609f, 610f, 611f, 612f, 613f, 614f, 615f, 616f, 617f, 618f, 619f, 620f, 621f, 622f, 623f, 624f, 625f, 626f, 627f, 628f, 629f, 630f, 631f, 632f, 633f, 634f, 635f, 636f, 637f, 638f, 639f, 640f, 641f, 642f, 643f, 644f, 645f, 646f, 647f, 648f, 649f, 650f, 651f, 652f, 653f, 654f, 655f, 656f, 657f, 658f, 659f, 660f, 661f, 662f, 663f, 664f, 665f, 666f, 667f, 668f, 669f, 670f, 671f, 672f, 673f, 674f, 675f, 676f, 677f, 678f, 679f, 680f, 681f, 682f, 683f, 684f, 685f, 686f, 687f, 688f, 689f, 690f, 691f, 692f, 693f, 694f, 695f, 696f, 697f, 698f, 699f, 700f, 701f, 702f, 703f, 704f, 705f, 706f, 707f,**



16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|         |       |              |     |     |                          |           |
|---------|-------|--------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type   | Qty | Ply | Summit/25 Woodside/MO    | 144187963 |
| 2745269 | A6    | Roof Special | 1   | 1   | Job Reference (optional) |           |

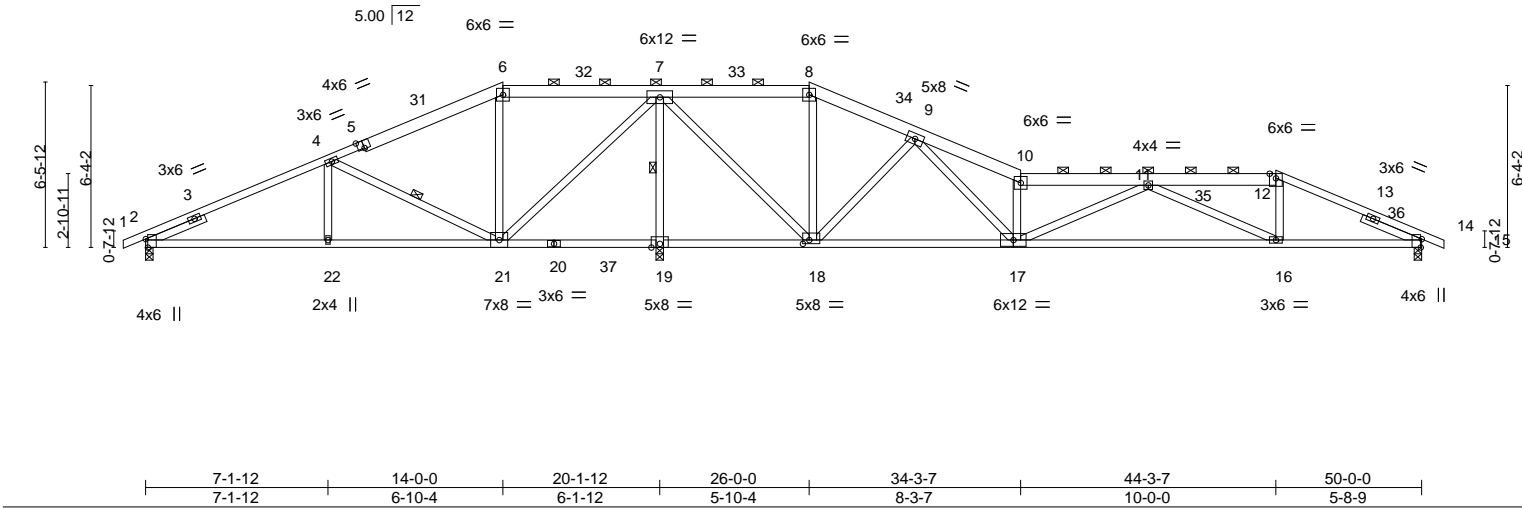
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Valley Center, KS - 67147,

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-0-10-8    7-1-12    14-0-0    20-0-0    20-1-12    26-0-0    30-1-12    34-3-7    39-3-7    44-3-7    50-0-0    50-10-8  
0-10-8    7-1-12    6-10-4    6-0-0    0-1-12    5-10-4    4-1-12    4-1-12    5-0-0    5-0-0    5-8-9    0-10-8

Scale = 1:90.3



| LOADING (psf) | SPACING-             | 2-0-0 | CSI.      | DEFL.    | in (loc)    | l/defl | L/d | PLATES         | GRIP     |
|---------------|----------------------|-------|-----------|----------|-------------|--------|-----|----------------|----------|
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.70   | Vert(LL) | -0.32 16-17 | >999   | 240 | MT20           | 197/144  |
| TCDL 20.0     | Lumber DOL           | 1.15  | BC 0.83   | Vert(CT) | -0.71 16-17 | >506   | 180 |                |          |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.86   | Horz(CT) | 0.03 2      | n/a    | n/a |                |          |
| BCDL 10.0     | Code IRC2018/TPI2014 |       | Matrix-AS |          |             |        |     | Weight: 229 lb | FT = 20% |

- LUMBER-**  
TOP CHORD 2x6 SPF No.2 \*Except\*  
12-15,1-5: 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2 \*Except\*  
2-20,14-17: 2x4 SPF 1650F 1.5E  
WEBS 2x4 SPF No.2  
SLIDER Left 2x4 SPF No.2 2-6-0, Right 2x4 SPF No.2 2-6-0
- BRACING-**  
TOP CHORD Structural wood sheathing directly applied, except  
2-0-0 oc purlins (4-7-13 max.): 6-8, 10-12.  
BOT CHORD Rigid ceiling directly applied.  
WEBS 1 Row at midpt 4-21, 7-19

- REACTIONS.** (size) 2=0-3-8, 14=0-3-8, 19=0-3-8  
Max Horz 2=-57(LC 13)  
Max Uplift 2=-57(LC 12), 14=-32(LC 13)  
Max Grav 2=788(LC 25), 14=1312(LC 28), 19=3951(LC 2)

- FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-4=-880/377, 4-6=-28/973, 6-7=0/850, 7-8=0/422, 8-9=0/510, 9-10=-2357/239,  
10-11=-2266/204, 11-12=-2043/189, 12-14=-2293/170  
BOT CHORD 2-22=-286/812, 21-22=-286/812, 19-21=-2151/172, 18-19=-2151/172, 17-18=-31/635,  
16-17=-203/2703, 14-16=-98/2069  
WEBS 4-22=0/304, 4-21=-1104/108, 6-21=-775/112, 7-21=-110/2053, 7-19=-3705/287,  
7-18=-132/2464, 8-18=-523/70, 9-18=-1428/157, 9-17=-111/2317, 10-17=-1244/160,  
11-17=-546/109, 11-16=-799/129, 12-16=0/610

- 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=6.0psf; h=15ft; Cat. II; Exp C; Enclosed;  
MWFRS (envelope) interior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 14-0-0, Exterior(2R) 14-0-0 to 17-0-0,  
Interior(1) 17-0-0 to 26-0-0, Exterior(2R) 26-0-0 to 29-0-0, Interior(1) 29-0-0 to 44-3-7, Exterior(2R) 44-3-7 to 47-3-7, Interior(1) 47-3-7  
to 50-10-8 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  
3) Provide adequate drainage to prevent water ponding.  
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.  
5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide  
will fit between the bottom chord and any other members, with BCDL = 10.0psf.  
6) Bearing at joint(s) 19 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) 2, 14.  
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.  
10) 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/25 Woodside/MO    | 144187964 |
| 2745269 | A7    | ROOF SPECIAL | 1   | 1   | Job Reference (optional) |           |

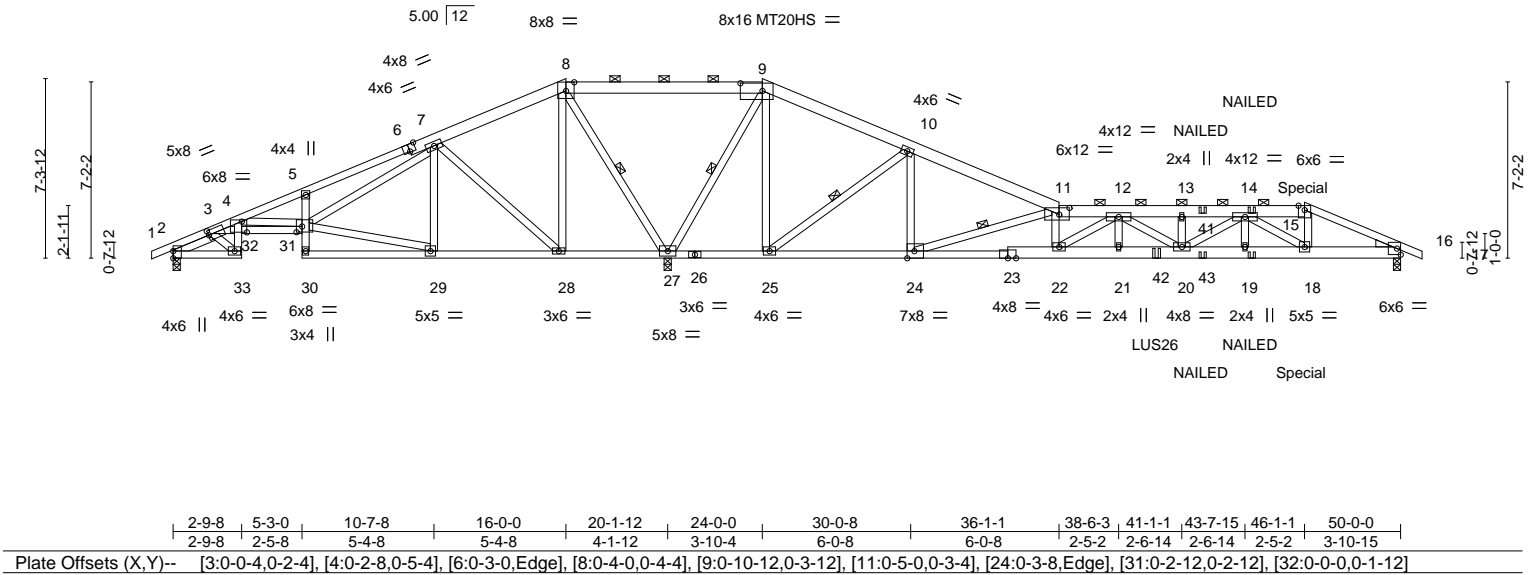
Builders FirstSource (Valley Center), Valley Center, KS - 67147,

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0-10-8 2-9-8 5-3-0 10-7-8 16-0-0 24-0-0 30-0-8 36-1-1 38-6-3 41-1-1 43-7-15 46-1-1 50-0-0 50-10-8  
0-10-8 2-9-8 2-5-8 5-4-8 5-4-8 8-0-0 6-0-8 6-0-8 2-5-2 2-6-14 2-6-14 2-5-2 3-10-15 0-10-8

Scale = 1:93.9



| LOADING (psf) | SPACING-             | 2-0-0 | CSI.      | DEFL.    | in (loc) | l/defl | L/d  | PLATES         | GRIP     |
|---------------|----------------------|-------|-----------|----------|----------|--------|------|----------------|----------|
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.81   | Vert(LL) | -0.33    | 21-22  | >999 | MT20           | 197/144  |
| TCDL 20.0     | Lumber DOL           | 1.15  | BC 0.75   | Vert(CT) | -0.59    | 21-22  | >606 | MT20HS         | 148/108  |
| BCLL 0.0 *    | Rep Stress Incr      | NO    | WB 0.93   | Horz(CT) | -0.15    | 27     | n/a  |                |          |
| BCDL 10.0     | Code IRC2018/TPI2014 |       | Matrix-MS |          |          |        |      |                |          |
|               |                      |       |           |          |          |        |      | Weight: 263 lb | FT = 20% |

|  |   |
|--|---|
| <b>LUMBER-</b>                                       | <b>BRACING-</b>   |
| TOP CHORD 2x6 SPF No.2 *Except*                      | TOP CHORD Structural wood sheathing directly applied or 2-10-1 oc purlins, except |
| 8-9: 2x6 SPF 2100F 1.8E, 15-17: 2x4 SPF No.2         | 2-0-0 oc purlins (2-10-15 max.): 8-9, 11-15.                                      |
| 1-6: 2x4 SPF 1650F 1.5E                              | BOT CHORD Rigid ceiling directly applied or 3-1-13 oc bracing.                    |
| BOT CHORD 2x4 SPF No.2 *Except*                      | WEBS 1 Row at midpt 8-27, 9-27, 10-25, 11-24                                      |
| 16-23: 2x6 SPF 2100F 1.8E, 23-26: 2x4 SPF 1650F 1.5E |   |
| WEBS 2x4 SPF No.2                                    |   |
| WEDGE Right: 2x4 SP No.3                             |   |
| SLIDER Left 2x4 SPF No.2 1-9-0                       |   |

|                   |  |   |
|-------------------|--|---|
| <b>REACTIONS.</b> | (size) 2=0-3-8, 27=0-3-8 (req. 0-8-3), 16=0-3-8      | <b>SUPPLEMENTARY BEARING PLATES, SPECIAL ANCHORAGE, OR OTHER MEANS TO ALLOW FOR THE MINIMUM REQUIRED SUPPORT WIDTH (SUCH AS COLUMN CAPS, BEARING BLOCKS, ETC.) ARE THE RESPONSIBILITY OF THE TRUSS MANUFACTURER OR THE BUILDING DESIGNER.</b> |
|                   | Max Horz 2=64(LC 9)                                  |   |
|                   | Max Uplift 2=491(LC 22), 27=74(LC 5), 16=187(LC 9)   |   |
|                   | Max Grav 2=264(LC 18), 27=5204(LC 1), 16=1810(LC 22) |   |

|                |  |
|----------------|--|
| <b>FORCES.</b> | (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.   |
| TOP CHORD      | 2-3=145/409, 3-4=656/2819, 4-5=394/2492, 5-7=337/2324, 7-8=104/2678, 8-9=63/3821, 9-10=79/2506, 10-11=109/1009, 11-12=3405/430, 12-13=5371/683, 13-14=5371/683, 14-15=2976/366, 15-16=3364/392   |
| BOT CHORD      | 2-33=948/294, 32-33=950/330, 4-32=527/249, 31-32=2935/760, 5-31=396/73, 28-29=1862/266, 27-28=2421/241, 25-27=2260/165, 24-25=875/134, 22-24=390/3483, 21-22=597/4950, 20-21=597/4950, 19-20=528/4681, 18-19=528/4681, 16-18=325/3052  |
| WEBS           | 4-31=478/635, 29-31=1677/221, 7-31=338/661, 7-29=0/444, 7-28=1037/62, 8-28=0/759, 8-27=2703/53, 9-27=3185/128, 9-25=53/1301, 10-25=2056/193, 10-24=52/1272, 11-24=3904/417, 11-22=64/1020, 15-18=73/1046, 3-32=2250/571, 3-33=365/1146, 12-22=1934/274, 12-21=78/475, 12-20=129/853, 13-20=274/59, 14-20=133/824, 14-18=2047/250 |

|   |  |
|---|--|
| <b>NOTES-</b>   |  |
| 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=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) interior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60 |  |
| 3) Provide adequate drainage to prevent water ponding.  |  |
| 4) All plates are MT20 plates unless otherwise indicated.   |  |
| 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.  |  |
| 6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.   |  |
| 7) WARNING: Required bearing size at joint(s) 27 greater than input bearing size.   |  |

Continued on page 2



January 4, 2021

**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/TPI 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/25 Woodside/MO |
| 2745269                  | A7    | ROOF SPECIAL | 1   | 1   | I44187964             |
| Job Reference (optional) |       |              |     |     |                       |

- NOTES-**
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 27 except (jt=lb) 2=491, 16=187.
  - 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - 11) Use Simpson Strong-Tie LUS26 (4-10d Girder, 3-10d Truss, Single Ply Girder) or equivalent at 40-0-12 from the left end to connect truss(es) to front face of bottom chord, skewed 0.0 deg.to the left, sloping 0.0 deg. down.
  - 12) Fill all nail holes where hanger is in contact with lumber.
  - 13) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidelines.
  - 14) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 209 lb down and 121 lb up at 46-1-1 on top chord, and 187 lb down and 29 lb up at 45-11-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
  - 15) 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 + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
    - Uniform Loads (plf)
      - Vert: 1-8=-90, 8-9=-90, 9-11=-90, 11-15=-90, 15-17=-90, 33-34=-20, 31-32=-20, 30-38=-20
    - Concentrated Loads (lb)
      - Vert: 15=-91(F) 18=-187(F) 19=-48(F) 14=-76(F) 41=-76(F) 42=-653(F) 43=-48(F)

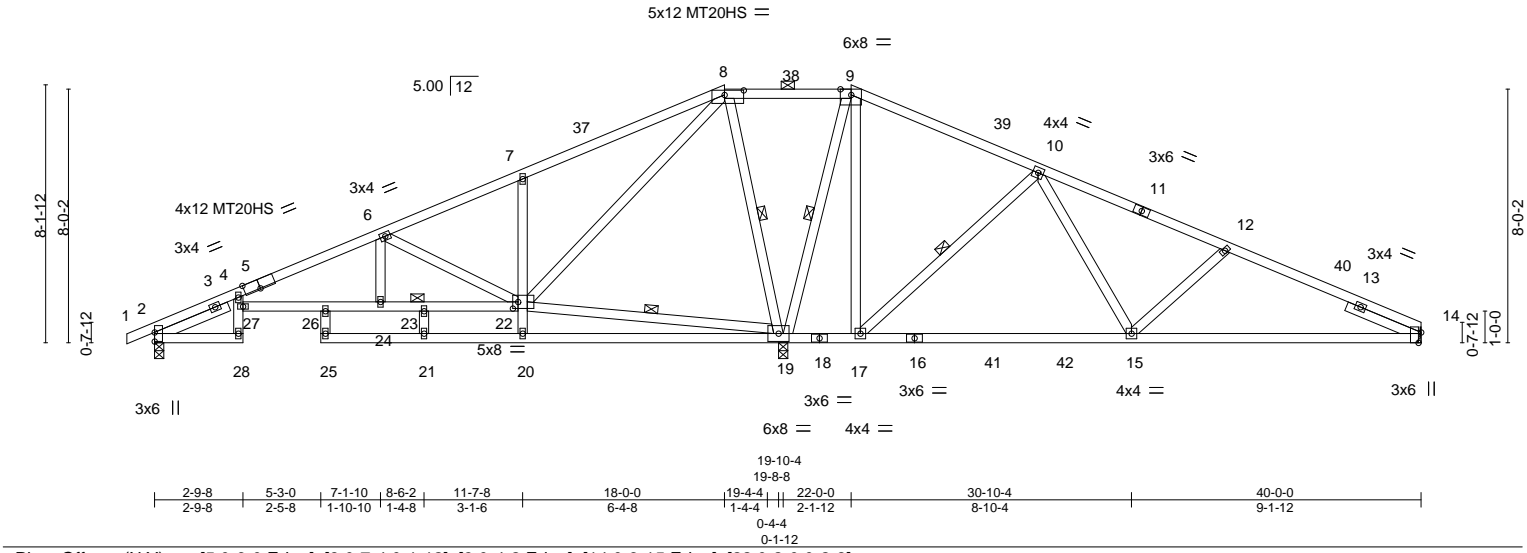
|         |       |            |     |     |                       |           |
|---------|-------|------------|-----|-----|-----------------------|-----------|
| Job     | Truss | Truss Type | Qty | Ply | Summit/25 Woodside/MO | 144187965 |
| 2745269 | A8    | Hip        | 1   | 1   |                       |           |

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Scale = 1:72.8



|                       |       |  |  |       |  |             |  |              |  |                     |  |                |  |             |  |
|-----------------------|-------|--|--|-------|--|-------------|--|--------------|--|---------------------|--|----------------|--|-------------|--|
| Plate Offsets (X,Y)-- |       | [5:0-6-0,Edge], [8:0-7-4,0-1-12], [9:0-4-2,Edge], [14:0-3-15,Edge], [22:0-2-0,0-2-8] |  |       |  |             |  |              |  |                     |  |                |  |             |  |
| <b>LOADING</b> (psf)  |       | <b>SPACING-</b>  |  | 2-0-0 |  | <b>CSI.</b> |  | <b>DEFL.</b> |  | in (loc) l/defl L/d |  | <b>PLATES</b>  |  | <b>GRIP</b> |  |
| TCLL                  | 25.0  | Plate Grip DOL   |  | 1.15  |  | TC 0.99     |  | Vert(LL)     |  | -0.28 28 >863 240   |  | MT20           |  | 197/144     |  |
| TCDL                  | 20.0  | Lumber DOL   |  | 1.15  |  | BC 0.66     |  | Vert(CT)     |  | -0.53 28 >446 180   |  | MT20HS         |  | 148/108     |  |
| BCLL                  | 0.0 * | Rep Stress Incr  |  | YES   |  | WB 0.61     |  | Horz(CT)     |  | 0.20 19 n/a n/a     |  |                |  |             |  |
| BCDL                  | 10.0  | Code IRC2018/TPI2014   |  |       |  | Matrix-AS   |  |              |  |                     |  | Weight: 190 lb |  | FT = 20%    |  |

|  |  |
|--|--|
| <b>LUMBER-</b>   | <b>BRACING-</b>  |
| TOP CHORD 2x4 SPF No.2                                   | TOP CHORD Structural wood sheathing directly applied, except |
| BOT CHORD 2x4 SPF No.2                                   | 2-0-0 oc purlins (10-0-0 max.): 8-9.                         |
| WEBS 2x4 SPF No.2  | BOT CHORD Rigid ceiling directly applied.                    |
| SLIDER Left 2x4 SPF No.2 2-6-0, Right 2x4 SPF No.2 2-6-0 | WEBS 1 Row at midpt 19-22, 10-17, 9-19, 8-19                 |
|  | JOINTS 1 Brace at Jt(s): 23                                  |

|                   |  |   |
|-------------------|--|---|
| <b>REACTIONS.</b> | (size) 2=0-3-8, 19=0-3-8 (req. 0-6-3), 14=Mechanical | <b>SUPPLEMENTARY BEARING PLATES, SPECIAL ANCHORAGE, OR OTHER MEANS TO ALLOW FOR THE MINIMUM REQUIRED SUPPORT WIDTH (SUCH AS COLUMN CAPS, BEARING BLOCKS, ETC.) ARE THE RESPONSIBILITY OF THE TRUSS MANUFACTURER OR THE BUILDING DESIGNER.</b> |
|                   | Max Horz 2=129(LC 12)                                |   |
|                   | Max Uplift 2=23(LC 13), 19=341(LC 12), 14=154(LC 13) |   |
|                   | Max Grav 2=435(LC 27), 19=3956(LC 2), 14=654(LC 26)  |   |

|                |   |
|----------------|---|
| <b>FORCES.</b> | (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  |
| TOP CHORD      | 2-4=-553/101, 6-7=-179/985, 7-8=-86/1016, 8-9=-210/2095, 9-10=-240/1756, 10-12=-475/934, 12-14=-831/702   |
| BOT CHORD      | 17-19=-1590/341, 15-17=-1068/311, 14-15=-579/757  |
| WEBS           | 20-22=0/263, 7-22=-488/174, 19-22=-1706/281, 9-17=-76/904, 10-17=-1082/205, 10-15=-5/862, 12-15=-614/166, 8-22=-178/1271, 6-22=-991/174, 6-24=0/278, 9-19=-1958/134, 8-19=-1700/289 |

- 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=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 18-0-0, Exterior(2E) 18-0-0 to 22-0-0, Exterior(2R) 22-0-0 to 26-2-15, Interior(1) 26-2-15 to 40-0-0 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
  - 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.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - WARNING:** Required bearing size at joint(s) 19 greater than input bearing size.
  - 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 except (jt=lb) 19=341, 14=154.
  - 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.



January 4, 2021



|         |       |            |     |     |                       |           |
|---------|-------|------------|-----|-----|-----------------------|-----------|
| Job     | Truss | Truss Type | Qty | Ply | Summit/25 Woodside/MO | 144187966 |
| 2745269 | A9    | Common     | 1   | 1   |                       |           |

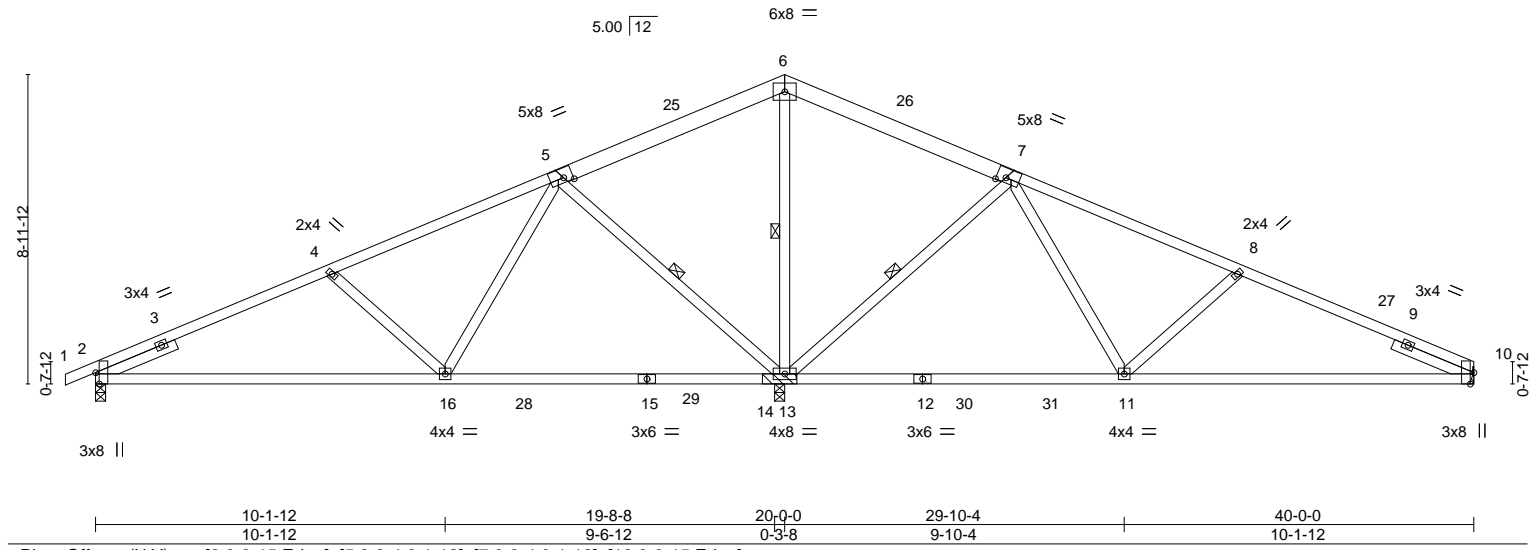
Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Thu Dec 31 09:30:13 2020 Page 1

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|        |        |        |        |         |         |        |
|--------|--------|--------|--------|---------|---------|--------|
| 0-10-8 | 6-10-5 | 13-5-3 | 20-0-0 | 26-6-13 | 33-1-11 | 40-0-0 |
| 0-10-8 | 6-10-5 | 6-6-13 | 6-6-13 | 6-6-13  | 6-6-13  | 6-10-5 |

Scale = 1:66.9



| LOADING (psf) |       | SPACING-             |      | CSI.      |      | DEFL.    |             | PLATES         |  | GRIP     |  |
|---------------|-------|----------------------|------|-----------|------|----------|-------------|----------------|--|----------|--|
| TCLL          | 25.0  | Plate Grip DOL       | 1.15 | TC        | 0.55 | in (loc) | l/defl      | MT20           |  | 197/144  |  |
| TCDL          | 20.0  | Lumber DOL           | 1.15 | BC        | 0.85 | Vert(LL) | -0.21 13-16 |                |  |          |  |
| BCLL          | 0.0 * | Rep Stress Incr      | YES  | WB        | 0.43 | Vert(CT) | -0.34 11-23 |                |  |          |  |
| BCDL          | 10.0  | Code IRC2018/TPI2014 |      | Matrix-AS |      | Horz(CT) | 0.03 2      |                |  |          |  |
|               |       |                      |      |           |      |          |             | Weight: 167 lb |  | FT = 20% |  |

**LUMBER-**  
TOP CHORD 2x6 SPF No.2 \*Except\*  
1-5,7-10: 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2  
SLIDER Left 2x4 SPF No.2 2-6-0, Right 2x4 SPF No.2 2-6-0

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied.  
BOT CHORD Rigid ceiling directly applied.  
WEBS 1 Row at midpt 6-13, 7-13, 5-13

**REACTIONS.** (size) 2=0-3-8, 13=(0-3-8 + bearing block) (req. 0-4-11), 10=Mechanical  
Max Horz 2=142(LC 12)  
Max Uplift 2=97(LC 12), 13=-159(LC 12), 10=-102(LC 13)  
Max Grav 2=933(LC 25), 13=2989(LC 2), 10=864(LC 28)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-4=-1201/156, 4-5=-848/103, 5-6=-17/873, 6-7=0/873, 7-8=-855/159, 8-10=-1223/210  
BOT CHORD 2-16=-205/1108, 13-16=-99/302, 11-13=-102/307, 10-11=-124/1120  
WEBS 6-13=-1133/99, 7-13=-1150/237, 7-11=-20/892, 8-11=-639/198, 5-13=-1148/239,  
5-16=-23/887, 4-16=-633/200

#### NOTES-

- 2x4 SPF No.2 bearing block 12" long at jt. 13 attached to front face with 2 rows of 10d (0.131"x3") nails spaced 3" o.c. 8 Total fasteners. Bearing is assumed to be SPF No.2.
- 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=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 20-0-0, Exterior(2R) 20-0-0 to 23-0-0, Interior(1) 23-0-0 to 40-0-0 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
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2 except (jt=lb) 13=159, 10=102.
- 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.



January 4, 2021

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|         |       |              |     |     |                       |           |
|---------|-------|--------------|-----|-----|-----------------------|-----------|
| Job     | Truss | Truss Type   | Qty | Ply | Summit/25 Woodside/MO | 144187967 |
| 2745269 | A10   | Roof Special | 5   | 1   |                       |           |

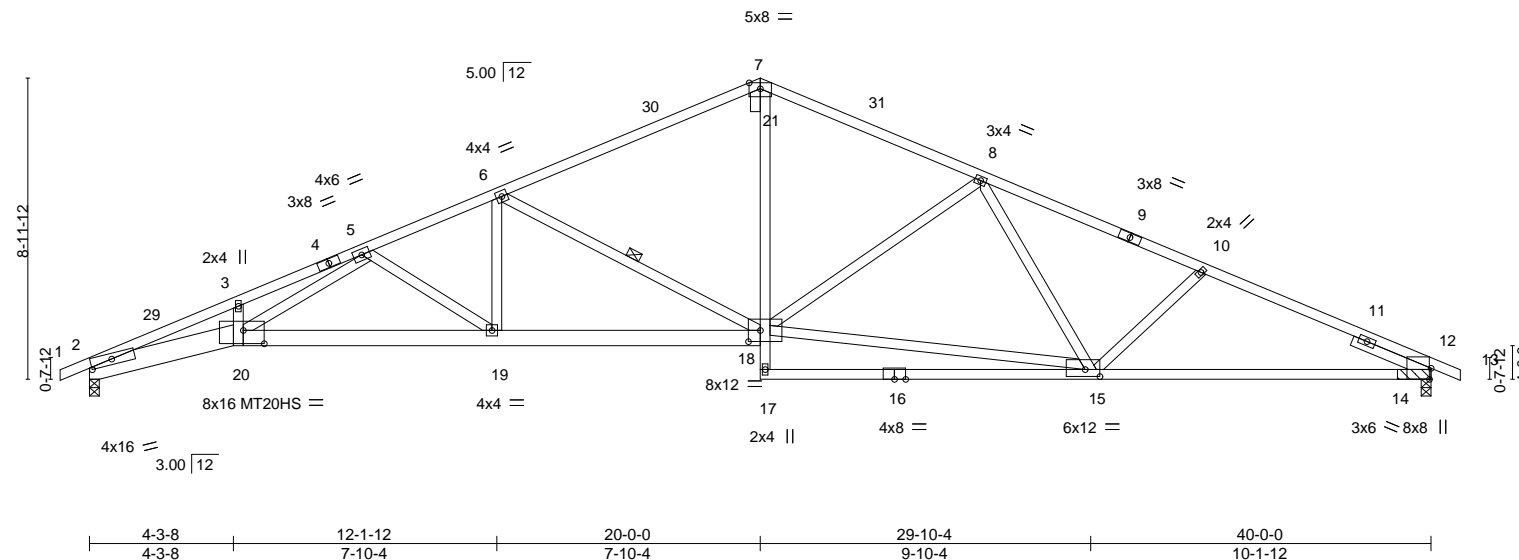
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|         |       |         |         |        |         |         |        |         |
|---------|-------|---------|---------|--------|---------|---------|--------|---------|
| -0-10-8 | 4-3-8 | 8-3-6   | 12-1-12 | 20-0-0 | 26-6-13 | 33-1-11 | 40-0-0 | 40-10-8 |
| 0-10-8  | 4-3-8 | 3-11-14 | 3-10-6  | 7-10-4 | 6-6-13  | 6-6-13  | 6-10-5 | 0-10-8  |

Scale = 1:68.7



| LOADING (psf) |       | SPACING-             |      | CSI.      |      | DEFL.    |                  | PLATES |        | GRIP           |          |
|---------------|-------|----------------------|------|-----------|------|----------|------------------|--------|--------|----------------|----------|
| TCLL          | 25.0  | Plate Grip DOL       | 1.15 | TC        | 0.98 | Vert(LL) | -0.41 15-17 >999 | 240    | MT20   | 197/144        |          |
| TCDL          | 20.0  | Lumber DOL           | 1.15 | BC        | 0.88 | Vert(CT) | -1.10 15-17 >435 | 180    | MT20HS | 148/108        |          |
| BCLL          | 0.0 * | Rep Stress Incr      | YES  | WB        | 0.97 | Horz(CT) | 0.35 12 n/a      | n/a    |        |                |          |
| BCDL          | 10.0  | Code IRC2018/TPI2014 |      | Matrix-AS |      |          |                  |        |        |                |          |
|               |       |                      |      |           |      |          |                  |        |        | Weight: 189 lb | FT = 20% |

#### LUMBER-

TOP CHORD 2x4 SPF 1650F 1.5E \*Except\*  
7-9: 2x4 SPF No.2  
BOT CHORD 2x4 SPF 1650F 1.5E \*Except\*  
2-20: 2x8 SP 2400F 2.0E, 18-20: 2x6 SPF 2100F 1.8E  
16-17: 2x4 SPF No.2  
WEBS 2x4 SPF No.2 \*Except\*  
7-17: 2x4 SPF 1650F 1.5E  
SLIDER Right 2x4 SPF No.2 2-6-0

#### BRACING-

TOP CHORD Structural wood sheathing directly applied.  
BOT CHORD Rigid ceiling directly applied.  
WEBS 1 Row at midpt 6-18

#### REACTIONS.

(size) 2=0-3-8, 12=(0-3-8 + bearing block) (req. 0-3-9)  
Max Horz 2=-138(LC 17)  
Max Uplift 2=-177(LC 12), 12=-177(LC 13)  
Max Grav 2=2277(LC 1), 12=2277(LC 1)

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

TOP CHORD 2-3=-7705/608, 3-5=-7621/665, 5-6=-4842/348, 6-7=-3311/285, 7-8=-3293/289,  
8-10=-4021/290, 10-12=-4355/336  
BOT CHORD 2-20=-648/7112, 19-20=-431/5241, 18-19=-295/4428, 12-15=-228/3930  
WEBS 7-18=-59/1809, 6-19=0/849, 6-18=-1712/253, 15-18=-135/3587, 8-18=-872/227,  
8-15=0/310, 10-15=-459/190, 5-20=-252/2177, 5-19=-981/165

#### NOTES-

- 2x4 SPF 1650F 1.5E bearing block 12" long at jt. 12 attached to front face with 2 rows of 10d (0.131"x3") nails spaced 3" o.c. 8  
Total fasteners. Bearing is assumed to be SPF 1650F 1.5E.
- 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=6.0psf; h=15ft; Cat. II; Exp C; Enclosed;  
MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 20-0-0, Exterior(2R) 20-0-0 to 23-0-0,  
Interior(1) 23-0-0 to 40-10-8 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
- All plates are MT20 plates unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide  
will fit between the bottom chord and any other members.
- Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify  
capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb)  
2=177, 12=177.
- 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.



January 4, 2021

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Chesterfield, MO 63017

|         |       |              |     |     |                       |           |
|---------|-------|--------------|-----|-----|-----------------------|-----------|
| Job     | Truss | Truss Type   | Qty | Ply | Summit/25 Woodside/MO | 144187968 |
| 2745269 | A11   | Roof Special | 2   | 1   |                       |           |

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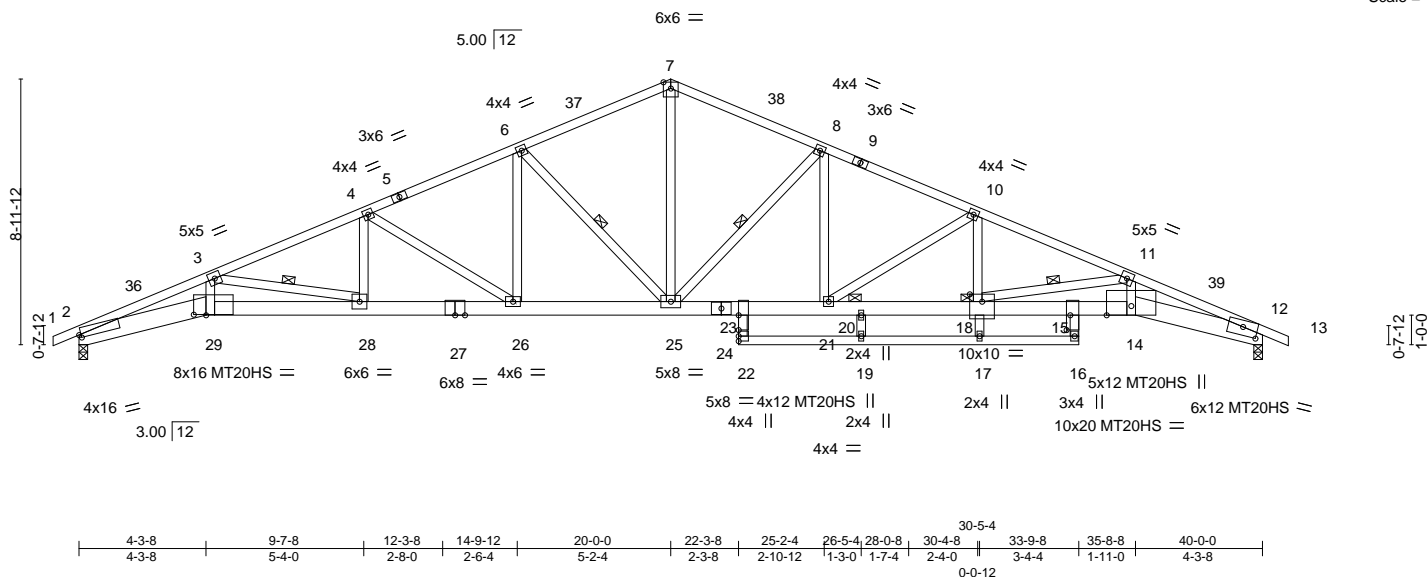
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Job Reference (optional)

0-10-8 4-3-8 9-7-8 12-3-8 14-9-12 20-0-0 22-3-8 25-2-4 28-0-8 30-4-8 33-9-8 35-8-8 40-0-0 40-10-8  
0-10-8 4-3-8 5-4-0 2-8-0 2-6-4 5-2-4 2-3-8 2-10-12 2-10-4 2-4-0 3-5-0 1-11-0 4-3-8 0-10-8

Scale = 1:77.9



| Plate Offsets (X,Y)-- | [2:0-0-13,0-1-4], [12:0-6-0,0-3-6], [15:0-6-0,0-1-8], [18:0-5-0,0-3-0], [23:0-6-0,0-0-0], [29:0-5-0,0-0-4] |       |             |              |          |        |      |                |             |  |
|-----------------------|--|-------|-------------|--------------|----------|--------|------|----------------|-------------|--|
| <b>LOADING</b> (psf)  | <b>SPACING-</b>  | 2-0-0 | <b>CSI.</b> | <b>DEFL.</b> | in (loc) | l/defl | L/d  | <b>PLATES</b>  | <b>GRIP</b> |  |
| TCLL 25.0             | Plate Grip DOL   | 1.15  | TC 0.99     | Vert(LL)     | -0.42    | 25-26  | >999 | MT20           | 197/144     |  |
| TCDL 20.0             | Lumber DOL   | 1.15  | BC 0.98     | Vert(CT)     | -0.93    | 25-26  | >514 | MT20HS         | 148/108     |  |
| BCLL 0.0 *            | Rep Stress Incr  | YES   | WB 0.94     | Horz(CT)     | 0.44     | 12     | n/a  |                |             |  |
| BCDL 10.0             | Code IRC2018/TPI2014   |       | Matrix-AS   |              |          |        |      |                |             |  |
|                       |  |       |             |              |          |        |      | Weight: 221 lb | FT = 20%    |  |

|  |   |
|--|---|
| <b>LUMBER-</b>   | <b>BRACING-</b>                                       |
| TOP CHORD 2x4 SPF No.2 *Except*                                | TOP CHORD Structural wood sheathing directly applied. |
| 1-5: 2x4 SPF 1650F 1.5E  | BOT CHORD Rigid ceiling directly applied.             |
| BOT CHORD 2x4 SPF No.2 *Except*                                | WEBS 1 Row at midpt 6-25, 3-28, 11-18, 8-25           |
| 2-29,12-14: 2x8 SP 2400F 2.0E, 27-29,14-24: 2x6 SPF 2100F 1.8E | JOINTS 1 Brace at Jt(s): 20, 18                       |
| 24-27: 2x6 SPF No.2  |   |
| WEBS 2x4 SPF No.2  |   |

**REACTIONS.** (size) 2=0-3-8, 12=0-3-8  
Max Horz 2=-138(LC 17)  
Max Uplift 2=-176(LC 12), 12=-176(LC 13)  
Max Grav 2=2279(LC 1), 12=2279(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-7992/650, 3-4=-5504/400, 4-6=-4204/301, 6-7=-3265/285, 7-8=-3265/284,  
8-10=-4121/290, 10-11=-5351/349, 11-12=-7784/515  
BOT CHORD 2-29=-691/7397, 28-29=-677/7296, 26-28=-380/5037, 25-26=-206/3793, 23-25=-99/3717,  
21-23=-89/3351, 20-21=-183/4521, 18-20=-183/4521, 15-18=-407/6744, 14-15=-416/7107,  
19-22=-11/366, 17-19=-11/366, 16-17=-10/367, 12-14=-424/7194  
WEBS 3-29=-62/1199, 11-14=-10/1152, 7-25=-97/1981, 6-25=-1249/208, 6-26=-42/806,  
4-26=-1471/206, 4-28=-13/759, 3-28=-2312/303, 11-18=-2268/227, 10-18=0/692,  
10-21=-1383/180, 8-21=-29/694, 8-25=-1141/196

- 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=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 20-0-0, Exterior(2R) 20-0-0 to 23-0-0, Interior(1) 23-0-0 to 40-10-8 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
  - All plates are MT20 plates unless otherwise indicated.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Bearing at joint(s) 2, 12 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) except (jt=lb) 2=176, 12=176.
  - 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.



January 4,2021

**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/25 Woodside/MO | 144187969 |
| 2745269 | A12   | Hip        | 1   | 1   |                       |           |

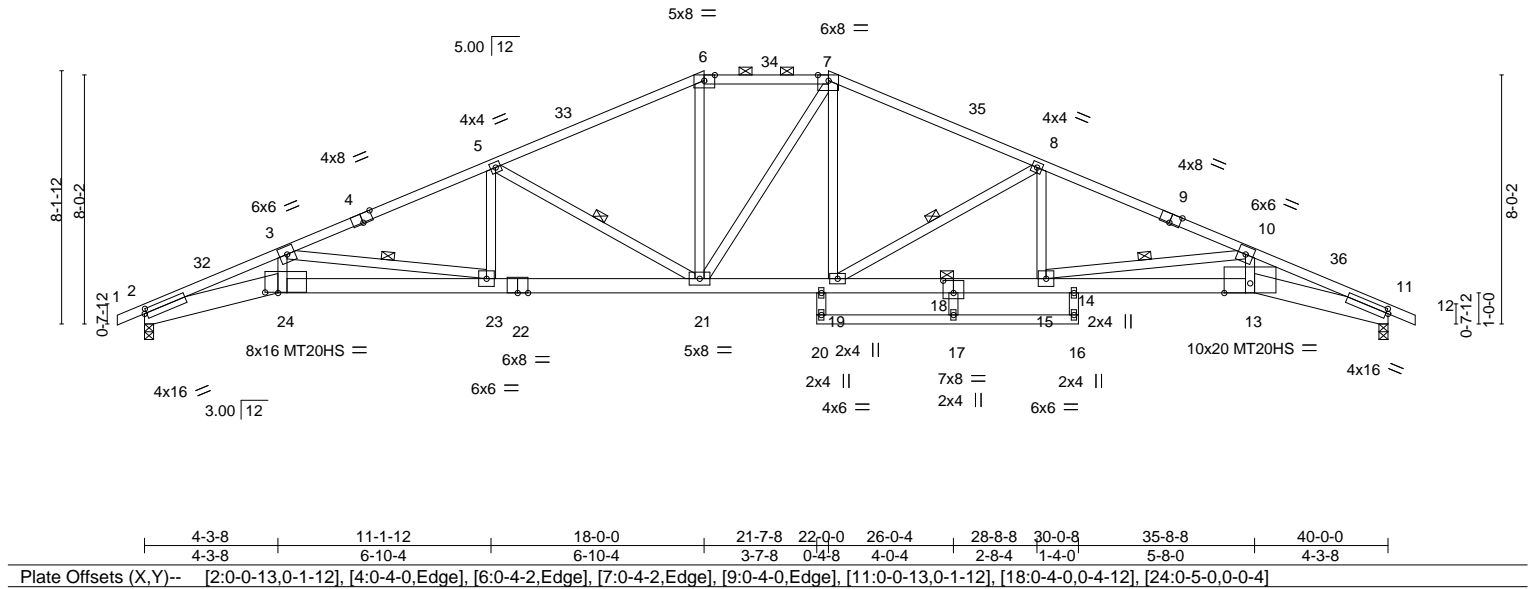
Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Thu Dec 31 09:29:46 2020 Page 1

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0-10-8 4-3-8 11-1-12 18-0-0 21-7-8 22-0-0 26-0-4 28-8-8 30-0-8 35-8-8 40-0-0 40-10-8  
0-10-8 4-3-8 6-10-4 6-10-4 3-7-8 0-4-8 4-0-4 2-8-4 1-4-0 5-8-0 4-3-8 0-10-8

Scale = 1:74.1



| LOADING (psf) | SPACING-             | CSI.      | DEFL.                      | PLATES         | GRIP     |
|---------------|----------------------|-----------|----------------------------|----------------|----------|
| TCLL 25.0     | Plate Grip DOL 1.15  | TC 0.82   | in (loc) l/defl L/d        | MT20           | 197/144  |
| TCDL 20.0     | Lumber DOL 1.15      | BC 0.99   | Vert(LL) -0.68 20 >707 240 | MT20HS         | 148/108  |
| BCLL 0.0 *    | Rep Stress Incr YES  | WB 0.66   | Vert(CT) -1.69 20 >284 180 |                |          |
| BCDL 10.0     | Code IRC2018/TPI2014 | Matrix-AS | Horz(CT) 0.50 11 n/a n/a   |                |          |
|               |                      |           |                            | Weight: 212 lb | FT = 20% |

|  |  |
|--|--|
| <b>LUMBER-</b>   | <b>BRACING-</b>  |
| TOP CHORD 2x4 SPF 1650F 1.5E *Except*<br>6-7: 2x4 SPF No.2   | TOP CHORD Structural wood sheathing directly applied, except<br>2-0-0 oc purlins (2-10-14 max.): 6-7.                  |
| BOT CHORD 2x4 SPF No.2 *Except*<br>2-24,11-13: 2x8 SP 2400F 2.0E, 22-24,13-18: 2x6 SPF 2100F 1.8E<br>18-22: 2x6 SPF No.2 | BOT CHORD Rigid ceiling directly applied. Except:<br>2-2-0 oc bracing: 18-19<br>1 Row at midpt 3-23, 5-21, 8-19, 10-15 |
| WEBS 2x4 SPF No.2  | WEBS 1 Row at midpt<br>JOINTS 1 Brace at Jt(s): 18   |

|                   |  |
|-------------------|--|
| <b>REACTIONS.</b> | (size) 2=0-3-8, 11=0-3-8<br>Max Horz 2=-123(LC 13)<br>Max Uplift 2=-158(LC 12), 11=-148(LC 13)<br>Max Grav 2=2314(LC 1), 11=2331(LC 1) |
|-------------------|--|

|                |   |
|----------------|---|
| <b>FORCES.</b> | (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  |
| TOP CHORD      | 2-3=-8245/572, 3-5=-5262/305, 5-6=-3789/235, 6-7=-3366/248, 7-8=-3826/213,<br>8-10=-5336/225, 10-11=-8251/432   |
| BOT CHORD      | 2-24=-607/7642, 23-24=-596/7539, 21-23=-265/4797, 19-21=0/3399, 18-19=-88/4865,<br>15-18=-88/4865, 14-15=-344/7545, 13-14=-344/7545, 11-13=-351/7644                              |
| WEBS           | 3-24=-37/1286, 3-23=-2780/335, 5-23=0/721, 5-21=-1632/244, 6-21=-4/931,<br>10-13=-2/1247, 17-18=0/359, 7-19=0/1002, 7-21=-320/194, 8-19=-1671/204, 8-15=0/787,<br>10-15=-2716/280 |

- 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=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 18-0-0, Exterior(2E) 18-0-0 to 22-0-0, Exterior(2R) 22-0-0 to 26-2-15, Interior(1) 26-2-15 to 40-10-8 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
  - Provide adequate drainage to prevent water ponding.
  - All plates are MT20 plates unless otherwise indicated.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Bearing at joint(s) 2, 11 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) except (jt=lb) 2=158, 11=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.
  - 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.



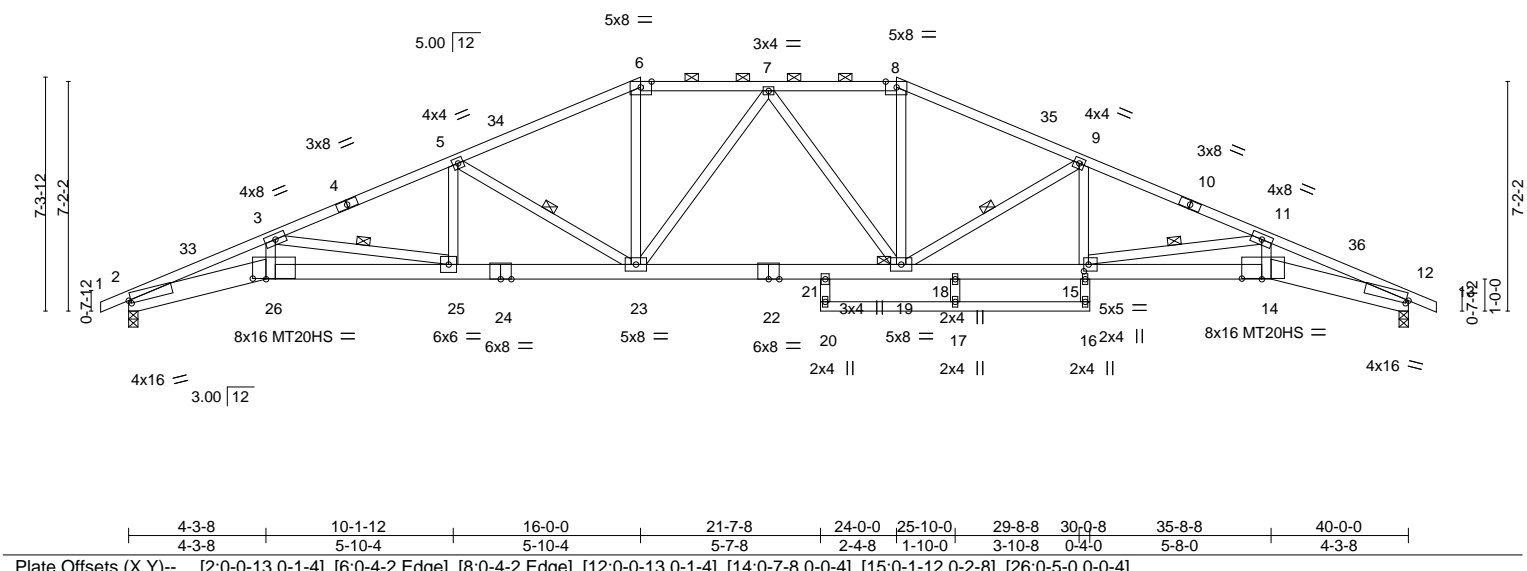
January 4, 2021

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

|         |       |            |     |     |                       |           |
|---------|-------|------------|-----|-----|-----------------------|-----------|
| Job     | Truss | Truss Type | Qty | Ply | Summit/25 Woodside/MO | 144187970 |
| 2745269 | A13   | Hip        | 1   | 1   |                       |           |

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.240 s Mar 9 2020 MiTek Industries, Inc. Thu Dec 31 09:29:48 2020 Page 1  
 ID:ggMHuYjvKTSNSqRK\_pqYByzXhju-s6t5?8J387lw63OyQlwJe6u8ZcY3pNK5nCcIey3UaH  
 Job Reference (optional)  
 -0-10-8 4-3-8 10-1-12 16-0-0 20-0-0 21-7-8 24-0-0 29-8-8 30-0-8 35-8-8 40-0-0 40-10-8  
 0-10-8 4-3-8 5-10-4 5-10-4 4-0-0 1-7-8 2-4-8 5-8-8 0-4-0 5-8-0 4-3-8 0-10-8  
 Scale = 1:72.0



|               |                      |       |           |          |             |        |     |                |          |
|---------------|----------------------|-------|-----------|----------|-------------|--------|-----|----------------|----------|
| LOADING (psf) | SPACING-             | 2-0-0 | CSI.      | DEFL.    | in (loc)    | l/defl | L/d | PLATES         | GRIP     |
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.69   | Vert(LL) | -0.43 21-23 | >999   | 240 | MT20           | 197/144  |
| TCDL 20.0     | Lumber DOL           | 1.15  | BC 0.91   | Vert(CT) | -0.98 21-23 | >491   | 180 | MT20HS         | 148/108  |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.47   | Horz(CT) | 0.46 12     | n/a    | n/a |                |          |
| BCDL 10.0     | Code IRC2018/TPI2014 |       | Matrix-AS |          |             |        |     | Weight: 211 lb | FT = 20% |

|   |  |
|---|--|
| <b>LUMBER-</b>  | <b>BRACING-</b>  |
| TOP CHORD 2x4 SPF 1650F 1.5E *Except*<br>6-8: 2x4 SPF No.2  | TOP CHORD Structural wood sheathing directly applied, except<br>2-0-0 oc purlins (2-10-3 max.): 6-8. |
| BOT CHORD 2x4 SPF No.2 *Except*<br>2-26,12-14: 2x8 SP 2400F 2.0E, 24-26,14-22: 2x6 SPF 2100F 1.8E | BOT CHORD Rigid ceiling directly applied.  |
| WEBS 22-24: 2x6 SPF No.2  | WEBS 1 Row at midpt 3-25, 5-23, 9-19, 11-15  |
|   | JOINTS 1 Brace at Jt(s): 19  |

|                   |  |
|-------------------|--|
| <b>REACTIONS.</b> | (size) 2=0-3-8, 12=0-3-8<br>Max Horz 2=-109(LC 13)<br>Max Uplift 2=-182(LC 12), 12=-182(LC 13)<br>Max Grav 2=2279(LC 1), 12=2279(LC 1) |
|-------------------|--|

|                |   |
|----------------|---|
| <b>FORCES.</b> | (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  |
| TOP CHORD      | 2-3=-8036/647, 3-5=-5368/400, 5-6=-4054/297, 6-7=-3630/300, 7-8=-3610/298,<br>8-9=-4033/294, 9-11=-5370/365, 11-12=-8038/552  |
| BOT CHORD      | 2-26=-660/7441, 25-26=-647/7339, 23-25=-348/4907, 21-23=-120/3774, 19-21=-109/3688,<br>18-19=-195/4813, 15-18=-195/4813, 14-15=-451/7341, 12-14=-459/7443                                 |
| WEBS           | 3-26=-51/1237, 3-25=-2478/305, 5-25=-5/706, 5-23=-1467/231, 6-23=-22/1110,<br>11-14=-15/1242, 8-19=-29/1102, 9-19=-1482/219, 11-15=-2480/249, 7-23=-460/129,<br>7-19=-487/136, 9-15=0/722 |

- 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=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 16-0-0, Exterior(2R) 16-0-0 to 20-0-0, Interior(1) 20-0-0 to 24-0-0, Exterior(2R) 24-0-0 to 28-2-15, Interior(1) 28-2-15 to 40-10-8 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
  - Provide adequate drainage to prevent water ponding.
  - All plates are MT20 plates unless otherwise indicated.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Bearing at joint(s) 2, 12 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) except (jt=lb) 2=182, 12=182.
  - 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.





|         |       |            |     |     |                       |           |
|---------|-------|------------|-----|-----|-----------------------|-----------|
| Job     | Truss | Truss Type | Qty | Ply | Summit/25 Woodside/MO | 144187971 |
| 2745269 | A14   | Hip        | 1   | 1   |                       |           |

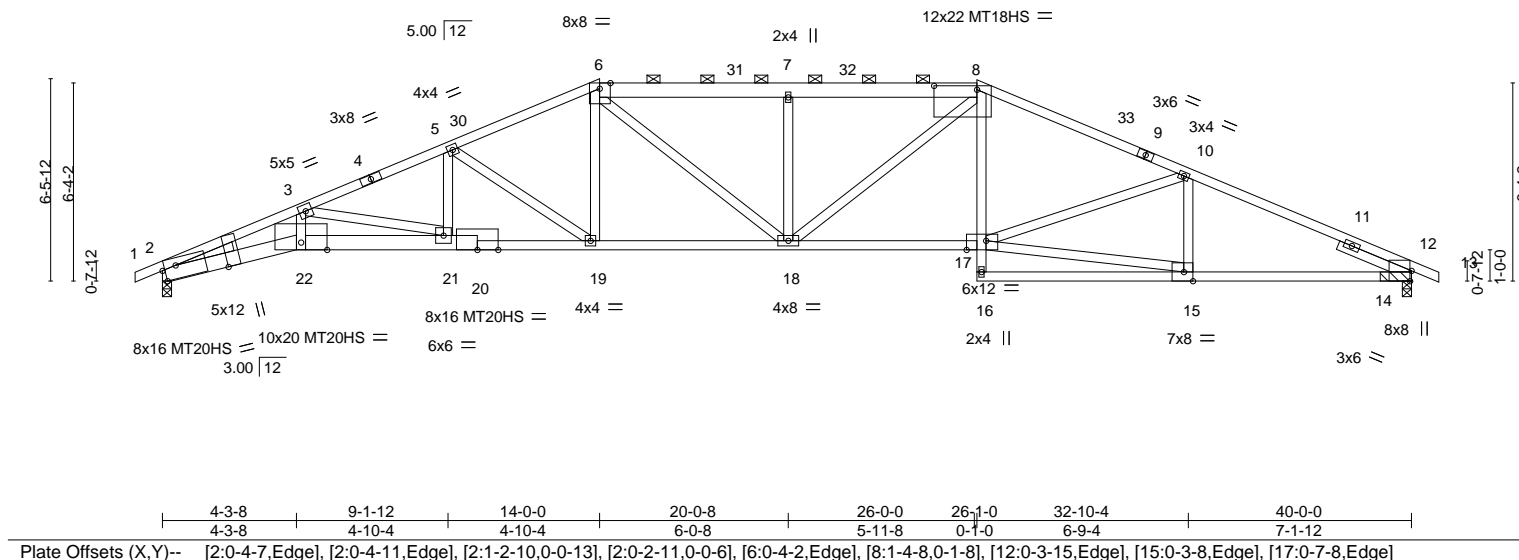
Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Thu Dec 31 09:29:49 2020 Page 1

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|         |       |        |        |        |        |         |        |         |
|---------|-------|--------|--------|--------|--------|---------|--------|---------|
| -0-10-8 | 4-3-8 | 9-1-12 | 14-0-0 | 20-0-8 | 26-0-0 | 32-10-4 | 40-0-0 | 40-10-8 |
| 0-10-8  | 4-3-8 | 4-10-4 | 4-10-4 | 6-0-8  | 5-11-8 | 6-10-4  | 7-1-12 | 0-10-8  |

Scale = 1:73.8



|               |                      |       |           |          |             |        |     |                |          |
|---------------|----------------------|-------|-----------|----------|-------------|--------|-----|----------------|----------|
| LOADING (psf) | SPACING-             | 2-0-0 | CSI.      | DEFL.    | in (loc)    | l/defl | L/d | PLATES         | GRIP     |
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.94   | Vert(LL) | -0.39 18-19 | >999   | 240 | MT20           | 197/144  |
| TCDL 20.0     | Lumber DOL           | 1.15  | BC 0.89   | Vert(CT) | -0.88 18-19 | >544   | 180 | MT20HS         | 148/108  |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.95   | Horz(CT) | 0.42 12     | n/a    | n/a | MT18HS         | 197/144  |
| BCDL 10.0     | Code IRC2018/TPI2014 |       | Matrix-AS |          |             |        |     | Weight: 185 lb | FT = 20% |

#### LUMBER-

TOP CHORD 2x4 SPF 1650F 1.5E \*Except\*  
4-6: 2x4 SPF No.2, 6-8: 2x6 SPF No.2  
BOT CHORD 2x4 SPF 1650F 1.5E \*Except\*  
2-22,20-22: 2x6 SPF 2100F 1.8E  
WEBS 2x4 SPF No.2  
WEDGE  
Left: 2x4 SPF No.2  
SLIDER Right 2x4 SPF No.2 2-6-0

#### BRACING-

TOP CHORD Structural wood sheathing directly applied, except  
2-0-0 oc purlins (3-1-7 max.): 6-8.  
BOT CHORD Rigid ceiling directly applied.

#### REACTIONS.

(size) 2=0-3-8, 12=(0-3-8 + bearing block) (req. 0-3-9)  
Max Horz 2=97(LC 16)  
Max Uplift 2=-129(LC 12), 12=-128(LC 13)  
Max Grav 2=2279(LC 1), 12=2279(LC 1)

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

TOP CHORD 2-3=-7946/435, 3-5=-5501/341, 5-6=-4357/313, 6-7=-4492/357, 7-8=-4490/356,  
8-10=-4406/313, 10-12=-4353/276  
BOT CHORD 2-22=-441/7368, 21-22=-431/7257, 19-21=-219/5042, 18-19=-159/3939, 17-18=-154/3977,  
12-15=-186/3927  
WEBS 8-17=-11/694, 3-22=-42/1319, 6-19=-36/779, 6-18=-87/899, 7-18=-756/179,  
15-17=-183/3862, 10-17=-33/325, 10-15=-493/119, 3-21=-2276/238, 5-21=-1/716,  
5-19=-1301/180, 8-18=-75/872

#### NOTES-

- 1) 2x4 SPF 1650F 1.5E bearing block 12" long at jt. 12 attached to front face with 2 rows of 10d (0.131"x3") nails spaced 3" o.c. 8 Total fasteners. Bearing is assumed to be SPF 1650F 1.5E.
- 2) Unbalanced roof live loads have been considered for this design.
- 3) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-2-11, Interior(1) 2-2-11 to 14-0-0, Exterior(2R) 14-0-0 to 18-2-15, Interior(1) 18-2-15 to 26-1-0, Exterior(2R) 26-1-0 to 30-3-15, Interior(1) 30-3-15 to 40-10-8 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
- 4) Provide adequate drainage to prevent water ponding.
- 5) All plates are MT20 plates unless otherwise indicated.
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 8) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb)

Continued on page 2



January 4, 2021

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16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|         |       |            |     |     |                          |           |
|---------|-------|------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type | Qty | Ply | Summit/25 Woodside/MO    | I44187971 |
| 2745269 | A14   | Hip        | 1   | 1   | Job Reference (optional) |           |

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

8.240 s Mar 9 2020 MiTek Industries, Inc. Thu Dec 31 09:29:49 2020 Page 2  
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- NOTES-**
- 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.
  - 11) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
  - 12) 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/25 Woodside/MO | 144187972 |
| 2745269 | A15   | HIP        | 1   | 1   |                       |           |

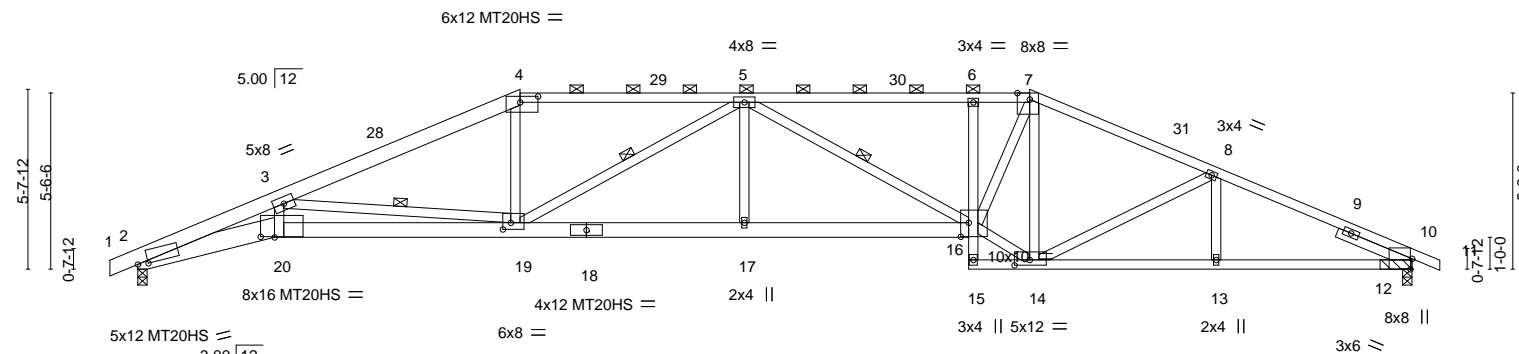
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|        |       |        |        |        |        |         |        |         |
|--------|-------|--------|--------|--------|--------|---------|--------|---------|
| 0-10-8 | 4-3-8 | 12-0-0 | 19-0-8 | 26-1-0 | 28-0-0 | 33-10-4 | 40-0-0 | 40-10-8 |
| 0-10-8 | 4-3-8 | 7-8-8  | 7-0-8  | 7-0-8  | 1-11-0 | 5-10-4  | 6-1-12 | 0-10-8  |

Scale = 1:72.3



|  |       |        |        |        |        |         |        |
|--|-------|--------|--------|--------|--------|---------|--------|
|  | 4-3-8 | 12-0-0 | 19-0-8 | 26-1-0 | 28-0-0 | 33-10-4 | 40-0-0 |
|  | 4-3-8 | 7-8-8  | 7-0-8  | 7-0-8  | 1-11-0 | 5-10-4  | 6-1-12 |

|                       |       |  |       |             |      |                |                      |
|-----------------------|-------|--|-------|-------------|------|----------------|----------------------|
| Plate Offsets (X,Y)-- |       | [2:0-3-15,0-0-8], [4:0-6-12,0-2-4], [7:0-4-11,Edge], [10:0-3-15,Edge], [14:0-5-12,0-2-0], [16:0-3-0,0-5-4], [19:0-3-0,0-2-8], [20:0-5-4,0-0-4] |       |             |      |                |                      |
| <b>LOADING</b> (psf)  |       | <b>SPACING-</b>  | 2-0-0 | <b>CSI.</b> |      | <b>DEFL.</b>   | in (loc) l/defl L/d  |
| TCLL                  | 25.0  | Plate Grip DOL   | 1.15  | TC          | 0.95 | Vert(LL)       | -0.42 16-17 >999 240 |
| TCDL                  | 20.0  | Lumber DOL   | 1.15  | BC          | 0.94 | Vert(CT)       | -0.93 16-17 >517 180 |
| BCLL                  | 0.0 * | Rep Stress Incr  | YES   | WB          | 0.93 | Horz(CT)       | 0.42 10 n/a n/a      |
| BCDL                  | 10.0  | Code IRC2018/TPI2014   |       | Matrix-AS   |      |                |                      |
|                       |       |  |       |             |      | <b>PLATES</b>  | <b>GRIP</b>          |
|                       |       |  |       |             |      | MT20           | 197/144              |
|                       |       |  |       |             |      | MT20HS         | 148/108              |
|                       |       |  |       |             |      | Weight: 196 lb | FT = 20%             |

|                |   |                 |   |
|----------------|---|-----------------|---|
| <b>LUMBER-</b> |   | <b>BRACING-</b> |   |
| TOP CHORD      | 2x4 SPF 1650F 1.5E *Except*<br>1-4: 2x6 SPF No.2  | TOP CHORD       | Structural wood sheathing directly applied, except<br>2-0-0 oc purlins (2-2-0 max.): 4-7. |
| BOT CHORD      | 2x4 SPF 1650F 1.5E *Except*<br>2-20: 2x8 SP 2400F 2.0E, 18-20,16-18: 2x6 SPF 2100F 1.8E<br>6-15: 2x4 SPF No.2 | BOT CHORD       | Rigid ceiling directly applied.   |
| WEBS           | 2x4 SPF No.2  | WEBS            | 1 Row at midpt 3-19, 5-19, 5-16   |
| SLIDER         | Right 2x4 SPF No.2 2-6-0  |                 |   |

**REACTIONS.** (size) 2=0-3-8, 10=(0-3-8 + bearing block) (req. 0-3-9)  
Max Horz 2=87(LC 12)  
Max Uplift 2=149(LC 8), 10=149(LC 9)  
Max Grav 2=2279(LC 1), 10=2279(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-8618/523, 3-4=-5037/381, 4-5=-4590/379, 5-6=-4815/416, 6-7=-4748/409,  
7-8=-3928/327, 8-10=-4348/293  
BOT CHORD 2-20=-460/8040, 19-20=-455/7873, 17-19=-349/5365, 16-17=-349/5365, 6-16=-521/133,  
14-15=-51/279, 13-14=-206/3929, 10-13=-206/3929  
WEBS 3-20=-51/633, 3-19=-3315/363, 4-19=-0/1164, 5-19=-1117/129, 5-17=0/270,  
5-16=-805/77, 14-16=-152/3810, 7-16=-232/2958, 7-14=-1558/128, 8-14=-446/156

- NOTES-**
- 2x4 SPF 1650F 1.5E bearing block 12" long at jt. 10 attached to front face with 2 rows of 10d (0.131"x3") nails spaced 3" o.c. 8  
Total fasteners. Bearing is assumed to be SPF 1650F 1.5E.
  - 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=6.0psf; h=15ft; Cat. II; Exp C; Enclosed;  
MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-4-13, Interior(1) 2-4-13 to 12-0-0, Exterior(2R) 12-0-0 to  
16-2-15, Interior(1) 16-2-15 to 28-0-0, Exterior(2R) 28-0-0 to 32-2-15, Interior(1) 32-2-15 to 40-10-8 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
  - Provide adequate drainage to prevent water ponding.
  - All plates are MT20 plates unless otherwise indicated.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide  
will fit between the bottom chord and any other members.
  - Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify  
capacity of bearing surface.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb)  
2=149, 10=149.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and  
Controlled by standard ANSI/TPI 1.



January 4, 2021

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**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/25 Woodside/MO    | I44187972 |
| 2745269 | A15   | HIP        | 1   | 1   | Job Reference (optional) |           |

- NOTES-**
- 11) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- 12) 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/25 Woodside/MO | 144187973 |
| 2745269 | A16   | Hip        | 1   | 1   |                       |           |

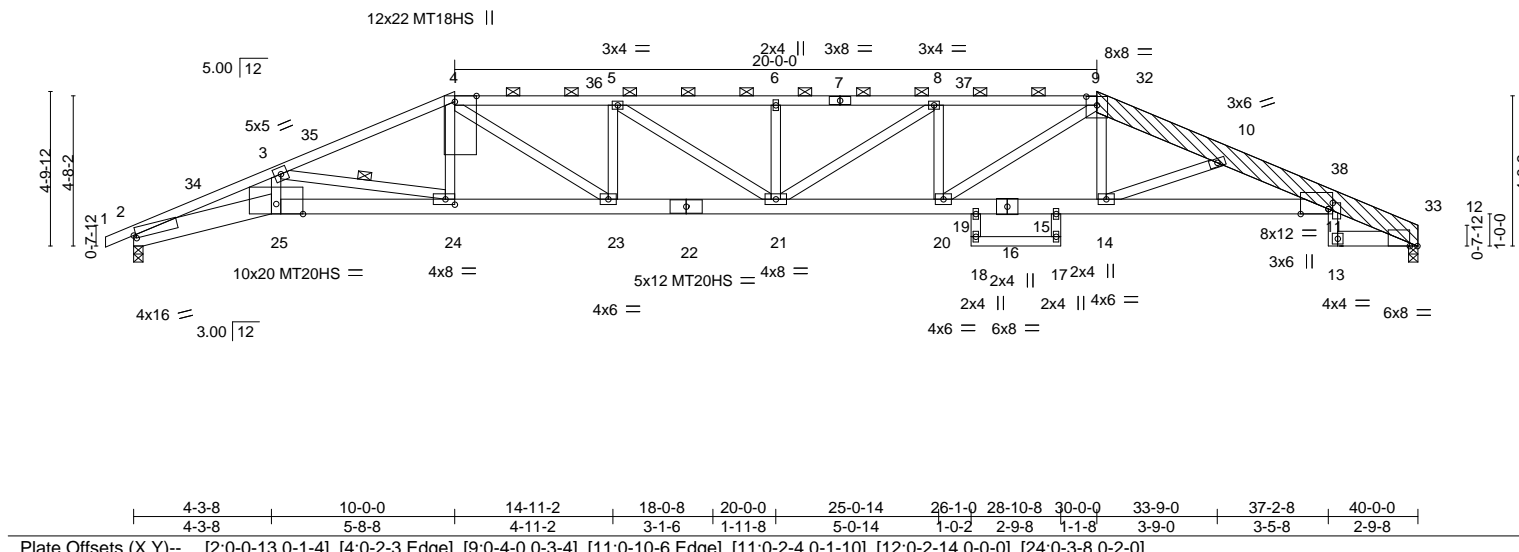
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8.240 s Mar 9 2020 MiTek Industries, Inc. Thu Dec 31 09:29:53 2020 Page 1

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|         |       |        |         |        |        |         |         |        |         |        |        |        |        |         |
|---------|-------|--------|---------|--------|--------|---------|---------|--------|---------|--------|--------|--------|--------|---------|
| -0-10-8 | 4-3-8 | 10-0-0 | 14-11-2 | 15-4-5 | 20-0-0 | 20-8-11 | 25-0-14 | 26-1-0 | 28-10-8 | 30-0-0 | 33-9-0 | 37-2-8 | 40-0-0 | 40-10-8 |
| 0-10-8  | 4-3-8 | 5-8-8  | 4-11-2  | 0-5-3  | 4-7-11 | 0-8-11  | 4-4-3   | 1-0-2  | 2-9-8   | 1-1-8  | 3-9-0  | 3-5-8  | 2-9-8  | 0-10-8  |

Scale = 1:71.8



|               |       |                      |  |           |  |          |  |          |    |        |  |     |  |                |  |          |  |
|---------------|-------|----------------------|--|-----------|--|----------|--|----------|----|--------|--|-----|--|----------------|--|----------|--|
| LOADING (psf) |       | SPACING- 2-0-0       |  | CSI.      |  | DEFL.    |  | in (loc) |    | l/defl |  | L/d |  | PLATES         |  | GRIP     |  |
| TCLL          | 25.0  | Plate Grip DOL 1.15  |  | TC 0.93   |  | Vert(LL) |  | -0.60    | 21 | >804   |  | 240 |  | MT20           |  | 197/144  |  |
| TCDL          | 20.0  | Lumber DOL 1.15      |  | BC 0.93   |  | Vert(CT) |  | -1.31    | 21 | >366   |  | 180 |  | MT20HS         |  | 148/108  |  |
| BCLL          | 0.0 * | Rep Stress Incr YES  |  | WB 0.51   |  | Horz(CT) |  | 0.55     | 12 | n/a    |  | n/a |  | MT18HS         |  | 197/144  |  |
| BCDL          | 10.0  | Code IRC2018/TPI2014 |  | Matrix-AS |  |          |  |          |    |        |  |     |  | Weight: 241 lb |  | FT = 20% |  |

|  |  |
|--|--|
| <b>LUMBER-</b>   | <b>BRACING-</b>  |
| TOP CHORD 2x4 SPF 1650F 1.5E *Except*                          | TOP CHORD Structural wood sheathing directly applied, except |
| 9-12: 2x8 SP 2400F 2.0E  | 2-0-0 oc purlins (2-2-0 max.): 4-9.                          |
| BOT CHORD 2x4 SPF No.2 *Except*                                | BOT CHORD Rigid ceiling directly applied.                    |
| 2-25: 2x8 SP 2400F 2.0E, 22-25,11-16,16-22: 2x6 SPF 2100F 1.8E | WEBS 1 Row at midpt 3-24                                     |
| 12-13: 2x6 SPF No.2  |  |
| WEBS 2x4 SPF No.2  |  |
| OTHERS 2x8 SP 2400F 2.0E                                       |  |
| LBR SCAB 9-12 2x8 SP 2400F 2.0E one side                       |  |

**REACTIONS.** (size) 2=0-3-8, 12=0-3-8  
Max Horz 2=75(LC 16)  
Max Uplift 2=-171(LC 8), 12=-147(LC 9)  
Max Grav 2=2278(LC 1), 12=2198(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-8016/576, 3-4=-5530/467, 4-5=-6234/593, 5-6=-6666/633, 6-8=-6666/633,  
8-9=-6234/592, 9-10=-5544/466, 10-11=-6928/548, 11-12=-1095/98  
BOT CHORD 2-25=-5077/423, 24-25=-499/7325, 23-24=-349/5037, 21-23=-489/6231, 20-21=-482/6234,  
19-20=-342/5082, 15-19=-343/5025, 14-15=-342/5082, 11-14=-475/6766, 11-13=-29/556  
WEBS 3-25=-16/1178, 3-24=-2302/235, 4-24=0/784, 9-14=0/779, 6-21=-456/124, 5-21=-61/622,  
5-23=-863/167, 4-23=-183/1594, 8-21=-58/627, 8-20=-798/159, 9-20=-179/1513,  
10-14=-1774/169

#### NOTES-

- 1) Attached 11-1-0 scab 9 to 12, front face(s) 2x8 SP 2400F 2.0E with 2 row(s) of 10d (0.131"x3") nails spaced 9" o.c.except : starting at 3-4-15 from end at joint 9, nail 2 row(s) at 7" o.c. for 2-0-0; starting at 6-6-12 from end at joint 9, nail 2 row(s) at 2" o.c. for 4-3-0.
- 2) Unbalanced roof live loads have been considered for this design.
- 3) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 10-0-0, Exterior(2R) 10-0-0 to 14-2-15, Interior(1) 14-2-15 to 30-0-0, Exterior(2R) 30-0-0 to 34-0-14, Interior(1) 34-0-14 to 39-11-12 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
- 4) Provide adequate drainage to prevent water ponding.
- 5) All plates are MT20 plates unless otherwise indicated.
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 8) Bearing at joint(s) 2, 12 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb)

Continued on page 2



January 4,2021

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16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|         |       |            |     |     |                          |           |
|---------|-------|------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type | Qty | Ply | Summit/25 Woodside/MO    | I44187973 |
| 2745269 | A16   | Hip        | 1   | 1   | Job Reference (optional) |           |

- NOTES-**
- 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.
  - 11) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
  - 12) 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/25 Woodside/MO | 144187974 |
| 2745269 | A17   | Hip        | 1   | 1   |                       |           |

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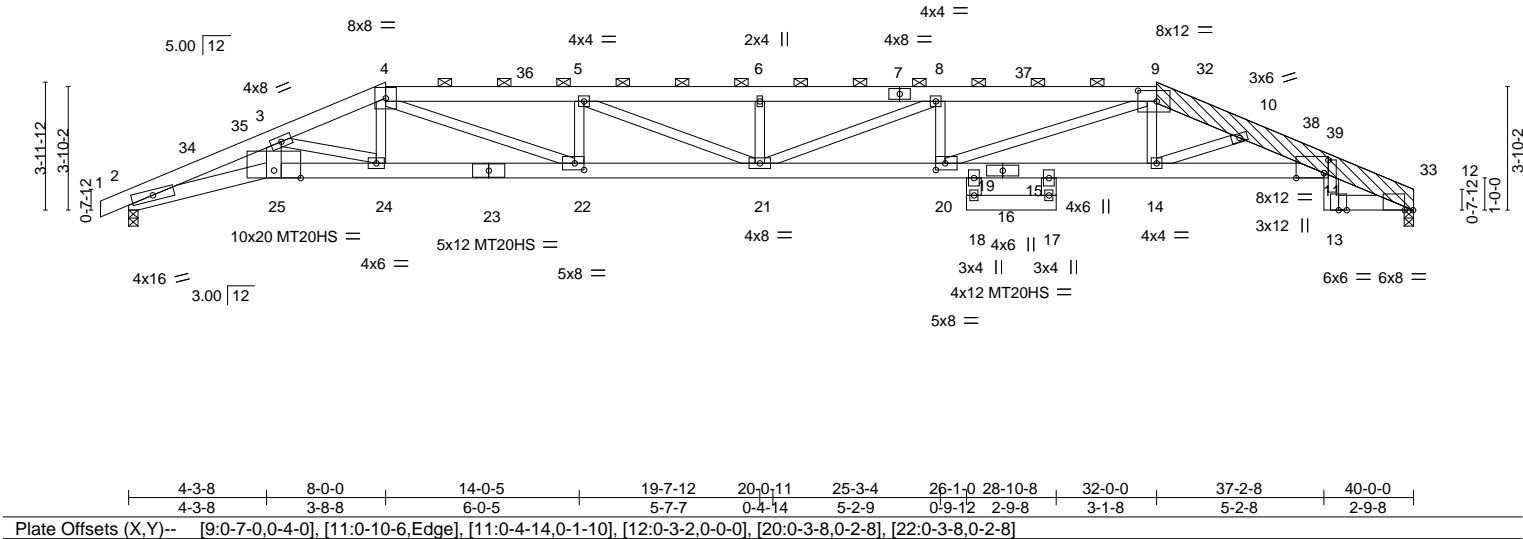
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-0-10-8
4-3-8
8-0-0
14-0-5
19-7-12
20-0-11
25-3-4
26-1-0
28-10-8
32-0-0
34-6-15
37-2-8
40-0-0
40-10-8

0-10-8
4-3-8
3-8-8
6-0-5
5-7-7
0-4-14
5-2-9
0-9-12
2-9-8
3-1-8
2-6-15
2-7-9
2-9-8
0-10-8

Scale = 1:71.7



|                          |       |            |     |     |                       |
|--------------------------|-------|------------|-----|-----|-----------------------|
| Job                      | Truss | Truss Type | Qty | Ply | Summit/25 Woodside/MO |
| 2745269                  | A17   | Hip        | 1   | 1   | 144187974             |
| Job Reference (optional) |       |            |     |     |                       |

- NOTES-**
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=192, 12=169.
  - 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.
  - 11) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
  - 12) 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     | Truss | Truss Type | Qty | Ply | Summit/25 Woodside/MO    |
| 2745269 | A18   | HIP GIRDER | 1   | 2   | 144187975                |
|         |       |            |     |     | Job Reference (optional) |

- NOTES-**
- 9) Bearing at joint(s) 2, 20 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 13 except (jt=lb) 2=375, 20=977.
- 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) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidelines.
- 14) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 473 lb down and 105 lb up at 6-0-0, 116 lb down and 45 lb up at 6-0-12, 116 lb down and 45 lb up at 8-0-12, 116 lb down and 45 lb up at 10-0-12, 116 lb down and 45 lb up at 12-0-12, 116 lb down and 45 lb up at 14-0-12, 116 lb down and 45 lb up at 16-0-12, 116 lb down and 45 lb up at 18-0-12, 116 lb down and 45 lb up at 20-0-0, 116 lb down and 45 lb up at 21-11-4, 116 lb down and 45 lb up at 23-11-4, and 116 lb down and 45 lb up at 26-2-12, and 611 lb down and 148 lb up at 33-11-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

- 1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
- Uniform Loads (plf)
- Vert: 1-4=-90, 4-11=-90, 11-12=-90, 12-14=-90, 26-27=-20, 18-26=-20, 19-20=-20, 12-17=-20, 15-30=-20
- Concentrated Loads (lb)
- Vert: 4=-84(F) 8=-84(F) 24=-116 9=-84(F) 18=-116 25=-589(F=-473) 22=-116 6=-84(F) 11=-116(F) 16=-611(F) 10=-116(F) 34=-84(F) 35=-84(F) 36=-84(F) 37=-84(F) 38=-84(F) 39=-84(F) 40=-84(F) 41=90(F) 42=-116(F) 43=-116 44=-116 45=-116 46=-116 47=-116 48=-116 49=-116 50=-111(F) 52=-85(F) 53=-85(F)

|                |             |                      |          |          |                                    |
|----------------|-------------|----------------------|----------|----------|------------------------------------|
| Job<br>2745269 | Truss<br>B1 | Truss Type<br>Common | Qty<br>3 | Ply<br>1 | Summit/25 Woodside/MO<br>144187976 |
|----------------|-------------|----------------------|----------|----------|------------------------------------|

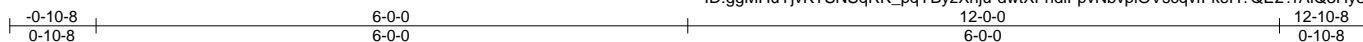
Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

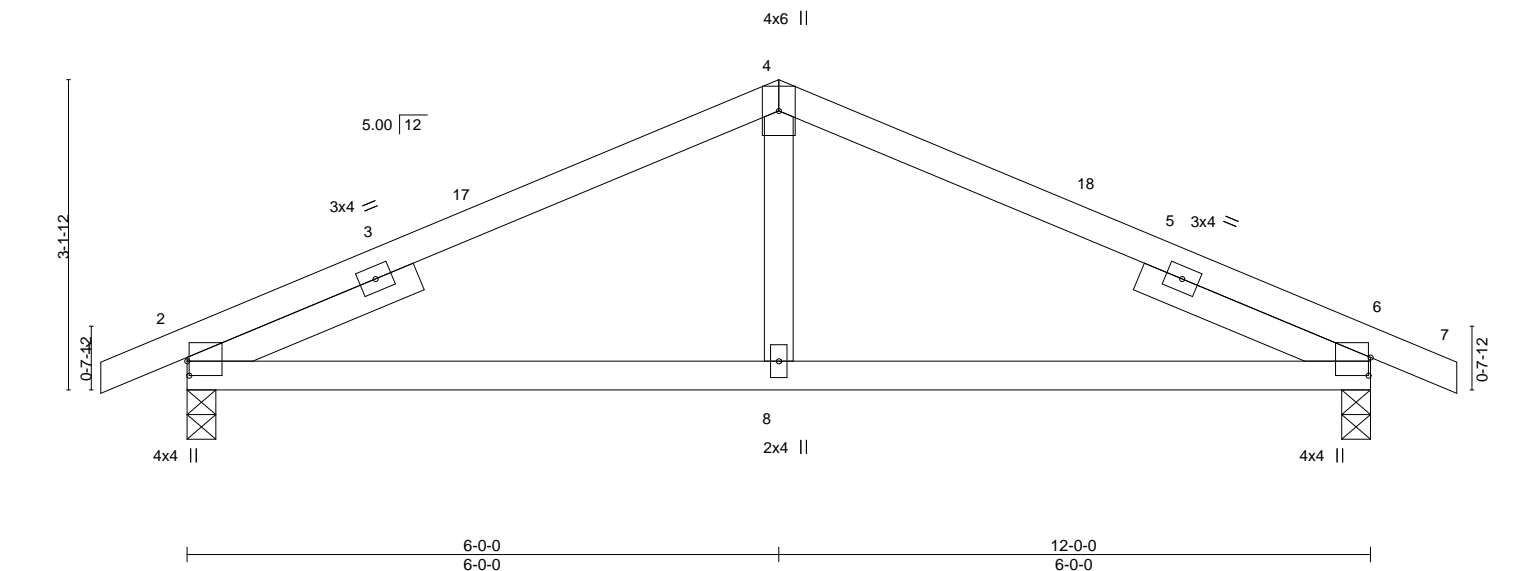
8.240 s Mar 9 2020 MiTek Industries, Inc. Thu Dec 31 09:30:13 2020 Page 1

ID:ggMHuYjvKTSNSqRK\_pqYByzXhju-dwtXFhdiFpNbvplOVscqvIFkeH?QE2?rAIQ3Hy3UZu

Job Reference (optional)



Scale = 1:23.4



|   |                      |       |             |               |             |        |     |
|---|----------------------|-------|-------------|---------------|-------------|--------|-----|
| Plate Offsets (X,Y)-- [2:0-1-12,0-0-4], [6:0-2-3,0-0-4] |                      |       |             |               |             |        |     |
| <b>LOADING</b> (psf)                                    | <b>SPACING-</b>      | 2-0-0 | <b>CSI.</b> | <b>DEFL.</b>  | in (loc)    | l/defl | L/d |
| TCLL 25.0   | Plate Grip DOL       | 1.15  | TC 0.38     | Vert(LL)      | -0.04 8-15  | >999   | 240 |
| TCDL 20.0   | Lumber DOL           | 1.15  | BC 0.36     | Vert(CT)      | -0.07 8-15  | >999   | 180 |
| BCLL 0.0 *  | Rep Stress Incr      | YES   | WB 0.06     | Horz(CT)      | 0.02 2      | n/a    | n/a |
| BCDL 10.0   | Code IRC2018/TPI2014 |       | Matrix-AS   |               |             |        |     |
|   |                      |       |             | <b>PLATES</b> | <b>GRIP</b> |        |     |
|   |                      |       |             | MT20          | 197/144     |        |     |
|   |                      |       |             | Weight: 40 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 2-6-0, Right 2x4 SPF No.2 2-6-0

#### 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=45(LC 12)  
Max Uplift 2=-64(LC 12), 6=-64(LC 13)  
Max Grav 2=739(LC 1), 6=739(LC 1)

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

TOP CHORD 2-4=-863/228, 4-6=-863/228  
BOT CHORD 2-8=-112/786, 6-8=-112/786  
WEBS 4-8=0/257

#### 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=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 6-0-0, Exterior(2R) 6-0-0 to 9-0-0, Interior(1) 9-0-0 to 12-10-8 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
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 6.
- 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.
- 7) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.



January 4, 2021

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**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/25 Woodside/MO | 144187977 |
| 2745269 | B2    | Hip Girder | 1   | 1   |                       |           |

Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

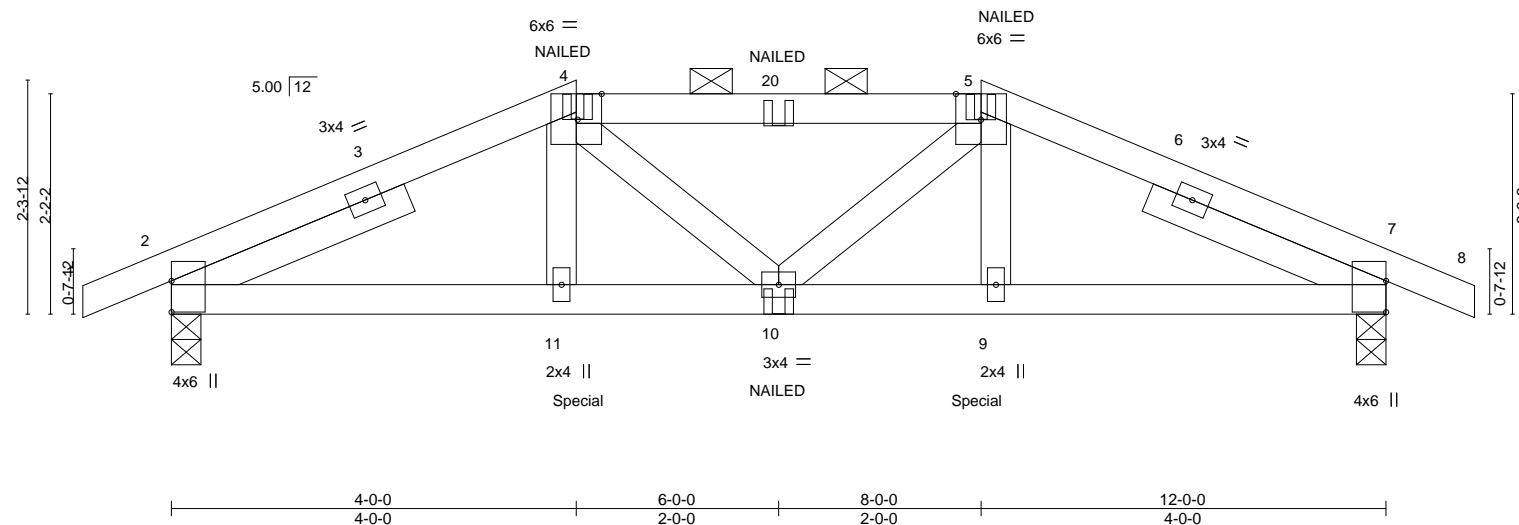
8.240 s Mar 9 2020 MiTek Industries, Inc. Thu Dec 31 09:30:15 2020 Page 1

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Job Reference (optional)

|        |       |       |        |         |
|--------|-------|-------|--------|---------|
| 0-10-8 | 4-0-0 | 8-0-0 | 12-0-0 | 12-10-8 |
| 0-10-8 | 4-0-0 | 4-0-0 | 4-0-0  | 0-10-8  |

Scale = 1:22.8



| LOADING (psf) | SPACING-             | 2-0-0 | CSI.      | DEFL.    | in (loc)   | l/defl | L/d | PLATES        | GRIP     |
|---------------|----------------------|-------|-----------|----------|------------|--------|-----|---------------|----------|
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.64   | Vert(LL) | -0.04 9-10 | >999   | 240 | MT20          | 197/144  |
| TCDL 20.0     | Lumber DOL           | 1.15  | BC 0.74   | Vert(CT) | -0.08 9-10 | >999   | 180 |               |          |
| BCLL 0.0 *    | Rep Stress Incr      | NO    | WB 0.06   | Horz(CT) | 0.03 7     | n/a    | n/a |               |          |
| BCDL 10.0     | Code IRC2018/TPI2014 |       | Matrix-MS |          |            |        |     | 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 2-6-0, Right 2x4 SPF No.2 2-6-0

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 4-0-6 oc purlins, except 2-0-0 oc purlins (3-7-7 max.): 4-5.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS.

(size) 2=0-3-8, 7=0-3-8  
 Max Horz 2=31(LC 9)  
 Max Uplift 2=159(LC 8), 7=159(LC 9)  
 Max Grav 2=1131(LC 1), 7=1131(LC 1)

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

TOP CHORD 2-4=-1842/278, 4-5=-1743/248, 5-7=-1842/278  
 BOT CHORD 2-11=-233/1681, 10-11=-233/1663, 9-10=-208/1663, 7-9=-207/1681

#### 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=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=159, 7=159.
- 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) 290 lb down and 66 lb up at 4-0-0, and 290 lb down and 66 lb up at 7-11-4 on bottom 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

- Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15  
 Uniform Loads (plf)  
 Vert: 1-4=-90, 4-5=-90, 5-8=-90, 12-16=-20  
 Concentrated Loads (lb)  
 Vert: 4=-60(F) 5=-60(F) 11=-290(F) 9=-290(F) 10=-27(F) 20=-60(F)



January 4, 2021

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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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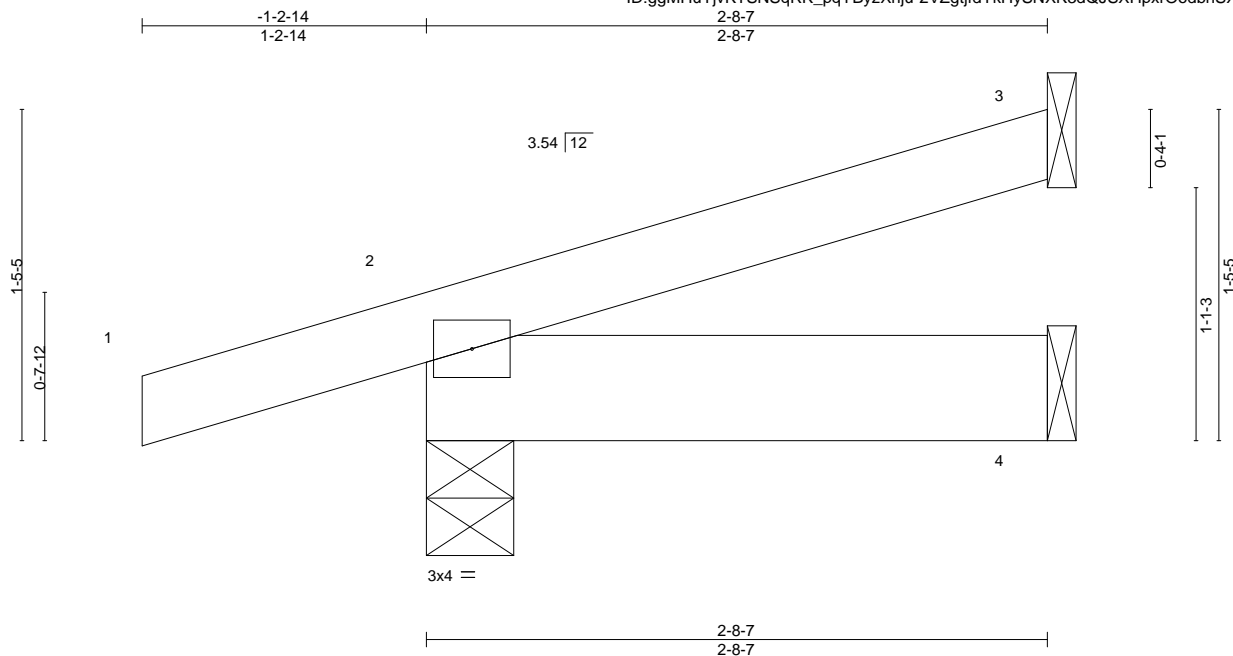
|                |              |                         |          |          |   |           |
|----------------|--------------|-------------------------|----------|----------|---|-----------|
| Job<br>2745269 | Truss<br>CJ1 | Truss Type<br>Jack-Open | Qty<br>1 | Ply<br>1 | Summit/25 Woodside/MO<br>Job Reference (optional) | I44187978 |
|----------------|--------------|-------------------------|----------|----------|---|-----------|

Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

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Scale = 1:10.0

| LOADING (psf) | SPACING-             | 2-0-0 | CSI.      | DEFL.    | in    | (loc) | l/defl | L/d | PLATES        | GRIP     |
|---------------|----------------------|-------|-----------|----------|-------|-------|--------|-----|---------------|----------|
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.13   | Vert(LL) | -0.00 | 7     | >999   | 240 | MT20          | 197/144  |
| TCDL 20.0     | Lumber DOL           | 1.15  | BC 0.03   | Vert(CT) | -0.00 | 7     | >999   | 180 |               |          |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.00   | Horz(CT) | 0.00  | 3     | n/a    | n/a |               |          |
| BCDL 10.0     | Code IRC2018/TPI2014 |       | Matrix-MP |          |       |       |        |     | Weight: 10 lb | FT = 20% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x6 SPF No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 2-8-7 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS.

(size) 3=Mechanical, 2=0-4-9, 4=Mechanical  
Max Horz 2=46(LC 8)  
Max Uplift 3=-25(LC 12), 2=-65(LC 8)  
Max Grav 3=83(LC 1), 2=283(LC 1), 4=54(LC 3)

**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=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 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.



January 4, 2021

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**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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Chesterfield, MO 63017

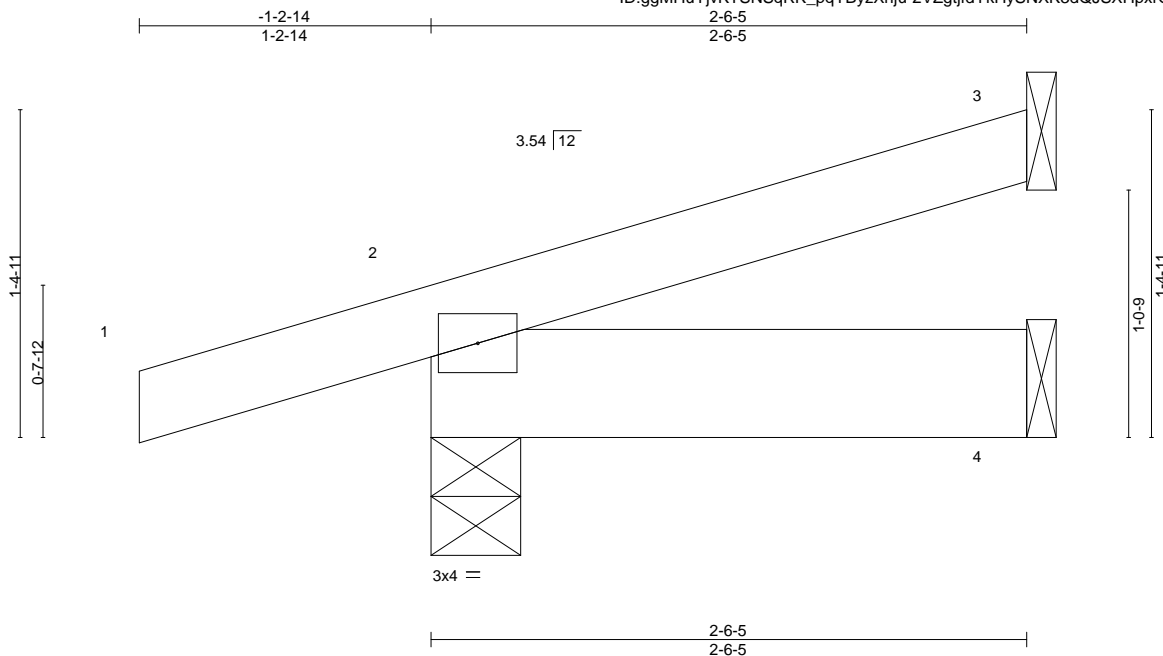
|                |              |                         |          |          |   |           |
|----------------|--------------|-------------------------|----------|----------|---|-----------|
| Job<br>2745269 | Truss<br>CJ2 | Truss Type<br>Jack-Open | Qty<br>1 | Ply<br>1 | Summit/25 Woodside/MO<br>Job Reference (optional) | I44187979 |
|----------------|--------------|-------------------------|----------|----------|---|-----------|

Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Thu Dec 31 09:30:16 2020 Page 1

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Scale = 1:9.8

| LOADING (psf) | SPACING-             | 2-0-0 | CSI.      | DEFL.    | in    | (loc) | L/defl | L/d | PLATES       | GRIP     |
|---------------|----------------------|-------|-----------|----------|-------|-------|--------|-----|--------------|----------|
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.13   | Vert(LL) | -0.00 | 7     | >999   | 240 | MT20         | 197/144  |
| TCDL 20.0     | Lumber DOL           | 1.15  | BC 0.03   | Vert(CT) | -0.00 | 7     | >999   | 180 |              |          |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.00   | Horz(CT) | 0.00  | 3     | n/a    | n/a |              |          |
| BCDL 10.0     | Code IRC2018/TPI2014 |       | Matrix-MP |          |       |       |        |     | Weight: 9 lb | FT = 20% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x6 SPF No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 2-6-5 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS.

(size) 3=Mechanical, 2=0-4-9, 4=Mechanical  
Max Horz 2=44(LC 8)  
Max Uplift 3=-23(LC 12), 2=-65(LC 8)  
Max Grav 3=76(LC 1), 2=275(LC 1), 4=50(LC 3)

**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=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 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.



January 4, 2021

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**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



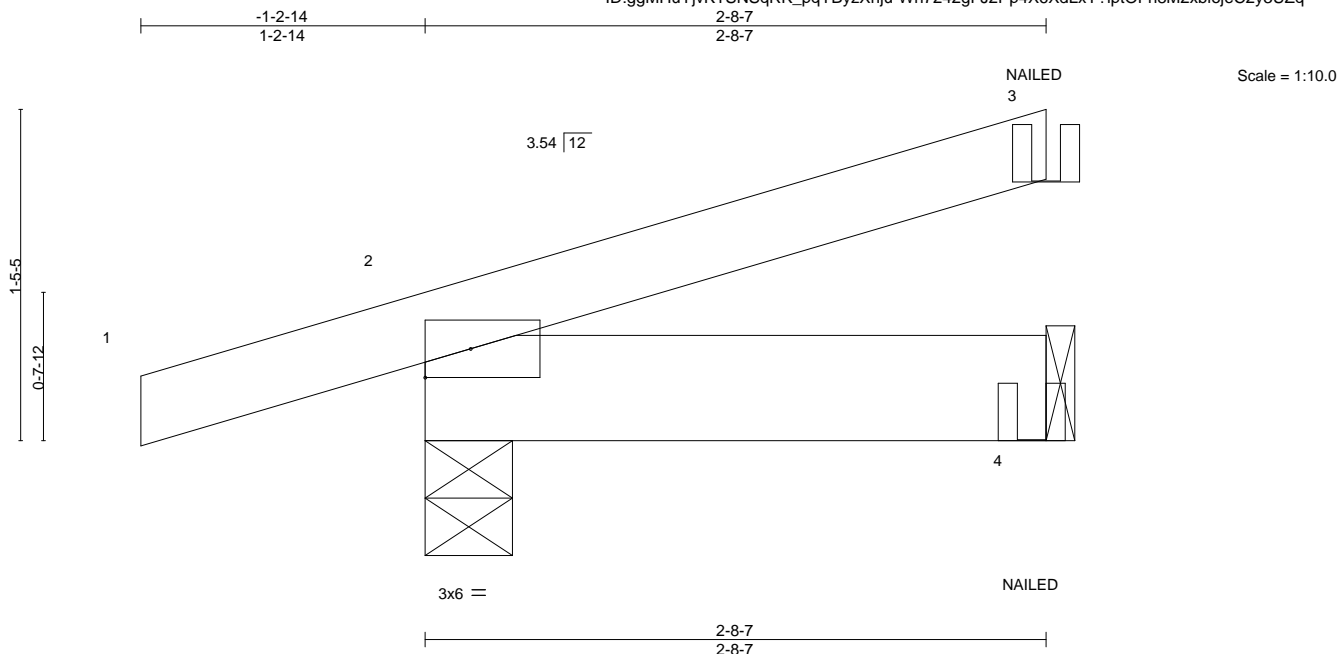
|         |       |                     |     |     |                          |           |
|---------|-------|---------------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type          | Qty | Ply | Summit/25 Woodside/MO    | I44187980 |
| 2745269 | CJ3   | Diagonal Hip Girder | 2   | 1   | Job Reference (optional) |           |

Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

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ID:ggMHuYjvKTSNSqRK\_pqYByzXhju-Wh7242gFJ2Pp4X6XdLxY?lptOFh8M2xblajeC2y3UZq



| LOADING (psf) | SPACING-             | 2-0-0 | CSI.      | DEFL.    | in    | (loc) | l/defl | L/d | PLATES        | GRIP     |
|---------------|----------------------|-------|-----------|----------|-------|-------|--------|-----|---------------|----------|
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.53   | Vert(LL) | -0.00 | 4-7   | >999   | 240 | MT20          | 197/144  |
| TCDL 20.0     | Lumber DOL           | 1.15  | BC 0.22   | Vert(CT) | -0.01 | 4-7   | >999   | 180 |               |          |
| BCLL 0.0 *    | Rep Stress Incr      | NO    | WB 0.00   | Horz(CT) | 0.00  | 2     | n/a    | n/a |               |          |
| BCDL 10.0     | Code IRC2018/TPI2014 |       | Matrix-MP |          |       |       |        |     | Weight: 10 lb | FT = 20% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x6 SPF No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 2-8-7 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS.

(size) 2=0-4-9, 4=Mechanical  
Max Horz 2=43(LC 4)  
Max Uplift 2=61(LC 21), 4=37(LC 5)  
Max Grav 2=283(LC 1), 4=150(LC 1)

**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=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 4.
- 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.
- 7) "NAILED" indicates 3-10d (0.148"x3.25") toe-nails per NDS guidelines.
- 8) 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 + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-3=-90, 4-5=-20  
Concentrated Loads (lb)  
Vert: 4=-25(B)



January 4, 2021

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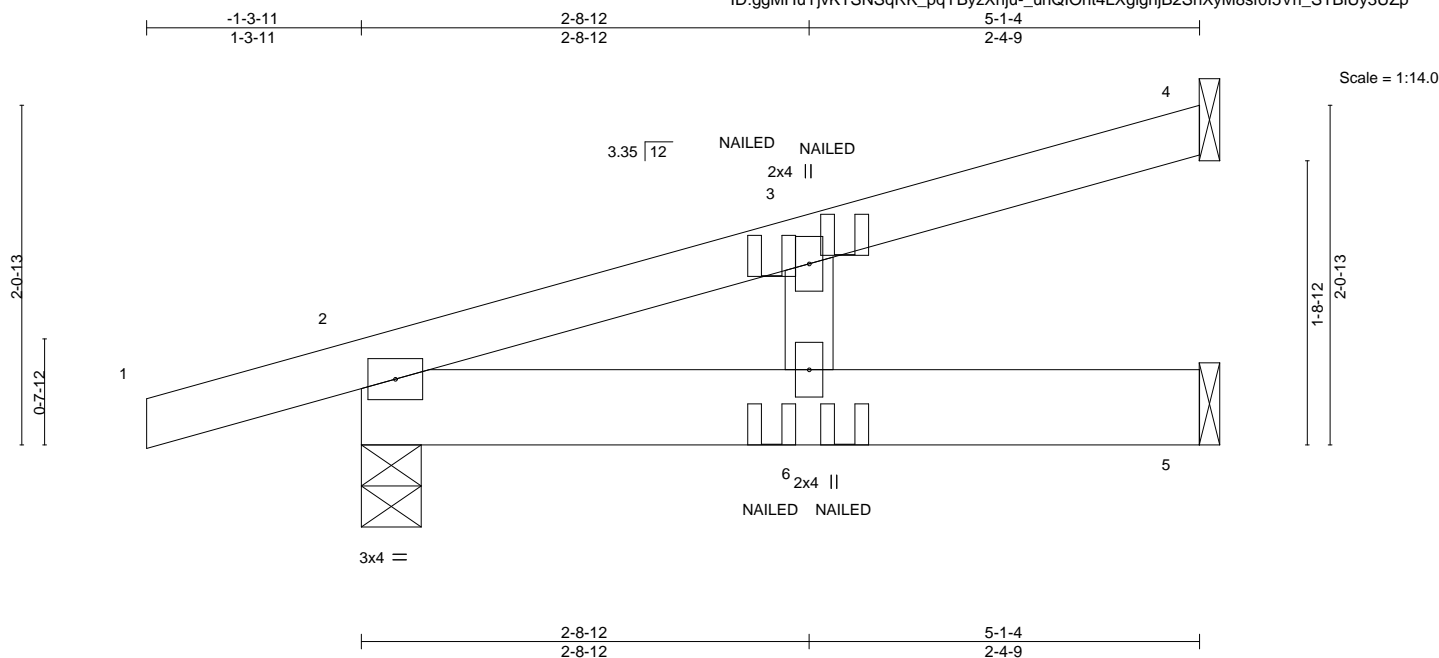
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|         |       |                     |     |     |                          |           |
|---------|-------|---------------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type          | Qty | Ply | Summit/25 Woodside/MO    | 144187981 |
| 2745269 | CJ4   | 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. Thu Dec 31 09:30:18 2020 Page 1

ID:ggMHuYjvKTSNSqRK\_pqYByzXhju-uhQlOht4LXgighjB2SnXyM8sf0I5Vrl\_STBIUy3UZp



| LOADING (psf) | SPACING-             | 2-0-0 | CSI.      | DEFL.    | in (loc) | l/defl | L/d  | PLATES        | GRIP     |
|---------------|----------------------|-------|-----------|----------|----------|--------|------|---------------|----------|
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.16   | Vert(LL) | -0.02    | 6      | >999 | 240           | MT20     |
| TCDL 20.0     | Lumber DOL           | 1.15  | BC 0.29   | Vert(CT) | -0.04    | 6      | >999 | 180           | 197/144  |
| BCLL 0.0 *    | Rep Stress Incr      | NO    | WB 0.02   | Horz(CT) | 0.01     | 4      | n/a  | n/a           |          |
| BCDL 10.0     | Code IRC2018/TPI2014 |       | Matrix-MP |          |          |        |      |               |          |
|               |                      |       |           |          |          |        |      | Weight: 18 lb | FT = 20% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x6 SPF No.2  
WEBS 2x4 SPF No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 5-1-4 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS.

(size) 4=Mechanical, 2=0-4-6, 5=Mechanical  
Max Horz 2=69(LC 21)  
Max Uplift 4=30(LC 8), 2=-76(LC 4), 5=-9(LC 8)  
Max Grav 4=115(LC 1), 2=416(LC 1), 5=153(LC 1)

**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=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4, 2, 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.
- 7) "NAILED" indicates 2-12d (0.148"x3.25") toe-nails per NDS guidelines.
- 8) 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 + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
- Uniform Loads (plf)  
Vert: 1-4=-90, 5-7=-20
- Concentrated Loads (lb)  
Vert: 6=-12(F=-9, B=-2)



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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

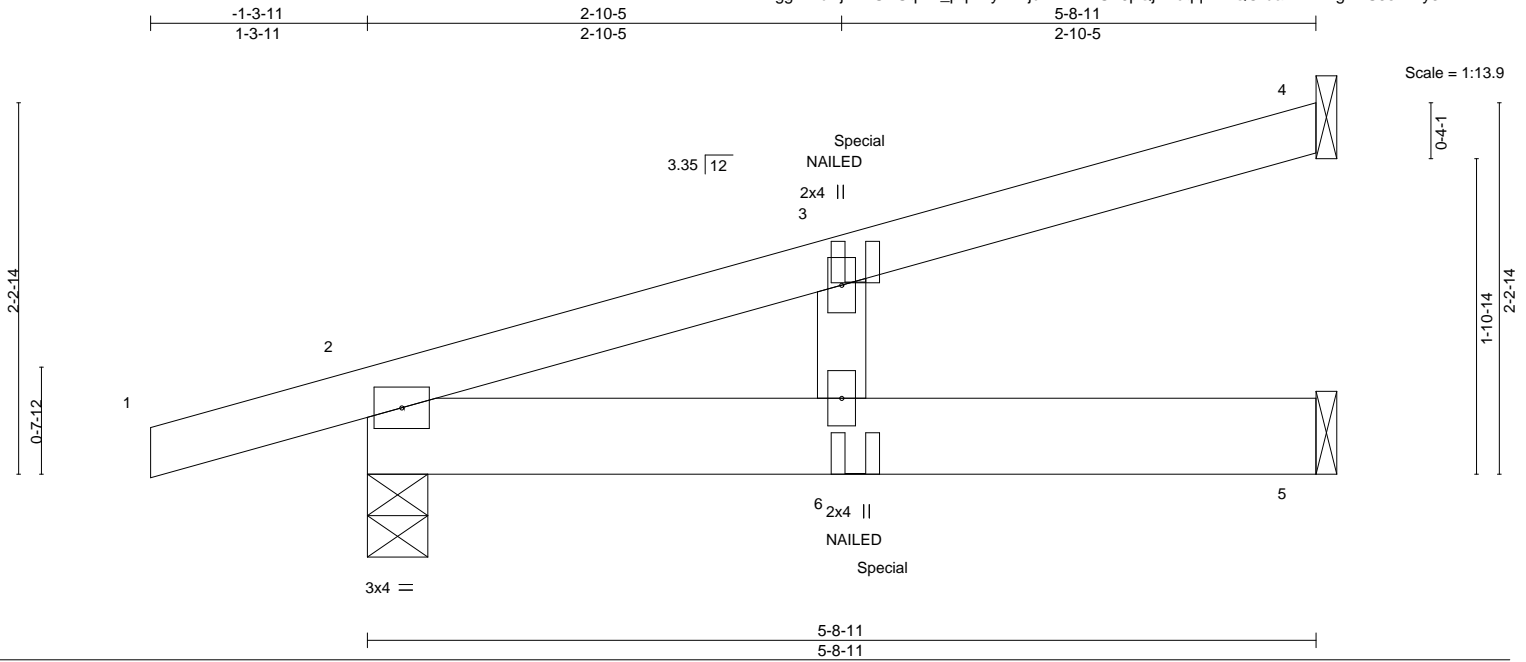
Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|                          |              |                                   |          |          |                       |           |
|--------------------------|--------------|-----------------------------------|----------|----------|-----------------------|-----------|
| Job<br>2745269           | Truss<br>CJ5 | Truss Type<br>Diagonal Hip Girder | Qty<br>1 | Ply<br>1 | Summit/25 Woodside/MO | I44187982 |
| Job Reference (optional) |              |                                   |          |          |                       |           |

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| LOADING (psf) | SPACING-             | 2-0-0 | CSI.      | DEFL.    | in    | (loc) | I/defl | L/d | PLATES        | GRIP     |
|---------------|----------------------|-------|-----------|----------|-------|-------|--------|-----|---------------|----------|
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.24   | Vert(LL) | -0.03 | 6     | >999   | 240 | MT20          | 197/144  |
| TCDL 20.0     | Lumber DOL           | 1.15  | BC 0.38   | Vert(CT) | -0.06 | 6     | >999   | 180 |               |          |
| BCLL 0.0 *    | Rep Stress Incr      | NO    | WB 0.03   | Horz(CT) | 0.01  | 4     | n/a    | n/a |               |          |
| BCDL 10.0     | Code IRC2018/TPI2014 |       | Matrix-MP |          |       |       |        |     | Weight: 19 lb | FT = 20% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x6 SPF No.2  
WEBS 2x4 SPF No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 5-8-11 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (lb/size) 4=136/Mechanical, 2=447/0-4-6, 5=166/Mechanical  
Max Horz 2=76(LC 21)  
Max Uplift 4=-36(LC 8), 2=-78(LC 4), 5=-8(LC 8)

**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=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 36 lb uplift at joint 4, 78 lb uplift at joint 2 and 8 lb uplift at joint 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.
- 7) "NAILED" indicates 2-12d (0.148"x3.25") toe-nails per NDS guidelines.
- 8) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 24 lb down and 30 lb up at 3-1-6 on top chord, and 1 lb down and 1 lb up at 3-1-6 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- 9) 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 + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-4=-90, 5-7=-20  
Concentrated Loads (lb)  
Vert: 6=-9(F=1, B=-9)



January 4, 2021

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**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**



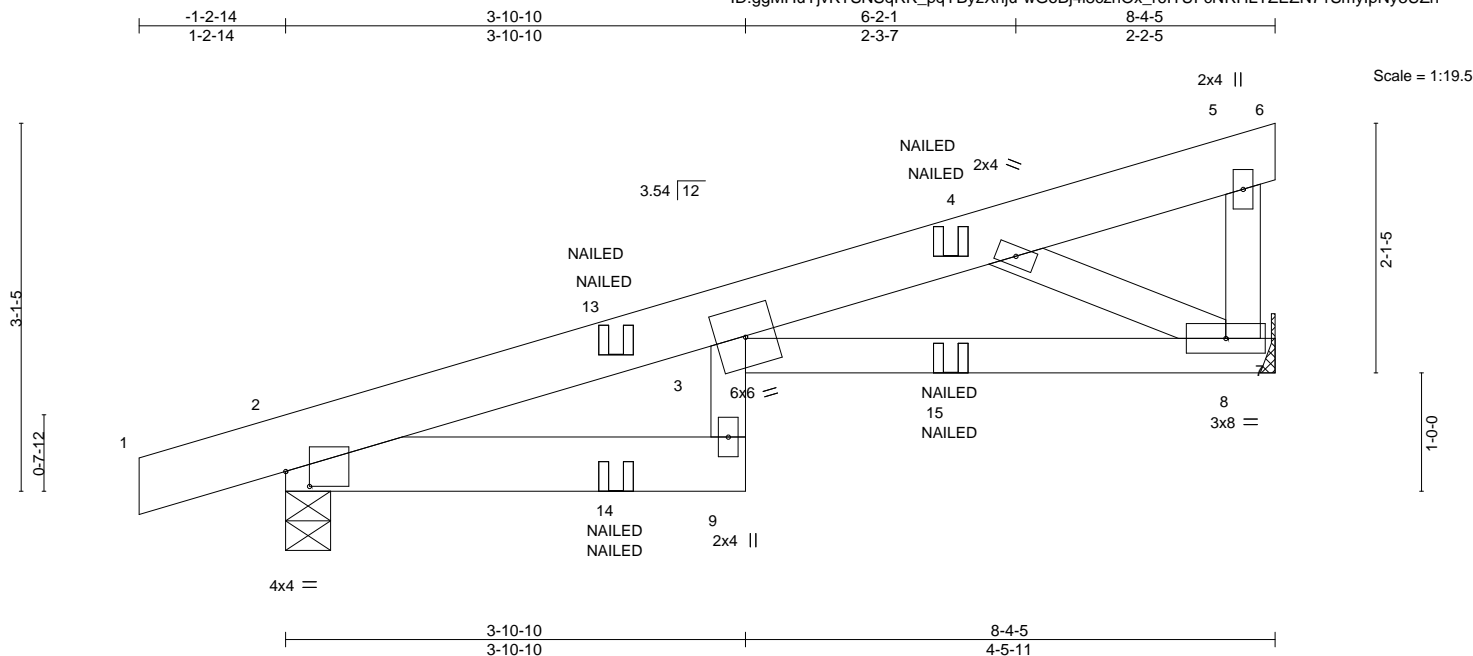
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|         |       |                     |     |     |                          |           |
|---------|-------|---------------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type          | Qty | Ply | Summit/25 Woodside/MO    | 144187983 |
| 2745269 | CJ6   | Diagonal Hip Girder | 1   | 1   | Job Reference (optional) |           |

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| Plate Offsets (X,Y)-- [2:0-2-7,0-1-8] |       |                      |      |           |      |                           |       |   |      |             |               |          |
|---------------------------------------|-------|----------------------|------|-----------|------|---------------------------|-------|---|------|-------------|---------------|----------|
| LOADING (psf)                         |       | SPACING- 2-0-0       |      | CSI.      |      | DEFL. in (loc) l/defl L/d |       |   |      | PLATES GRIP |               |          |
| TCLL                                  | 25.0  | Plate Grip DOL       | 1.15 | TC        | 1.00 | Vert(LL)                  | -0.12 | 9 | >823 | 240         | MT20          | 197/144  |
| TCDL                                  | 20.0  | Lumber DOL           | 1.15 | BC        | 0.77 | Vert(CT)                  | -0.25 | 9 | >386 | 180         |               |          |
| BCLL                                  | 0.0 * | Rep Stress Incr      | NO   | WB        | 0.16 | Horz(CT)                  | 0.11  | 8 | n/a  | n/a         |               |          |
| BCDL                                  | 10.0  | Code IRC2018/TPI2014 |      | Matrix-MP |      |                           |       |   |      |             | Weight: 35 lb | FT = 20% |

#### LUMBER-

TOP CHORD 2x6 SPF No.2  
 BOT CHORD 2x4 SPF No.2 \*Except\*  
 2-9: 2x6 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 or 10-0-0 oc bracing, Except:  
 6-0-0 oc bracing: 2-9.

#### REACTIONS.

(size) 8=Mechanical, 2=0-4-9  
 Max Horz 2=91(LC 5)  
 Max Uplift 8=-99(LC 8), 2=-108(LC 4)  
 Max Grav 8=555(LC 1), 2=609(LC 1)

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

TOP CHORD 3-4=-954/175  
 BOT CHORD 3-8=-201/1037  
 WEBS 4-8=-1124/233

#### NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 8 except (jt=lb) 2=108.
- 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.
- 7) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidelines.
- 8) 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 + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
- Uniform Loads (plf)  
 Vert: 1-3=-90, 3-5=-90, 5-6=-40, 9-10=-20, 3-7=-20
- Concentrated Loads (lb)  
 Vert: 14=2(F=1, B=1) 15=-147(F=-74, B=-74)



January 4, 2021

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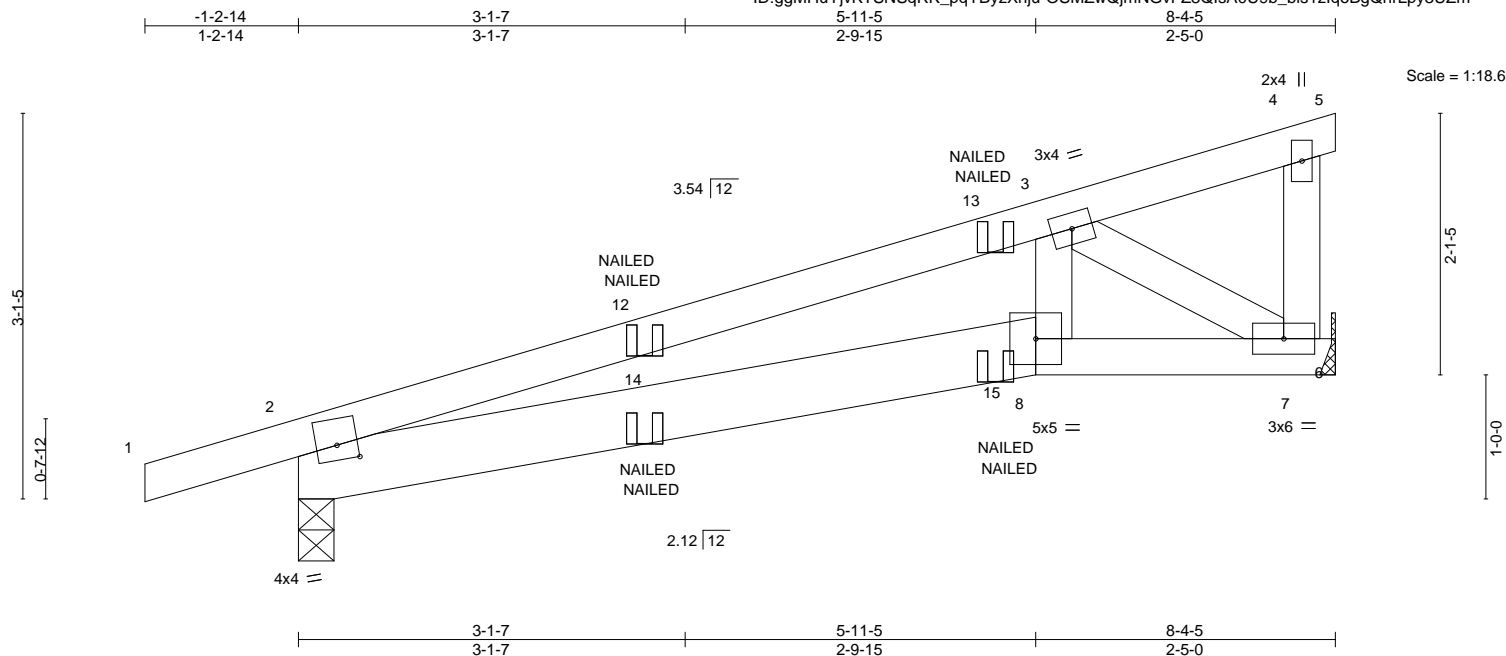
16023 Swingley Ridge Rd  
 Chesterfield, MO 63017

|         |       |                     |     |     |                          |           |
|---------|-------|---------------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type          | Qty | Ply | Summit/25 Woodside/MO    | 144187984 |
| 2745269 | CJ7   | Diagonal Hip Girder | 1   | 1   | Job Reference (optional) |           |

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| Plate Offsets (X,Y)-- [2:0-2-0,0-1-7] |       |                       |      |             |      |                                  |       |      |      |               |               |          |
|---------------------------------------|-------|-----------------------|------|-------------|------|----------------------------------|-------|------|------|---------------|---------------|----------|
| <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                                  | 25.0  | Plate Grip DOL        | 1.15 | TC          | 0.44 | Vert(LL)                         | -0.01 | 8-11 | >999 | 240           | MT20          | 197/144  |
| TCDL                                  | 20.0  | Lumber DOL            | 1.15 | BC          | 0.29 | Vert(CT)                         | -0.04 | 8-11 | >999 | 180           |               |          |
| BCLL                                  | 0.0 * | Rep Stress Incr       | NO   | WB          | 0.14 | Horz(CT)                         | 0.01  | 7    | n/a  | n/a           |               |          |
| BCDL                                  | 10.0  | Code IRC2018/TPI2014  |      | Matrix-MP   |      |                                  |       |      |      |               | Weight: 30 lb | FT = 20% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
 BOT CHORD 2x4 SPF No.2 \*Except\*  
 2-8: 2x6 SPF No.2  
 WEBS 2x4 SPF No.2

#### BRACING-

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

#### REACTIONS.

(size) 7=Mechanical, 2=0-3-7  
 Max Horz 2=92(LC 5)  
 Max Uplift 7=77(LC 8), 2=97(LC 4)  
 Max Grav 7=501(LC 1), 2=585(LC 1)

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

TOP CHORD 2-3=-945/137  
 BOT CHORD 2-8=-154/863, 7-8=-148/805  
 WEBS 3-8=0/278, 3-7=-927/188

#### NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 7, 2.
- 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) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidelines.
- 9) 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 + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15  
 Uniform Loads (plf)  
 Vert: 1-4=-90, 4-5=-40, 8-9=-20, 6-8=-20  
 Concentrated Loads (lb)  
 Vert: 13=-36(F=-18, B=-18) 14=2(F=1, B=1) 15=-35(F=-18, B=-18)



January 4, 2021

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**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**



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 Chesterfield, MO 63017

|         |       |                     |     |     |                          |           |
|---------|-------|---------------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type          | Qty | Ply | Summit/25 Woodside/MO    | I44187985 |
| 2745269 | CJ8   | DIAGONAL HIP GIRDER | 2   | 1   | Job Reference (optional) |           |

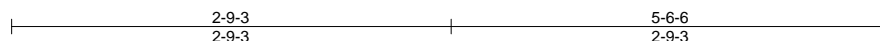
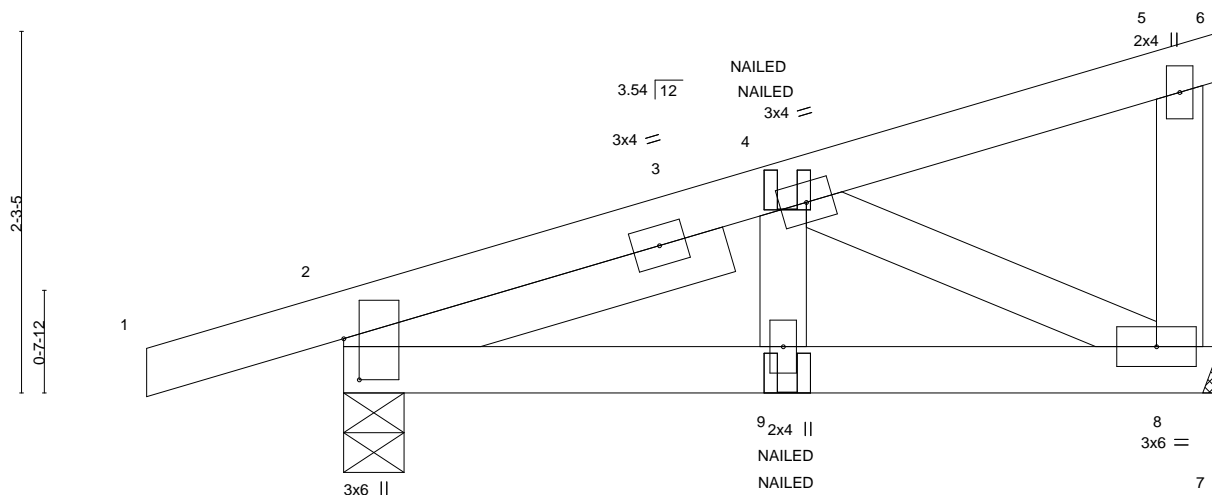
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Scale = 1:14.5



|                       |       |                      |  |           |  |                           |  |                        |  |
|-----------------------|-------|----------------------|--|-----------|--|---------------------------|--|------------------------|--|
| Plate Offsets (X,Y)-- |       | [2:0-3-2,0-1-3]      |  |           |  |                           |  |                        |  |
| LOADING (psf)         |       | SPACING- 2-0-0       |  | CSI.      |  | DEFL. in (loc) l/defl L/d |  | PLATES GRIP            |  |
| TCLL                  | 25.0  | Plate Grip DOL 1.15  |  | TC 0.15   |  | Vert(LL) -0.00 9 >999 240 |  | MT20 197/144           |  |
| TCDL                  | 20.0  | Lumber DOL 1.15      |  | BC 0.12   |  | Vert(CT) -0.01 9 >999 180 |  |                        |  |
| BCLL                  | 0.0 * | Rep Stress Incr NO   |  | WB 0.06   |  | Horz(CT) 0.00 8 n/a n/a   |  |                        |  |
| BCDL                  | 10.0  | Code IRC2018/TPI2014 |  | Matrix-MP |  |                           |  | Weight: 23 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 2-6-0

#### BRACING-

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

#### REACTIONS.

(size) 2=0-4-9, 8=Mechanical  
 Max Horz 2=78(LC 7)  
 Max Uplift 2=77(LC 4), 8=40(LC 8)  
 Max Grav 2=413(LC 1), 8=292(LC 1)

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

TOP CHORD 2-4=-324/34  
 BOT CHORD 2-9=-37/329, 8-9=-37/329  
 WEBS 4-8=-363/59

#### NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 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.
- 7) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidelines.
- 8) 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 + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15  
 Uniform Loads (plf)  
 Vert: 1-5=-90, 5-6=-40, 7-10=-20  
 Concentrated Loads (lb)  
 Vert: 9=2(F=1, B=1)



January 4, 2021

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



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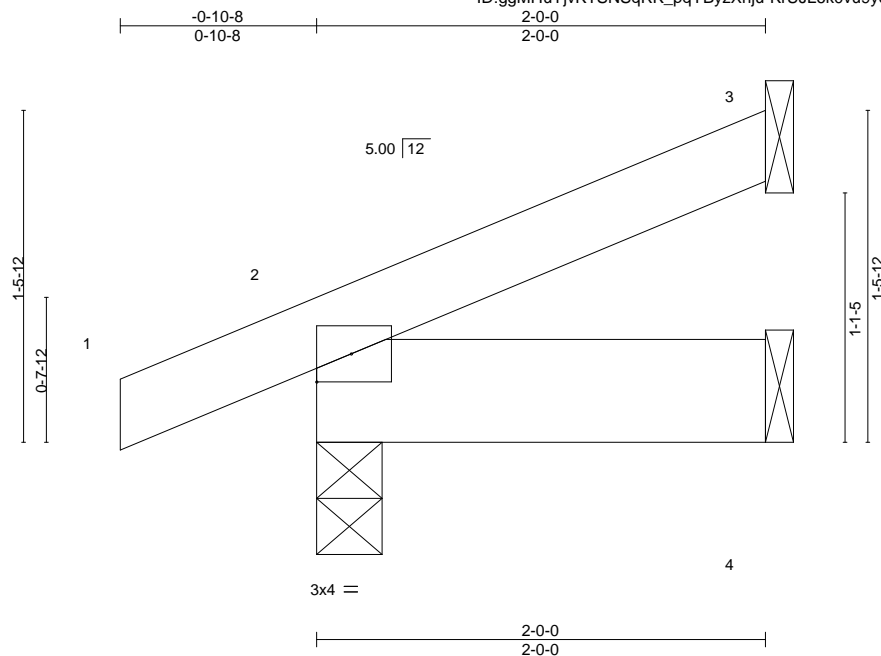
|         |       |            |     |     |                          |           |
|---------|-------|------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type | Qty | Ply | Summit/25 Woodside/MO    | 144187986 |
| 2745269 | J1    | Jack-Open  | 3   | 1   | Job Reference (optional) |           |

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Valley Center, KS - 67147,

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Scale = 1:10.3

| LOADING (psf) | SPACING-             | 2-0-0 | CSI.      | DEFL.    | in    | (loc) | I/defl | L/d | PLATES       | GRIP     |
|---------------|----------------------|-------|-----------|----------|-------|-------|--------|-----|--------------|----------|
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.07   | Vert(LL) | -0.00 | 7     | >999   | 240 | MT20         | 197/144  |
| TCDL 20.0     | Lumber DOL           | 1.15  | BC 0.02   | Vert(CT) | -0.00 | 7     | >999   | 180 |              |          |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.00   | Horz(CT) | 0.00  | 3     | n/a    | n/a |              |          |
| BCDL 10.0     | Code IRC2018/TPI2014 |       | Matrix-MP |          |       |       |        |     | Weight: 7 lb | FT = 20% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x6 SPF No.2

#### BRACING-

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

#### REACTIONS.

(size) 3=Mechanical, 2=0-3-8, 4=Mechanical  
Max Horz 2=42(LC 12)  
Max Uplift 3=22(LC 12), 2=23(LC 8)  
Max Grav 3=63(LC 1), 2=205(LC 1), 4=42(LC 3)

**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=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone 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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3'-6" tall by 2'-0" wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 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.



January 4, 2021

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

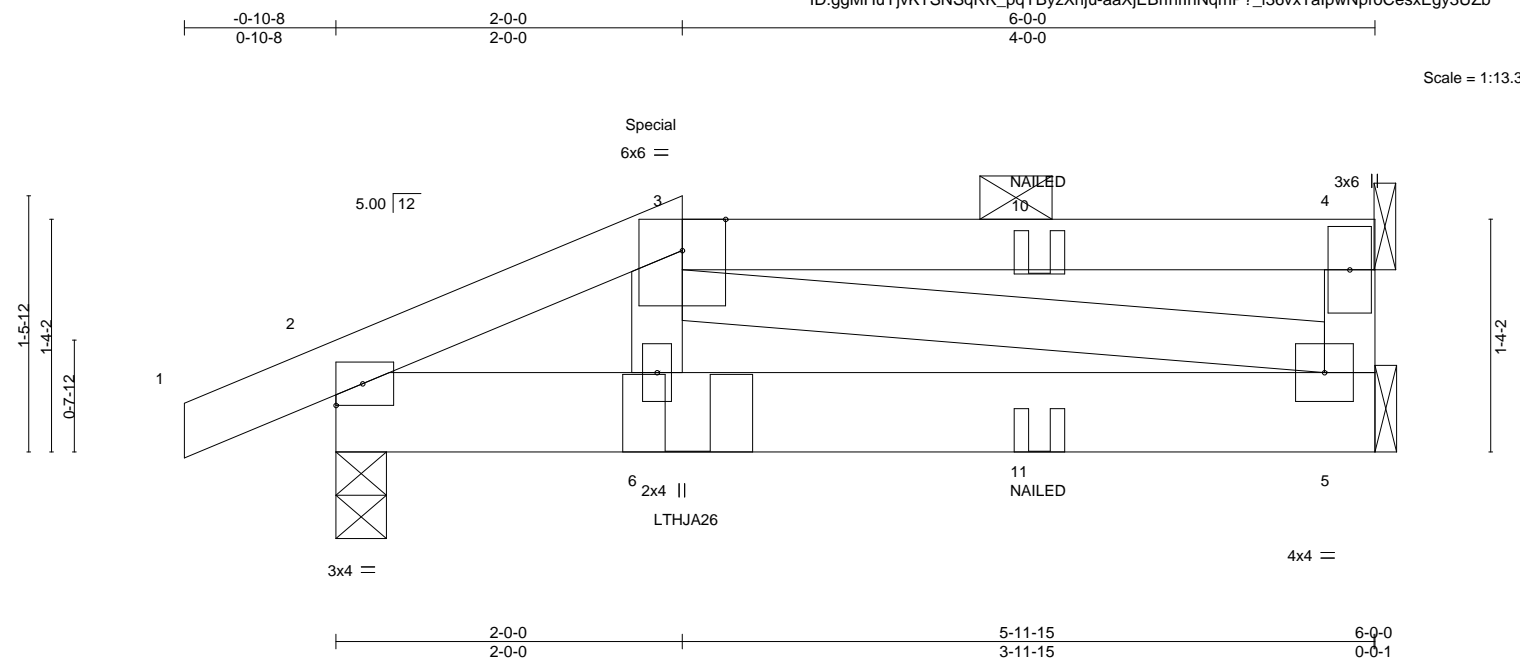
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall 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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Chesterfield, MO 63017



|                      |                       |             |                                  |               |             |
|----------------------|-----------------------|-------------|----------------------------------|---------------|-------------|
| <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 25.0            | Plate Grip DOL 1.15   | TC 0.40     | Vert(LL) -0.00 6 >999 240        | MT20          | 197/144     |
| TCDL 20.0            | Lumber DOL 1.15       | BC 0.14     | Vert(CT) -0.01 5-6 >999 180      |               |             |
| BCLL 0.0 *           | Rep Stress Incr NO    | WB 0.12     | Horz(CT) 0.00 4 n/a n/a          |               |             |
| BCDL 10.0            | Code IRC2018/TPI2014  | Matrix-MP   |                                  | Weight: 25 lb | FT = 20%    |

**LUMBER-**

|           |              |
|-----------|--------------|
| TOP CHORD | 2x4 SPF No.2 |
| BOT CHORD | 2x6 SPF No.2 |
| WEBS      | 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: 3-4. |
| BOT CHORD | Rigid ceiling directly applied or 10-0-0 oc bracing.   |

**REACTIONS.**

(size) 5=Mechanical, 2=0-3-8, 4=Mechanical  
 Max Horz 2=41(LC 7)  
 Max Uplift 2=44(LC 4), 4=48(LC 4)  
 Max Grav 5=160(LC 3), 2=421(LC 1), 4=173(LC 1)

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

TOP CHORD 2-3=-446/15  
BOT CHORD 2-6=-27/385, 5-6=-34/383  
WEBS 3-5=-396/27

**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=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Provide adequate drainage to prevent water ponding.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 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) 2, 4.
- 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 10) Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.
- 11) Use Simpson Strong-Tie LTHJA26 (LTHJA26 on 1 ply, Left Hand Hip) or equivalent at 2-0-6 from the left end to connect truss(es) to front face of bottom chord.
- 12) Fill all nail holes where hanger is in contact with lumber.
- 13) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidelines.
- 14) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 60 lb down and 61 lb up at 2-0-0 on top chord. The design/selection of such connection device(s) is the responsibility of others.
- 15) 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 + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15



January 4, 2021

Continued on page 2



**WARNING – Velly design parameters are listed below and included within key reference 1. See MIF-1419.1 for 3/15/2020 per ONE USE.**  
 Design valid for use only with MITEK® connectors. This design is based only upon parameters shown, and is for the 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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|                          |       |                 |     |     |                       |
|--------------------------|-------|-----------------|-----|-----|-----------------------|
| Job                      | Truss | Truss Type      | Qty | Ply | Summit/25 Woodside/MO |
| 2745269                  | J2    | Half Hip Girder | 1   | 1   | I44187987             |
| Job Reference (optional) |       |                 |     |     |                       |

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

8.240 s Mar 9 2020 MiTek Industries, Inc. Thu Dec 31 09:30:32 2020 Page 2  
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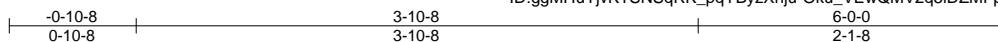
**LOAD CASE(S)** Standard  
Uniform Loads (plf)  
Vert: 1-3=-90, 3-4=-90, 5-7=-20  
Concentrated Loads (lb)  
Vert: 6=-18(F) 11=-9(F)

|         |       |            |     |     |                          |           |
|---------|-------|------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type | Qty | Ply | Summit/25 Woodside/MO    | 144187988 |
| 2745269 | J3    | Half Hip   | 1   | 1   | Job Reference (optional) |           |

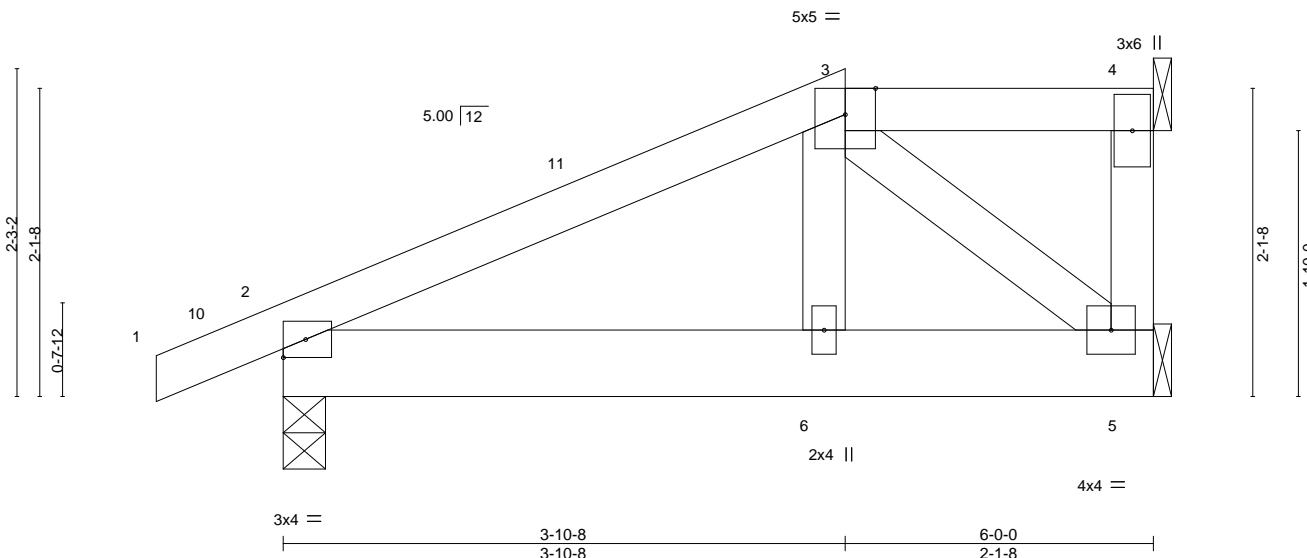
Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Thu Dec 31 09:30:38 2020 Page 1

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Scale: 3/4"=1'



| LOADING (psf) | SPACING-             | 2-0-0 | CSI.      | DEFL.    | in    | (loc) | I/defl | L/d | PLATES        | GRIP     |
|---------------|----------------------|-------|-----------|----------|-------|-------|--------|-----|---------------|----------|
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.18   | Vert(LL) | -0.01 | 6-9   | >999   | 240 | MT20          | 197/144  |
| TCDL 20.0     | Lumber DOL           | 1.15  | BC 0.11   | Vert(CT) | -0.01 | 6-9   | >999   | 180 |               |          |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.05   | Horz(CT) | 0.00  | 2     | n/a    | n/a |               |          |
| BCDL 10.0     | Code IRC2018/TPI2014 |       | Matrix-AS |          |       |       |        |     | Weight: 25 lb | FT = 20% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 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: 3-4.  
BOT CHORD Rigid ceiling directly applied.

#### REACTIONS.

(size) 2=0-3-8, 5=Mechanical, 4=Mechanical  
Max Horz 2=71(LC 11)  
Max Uplift 2=45(LC 12), 5=-7(LC 9), 4=-25(LC 8)  
Max Grav 2=407(LC 1), 5=227(LC 1), 4=89(LC 1)

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

TOP CHORD 2-3=-340/86  
WEBS 3-5=-327/151

#### 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=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 3-10-8, Exterior(2E) 3-10-8 to 5-10-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Provide adequate drainage to prevent water ponding.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 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) 2, 5, 4.
- 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 9) 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.
- 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 11) Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.



January 4, 2021

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component



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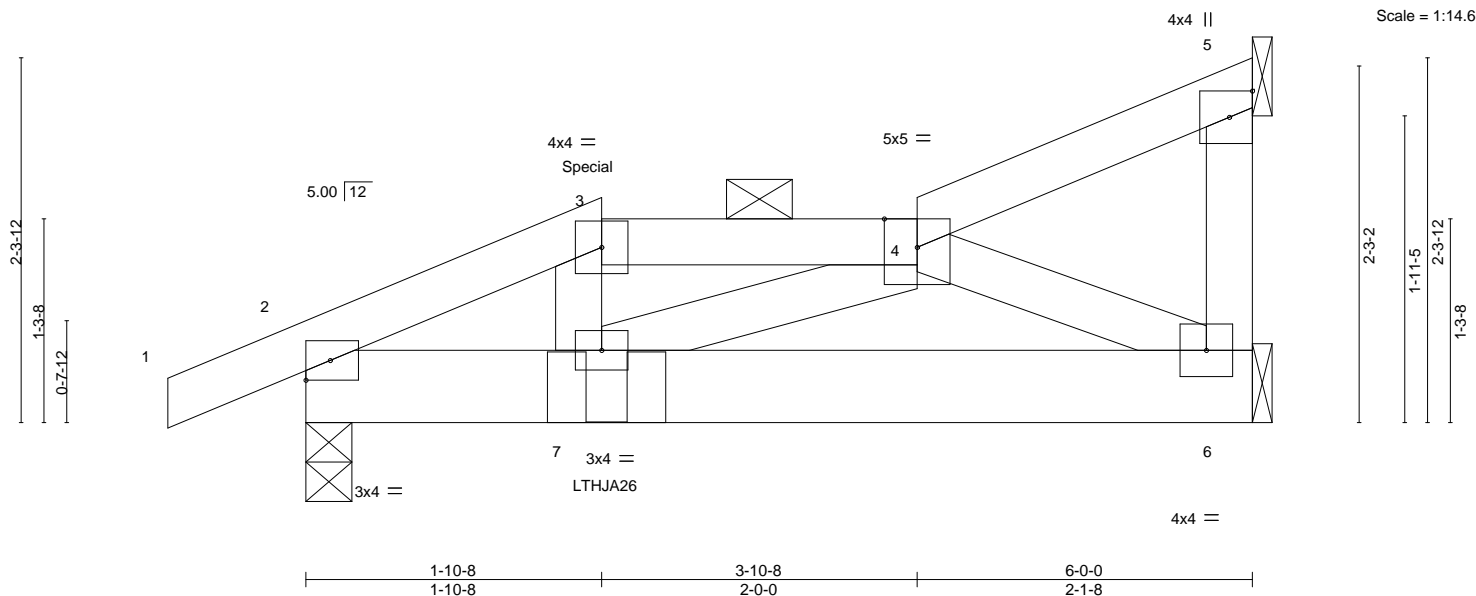
|         |       |                     |     |     |                          |           |
|---------|-------|---------------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type          | Qty | Ply | Summit/25 Woodside/MO    | I44187989 |
| 2745269 | J4    | Roof Special Girder | 1   | 1   | Job Reference (optional) |           |

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

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|         |        |        |       |
|---------|--------|--------|-------|
| -0-10-8 | 1-10-8 | 3-10-8 | 6-0-0 |
| 0-10-8  | 1-10-8 | 2-0-0  | 2-1-8 |



| LOADING (psf) | SPACING-             | 2-0-0 | CSI.      | DEFL.    | in    | (loc) | I/defl | L/d | PLATES        | GRIP     |
|---------------|----------------------|-------|-----------|----------|-------|-------|--------|-----|---------------|----------|
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.10   | Vert(LL) | -0.00 | 6-7   | >999   | 240 | MT20          | 197/144  |
| TCDL 20.0     | Lumber DOL           | 1.15  | BC 0.13   | Vert(CT) | -0.01 | 6-7   | >999   | 180 |               |          |
| BCLL 0.0 *    | Rep Stress Incr      | NO    | WB 0.06   | Horz(CT) | -0.00 | 5     | n/a    | n/a |               |          |
| BCDL 10.0     | Code IRC2018/TPI2014 |       | Matrix-MP |          |       |       |        |     | Weight: 26 lb | FT = 20% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x6 SPF No.2  
WEBS 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: 3-4.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS.

(size) 6=Mechanical, 2=0-3-8, 5=Mechanical  
Max Horz 2=77(LC 7)  
Max Uplift 6=21(LC 8), 2=59(LC 8), 5=24(LC 8)  
Max Grav 6=235(LC 1), 2=425(LC 1), 5=89(LC 1)

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

TOP CHORD 2-3=-458/36, 3-4=-397/45  
BOT CHORD 2-7=-44/399, 6-7=-65/380  
WEBS 4-6=-424/91

#### NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Provide adequate drainage to prevent water ponding.
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 5) Refer to girder(s) for truss to truss connections.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 6, 2, 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.
- 8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 9) Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.
- 10) Use Simpson Strong-Tie LTHJA26 (LTHJA26 on 1 ply, Right Hand Hip) or equivalent at 1-10-14 from the left end to connect truss(es) to back face of bottom chord.
- 11) Fill all nail holes where hanger is in contact with lumber.
- 12) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 56 lb down and 58 lb up at 1-10-8 on top chord. The design/selection of such connection device(s) is the responsibility of others.
- 13) 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 + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-3=-90, 3-4=-90, 4-5=-90, 6-8=-20



January 4, 2021

Continued on page 2

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|                          |       |                     |     |     |                       |
|--------------------------|-------|---------------------|-----|-----|-----------------------|
| Job                      | Truss | Truss Type          | Qty | Ply | Summit/25 Woodside/MO |
| 2745269                  | J4    | Roof Special Girder | 1   | 1   | I44187989             |
| Job Reference (optional) |       |                     |     |     |                       |

**LOAD CASE(S)** Standard  
Concentrated Loads (lb)  
Vert: 7=-25(B)



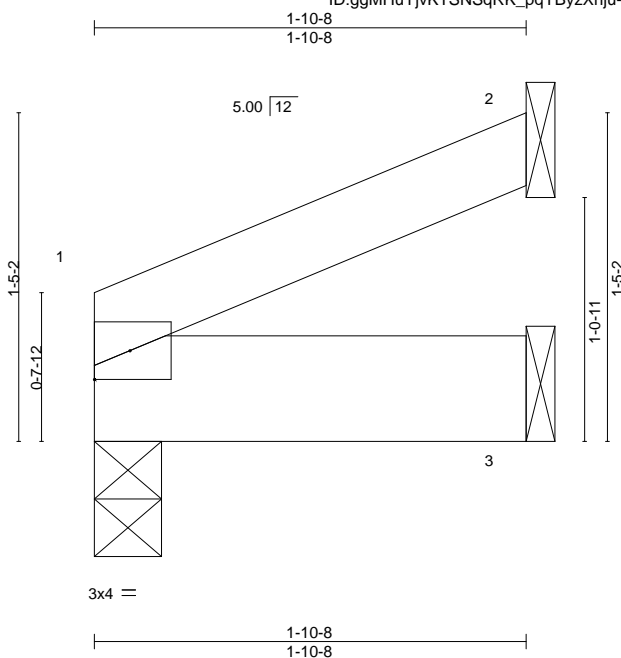
|                          |       |            |     |     |                       |
|--------------------------|-------|------------|-----|-----|-----------------------|
| Job                      | Truss | Truss Type | Qty | Ply | Summit/25 Woodside/MO |
| 2745269                  | J5    | Jack-Open  | 1   | 1   | I44187990             |
| Job Reference (optional) |       |            |     |     |                       |

Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

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Scale = 1:10.0

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

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x6 SPF No.2

#### BRACING-

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

#### REACTIONS.

(size) 1=0-3-8, 2=Mechanical, 3=Mechanical  
Max Horz 1=28(LC 12)  
Max Uplift 1=-2(LC 12), 2=-21(LC 12), 3=-1(LC 12)  
Max Grav 1=102(LC 1), 2=62(LC 1), 3=45(LC 3)

**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=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone 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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 2, 3.
- 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.



January 4, 2021

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**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

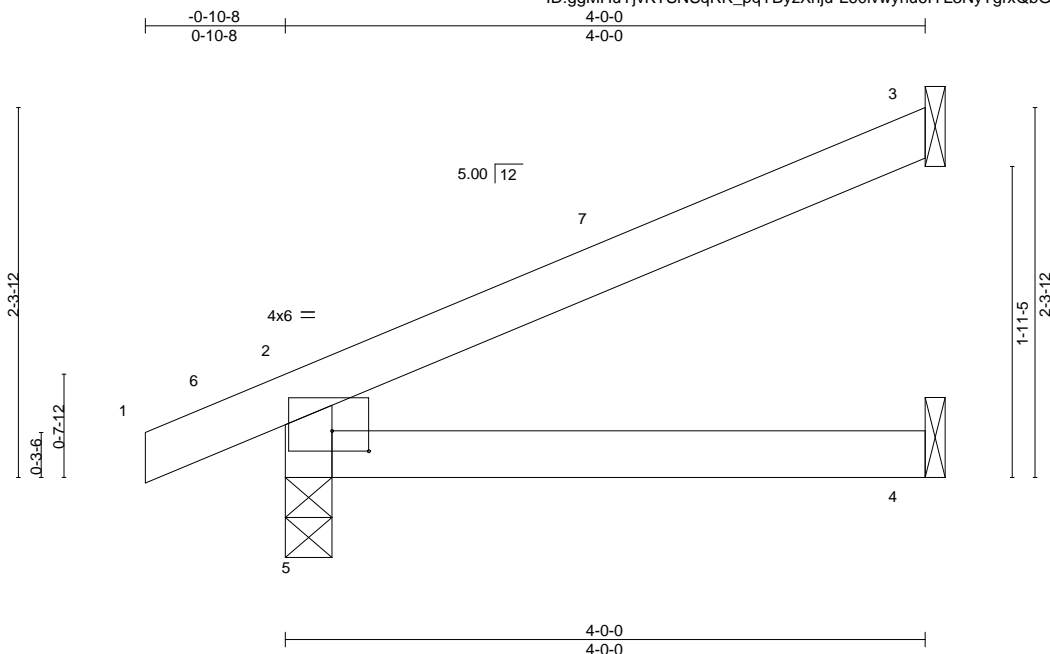
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|  |             |                         |          |          |                                    |
|--|-------------|-------------------------|----------|----------|------------------------------------|
| Job<br>2745269   | Truss<br>J6 | Truss Type<br>Jack-Open | Qty<br>9 | Ply<br>1 | Summit/25 Woodside/MO<br>144187991 |
| Builders FirstSource (Valley Center), Valley Center, KS - 67147, |             |                         |          |          |                                    |

8.240 s Mar 9 2020 MiTek Industries, Inc. Thu Dec 31 09:30:40 2020 Page 1  
ID:ggMHuYjvKTSNSqRK\_pqYByzXhju-L60lvwyhu6iYL3NyTgrxQbGu5XYqFRd\_2toMWDy3UZT



|                       |                      |   |                             |
|-----------------------|----------------------|---|-----------------------------|
| Plate Offsets (X,Y)-- |                      | [2:0-1-12,0-0-12], [2:0-2-12,0-1-8], [5:0-0-0,0-1-12] |                             |
| <b>LOADING</b> (psf)  | <b>SPACING-</b>      | <b>CSI.</b>   | <b>DEFL.</b>                |
| TCLL 25.0             | Plate Grip DOL 1.15  | TC 0.24   | in (loc) l/defl L/d         |
| TCDL 20.0             | Lumber DOL 1.15      | BC 0.13   | Vert(LL) -0.01 4-5 >999 240 |
| BCLL 0.0 *            | Rep Stress Incr YES  | WB 0.00   | Vert(CT) -0.02 4-5 >999 180 |
| BCDL 10.0             | Code IRC2018/TPI2014 | Matrix-AS   | Horz(CT) 0.01 3 n/a n/a     |
|                       |                      | Weight: 11 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.

#### REACTIONS.

(size) 3=Mechanical, 4=Mechanical, 5=0-3-8  
Max Horz 5=66(LC 12)  
Max Uplift 3=52(LC 12), 5=28(LC 12)  
Max Grav 3=150(LC 1), 4=73(LC 3), 5=313(LC 1)

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

TOP CHORD 2-5=-284/150

#### NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 3-11-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Bearing at joint(s) 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 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.
- 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.



January 4, 2021

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16023 Swingley Ridge Rd  
Chesterfield, MO 63017

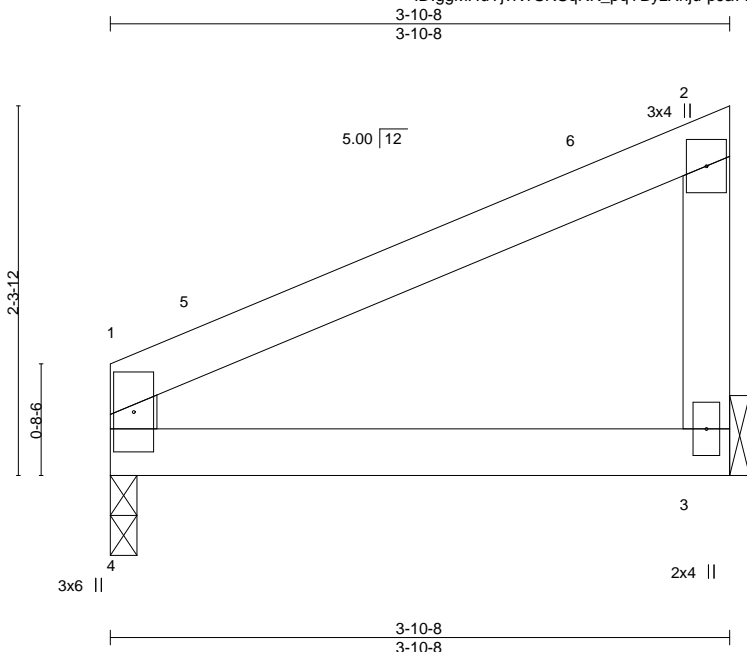
|         |       |            |     |     |                          |           |
|---------|-------|------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type | Qty | Ply | Summit/25 Woodside/MO    | 144187992 |
| 2745269 | J7    | Jack-Open  | 1   | 1   | Job Reference (optional) |           |

Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

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Scale = 1:14.4

| LOADING (psf) | SPACING-             | 2-0-0 | CSI.     | DEFL.    | in (loc) | L/defl | L/d  | PLATES        | GRIP     |
|---------------|----------------------|-------|----------|----------|----------|--------|------|---------------|----------|
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.21  | Vert(LL) | -0.01    | 3-4    | >999 | 240           | MT20     |
| TCDL 20.0     | Lumber DOL           | 1.15  | BC 0.11  | Vert(CT) | -0.01    | 3-4    | >999 | 180           | 197/144  |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.00  | Horz(CT) | 0.00     | 3      | n/a  | n/a           |          |
| BCDL 10.0     | Code IRC2018/TPI2014 |       | Matrix-R |          |          |        |      |               |          |
|               |                      |       |          |          |          |        |      | Weight: 12 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 or 3-10-8 oc purlins, except end verticals.

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

#### REACTIONS.

(size) 4=0-2-0, 3=Mechanical

Max Horz 4=74(LC 9)

Max Uplift 4=14(LC 12), 3=31(LC 12)

Max Grav 4=197(LC 1), 3=197(LC 1)

**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=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) 0-1-12 to 3-1-12, Exterior(2N) 3-1-12 to 3-8-12 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
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 4) Gable studs spaced at 1-4-0 oc.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 7) Refer to girder(s) for truss to truss connections.
- 8) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 4.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4, 3.
- 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.



January 4, 2021

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**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

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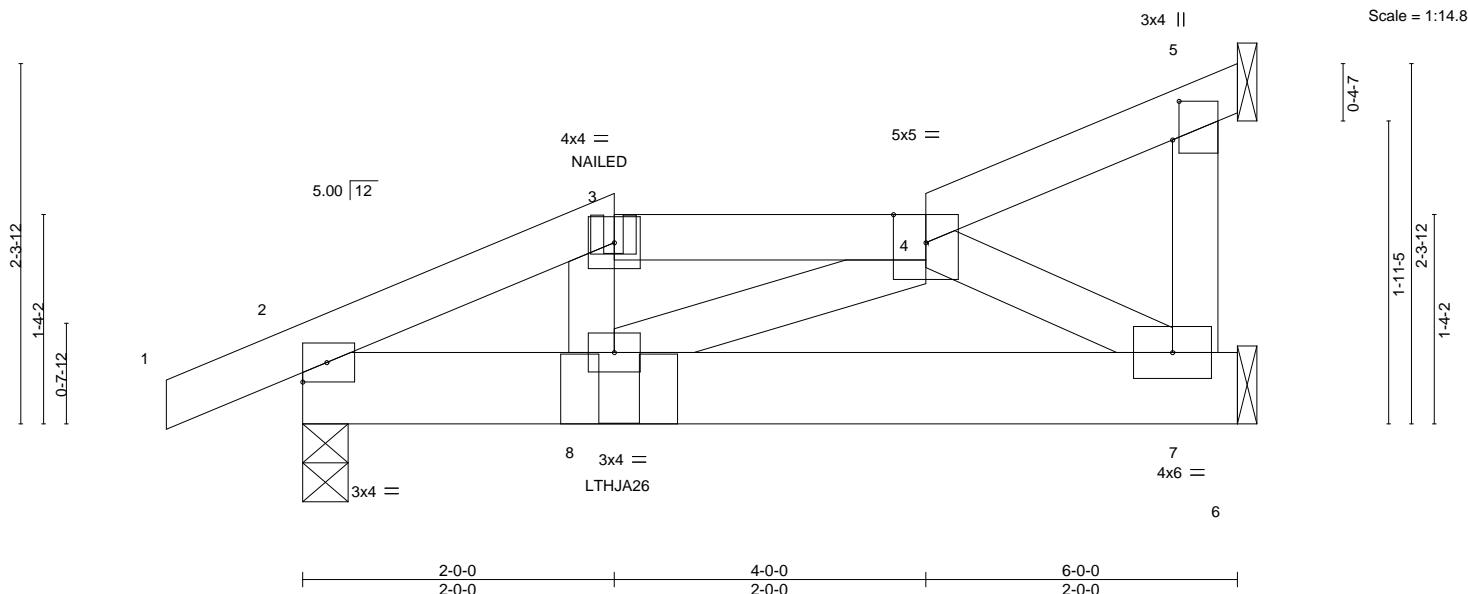
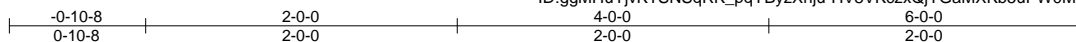


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|  |       |                     |     |     |                       |                          |
|--|-------|---------------------|-----|-----|-----------------------|--------------------------|
| Job  | Truss | Truss Type          | Qty | Ply | Summit/25 Woodside/MO | I44187993                |
| 2745269  | J8    | Roof Special Girder | 1   | 1   |                       |                          |
| Builders FirstSource (Valley Center), Valley Center, KS - 67147, |       |                     |     |     |                       | Job Reference (optional) |

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|                       |       |                      |  |           |  |                             |  |  |  |               |  |          |  |
|-----------------------|-------|----------------------|--|-----------|--|-----------------------------|--|--|--|---------------|--|----------|--|
| Plate Offsets (X,Y)-- |       | [5:0-3-0,0-0-8]      |  |           |  |                             |  |  |  |               |  |          |  |
| LOADING (psf)         |       | SPACING- 2-0-0       |  | CSI.      |  | DEFL. in (loc) l/defl L/d   |  |  |  | PLATES        |  | GRIP     |  |
| TCLL                  | 25.0  | Plate Grip DOL 1.15  |  | TC 0.10   |  | Vert(LL) -0.00 8 >999 240   |  |  |  | MT20          |  | 197/144  |  |
| TCDL                  | 20.0  | Lumber DOL 1.15      |  | BC 0.15   |  | Vert(CT) -0.01 7-8 >999 180 |  |  |  |               |  |          |  |
| BCLL                  | 0.0 * | Rep Stress Incr NO   |  | WB 0.06   |  | Horz(CT) -0.00 5 n/a n/a    |  |  |  |               |  |          |  |
| BCDL                  | 10.0  | Code IRC2018/TPI2014 |  | Matrix-MP |  |                             |  |  |  | Weight: 26 lb |  | FT = 20% |  |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x6 SPF No.2  
WEBS 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: 3-4.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS.

(size) 5=Mechanical, 7=Mechanical, 2=0-3-8  
Max Horz 2=74(LC 7)  
Max Uplift 5=-21(LC 5), 7=-34(LC 8), 2=-85(LC 8)  
Max Grav 5=78(LC 1), 7=279(LC 1), 2=488(LC 1)

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

TOP CHORD 2-3=-569/88, 3-4=-493/91  
BOT CHORD 2-8=-86/500, 7-8=-74/377  
WEBS 4-7=-438/105

#### NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Provide adequate drainage to prevent water ponding.
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 5) Refer to girder(s) for truss to truss connections.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 7, 2.
- 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) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 9) Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.
- 10) Use Simpson Strong-Tie LTHJA26 (LTHJA26 on 1 ply, Left Hand Hip) or equivalent at 2-0-6 from the left end to connect truss(es) to front face of bottom chord, skewed 0.0 deg.to the left, sloping 0.0 deg. down.
- 11) Fill all nail holes where hanger is in contact with lumber.
- 12) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidelines.
- 13) 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 + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-3=-90, 3-4=-90, 4-5=-90, 6-9=-20



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Continued on page 2

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|         |       |                     |     |     |                          |           |
|---------|-------|---------------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type          | Qty | Ply | Summit/25 Woodside/MO    | I44187993 |
| 2745269 | J8    | Roof Special Girder | 1   | 1   | Job Reference (optional) |           |

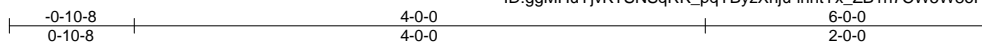
**LOAD CASE(S)** Standard  
 Concentrated Loads (lb)  
 Vert: 8=-131(F)

|         |       |            |     |     |                          |           |
|---------|-------|------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type | Qty | Ply | Summit/25 Woodside/MO    | 144187994 |
| 2745269 | J9    | Jack-Open  | 2   | 1   | Job Reference (optional) |           |

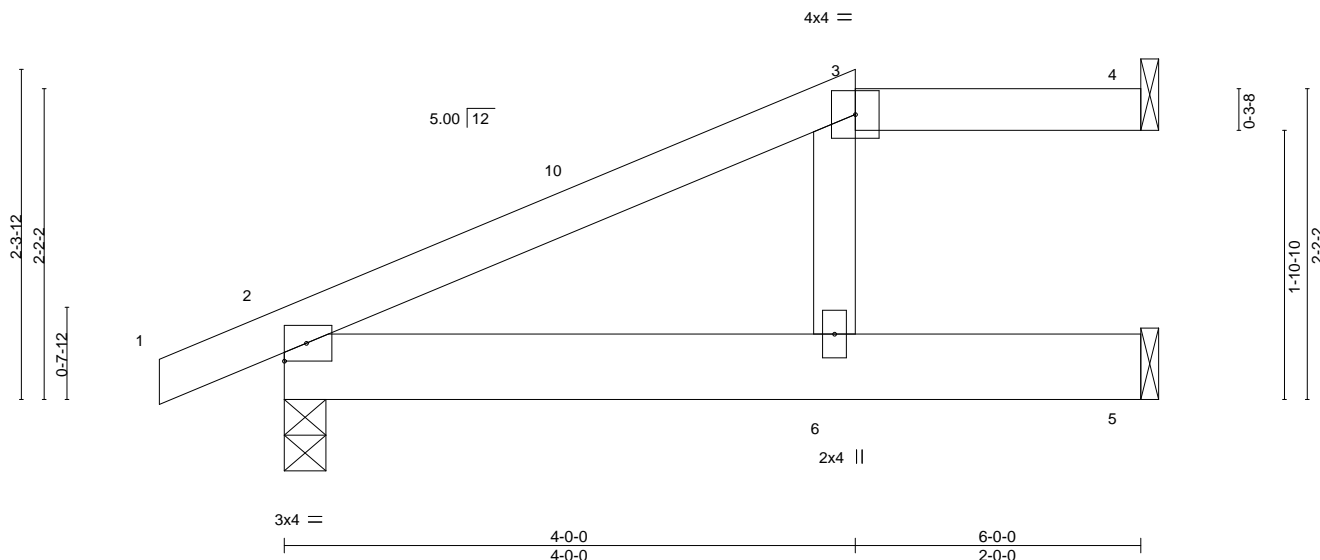
Builders FirstSource (Valley Center), Valley Center, KS - 67147,

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Scale: 3/4"=1'



| LOADING (psf) | SPACING-             | 2-0-0 | CSI.      | DEFL.    | in    | (loc) | I/defl | L/d | PLATES        | GRIP     |
|---------------|----------------------|-------|-----------|----------|-------|-------|--------|-----|---------------|----------|
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.25   | Vert(LL) | -0.04 | 6-9   | >999   | 240 | MT20          | 197/144  |
| TCDL 20.0     | Lumber DOL           | 1.15  | BC 0.41   | Vert(CT) | -0.09 | 6-9   | >825   | 180 |               |          |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.03   | Horz(CT) | 0.05  | 4     | n/a    | n/a |               |          |
| BCDL 10.0     | Code IRC2018/TPI2014 |       | Matrix-AS |          |       |       |        |     | Weight: 21 lb | FT = 20% |

**LUMBER-**  
TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x6 SPF No.2  
WEBS 2x4 SPF No.2

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

**REACTIONS.** (size) 4=Mechanical, 2=0-3-8, 5=Mechanical  
Max Horz 2=69(LC 12)  
Max Uplift 4=24(LC 8), 2=40(LC 12), 5=12(LC 12)  
Max Grav 4=87(LC 1), 2=411(LC 1), 5=234(LC 1)

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

#### 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=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 4-0-0, Exterior(2E) 4-0-0 to 5-11-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Provide adequate drainage to prevent water ponding.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 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.
- 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



January 4, 2021

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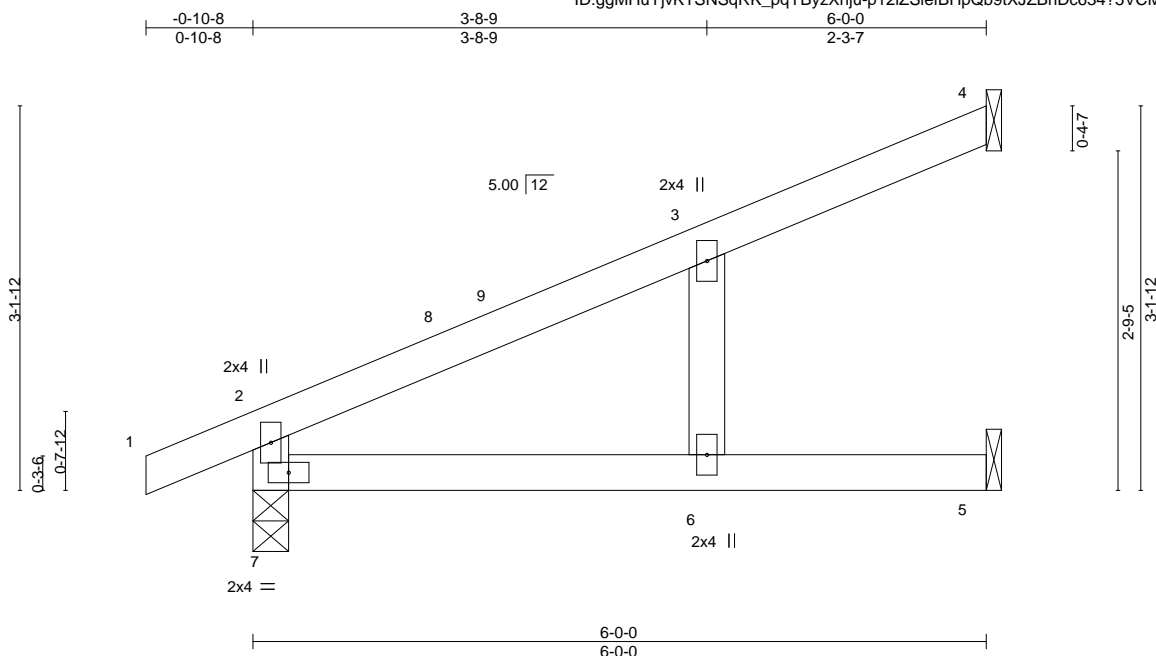
|         |       |            |     |     |                          |           |
|---------|-------|------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type | Qty | Ply | Summit/25 Woodside/MO    | 144187995 |
| 2745269 | J10   | Jack-Open  | 6   | 1   | Job Reference (optional) |           |

Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

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| LOADING (psf) | SPACING-             | 2-0-0 | CSI.      | DEFL.    | in    | (loc) | I/defl | L/d | PLATES        | GRIP     |
|---------------|----------------------|-------|-----------|----------|-------|-------|--------|-----|---------------|----------|
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.44   | Vert(LL) | 0.09  | 6-7   | >790   | 240 | MT20          | 197/144  |
| TCDL 20.0     | Lumber DOL           | 1.15  | BC 0.52   | Vert(CT) | -0.17 | 6-7   | >402   | 180 |               |          |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.02   | Horz(CT) | 0.04  | 4     | n/a    | n/a |               |          |
| BCDL 10.0     | Code IRC2018/TPI2014 |       | Matrix-AS |          |       |       |        |     | Weight: 18 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.

#### REACTIONS.

(size) 4=Mechanical, 5=Mechanical, 7=0-3-8  
Max Horz 7=97(LC 12)  
Max Uplift 4=45(LC 12), 5=15(LC 12), 7=33(LC 12)  
Max Grav 4=180(LC 1), 5=131(LC 1), 7=419(LC 1)

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

TOP CHORD 2-7=-319/131

#### NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 5-11-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) 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.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4, 5, 7.
- 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.



January 4, 2021

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|         |       |                     |     |     |                          |           |
|---------|-------|---------------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type          | Qty | Ply | Summit/25 Woodside/MO    | 144187996 |
| 2745269 | J11   | Roof Special Girder | 1   | 1   | Job Reference (optional) |           |

Builders FirstSource (Valley Center),

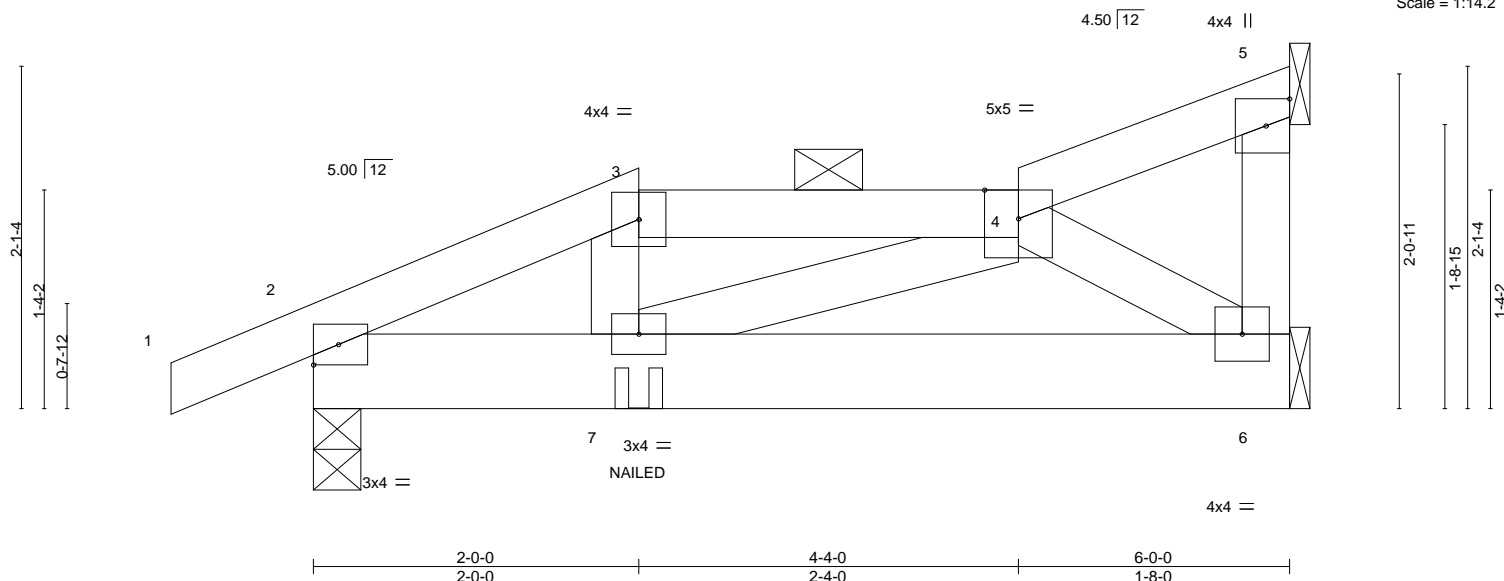
Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Thu Dec 31 09:30:25 2020 Page 1

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Scale = 1:14.2



| LOADING (psf) | SPACING-             | 2-0-0 | CSL       | DEFL.    | in    | (loc) | L/defl | L/d | PLATES        | GRIP     |
|---------------|----------------------|-------|-----------|----------|-------|-------|--------|-----|---------------|----------|
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.14   | Vert(LL) | -0.00 | 7     | >999   | 240 | MT20          | 197/144  |
| TCDL 20.0     | Lumber DOL           | 1.15  | BC 0.16   | Vert(CT) | -0.01 | 6-7   | >999   | 180 |               |          |
| BCLL 0.0 *    | Rep Stress Incr      | NO    | WB 0.06   | Horz(CT) | 0.00  | 6     | n/a    | n/a |               |          |
| BCDL 10.0     | Code IRC2018/TPI2014 |       | Matrix-MP |          |       |       |        |     | Weight: 26 lb | FT = 20% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
 BOT CHORD 2x6 SPF No.2  
 WEBS 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: 3-4.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS.

(size) 6=Mechanical, 2=0-3-8, 5=Mechanical  
 Max Horz 2=69(LC 7)  
 Max Uplift 6=40(LC 8), 2=88(LC 8), 5=19(LC 5)  
 Max Grav 6=286(LC 1), 2=490(LC 1), 5=68(LC 1)

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

TOP CHORD 2-3=574/91, 3-4=500/95  
 BOT CHORD 2-7=86/504, 6-7=69/349  
 WEBS 4-6=421/101

#### NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Provide adequate drainage to prevent water ponding.
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 5) Refer to girder(s) for truss to truss connections.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 6, 2, 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.
- 8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 9) Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.
- 10) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidelines.
- 11) 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 + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
- Uniform Loads (plf)  
 Vert: 1-3=90, 3-4=90, 4-5=90, 6-8=20
- Concentrated Loads (lb)  
 Vert: 7=121(B)



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**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

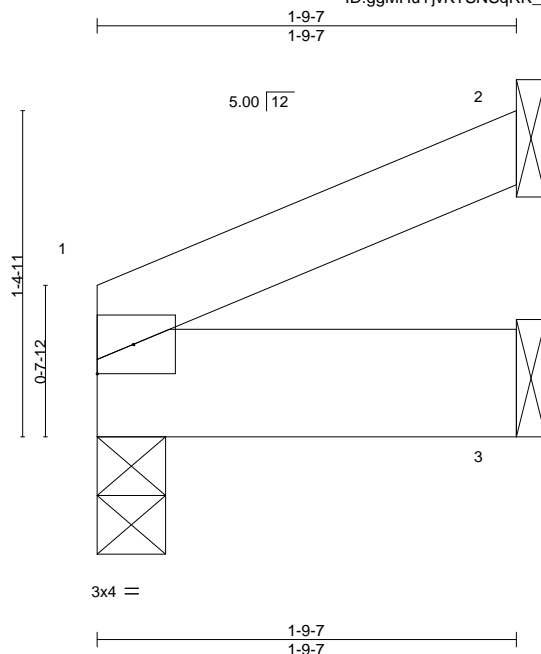
|  |              |                         |          |          |                                    |
|--|--------------|-------------------------|----------|----------|------------------------------------|
| Job<br>2745269   | Truss<br>J12 | Truss Type<br>Jack-Open | Qty<br>1 | Ply<br>1 | Summit/25 Woodside/MO<br>I44187997 |
| Builders FirstSource (Valley Center), Valley Center, KS - 67147, |              |                         |          |          | Job Reference (optional)           |

Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Thu Dec 31 09:30:26 2020 Page 1

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Scale = 1:9.8

| LOADING (psf) | SPACING-             | 2-0-0 | CSI.      | DEFL.    | in    | (loc) | l/defl | L/d | PLATES       | GRIP     |
|---------------|----------------------|-------|-----------|----------|-------|-------|--------|-----|--------------|----------|
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.03   | Vert(LL) | -0.00 | 6     | >999   | 240 | MT20         | 197/144  |
| TCDL 20.0     | Lumber DOL           | 1.15  | BC 0.03   | Vert(CT) | -0.00 | 6     | >999   | 180 |              |          |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.00   | Horz(CT) | 0.00  | 1     | n/a    | n/a |              |          |
| BCDL 10.0     | Code IRC2018/TPI2014 |       | Matrix-MP |          |       |       |        |     | Weight: 6 lb | FT = 20% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x6 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) 1=0-3-8, 2=Mechanical, 3=Mechanical  
Max Horz 1=27(LC 33)  
Max Uplift 2=20(LC 33), 3=-1(LC 12)  
Max Grav 1=266(LC 1), 2=58(LC 1), 3=43(LC 3)

**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=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone 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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 3.
- 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.
- 7) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 169 lb down and 47 lb up at 0-0-0 on top chord. The design/selection of such connection device(s) is the responsibility of others.

#### LOAD CASE(S) Standard

- 1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-2=-90, 3-4=-20  
Concentrated Loads (lb)  
Vert: 1=-169



January 4, 2021

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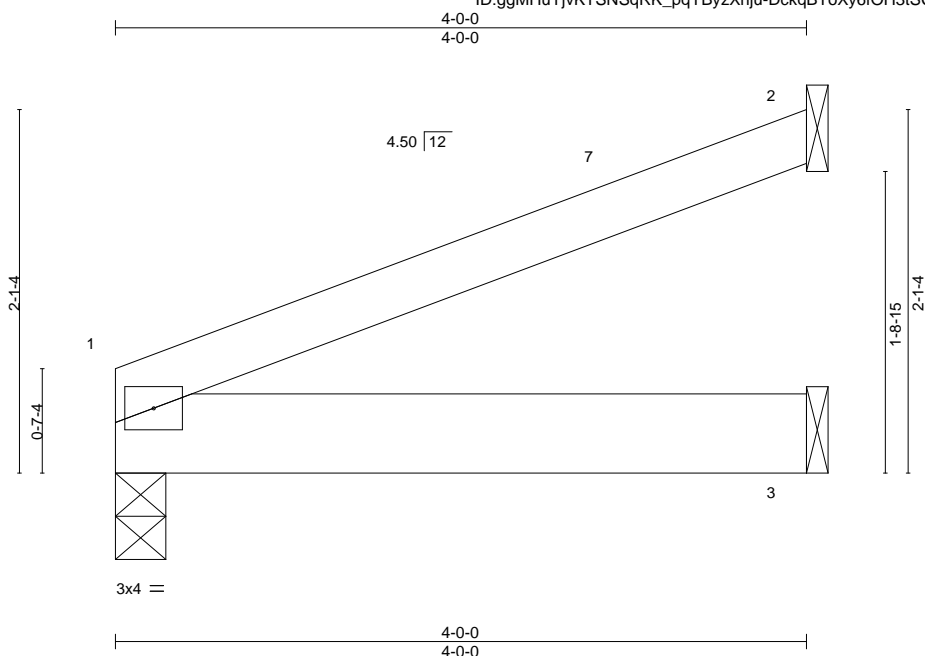
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall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

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|                      |                       |             |                                  |               |             |
|----------------------|-----------------------|-------------|----------------------------------|---------------|-------------|
| <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 25.0            | Plate Grip DOL 1.15   | TC 0.20     | Vert(LL) -0.01 3-6 >999 240      | MT20          | 197/144     |
| TCDL 20.0            | Lumber DOL 1.15       | BC 0.15     | Vert(CT) -0.01 3-6 >999 180      |               |             |
| BCLL 0.0 *           | Rep Stress Incr YES   | WB 0.00     | Horz(CT) 0.00 1 n/a n/a          |               |             |
| BCDL 10.0            | Code IRC2018/TPI2014  | Matrix-AS   |                                  | Weight: 12 lb | FT = 20%    |

**LUMBER-**

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x6 SPF No.2

**BRACING-**

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

**REACTIONS.**

(size) 1=0-3-8, 2=Mechanical, 3=Mechanical  
 Max Horz 1=54(LC 12)  
 Max Uplift 1=-12(LC 12), 2=-43(LC 12)  
 Max Grav 1=217(LC 1), 2=135(LC 1), 3=93(LC 3)

**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; TCDD=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior(1) 3-0-0 to 3-11-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 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.
- 7) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.



January 4, 2021

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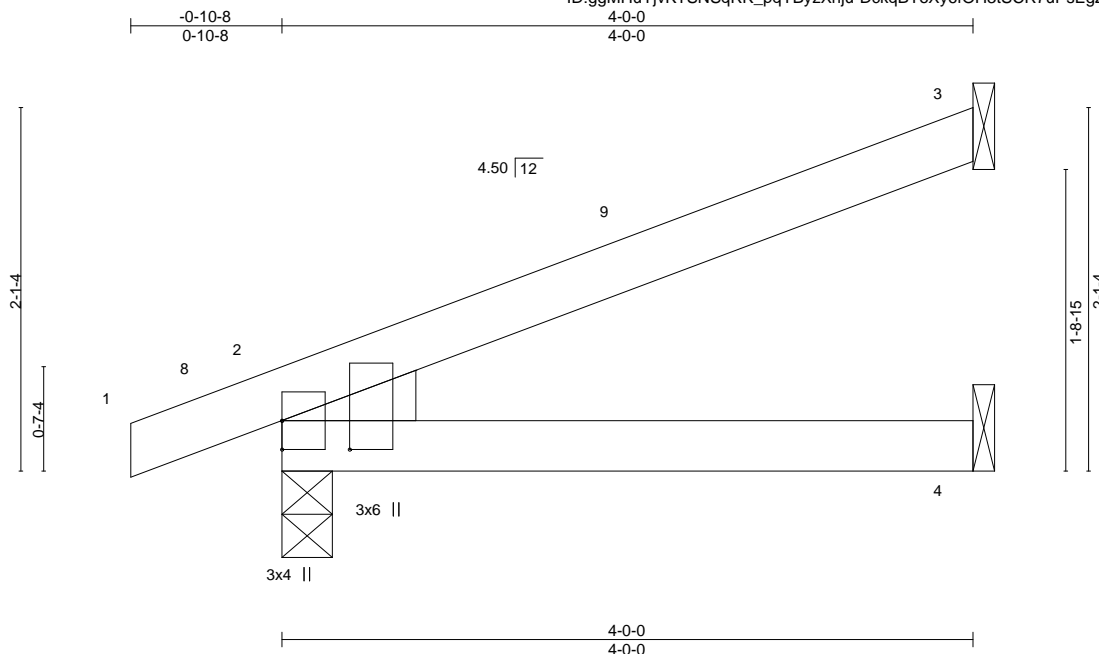
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|  |              |                         |          |          |                                    |
|--|--------------|-------------------------|----------|----------|------------------------------------|
| Job<br>2745269   | Truss<br>J14 | Truss Type<br>Jack-Open | Qty<br>3 | Ply<br>1 | Summit/25 Woodside/MO<br>144187999 |
| Builders FirstSource (Valley Center), Valley Center, KS - 67147, |              |                         |          |          |                                    |

8.240 s Mar 9 2020 MiTek Industries, Inc. Thu Dec 31 09:30:27 2020 Page 1  
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|                       |       |                      |  |           |      |                           |       |     |      |             |               |          |
|-----------------------|-------|----------------------|--|-----------|------|---------------------------|-------|-----|------|-------------|---------------|----------|
| Plate Offsets (X,Y)-- |       | [2:0-2,0,0-4-11]     |  |           |      |                           |       |     |      |             |               |          |
| LOADING (psf)         |       | SPACING- 2-0-0       |  | CSI.      |      | DEFL. in (loc) l/defl L/d |       |     |      | PLATES GRIP |               |          |
| TCLL                  | 25.0  | Plate Grip DOL 1.15  |  | TC        | 0.23 | Vert(LL)                  | 0.02  | 4-7 | >999 | 240         | MT20          | 197/144  |
| TCDL                  | 20.0  | Lumber DOL 1.15      |  | BC        | 0.20 | Vert(CT)                  | -0.03 | 4-7 | >999 | 180         |               |          |
| BCLL                  | 0.0 * | Rep Stress Incr YES  |  | WB        | 0.00 | Horz(CT)                  | 0.01  | 2   | n/a  | n/a         |               |          |
| BCDL                  | 10.0  | Code IRC2018/TPI2014 |  | Matrix-AS |      |                           |       |     |      |             | Weight: 12 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=66(LC 8)  
Max Uplift 3=-44(LC 12), 2=-40(LC 8)  
Max Grav 3=147(LC 1), 2=304(LC 1), 4=77(LC 3)

**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=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 3-11-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 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.
- 7) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.



January 4, 2021

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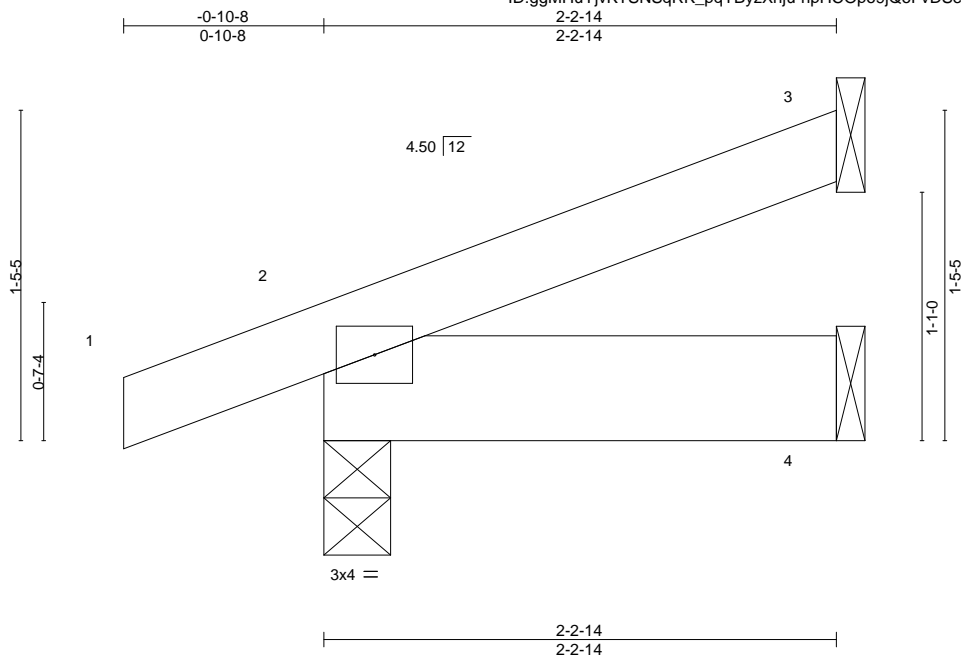
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|  |              |                         |          |          |                                    |
|--|--------------|-------------------------|----------|----------|------------------------------------|
| Job<br>2745269   | Truss<br>J15 | Truss Type<br>Jack-Open | Qty<br>2 | Ply<br>1 | Summit/25 Woodside/MO<br>I44188000 |
| Builders FirstSource (Valley Center), Valley Center, KS - 67147, |              |                         |          |          | Job Reference (optional)           |

8.240 s Mar 9 2020 MiTek Industries, Inc. Thu Dec 31 09:30:28 2020 Page 1  
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Scale = 1:10.1

| LOADING (psf) | SPACING-             | 2-0-0 | CSI.      | DEFL.    | in (loc)     | L/defl   | L/d  | PLATES | GRIP    |
|---------------|----------------------|-------|-----------|----------|--------------|----------|------|--------|---------|
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.07   | Vert(LL) | -0.00        | 7        | >999 | 240    | MT20    |
| TCDL 20.0     | Lumber DOL           | 1.15  | BC 0.03   | Vert(CT) | -0.00        | 7        | >999 | 180    | 197/144 |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.00   | Horz(CT) | 0.00         | 3        | n/a  | n/a    |         |
| BCDL 10.0     | Code IRC2018/TPI2014 |       | Matrix-MP |          |              |          |      |        |         |
|               |                      |       |           |          | Weight: 8 lb | FT = 20% |      |        |         |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x6 SPF No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 2-2-14 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=43(LC 8)  
Max Uplift 3=-22(LC 12), 2=-39(LC 8)  
Max Grav 3=67(LC 1), 2=214(LC 1), 4=48(LC 3)

**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=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone 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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 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.



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|                |              |                         |          |          |   |           |
|----------------|--------------|-------------------------|----------|----------|---|-----------|
| Job<br>2745269 | Truss<br>J16 | Truss Type<br>Jack-Open | Qty<br>1 | Ply<br>1 | Summit/25 Woodside/MO<br>Job Reference (optional) | I44188001 |
|----------------|--------------|-------------------------|----------|----------|---|-----------|

Builders FirstSource (Valley Center),

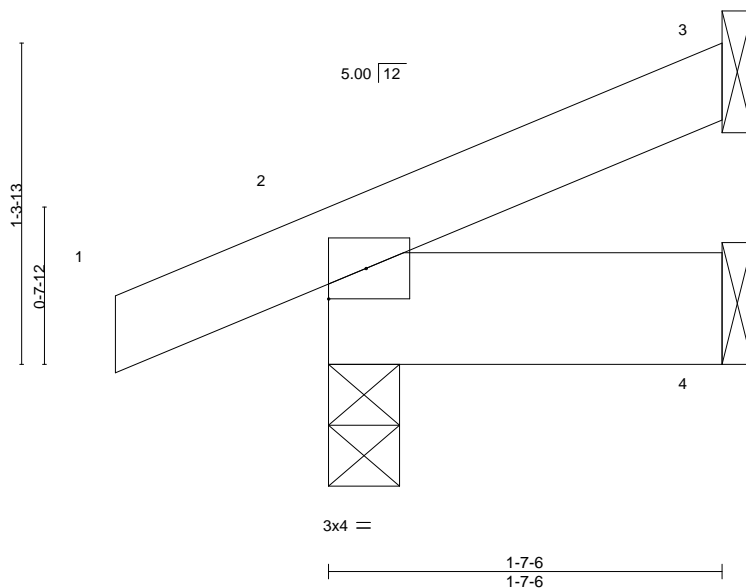
Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Thu Dec 31 09:30:29 2020 Page 1

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-0-10-8 1-7-6  
0-10-8 1-7-6

Scale = 1:9.5



| LOADING (psf) | SPACING-             | 2-0-0 | CSI.      | DEFL.    | in    | (loc) | l/defl | L/d | PLATES       | GRIP     |
|---------------|----------------------|-------|-----------|----------|-------|-------|--------|-----|--------------|----------|
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.07   | Vert(LL) | -0.00 | 7     | >999   | 240 | MT20         | 197/144  |
| TCDL 20.0     | Lumber DOL           | 1.15  | BC 0.01   | Vert(CT) | -0.00 | 7     | >999   | 180 |              |          |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.00   | Horz(CT) | 0.00  | 3     | n/a    | n/a |              |          |
| BCDL 10.0     | Code IRC2018/TPI2014 |       | Matrix-MP |          |       |       |        |     | Weight: 6 lb | FT = 20% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x6 SPF No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 1-7-6 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=36(LC 12)  
Max Uplift 3=-17(LC 12), 2=-24(LC 8)  
Max Grav 3=48(LC 1), 2=188(LC 1), 4=32(LC 3)

**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=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone 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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 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.



January 4, 2021

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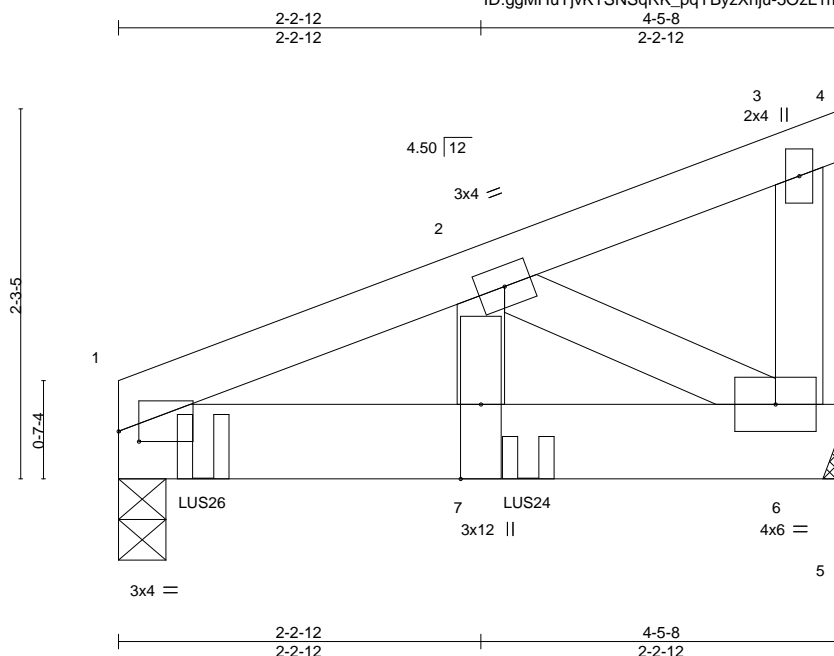
ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

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



16023 Swingley Ridge Rd  
Chesterfield, MO 63017





Scale = 1:14.2

| Plate Offsets (X,Y)-- [1:0-1-8,0-0-12] |       |                      |      |           |      |                           |       |   |      |     |               |          |
|--|-------|----------------------|------|-----------|------|---------------------------|-------|---|------|-----|---------------|----------|
| LOADING (psf)                          |       | SPACING- 2-0-0       |      | CSI.      |      | DEFL. in (loc) l/defl L/d |       |   |      |     | PLATES GRIP   |          |
| TCLL                                   | 25.0  | Plate Grip DOL       | 1.15 | TC        | 0.10 | Vert(LL)                  | -0.01 | 7 | >999 | 240 | MT20          | 197/144  |
| TCDL                                   | 20.0  | Lumber DOL           | 1.15 | BC        | 0.14 | Vert(CT)                  | -0.01 | 7 | >999 | 180 |               |          |
| BCLL                                   | 0.0 * | Rep Stress Incr      | NO   | WB        | 0.16 | Horz(CT)                  | 0.00  | 6 | n/a  | n/a |               |          |
| BCDL                                   | 10.0  | Code IRC2018/TPI2014 |      | Matrix-MP |      |                           |       |   |      |     | Weight: 21 lb | FT = 20% |

|                |                   |                 |   |
|----------------|-------------------|-----------------|---|
| <b>LUMBER-</b> |                   | <b>BRACING-</b> |   |
| TOP CHORD      | 2x4 SPF No.2      | TOP CHORD       | Structural wood sheathing directly applied or 4-5-8 oc purlins, except end verticals. |
| BOT CHORD      | 2x6 SP 2400F 2.0E |                 |   |
| WEBS           | 2x4 SPF No.2      | BOT CHORD       | Rigid ceiling directly applied or 10-0-0 oc bracing.                                  |

**REACTIONS.** (size) 1=0-3-8, 6=Mechanical  
Max Horz 1=71(LC 7)  
Max Uplift 1=-195(LC 8), 6=-137(LC 8)  
Max Grav 1=1276(LC 1), 6=673(LC 1)

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

TOP CHORD 1-2=-1004/189  
BOT CHORD 1-7=-189/927, 6-7=-189/927  
WEBS 2-7=-125/645, 2-6=-1053/229

**NOTES-**

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDD=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 1=195, 6=137.
- 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.
- 7) Use Simpson Strong-Tie LUS26 (4-10d Girder, 4-10d Truss, Single Ply Girder) or equivalent at 0-6-4 from the left end to connect truss(es) to back face of bottom chord.
- 8) Use Simpson Strong-Tie LUS24 (4-10d Girder, 2-10d Truss, Single Ply Girder) or equivalent at 2-6-4 from the left end to connect truss(es) to back face of bottom chord.
- 9) Fill all nail holes where hanger is in contact with lumber.
- 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 + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-3=-90, 3-4=-40, 5-8=-20  
Concentrated Loads (lb)  
Vert: 7=-634(B) 10=-839(B)



January 4, 2021

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



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|         |       |            |     |     |                          |           |
|---------|-------|------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type | Qty | Ply | Summit/25 Woodside/MO    | 144188004 |
| 2745269 | J19   | Jack-Open  | 2   | 1   | Job Reference (optional) |           |

Builders FirstSource (Valley Center),

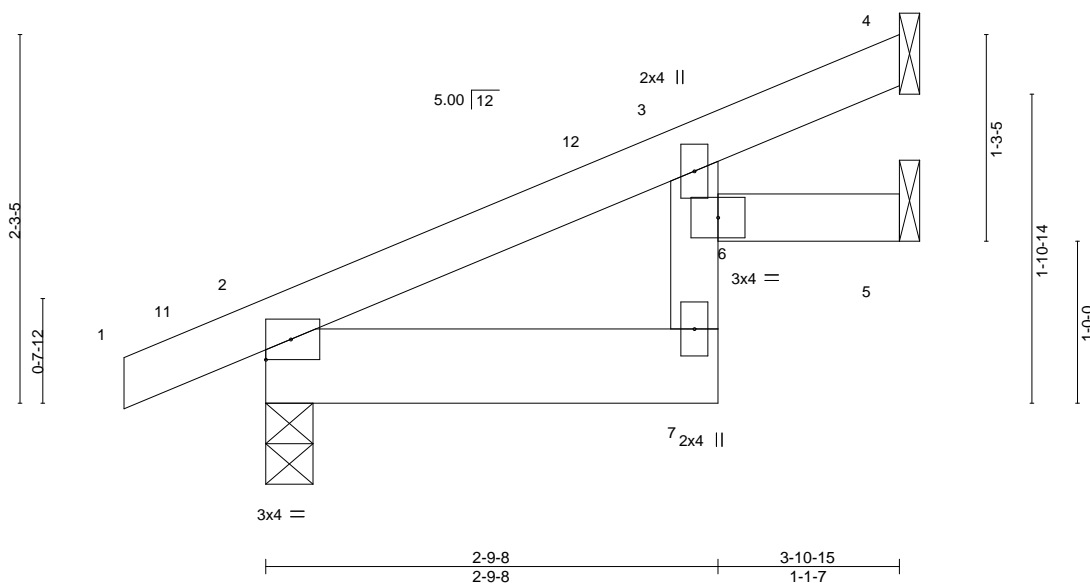
Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Thu Dec 31 09:30:31 2020 Page 1

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-0-10-8 2-9-8 3-10-15  
0-10-8 2-9-8 1-1-7

Scale = 1:14.2



| LOADING (psf) | SPACING-             | 2-0-0 | CSI.      | DEFL.    | in (loc) | L/defl | L/d  | PLATES        | GRIP     |
|---------------|----------------------|-------|-----------|----------|----------|--------|------|---------------|----------|
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.10   | Vert(LL) | -0.01    | 7      | >999 | 240           | MT20     |
| BCDL 20.0     | Lumber DOL           | 1.15  | BC 0.20   | Vert(CT) | -0.01    | 7      | >999 | 180           | 197/144  |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.00   | Horz(CT) | 0.01     | 5      | n/a  | n/a           |          |
| BCDL 10.0     | Code IRC2018/TPI2014 |       | Matrix-MR |          |          |        |      |               |          |
|               |                      |       |           |          |          |        |      | Weight: 14 lb | FT = 20% |

#### LUMBER-

TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2 \*Except\*  
2-7: 2x6 SPF No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 3-10-15 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=70(LC 12)  
Max Uplift 4=25(LC 12), 2=27(LC 12), 5=13(LC 12)  
Max Grav 4=101(LC 1), 2=299(LC 1), 5=102(LC 1)

**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=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 3-10-3 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4, 2, 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.



January 4, 2021

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Chesterfield, MO 63017

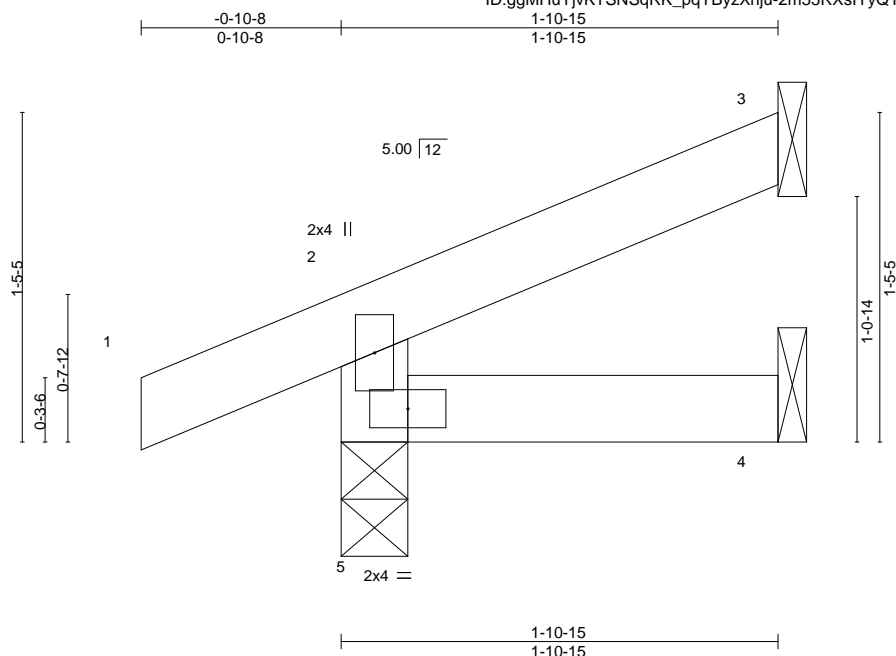
|         |       |            |     |     |                          |           |
|---------|-------|------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type | Qty | Ply | Summit/25 Woodside/MO    | I44188005 |
| 2745269 | J20   | Jack-Open  | 6   | 1   | Job Reference (optional) |           |

Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Thu Dec 31 09:30:33 2020 Page 1

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Scale = 1:10.1

| LOADING (psf) | SPACING-             | 2-0-0 | CSI.      | DEFL.    | in (loc) | L/defl | L/d  | PLATES       | GRIP     |
|---------------|----------------------|-------|-----------|----------|----------|--------|------|--------------|----------|
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.09   | Vert(LL) | -0.00    | 5      | >999 | 240          | MT20     |
| TCDL 20.0     | Lumber DOL           | 1.15  | BC 0.02   | Vert(CT) | -0.00    | 5      | >999 | 180          | 197/144  |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.00   | Horz(CT) | -0.00    | 3      | n/a  | n/a          |          |
| BCDL 10.0     | Code IRC2018/TPI2014 |       | Matrix-MR |          |          |        |      |              |          |
|               |                      |       |           |          |          |        |      | Weight: 6 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 or 1-10-15 oc purlins, except end verticals.

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

#### REACTIONS.

(size) 3=Mechanical, 4=Mechanical, 5=0-3-8

Max Horz 5=35(LC 12)

Max Uplift 3=23(LC 12), 5=28(LC 8)

Max Grav 3=57(LC 1), 4=31(LC 3), 5=215(LC 1)

**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=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone 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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Bearing at joint(s) 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 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.



January 4, 2021

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**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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Chesterfield, MO 63017

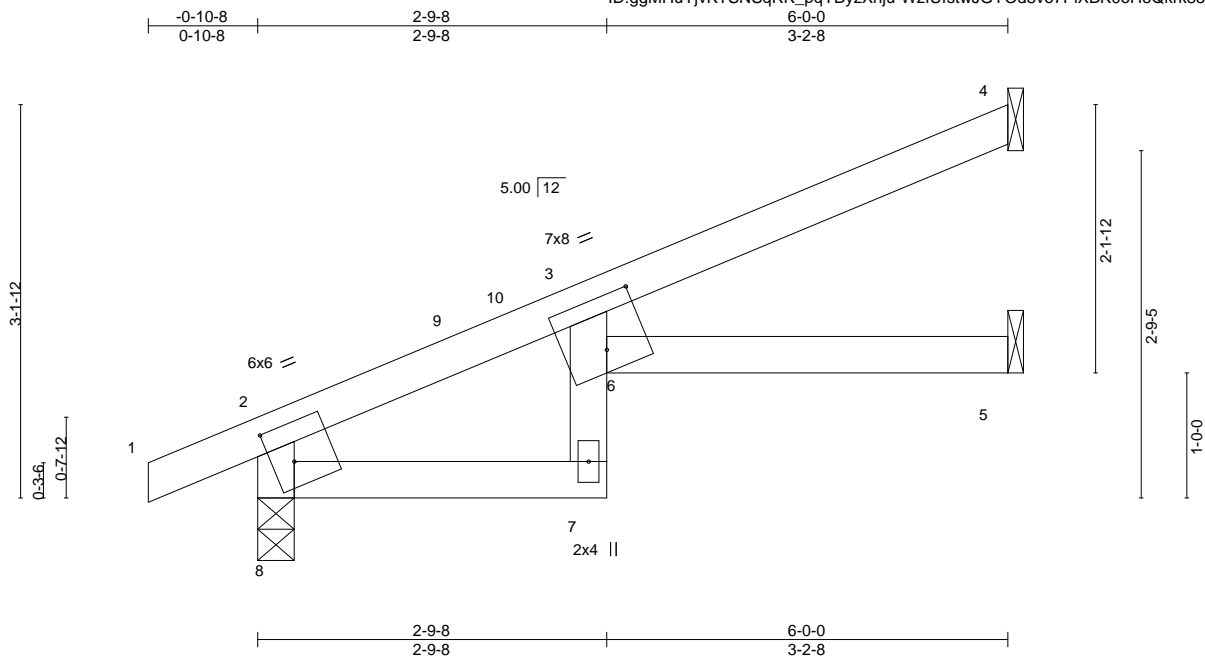
|         |       |            |     |     |                          |           |
|---------|-------|------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type | Qty | Ply | Summit/25 Woodside/MO    | 144188006 |
| 2745269 | J21   | Jack-Open  | 3   | 1   | Job Reference (optional) |           |

Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Thu Dec 31 09:30:34 2020 Page 1

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Scale = 1:18.4

|  |       |                       |      |             |      |                                  |                    |               |             |
|--|-------|-----------------------|------|-------------|------|----------------------------------|--------------------|---------------|-------------|
| Plate Offsets (X,Y)-- [2:0-1-14,0-0-0], [2:0-2-1,0-3-10], [3:0-1-14,0-0-0], [3:0-4-0,0-4-15], [6:0-0-11,0-1-10], [8:0-0-11,0-1-10] |       |                       |      |             |      |                                  |                    |               |             |
| <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   | 25.0  | Plate Grip DOL        | 1.15 | TC          | 0.45 | Vert(LL)                         | 0.07 5-6 >962 240  | MT20          | 197/144     |
| TCDL   | 20.0  | Lumber DOL            | 1.15 | BC          | 0.50 | Vert(CT)                         | -0.15 5-6 >474 180 |               |             |
| BCLL   | 0.0 * | Rep Stress Incr       | YES  | WB          | 0.00 | Horz(CT)                         | 0.06 5 n/a n/a     |               |             |
| BCDL   | 10.0  | Code IRC2018/TPI2014  |      | Matrix-AS   |      |                                  |                    | Weight: 17 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.

#### REACTIONS.

(size) 4=Mechanical, 5=Mechanical, 8=0-3-8  
Max Horz 8=97(LC 12)  
Max Uplift 4=-59(LC 12), 5=-1(LC 12), 8=-33(LC 12)  
Max Grav 4=206(LC 1), 5=111(LC 3), 8=419(LC 1)

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

TOP CHORD 2-8=-397/151, 2-3=-351/50  
BOT CHORD 7-8=-149/253

#### NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 5-11-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Bearing at joint(s) 8 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4, 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.
- 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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**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**



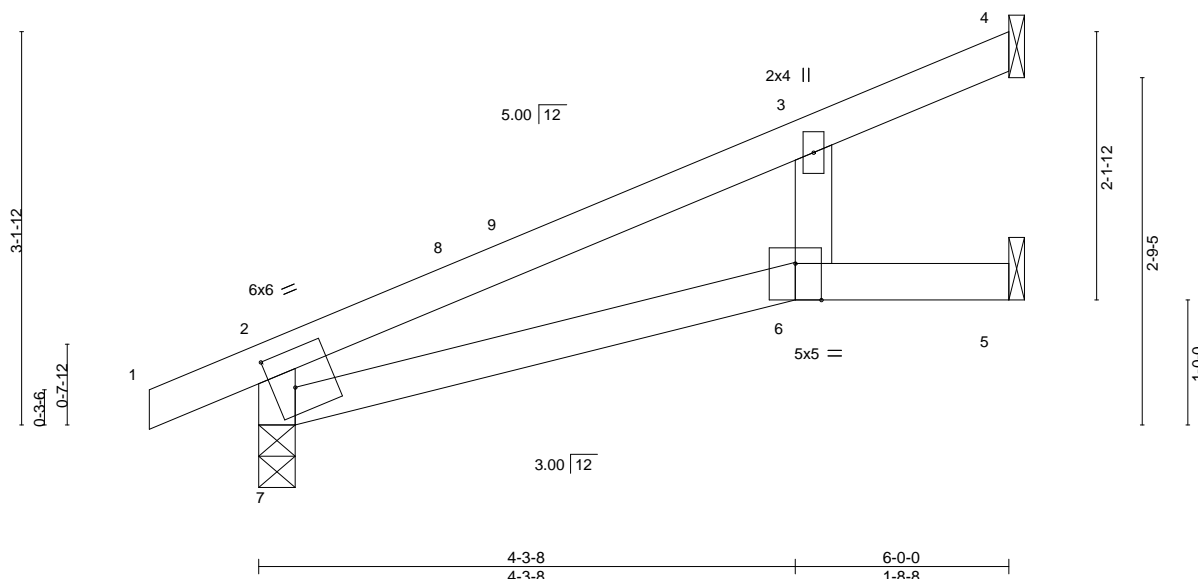
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Chesterfield, MO 63017



|  |              |                         |           |          |                                    |
|--|--------------|-------------------------|-----------|----------|------------------------------------|
| Job<br>2745269   | Truss<br>J22 | Truss Type<br>Jack-Open | Qty<br>11 | Ply<br>1 | Summit/25 Woodside/MO<br>144188007 |
| Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.240 s Mar 9 2020 MiTek Industries, Inc. Thu Dec 31 09:30:35 2020 Page 1<br>ID:ggMHuYjvKTSNSqRK_pqYByzXhju-_9CcsCuY4agFEIU_g7GmjYZy4WnwaB4Fub4br?y3UZY |              |                         |           |          |                                    |
| Job Reference (optional)   |              |                         |           |          |                                    |



Scale = 1:18.4



|  |       |                       |  |             |      |                                  |       |     |      |               |               |             |  |
|--|-------|-----------------------|--|-------------|------|----------------------------------|-------|-----|------|---------------|---------------|-------------|--|
| Plate Offsets (X,Y)-- [2:0-1-14,0-0-0], [2:0-2-2,0-3-8], [6:0-2-8,Edge], [7:0-0-11,0-1-11] |       |                       |  |             |      |                                  |       |     |      |               |               |             |  |
| <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   | 25.0  | Plate Grip DOL 1.15   |  | TC          | 0.51 | Vert(LL)                         | 0.08  | 6-7 | >832 | 240           | MT20          | 197/144     |  |
| TCDL   | 20.0  | Lumber DOL 1.15       |  | BC          | 0.44 | Vert(CT)                         | -0.16 | 6-7 | >427 | 180           |               |             |  |
| BCLL   | 0.0 * | Rep Stress Incr YES   |  | WB          | 0.02 | Horz(CT)                         | 0.04  | 4   | n/a  | n/a           |               |             |  |
| BCDL   | 10.0  | Code IRC2018/TPI2014  |  | Matrix-AS   |      |                                  |       |     |      |               | Weight: 17 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.

#### REACTIONS.

(size) 4=Mechanical, 5=Mechanical, 7=0-3-8  
Max Horz 7=96(LC 12)  
Max Uplift 4=-35(LC 12), 5=-25(LC 12), 7=-33(LC 12)  
Max Grav 4=174(LC 1), 5=136(LC 1), 7=419(LC 1)

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

TOP CHORD 2-7=-337/141

#### NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 5-11-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) 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.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4, 5, 7.
- 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.



January 4, 2021

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16023 Swingley Ridge Rd  
Chesterfield, MO 63017

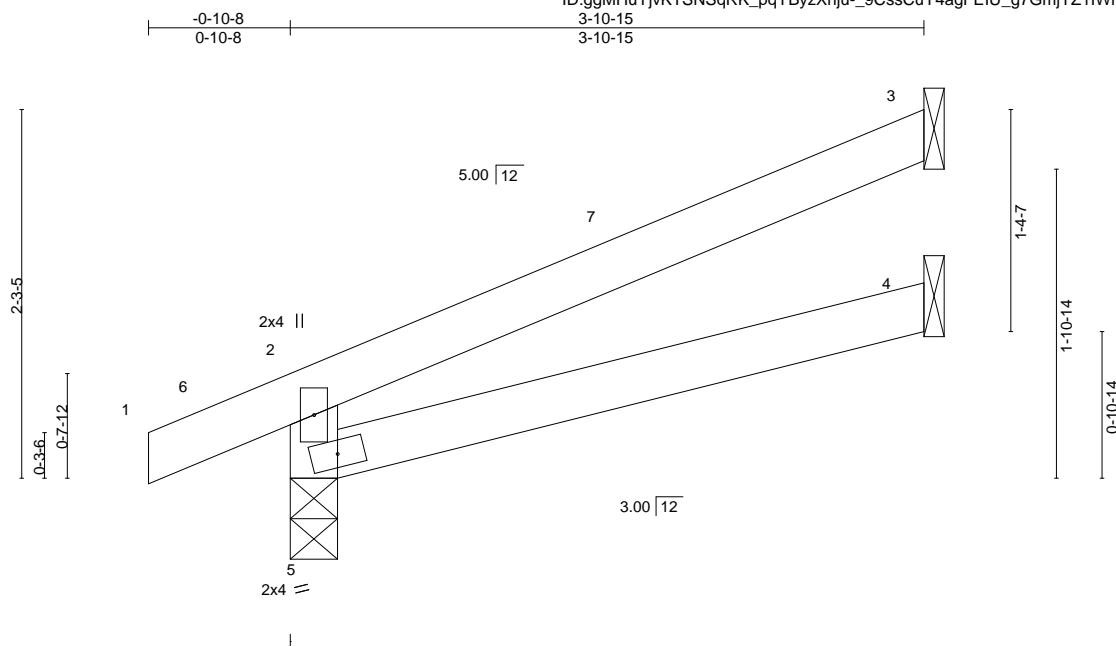
|         |       |            |     |     |                          |           |
|---------|-------|------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type | Qty | Ply | Summit/25 Woodside/MO    | I44188008 |
| 2745269 | J23   | Jack-Open  | 2   | 1   | Job Reference (optional) |           |

Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Thu Dec 31 09:30:35 2020 Page 1

ID:ggMHuYjvKTSNSqRK\_pqYByzXhju-\_9CscCuY4agFEIU\_g7GmjYZ1WriaBOFub4br?y3UZY



Scale = 1:14.2

| LOADING (psf) | SPACING-             | 2-0-0 | CSI.      | DEFL.    | in    | (loc) | l/defl | L/d | PLATES        | GRIP     |
|---------------|----------------------|-------|-----------|----------|-------|-------|--------|-----|---------------|----------|
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.24   | Vert(LL) | -0.01 | 4-5   | >999   | 240 | MT20          | 197/144  |
| TCDL 20.0     | Lumber DOL           | 1.15  | BC 0.13   | Vert(CT) | -0.02 | 4-5   | >999   | 180 |               |          |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.00   | Horz(CT) | 0.01  | 3     | n/a    | n/a |               |          |
| BCDL 10.0     | Code IRC2018/TPI2014 |       | Matrix-MR |          |       |       |        |     | Weight: 11 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 or 3-10-15 oc purlins, except end verticals.

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

#### REACTIONS.

(size) 3=Mechanical, 4=Mechanical, 5=0-3-8

Max Horz 5=64(LC 12)

Max Uplift 3=-51(LC 12), 5=-27(LC 12)

Max Grav 3=145(LC 1), 4=72(LC 3), 5=308(LC 1)

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

TOP CHORD 2-5=-280/148

#### NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 3-10-3 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Bearing at joint(s) 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 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.



January 4, 2021

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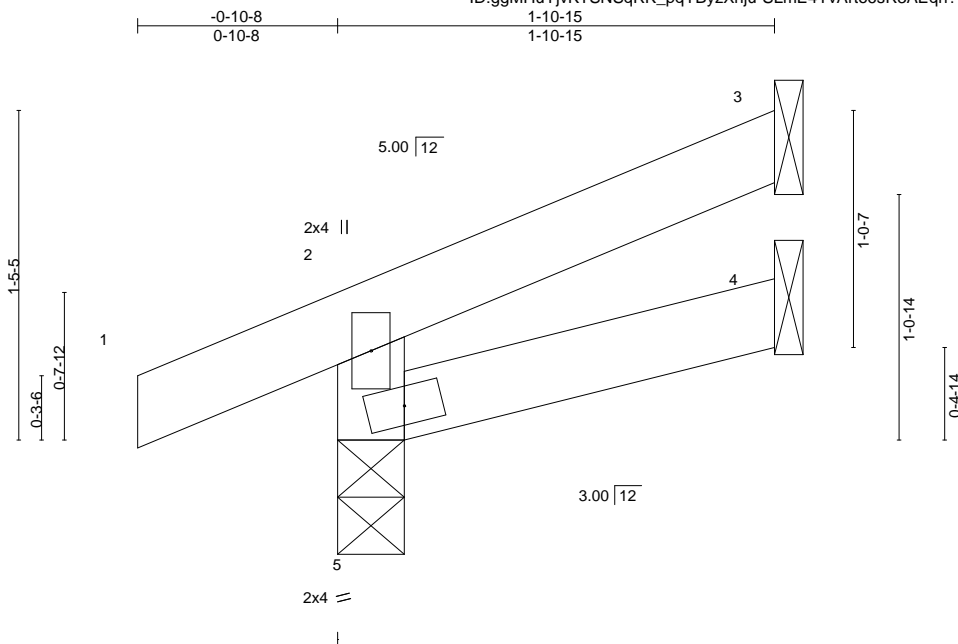
|                          |       |            |     |     |                       |
|--------------------------|-------|------------|-----|-----|-----------------------|
| Job                      | Truss | Truss Type | Qty | Ply | Summit/25 Woodside/MO |
| 2745269                  | J24   | Jack-Open  | 2   | 1   | 144188009             |
| Job Reference (optional) |       |            |     |     |                       |

Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Thu Dec 31 09:30:36 2020 Page 1

ID:ggMHuYjvKTSNSqRK\_pqYByzXhju-SLmE4YvArto6sR3AEqn?GI6ETvDdJeeO7Fq8NSy3UZx



Scale = 1:10.1

| LOADING (psf) | SPACING-             | 2-0-0 | CSI.      | DEFL.    | in    | (loc) | I/defl | L/d | PLATES       | GRIP     |
|---------------|----------------------|-------|-----------|----------|-------|-------|--------|-----|--------------|----------|
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.09   | Vert(LL) | -0.00 | 5     | >999   | 240 | MT20         | 197/144  |
| TCDL 20.0     | Lumber DOL           | 1.15  | BC 0.02   | Vert(CT) | -0.00 | 5     | >999   | 180 |              |          |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.00   | Horz(CT) | -0.00 | 3     | n/a    | n/a |              |          |
| BCDL 10.0     | Code IRC2018/TPI2014 |       | Matrix-MR |          |       |       |        |     | Weight: 6 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 or 1-10-15 oc purlins, except end verticals.

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

#### REACTIONS.

(size) 3=Mechanical, 4=Mechanical, 5=0-3-8

Max Horz 5=35(LC 12)

Max Uplift 3=24(LC 12), 5=-27(LC 8)

Max Grav 3=57(LC 1), 4=31(LC 3), 5=215(LC 1)

**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=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone 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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Bearing at joint(s) 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 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.



January 4, 2021

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**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



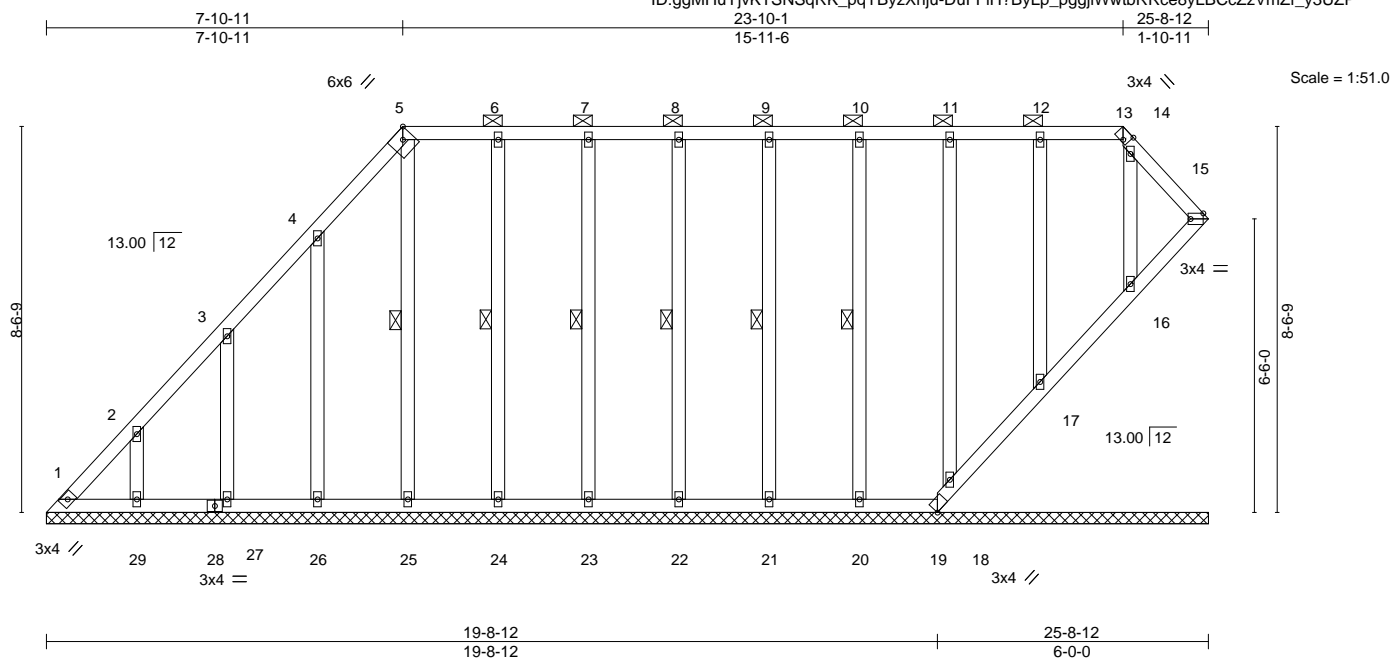
16023 Swingley Ridge Rd  
Chesterfield, MO 63017



|                |              |                     |          |          |                                    |
|----------------|--------------|---------------------|----------|----------|------------------------------------|
| Job<br>2745269 | Truss<br>LG1 | Truss Type<br>GABLE | Qty<br>1 | Ply<br>1 | Summit/25 Woodside/MO<br>144188011 |
|----------------|--------------|---------------------|----------|----------|------------------------------------|

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

8.240 s Mar 9 2020 MiTek Industries, Inc. Thu Dec 31 09:30:44 2020 Page 1  
ID:ggMHuYjvKTSNSqRK\_pqYByzXhju-DuFFIH?ByLp\_pggjiWwtbRRce8yLBCcZzVmZf\_y3UZP



| Plate Offsets (X,Y)-- |                 | [5:0-2-9,Edge], [13:0-1-7,Edge], [15:Edge,0-1-8] |                           |
|-----------------------|-----------------|--|---------------------------|
| <b>LOADING</b> (psf)  | <b>SPACING-</b> | 2-0-0  | <b>CSI.</b>               |
| TCLL 25.0             | Plate Grip DOL  | 1.15   | TC 0.08                   |
| TCDL 20.0             | Lumber DOL      | 1.15   | BC 0.03                   |
| BCLL 0.0 *            | Rep Stress Incr | YES  | WB 0.19                   |
| BCDL 10.0             | Code            | IRC2018/TPI2014                                  | Matrix-S                  |
|                       |                 |  | <b>DEFL.</b>              |
|                       |                 |  | in (loc) l/defl L/d       |
|                       |                 |  | Vert(LL) n/a - n/a 999    |
|                       |                 |  | Vert(CT) n/a - n/a 999    |
|                       |                 |  | Horz(CT) -0.00 15 n/a n/a |
|                       |                 |  | <b>PLATES</b>             |
|                       |                 |  | MT20                      |
|                       |                 |  | <b>GRIP</b>               |
|                       |                 |  | 197/144                   |
|                       |                 |  | Weight: 153 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.): 5-13.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
WEBS 1 Row at midpt 10-20, 9-21, 8-22, 5-25, 6-24, 7-23

#### REACTIONS.

All bearings 25-8-12.  
(lb) - Max Horz 1=262(LC 12)  
Max Uplift All uplift 100 lb or less at joint(s) 1, 15, 19, 16, 17, 18, 20, 21, 22, 25, 24, 23 except 29=113(LC 12), 27=111(LC 12), 26=115(LC 12)  
Max Grav All reactions 250 lb or less at joint(s) 1, 15, 19, 16, 17, 18, 20, 21, 22, 29, 27, 26, 25, 24, 23

#### FORCES.

(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-2=-323/233

#### 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=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-4-0 to 3-4-0, Interior(1) 3-4-0 to 7-10-11, Exterior(2R) 7-10-11 to 12-0-0, Interior(1) 12-0-0 to 23-10-1, Exterior(2E) 23-10-1 to 25-6-5 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
- 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.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 15, 19, 16, 17, 18, 20, 21, 22, 25, 24, 23 except (jt=lb) 29=113, 27=111, 26=115.
- Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 15, 16, 17, 18.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



January 4, 2021

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**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601  
**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**



16023 Swingley Ridge Rd  
Chesterfield, MO 63017

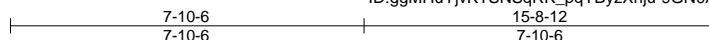
|                          |       |            |     |     |                       |
|--------------------------|-------|------------|-----|-----|-----------------------|
| Job                      | Truss | Truss Type | Qty | Ply | Summit/25 Woodside/MO |
| 2745269                  | LG2   | GABLE      | 1   | 1   | I44188012             |
| Job Reference (optional) |       |            |     |     |                       |

Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

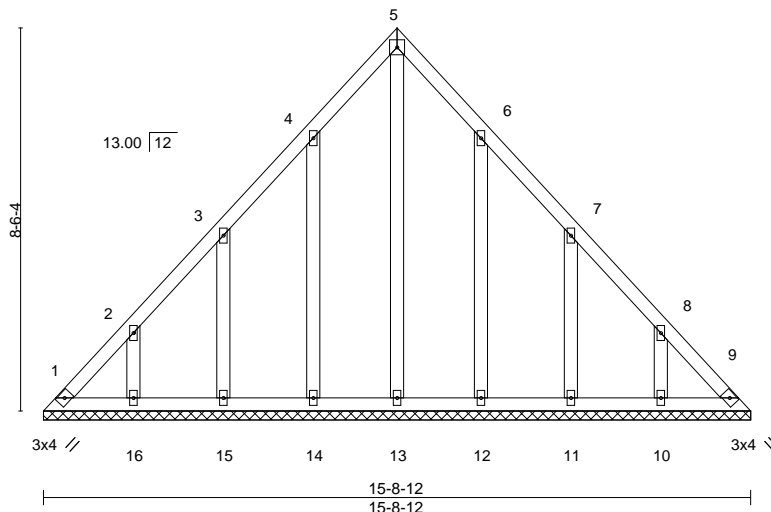
8.240 s Mar 9 2020 MiTek Industries, Inc. Thu Dec 31 09:30:46 2020 Page 1

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4x4 =

Scale = 1:51.2



|                       |       |                      |  |       |  |          |  |          |  |   |  |        |  |     |  |        |  |               |  |          |  |
|-----------------------|-------|----------------------|--|-------|--|----------|--|----------|--|---|--|--------|--|-----|--|--------|--|---------------|--|----------|--|
| Plate Offsets (X,Y)-- |       |                      |  |       |  |          |  |          |  | [2:0-0-0,0-0-0], [3:0-0-0,0-0-0], [4:0-0-0,0-0-0] |  |        |  |     |  |        |  |               |  |          |  |
| LOADING (psf)         |       | SPACING-             |  | 2-0-0 |  | CSI.     |  | DEFL.    |  | in (loc)  |  | l/defl |  | L/d |  | PLATES |  | GRIP          |  |          |  |
| TCLL                  | 25.0  | Plate Grip DOL       |  | 1.15  |  | TC 0.07  |  | Vert(LL) |  | n/a   |  | -      |  | n/a |  | 999    |  | MT20          |  | 197/144  |  |
| TCDL                  | 20.0  | Lumber DOL           |  | 1.15  |  | BC 0.04  |  | Vert(CT) |  | n/a   |  | -      |  | n/a |  | 999    |  |               |  |          |  |
| BCLL                  | 0.0 * | Rep Stress Incr      |  | YES   |  | WB 0.18  |  | Horz(CT) |  | 0.00  |  | 9      |  | n/a |  | n/a    |  |               |  |          |  |
| BCDL                  | 10.0  | Code IRC2018/TPI2014 |  |       |  | Matrix-S |  |          |  |   |  |        |  |     |  |        |  | Weight: 78 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 15-8-12.

(lb) - Max Horz 1=-196(LC 8)

Max Uplift All uplift 100 lb or less at joint(s) 1, 9 except 10=-112(LC 13), 11=-115(LC 13), 12=-106(LC 13),

16=-113(LC 12), 15=-114(LC 12), 14=-108(LC 12)

Max Grav All reactions 250 lb or less at joint(s) 1, 9, 13, 10, 11, 12, 16, 15, 14

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

TOP CHORD 1-2=-262/174

#### 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=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-4-0 to 3-4-0, Interior(1) 3-4-0 to 7-10-6, Exterior(2R) 7-10-6 to 10-10-6, Interior(1) 10-10-6 to 15-4-12 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
- 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.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 9 except (jt=lb) 10=112, 11=115, 12=106, 16=113, 15=114, 14=108.
- 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.



January 4, 2021

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**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

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Chesterfield, MO 63017



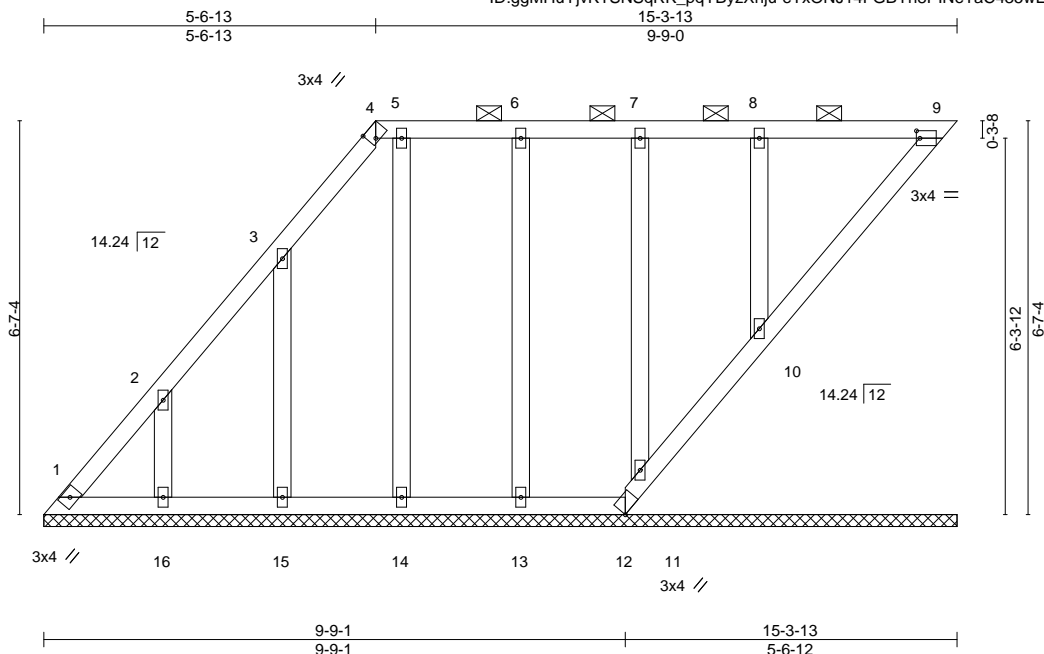
|                |              |                     |          |          |                                    |
|----------------|--------------|---------------------|----------|----------|------------------------------------|
| Job<br>2745269 | Truss<br>LG3 | Truss Type<br>GABLE | Qty<br>1 | Ply<br>1 | Summit/25 Woodside/MO<br>I44188013 |
|----------------|--------------|---------------------|----------|----------|------------------------------------|

Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Thu Dec 31 09:30:47 2020 Page 1

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| Plate Offsets (X,Y)-- |                 | [4:0-1-5,Edge], [9:0-0-11,0-1-8] |                          |
|-----------------------|-----------------|----------------------------------|--------------------------|
| <b>LOADING</b> (psf)  | <b>SPACING-</b> | 2-0-0                            | <b>CSI.</b>              |
| TCLL 25.0             | Plate Grip DOL  | 1.15                             | TC 0.14                  |
| TCDL 20.0             | Lumber DOL      | 1.15                             | BC 0.07                  |
| BCLL 0.0 *            | Rep Stress Incr | YES                              | WB 0.14                  |
| BCDL 10.0             | Code            | IRC2018/TPI2014                  | Matrix-S                 |
|                       |                 |                                  | <b>DEFL.</b>             |
|                       |                 |                                  | in (loc) l/defl L/d      |
|                       |                 |                                  | Vert(LL) n/a - n/a 999   |
|                       |                 |                                  | Vert(CT) n/a - n/a 999   |
|                       |                 |                                  | Horz(CT) -0.00 9 n/a n/a |
|                       |                 |                                  | <b>PLATES</b>            |
|                       |                 |                                  | MT20                     |
|                       |                 |                                  | <b>GRIP</b>              |
|                       |                 |                                  | 197/144                  |
|                       |                 |                                  | Weight: 72 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.): 4-9.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS.

All bearings 15-3-13.

(lb) - Max Horz 1=233(LC 12)

Max Uplift All uplift 100 lb or less at joint(s) 1, 9, 12, 14, 13, 11, 10 except 16=134(LC 12), 15=122(LC 12)

Max Grav All reactions 250 lb or less at joint(s) 1, 9, 12, 15, 14, 13, 11 except 16=256(LC 19), 10=349(LC 1)

#### FORCES.

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

TOP CHORD 1-2=-251/213

WEBS 8-10=-275/73

#### 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=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-3-12 to 3-3-12, Interior(1) 3-3-12 to 5-6-13, Exterior(2R) 5-6-13 to 8-6-13, Interior(1) 8-6-13 to 15-0-14 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
- 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.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 9, 12, 14, 13, 11, 10 except (jt=lb) 16=134, 15=122.
- Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 9, 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.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



January 4, 2021

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**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

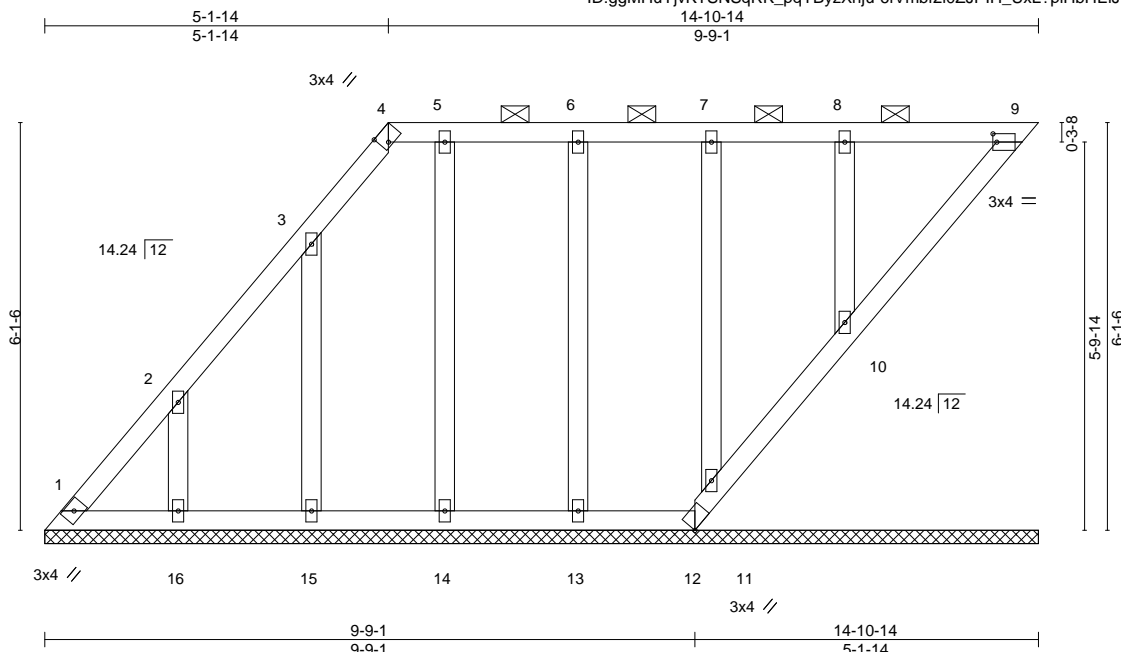
|                |              |                     |          |          |                                    |
|----------------|--------------|---------------------|----------|----------|------------------------------------|
| Job<br>2745269 | Truss<br>LG4 | Truss Type<br>GABLE | Qty<br>1 | Ply<br>1 | Summit/25 Woodside/MO<br>144188014 |
|----------------|--------------|---------------------|----------|----------|------------------------------------|

Builders FirstSource (Valley Center),

Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Thu Dec 31 09:30:48 2020 Page 1

ID:ggMHuYjvKTSNSqRK\_pqYByzXhju-6fVmbf2i0ZJPIH\_UxL?plHbHEIJv72r9u7knply3UZL



Scale = 1:34.6

|                       |                      |                                  |                          |
|-----------------------|----------------------|----------------------------------|--------------------------|
| Plate Offsets (X,Y)-- |                      | [4:0-1-5,Edge], [9:0-0-11,0-1-8] |                          |
| <b>LOADING</b> (psf)  | <b>SPACING-</b>      | <b>CSI.</b>                      | <b>DEFL.</b>             |
| TCLL 25.0             | Plate Grip DOL 1.15  | TC 0.10                          | in (loc) l/defl L/d      |
| TCDL 20.0             | Lumber DOL 1.15      | BC 0.06                          | Vert(LL) n/a - n/a 999   |
| BCLL 0.0 *            | Rep Stress Incr YES  | WB 0.11                          | Vert(CT) n/a - n/a 999   |
| BCDL 10.0             | Code IRC2018/TPI2014 | Matrix-S                         | Horz(CT) -0.00 9 n/a n/a |
|                       |                      |                                  | <b>PLATES</b> MT20       |
|                       |                      |                                  | <b>GRIP</b> 197/144      |
|                       |                      |                                  | 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, except 2-0-0 oc purlins (6-0-0 max.): 4-9.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS.

All bearings 14-10-14.

(lb) - Max Horz 1=215(LC 12)

Max Uplift All uplift 100 lb or less at joint(s) 1, 9, 12, 14, 13, 11, 10 except 16=138(LC 12), 15=104(LC 12)

Max Grav All reactions 250 lb or less at joint(s) 1, 9, 12, 15, 14, 13, 11 except 16=260(LC 19), 10=309(LC 1)

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

#### NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-3-12 to 3-3-12, Interior(1) 3-3-12 to 5-1-14, Exterior(2R) 5-1-14 to 8-0-0, Interior(1) 8-0-0 to 14-7-15 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
- 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.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 9, 12, 14, 13, 11, 10 except (it=lb) 16=138, 15=104.
- Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 9, 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.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



January 4, 2021

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**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

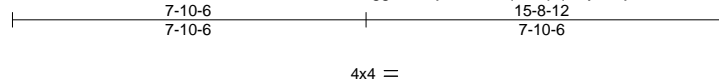
**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



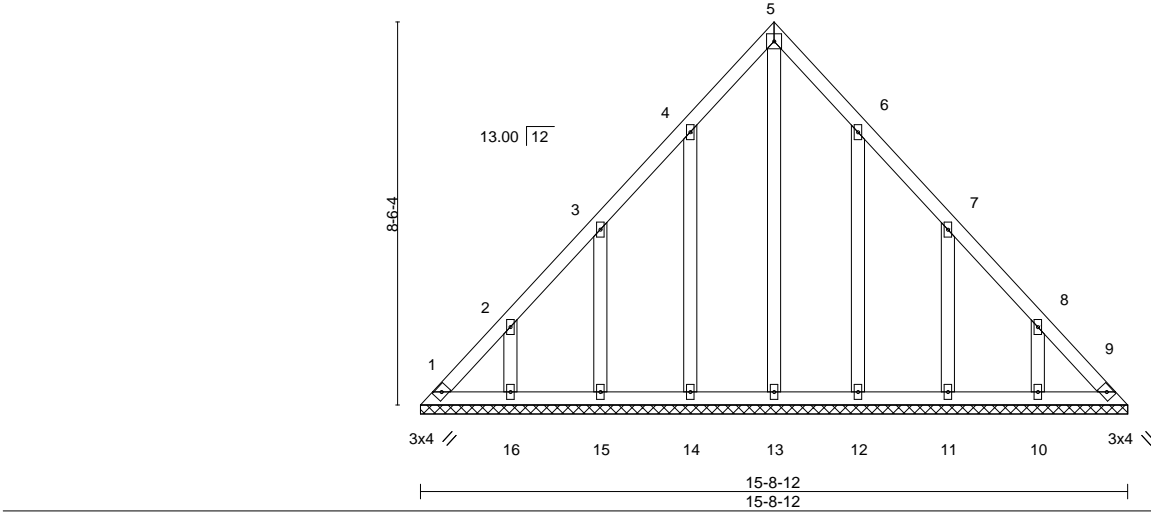
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|                          |       |            |     |     |                       |
|--------------------------|-------|------------|-----|-----|-----------------------|
| Job                      | Truss | Truss Type | Qty | Ply | Summit/25 Woodside/MO |
| 2745269                  | LG5   | GABLE      | 1   | 1   | I44188015             |
| Job Reference (optional) |       |            |     |     |                       |

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.240 s Mar 9 2020 MiTek Industries, Inc. Thu Dec 31 09:30:49 2020 Page 1  
ID:ggMHuYjvKTSNSqRK\_pqYByzXhju-ar38o73KntRGwRZgV3W2IV8SW9fRsU2J6nTKLBy3UZK



Scale = 1:51.2



|                       |        |   |      |             |      |                                  |            |               |               |             |  |
|-----------------------|--------|---|------|-------------|------|----------------------------------|------------|---------------|---------------|-------------|--|
| Plate Offsets (X,Y)-- |        | [2:0-0-0,0-0-0], [3:0-0-0,0-0-0], [4:0-0-0,0-0-0] |      |             |      |                                  |            |               |               |             |  |
| <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                  | 25.0   | Plate Grip DOL                                    | 1.15 | TC          | 0.07 | Vert(LL)                         | n/a - n/a  | 999           | MT20          | 197/144     |  |
| TCDL                  | 20.0   | Lumber DOL  | 1.15 | BC          | 0.04 | Vert(CT)                         | n/a - n/a  | 999           |               |             |  |
| BCLL                  | 0.0 ** | Rep Stress Incr                                   | YES  | WB          | 0.18 | Horz(CT)                         | 0.00 9 n/a | n/a           |               |             |  |
| BCDL                  | 10.0   | Code IRC2018/TPI2014                              |      | Matrix-S    |      |                                  |            |               | Weight: 78 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. |
| BOT CHORD 2x4 SPF No.2 | BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.            |
| OTHERS 2x4 SPF No.2    |   |

**REACTIONS.** All bearings 15-8-12.  
(lb) - Max Horz 1=-196(LC 8)  
Max Uplift All uplift 100 lb or less at joint(s) 1, 9 except 10=-112(LC 13), 11=-115(LC 13), 12=-106(LC 13),  
16=-113(LC 12), 15=-114(LC 12), 14=-108(LC 12)  
Max Grav All reactions 250 lb or less at joint(s) 1, 9, 13, 10, 11, 12, 16, 15, 14

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-2=-262/174

**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=6.0psf; h=15ft; Cat. II; Exp C; Enclosed;  
MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-4-0 to 3-4-0, Interior(1) 3-4-0 to 7-10-6, Exterior(2R) 7-10-6 to 10-10-6,  
Interior(1) 10-10-6 to 15-4-12 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
- 3) All plates are 2x4 MT20 unless otherwise indicated.
- 4) Gable requires continuous bottom chord bearing.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 9 except (jt=lb) 10=-112, 11=-115, 12=-106, 16=-113, 15=-114, 14=-108.
- 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.



January 4, 2021

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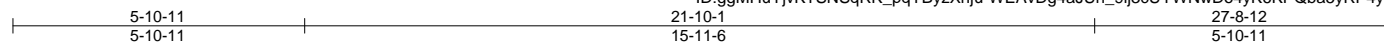
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|         |       |            |     |     |                          |           |
|---------|-------|------------|-----|-----|--------------------------|-----------|
| Job     | Truss | Truss Type | Qty | Ply | Summit/25 Woodside/MO    | 144188016 |
| 2745269 | LG6   | GABLE      | 1   | 1   | Job Reference (optional) |           |

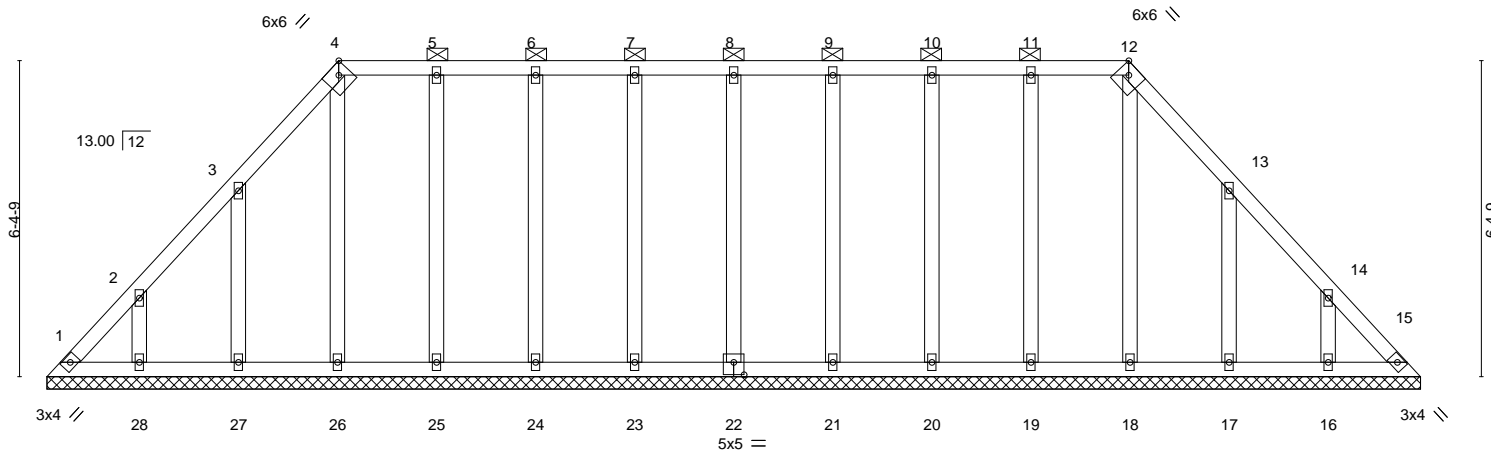
Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Thu Dec 31 09:30:51 2020 Page 1

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Scale = 1:46.5



|                       |       |                      |  |       |  |             |      |  |  |   |          |          |  |        |  |     |  |               |  |                |          |  |  |  |  |  |  |  |  |
|-----------------------|-------|----------------------|--|-------|--|-------------|------|--|--|---|----------|----------|--|--------|--|-----|--|---------------|--|----------------|----------|--|--|--|--|--|--|--|--|
|                       |       |                      |  |       |  |             |      |  |  | 27-8-12   |          |          |  |        |  |     |  |               |  |                |          |  |  |  |  |  |  |  |  |
| Plate Offsets (X,Y)-- |       |                      |  |       |  |             |      |  |  | [4:0-2-9,Edge], [12:0-2-9,Edge], [22:0-2-8,0-3-0] |          |          |  |        |  |     |  |               |  | 27-8-12        |          |  |  |  |  |  |  |  |  |
| <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                  | 25.0  | Plate Grip DOL       |  | 1.15  |  | TC          | 0.06 |  |  |   | Vert(LL) | n/a      |  | -      |  | n/a |  | 999           |  | MT20           | 197/144  |  |  |  |  |  |  |  |  |
| TCDL                  | 20.0  | Lumber DOL           |  | 1.15  |  | BC          | 0.02 |  |  |   | Vert(CT) | n/a      |  | -      |  | n/a |  | 999           |  |                |          |  |  |  |  |  |  |  |  |
| BCLL                  | 0.0 * | Rep Stress Incr      |  | YES   |  | WB          | 0.12 |  |  |   | Horz(CT) | 0.01     |  | 15     |  | n/a |  | n/a           |  |                |          |  |  |  |  |  |  |  |  |
| BCDL                  | 10.0  | Code IRC2018/TPI2014 |  |       |  | Matrix-S    |      |  |  |   |          |          |  |        |  |     |  |               |  | Weight: 140 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.): 4-12.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS.

All bearings 27-8-12.  
(lb) - Max Horz 1=145(LC 8)  
Max Uplift All uplift 100 lb or less at joint(s) 1, 15, 22, 23, 24, 25, 26, 21, 20, 19 except 27=122(LC 12), 28=107(LC 12), 17=122(LC 13), 16=108(LC 13)  
Max Grav All reactions 250 lb or less at joint(s) 1, 15, 22, 23, 24, 25, 26, 28, 21, 20, 19, 18, 16 except 27=257(LC 19), 17=257(LC 20)

**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=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-4-0 to 3-4-0, Interior(1) 3-4-0 to 5-10-11, Exterior(2R) 5-10-11 to 9-10-6, Interior(1) 9-10-6 to 21-10-1, Exterior(2R) 21-10-1 to 25-10-6, Interior(1) 25-10-6 to 27-4-12 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
- 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.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 15, 22, 23, 24, 25, 26, 21, 20, 19 except (jt=lb) 27=122, 28=107, 17=122, 16=108.
- 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.



January 4, 2021

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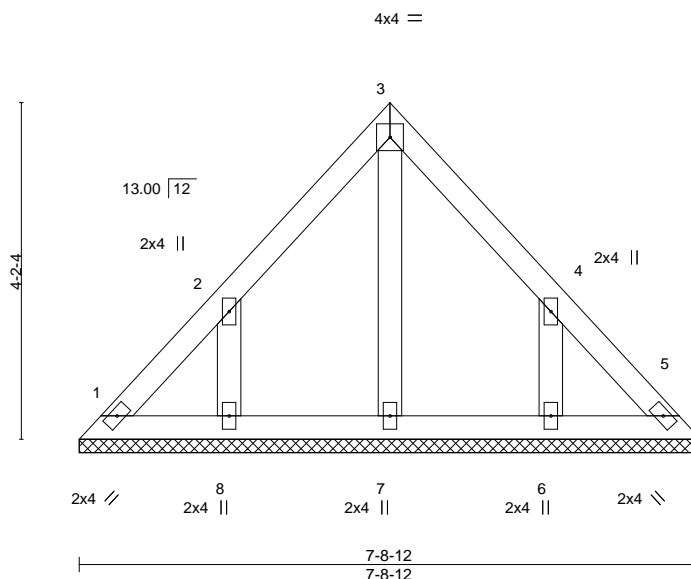
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

|  |              |                     |          |          |                                    |
|--|--------------|---------------------|----------|----------|------------------------------------|
| Job<br>2745269   | Truss<br>LG7 | Truss Type<br>GABLE | Qty<br>1 | Ply<br>1 | Summit/25 Woodside/MO<br>I44188017 |
| Builders FirstSource (Valley Center), Valley Center, KS - 67147, |              |                     |          |          |                                    |

3-10-6 3-10-6 7-8-12 3-10-6

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Scale = 1:28.6



| LOADING (psf) | SPACING-             | 2-0-0 | CSI.     | DEFL.    | in   | (loc) | l/defl | L/d | PLATES        | GRIP     |
|---------------|----------------------|-------|----------|----------|------|-------|--------|-----|---------------|----------|
| TCLL 25.0     | Plate Grip DOL       | 1.15  | TC 0.07  | Vert(LL) | n/a  | -     | n/a    | 999 | MT20          | 197/144  |
| TCDL 20.0     | Lumber DOL           | 1.15  | BC 0.03  | Vert(CT) | n/a  | -     | n/a    | 999 |               |          |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.03  | Horz(CT) | 0.00 | 5     | n/a    | n/a |               |          |
| BCDL 10.0     | Code IRC2018/TPI2014 |       | Matrix-P |          |      |       |        |     | Weight: 28 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 7-8-12.  
(lb) - Max Horz 1=92(LC 8)  
Max Uplift All uplift 100 lb or less at joint(s) 1, 5 except 8=126(LC 12), 6=126(LC 13)  
Max Grav All reactions 250 lb or less at joint(s) 1, 5, 7 except 8=261(LC 19), 6=261(LC 20)

**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=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-4-0 to 3-4-0, Interior(1) 3-4-0 to 3-10-6, Exterior(2R) 3-10-6 to 6-10-6, Interior(1) 6-10-6 to 7-4-12 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
- Gable requires continuous bottom chord bearing.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 5 except (jt=lb) 8=126, 6=126.
- 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.



January 4, 2021

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**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**



16023 Swingley Ridge Rd  
Chesterfield, MO 63017

144188018

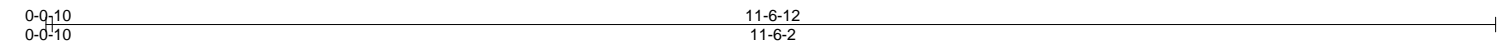
Job Reference (optional)

8.240 s Mar 9 2020 MiTek Industries, Inc. Thu Dec 31 09:30:53 2020 Page 1

ID:ggMHuYivKTSNSgRK pgYByzXhju-ScIfcM6rq6xiP3sRkva SLJ3hmzTnJqu1PRYUvv3UZG

11-6-12  
5-9-6

Scale = 1:18.4



|                      |                       |             |                                  |               |             |
|----------------------|-----------------------|-------------|----------------------------------|---------------|-------------|
| <b>LOADING</b> (psf) | <b>SPACING-</b> 2-0-0 | <b>CSI.</b> | <b>DEFL.</b> in (loc) l/defl L/d | <b>PLATES</b> | <b>GRIP</b> |
| TCLL 25.0            | Plate Grip DOL 1.15   | TC 0.44     | Vert(LL) n/a - n/a 999           | MT20          | 197/144     |
| TCDL 20.0            | Lumber DOL 1.15       | BC 0.22     | Vert(CT) n/a - n/a 999           |               |             |
| BCLL 0.0 *           | Rep Stress Incr YES   | WB 0.07     | Horz(CT) 0.00 3 n/a n/a          |               |             |
| BCDL 10.0            | Code IRC2018/TPI2014  | Matrix-S    |                                  | Weight: 28 lb | FT = 20%    |

| LUMBER-   |              | BRACING-  |   |
|-----------|--------------|-----------|---|
| 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 |           |   |

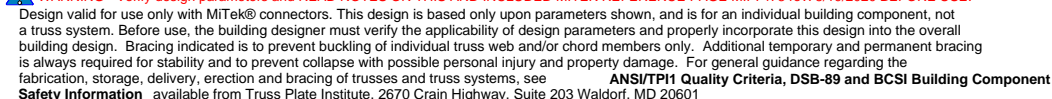
(size) 1=11-5-8, 3=11-5-8, 4=11-5-8  
 Max Horz 1=33(LC 16)  
 Max Uplift 1=-32(LC 12), 3=-38(LC 13), 4=-16(LC 12)  
 Max Grav 1=251(LC 25), 3=251(LC 26), 4=615(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
**WEBS** 2-4--455/177

- 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; BC DL=6.0psf; h=15ft; Cat. II; Exp. C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-9-1 to 3-9-1, Interior(1) 3-9-1 to 5-9-6, Exterior(2R) 5-9-6 to 8-9-6, Interior(1) 8-9-6 to 10-9-11 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Gable requires continuous bottom chord bearing.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3, 4.
- 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.



January 4, 2021





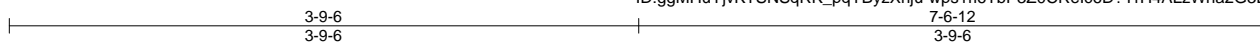
|                          |       |            |     |     |                       |
|--------------------------|-------|------------|-----|-----|-----------------------|
| Job                      | Truss | Truss Type | Qty | Ply | Summit/25 Woodside/MO |
| 2745269                  | V2    | Valley     | 1   | 1   | I44188019             |
| Job Reference (optional) |       |            |     |     |                       |

Builders FirstSource (Valley Center),

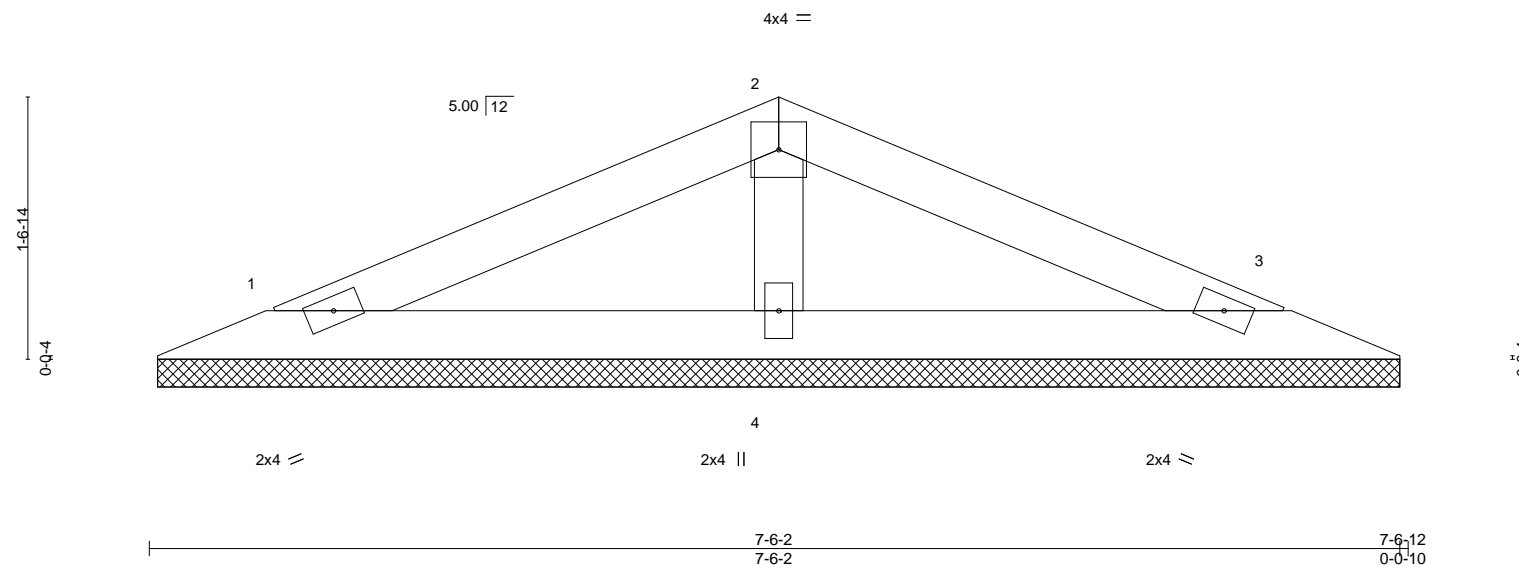
Valley Center, KS - 67147,

8.240 s Mar 9 2020 MiTek Industries, Inc. Thu Dec 31 09:30:54 2020 Page 1

ID:ggMHuYjvKTSNSqRK\_pqYByzXhju-wps1ri6TbP3Z0CRlc6D?YrH4ALzWna2G3B50Py3UZf



Scale = 1:13.8



| LOADING (psf) | SPACING-             | 2-0-0 | CSI.     | DEFL.    | in (loc) | l/defl | L/d | PLATES        | GRIP     |
|---------------|----------------------|-------|----------|----------|----------|--------|-----|---------------|----------|
| TCCL 25.0     | Plate Grip DOL       | 1.15  | TC 0.21  | Vert(LL) | n/a      | -      | n/a | MT20          | 197/144  |
| TCDL 20.0     | Lumber DOL           | 1.15  | BC 0.08  | Vert(CT) | n/a      | -      | n/a |               |          |
| BCLL 0.0 *    | Rep Stress Incr      | YES   | WB 0.03  | Horz(CT) | 0.00     | 3      | n/a |               |          |
| BCDL 10.0     | Code IRC2018/TPI2014 |       | Matrix-P |          |          |        |     | Weight: 17 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=7-5-8, 3=7-5-8, 4=7-5-8  
Max Horz 1=-20(LC 17)  
Max Uplift 1=-25(LC 12), 3=-28(LC 13)  
Max Grav 1=167(LC 1), 3=167(LC 1), 4=331(LC 1)

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

WEBS 2-4=-256/136

#### 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=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone 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
- Gable requires continuous bottom chord bearing.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 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.



January 4, 2021

**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

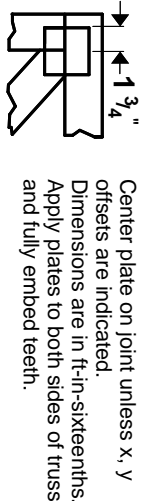
Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



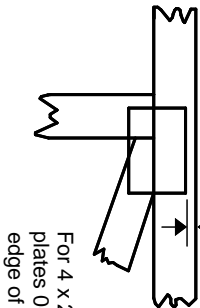
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

# Symbols

## PLATE LOCATION AND ORIENTATION



0- $\frac{1}{16}$ "



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.

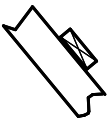
\* Plate location details available in **MiTek 20/20** software or upon request.

## PLATE SIZE

4 X 4

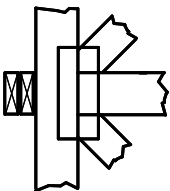
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## 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



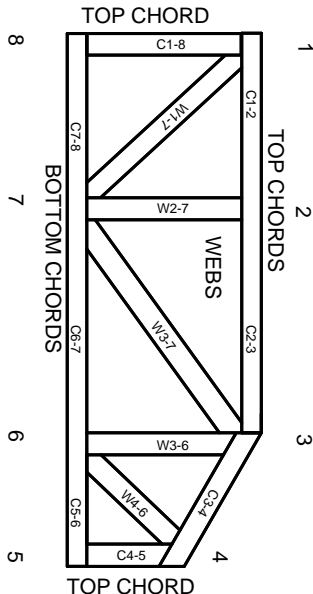
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

## Industry Standards:

ANSI/TP1: 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.