

RE: P240270-01  
Roof - HR Lot 149

MiTek, Inc.  
16023 Swingley Ridge Rd.  
Chesterfield, MO 63017  
314.434.1200

**Site Information:**

Customer: Clayton Properties Project Name: P240270-01  
Lot/Block: 149 Model:  
Address: 3220 SW Arboridge Dr Subdivision: Hawthorne Ridge  
City: Lee's Summit State: MO

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

Design Code: IRC2018/TPI2014 Design Program: MiTek 20/20 8.6  
Wind Code: ASCE 7-16 Wind Speed: 115 mph  
Roof Load: 45.0 psf Floor Load: N/A psf

This package includes 20 individual, dated Truss Design Drawings and 0 Additional Drawings.

| No. | Seal#     | Truss Name | Date      |
|-----|-----------|------------|-----------|
| 1   | I64407244 | B1         | 3/24/2024 |
| 2   | I64407245 | B2         | 3/24/2024 |
| 3   | I64407246 | B3         | 3/24/2024 |
| 4   | I64407247 | B4         | 3/24/2024 |
| 5   | I64407248 | B5         | 3/24/2024 |
| 6   | I64407249 | C1         | 3/24/2024 |
| 7   | I64407250 | C2         | 3/24/2024 |
| 8   | I64407251 | C3         | 3/24/2024 |
| 9   | I64407252 | D1         | 3/24/2024 |
| 10  | I64407253 | E1         | 3/24/2024 |
| 11  | I64407254 | E2         | 3/24/2024 |
| 12  | I64407255 | J1         | 3/24/2024 |
| 13  | I64407256 | J2         | 3/24/2024 |
| 14  | I64407257 | VC1        | 3/24/2024 |
| 15  | I64407258 | VC2        | 3/24/2024 |
| 16  | I64407259 | VC3        | 3/24/2024 |
| 17  | I64407260 | VC4        | 3/24/2024 |
| 18  | I64407261 | VC5        | 3/24/2024 |
| 19  | I64407262 | VE1        | 3/24/2024 |
| 20  | I64407263 | VE2        | 3/24/2024 |

The truss drawing(s) referenced above have been prepared by  
MiTek USA, Inc. under my direct supervision  
based on the parameters provided by .

Truss Design Engineer's Name: Sevier, Scott

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

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.

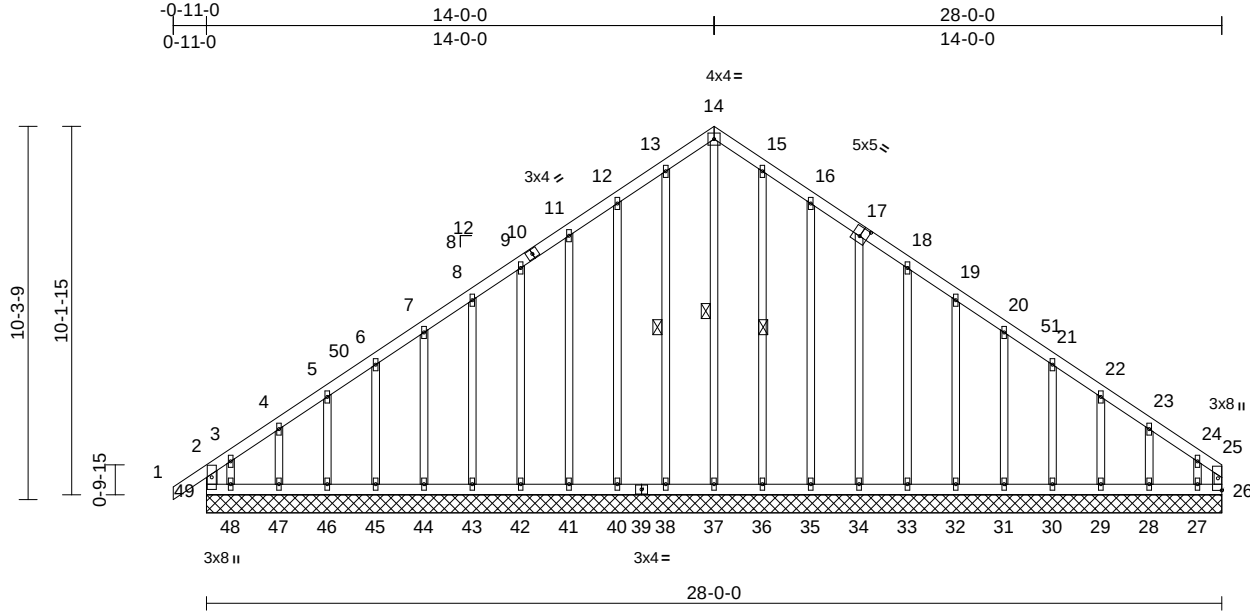


|            |       |                        |     |     |                          |           |
|------------|-------|------------------------|-----|-----|--------------------------|-----------|
| Job        | Truss | Truss Type             | Qty | Ply | Roof - HR Lot 149        | I64407244 |
| P240270-01 | B1    | Common Supported Gable | 1   | 1   | Job Reference (optional) |           |

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

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Page: 1



Scale = 1:63.5

Plate Offsets (X, Y): [17:0-2-8,0-3-0]

| Loading                 | (psf) | Spacing         | 1-11-4          | CSI      | DEFL | in       | (loc) | l/defl | L/d | PLATES | GRIP    |
|-------------------------|-------|-----------------|-----------------|----------|------|----------|-------|--------|-----|--------|---------|
| TCLL (roof)             | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.12 | Vert(LL) | n/a   | -      | n/a | 999    | 244/190 |
| TCDL                    | 10.0  | Lumber DOL      | 1.15            | BC       | 0.10 | Vert(CT) | n/a   | -      | n/a | 999    |         |
| BCLL                    | 0.0   | Rep Stress Incr | YES             | WB       | 0.20 | Horz(CT) | 0.01  | 26     | n/a | n/a    |         |
| BCDL                    | 10.0  | Code            | IRC2018/TPI2014 | Matrix-R |      |          |       |        |     |        |         |
| Weight: 179 lb FT = 20% |       |                 |                 |          |      |          |       |        |     |        |         |

#### LUMBER

|           |                                         |
|-----------|-----------------------------------------|
| TOP CHORD | 2x4 SP No.2                             |
| BOT CHORD | 2x4 SP No.2                             |
| WEBS      | 2x4 SP No.2 *Except* 25-26:2x3 SPF No.2 |
| OTHERS    | 2x3 SPF No.2                            |

#### BRACING

|           |                                                                                       |
|-----------|---------------------------------------------------------------------------------------|
| TOP CHORD | Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals. |
| BOT CHORD | Rigid ceiling directly applied or 10-0-0 oc bracing.                                  |
| WEBS      | 1 Row at midpt 14-37, 13-38, 15-36                                                    |

|                  |                                                                                                                                                                                                                                                                                                                                                                                 |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| REACTIONS (size) | 26=28-0-0, 27=28-0-0, 28=28-0-0, 29=28-0-0, 30=28-0-0, 31=28-0-0, 32=28-0-0, 33=28-0-0, 34=28-0-0, 35=28-0-0, 36=28-0-0, 37=28-0-0, 38=28-0-0, 40=28-0-0, 41=28-0-0, 42=28-0-0, 43=28-0-0, 44=28-0-0, 45=28-0-0, 46=28-0-0, 47=28-0-0, 48=28-0-0, 49=28-0-0                                                                                                                     |
| Max Horiz        | 49=286 (LC 9)                                                                                                                                                                                                                                                                                                                                                                   |
| Max Uplift       | 26=159 (LC 11), 27=-217 (LC 13), 28=-43 (LC 13), 29=-52 (LC 13), 30=-50 (LC 13), 31=-51 (LC 13), 32=-51 (LC 13), 33=-45 (LC 13), 34=-52 (LC 13), 35=-66 (LC 13), 36=-9 (LC 13), 37=-5 (LC 11), 38=-17 (LC 12), 40=-61 (LC 12), 41=-51 (LC 12), 42=-50 (LC 12), 43=-50 (LC 12), 44=-51 (LC 12), 45=-50 (LC 12), 46=-53 (LC 12), 47=-41 (LC 12), 48=-278 (LC 12), 49=-264 (LC 10) |

#### FORCES

|           |                                                                                                                                                                                                                                                                                                                                                                 |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           | (lb) - Maximum Compression/Maximum Tension                                                                                                                                                                                                                                                                                                                      |
| TOP CHORD | 2-49=-246/167, 1-2=0/40, 2-3=-292/242, 3-4=-213/190, 4-5=-187/173, 5-6=-166/157, 6-7=-154/152, 7-8=-141/149, 8-9=-128/173, 9-11=-116/199, 11-12=-135/225, 12-13=-164/269, 13-14=-173/286, 14-15=-173/286, 15-16=-164/269, 16-18=-135/218, 18-19=-87/135, 19-20=-62/96, 20-21=-68/71, 21-22=-77/64, 22-23=-102/80, 23-24=-149/97, 24-25=-223/134, 25-26=-172/100 |
| BOT CHORD | 48-49=-105/147, 47-48=-105/147, 46-47=-105/147, 45-46=-105/147, 44-45=-105/147, 43-44=-105/147, 42-43=-105/147, 41-42=-105/147, 40-41=-105/147, 38-40=-105/147, 37-38=-105/147, 36-37=-105/147, 35-36=-105/147, 34-35=-105/147, 33-34=-104/146, 32-33=-104/146, 31-32=-104/146, 30-31=-104/146, 29-30=-104/146, 28-29=-104/146, 27-28=-104/146, 26-27=-104/146  |

#### WEBS

|                                                                                                                                                                                                                                                                                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 14-37=-231/105, 13-38=-102/33, 12-40=-96/77, 11-41=-96/67, 9-42=-96/65, 8-43=-96/66, 7-44=-96/66, 6-45=-96/66, 5-46=-96/65, 4-47=-100/68, 3-48=-119/144, 15-36=-92/25, 16-35=-103/81, 17-34=-97/68, 18-33=-91/61, 19-32=-97/67, 20-31=-96/66, 21-30=-96/66, 22-29=-96/65, 23-28=-99/68, 24-27=-111/128 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-11-0 to 4-1-0, Exterior(2N) 4-1-0 to 14-0-0, Corner(3R) 14-0-0 to 19-0-0, Exterior(2N) 19-0-0 to 27-10-12 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60



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Continued on page 2

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcsccomponents.com)

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|            |       |                        |     |     |                          |
|------------|-------|------------------------|-----|-----|--------------------------|
| Job        | Truss | Truss Type             | Qty | Ply | Roof - HR Lot 149        |
| P240270-01 | B1    | Common Supported Gable | 1   | 1   | I64407244                |
|            |       |                        |     |     | Job Reference (optional) |

- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) All plates are 1.5x4 MT20 unless otherwise indicated.
- 5) Gable requires continuous bottom chord bearing.
- 6) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 7) Gable studs spaced at 1-4-0 oc.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 264 lb uplift at joint 49, 159 lb uplift at joint 26, 5 lb uplift at joint 37, 17 lb uplift at joint 38, 61 lb uplift at joint 40, 51 lb uplift at joint 41, 50 lb uplift at joint 42, 50 lb uplift at joint 43, 51 lb uplift at joint 44, 50 lb uplift at joint 45, 53 lb uplift at joint 46, 41 lb uplift at joint 47, 278 lb uplift at joint 48, 9 lb uplift at joint 36, 66 lb uplift at joint 35, 52 lb uplift at joint 34, 45 lb uplift at joint 33, 51 lb uplift at joint 32, 51 lb uplift at joint 31, 50 lb uplift at joint 30, 52 lb uplift at joint 29, 43 lb uplift at joint 28 and 217 lb uplift at joint 27.
- 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.

LOAD CASE(S) Standard

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Missouri City, MO 63053  
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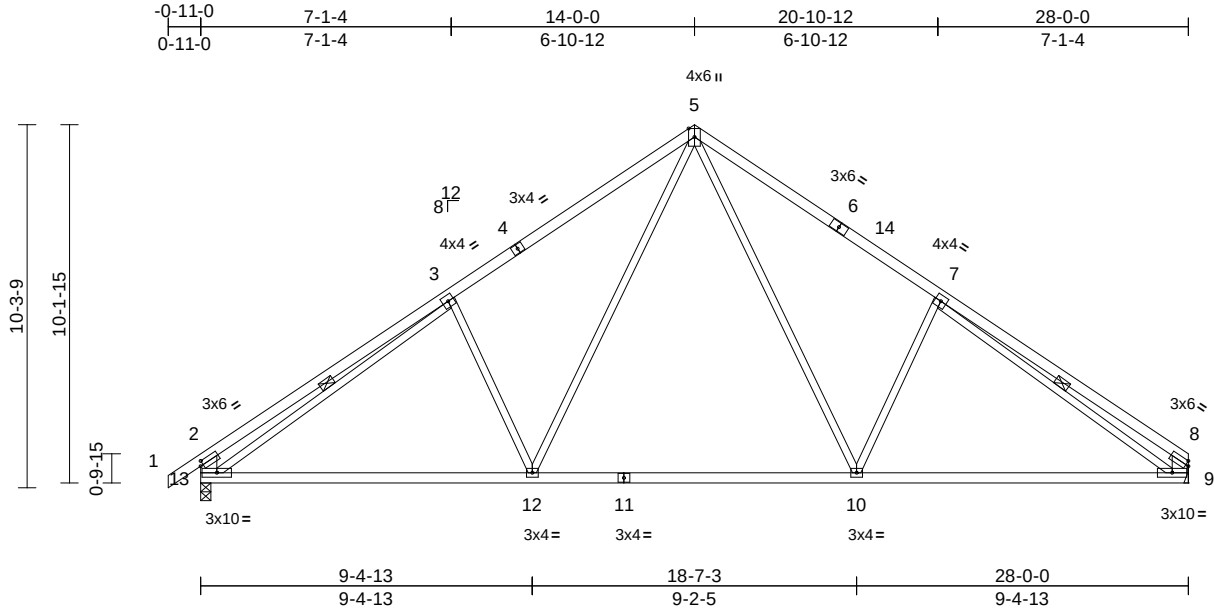
|            |       |            |     |     |                          |           |
|------------|-------|------------|-----|-----|--------------------------|-----------|
| Job        | Truss | Truss Type | Qty | Ply | Roof - HR Lot 149        |           |
| P240270-01 | B2    | Common     | 4   | 1   | Job Reference (optional) | I64407245 |

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Scale = 1:65.3

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

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      |      | DEFL     | in    | (loc) | l/defl | L/d | PLATES         | GRIP     |
|-------------|-------|-----------------|-----------------|----------|------|----------|-------|-------|--------|-----|----------------|----------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.75 | Vert(LL) | -0.16 | 12-13 | >999   | 240 | MT20           | 244/190  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.81 | Vert(CT) | -0.33 | 12-13 | >999   | 180 |                |          |
| BCLL        | 0.0   | Rep Stress Incr | YES             | WB       | 0.73 | Horz(CT) | 0.05  | 9     | n/a    | n/a |                |          |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      |          |       |       |        |     | Weight: 135 lb | FT = 20% |

#### LUMBER

TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x3 SPF No.2 \*Except\* 13-2,9-8:2x6 SPF No.2

#### BRACING

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

WEBS 1 Row at midpt 3-13, 7-9

REACTIONS (size) 9= Mechanical, 13=0-3-8  
Max Horiz 13=297 (LC 9)  
Max Uplift 9=-173 (LC 13), 13=-202 (LC 12)  
Max Grav 9=1238 (LC 1), 13=1321 (LC 1)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/44, 2-3=-739/302, 3-5=-1488/355,  
5-7=-1496/359, 7-8=-601/203,  
2-13=-655/283, 8-9=-488/191  
BOT CHORD 12-13=-259/1296, 10-12=-36/874,  
9-10=-154/1276  
WEBS 5-10=-209/636, 7-10=-426/335,  
5-12=-205/626, 3-12=-413/330,  
3-13=-960/63, 7-9=-1101/126

#### 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=35ft;  
Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope)  
exterior zone and C-C Exterior(2E) -0-11-0 to 4-1-0,  
Interior (1) 4-1-0 to 14-0-0, Exterior(2R) 14-0-0 to  
19-0-0, Interior (1) 19-0-0 to 27-9-4 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

- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Bearings are assumed to be: Joint 13 SP No.2 crushing capacity of 565 psi.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 202 lb uplift at joint 13 and 173 lb uplift at joint 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.

LOAD CASE(S) Standard



March 24, 2024

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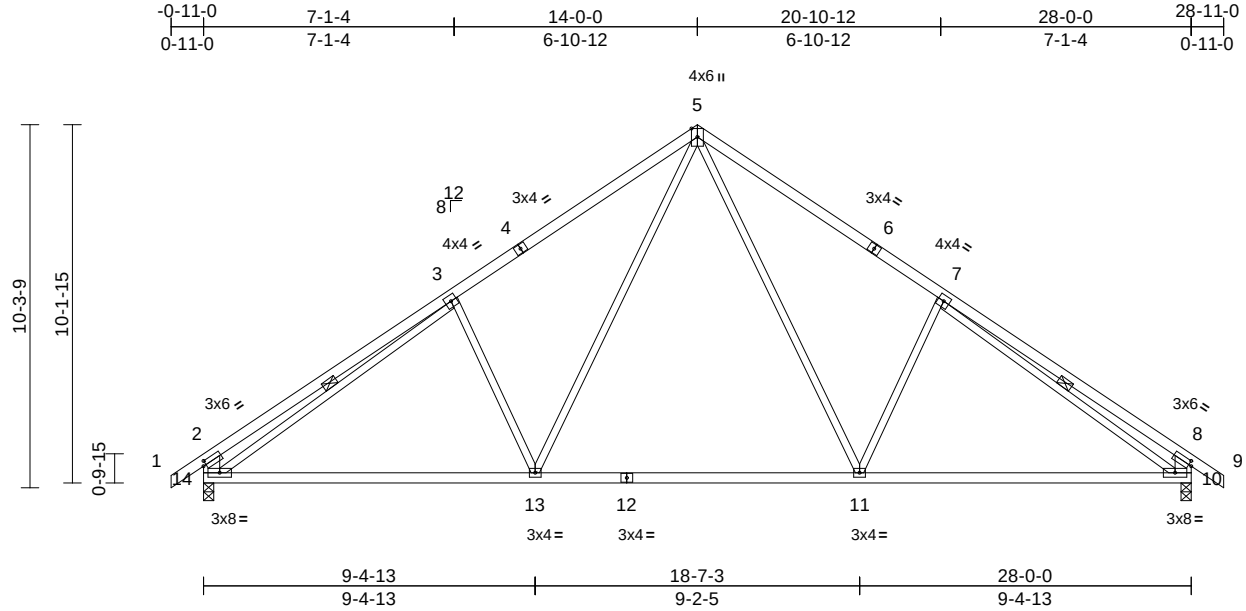
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|                   |             |                      |          |          |                                               |           |
|-------------------|-------------|----------------------|----------|----------|-----------------------------------------------|-----------|
| Job<br>P240270-01 | Truss<br>B3 | Truss Type<br>Common | Qty<br>3 | Ply<br>1 | Roof - HR Lot 149<br>Job Reference (optional) | 164407246 |
|-------------------|-------------|----------------------|----------|----------|-----------------------------------------------|-----------|

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Page: 1



Scale = 1:65.3

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

| Loading        | (psf) | Spacing         | 2-0-0           | CSI      | DEFL | in       | (loc) | l/defl | L/d  | PLATES | GRIP     |         |
|----------------|-------|-----------------|-----------------|----------|------|----------|-------|--------|------|--------|----------|---------|
| TCLL (roof)    | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.72 | Vert(LL) | -0.16 | 13-14  | >999 | 240    | MT20     | 244/190 |
| TCDL           | 10.0  | Lumber DOL      | 1.15            | BC       | 0.81 | Vert(CT) | -0.33 | 13-14  | >999 | 180    |          |         |
| BCLL           | 0.0   | Rep Stress Incr | YES             | WB       | 0.64 | Horz(CT) | 0.05  | 10     | n/a  | n/a    |          |         |
| BCDL           | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      |          |       |        |      |        |          |         |
| Weight: 137 lb |       |                 |                 |          |      |          |       |        |      |        | FT = 20% |         |

#### LUMBER

TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x3 SPF No.2 \*Except\* 14-2,10-8:2x6 SPF No.2

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 3-3-7 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

WEBS 1 Row at midpt 3-14, 7-10

**REACTIONS** (size) 10=0-3-8, 14=0-3-8  
Max Horiz 14=-305 (LC 10)  
Max Uplift 10=-202 (LC 13), 14=-202 (LC 12)  
Max Grav 10=1320 (LC 1), 14=1320 (LC 1)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/44, 2-3=-739/302, 3-5=-1485/355, 5-7=-1485/355, 7-8=-739/302, 8-9=0/44, 2-14=-655/283, 8-10=-655/283  
BOT CHORD 13-14=-244/1305, 11-13=-22/872, 10-11=-106/1264  
WEBS 5-11=-205/625, 7-11=-413/329, 5-13=-205/625, 3-13=-413/329, 3-14=-956/61, 7-10=-956/61

#### 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=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 4-1-0, Interior (1) 4-1-0 to 14-0-0, Exterior(2R) 14-0-0 to 19-0-0, Interior (1) 19-0-0 to 28-11-0 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.
- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 202 lb uplift at joint 14 and 202 lb uplift at joint 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.

**LOAD CASE(S)** Standard



March 24, 2024

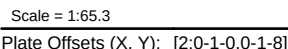
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**LUMBER**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x3 SPF No.2 \*Except\* 13-2:2x6 SPF No.2,  
9-8:2x4 SP No.2

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or  
3-3-7 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc  
bracing.  
WEBS 1 Row at midpt 3-13, 7-9

**REACTIONS** (size) 9= Mechanical, 13=0-3-8  
Max Horiz 13=299 (LC 9)  
Max Uplift 9=-170 (LC 13), 13=-201 (LC 12)  
Max Grav 9=1228 (LC 1), 13=1312 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum  
Tension  
TOP CHORD 1-2=0/44, 2-3=-737/302, 3-5=-1473/353,  
5-7=-1463/354, 7-8=-476/174,  
2-13=-653/283, 8-9=-412/171  
BOT CHORD 12-13=-258/1285, 10-12=-35/861,  
9-10=-156/1237  
WEBS 5-10=-203/607, 7-10=-399/329,  
5-12=-205/627, 3-12=-414/330,  
3-13=-947/60, 7-9=-1197/144

- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) Bearings are assumed to be: Joint 13 SP No.2 crushing capacity of 565 psi.
- 5) Refer to girder(s) for truss to truss connections.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 201 lb uplift at joint 13 and 170 lb uplift at joint 9.
- 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.

LOAD CASE(S) Standard

## 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=35ft;  
Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope)  
exterior zone and C-C Exterior(2E) -0-11-0 to 4-1-0,  
Interior (1) 4-1-0 to 14-0-0, Exterior(2R) 14-0-0 to  
19-0-0, Interior (1) 19-0-0 to 27-6-12 zone; cantilever left  
and right exposed ; end vertical left and right  
exposed;C-C for members and forces & MWFRS for  
reactions shown; Lumber DOL=1.60 plate grip  
DOL=1.60



March 24.2024

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

**WARNING – verify design parameters and READ NOTES on this and INCLUDED WITH REFERENCE PAGE MP-7473 Rev. 12/2023 BEFORE USE.**  
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria**, and **DSB-22** available from Truss Plate Institute ([www.tpinst.org](http://www.tpinst.org)) and **BCSI Building Component Safety Information** available from the Structural Building Component Association ([www.sbcsccomponents.com](http://www.sbcsccomponents.com))

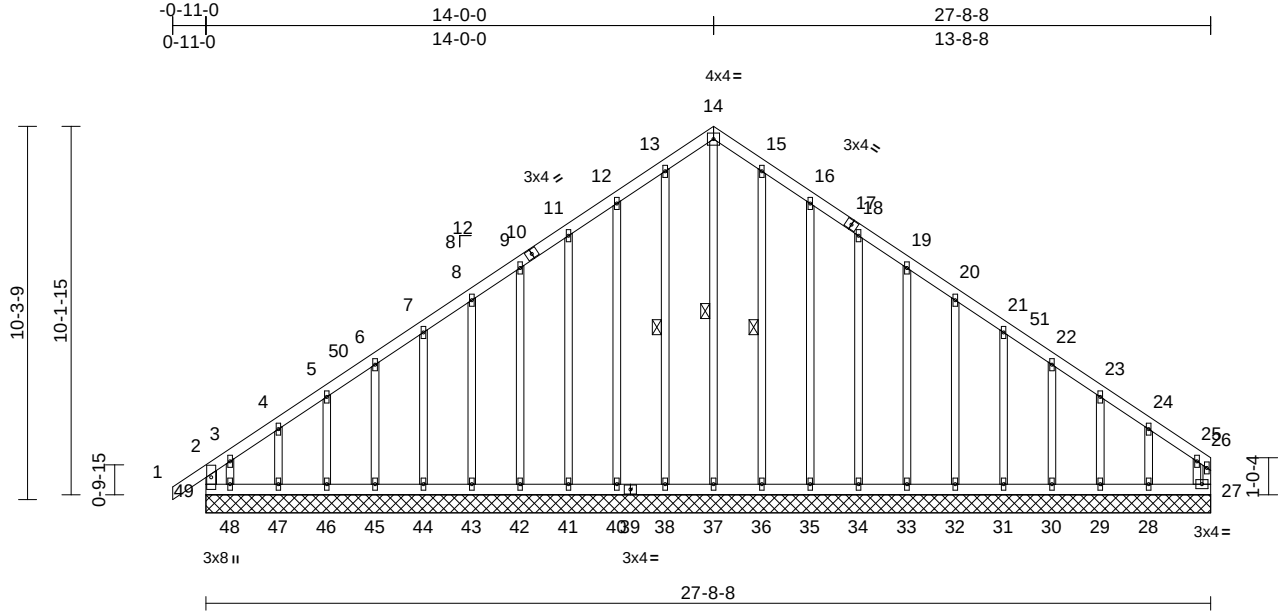
**Mitek®**  
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AS NOTED ON PLANS REVIEW  
16023 Swinley Ridge Rd  
Crestwood, MO 63017  
844-4200 MitekUSA.com  
DEVELOPMENT SERVICES  
LEE'S SUMMIT, MISSOURI  
04/24/2024 5:30:44

|            |       |                        |     |     |                          |           |
|------------|-------|------------------------|-----|-----|--------------------------|-----------|
| Job        | Truss | Truss Type             | Qty | Ply | Roof - HR Lot 149        | I64407248 |
| P240270-01 | B5    | Common Supported Gable | 1   | 1   | Job Reference (optional) |           |

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

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Page: 1



Scale = 1:63.5

| Loading                 | (psf) | Spacing         | 2-0-0           | CSI      | DEFL | in       | (loc) | l/defl | L/d | PLATES | GRIP    |
|-------------------------|-------|-----------------|-----------------|----------|------|----------|-------|--------|-----|--------|---------|
| TCLL (roof)             | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.12 | n/a      | -     | n/a    | 999 | MT20   | 244/190 |
| TCDL                    | 10.0  | Lumber DOL      | 1.15            | BC       | 0.11 | n/a      | -     | n/a    | 999 |        |         |
| BCLL                    | 0.0   | Rep Stress Incr | YES             | WB       | 0.23 | Horz(CT) | 0.01  | 27     | n/a |        |         |
| BCDL                    | 10.0  | Code            | IRC2018/TPI2014 | Matrix-R |      |          |       |        |     |        |         |
| Weight: 178 lb FT = 20% |       |                 |                 |          |      |          |       |        |     |        |         |

#### LUMBER

|           |                                         |
|-----------|-----------------------------------------|
| TOP CHORD | 2x4 SP No.2                             |
| BOT CHORD | 2x4 SP No.2                             |
| WEBS      | 2x4 SP No.2 *Except* 26-27:2x3 SPF No.2 |
| OTHERS    | 2x3 SPF No.2                            |

#### BRACING

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

WEBS 1 Row at midpt 14-37, 13-38, 15-36

|                  |                                                                                                                                                                                                                                                                                                                                          |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| REACTIONS (size) | 27=27-8-8, 28=27-8-8, 29=27-8-8, 30=27-8-8, 31=27-8-8, 32=27-8-8, 33=27-8-8, 34=27-8-8, 35=27-8-8, 36=27-8-8, 37=27-8-8, 38=27-8-8, 40=27-8-8, 41=27-8-8, 42=27-8-8, 43=27-8-8, 44=27-8-8, 45=27-8-8, 46=27-8-8, 47=27-8-8, 48=27-8-8, 49=27-8-8                                                                                         |
| Max Horiz        | 49=298 (LC 9)                                                                                                                                                                                                                                                                                                                            |
| Max Uplift       | 27=64 (LC 11), 28=174 (LC 13), 29=23 (LC 13), 30=57 (LC 13), 31=51 (LC 13), 32=52 (LC 13), 33=51 (LC 13), 34=53 (LC 13), 35=67 (LC 13), 36=5 (LC 13), 37=26 (LC 11), 38=17 (LC 12), 40=64 (LC 12), 41=53 (LC 12), 42=52 (LC 12), 43=52 (LC 12), 44=52 (LC 12), 45=51 (LC 12), 46=54 (LC 12), 47=42 (LC 12), 48=297 (LC 9), 49=305 (LC 8) |

#### FORCES

|           |                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TOP CHORD | (lb) - Maximum Compression/Maximum Tension<br>2-49=-275/199, 1-2=0/41, 2-3=-320/271, 3-4=-235/213, 4-5=-208/195, 5-6=-195/186, 6-7=-182/182, 7-8=-169/180, 8-9=-155/207, 9-11=-142/233, 11-12=-157/260, 12-13=-188/304, 13-14=-195/320, 14-15=-195/320, 15-16=-188/304, 16-18=-157/252, 18-19=-132/207, 19-20=-106/164, 20-21=-81/120, 21-22=-59/80, 22-23=-69/53, 23-24=-73/54, 24-25=-166/104, 25-26=-25/33, 26-27=-113/156 |
| BOT CHORD | 48-49=-92/119, 47-48=-92/119, 46-47=-92/119, 45-46=-92/119, 44-45=-92/119, 43-44=-92/119, 42-43=-92/119, 41-42=-92/119, 40-41=-92/119, 38-40=-92/119, 37-38=-92/119, 36-37=-92/119, 35-36=-92/119, 34-35=-92/119, 33-34=-92/119, 32-33=-92/119, 31-32=-92/119, 30-31=-92/119, 29-30=-92/119, 28-29=-92/119, 27-28=-92/119                                                                                                     |

#### WEBS

|                                                                                                                                                                                                                                                                                                           |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 14-37=-262/124, 13-38=-106/33, 12-40=-99/80, 11-41=-99/69, 9-42=-99/68, 8-43=-99/68, 7-44=-99/68, 6-45=-99/68, 5-46=-99/67, 4-47=-103/71, 3-48=-131/147, 15-36=-95/21, 16-35=-104/83, 18-34=-99/69, 19-33=-99/67, 20-32=-99/68, 21-31=-99/68, 22-30=-101/71, 23-29=-92/53, 24-28=-149/158, 25-27=-254/162 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

#### 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=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-11-0 to 4-1-0, Exterior(2N) 4-1-0 to 14-0-0, Corner(3R) 14-0-0 to 19-0-0, Exterior(2N) 19-0-0 to 27-7-4 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



March 24, 2024

Continued on page 2

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|            |       |                        |     |     |                          |
|------------|-------|------------------------|-----|-----|--------------------------|
| Job        | Truss | Truss Type             | Qty | Ply | Roof - HR Lot 149        |
| P240270-01 | B5    | Common Supported Gable | 1   | 1   | I64407248                |
|            |       |                        |     |     | Job Reference (optional) |

- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) All plates are 1.5x4 MT20 unless otherwise indicated.
- 5) Gable requires continuous bottom chord bearing.
- 6) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 7) Gable studs spaced at 1-4-0 oc.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 305 lb uplift at joint 49, 64 lb uplift at joint 27, 26 lb uplift at joint 37, 17 lb uplift at joint 38, 64 lb uplift at joint 40, 53 lb uplift at joint 41, 52 lb uplift at joint 42, 52 lb uplift at joint 43, 52 lb uplift at joint 44, 51 lb uplift at joint 45, 54 lb uplift at joint 46, 42 lb uplift at joint 47, 297 lb uplift at joint 48, 5 lb uplift at joint 36, 67 lb uplift at joint 35, 53 lb uplift at joint 34, 51 lb uplift at joint 33, 52 lb uplift at joint 32, 51 lb uplift at joint 31, 57 lb uplift at joint 30, 23 lb uplift at joint 29 and 174 lb uplift at joint 28.
- 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.

LOAD CASE(S) Standard

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DEVELOPMENT SERVICES  
LEE'S SUMMIT, MISSOURI

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Potosi, MO 63003  
816-494-1200 / [Mitek-US.com](http://Mitek-US.com)

04/24/2024 5:30:44



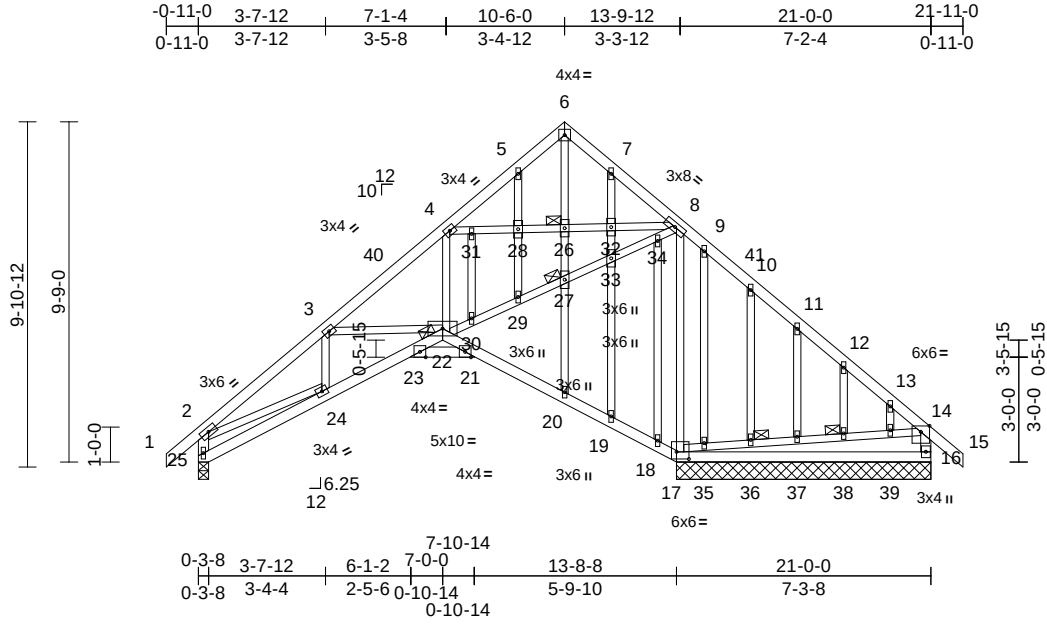
|            |       |              |     |     |                          |           |
|------------|-------|--------------|-----|-----|--------------------------|-----------|
| Job        | Truss | Truss Type   | Qty | Ply | Roof - HR Lot 149        | I64407249 |
| P240270-01 | C1    | Roof Special | 1   | 1   | Job Reference (optional) |           |

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

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Scale = 1:66

Plate Offsets (X, Y): [17:0-4-4,0-2-8]

| Loading                 | (psf) | Spacing         | 1-11-4          | CSI      | DEFL | in       | (loc) | l/defl | L/d  | PLATES | GRIP    |
|-------------------------|-------|-----------------|-----------------|----------|------|----------|-------|--------|------|--------|---------|
| TCLL (roof)             | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.55 | Vert(LL) | -0.08 | 16-17  | >999 | 240    | 197/144 |
| TCDL                    | 10.0  | Lumber DOL      | 1.15            | BC       | 0.43 | Vert(CT) | -0.16 | 16-17  | >542 | 180    |         |
| BCLL                    | 0.0   | Rep Stress Incr | YES             | WB       | 0.92 | Horz(CT) | 0.05  | 16     | n/a  | n/a    |         |
| BCDL                    | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      |          |       |        |      |        |         |
| Weight: 149 lb FT = 20% |       |                 |                 |          |      |          |       |        |      |        |         |

|                                            |                                                                                                                                                                                                             |                                                     |
|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|
| <b>LUMBER</b>                              |                                                                                                                                                                                                             | WEBS                                                |
| TOP CHORD                                  | 2x4 SP No.2                                                                                                                                                                                                 | 8-17=858/162, 2-24=8/485,                           |
| BOT CHORD                                  | 2x4 SP No.2                                                                                                                                                                                                 | 17-35=633/280, 35-36=608/283,                       |
| WEBS                                       | 2x3 SPF No.2 *Except* 25-2,16-14:2x4 SP No.2                                                                                                                                                                | 36-37=607/280, 37-38=605/279,                       |
| OTHERS                                     | 2x3 SPF No.2                                                                                                                                                                                                | 38-39=602/276, 14-39=611/283,                       |
| <b>BRACING</b>                             |                                                                                                                                                                                                             | 4-22=38/86, 3-24=54/51, 3-22=241/196,               |
| TOP CHORD                                  | Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.                                                                                                                       | 22-30=175/832, 29-30=178/846,                       |
| BOT CHORD                                  | Rigid ceiling directly applied or 6-0-0 oc bracing.                                                                                                                                                         | 27-29=183/858, 27-33=177/842,                       |
| JOINTS                                     | 1 Brace at Jt(s): 22, 26, 27, 36, 38                                                                                                                                                                        | 33-34=181/875, 8-34=192/862,                        |
| <b>REACTIONS</b>                           |                                                                                                                                                                                                             | 4-31=271/157, 28-31=270/158,                        |
| (size)                                     | 16=7-3-8, 17=7-3-8, 25=0-3-8                                                                                                                                                                                | 26-28=270/157, 26-32=270/158,                       |
| Max Horiz                                  | 25=290 (LC 10)                                                                                                                                                                                              | 8-32=271/158, 6-26=3/108, 26-27=0/114,              |
| Max Uplift                                 | 16=152 (LC 8), 17=221 (LC 12), 25=100 (LC 13)                                                                                                                                                               | 20-27=0/101, 5-28=50/35, 28-29=28/18,               |
| Max Grav                                   | 16=241 (LC 26), 17=1338 (LC 1), 25=513 (LC 1)                                                                                                                                                               | 30-31=35/12, 7-32=48/8, 32-33=72/8,                 |
| <b>FORCES</b>                              |                                                                                                                                                                                                             | 19-33=22/17, 18-34=46/15, 9-35=122/22,              |
| (lb) - Maximum Compression/Maximum Tension |                                                                                                                                                                                                             | 10-36=34/41, 11-37=27/19, 12-38=54/44, 13-39=83/112 |
| TOP CHORD                                  | 1-2=0/46, 2-3=775/156, 3-4=511/65, 4-5=230/27, 5-6=162/52, 6-7=186/62, 7-8=246/55, 8-9=47/467, 9-10=64/519, 10-11=66/469, 11-12=72/432, 12-13=89/407, 13-14=96/318, 14-15=0/46, 2-25=516/167, 14-16=172/193 |                                                     |
| BOT CHORD                                  | 24-25=301/373, 23-24=252/819, 22-23=179/833, 21-23=101/9, 21-22=306/218, 20-21=339/171, 19-20=333/175, 18-19=341/161, 17-18=357/150, 16-17=212/353                                                          |                                                     |

#### 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=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 4-1-0, Interior (1) 4-1-0 to 10-6-0, Exterior(2R) 10-6-0 to 15-6-0, Interior (1) 15-6-0 to 21-11-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) All plates are 1.5x4 MT20 unless otherwise indicated.
- 5) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 6) Gable studs spaced at 1-4-0 oc.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- 8) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
  - 9) Bearing at joint(s) 25 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 25, 221 lb uplift at joint 17 and 152 lb uplift at joint 16.
  - 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.
- LOAD CASE(S)** Standard



March 24, 2024

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AS NOTED ON PLANS REVIEW  
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04/24/2024 5:30:44

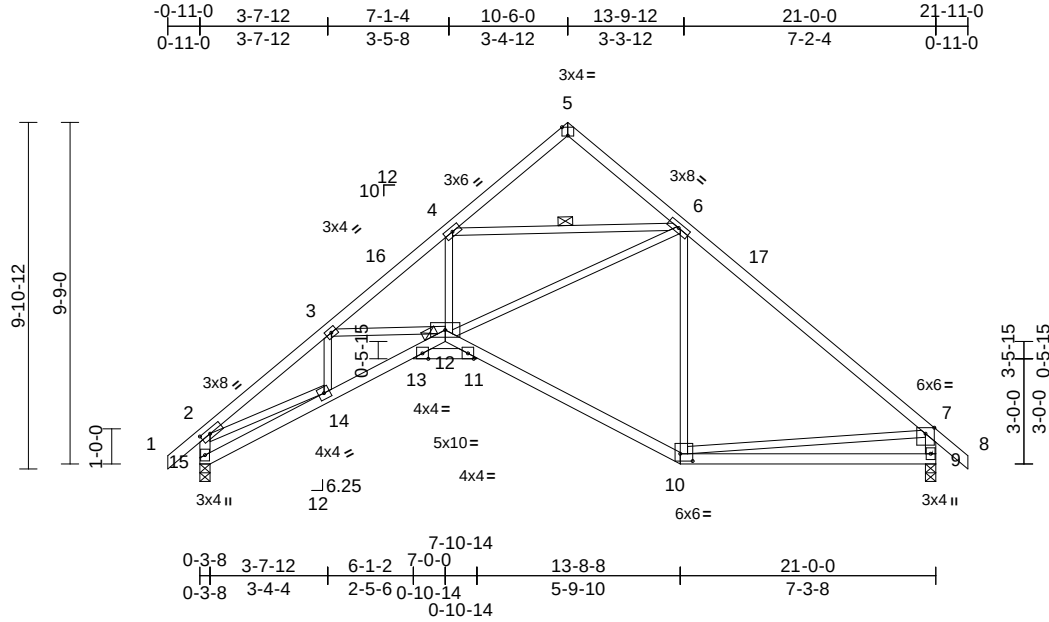
|            |       |              |     |     |                          |           |
|------------|-------|--------------|-----|-----|--------------------------|-----------|
| Job        | Truss | Truss Type   | Qty | Ply | Roof - HR Lot 149        |           |
| P240270-01 | C2    | Roof Special | 6   | 1   | Job Reference (optional) | I64407250 |

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Thu Mar 21 14:30:34

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| Loading                 | (psf) | Spacing         | 2-0-0           | CSI      | DEFL | in       | (loc) | l/defl | L/d  | PLATES | GRIP    |
|-------------------------|-------|-----------------|-----------------|----------|------|----------|-------|--------|------|--------|---------|
| TCLL (roof)             | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.66 | Vert(LL) | -0.09 | 9-10   | >999 | 240    | 244/190 |
| TCDL                    | 10.0  | Lumber DOL      | 1.15            | BC       | 0.47 | Vert(CT) | -0.19 | 9-10   | >999 | 180    |         |
| BCLL                    | 0.0   | Rep Stress Incr | YES             | WB       | 0.58 | Horz(CT) | 0.14  | 9      | n/a  | n/a    |         |
| BCDL                    | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      |          |       |        |      |        |         |
| Weight: 115 lb FT = 20% |       |                 |                 |          |      |          |       |        |      |        |         |

**LUMBER**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x3 SPF No.2 \*Except\* 15-2,9-7:2x4 SP No.2

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 4-0-8 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

WEBS 1 Row at midpt 4-6  
JOINTS 1 Brace at Jt(s): 12

**REACTIONS** (size) 9=0-3-8, 15=0-3-8  
Max Horiz 15=300 (LC 10)  
Max Uplift 9=-142 (LC 13), 15=-142 (LC 12)  
Max Grav 9=1006 (LC 1), 15=1006 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/48, 2-3=-1891/347, 3-4=-1961/286, 4-5=-209/45, 5-6=-237/73, 6-7=-1056/197, 7-8=0/48, 2-15=-1016/256, 7-9=-934/221  
BOT CHORD 14-15=-309/416, 13-14=-365/1778, 12-13=-229/1799, 11-13=-250/0, 11-12=0/821, 10-11=-31/786, 9-10=-227/415  
WEBS 6-10=-250/76, 2-14=-147/1309, 7-10=-65/377, 4-12=-38/857, 3-14=-276/60, 3-12=-29/172, 6-12=-178/994, 4-6=-1369/328

#### NOTES

1) 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=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 4-1-0, Interior (1) 4-1-0 to 10-6-0, Exterior(2R) 10-6-0 to 15-6-0, Interior (1) 15-6-0 to 21-11-0 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.
- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- Bearing at joint(s) 15 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 142 lb uplift at joint 15 and 142 lb uplift at joint 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.

**LOAD CASE(S)** Standard



March 24, 2024

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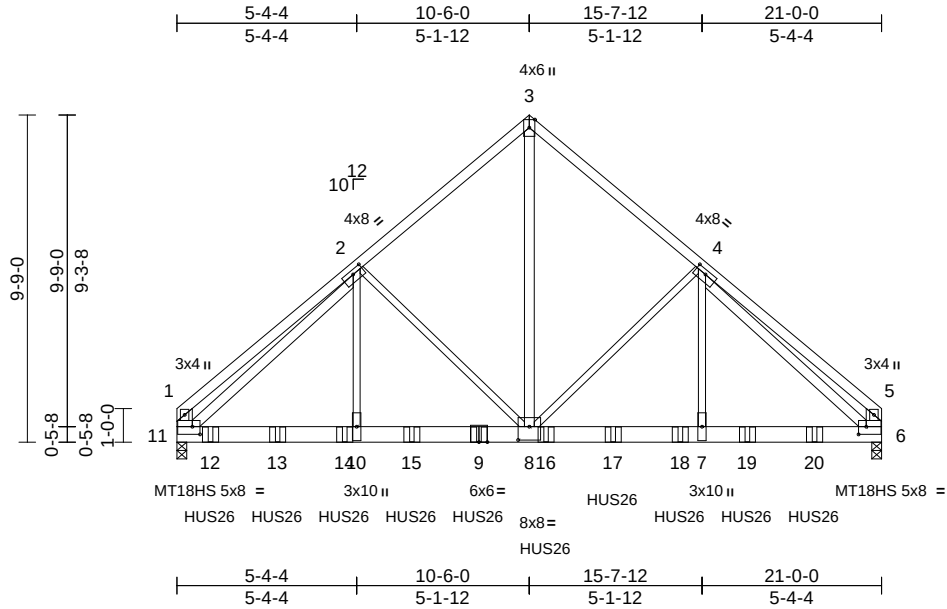
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|            |       |               |     |     |                          |           |
|------------|-------|---------------|-----|-----|--------------------------|-----------|
| Job        | Truss | Truss Type    | Qty | Ply | Roof - HR Lot 149        | I64407251 |
| P240270-01 | C3    | Common Girder | 1   | 2   | Job Reference (optional) |           |

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

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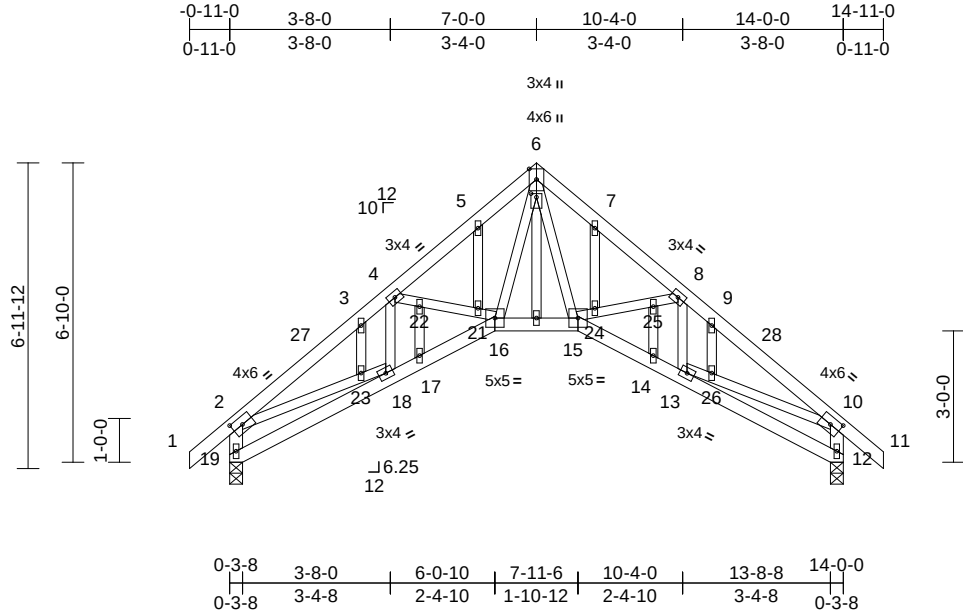


|                   |             |                            |          |          |                                               |           |
|-------------------|-------------|----------------------------|----------|----------|-----------------------------------------------|-----------|
| Job<br>P240270-01 | Truss<br>D1 | Truss Type<br>Roof Special | Qty<br>1 | Ply<br>1 | Roof - HR Lot 149<br>Job Reference (optional) | I64407252 |
|-------------------|-------------|----------------------------|----------|----------|-----------------------------------------------|-----------|

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Scale = 1:52.6

Plate Offsets (X, Y): [2:0-2-14,0-2-0], [6:0-1-0,0-1-8], [10:0-2-14,0-2-0]

| Loading     | (psf) | Spacing         | 1-11-4          | CSI      |      | DEFL     | in    | (loc) | l/defl | L/d | PLATES        | GRIP     |
|-------------|-------|-----------------|-----------------|----------|------|----------|-------|-------|--------|-----|---------------|----------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.28 | Vert(LL) | -0.04 | 15-16 | >999   | 240 | MT20          | 197/144  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.26 | Vert(CT) | -0.08 | 15-16 | >999   | 180 |               |          |
| BCLL        | 0.0   | Rep Stress Incr | YES             | WB       | 0.41 | Horz(CT) | 0.09  | 12    | n/a    | n/a |               |          |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      |          |       |       |        |     | Weight: 84 lb | FT = 20% |

#### LUMBER

|           |                                              |
|-----------|----------------------------------------------|
| TOP CHORD | 2x4 SP No.2                                  |
| BOT CHORD | 2x4 SP No.2                                  |
| WEBS      | 2x3 SPF No.2 *Except* 19-2,12-10:2x4 SP No.2 |
| OTHERS    | 2x3 SPF No.2                                 |

#### BRACING

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

|           |                                         |
|-----------|-----------------------------------------|
| REACTIONS | (size) 12=0-3-8, 19=0-3-8               |
|           | Max Horiz 19=212 (LC 11)                |
|           | Max Uplift 12=98 (LC 13), 19=98 (LC 12) |
|           | Max Grav 12=670 (LC 1), 19=670 (LC 1)   |

|           |                                                                                                                                                                                                                                                                                             |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| FORCES    | (lb) - Maximum Compression/Maximum Tension                                                                                                                                                                                                                                                  |
| TOP CHORD | 1-2=0/46, 2-3=-1167/210, 3-4=-953/227, 4-5=-995/166, 5-6=-929/224, 6-7=-922/214, 7-8=-995/166, 8-9=-938/198, 9-10=-1167/185, 10-11=0/46, 2-19=-701/204, 10-12=-700/213                                                                                                                      |
| BOT CHORD | 18-19=-215/345, 17-18=-145/1044, 16-17=-148/1052, 15-16=-22/648, 14-15=-60/920, 13-14=-58/913, 12-13=-40/178                                                                                                                                                                                |
| WEBS      | 6-15=-88/521, 6-16=-143/598, 2-23=-13/697, 18-23=-13/662, 13-26=-24/662, 10-26=-25/697, 4-22=-150/155, 21-22=-152/151, 16-21=-166/178, 4-18=-246/20, 15-24=-188/190, 24-25=-168/161, 8-25=-167/165, 8-13=-251/32, 5-21=-43/73, 17-22=0/21, 3-23=0/164, 7-24=-52/79, 14-25=-1/23, 9-26=0/169 |

#### 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=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 4-1-0, Interior (1) 4-1-0 to 7-0-0, Exterior(2R) 7-0-0 to 12-0-0, Interior (1) 12-0-0 to 14-11-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- All plates are 1.5x4 MT20 unless otherwise indicated.
- Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- Gable studs spaced at 1-4-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- Bearing at joint(s) 19, 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 98 lb uplift at joint 19 and 98 lb uplift at joint 12.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



March 24, 2024

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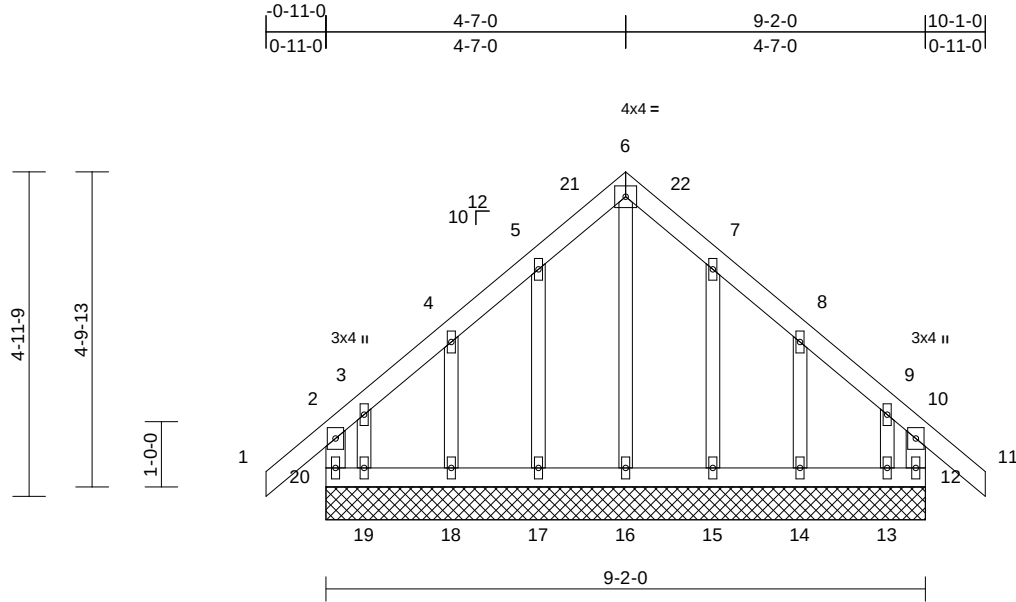


|            |       |                        |     |     |                          |           |
|------------|-------|------------------------|-----|-----|--------------------------|-----------|
| Job        | Truss | Truss Type             | Qty | Ply | Roof - HR Lot 149        | I64407253 |
| P240270-01 | E1    | Common Supported Gable | 1   | 1   | Job Reference (optional) |           |

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

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| Loading     | (psf) | Spacing         | 1-11-4          | CSI      | DEFL | in       | (loc) | l/defl | L/d | PLATES        | GRIP     |
|-------------|-------|-----------------|-----------------|----------|------|----------|-------|--------|-----|---------------|----------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.13 | Vert(LL) | n/a   | -      | 999 | MT20          | 244/190  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.07 | Vert(CT) | n/a   | -      | 999 |               |          |
| BCLL        | 0.0   | Rep Stress Incr | YES             | WB       | 0.10 | Horz(CT) | 0.00  | 12     | n/a |               |          |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-R |      |          |       |        |     | Weight: 51 lb | FT = 20% |

#### LUMBER

|           |              |
|-----------|--------------|
| TOP CHORD | 2x4 SP No.2  |
| BOT CHORD | 2x4 SP No.2  |
| WEBS      | 2x4 SP No.2  |
| OTHERS    | 2x3 SPF No.2 |

#### BRACING

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

#### REACTIONS

|            |                                                                                                                                                |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| (size)     | 12=9-2-0, 13=9-2-0, 14=9-2-0, 15=9-2-0, 16=9-2-0, 17=9-2-0, 18=9-2-0, 19=9-2-0, 20=9-2-0                                                       |
| Max Horiz  | 20=155 (LC 11)                                                                                                                                 |
| Max Uplift | 12=-115 (LC 9), 13=-130 (LC 8), 14=-69 (LC 13), 15=-54 (LC 13), 17=-55 (LC 12), 18=-69 (LC 12), 19=-153 (LC 9), 20=-148 (LC 8)                 |
| Max Grav   | 12=191 (LC 19), 13=148 (LC 11), 14=127 (LC 20), 15=131 (LC 20), 16=144 (LC 22), 17=132 (LC 19), 18=126 (LC 19), 19=174 (LC 10), 20=219 (LC 20) |

#### FORCES

|                                            |                                                                                                                                                              |
|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (lb) - Maximum Compression/Maximum Tension |                                                                                                                                                              |
| TOP CHORD                                  | 2-20=-154/102, 1-2=0/46, 2-3=-106/102, 3-4=-68/72, 4-5=-64/167, 5-6=-103/242, 6-7=-103/240, 7-8=-64/166, 8-9=-51/67, 9-10=-84/80, 10-11=0/46, 10-12=-138/104 |
| BOT CHORD                                  | 19-20=-75/112, 18-19=-75/112, 17-18=-75/112, 16-17=-75/112, 15-16=-75/112, 14-15=-75/112, 13-14=-75/112, 12-13=-75/112                                       |
| WEBS                                       | 6-16=-214/50, 5-17=-106/128, 4-18=-104/171, 3-19=-105/75, 7-15=-105/128, 8-14=-104/171, 9-13=-103/72                                                         |

#### 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=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-11-0 to 4-1-0, Exterior(2N) 4-1-0 to 4-7-0, Corner(3R) 4-7-0 to 9-7-0, Exterior(2N) 9-7-0 to 10-1-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- All plates are 1.5x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- Gable studs spaced at 1-4-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 148 lb uplift at joint 20, 115 lb uplift at joint 12, 55 lb uplift at joint 17, 69 lb uplift at joint 18, 153 lb uplift at joint 19, 54 lb uplift at joint 15, 69 lb uplift at joint 14 and 130 lb uplift at joint 13.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



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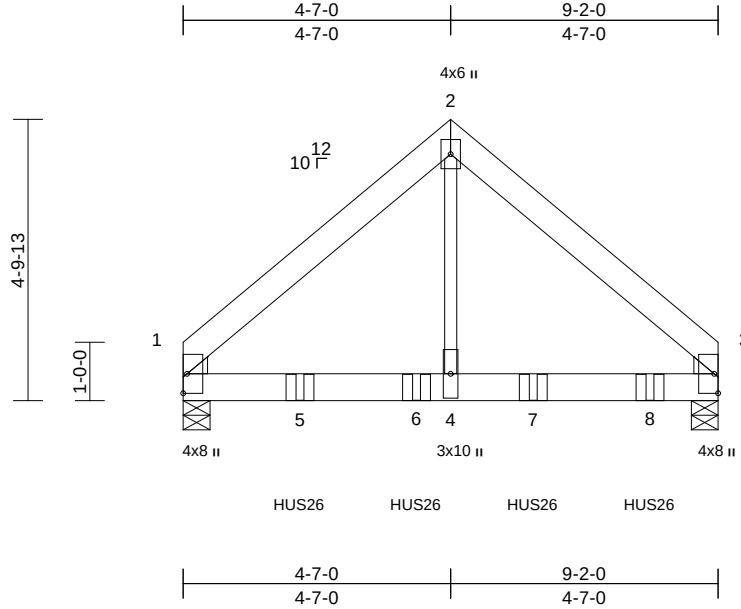
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|                   |             |                             |          |          |                                               |           |
|-------------------|-------------|-----------------------------|----------|----------|-----------------------------------------------|-----------|
| Job<br>P240270-01 | Truss<br>E2 | Truss Type<br>Common Girder | Qty<br>1 | Ply<br>2 | Roof - HR Lot 149<br>Job Reference (optional) | 164407254 |
|-------------------|-------------|-----------------------------|----------|----------|-----------------------------------------------|-----------|

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| Loading     | (psf) | Spacing         | 2-0-0           | CSI      |      | DEFL     | in    | (loc) | l/defl | L/d | PLATES        | GRIP     |
|-------------|-------|-----------------|-----------------|----------|------|----------|-------|-------|--------|-----|---------------|----------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.43 | Vert(LL) | -0.03 | 3-4   | >999   | 240 | MT20          | 197/144  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.32 | Vert(CT) | -0.05 | 3-4   | >999   | 180 |               |          |
| BCLL        | 0.0   | Rep Stress Incr | NO              | WB       | 0.55 | Horz(CT) | 0.01  | 3     | n/a    | n/a |               |          |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      |          |       |       |        |     | Weight: 97 lb | FT = 20% |

#### LUMBER

TOP CHORD 2x6 SPF No.2  
BOT CHORD 2x6 SP 2400F 2.0E  
WEBS 2x3 SPF No.2  
WEDGE Left: 2x4 SP 2400F 2.0E  
Right: 2x4 SP 2400F 2.0E

#### 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=0-5-8, 3=0-5-8  
Max Horiz 1=120 (LC 11)  
Max Uplift 1=-379 (LC 12), 3=-450 (LC 13)  
Max Grav 1=2594 (LC 1), 3=3061 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-2641/483, 2-3=-2635/500  
BOT CHORD 1-4=-251/1850, 3-4=-251/1850  
WEBS 2-4=-452/3212

#### NOTES

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

- Wind: ASCE 7-16; Vult=115mph (3-second gust)  
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft;  
Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior 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
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- All bearings are assumed to be SP 2400F 2.0E crushing capacity of 805 psi.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 379 lb uplift at joint 1 and 450 lb uplift at joint 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.
- Use Simpson Strong-Tie HUS26 (14-10d Girder, 4-10d Truss) or equivalent spaced at 2-0-0 oc max. starting at 2-0-0 from the left end to 8-0-0 to connect truss(es) to back face of bottom chord.
- Fill all nail holes where hanger is in contact with lumber.

#### LOAD CASE(S) Standard

- Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 1-2=-70, 2-3=-70, 1-3=-20  
Concentrated Loads (lb)  
Vert: 5=-1218 (B), 6=-1218 (B), 7=-1218 (B), 8=-1218 (B)



March 24, 2024

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|            |       |            |     |     |                          |
|------------|-------|------------|-----|-----|--------------------------|
| Job        | Truss | Truss Type | Qty | Ply | Roof - HR Lot 149        |
| P240270-01 | J1    | Monopitch  | 1   | 1   | Job Reference (optional) |

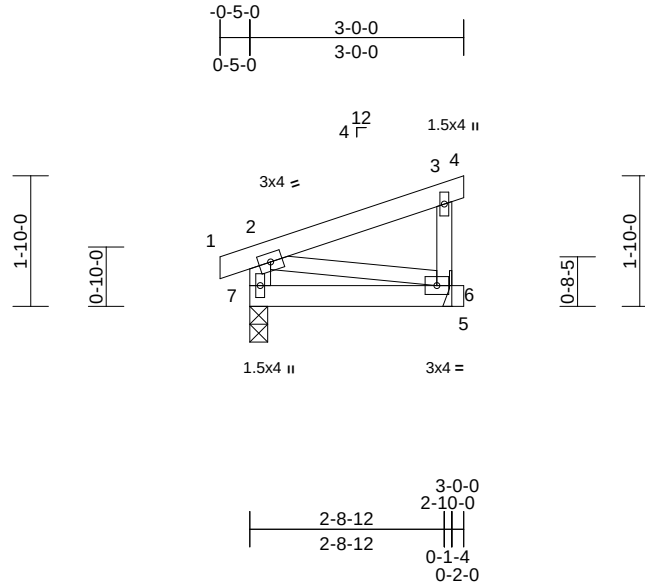
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Scale = 1:32.3

| Loading     | (psf) | Spacing         | 1-11-4          | CSI      |      | DEFL     | in   | (loc) | l/defl | L/d | PLATES        | GRIP     |
|-------------|-------|-----------------|-----------------|----------|------|----------|------|-------|--------|-----|---------------|----------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.12 | Vert(LL) | 0.01 | 6-7   | >999   | 240 | MT20          | 197/144  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.14 | Vert(CT) | 0.01 | 6-7   | >999   | 180 |               |          |
| BCLL        | 0.0   | Rep Stress Incr | YES             | WB       | 0.03 | Horz(CT) | 0.00 | 6     | n/a    | n/a |               |          |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-P |      |          |      |       |        |     | Weight: 13 lb | FT = 20% |

**LUMBER**

TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x4 SP No.2  
 WEBS 2x3 SPF No.2 \*Except\* 7-2:2x4 SP No.2

**BRACING**

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

**REACTIONS** (size) 6= Mechanical, 7=0-3-0

Max Horiz 7=44 (LC 9)  
 Max Uplift 6=-69 (LC 8), 7=-61 (LC 8)  
 Max Grav 6=120 (LC 1), 7=154 (LC 1)

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

TOP CHORD 1-2=0/12, 2-3=-54/21, 3-4=-2/0, 3-6=-89/139,  
 2-7=-130/131

BOT CHORD 6-7=-118/33, 5-6=0/0

WEBS 2-6=-34/121

**NOTES**

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)  
 Vasd=91mph; TCCL=6.0psf; BCDL=6.0psf; h=35ft;  
 Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope)  
 exterior zone and C-C Exterior(2E) zone; cantilever left  
 and right exposed; end vertical left exposed; porch left  
 and right exposed; C-C for members and forces &  
 MWFRS for reactions shown; Lumber DOL=1.60 plate  
 grip DOL=1.60
- 2) 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) Bearings are assumed to be: Joint 7 SP No.2 crushing  
 capacity of 565 psi.

- 7) Refer to girder(s) for truss to truss connections.
  - 8) Provide mechanical connection (by others) of truss to  
 bearing plate capable of withstanding 69 lb uplift at joint  
 6 and 61 lb uplift at joint 7.
  - 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.
- LOAD CASE(S)** Standard



March 24, 2024

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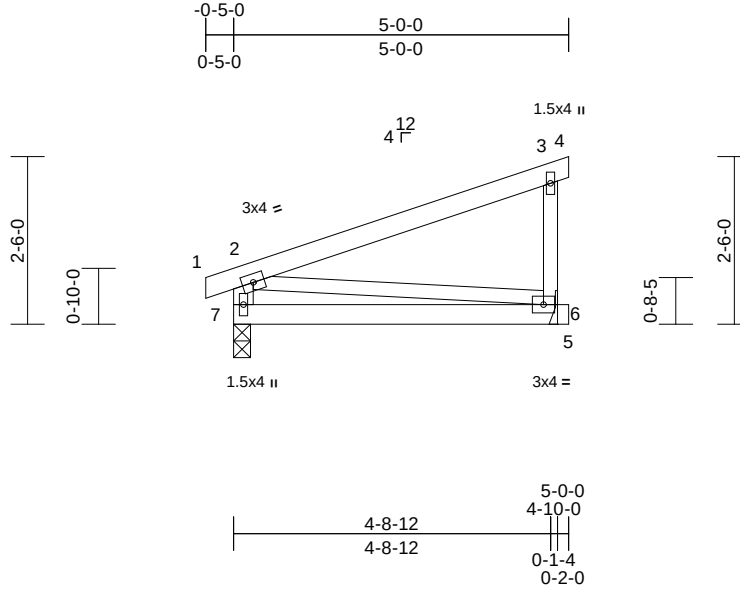
|            |       |            |     |     |                          |           |
|------------|-------|------------|-----|-----|--------------------------|-----------|
| Job        | Truss | Truss Type | Qty | Ply | Roof - HR Lot 149        |           |
| P240270-01 | J2    | Monopitch  | 3   | 1   | Job Reference (optional) | I64407256 |

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

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Scale = 1:34.4

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      |      | DEFL     | in   | (loc) | l/defl | L/d | PLATES        | GRIP     |
|-------------|-------|-----------------|-----------------|----------|------|----------|------|-------|--------|-----|---------------|----------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.46 | Vert(LL) | 0.10 | 6-7   | >549   | 240 | MT20          | 197/144  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.49 | Vert(CT) | 0.08 | 6-7   | >651   | 180 |               |          |
| BCLL        | 0.0   | Rep Stress Incr | YES             | WB       | 0.05 | Horz(CT) | 0.00 | 6     | n/a    | n/a |               |          |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-P |      |          |      |       |        |     | Weight: 22 lb | FT = 20% |

#### LUMBER

TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x3 SPF No.2 \*Except\* 7-2:2x4 SP No.2

#### BRACING

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

**REACTIONS** (size) 6= Mechanical, 7=0-3-0  
Max Horiz 7=71 (LC 8)  
Max Uplift 6=-116 (LC 8), 7=-98 (LC 8)  
Max Grav 6=215 (LC 1), 7=248 (LC 1)

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

TOP CHORD 1-2=0/12, 2-3=-93/40, 3-4=-2/0,  
3-6=-164/242, 2-7=-202/208

BOT CHORD 6-7=-183/54, 5-6=0/0  
WEBS 2-6=-55/184

#### NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)  
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft;  
Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope)  
exterior zone and C-C Exterior(2E) zone; cantilever left  
and right exposed; end vertical left exposed; porch left  
and right exposed; C-C for members and forces &  
MWFRS for reactions shown; Lumber DOL=1.60 plate  
grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom  
chord live load nonconcurrent with any other live loads.
- 3) Bearings are assumed to be: Joint 7 SP No.2 crushing  
capacity of 565 psi.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to  
bearing plate capable of withstanding 116 lb uplift at joint  
6 and 98 lb uplift at joint 7.
- 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.

LOAD CASE(S) Standard



March 24, 2024

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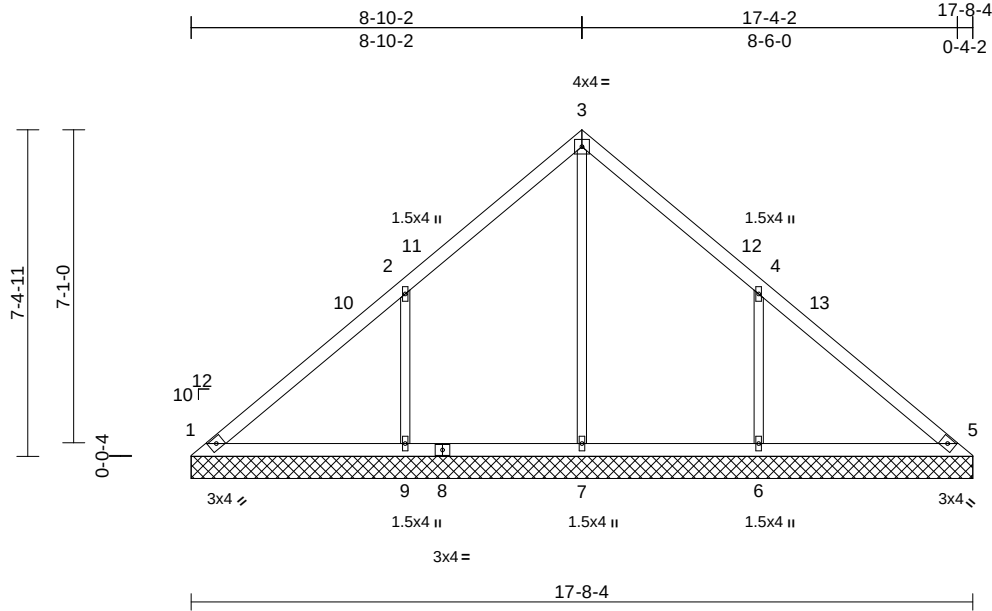
|            |       |            |     |     |                          |           |
|------------|-------|------------|-----|-----|--------------------------|-----------|
| Job        | Truss | Truss Type | Qty | Ply | Roof - HR Lot 149        | I64407257 |
| P240270-01 | VC1   | Valley     | 1   | 1   | Job Reference (optional) |           |

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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 (roof)    | 25.0  | Plate Grip DOL  | 1.15            | TC         | 0.32 | Vert(LL)    | n/a  | -     | n/a    | 999 | MT20          | 244/190     |
| TCDL           | 10.0  | Lumber DOL      | 1.15            | BC         | 0.16 | Vert(TL)    | n/a  | -     | n/a    | 999 |               |             |
| BCLL           | 0.0   | Rep Stress Incr | YES             | WB         | 0.20 | Horiz(TL)   | 0.00 | 5     | n/a    | n/a |               |             |
| BCDL           | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S   |      |             |      |       |        |     | Weight: 70 lb | FT = 20%    |

#### LUMBER

TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
OTHERS 2x3 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=17-8-4, 5=17-8-4, 6=17-8-4, 7=17-8-4, 9=17-8-4  
Max Horiz 1=197 (LC 9)  
Max Uplift 1=-16 (LC 8), 6=-259 (LC 13), 9=-259 (LC 12)  
Max Grav 1=213 (LC 20), 5=197 (LC 1), 6=498 (LC 20), 7=232 (LC 22), 9=498 (LC 19)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-195/146, 2-3=-178/161, 3-4=-166/139, 4-5=-165/103  
BOT CHORD 1-9=-70/158, 7-9=-70/158, 6-7=-70/158, 5-6=-70/158  
WEBS 3-7=-164/0, 2-9=-387/305, 4-6=-387/304

#### 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=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-4-13 to 5-4-13, Interior (1) 5-4-13 to 8-10-7, Exterior(2R) 8-10-7 to 13-10-7, Interior (1) 13-10-7 to 17-4-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 16 lb uplift at joint 1, 259 lb uplift at joint 9 and 259 lb uplift at joint 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.

**LOAD CASE(S)** Standard



March 24, 2024

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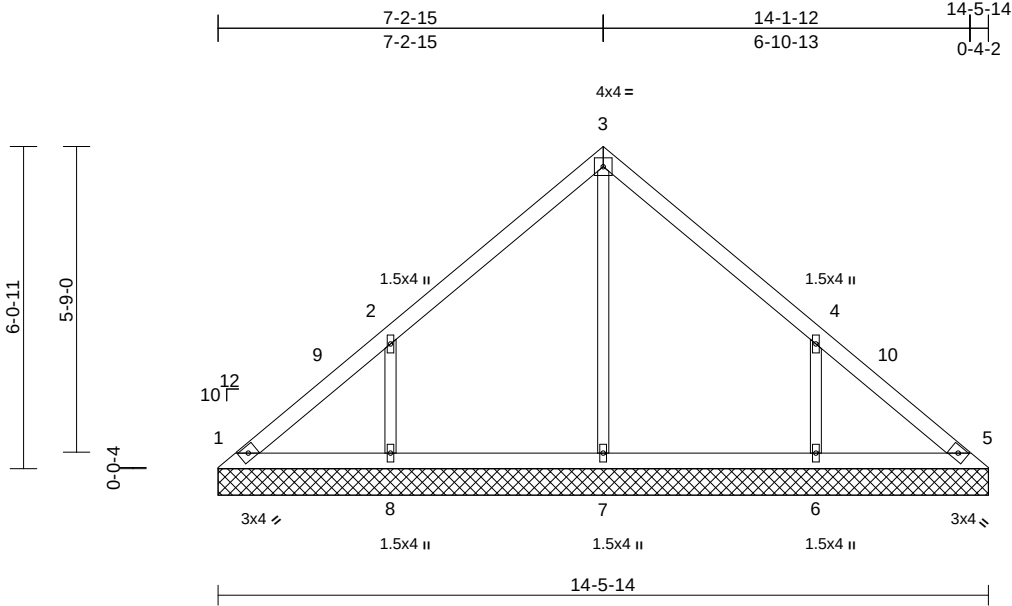
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|            |       |            |     |     |                          |           |
|------------|-------|------------|-----|-----|--------------------------|-----------|
| Job        | Truss | Truss Type | Qty | Ply | Roof - HR Lot 149        |           |
| P240270-01 | VC2   | Valley     | 1   | 1   | Job Reference (optional) | I64407258 |

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| Loading     | (psf) | Spacing         | 2-0-0           | CSI      |      | DEFL      | in   | (loc) | l/defl | L/d | PLATES        | GRIP     |
|-------------|-------|-----------------|-----------------|----------|------|-----------|------|-------|--------|-----|---------------|----------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.22 | Vert(LL)  | n/a  | -     | n/a    | 999 | MT20          | 244/190  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.12 | Vert(TL)  | n/a  | -     | n/a    | 999 |               |          |
| BCLL        | 0.0   | Rep Stress Incr | YES             | WB       | 0.14 | Horiz(TL) | 0.00 | 5     | n/a    | n/a |               |          |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      |           |      |       |        |     | Weight: 56 lb | FT = 20% |

#### LUMBER

TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
OTHERS 2x3 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=14-5-14, 5=14-5-14, 6=14-5-14, 7=14-5-14, 8=14-5-14  
Max Horiz 1=-160 (LC 8)  
Max Uplift 1=-28 (LC 8), 5=-1 (LC 9), 6=-210 (LC 13), 8=-210 (LC 12)  
Max Grav 1=157 (LC 20), 5=136 (LC 19), 6=396 (LC 20), 7=251 (LC 1), 8=396 (LC 19)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-165/118, 2-3=-175/137, 3-4=-166/129, 4-5=-141/75  
BOT CHORD 1-8=-51/118, 7-8=-51/118, 6-7=-51/118, 5-6=-51/118  
WEBS 3-7=-170/0, 2-8=-317/259, 4-6=-317/259

#### 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=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-4-13 to 5-4-13, Interior (1) 5-4-13 to 7-3-4, Exterior(2R) 7-3-4 to 12-3-4, Interior (1) 12-3-4 to 14-1-10 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- Gable requires continuous bottom chord bearing.
  - Gable studs spaced at 4-0-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 28 lb uplift at joint 1, 1 lb uplift at joint 5, 210 lb uplift at joint 8 and 210 lb uplift at joint 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.
- LOAD CASE(S)** Standard



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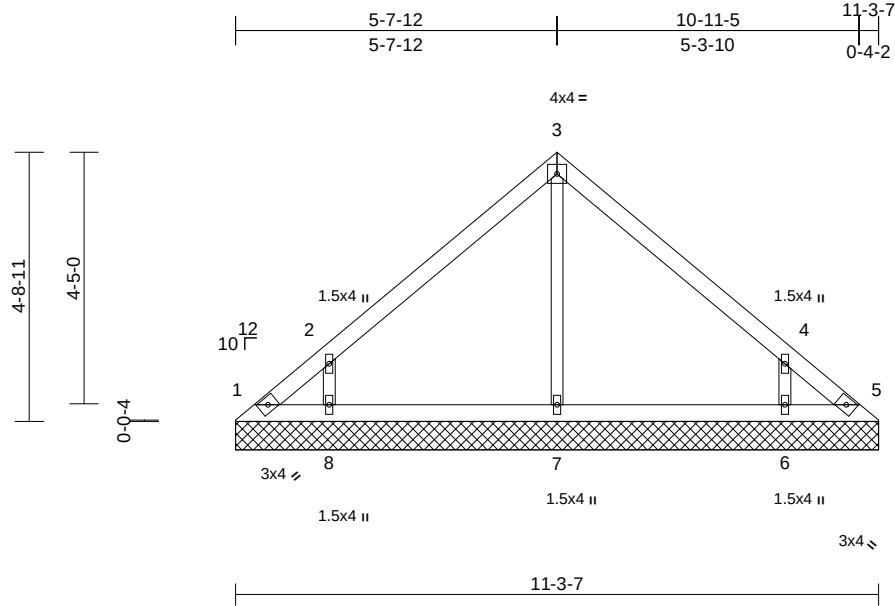
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|            |       |            |     |     |                          |           |
|------------|-------|------------|-----|-----|--------------------------|-----------|
| Job        | Truss | Truss Type | Qty | Ply | Roof - HR Lot 149        |           |
| P240270-01 | VC3   | Valley     | 1   | 1   | Job Reference (optional) | I64407259 |

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| Loading     | (psf) | Spacing         | 2-0-0           | CSI      | DEFL | in        | (loc) | l/defl | L/d | PLATES | GRIP                   |
|-------------|-------|-----------------|-----------------|----------|------|-----------|-------|--------|-----|--------|------------------------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.22 | Vert(LL)  | n/a   | -      | n/a | 999    | MT20                   |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.12 | Vert(TL)  | n/a   | -      | n/a | 999    | 244/190                |
| BCLL        | 0.0   | Rep Stress Incr | YES             | WB       | 0.08 | Horiz(TL) | 0.00  | 5      | n/a | n/a    |                        |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      |           |       |        |     |        | Weight: 42 lb FT = 20% |

#### LUMBER

TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
OTHERS 2x3 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=11-3-7, 5=11-3-7, 6=11-3-7, 7=11-3-7, 8=11-3-7  
Max Horiz 1=-123 (LC 8)  
Max Uplift 1=-75 (LC 10), 5=-54 (LC 11), 6=-199 (LC 13), 8=-199 (LC 12)  
Max Grav 1=105 (LC 12), 5=91 (LC 13), 6=365 (LC 20), 7=256 (LC 1), 8=365 (LC 19)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-149/112, 2-3=-171/106, 3-4=-167/115, 4-5=-126/78  
BOT CHORD 1-8=-35/88, 7-8=-35/88, 6-7=-35/88, 5-6=-35/88  
WEBS 3-7=-170/23, 2-8=-307/309, 4-6=-307/262

#### 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=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior 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
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- Gable requires continuous bottom chord bearing.

- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 75 lb uplift at joint 1, 54 lb uplift at joint 5, 199 lb uplift at joint 8 and 199 lb uplift at joint 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.

**LOAD CASE(S)** Standard



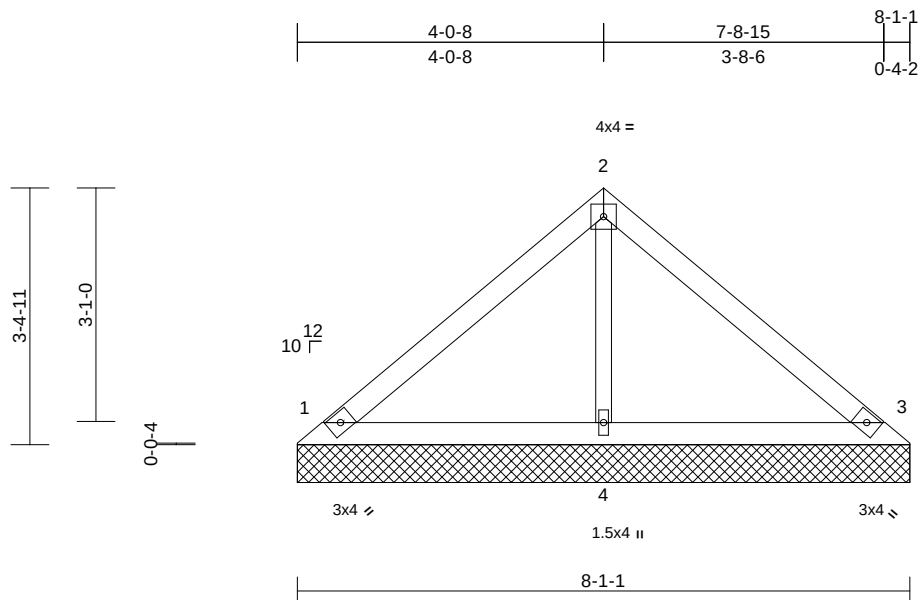
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| <b>Loading</b> | (psf) | <b>Spacing</b>  | 2-0-0           | <b>CSI</b> | <b>DEFL</b> | in        | (loc) | I/defl | L/d | <b>PLATES</b> | <b>GRIP</b>            |
|----------------|-------|-----------------|-----------------|------------|-------------|-----------|-------|--------|-----|---------------|------------------------|
| TCLL (roof)    | 25.0  | Plate Grip DOL  | 1.15            | TC         | 0.31        | Vert(LL)  | n/a   | -      | n/a | 999           | MT20<br>244/190        |
| TCDL           | 10.0  | Lumber DOL      | 1.15            | BC         | 0.14        | Vert(TL)  | n/a   | -      | n/a | 999           |                        |
| BCLL           | 0.0   | Rep Stress Incr | YES             | WB         | 0.05        | Horiz(TL) | 0.00  | 3      | n/a | n/a           |                        |
| BCDL           | 10.0  | Code            | IRC2018/TPI2014 | Matrix-P   |             |           |       |        |     |               | Weight: 29 lb FT = 20% |

## LUMBER

|           |              |
|-----------|--------------|
| TOP CHORD | 2x4 SP No.2  |
| BOT CHORD | 2x4 SP No.2  |
| OTHERS    | 2x3 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=8-1-1, 3=8-1-1, 4=8-1-1                |
| Max Horiz  | 1=85 (LC 11)                             |
| Max Uplift | 1=-47 (LC 12), 3=-57 (LC 13)             |
| Max Grav   | 1=199 (LC 1), 3=199 (LC 1), 4=262 (LC 1) |

## FORCES

|               |                                            |
|---------------|--------------------------------------------|
| <b>FORCES</b> | (lb) - Maximum Compression/Maximum Tension |
| TOP CHORD     | 1-2=-141/78, 2-3=-133/87                   |
| BOT CHORD     | 1-4=-20/67, 3-4=-20/67                     |
| WEBS          | 2-4=-170/90                                |

## 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=35ft;  
Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope)  
exterior 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
- 3) Truss designed for wind loads in the plane of the truss  
only. For studs exposed to wind (normal to the face),  
see Standard Industry Gable End Details as applicable,  
or consult qualified building designer as per ANSI/TP1 1.
- 4) Gable requires continuous bottom chord bearing.
- 5) Gable studs spaced at 4-0-0 oc.
- 6) This truss has been designed for a 10.0 psf bottom  
chord live load nonconcurrent with any other live loads.

- 7) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 47 lb uplift at joint 1 and 57 lb uplift at joint 3.
- 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.

LOAD CASE(S) Standard



March 24, 2024



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Design valid for use only with MiTeC® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria**, and **DSB-22** available from Truss Plate Institute ([www.tpinst.org](http://www.tpinst.org)) and **BCSI Building Component Safety Information** available from the Structural Building Component Association ([www.sbcsccomponents.com](http://www.sbcsccomponents.com))

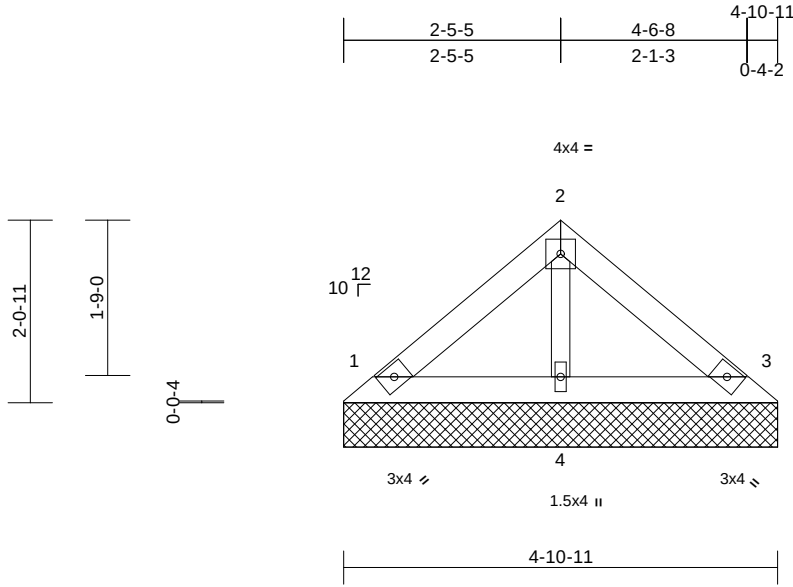
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Creston, MO 65013  
417-441-2200 | MiTekUSA.com  
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|            |       |            |     |     |                          |           |
|------------|-------|------------|-----|-----|--------------------------|-----------|
| Job        | Truss | Truss Type | Qty | Ply | Roof - HR Lot 149        |           |
| P240270-01 | VC5   | Valley     | 1   | 1   | Job Reference (optional) | I64407261 |

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Thu Mar 21 14:30:35  
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Page: 1



Scale = 1:26

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      | DEFL | in        | (loc) | l/defl | L/d | PLATES | GRIP                   |
|-------------|-------|-----------------|-----------------|----------|------|-----------|-------|--------|-----|--------|------------------------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.11 | Vert(LL)  | n/a   | -      | n/a | 999    | MT20                   |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.04 | Vert(TL)  | n/a   | -      | n/a | 999    | 244/190                |
| BCLL        | 0.0   | Rep Stress Incr | YES             | WB       | 0.02 | Horiz(TL) | 0.00  | 3      | n/a | n/a    |                        |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-P |      |           |       |        |     |        | Weight: 17 lb FT = 20% |

#### LUMBER

TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
OTHERS 2x3 SPF No.2

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 4-11-4 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 1=4-10-11, 3=4-10-11, 4=4-10-11  
Max Horiz 1=-48 (LC 10)  
Max Uplift 1=-27 (LC 12), 3=-32 (LC 13)  
Max Grav 1=112 (LC 1), 3=112 (LC 1), 4=148 (LC 1)

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

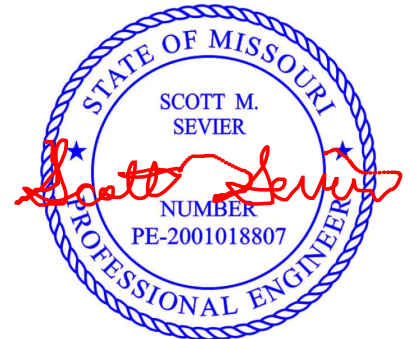
TOP CHORD 1-2=-79/53, 2-3=-75/58  
BOT CHORD 1-4=-11/38, 3-4=-11/38  
WEBS 2-4=-96/63

#### 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=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior 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
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 27 lb uplift at joint 1 and 32 lb uplift at joint 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.

**LOAD CASE(S)** Standard



March 24, 2024

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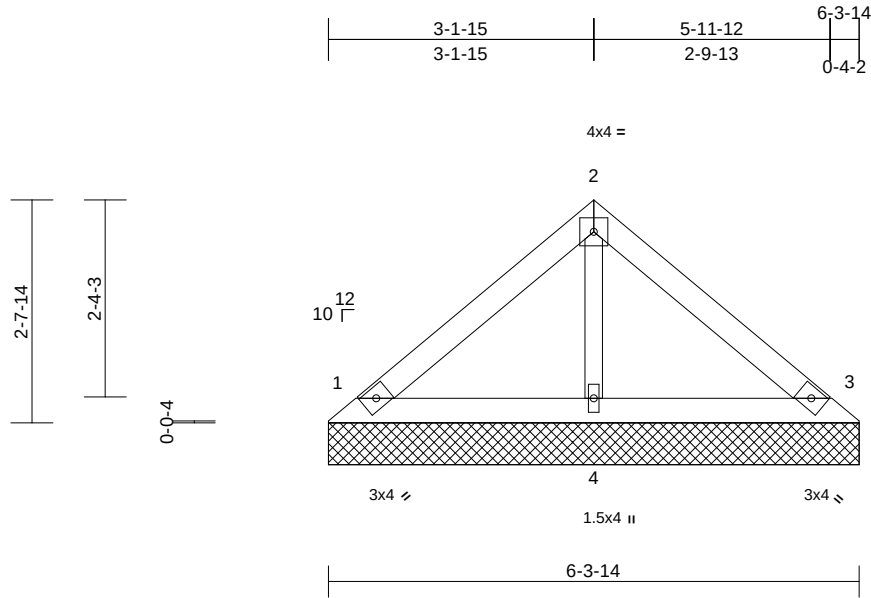
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|            |       |            |     |     |                          |           |
|------------|-------|------------|-----|-----|--------------------------|-----------|
| Job        | Truss | Truss Type | Qty | Ply | Roof - HR Lot 149        |           |
| P240270-01 | VE1   | Valley     | 1   | 1   | Job Reference (optional) | I64407262 |

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Thu Mar 21 14:30:35  
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Scale = 1:27.4

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      |      | DEFL      | in   | (loc) | l/defl | L/d | PLATES        | GRIP     |
|-------------|-------|-----------------|-----------------|----------|------|-----------|------|-------|--------|-----|---------------|----------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.19 | Vert(LL)  | n/a  | -     | n/a    | 999 | MT20          | 244/190  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.08 | Vert(TL)  | n/a  | -     | n/a    | 999 |               |          |
| BCLL        | 0.0   | Rep Stress Incr | YES             | WB       | 0.03 | Horiz(TL) | 0.00 | 3     | n/a    | n/a |               |          |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-P |      |           |      |       |        |     | Weight: 22 lb | FT = 20% |

#### LUMBER

TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
OTHERS 2x3 SP No.2

#### BRACING

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

**REACTIONS** (size) 1=6-3-14, 3=6-3-14, 4=6-3-14  
Max Horiz 1=-65 (LC 8)  
Max Uplift 1=-36 (LC 12), 3=-43 (LC 13)  
Max Grav 1=151 (LC 1), 3=151 (LC 1), 4=199 (LC 1)

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

TOP CHORD 1-2=-107/67, 2-3=-101/73  
BOT CHORD 1-4=-15/51, 3-4=-15/51  
WEBS 2-4=-129/79

#### 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=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior 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
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 36 lb uplift at joint 1 and 43 lb uplift at joint 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.

**LOAD CASE(S)** Standard



March 24, 2024

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Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcsccomponents.com)

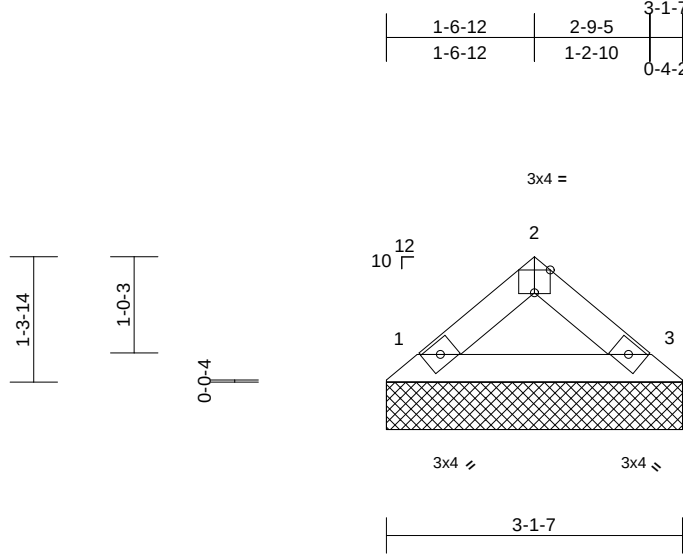
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|            |       |            |     |     |                          |           |
|------------|-------|------------|-----|-----|--------------------------|-----------|
| Job        | Truss | Truss Type | Qty | Ply | Roof - HR Lot 149        | I64407263 |
| P240270-01 | VE2   | Valley     | 1   | 1   | Job Reference (optional) |           |

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Thu Mar 21 14:30:36  
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Page: 1



Scale = 1:24.3

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

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      | DEFL | in        | (loc) | l/defl | L/d | PLATES | GRIP                  |
|-------------|-------|-----------------|-----------------|----------|------|-----------|-------|--------|-----|--------|-----------------------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.04 | Vert(LL)  | n/a   | -      | n/a | 999    | MT20                  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.06 | Vert(TL)  | n/a   | -      | n/a | 999    | 244/190               |
| BCLL        | 0.0   | Rep Stress Incr | YES             | WB       | 0.00 | Horiz(TL) | 0.00  | 3      | n/a | n/a    |                       |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-P |      |           |       |        |     |        | Weight: 9 lb FT = 20% |

#### LUMBER

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

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 3-2-1 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 1=3-1-7, 3=3-1-7  
Max Horiz 1=-28 (LC 8)  
Max Uplift 1=-14 (LC 12), 3=-14 (LC 13)  
Max Grav 1=106 (LC 1), 3=106 (LC 1)

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

TOP CHORD 1-2=-86/62, 2-3=-86/67  
BOT CHORD 1-3=-12/51

#### 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=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior 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
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.

- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 14 lb uplift at joint 1 and 14 lb uplift at joint 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.

**LOAD CASE(S)** Standard



March 24, 2024

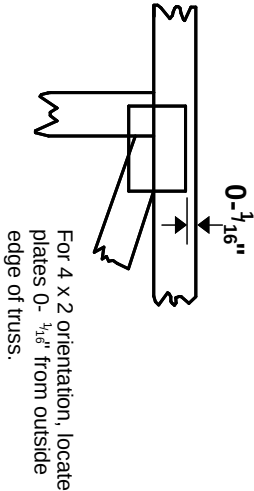
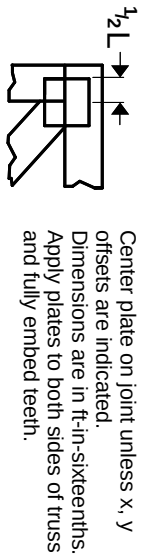
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Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcsccomponents.com)

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# Symbols

## PLATE LOCATION AND ORIENTATION



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 SIZE

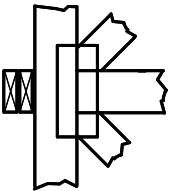
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## LATERAL BRACING LOCATION



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

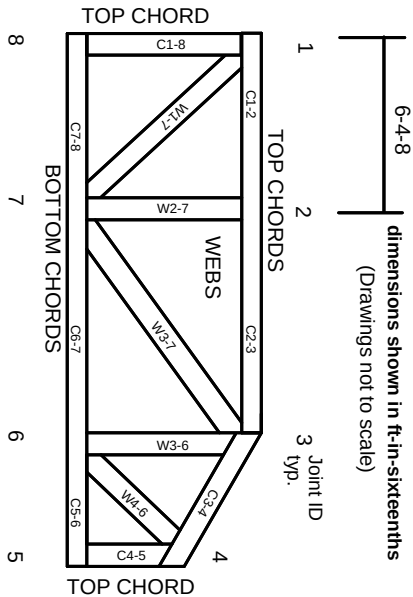
## BEARING



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

**Industry Standards:**  
ANSI/TP1.1: National Design Specification for Metal Plate Connected Wood Truss Construction.  
DSB-22: Design Standard for Bracing.  
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses.

# Numbering System



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

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

## Product Code Approvals

ICC-ES Reports:

ESR-1988, ESR-2362, ESR-2685, ESR-3282  
ESR-4722, ESL-1388

## Design General Notes

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

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

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# MITek®

Mitek Engineering Reference Sheet: MIL-7473 rev. 1/12/2023

# 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.

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