

RE: P240851-01 - Roof - HR Lot 75

**Site Information:**

Project Customer: Clayton Properties    Project Name: Somerset - Farmhouse  
Lot/Block: 75    Subdivision: Hawthorne Ridge  
Model:

Address: 1530 SW Arbor Falls Dr

City: Lee's Summit

State: MO

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

Design Code: IRC2018/TPI2014

Wind Code: ASCE 7-16    Wind Speed: 115 mph

Roof Load: 45.0 psf

Design Program: MiTek 20/20 8.6

Design Method: MWFRS (Envelope)/C-C hybrid Wind ASCE 7-16

Floor Load: N/A psf

Mean Roof Height (feet): 35

Exposure Category: C

| No. | Seal#     | Truss Name | Date    |
|-----|-----------|------------|---------|
| 1   | I67189964 | B01        | 7/31/24 |
| 2   | I67189965 | B02        | 7/31/24 |
| 3   | I67189966 | B03        | 7/31/24 |
| 4   | I67189967 | C01        | 7/31/24 |
| 5   | I67189968 | C02        | 7/31/24 |
| 6   | I67189969 | C03        | 7/31/24 |
| 7   | I67189970 | D1         | 7/31/24 |
| 8   | I67189971 | D2         | 7/31/24 |
| 9   | I67189972 | D3         | 7/31/24 |
| 10  | I67189973 | D4         | 7/31/24 |
| 11  | I67189974 | D5         | 7/31/24 |
| 12  | I67189975 | D6         | 7/31/24 |
| 13  | I67189976 | D7         | 7/31/24 |
| 14  | I67189977 | E1         | 7/31/24 |
| 15  | I67189978 | E2         | 7/31/24 |
| 16  | I67189979 | E3         | 7/31/24 |
| 17  | I67189980 | GR1        | 7/31/24 |
| 18  | I67189981 | V1         | 7/31/24 |
| 19  | I67189982 | V2         | 7/31/24 |
| 20  | I67189983 | V3         | 7/31/24 |
| 21  | I67189984 | V4         | 7/31/24 |
| 22  | I67189985 | V5         | 7/31/24 |
| 23  | I67189986 | V6         | 7/31/24 |
| 24  | I67189987 | V7         | 7/31/24 |
| 25  | I67189988 | V8         | 7/31/24 |
| 26  | I67189989 | V9         | 7/31/24 |
| 27  | I67189990 | V10        | 7/31/24 |
| 28  | I67189991 | V11        | 7/31/24 |
| 29  | I67189992 | V12        | 7/31/24 |
| 30  | I67189993 | V13        | 7/31/24 |
| 31  | I67189994 | V14        | 7/31/24 |
| 32  | I67189995 | V15        | 7/31/24 |
| 33  | I67189996 | V16        | 7/31/24 |
| 34  | I67189997 | V17        | 7/31/24 |

The truss drawing(s) referenced above have been prepared by  
MiTek USA, Inc. under my direct supervision based on the parameters  
provided by Premier Building Supply (Springhill, KS)20300 W 207th Street.

Truss Design Engineer's Name: Sevier, Scott

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

**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 or TRENCO. Any project specific information included is for MiTek's or TRENCO's customers file reference purpose only, and was not taken into account in the preparation of these designs. MiTek or TRENCO 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.



July 31, 2024

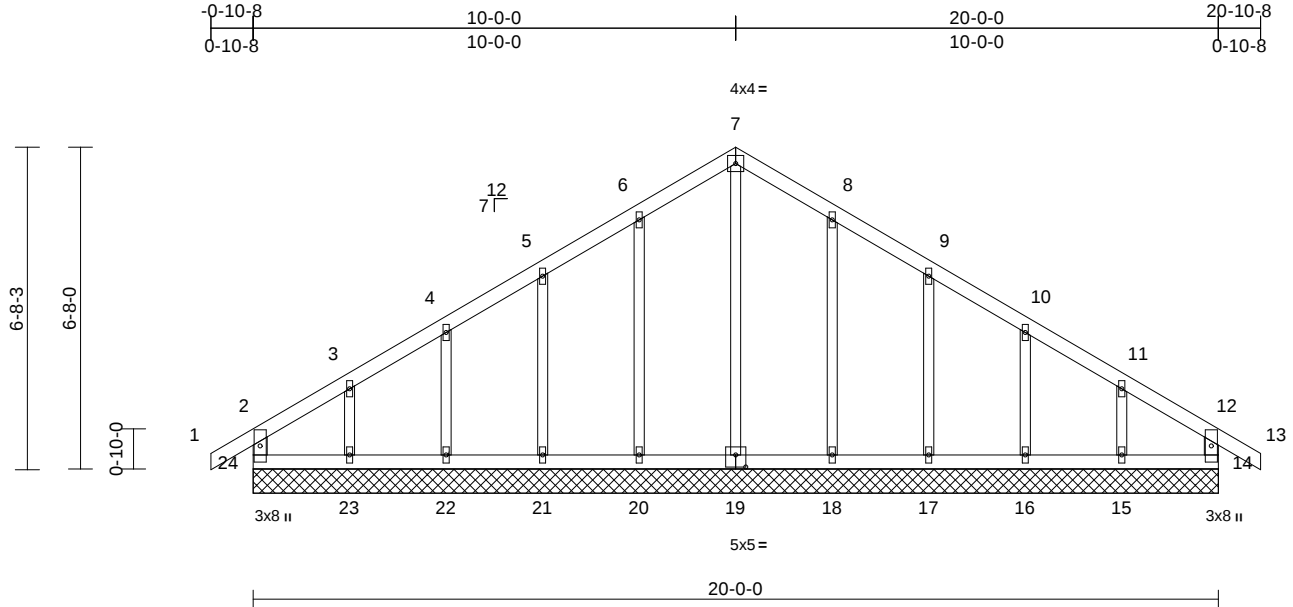
|            |       |                        |     |     |                          |                          |
|------------|-------|------------------------|-----|-----|--------------------------|--------------------------|
| Job        | Truss | Truss Type             | Qty | Ply | Roof - HR Lot 75         | RELEASE FOR CONSTRUCTION |
| P240851-01 | B01   | Common Supported Gable | 1   | 1   | Job Reference (optional) | AS NOTED FOR PLAN REVIEW |
|            |       |                        |     |     |                          | DEVELOPMENT SERVICES     |
|            |       |                        |     |     |                          | 167189964                |
|            |       |                        |     |     |                          | LEE'S SUMMIT, MISSOURI   |

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

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08/08/2024



Scale = 1:47.7

Plate Offsets (X, Y): [19:0-2-8,0-3-0]

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      | DEFL | in       | (loc) | l/defl | L/d | PLATES        | GRIP     |
|-------------|-------|-----------------|-----------------|----------|------|----------|-------|--------|-----|---------------|----------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.08 | Vert(LL) | n/a   | -      | n/a | 999           | 197/144  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.06 | Vert(CT) | n/a   | -      | n/a | 999           |          |
| BCLL        | 0.0   | Rep Stress Incr | YES             | WB       | 0.16 | Horz(CT) | 0.00  | 14     | n/a | n/a           |          |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-R |      |          |       |        |     |               |          |
|             |       |                 |                 |          |      |          |       |        |     | Weight: 94 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

**WEBS**  
7-19=-165/38, 6-20=-156/92, 5-21=-145/104,  
4-22=-145/108, 3-23=-155/122,  
8-18=-155/93, 9-17=-146/104,  
10-16=-146/108, 11-15=-148/123

**LOAD CASE(S)** Standard

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

**REACTIONS** (size)  
14=20-0-0, 15=20-0-0, 16=20-0-0,  
17=20-0-0, 18=20-0-0, 19=20-0-0,  
20=20-0-0, 21=20-0-0, 22=20-0-0,  
23=20-0-0, 24=20-0-0  
Max Horiz 24=-202 (LC 10)  
Max Uplift 14=-33 (LC 9), 15=-106 (LC 13),  
16=-60 (LC 13), 17=-74 (LC 13),  
18=-66 (LC 13), 20=-66 (LC 12),  
21=-74 (LC 12), 22=-58 (LC 12),  
23=-114 (LC 12), 24=-64 (LC 8)  
Max Grav 14=164 (LC 1), 15=200 (LC 20),  
16=184 (LC 1), 17=186 (LC 20),  
18=195 (LC 20), 19=193 (LC 22),  
20=196 (LC 19), 21=186 (LC 19),  
22=184 (LC 1), 23=213 (LC 19),  
24=186 (LC 20)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 2-24=-154/86, 1-2=0/36, 2-3=-130/120,  
3-4=-100/97, 4-5=-89/123, 5-6=-102/184,  
6-7=-133/242, 7-8=-133/242, 8-9=-102/184,  
9-10=-69/119, 10-11=-69/71, 11-12=-89/77,  
12-13=0/36, 12-14=-146/84  
BOT CHORD 23-24=-84/100, 22-23=-84/100,  
21-22=-84/100, 20-21=-84/100,  
18-20=-84/100, 17-18=-84/100,  
16-17=-84/100, 15-16=-84/100,  
14-15=-84/100

#### 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) 0-10-8 to 4-0-0, Exterior(2N) 4-0-0 to 10-0-0, Corner(3R) 10-0-0 to 15-0-0, Exterior(2N) 15-0-0 to 20-10-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 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 2-0-0 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 64 lb uplift at joint 24, 33 lb uplift at joint 14, 66 lb uplift at joint 20, 74 lb uplift at joint 21, 58 lb uplift at joint 22, 114 lb uplift at joint 23, 66 lb uplift at joint 18, 74 lb uplift at joint 17, 60 lb uplift at joint 16 and 106 lb uplift at joint 15.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



July 31, 2024

**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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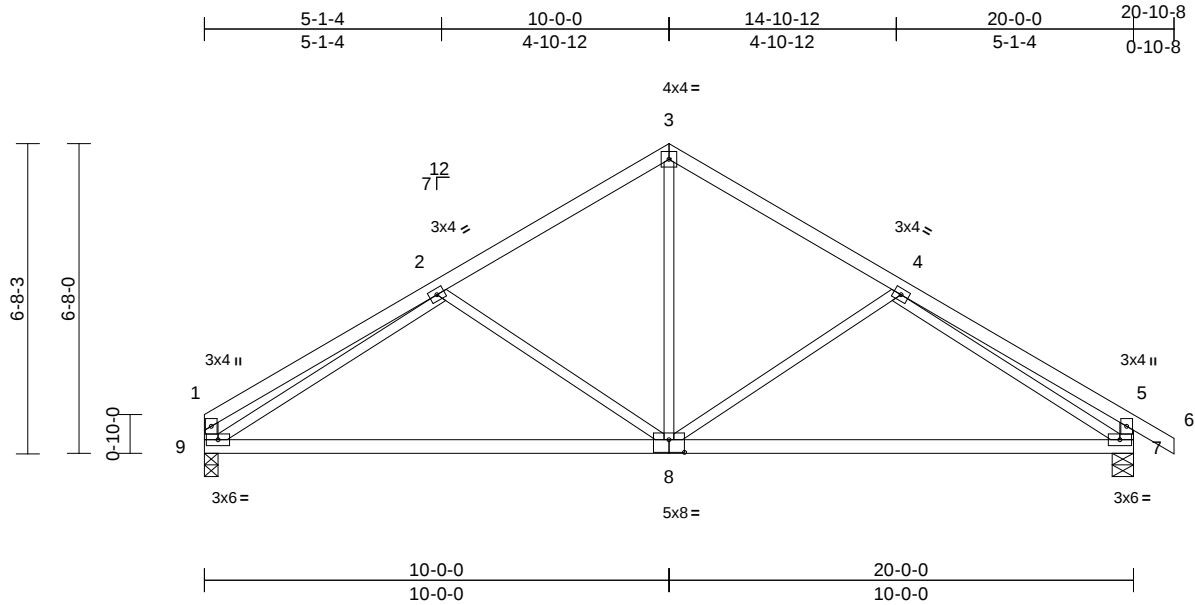
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Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

|            |       |            |     |     |                          |                                                                                                                     |
|------------|-------|------------|-----|-----|--------------------------|---------------------------------------------------------------------------------------------------------------------|
| Job        | Truss | Truss Type | Qty | Ply | Roof - HR Lot 75         | RELEASE FOR CONSTRUCTION<br>AS NOTED FOR PLAN REVIEW<br>DEVELOPMENT SERVICES<br>167189965<br>LEE'S SUMMIT, MISSOURI |
| P240851-01 | B02   | Common     | 1   | 1   | Job Reference (optional) |                                                                                                                     |

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08/08/2024



Scale = 1:49.6

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

| 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       | 0.36 | Vert(LL) | -0.18 | 7-8   | >999   | 240 | MT20          | 244/190  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.96 | Vert(CT) | -0.38 | 7-8   | >630   | 180 |               |          |
| BCLL        | 0.0   | Rep Stress Incr | YES             | WB       | 0.73 | Horz(CT) | 0.03  | 7     | n/a    | n/a |               |          |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      |          |       |       |        |     | Weight: 91 lb | FT = 20% |

#### LUMBER

TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x3 SPF No.2 \*Except\* 9-1,7-5:2x4 SP No.2

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 5-7-1 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.

#### REACTIONS

(size) 7=0-5-8, 9=0-3-8  
Max Horiz 9=-196 (LC 8)  
Max Uplift 7=-155 (LC 13), 9=-128 (LC 12)  
Max Grav 7=960 (LC 1), 9=885 (LC 1)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-414/70, 2-3=-939/194, 3-4=-938/192, 4-5=-466/113, 5-6=0/36, 1-9=-325/93, 5-7=-433/145  
BOT CHORD 7-9=-200/973  
WEBS 3-8=-57/523, 4-8=-305/231, 2-8=-316/235, 2-9=-818/189, 4-7=-759/157

#### 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) 0-1-12 to 4-11-10, Interior (1) 4-11-10 to 10-0-0, Exterior(2R) 10-0-0 to 15-0-6, Interior (1) 15-0-6 to 20-10-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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 128 lb uplift at joint 9 and 155 lb uplift at joint 7.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



July 31, 2024

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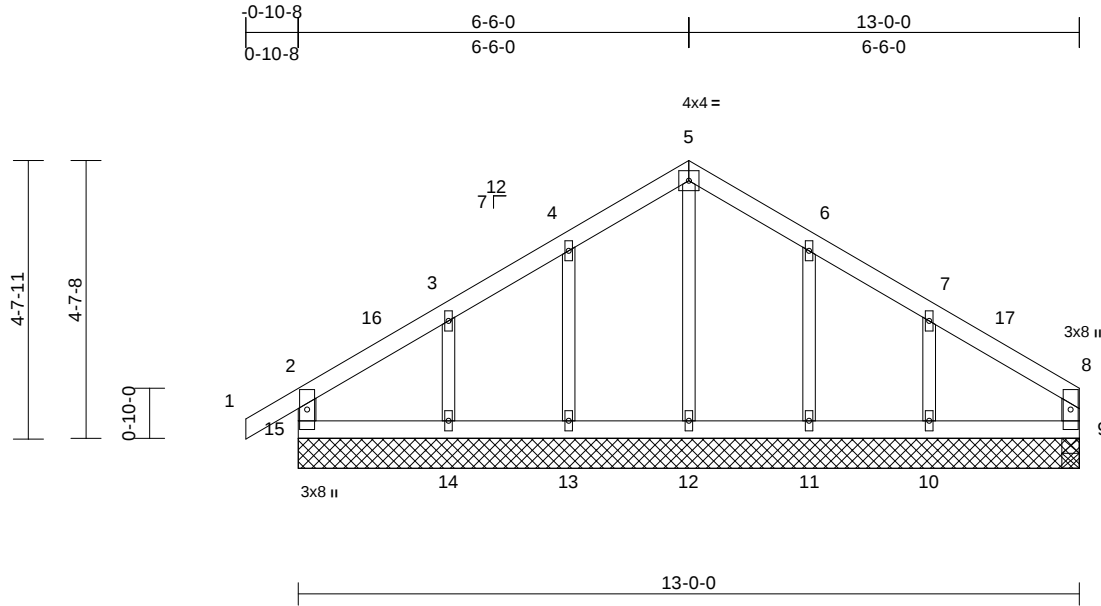
|            |       |                         |     |     |                          |                          |
|------------|-------|-------------------------|-----|-----|--------------------------|--------------------------|
| Job        | Truss | Truss Type              | Qty | Ply | Roof - HR Lot 75         | RELEASE FOR CONSTRUCTION |
| P240851-01 | B03   | Common Structural Gable | 1   | 1   | Job Reference (optional) | AS NOTED FOR PLAN REVIEW |
|            |       |                         |     |     |                          | DEVELOPMENT SERVICES     |
|            |       |                         |     |     |                          | 167189966                |
|            |       |                         |     |     |                          | LEE'S SUMMIT, MISSOURI   |

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08/08/2024



Scale = 1:38.3

| 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       | 0.09 | Vert(LL) | 0.00  | 14-15  | >999 | 240           | 197/144  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.04 | Vert(CT) | 0.00  | 14-15  | >999 | 180           |          |
| BCLL        | 0.0   | Rep Stress Incr | YES             | WB       | 0.05 | Horz(CT) | 0.00  | 9      | n/a  | n/a           |          |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-R |      |          |       |        |      |               |          |
|             |       |                 |                 |          |      |          |       |        |      | Weight: 56 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 10-0-0 oc bracing.                                  |

|                  |                                                                                                              |
|------------------|--------------------------------------------------------------------------------------------------------------|
| REACTIONS (size) | 9=13-0-0, 10=13-0-0, 11=13-0-0, 12=13-0-0, 13=13-0-0, 14=13-0-0, 15=13-0-0                                   |
| Max Horiz        | 15=139 (LC 9)                                                                                                |
| Max Uplift       | 9=-27 (LC 12), 10=-101 (LC 13), 11=-62 (LC 13), 13=-62 (LC 12), 14=-101 (LC 12), 15=-43 (LC 13)              |
| Max Grav         | 9=109 (LC 19), 10=241 (LC 20), 11=179 (LC 20), 12=153 (LC 22), 13=186 (LC 25), 14=226 (LC 19), 15=197 (LC 1) |

#### FORCES

|                                            |                                                                                                                    |
|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| (lb) - Maximum Compression/Maximum Tension |                                                                                                                    |
| TOP CHORD                                  | 1-2=0/36, 2-3=-114/78, 3-4=-87/101, 4-5=-124/158, 5-6=-123/157, 6-7=-89/100, 7-8=-85/52, 2-15=-173/108, 8-9=-86/42 |
| BOT CHORD                                  | 14-15=-45/60, 13-14=-45/60, 12-13=-45/60, 11-12=-45/60, 10-11=-45/60, 9-10=-45/60                                  |
| WEBS                                       | 5-12=-112/22, 4-13=-150/90, 3-14=-169/118, 6-11=-145/89, 7-10=-182/120                                             |

#### 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) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 6-6-0, Exterior(2R) 6-6-0 to 11-6-0, Interior (1) 11-6-0 to 12-10-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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 2-0-0 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.
- N/A

- 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



July 31, 2024

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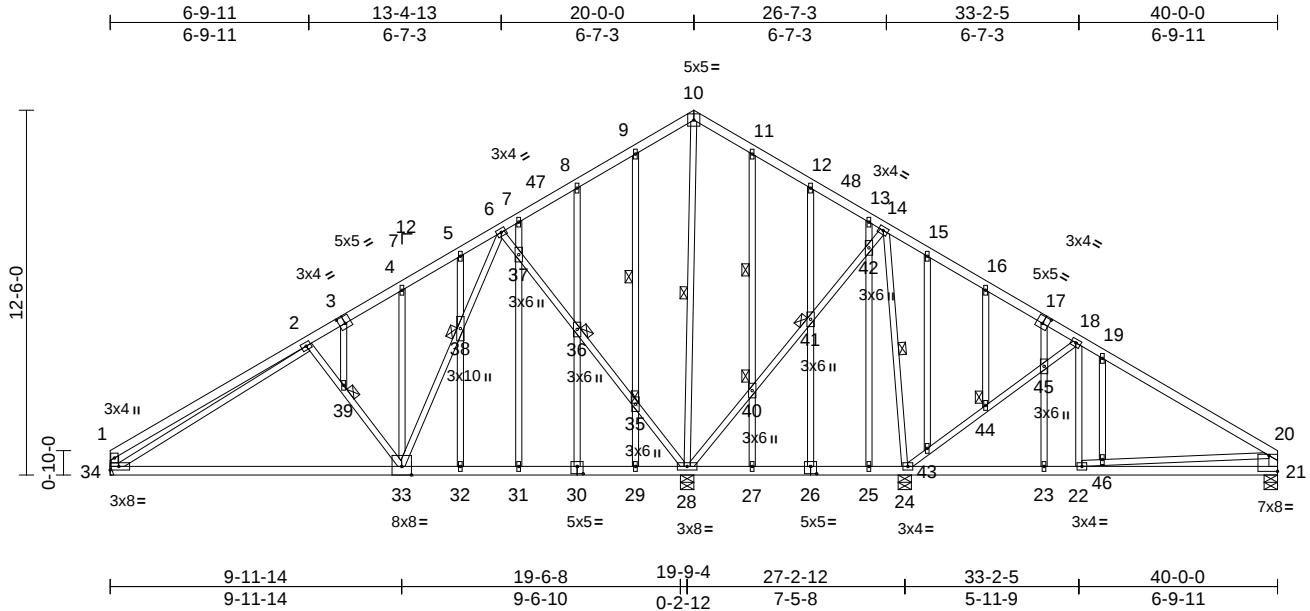
|            |       |                         |     |     |                          |                                                                                         |
|------------|-------|-------------------------|-----|-----|--------------------------|-----------------------------------------------------------------------------------------|
| Job        | Truss | Truss Type              | Qty | Ply | Roof - HR Lot 75         | RELEASE FOR CONSTRUCTION                                                                |
| P240851-01 | C01   | Common Structural Gable | 1   | 1   | Job Reference (optional) | AS NOTED FOR PLAN REVIEW<br>DEVELOPMENT SERVICES<br>167189967<br>LEE'S SUMMIT, MISSOURI |

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08/08/2024



Scale = 1:79

Plate Offsets (X, Y): [3:0-2-8,0-3-0], [17:0-2-8,0-3-0], [21:Edge,0-6-8], [26:0-2-8,0-3-0], [30:0-2-8,0-3-0]

| Loading                 | (psf) | Spacing         | 2-0-0           | CSI      | DEFL | in       | (loc) | l/defl | L/d  | PLATES | GRIP    |
|-------------------------|-------|-----------------|-----------------|----------|------|----------|-------|--------|------|--------|---------|
| TCLL (roof)             | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.55 | Vert(LL) | -0.23 | 33-34  | >999 | 240    | MT20    |
| TCDL                    | 10.0  | Lumber DOL      | 1.15            | BC       | 0.80 | Vert(CT) | -0.47 | 33-34  | >506 | 180    | 197/144 |
| BCLL                    | 0.0   | Rep Stress Incr | YES             | WB       | 0.78 | Horz(CT) | 0.02  | 21     | n/a  | n/a    |         |
| BCDL                    | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      |          |       |        |      |        |         |
| Weight: 270 lb FT = 20% |       |                 |                 |          |      |          |       |        |      |        |         |

|                         |                                                                                       |                                            |  |
|-------------------------|---------------------------------------------------------------------------------------|--------------------------------------------|--|
| <b>LUMBER</b>           |                                                                                       | <b>WEBS</b>                                |  |
| TOP CHORD               | 2x4 SP No.2                                                                           | 2-39=-392/257, 33-39=-390/253,             |  |
| BOT CHORD               | 2x4 SP No.2                                                                           | 33-38=-170/615, 6-38=-175/616,             |  |
| WEBS                    | 2x3 SPF No.2 *Except* 34-1,21-20:2x4 SP No.2                                          | 6-37=-901/364, 36-37=-790/314,             |  |
| OTHERS                  | 2x3 SPF No.2                                                                          | 35-36=-804/319, 28-35=-807/322,            |  |
| <b>BRACING</b>          |                                                                                       | 10-28=-573/0, 28-40=-146/135,              |  |
| TOP CHORD               | Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals. | 40-41=-150/134, 41-42=-132/125,            |  |
| BOT CHORD               | Rigid ceiling directly applied or 6-0-0 oc bracing.                                   | 14-42=-157/143, 14-24=-411/109,            |  |
| WEBS                    | 1 Row at midpt 10-28, 14-24, 9-35, 11-40                                              | 24-43=-624/253, 43-44=-601/235,            |  |
| JOINTS                  | 1 Brace at Jt(s): 35, 36, 38, 39, 40, 41, 44                                          | 44-45=-574/220, 18-45=-610/242,            |  |
| <b>REACTIONS</b> (size) | 21=0-5-8, 24=0-5-8, 28=0-5-8, 34= Mechanical                                          | 18-22=-40/280, 2-34=-335/48,               |  |
| Max Horiz               | 34=-348 (LC 8)                                                                        | 22-46=-152/192, 20-46=-136/175,            |  |
| Max Uplift              | 21=-51 (LC 13), 24=-234 (LC 13), 28=-359 (LC 12), 34=-79 (LC 12)                      | 9-35=-141/77, 29-35=-138/72, 8-36=-79/74,  |  |
| Max Grav                | 21=456 (LC 26), 24=910 (LC 26), 28=1655 (LC 1), 34=722 (LC 25)                        | 30-36=-61/68, 7-37=-88/276, 31-37=-27/142, |  |

|                                                          |                                                                                                                                                                                                                                                                       |
|----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>FORCES</b> (lb) - Maximum Compression/Maximum Tension |                                                                                                                                                                                                                                                                       |
| TOP CHORD                                                | 1-2=-558/163, 2-4=-620/111, 4-5=-532/158, 5-6=-474/160, 6-7=-55/198, 7-8=-64/390, 8-9=-31/408, 9-10=0/401, 10-11=0/386, 11-12=0/363, 12-13=0/323, 13-14=-14/235, 14-15=0/352, 15-16=-2/322, 16-18=-38/265, 18-19=-274/66, 19-20=-456/23, 1-34=-448/167, 20-21=-392/89 |
| BOT CHORD                                                | 33-34=-210/772, 32-33=-134/306, 31-32=-134/306, 29-31=-134/306, 28-29=-134/306, 27-28=-271/239, 25-27=-271/239, 24-25=-271/239, 23-24=0/301, 22-23=0/301, 21-22=-113/328                                                                                              |

#### 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) 0-1-12 to 5-1-12, Interior (1) 5-1-12 to 20-0-0, Exterior(2R) 20-0-0 to 25-0-0, Interior (1) 25-0-0 to 39-10-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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 2-0-0 oc.

- 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 28 SP No.2 crushing capacity of 565 psi, Joint 24 SP No.2 crushing capacity of 565 psi, Joint 21 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 79 lb uplift at joint 34.
  - One H2.5T Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 28, 24, and 21. This connection is for uplift only and does not consider lateral forces.
  - 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



July 31, 2024

**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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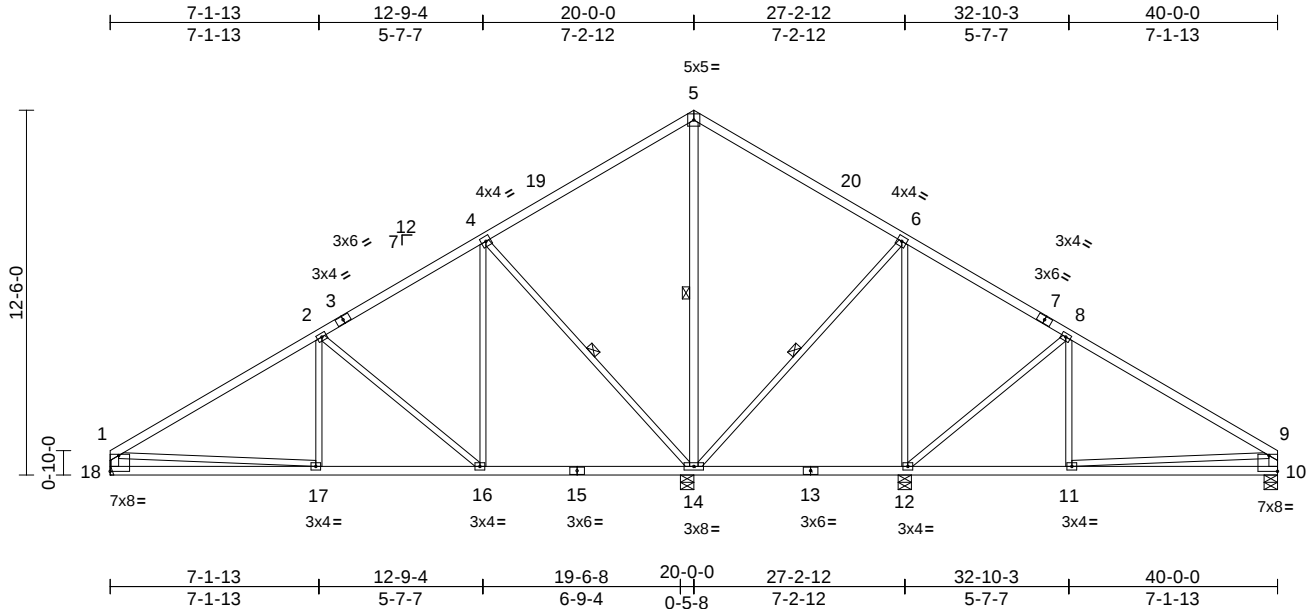
|            |       |            |     |     |                          |                          |
|------------|-------|------------|-----|-----|--------------------------|--------------------------|
| Job        | Truss | Truss Type | Qty | Ply | Roof - HR Lot 75         | RELEASE FOR CONSTRUCTION |
| P240851-01 | C02   | Common     | 3   | 1   | Job Reference (optional) | AS NOTED FOR PLAN REVIEW |
|            |       |            |     |     |                          | DEVELOPMENT SERVICES     |
|            |       |            |     |     |                          | 167189968                |
|            |       |            |     |     |                          | LEE'S SUMMIT, MISSOURI   |

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

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Scale = 1:79

Plate Offsets (X, Y): [2:Edge,0-0-0], [4:0-0-0,0-0-0], [10:Edge,0-6-8], [18:Edge,0-6-8]

| 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       | 0.76 | Vert(LL) | -0.07 | 17-18 | >999   | 240 | MT20           | 244/190  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.44 | Vert(CT) | -0.14 | 17-18 | >999   | 180 |                |          |
| BCLL        | 0.0   | Rep Stress Incr | YES             | WB       | 0.88 | Horz(CT) | 0.02  | 10    | n/a    | n/a |                |          |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      |          |       |       |        |     | Weight: 207 lb | FT = 20% |

#### LUMBER

TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x3 SPF No.2 \*Except\* 18-1,10-9,14-5:2x4 SP No.2

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 3-9-8 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.  
WEBS 1 Row at midpt 5-14, 6-14, 4-14

**REACTIONS** (size) 10=0-5-8, 12=0-5-8, 14=0-5-8, 18= Mechanical  
Max Horiz 18=-348 (LC 8)  
Max Uplift 10=-87 (LC 13), 12=-185 (LC 13), 14=-317 (LC 12), 18=-105 (LC 12)  
Max Grav 10=499 (LC 26), 12=813 (LC 26), 14=1677 (LC 1), 18=732 (LC 25)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-915/126, 2-4=-446/153, 4-5=-34/441, 5-6=0/429, 6-8=-20/270, 8-9=-513/91, 1-18=-664/146, 9-10=-432/127  
BOT CHORD 17-18=-345/602, 16-17=-208/818, 14-16=-155/406, 12-14=-233/179, 11-12=0/342, 10-11=-121/332  
WEBS 1-17=0/329, 9-11=-133/137, 5-14=-791/91, 6-14=-202/172, 6-12=-350/121, 8-12=-562/213, 8-11=0/272, 2-17=0/248, 2-16=-536/212, 4-16=-62/463, 4-14=-847/333

#### 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) 0-1-12 to 5-1-12, Interior (1) 5-1-12 to 20-0-0, Exterior(2R) 20-0-0 to 25-0-0, Interior (1) 25-0-0 to 39-10-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) 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 14 SP No.2 crushing capacity of 565 psi, Joint 12 SP No.2 crushing capacity of 565 psi, Joint 10 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 105 lb uplift at joint 18, 87 lb uplift at joint 10, 317 lb uplift at joint 14 and 185 lb uplift at joint 12.
- 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



July 31,2024

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

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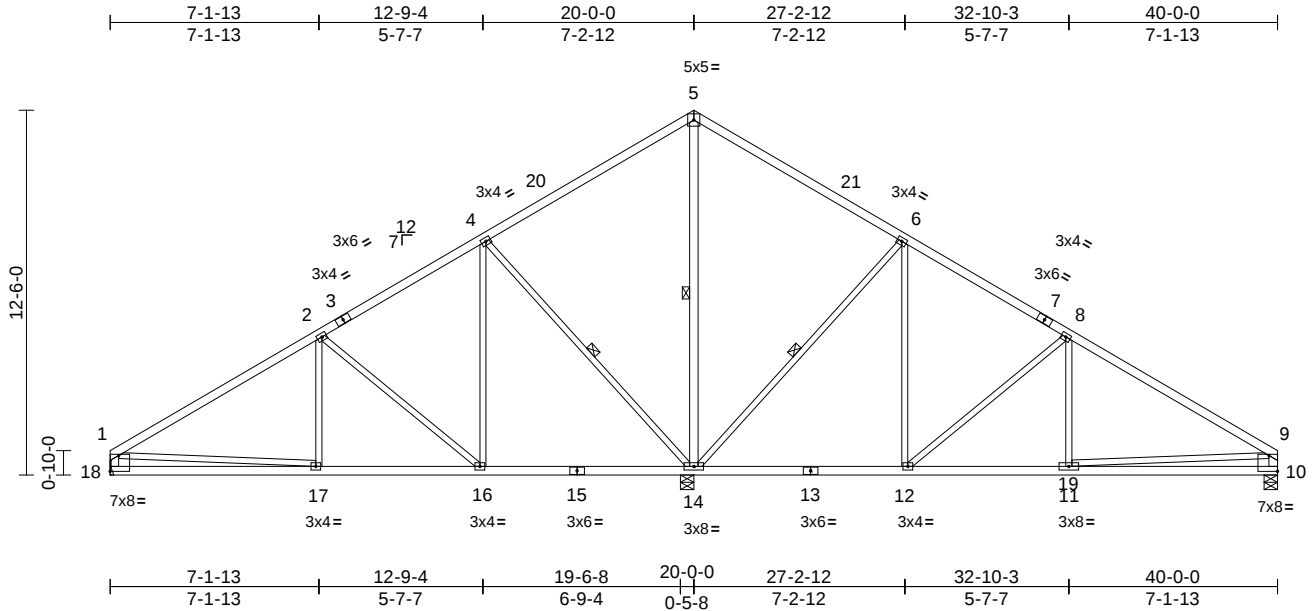
|            |       |            |     |     |                          |                          |
|------------|-------|------------|-----|-----|--------------------------|--------------------------|
| Job        | Truss | Truss Type | Qty | Ply | Roof - HR Lot 75         | RELEASE FOR CONSTRUCTION |
| P240851-01 | C03   | Common     | 6   | 1   | Job Reference (optional) | AS NOTED FOR PLAN REVIEW |
|            |       |            |     |     |                          | DEVELOPMENT SERVICES     |
|            |       |            |     |     |                          | 167189969                |
|            |       |            |     |     |                          | LEE'S SUMMIT, MISSOURI   |

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

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|                                                        |       |                 |                 |            |      |             |             |        |     |                |             |
|--------------------------------------------------------|-------|-----------------|-----------------|------------|------|-------------|-------------|--------|-----|----------------|-------------|
| Scale = 1:79                                           |       |                 |                 |            |      |             |             |        |     |                |             |
| Plate Offsets (X, Y): [10:Edge,0-6-8], [18:Edge,0-6-8] |       |                 |                 |            |      |             |             |        |     |                |             |
| <b>Loading</b>                                         | (psf) | <b>Spacing</b>  | 2-0-0           | <b>CSI</b> |      | <b>DEFL</b> | in (loc)    | l/defl | L/d | <b>PLATES</b>  | <b>GRIP</b> |
| TCLL (roof)                                            | 25.0  | Plate Grip DOL  | 1.15            | TC         | 0.79 | Vert(LL)    | -0.07 17-18 | >999   | 240 | MT20           | 244/190     |
| TCDL                                                   | 10.0  | Lumber DOL      | 1.15            | BC         | 0.42 | Vert(CT)    | -0.13 17-18 | >999   | 180 |                |             |
| BCLL                                                   | 0.0   | Rep Stress Incr | YES             | WB         | 0.89 | Horz(CT)    | 0.02 10     | n/a    | n/a |                |             |
| BCDL                                                   | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S   |      |             |             |        |     | Weight: 207 lb | FT = 20%    |

|                                                              |                                                                                                                                                                      |
|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>LUMBER</b>                                                |                                                                                                                                                                      |
| TOP CHORD                                                    | 2x4 SP No.2                                                                                                                                                          |
| BOT CHORD                                                    | 2x4 SP No.2                                                                                                                                                          |
| WEBS                                                         | 2x3 SPF No.2 *Except* 18-1,10-9,14-5:2x4 SP No.2                                                                                                                     |
| <b>BRACING</b>                                               |                                                                                                                                                                      |
| TOP CHORD                                                    | Structural wood sheathing directly applied or 3-11-11 oc purlins, except end verticals.                                                                              |
| BOT CHORD                                                    | Rigid ceiling directly applied or 6-0-0 oc bracing.                                                                                                                  |
| WEBS                                                         | 1 Row at midpt 5-14, 6-14, 4-14                                                                                                                                      |
| <b>REACTIONS</b> (size)                                      |                                                                                                                                                                      |
| 10=0-5-8, 14=0-5-8, 18= Mechanical                           |                                                                                                                                                                      |
| Max Horiz 18=348 (LC 9)                                      |                                                                                                                                                                      |
| Max Uplift 10=-142 (LC 13), 14=-289 (LC 12), 18=-117 (LC 12) |                                                                                                                                                                      |
| Max Grav 10=668 (LC 26), 14=2355 (LC 1), 18=703 (LC 25)      |                                                                                                                                                                      |
| <b>FORCES</b> (lb) - Maximum Compression/Maximum Tension     |                                                                                                                                                                      |
| TOP CHORD                                                    | 1-2=-866/142, 2-4=-394/158, 4-5=0/629, 5-6=0/629, 6-8=-328/187, 8-9=-815/183, 1-18=-636/157, 9-10=-597/182                                                           |
| BOT CHORD                                                    | 17-18=-350/592, 16-17=-259/698, 14-16=-229/307, 12-14=-57/203, 11-12=-67/590, 10-11=-114/414                                                                         |
| WEBS                                                         | 1-17=-58/290, 9-19=-8/187, 5-14=-993/76, 6-14=-850/331, 8-12=-538/208, 11-19=0/264, 8-19=0/260, 4-14=-852/332, 4-16=-61/468, 2-16=-547/210, 2-17=0/258, 6-12=-59/467 |

**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) 0-1-12 to 5-1-12, Interior (1) 5-1-12 to 20-0-0, Exterior(2R) 20-0-0 to 25-0-0, Interior (1) 25-0-0 to 39-10-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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 14 SP No.2 crushing capacity of 565 psi, Joint 10 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 117 lb uplift at joint 18, 142 lb uplift at joint 10 and 289 lb uplift at joint 14.
- 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



July 31, 2024

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

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|            |       |                        |     |     |                          |
|------------|-------|------------------------|-----|-----|--------------------------|
| Job        | Truss | Truss Type             | Qty | Ply | Roof - HR Lot 75         |
| P240851-01 | D1    | Common Supported Gable | 1   | 1   | Job Reference (optional) |

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RELEASE FOR CONSTRUCTION

AS NOTED FOR PLAN REVIEW

DEVELOPMENT SERVICES

167189970

LEE'S SUMMIT, MISSOURI

08/08/2024

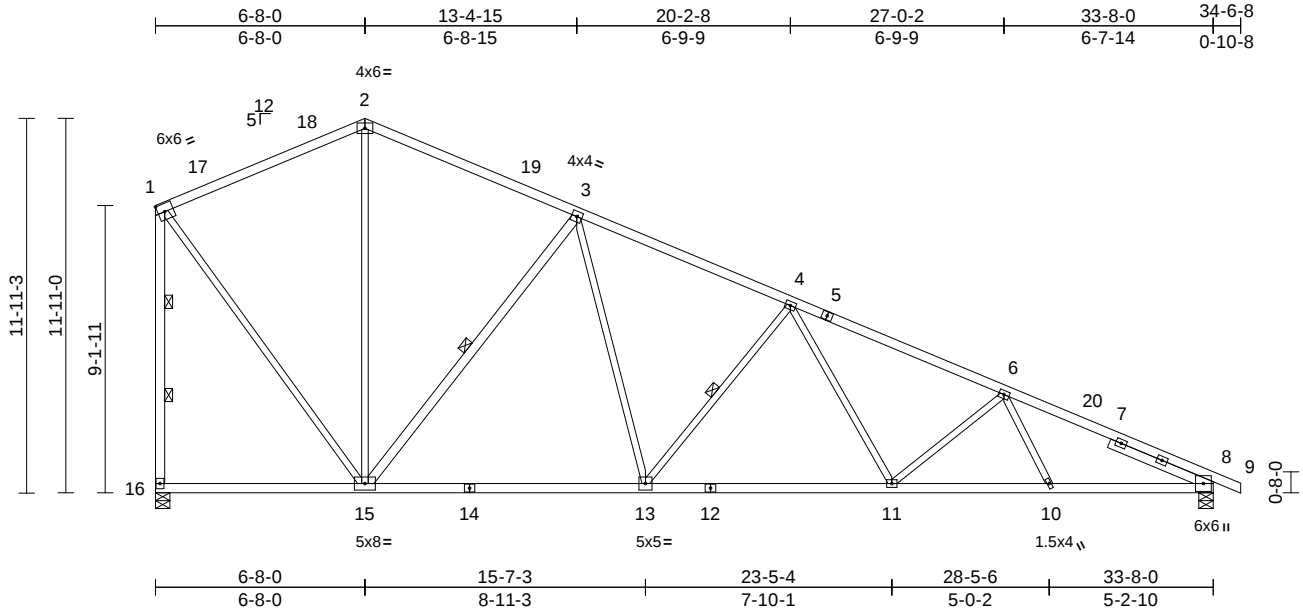
LOAD CASE(S) Standard

|            |       |            |     |     |                          |                                                                                                                     |
|------------|-------|------------|-----|-----|--------------------------|---------------------------------------------------------------------------------------------------------------------|
| Job        | Truss | Truss Type | Qty | Ply | Roof - HR Lot 75         | RELEASE FOR CONSTRUCTION<br>AS NOTED FOR PLAN REVIEW<br>DEVELOPMENT SERVICES<br>167189971<br>LEE'S SUMMIT, MISSOURI |
| P240851-01 | D2    | Common     | 5   | 1   | Job Reference (optional) |                                                                                                                     |

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|                                         |  |       |                 |  |                 |            |  |             |          |       |       |        |     |                |             |
|-----------------------------------------|--|-------|-----------------|--|-----------------|------------|--|-------------|----------|-------|-------|--------|-----|----------------|-------------|
| Scale = 1:73.3                          |  |       |                 |  |                 |            |  |             |          |       |       |        |     |                |             |
| Plate Offsets (X, Y): [8:0-3-11,0-0-11] |  |       |                 |  |                 |            |  |             |          |       |       |        |     |                |             |
| <b>Loading</b>                          |  | (psf) | <b>Spacing</b>  |  | 2-0-0           | <b>CSI</b> |  | <b>DEFL</b> |          | in    | (loc) | l/defl | L/d | <b>PLATES</b>  | <b>GRIP</b> |
| TCLL (roof)                             |  | 25.0  | Plate Grip DOL  |  | 1.15            | TC         |  | 0.98        | Vert(LL) | -0.15 | 11-13 | >999   | 240 | MT20           | 197/144     |
| TCDL                                    |  | 10.0  | Lumber DOL      |  | 1.15            | BC         |  | 0.78        | Vert(CT) | -0.33 | 13-15 | >999   | 180 |                |             |
| BCLL                                    |  | 0.0   | Rep Stress Incr |  | YES             | WB         |  | 0.84        | Horz(CT) | 0.09  | 8     | n/a    | n/a |                |             |
| BCDL                                    |  | 10.0  | Code            |  | IRC2018/TPI2014 | Matrix-S   |  |             |          |       |       |        |     | Weight: 183 lb | FT = 20%    |

**LUMBER**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x3 SPF No.2 \*Except\* 16-1,3-15:2x4 SP No.2  
SLIDER Right 2x4 SP No.2 -- 3-6-9  
**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 2-4-6 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 9-0-15 oc bracing.  
WEBS 1 Row at midpt 3-15, 4-13  
WEBS 2 Rows at 1/3 pts 1-16  
**REACTIONS** (size) 8=0-5-8, 16=0-5-8  
Max Horiz 16=409 (LC 8)  
Max Uplift 8=-298 (LC 13), 16=-260 (LC 13)  
Max Grav 8=1570 (LC 1), 16=1508 (LC 1)  
**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-847/320, 2-3=-862/336, 3-4=-1823/403, 4-6=-2561/508, 6-8=-2971/525, 8-9=0/0, 1-16=-1455/344  
BOT CHORD 15-16=-272/430, 13-15=-69/1401, 11-13=-221/2071, 10-11=-418/2587, 8-10=-391/2622  
WEBS 2-15=-68/268, 1-15=-279/1173, 3-15=-1158/386, 3-13=-135/814, 4-13=-775/301, 4-11=-75/459, 6-11=-405/216, 6-10=0/193

**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) 0-1-12 to 5-1-12, Interior (1) 5-1-12 to 6-8-0, Exterior(2R) 6-8-0 to 11-8-0, Interior (1) 11-8-0 to 34-6-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) All plates are 3x4 MT20 unless otherwise indicated.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 260 lb uplift at joint 16 and 298 lb uplift at joint 8.
- 7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



July 31, 2024

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

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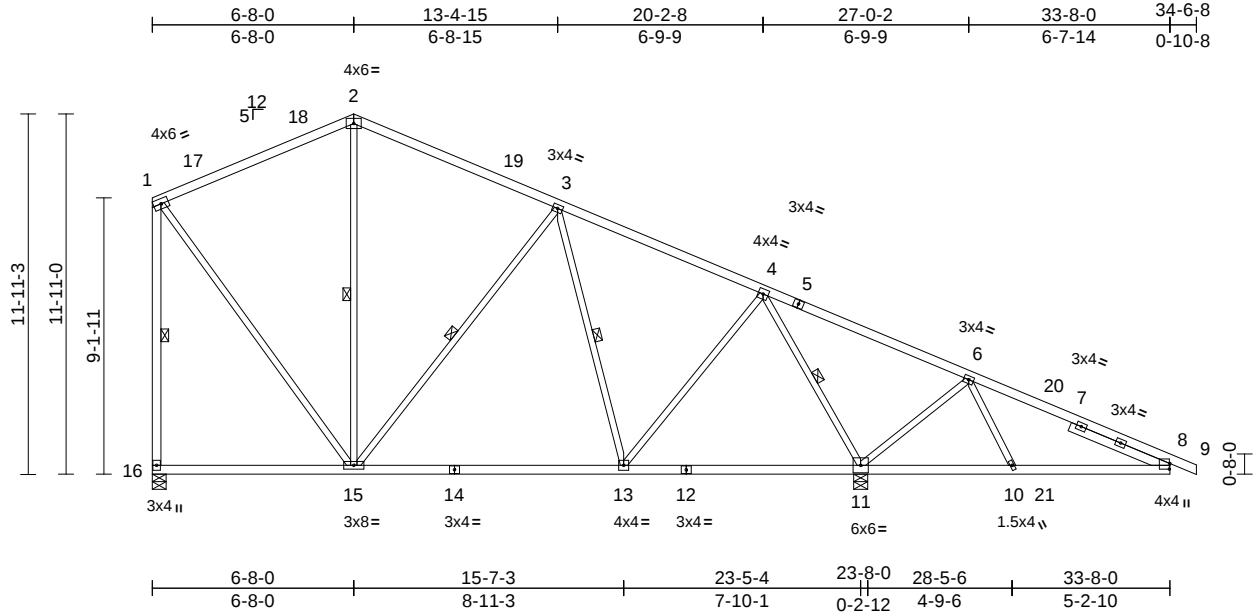
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314.434.1200 / MiTek-US.com

|            |       |            |     |     |                          |                                                                                                                     |
|------------|-------|------------|-----|-----|--------------------------|---------------------------------------------------------------------------------------------------------------------|
| Job        | Truss | Truss Type | Qty | Ply | Roof - HR Lot 75         | RELEASE FOR CONSTRUCTION<br>AS NOTED FOR PLAN REVIEW<br>DEVELOPMENT SERVICES<br>167189972<br>LEE'S SUMMIT, MISSOURI |
| P240851-01 | D3    | Common     | 4   | 1   | Job Reference (optional) |                                                                                                                     |

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

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08/08/2024



|                                       |       |                 |                 |            |      |             |             |        |     |
|---------------------------------------|-------|-----------------|-----------------|------------|------|-------------|-------------|--------|-----|
| Scale = 1:76.2                        |       |                 |                 |            |      |             |             |        |     |
| Plate Offsets (X, Y): [8:0-2-3,0-0-3] |       |                 |                 |            |      |             |             |        |     |
| <b>Loading</b>                        | (psf) | <b>Spacing</b>  | 2-0-0           | <b>CSI</b> |      | <b>DEFL</b> | in (loc)    | l/defl | L/d |
| TCLL (roof)                           | 25.0  | Plate Grip DOL  | 1.15            | TC         | 0.98 | Vert(LL)    | -0.11 13-15 | >999   | 240 |
| TCDL                                  | 10.0  | Lumber DOL      | 1.15            | BC         | 0.58 | Vert(CT)    | -0.22 13-15 | >999   | 180 |
| BCLL                                  | 0.0   | Rep Stress Incr | YES             | WB         | 0.86 | Horz(CT)    | 0.01 11     | n/a    | n/a |
| BCDL                                  | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S   |      |             |             |        |     |
| Weight: 176 lb FT = 20%               |       |                 |                 |            |      |             |             |        |     |

**LUMBER**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x3 SPF No.2 \*Except\* 16-1:2x4 SP No.2  
SLIDER Right 2x4 SP No.2 -- 3-6-9

**BRACING**  
TOP CHORD Structural wood sheathing directly applied, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.  
WEBS 1 Row at midpt 2-15, 1-16, 3-15, 3-13, 4-11

**REACTIONS** (size) 11=0-5-8, 16=0-5-8  
Max Horiz 16=-409 (LC 8)  
Max Uplift 11=-462 (LC 9), 16=-156 (LC 12)  
Max Grav 11=2260 (LC 1), 16=818 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-428/199, 2-3=-443/176, 3-4=-363/125, 4-6=-1061/1350, 6-8=-568/765, 8-9=0/0, 1-16=-766/175  
BOT CHORD 15-16=-272/430, 13-15=0/402, 11-13=-277/710, 10-11=-660/725, 8-10=-598/561  
WEBS 2-15=-193/226, 1-15=-109/519, 3-15=-195/183, 3-13=-485/466, 4-13=-419/815, 4-11=-1922/902, 6-11=-675/551, 6-10=-378/233

**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) 0-1-12 to 5-1-12, Interior (1) 5-1-12 to 6-8-0, Exterior(2R) 6-8-0 to 11-8-0, Interior (1) 11-8-0 to 34-6-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) All plates are 3x4 MT20 unless otherwise indicated.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 156 lb uplift at joint 16 and 462 lb uplift at joint 11.
- 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



July 31, 2024

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

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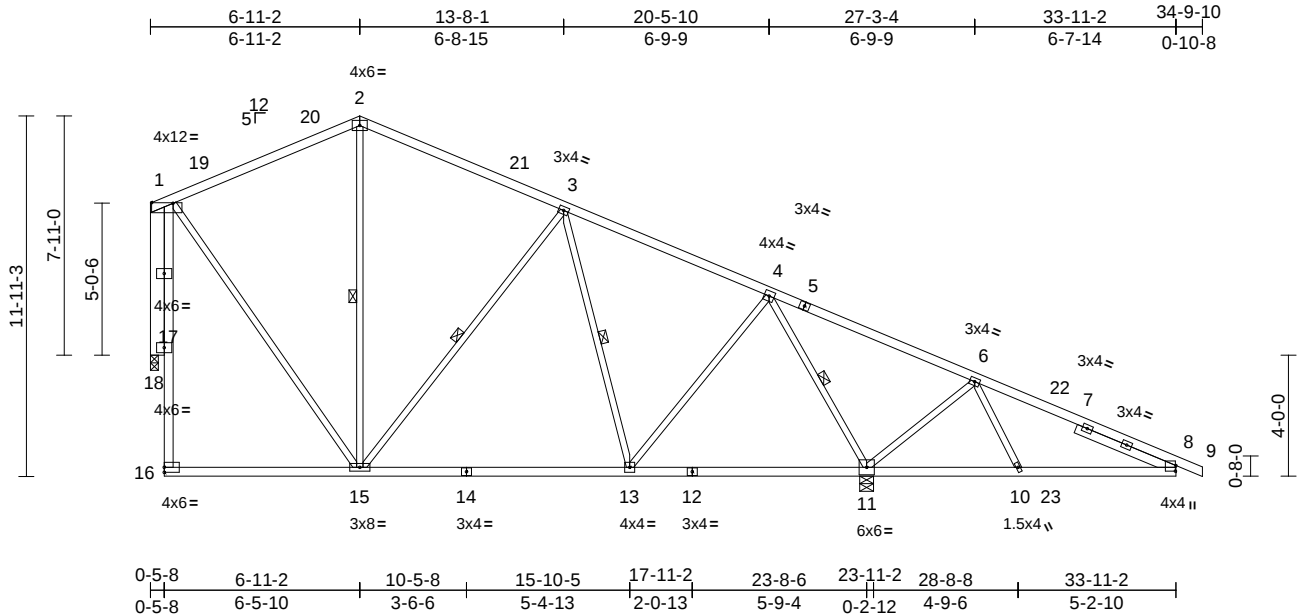
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|            |       |            |     |     |                          |
|------------|-------|------------|-----|-----|--------------------------|
| Job        | Truss | Truss Type | Qty | Ply | Roof - HR Lot 75         |
| P240851-01 | D4    | Common     | 3   | 1   | Job Reference (optional) |

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

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08/08/2024



Scale = 1:76.2

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

[illegible]

## LUMBER

|           |                                              |
|-----------|----------------------------------------------|
| TOP CHORD | 2x4 SP 1650F 1.5E                            |
| BOT CHORD | 2x4 SP 1650F 1.5E                            |
| WEBS      | 2x3 SPF No.2 *Except* 16-1:2x4 SP 1650F 1.5E |
| OTHERS    | 2x6 SPF No.2                                 |
| SLIDER    | Right 2x4 SP No.2 -- 3-6-9                   |

## 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.                                   |                               |
| WEBS      | 1 Row at midpt                                                                        | 2-15, 3-15, 3-13, 4-11        |
| REACTIONS | (size)                                                                                | 11=0-5-8, 18=0-3-2            |
|           | Max Horiz                                                                             | 18=359 (LC 13)                |
|           | Max Uplift                                                                            | 11=463 (LC 9), 18=99 (LC 13)  |
|           | Max Grav                                                                              | 11=2270 (LC 1), 18=791 (LC 1) |

## FORCES

Tension

TOP CHORD 1-2=-439/259, 2-3=-456/227, 3-4=-367/156,  
4-6=-1061/1350, 6-8=-568/764, 8-9=0/0,  
16-17=0/100, 1-17=0/100

BOT CHORD 15-16=-81/269, 13-15=0/391,  
11-13=-274/731, 10-11=-660/725,  
8-10=-598/561

WEBS 2-15=-175/95, 1-15=-19/469, 3-15=-175/166,  
3-13=-489/445, 4-13=-391/823,  
4-11=-1932/858, 6-11=-675/551,  
6-10=-378/233, 1-18=-796/99

## 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) 0-7-4 to 5-7-4,  
Interior (1) 5-7-4 to 6-11-2, Exterior(2R) 6-11-2 to  
11-11-2, Interior (1) 11-11-2 to 34-9-10 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
- 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 18 SPF No.2  
crushing capacity of 425 psi, Joint 11 SP 1650F 1.5E  
crushing capacity of 565 psi.
- 5) Bearing at joint(s) 18 considers parallel to grain value  
using ANSI/TPI 1 angle to grain formula. Building  
designer should verify capacity of bearing surface.
- 6) Provide mechanical connection (by others) of truss to  
bearing plate capable of withstanding 463 lb uplift at  
joint 11 and 99 lb uplift at joint 18.
- 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



July 31, 2024



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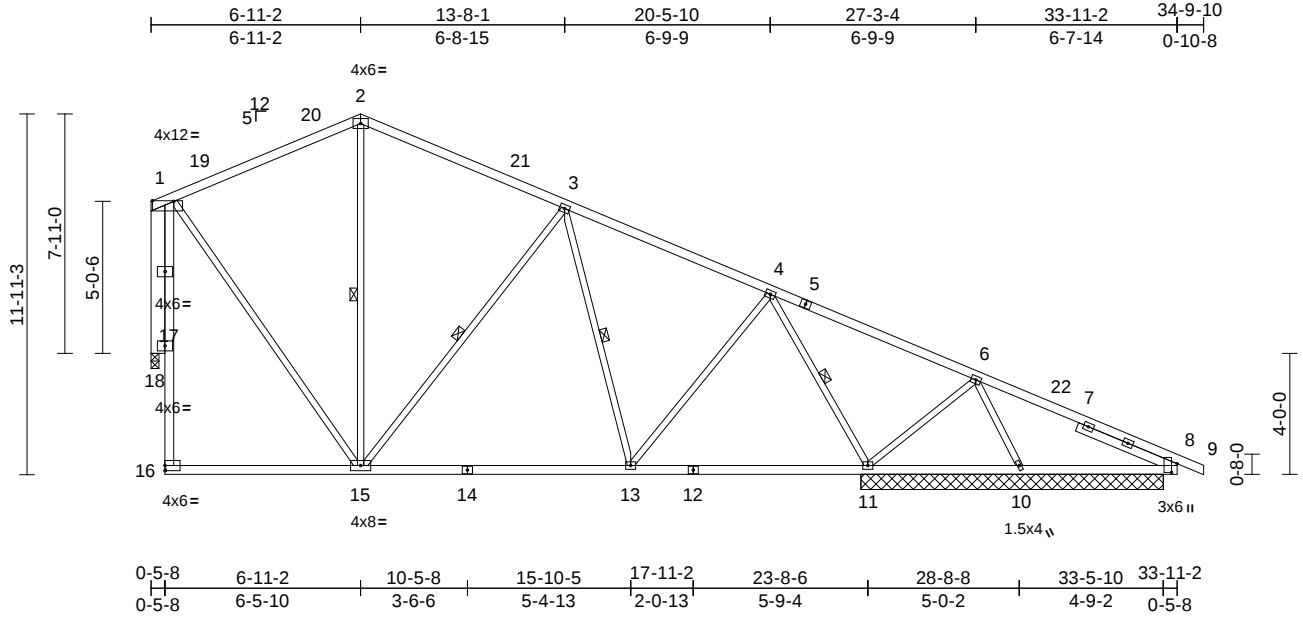
|            |       |            |     |     |                          |                                                                                         |
|------------|-------|------------|-----|-----|--------------------------|-----------------------------------------------------------------------------------------|
| Job        | Truss | Truss Type | Qty | Ply | Roof - HR Lot 75         | RELEASE FOR CONSTRUCTION                                                                |
| P240851-01 | D5    | Common     | 1   | 1   | Job Reference (optional) | AS NOTED FOR PLAN REVIEW<br>DEVELOPMENT SERVICES<br>167189974<br>LEE'S SUMMIT, MISSOURI |

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

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08/08/2024



Scale = 1:76.2

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

| 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       | 0.91 | Vert(LL) | -0.11 | 13-15 | >999   | 240 | MT20           | 197/144  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.63 | Vert(CT) | -0.24 | 13-15 | >999   | 180 |                |          |
| BCLL        | 0.0   | Rep Stress Incr | YES             | WB       | 0.56 | Horz(CT) | 0.77  | 11    | n/a    | n/a |                |          |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      |          |       |       |        |     | Weight: 185 lb | FT = 20% |

#### LUMBER

|           |                                              |
|-----------|----------------------------------------------|
| TOP CHORD | 2x4 SP No.2                                  |
| BOT CHORD | 2x4 SP No.2                                  |
| WEBS      | 2x3 SPF No.2 *Except* 16-1:2x4 SP 1650F 1.5E |
| OTHERS    | 2x6 SPF No.2                                 |
| SLIDER    | Right 2x4 SP No.2 -- 3-6-9                   |

#### BRACING

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

|           |                                                                            |
|-----------|----------------------------------------------------------------------------|
| WEBS      | 1 Row at midpt 2-15, 3-15, 3-13, 4-11                                      |
| REACTIONS | (size) 8=10-0-0, 10=10-0-0, 11=10-0-0, 18=0-3-2                            |
|           | Max Horiz 18=-359 (LC 13)                                                  |
|           | Max Uplift 8=-187 (LC 13), 10=-87 (LC 13), 11=-86 (LC 13), 18=-198 (LC 13) |
|           | Max Grav 8=419 (LC 26), 10=134 (LC 3), 11=1564 (LC 1), 18=991 (LC 1)       |

#### FORCES

|           |                                                                                                                                  |
|-----------|----------------------------------------------------------------------------------------------------------------------------------|
|           | (lb) - Maximum Compression/Maximum Tension                                                                                       |
| TOP CHORD | 1-2=-565/323, 2-3=-583/303, 3-4=-799/372, 4-6=-87/387, 6-8=-382/273, 8-9=0/0, 16-17=0/101, 1-17=0/101                            |
| BOT CHORD | 15-16=-75/264, 13-15=-42/681, 11-13=-136/435, 10-11=-231/262, 8-10=-163/262                                                      |
| WEBS      | 2-15=-133/120, 3-15=-430/321, 1-15=-111/652, 3-13=-119/79, 4-13=0/377, 4-11=-1238/73, 6-11=-527/171, 6-10=-30/154, 1-18=-997/236 |

#### 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) 0-7-4 to 5-7-4, Interior (1) 5-7-4 to 6-11-2, Exterior(2R) 6-11-2 to 11-11-2, Interior (1) 11-11-2 to 34-9-10 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
- 3) All plates are 3x4 MT20 unless otherwise indicated.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) Bearings are assumed to be: Joint 18 SPF No.2 crushing capacity of 425 psi, Joint 10 SP No.2 crushing capacity of 565 psi.
- 6) Bearing at joint(s) 18 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 187 lb uplift at joint 8, 86 lb uplift at joint 11, 87 lb uplift at joint 10 and 198 lb uplift at joint 18.
- 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



July 31, 2024

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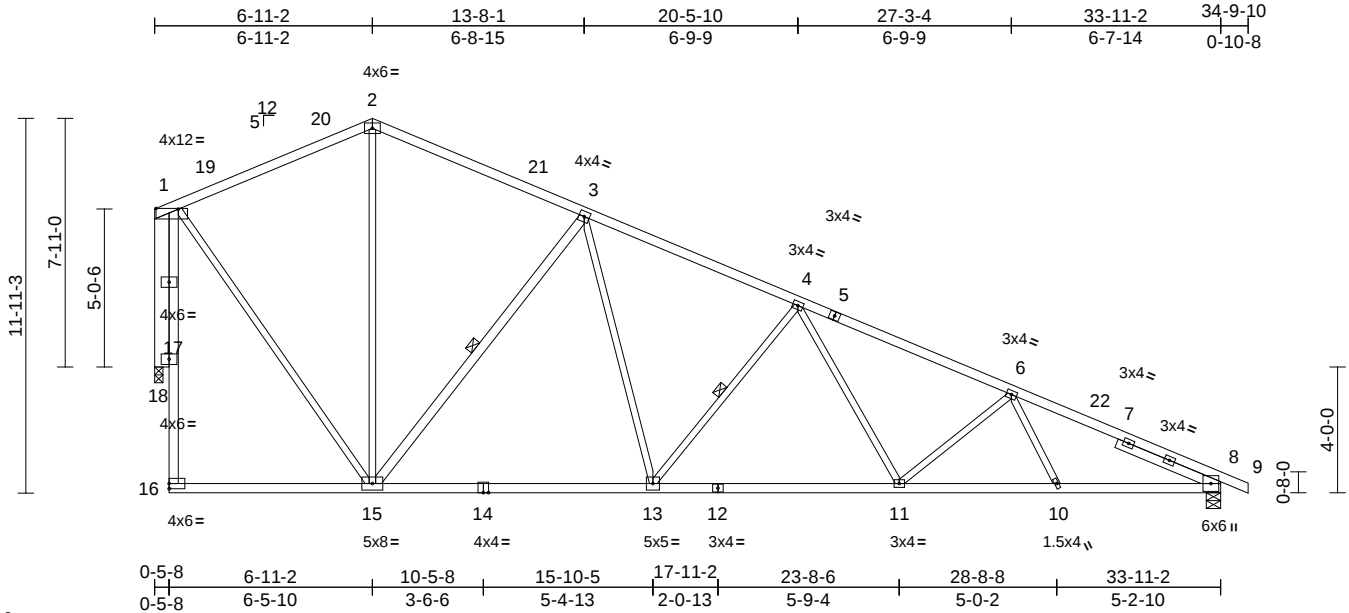
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|            |       |            |     |     |                          |                                                                                         |
|------------|-------|------------|-----|-----|--------------------------|-----------------------------------------------------------------------------------------|
| Job        | Truss | Truss Type | Qty | Ply | Roof - HR Lot 75         | RELEASE FOR CONSTRUCTION                                                                |
| P240851-01 | D6    | Common     | 6   | 1   | Job Reference (optional) | AS NOTED FOR PLAN REVIEW<br>DEVELOPMENT SERVICES<br>167189975<br>LEE'S SUMMIT, MISSOURI |

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08/08/2024



|                                                         |       |                 |                 |            |      |                         |             |             |     |
|---------------------------------------------------------|-------|-----------------|-----------------|------------|------|-------------------------|-------------|-------------|-----|
| Scale = 1:73.3                                          |       |                 |                 |            |      |                         |             |             |     |
| Plate Offsets (X, Y): [1:0-8-8,Edge], [8:0-3-11,0-0-11] |       |                 |                 |            |      |                         |             |             |     |
| <b>Loading</b>                                          | (psf) | <b>Spacing</b>  | 2-0-0           | <b>CSI</b> |      | <b>DEFL</b>             | in (loc)    | l/defl      | L/d |
| TCLL (roof)                                             | 25.0  | Plate Grip DOL  | 1.15            | TC         | 0.90 | Vert(LL)                | -0.15 11-13 | >999        | 240 |
| TCDL                                                    | 10.0  | Lumber DOL      | 1.15            | BC         | 0.80 | Vert(CT)                | -0.35 13-15 | >999        | 180 |
| BCLL                                                    | 0.0   | Rep Stress Incr | YES             | WB         | 0.66 | Horz(CT)                | 0.76 8      | n/a         | n/a |
| BCDL                                                    | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S   |      |                         |             |             |     |
|                                                         |       |                 |                 |            |      | <b>PLATES</b>           |             | <b>GRIP</b> |     |
|                                                         |       |                 |                 |            |      | MT20                    |             | 197/144     |     |
|                                                         |       |                 |                 |            |      | Weight: 192 lb FT = 20% |             |             |     |

**LUMBER**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x3 SPF No.2 \*Except\* 15-3:2x4 SP No.2,  
16-1:2x4 SP 1650F 1.5E  
OTHERS 2x6 SPF No.2  
SLIDER Right 2x4 SP No.2 -- 3-6-9

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or  
2-2-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 8-7-8 oc  
bracing.  
WEBS 1 Row at midpt 3-15, 4-13

**REACTIONS** (size) 8=0-5-8, 18=0-3-2  
Max Horiz 18=359 (LC 13)  
Max Uplift 8=-320 (LC 13), 18=-237 (LC 13)  
Max Grav 8=1583 (LC 1), 18=1478 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum  
Tension  
TOP CHORD 1-2=-872/346, 2-3=-891/315, 3-4=-1854/457,  
4-6=-2589/562, 6-8=-2999/575, 8-9=0/0,  
16-17=0/105, 1-17=0/105  
BOT CHORD 15-16=-58/262, 13-15=-71/1429,  
11-13=-270/2099, 10-11=-465/2612,  
8-10=-437/2647  
WEBS 2-15=-135/279, 3-15=-1158/383,  
1-15=-147/1101, 3-13=-126/816,  
4-13=-773/301, 4-11=-75/457, 6-11=-404/211,  
6-10=0/194, 1-18=-1486/255

**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) 0-7-4 to 5-7-4,  
Interior (1) 5-7-4 to 6-11-2, Exterior(2R) 6-11-2 to  
11-11-2, Interior (1) 11-11-2 to 34-9-10 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
- 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 18 SPF No.2  
crushing capacity of 425 psi, Joint 8 SP No.2 crushing  
capacity of 565 psi.
- Bearing at joint(s) 18 considers parallel to grain value  
using ANSI/TPI 1 angle to grain formula. Building  
designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to  
bearing plate capable of withstanding 320 lb uplift at  
joint 8 and 237 lb uplift at joint 18.
- This truss is designed in accordance with the 2018  
International Residential Code sections R502.11.1 and  
R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



July 31, 2024

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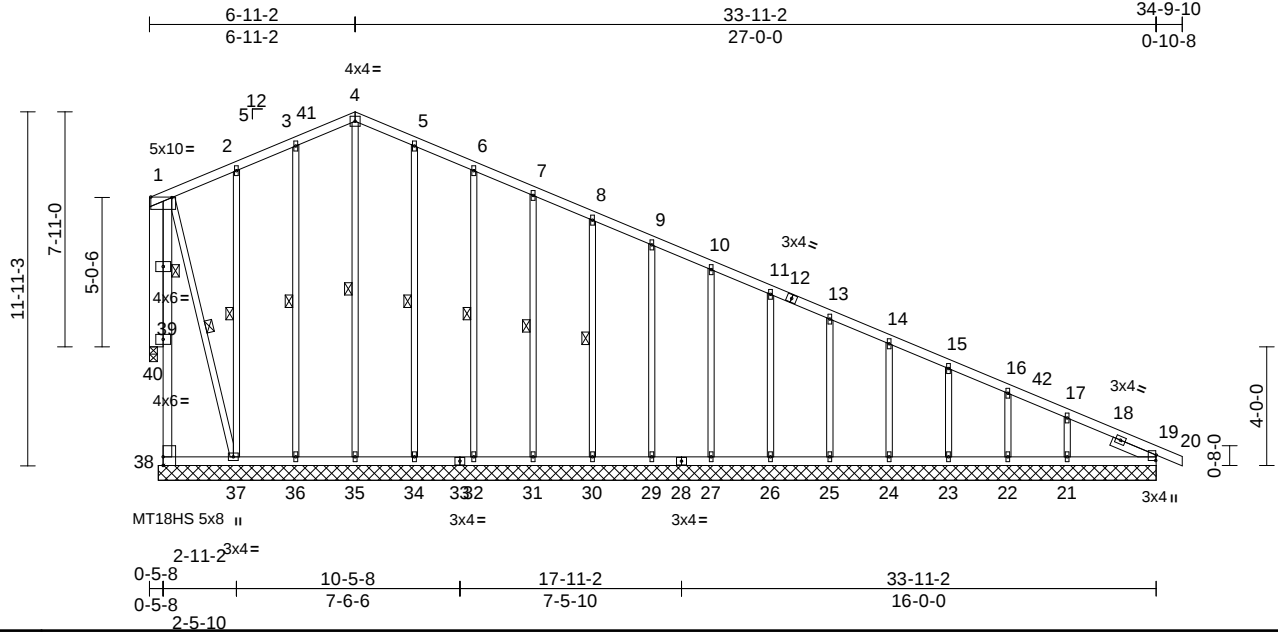
|            |       |                        |     |     |                          |                                                                                         |
|------------|-------|------------------------|-----|-----|--------------------------|-----------------------------------------------------------------------------------------|
| Job        | Truss | Truss Type             | Qty | Ply | Roof - HR Lot 75         | RELEASE FOR CONSTRUCTION                                                                |
| P240851-01 | D7    | Common Supported Gable | 1   | 1   | Job Reference (optional) | AS NOTED FOR PLAN REVIEW<br>DEVELOPMENT SERVICES<br>167189976<br>LEE'S SUMMIT, MISSOURI |

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Mon Jul 29 17:04:31 Page: 1

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08/08/2024



Scale = 1:77.7

Plate Offsets (X, Y): [1:0-8-8,Edge], [19:0-2-3,0-0-3]

| 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       | 0.74 | Ver(LL)  | 0.01  | 37-38  | >999 | 240    | MT18HS 244/190 |
| TCDL                    | 10.0  | Lumber DOL      | 1.15            | BC       | 0.35 | Ver(CT)  | 0.01  | 37-38  | >999 | 180    | MT20 197/144   |
| BCLL                    | 0.0   | Rep Stress Incr | YES             | WB       | 0.48 | Horz(CT) | 0.34  | 19     | n/a  | n/a    |                |
| BCDL                    | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      |          |       |        |      |        |                |
| Weight: 221 lb FT = 20% |       |                 |                 |          |      |          |       |        |      |        |                |

#### LUMBER

|           |                                         |
|-----------|-----------------------------------------|
| TOP CHORD | 2x4 SP No.2                             |
| BOT CHORD | 2x4 SP No.2                             |
| WEBS      | 2x4 SP No.2 *Except* 1-37:2x3 SPF No.2  |
| OTHERS    | 2x3 SPF No.2 *Except* 39-1:2x6 SPF No.2 |
| SLIDER    | Right 2x4 SP No.2 -- 1-7-2              |

#### 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                                                                        |

#### REACTIONS (size)

|            |                                                                                                                                                                                                                                                        |
|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (size)     | 19=33-7-10, 21=33-7-10,<br>22=33-7-10, 23=33-7-10,<br>24=33-7-10, 25=33-7-10,<br>26=33-7-10, 27=33-7-10,<br>29=33-7-10, 30=33-7-10,<br>31=33-7-10, 32=33-7-10,<br>34=33-7-10, 35=33-7-10,<br>36=33-7-10, 37=33-7-10,<br>38=33-7-10, 40=0-3-2           |
| Max Horiz  | 40=359 (LC 13)                                                                                                                                                                                                                                         |
| Max Uplift | 19=66 (LC 13), 21=75 (LC 13),<br>22=49 (LC 13), 23=56 (LC 13),<br>24=54 (LC 13), 25=54 (LC 13),<br>26=54 (LC 13), 27=54 (LC 13),<br>29=54 (LC 13), 30=55 (LC 13),<br>31=53 (LC 13), 32=67 (LC 13),<br>34=25 (LC 13), 36=42 (LC 12),<br>40=2136 (LC 13) |

#### FORCES

|           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TOP CHORD | Max Grav 19=188 (LC 26), 21=255 (LC 1), 22=156 (LC 26), 23=186 (LC 1), 24=179 (LC 26), 25=180 (LC 1), 26=180 (LC 26), 27=180 (LC 1), 29=180 (LC 1), 30=180 (LC 26), 31=180 (LC 1), 32=180 (LC 26), 34=188 (LC 26), 35=344 (LC 13), 36=183 (LC 25), 37=577 (LC 13), 38=1354 (LC 13), 40=26 (LC 1)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| BOT CHORD | (lb) - Maximum Compression/Maximum Tension<br>38-39=-1338/662, 1-39=-1338/662, 1-2=-282/569, 2-3=-271/586, 3-4=-290/647, 4-5=-289/646, 5-6=-279/615, 6-7=-262/567, 7-8=-247/524, 8-9=-232/480, 9-10=-216/437, 10-11=-201/393, 11-13=-186/350, 13-14=-171/306, 14-15=-156/263, 15-16=-140/219, 16-17=-128/178, 17-19=-112/127, 19-20=0/0<br>37-38=-94/204, 36-37=-60/75, 35-36=-60/75, 34-35=-60/75, 32-34=-60/75, 31-32=-60/75, 30-31=-60/75, 29-30=-60/75, 27-29=-60/75, 26-27=-60/75, 25-26=-60/75, 24-25=-60/75, 23-24=-60/75, 22-23=-60/75, 21-22=-60/75, 19-21=-60/75<br>4-35=-387/132, 3-36=-145/133, 2-37=-182/27, 5-34=-148/59, 6-32=-140/104, 7-31=-140/87, 8-30=-140/89, 9-29=-140/89, 10-27=-140/89, 11-26=-140/89, 13-25=-140/89, 14-24=-139/89, 15-23=-143/91, 16-22=-125/83, 17-21=-192/189, 1-37=-606/266, 1-40=-1118/2253 |
| WEBS      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

#### 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 Corner(3E) 0-7-4 to 5-7-4, Exterior(2N) 5-7-4 to 6-11-2, Corner(3R) 6-11-2 to 11-11-2, Exterior(2N) 11-11-2 to 34-9-10 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
- 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 MT20 plates unless otherwise indicated.
- 5) All plates are 1.5x4 MT20 unless otherwise indicated.
- 6) Gable studs spaced at 2-0-0 oc.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) Bearings are assumed to be: Joint 40 SPF No.2 crushing capacity of 425 psi, Joint 19 SP No.2 crushing capacity of 565 psi.



July 31, 2024

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](http://www.tpinst.org)) and **BCSI Building Component Safety Information** available from the Structural Building Component Association ([www.sbcscomponents.com](http://www.sbcscomponents.com))

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|            |       |                        |     |     |                          |
|------------|-------|------------------------|-----|-----|--------------------------|
| Job        | Truss | Truss Type             | Qty | Ply | Roof - HR Lot 75         |
| P240851-01 | D7    | Common Supported Gable | 1   | 1   | Job Reference (optional) |

RELEASE FOR CONSTRUCTION

AS NOTED FOR PLAN REVIEW

DEVELOPMENT SERVICES

167189976

LEE'S SUMMIT, MISSOURI

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Mon Jul 29 17:04:11 Page: 2

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08/08/2024

- 9) Bearing at joint(s) 40 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 42 lb uplift at joint 36, 25 lb uplift at joint 34, 67 lb uplift at joint 32, 53 lb uplift at joint 31, 55 lb uplift at joint 30, 54 lb uplift at joint 29, 54 lb uplift at joint 27, 54 lb uplift at joint 26, 54 lb uplift at joint 25, 54 lb uplift at joint 24, 56 lb uplift at joint 23, 49 lb uplift at joint 22, 75 lb uplift at joint 21, 66 lb uplift at joint 19 and 2136 lb uplift at joint 40.
- 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

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

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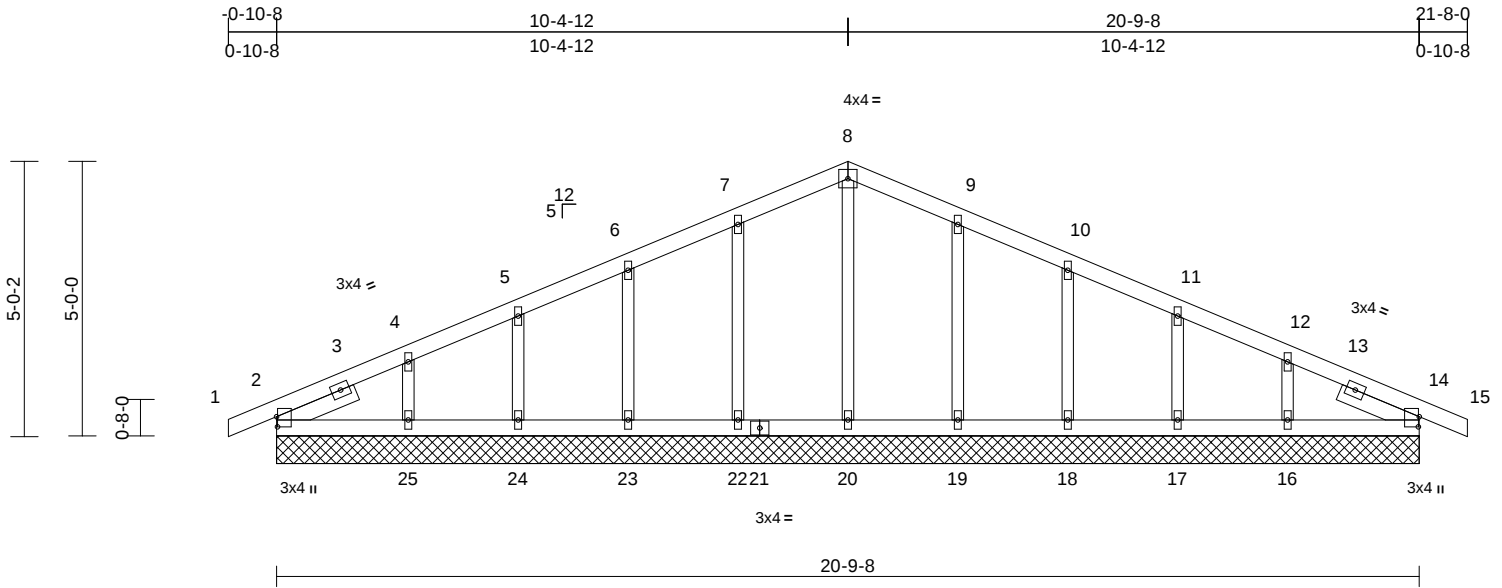
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|            |       |                        |     |     |                          |                                                                                         |
|------------|-------|------------------------|-----|-----|--------------------------|-----------------------------------------------------------------------------------------|
| Job        | Truss | Truss Type             | Qty | Ply | Roof - HR Lot 75         | RELEASE FOR CONSTRUCTION                                                                |
| P240851-01 | E1    | Common Supported Gable | 1   | 1   | Job Reference (optional) | AS NOTED FOR PLAN REVIEW<br>DEVELOPMENT SERVICES<br>167189977<br>LEE'S SUMMIT, MISSOURI |

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Mon Jul 29 17:04:31  
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08/08/2024



Scale = 1:41.9

Plate Offsets (X, Y): [2:0-2-3,0-0-3], [14:0-2-3,0-0-3]

| 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       | 0.06 | Vert(LL) | n/a   | -      | n/a | 999           | MT20     |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.04 | Vert(CT) | n/a   | -      | n/a | 999           | 197/144  |
| BCLL        | 0.0   | Rep Stress Incr | YES             | WB       | 0.06 | Horz(CT) | 0.00  | 14     | n/a | n/a           |          |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      |          |       |        |     |               |          |
|             |       |                 |                 |          |      |          |       |        |     | Weight: 91 lb | FT = 20% |

**LUMBER**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
OTHERS 2x3 SPF No.2  
SLIDER Left 2x4 SP No.2 -- 1-6-7, Right 2x4 SP No.2 -- 1-6-7

**WEBS**  
8-20=-109/0, 7-22=-150/91, 6-23=-139/93,  
5-24=-138/108, 4-25=-154/172,  
9-19=-150/90, 10-18=-139/93,  
11-17=-138/109, 12-16=-154/168

**LOAD CASE(S)** Standard

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

**REACTIONS** (size)  
2=20-9-8, 14=20-9-8, 16=20-9-8,  
17=20-9-8, 18=20-9-8, 19=20-9-8,  
20=20-9-8, 22=20-9-8, 23=20-9-8,  
24=20-9-8, 25=20-9-8  
Max Horiz 2=89 (LC 12)  
Max Uplift 2=-26 (LC 13), 14=-28 (LC 9),  
16=-75 (LC 13), 17=-51 (LC 13),  
18=-56 (LC 13), 19=-56 (LC 13),  
22=-57 (LC 12), 23=-56 (LC 12),  
24=-49 (LC 12), 25=-82 (LC 12)  
Max Grav 2=178 (LC 1), 14=178 (LC 1),  
16=205 (LC 26), 17=175 (LC 1),  
18=180 (LC 1), 19=190 (LC 26),  
20=149 (LC 22), 22=190 (LC 25),  
23=180 (LC 1), 24=175 (LC 1),  
25=205 (LC 25)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/0, 2-4=-116/53, 4-5=-70/69,  
5-6=-52/95, 6-7=-57/140, 7-8=-73/184,  
8-9=-73/184, 9-10=-57/140, 10-11=-52/96,  
11-12=-53/45, 12-14=-86/15, 14-15=0/0  
2-25=-15/88, 24-25=-15/88, 23-24=-15/88,  
22-23=-15/88, 20-22=-15/88, 19-20=-15/88,  
18-19=-15/88, 17-18=-15/88, 16-17=-15/88,  
14-16=-15/88

- 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) 0-10-8 to 4-4-12, Exterior(2N) 4-4-12 to 10-4-12, Corner(3R) 10-4-12 to 15-4-12, Exterior(2N) 15-4-12 to 21-8-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - All plates are 1.5x4 MT20 unless otherwise indicated.
  - Gable requires continuous bottom chord bearing.
  - Gable studs spaced at 2-0-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 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 26 lb uplift at joint 2, 57 lb uplift at joint 22, 56 lb uplift at joint 23, 49 lb uplift at joint 24, 82 lb uplift at joint 25, 56 lb uplift at joint 19, 56 lb uplift at joint 18, 51 lb uplift at joint 17, 75 lb uplift at joint 16 and 28 lb uplift at joint 14.
  - Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 14.
  - 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.



July 31, 2024

**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](http://www.tpinst.org)) and **BCSI Building Component Safety Information** available from the Structural Building Component Association ([www.sbcscomponents.com](http://www.sbcscomponents.com))

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|            |       |            |     |     |                          |
|------------|-------|------------|-----|-----|--------------------------|
| Job        | Truss | Truss Type | Qty | Ply | Roof - HR Lot 75         |
| P240851-01 | E2    | Common     | 4   | 1   | Job Reference (optional) |

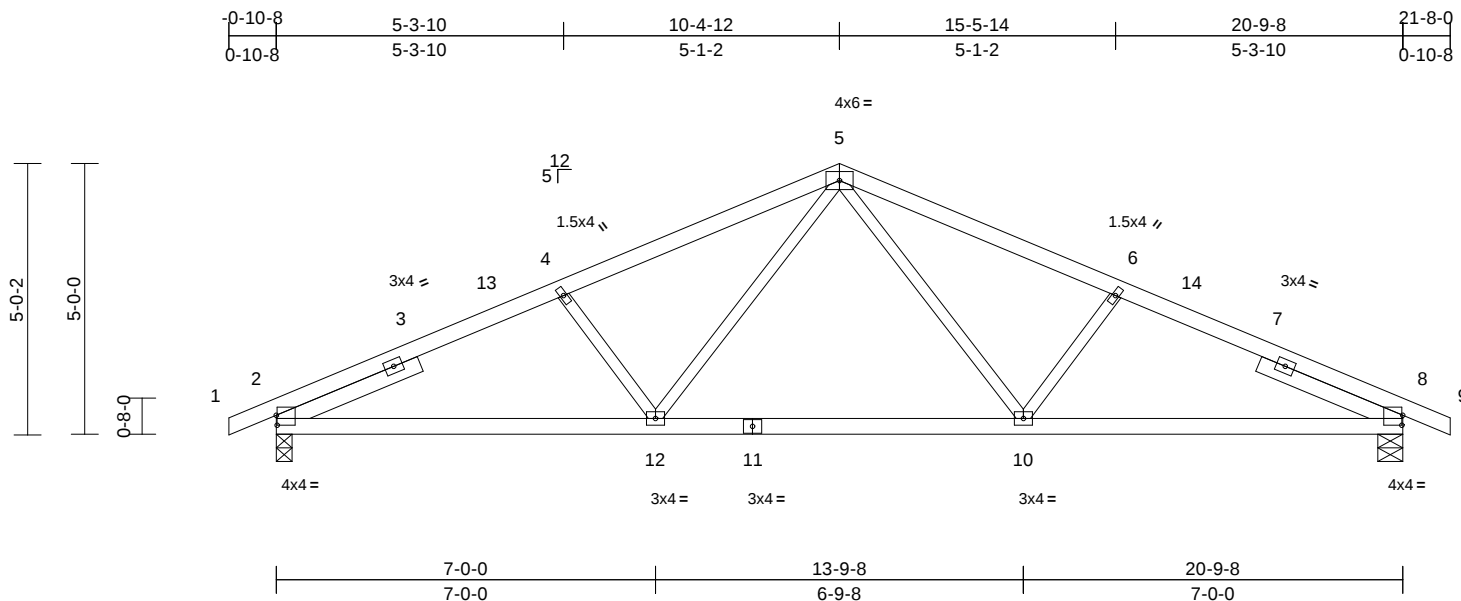
AS NOTED FOR PLAN REVIEW  
DEVELOPMENT SERVICES  
167189978  
LEE'S SUMMIT, MISSOURI

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

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Page: 1

08/08/2024



Scale = 1:42.5

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

| 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) | -0.07 | 10-12  | >999 | 240    | MT20          | 197/144  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.54 | Vert(CT) | -0.14 | 2-12   | >999 | 180    |               |          |
| BCLL        | 0.0   | Rep Stress Incr | YES             | WB       | 0.16 | Horz(CT) | 0.04  | 8      | n/a  | n/a    |               |          |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      |          |       |        |      |        | Weight: 90 lb | FT = 20% |

**LUMBER**

|           |                                                         |
|-----------|---------------------------------------------------------|
| TOP CHORD | 2x4 SP No.2                                             |
| BOT CHORD | 2x4 SP No.2                                             |
| WEBS      | 2x3 SPF No.2                                            |
| SLIDER    | Left 2x4 SP No.2 -- 2-10-1, Right 2x4 SP No.2 -- 2-10-1 |

**BRACING**

|           |                                                                  |
|-----------|------------------------------------------------------------------|
| TOP CHORD | Structural wood sheathing directly applied or 4-0-14 oc purlins. |
| BOT CHORD | Rigid ceiling directly applied or 10-0-0 oc bracing.             |

**REACTIONS** (size) 2=0-3-8, 8=0-5-8

|            |                                |
|------------|--------------------------------|
| Max Horiz  | 2=89 (LC 16)                   |
| Max Uplift | 2=-168 (LC 12), 8=-168 (LC 13) |
| Max Grav   | 2=997 (LC 1), 8=997 (LC 1)     |

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

|           |                                                                              |
|-----------|------------------------------------------------------------------------------|
| TOP CHORD | 1-2=0/0, 2-4=-1679/408, 4-5=-1482/390, 5-6=-1482/390, 6-8=-1679/408, 8-9=0/0 |
| BOT CHORD | 2-12=-311/1458, 10-12=-147/1044, 8-10=-302/1458                              |
| WEBS      | 5-10=-96/477, 6-10=-299/201, 5-12=-96/477, 4-12=-299/200                     |

**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) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 10-4-12, Exterior(2R) 10-4-12 to 15-6-15, Interior (1) 15-6-15 to 21-8-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- One H2.5T Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 8. This connection is for uplift only and does not consider lateral forces.
- 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

July 31, 2024

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

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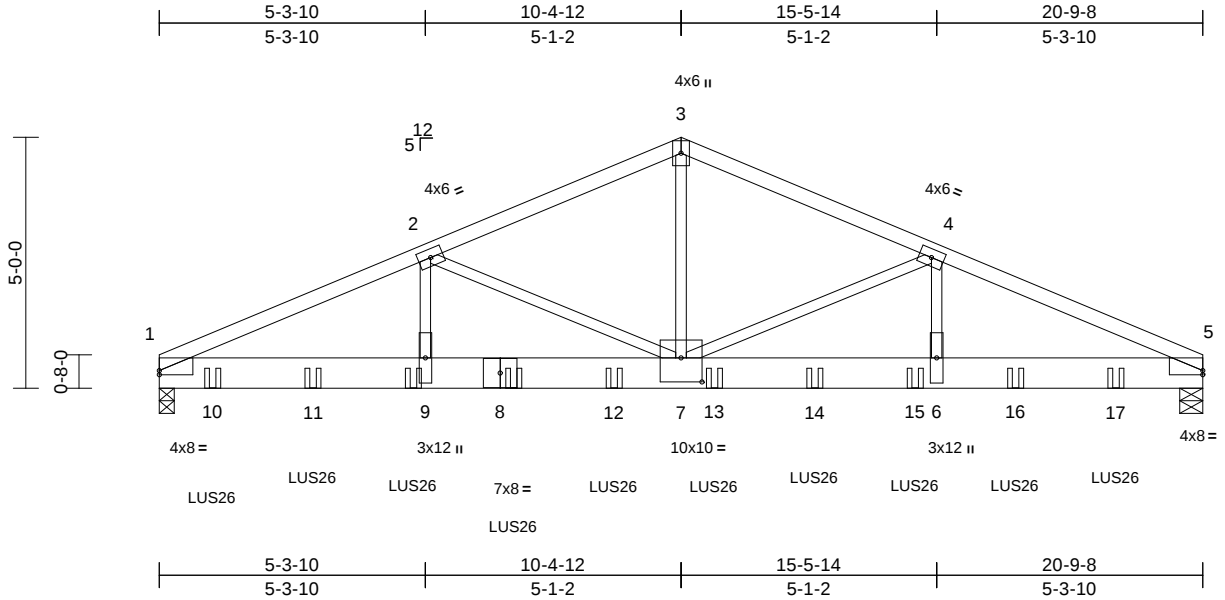
|            |       |               |     |     |                          |                          |
|------------|-------|---------------|-----|-----|--------------------------|--------------------------|
| Job        | Truss | Truss Type    | Qty | Ply | Roof - HR Lot 75         | RELEASE FOR CONSTRUCTION |
| P240851-01 | E3    | Common Girder | 1   | 2   | Job Reference (optional) | AS NOTED FOR PLAN REVIEW |
|            |       |               |     |     |                          | DEVELOPMENT SERVICES     |
|            |       |               |     |     |                          | 167189979                |
|            |       |               |     |     |                          | LEE'S SUMMIT, MISSOURI   |

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

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08/08/2024



|                                                                        |       |                 |                 |            |      |             |       |       |        |
|------------------------------------------------------------------------|-------|-----------------|-----------------|------------|------|-------------|-------|-------|--------|
| Scale = 1:45.9                                                         |       |                 |                 |            |      |             |       |       |        |
| Plate Offsets (X, Y): [1:Edge,0-1-0], [5:Edge,0-1-0], [7:0-5-0,0-5-12] |       |                 |                 |            |      |             |       |       |        |
| <b>Loading</b>                                                         | (psf) | <b>Spacing</b>  | 2-0-0           | <b>CSI</b> |      | <b>DEFL</b> | in    | (loc) | l/defl |
| TCLL (roof)                                                            | 25.0  | Plate Grip DOL  | 1.15            | TC         | 0.72 | Vert(LL)    | -0.14 | 6-7   | >999   |
| TCDL                                                                   | 10.0  | Lumber DOL      | 1.15            | BC         | 0.94 | Vert(CT)    | -0.24 | 7-9   | >999   |
| BCLL                                                                   | 0.0   | Rep Stress Incr | NO              | WB         | 0.69 | Horz(CT)    | 0.06  | 5     | n/a    |
| BCDL                                                                   | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S   |      |             |       |       |        |
| <b>PLATES</b> MT20 <b>GRIP</b> 197/144                                 |       |                 |                 |            |      |             |       |       |        |
| Weight: 196 lb FT = 20%                                                |       |                 |                 |            |      |             |       |       |        |

**LUMBER**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x8 SPF No.2  
WEBS 2x3 SPF No.2

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 3-7-7 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 1=0-3-9, 5=0-5-8  
Max Horiz 1=-86 (LC 34)  
Max Uplift 1=-744 (LC 12), 5=-758 (LC 13)  
Max Grav 1=4518 (LC 1), 5=4258 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-8116/1509, 2-3=-5745/1154, 3-4=-5745/1153, 4-5=-7917/1531  
BOT CHORD 1-9=-1317/7300, 7-9=-1317/7300, 6-7=-1327/7100, 5-6=-1327/7100  
WEBS 2-9=-220/1856, 2-7=-2323/472, 3-7=-723/4012, 4-7=-2104/492, 4-6=-246/1724

#### NOTES

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.  
Bottom chords connected as follows: 2x8 - 2 rows staggered at 0-8-0 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) 0-1-13 to 5-3-10,  
Interior (1) 5-3-10 to 10-4-12, Exterior(2R) 10-4-12 to  
15-5-14, Interior (1) 15-5-14 to 20-6-12 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
  - 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 SPF No.2 crushing  
capacity of 425 psi.
  - Provide mechanical connection (by others) of truss to  
bearing plate capable of withstanding 744 lb uplift at  
joint 1 and 758 lb uplift at joint 5.
  - This truss is designed in accordance with the 2018  
International Residential Code sections R502.11.1 and  
R802.10.2 and referenced standard ANSI/TPI 1.
  - Use Simpson Strong-Tie LUS26 (4-10d Girder, 4-10d  
Truss, Single Ply Girder) or equivalent spaced at 2-0-0  
oc max. starting at 1-0-12 from the left end to 19-0-12 to  
connect truss(es) to front face of bottom chord.
  - Fill all nail holes where hanger is in contact with lumber.
- LOAD CASE(S)** Standard
- Dead + Roof Live (balanced): Lumber Increase=1.15,  
Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 1-3=-70, 3-5=-70, 1-5=-20  
Concentrated Loads (lb)  
Vert: 8=-712 (F), 9=-712 (F), 10=-702 (F), 11=-712  
(F), 12=-683 (F), 13=-683 (F), 14=-683 (F), 15=-683  
(F), 16=-683 (F), 17=-683 (F)



July 31, 2024

**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](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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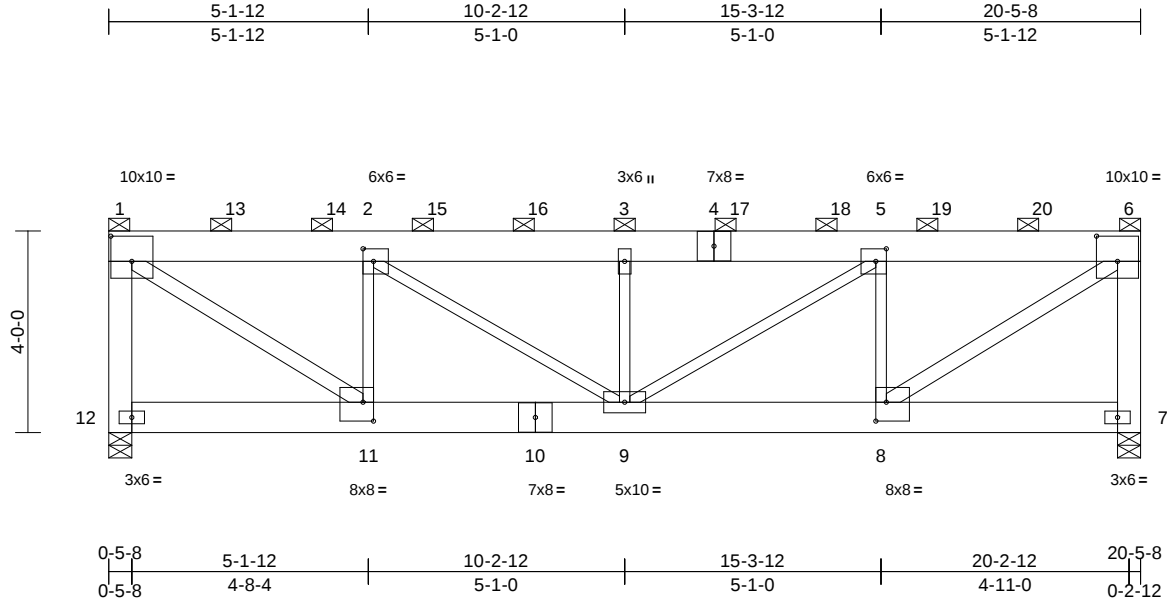
|            |       |             |     |     |                          |                          |
|------------|-------|-------------|-----|-----|--------------------------|--------------------------|
| Job        | Truss | Truss Type  | Qty | Ply | Roof - HR Lot 75         | RELEASE FOR CONSTRUCTION |
| P240851-01 | GR1   | Flat Girder | 1   | 2   | Job Reference (optional) | AS NOTED FOR PLAN REVIEW |
|            |       |             |     |     |                          | DEVELOPMENT SERVICES     |
|            |       |             |     |     |                          | 167189980                |
|            |       |             |     |     |                          | LEE'S SUMMIT, MISSOURI   |

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

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08/08/2024



|                                                                                                                             |       |                 |                 |          |      |          |       |       |        |
|-----------------------------------------------------------------------------------------------------------------------------|-------|-----------------|-----------------|----------|------|----------|-------|-------|--------|
| Scale = 1:45.7                                                                                                              |       |                 |                 |          |      |          |       |       |        |
| Plate Offsets (X, Y): [1:0-5-0,0-6-0], [2:0-2-8,0-3-0], [5:0-2-8,0-3-0], [6:0-5-0,0-6-0], [8:0-2-8,0-4-8], [11:0-2-8,0-4-8] |       |                 |                 |          |      |          |       |       |        |
| Loading                                                                                                                     | (psf) | Spacing         | 2-0-0           | CSI      |      | DEFL     | in    | (loc) | l/defl |
| TCLL (roof)                                                                                                                 | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.61 | Vert(LL) | -0.14 | 8-9   | >999   |
| TCDL                                                                                                                        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.85 | Vert(CT) | -0.25 | 8-9   | >943   |
| BCLL                                                                                                                        | 0.0   | Rep Stress Incr | NO              | WB       | 0.80 | Horz(CT) | 0.03  | 7     | n/a    |
| BCDL                                                                                                                        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      |          |       |       |        |
| Weight: 277 lb FT = 20%                                                                                                     |       |                 |                 |          |      |          |       |       |        |
| PLATES GRIP                                                                                                                 |       |                 |                 |          |      |          |       |       |        |
| MT20 197/144                                                                                                                |       |                 |                 |          |      |          |       |       |        |

**LUMBER**  
TOP CHORD 2x8 SPF No.2  
BOT CHORD 2x8 SPF No.2  
WEBS 2x3 SPF No.2 \*Except\* 12-1,6-7:2x6 SPF No.2, 6-8,11-1:2x4 SP 1650F 1.5E

**BRACING**  
TOP CHORD 2-0-0 oc purlins (4-7-7 max.): 1-6, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 7=0-5-8, 12=0-5-8  
Max Horiz 12=-139 (LC 8)  
Max Uplift 7=-3223 (LC 9), 12=-925 (LC 8)  
Max Grav 7=7021 (LC 1), 12=6334 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-12=-6212/1097, 1-2=-7367/1354, 2-3=-10579/1890, 3-5=-10579/1890, 5-6=-8400/1523, 6-7=-6851/3384  
BOT CHORD 11-12=-204/238, 9-11=-1451/7367, 8-9=-1556/8400, 7-8=-102/279  
WEBS 6-8=-1768/9870, 2-11=-4823/968, 1-11=-1591/8732, 2-9=-716/3863, 3-9=-3696/734, 5-9=-518/2620, 5-8=-5548/1093

**NOTES**  
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x8 - 2 rows staggered at 0-9-0 oc.  
Bottom chords connected as follows: 2x8 - 2 rows staggered at 0-9-0 oc.  
Web connected as follows: 2x4 - 1 row at 0-9-0 oc, 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.
- 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 (3) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
- Bearing at joint(s) 12, 7 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 925 lb uplift at joint 12 and 3223 lb uplift at joint 7.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 746 lb down and 74 lb up at 0-2-12, 721 lb down and 67 lb up at 2-6-4, 721 lb down and 67 lb up at 4-6-4, 921 lb down and 167 lb up at 6-6-4, 1408 lb down and 206 lb up at 8-6-4, 1408 lb down and 206 lb up at 10-6-4, 1408 lb down and 206 lb up at 12-6-4, 1408 lb down and 206 lb up at 14-6-4, 1408 lb down and 206 lb up at 16-6-4, and 1408 lb down and 206 lb up at 18-6-4, and 6 lb down and 2123 lb up at 20-2-12 on top chord. The design/selection of such connection device(s) is the responsibility of others.

- LOAD CASE(S)** Standard
- Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 1-6=-70, 7-12=-20  
Concentrated Loads (lb)  
Vert: 1=-746, 6=-2, 3=-1408, 13=-721, 14=-721, 15=-921, 16=-1408, 17=-1408, 18=-1408, 19=-1408, 20=-1408



July 31,2024

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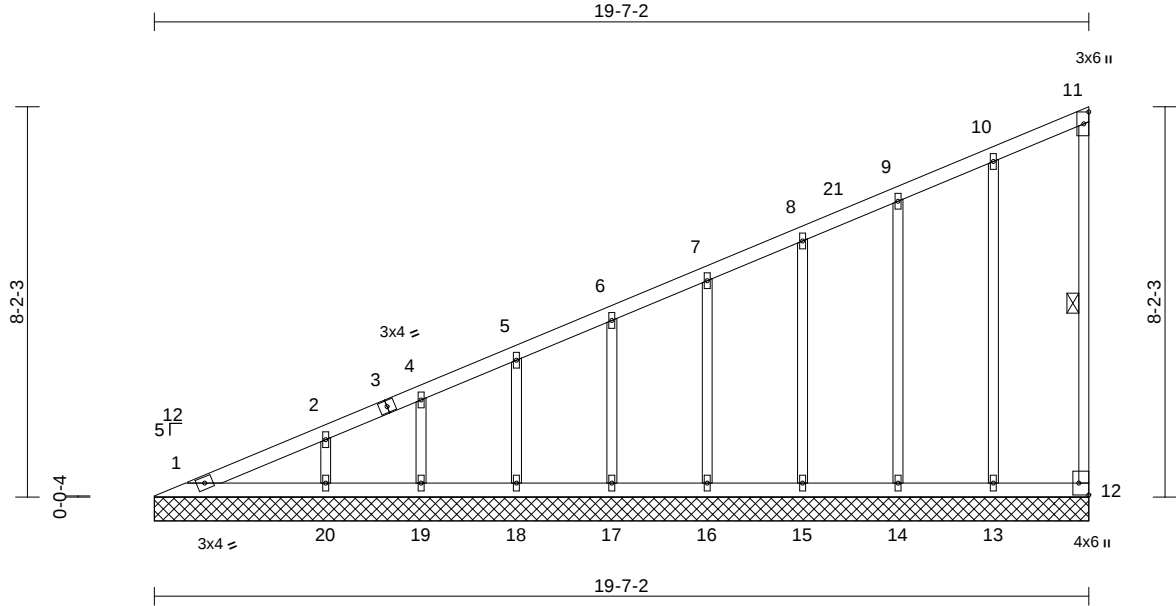
|            |       |            |     |     |                          |                          |
|------------|-------|------------|-----|-----|--------------------------|--------------------------|
| Job        | Truss | Truss Type | Qty | Ply | Roof - HR Lot 75         | RELEASE FOR CONSTRUCTION |
| P240851-01 | V1    | Valley     | 1   | 1   | Job Reference (optional) | AS NOTED FOR PLAN REVIEW |
|            |       |            |     |     |                          | DEVELOPMENT SERVICES     |
|            |       |            |     |     |                          | 167189981                |
|            |       |            |     |     |                          | LEE'S SUMMIT, MISSOURI   |

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

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Scale = 1:48.3

| Plate Offsets (X, Y): [12:Edge,0-2-8] |  |       |                 |  |                 |          |  |      |           |    |       |        |     |        |               |          |
|---------------------------------------|--|-------|-----------------|--|-----------------|----------|--|------|-----------|----|-------|--------|-----|--------|---------------|----------|
| Loading                               |  | (psf) | Spacing         |  | 2-0-0           | CSI      |  | DEFL |           | in | (loc) | l/defl | L/d | PLATES | GRIP          |          |
| TCLL (roof)                           |  | 25.0  | Plate Grip DOL  |  | 1.15            | TC       |  | 0.78 | Vert(LL)  |    | n/a   | -      | n/a | 999    | MT20          | 244/190  |
| TCDL                                  |  | 10.0  | Lumber DOL      |  | 1.15            | BC       |  | 0.25 | Vert(TL)  |    | n/a   | -      | n/a | 999    |               |          |
| BCLL                                  |  | 0.0   | Rep Stress Incr |  | YES             | WB       |  | 0.19 | Horiz(TL) |    | 0.00  | 12     | n/a | n/a    |               |          |
| BCDL                                  |  | 10.0  | Code            |  | IRC2018/TPI2014 | Matrix-S |  |      |           |    |       |        |     |        | Weight: 91 lb | FT = 20% |

|                  |                                                                                                                                               |                                                                                                                                                     |                                                                                                                   |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>LUMBER</b>    |                                                                                                                                               | <b>WEBS</b>                                                                                                                                         | 10-13=-156/154, 9-14=-140/92, 8-15=-140/77, 7-16=-140/79, 6-17=-139/78, 5-18=-145/81, 4-19=-119/68, 2-20=-201/120 |
| TOP CHORD        | 2x4 SP No.2                                                                                                                                   |                                                                                                                                                     |                                                                                                                   |
| BOT CHORD        | 2x4 SP No.2                                                                                                                                   |                                                                                                                                                     |                                                                                                                   |
| WEBS             | 2x3 SPF No.2                                                                                                                                  |                                                                                                                                                     |                                                                                                                   |
| OTHERS           | 2x3 SPF No.2                                                                                                                                  |                                                                                                                                                     |                                                                                                                   |
| <b>BRACING</b>   |                                                                                                                                               |                                                                                                                                                     |                                                                                                                   |
| 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                                                                                                                                | 11-12                                                                                                                                               |                                                                                                                   |
| <b>REACTIONS</b> | (size)                                                                                                                                        |                                                                                                                                                     |                                                                                                                   |
|                  | 1=19-7-2, 12=19-7-2, 13=19-7-2, 14=19-7-2, 15=19-7-2, 16=19-7-2, 17=19-7-2, 18=19-7-2, 19=19-7-2, 20=19-7-2                                   |                                                                                                                                                     |                                                                                                                   |
|                  | Max Horiz                                                                                                                                     | 1=366 (LC 9)                                                                                                                                        |                                                                                                                   |
|                  | Max Uplift                                                                                                                                    | 12=-40 (LC 9), 13=-62 (LC 12), 14=-50 (LC 12), 15=-57 (LC 12), 16=-54 (LC 12), 17=-54 (LC 12), 18=-56 (LC 12), 19=-45 (LC 12), 20=-82 (LC 12)       |                                                                                                                   |
|                  | Max Grav                                                                                                                                      | 1=152 (LC 20), 12=70 (LC 1), 13=192 (LC 1), 14=179 (LC 1), 15=180 (LC 1), 16=180 (LC 1), 17=178 (LC 1), 18=187 (LC 1), 19=149 (LC 1), 20=268 (LC 1) |                                                                                                                   |
| <b>FORCES</b>    | (lb) - Maximum Compression/Maximum Tension                                                                                                    |                                                                                                                                                     |                                                                                                                   |
| TOP CHORD        | 1-2=-460/274, 2-4=-406/244, 4-5=-372/234, 5-6=-334/218, 6-7=-296/203, 7-8=-258/188, 8-9=-219/172, 9-10=-182/162, 10-11=-139/137, 11-12=-54/46 |                                                                                                                                                     |                                                                                                                   |
| BOT CHORD        | 1-20=-154/168, 19-20=-154/168, 18-19=-154/168, 17-18=-154/168, 16-17=-154/168, 15-16=-154/168, 14-15=-154/168, 13-14=-154/168, 12-13=-154/168 |                                                                                                                                                     |                                                                                                                   |

- 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) 0-9-1 to 5-7-11, Interior (1) 5-7-11 to 19-6-7 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 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) All plates are 1.5x4 MT20 unless otherwise indicated.
  - 4) Gable requires continuous bottom chord bearing.
  - 5) Gable studs spaced at 2-0-0 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 40 lb uplift at joint 12, 62 lb uplift at joint 13, 50 lb uplift at joint 14, 57 lb uplift at joint 15, 54 lb uplift at joint 16, 54 lb uplift at joint 17, 56 lb uplift at joint 18, 45 lb uplift at joint 19 and 82 lb uplift at joint 20.
  - 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



July 31,2024

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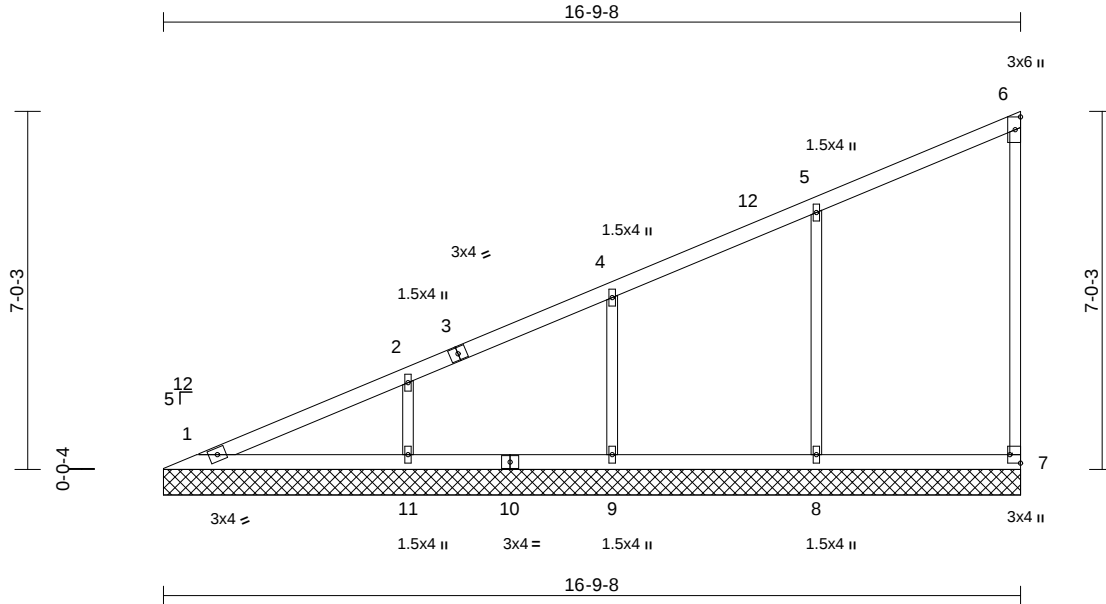
|            |       |            |     |     |                          |                          |
|------------|-------|------------|-----|-----|--------------------------|--------------------------|
| Job        | Truss | Truss Type | Qty | Ply | Roof - HR Lot 75         | RELEASE FOR CONSTRUCTION |
| P240851-01 | V2    | Valley     | 1   | 1   | Job Reference (optional) | AS NOTED FOR PLAN REVIEW |
|            |       |            |     |     |                          | DEVELOPMENT SERVICES     |
|            |       |            |     |     |                          | 167189982                |
|            |       |            |     |     |                          | LEE'S SUMMIT, MISSOURI   |

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Scale = 1:45.1

| Plate Offsets (X, Y): [7:Edge,0-2-8] |  |       |                 |  |                 |          |  |      |           |    |       |        |     |        |               |          |
|--------------------------------------|--|-------|-----------------|--|-----------------|----------|--|------|-----------|----|-------|--------|-----|--------|---------------|----------|
| Loading                              |  | (psf) | Spacing         |  | 2-0-0           | CSI      |  | DEFL |           | in | (loc) | l/defl | L/d | PLATES | GRIP          |          |
| TCLL (roof)                          |  | 25.0  | Plate Grip DOL  |  | 1.15            | TC       |  | 0.59 | Vert(LL)  |    | n/a   | -      | n/a | 999    | MT20          | 244/190  |
| TCDL                                 |  | 10.0  | Lumber DOL      |  | 1.15            | BC       |  | 0.20 | Vert(TL)  |    | n/a   | -      | n/a | 999    |               |          |
| BCLL                                 |  | 0.0   | Rep Stress Incr |  | YES             | WB       |  | 0.20 | Horiz(TL) |    | 0.00  | 7      | n/a | n/a    |               |          |
| BCDL                                 |  | 10.0  | Code            |  | IRC2018/TPI2014 | Matrix-S |  |      |           |    |       |        |     |        | Weight: 64 lb | FT = 20% |

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

**REACTIONS** (size) 1=16-9-8, 7=16-9-8, 8=16-9-8, 9=16-9-8, 11=16-9-8  
Max Horiz 1=312 (LC 9)  
Max Uplift 7=-41 (LC 9), 8=-120 (LC 12), 9=-102 (LC 12), 11=-126 (LC 12)  
Max Grav 1=169 (LC 20), 7=141 (LC 1), 8=399 (LC 1), 9=337 (LC 1), 11=416 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-406/240, 2-4=-317/200, 4-5=-242/175, 5-6=-141/124, 6-7=-109/93  
BOT CHORD 1-11=-133/145, 9-11=-133/145, 8-9=-133/145, 7-8=-133/145  
WEBS 5-8=-310/224, 4-9=-264/161, 2-11=-315/198

**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) 0-9-1 to 5-9-1, Interior (1) 5-9-1 to 16-8-14 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60  
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.

- 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 41 lb uplift at joint 7, 120 lb uplift at joint 8, 102 lb uplift at joint 9 and 126 lb uplift at joint 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



July 31, 2024

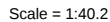
**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

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](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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314.434.1200 / MiTek-US.com

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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         | 0.41 | Vert(LL)    | n/a  | -     | n/a    | 999 | MT20          | 244/190     |
| TCDL           | 10.0  | Lumber DOL      | 1.15            | BC         | 0.22 | Vert(TL)    | n/a  | -     | n/a    | 999 |               |             |
| BCLL           | 0.0   | Rep Stress Incr | YES             | WB         | 0.11 | Horiz(TL)   | 0.00 | 5     | n/a    | n/a |               |             |
| BCDL           | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S   |      |             |      |       |        |     | Weight: 51 lb | FT = 20%    |

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

|           |                                                                                       |
|-----------|---------------------------------------------------------------------------------------|
| 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.                                  |

6=13-11-15, 7=13-11-15  
 Max Horiz 1=257 (LC 9)  
 Max Uplift 5=-37 (LC 9), 6=-105 (LC 12),  
 7=-149 (LC 12)  
 Max Grav 1=195 (LC 1), 5=150 (LC 1), 6=349  
 (LC 1), 7=492 (LC 1)

|           |                                                           |
|-----------|-----------------------------------------------------------|
|           | Tension                                                   |
| TOP CHORD | 1-2=-342/211, 2-3=-231/156, 3-4=-129/111,<br>4-5=-115/105 |
| BOT CHORD | 1-7=-110/121, 6-7=-110/121, 5-6=-110/121                  |
| WEBS      | 3-6=-276/218, 2-7=-370/260                                |

- 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) 0-9-1 to 6-0-8,  
Interior (1) 6-0-8 to 13-11-4 zone; cantilever left and right  
exposed ; end vertical left and right exposed; C-C for  
members and forces & MWFRS for reactions shown;  
Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss  
only. For studs exposed to wind (normal to the face),  
see Standard Industry Gable End Details as applicable,  
or consult qualified building designer as per ANSI/TPI 1.
- 3) Gable requires continuous bottom chord bearing.
- 4) Gable studs spaced at 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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 37 lb uplift at joint 5, 105 lb uplift at joint 6 and 149 lb uplift at joint 7.
- 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

## LOAD CASE(S) Standard



 **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 MITER REFERENCE PAGE mtf-7475 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.sbcscomponents.com](http://www.sbcscomponents.com))

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|            |       |            |     |     |                          |
|------------|-------|------------|-----|-----|--------------------------|
| Job        | Truss | Truss Type | Qty | Ply | Roof - HR Lot 75         |
| P240851-01 | V4    | Valley     | 1   | 1   | Job Reference (optional) |

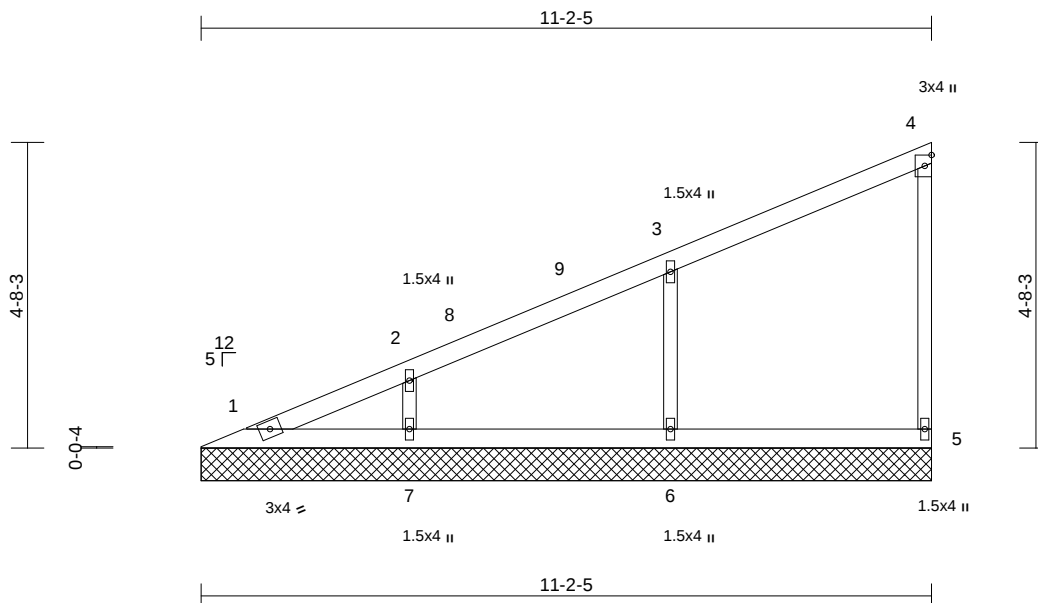
AS NOTED FOR PLAN REVIEW  
DEVELOPMENT SERVICES  
167189984  
LEE'S SUMMIT, MISSOURI

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Mon Jul 29 17:04:32 Page: 1

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08/08/2024



Scale = 1:35.3

| 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       | 0.25 | n/a       | -     | n/a    | 999 | MT20          | 244/190  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.13 | Vert(TL)  | n/a   | -      | 999 |               |          |
| BCLL        | 0.0   | Rep Stress Incr | YES             | WB       | 0.07 | Horiz(TL) | 0.00  | 5      | n/a |               |          |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      |           |       |        |     | Weight: 40 lb | FT = 20% |

**LUMBER**

|           |              |
|-----------|--------------|
| TOP CHORD | 2x4 SP No.2  |
| BOT CHORD | 2x4 SP No.2  |
| WEBS      | 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.                                  |

|                         |                                                        |
|-------------------------|--------------------------------------------------------|
| <b>REACTIONS</b> (size) | 1=11-2-5, 5=11-2-5, 6=11-2-5, 7=11-2-5                 |
| Max Horiz               | 1=203 (LC 9)                                           |
| Max Uplift              | 5=-32 (LC 9), 6=-121 (LC 12), 7=-96 (LC 12)            |
| Max Grav                | 1=97 (LC 20), 5=141 (LC 1), 6=402 (LC 1), 7=316 (LC 1) |

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

|           |                                                       |
|-----------|-------------------------------------------------------|
| TOP CHORD | 1-2=-307/179, 2-3=-236/150, 3-4=-114/93, 4-5=-108/108 |
| BOT CHORD | 1-7=-86/96, 6-7=-86/96, 5-6=-86/96                    |
| WEBS      | 3-6=-313/270, 2-7=-243/206                            |

**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) 0-9-1 to 5-9-1, Interior (1) 5-9-1 to 11-1-11 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) Gable requires continuous bottom chord bearing.
- 4) Gable studs spaced at 4-0-0 oc.

- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 32 lb uplift at joint 5, 121 lb uplift at joint 6 and 96 lb uplift at joint 7.
- 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard

July 31, 2024

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

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|            |       |            |     |     |                          |
|------------|-------|------------|-----|-----|--------------------------|
| Job        | Truss | Truss Type | Qty | Ply | Roof - HR Lot 75         |
| P240851-01 | V5    | Valley     | 1   | 1   | Job Reference (optional) |

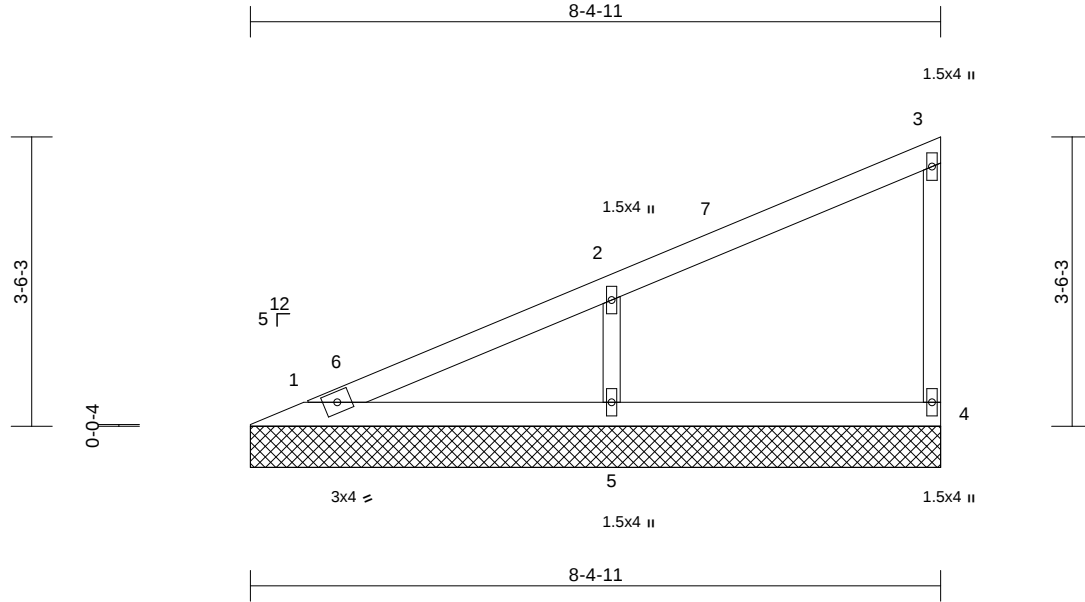
AS NOTED FOR PLAN REVIEW  
DEVELOPMENT SERVICES  
167189985  
LEE'S SUMMIT, MISSOURI

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Mon Jul 29 17:04:23 Page: 1

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08/08/2024



Scale = 1:28

| 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       | 0.27 | Vert(LL)  | n/a   | -      | n/a | 999    | MT20          | 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       | 0.08 | Horiz(TL) | 0.00  | 4      | n/a | n/a    |               |          |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-P |      |           |       |        |     |        | Weight: 28 lb | FT = 20% |

**LUMBER**

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

**REACTIONS**

(size) 1=8-4-11, 4=8-4-11, 5=8-4-11  
Max Horiz 1=148 (LC 9)  
Max Uplift 4=-27 (LC 9), 5=-129 (LC 12)  
Max Grav 1=122 (LC 1), 4=134 (LC 1), 5=426 (LC 1)

**FORCES**

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-240/145, 2-3=-105/81, 3-4=-104/117  
BOT CHORD 1-5=-65/71, 4-5=-65/71  
WEBS 2-5=-332/311

**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) 0-9-1 to 5-9-1,  
Interior (1) 5-9-1 to 8-4-1 zone; cantilever left and right  
exposed; end vertical left and right exposed; C-C for  
members and forces & MWFRS for reactions shown;  
Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss  
only. For studs exposed to wind (normal to the face),  
see Standard Industry Gable End Details as applicable,  
or consult qualified building designer as per ANSI/TPI 1.
- 3) Gable requires continuous bottom chord bearing.
- 4) Gable studs spaced at 4-0-0 oc.
- 5) This truss has been designed for a 10.0 psf bottom  
chord live load nonconcurrent with any other live loads.
- 6) All bearings are assumed to be SP No.2 crushing  
capacity of 565 psi.

- 7) Provide mechanical connection (by others) of truss to  
bearing plate capable of withstanding 27 lb uplift at joint  
4 and 129 lb uplift at joint 5.
- 8) This truss is designed in accordance with the 2018  
International Residential Code sections R502.11.1 and  
R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard

July 31, 2024

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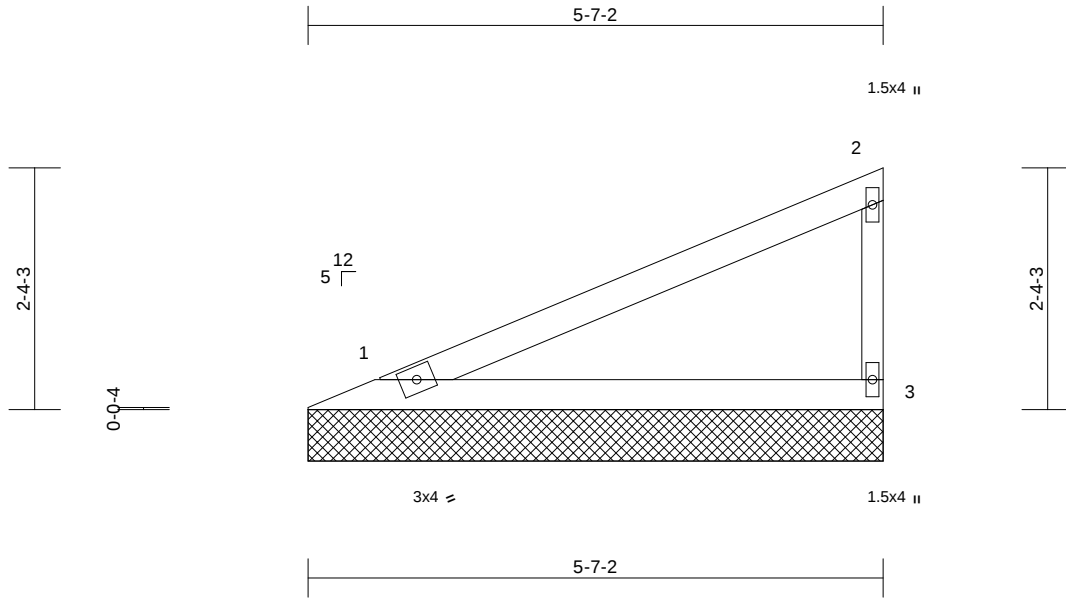
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|            |       |            |     |     |                          |                          |
|------------|-------|------------|-----|-----|--------------------------|--------------------------|
| Job        | Truss | Truss Type | Qty | Ply | Roof - HR Lot 75         | RELEASE FOR CONSTRUCTION |
| P240851-01 | V6    | Valley     | 1   | 1   | Job Reference (optional) | AS NOTED FOR PLAN REVIEW |
|            |       |            |     |     |                          | DEVELOPMENT SERVICES     |
|            |       |            |     |     |                          | 167189986                |
|            |       |            |     |     |                          | LEE'S SUMMIT, MISSOURI   |

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

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08/08/2024



Scale = 1:22.4

| 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       | 0.52 | Vert(LL)  | n/a   | -      | n/a | 999    | MT20                   |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.28 | 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: 18 lb FT = 20% |

#### LUMBER

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

8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 5-7-11 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=5-7-2, 3=5-7-2

Max Horiz 1=94 (LC 9)  
Max Uplift 1=-38 (LC 12), 3=-56 (LC 12)  
Max Grav 1=215 (LC 1), 3=215 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-121/82, 2-3=-167/194  
BOT CHORD 1-3=-41/45

#### 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 and right  
exposed;C-C for members and forces & MWFRS for  
reactions shown; Lumber DOL=1.60 plate grip  
DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss  
only. For studs exposed to wind (normal to the face),  
see Standard Industry Gable End Details as applicable,  
or consult qualified building designer as per ANSI/TPI 1.
- 3) Gable requires continuous bottom chord bearing.
- 4) Gable studs spaced at 4-0-0 oc.
- 5) This truss has been designed for a 10.0 psf bottom  
chord live load nonconcurrent with any other live loads.
- 6) All bearings are assumed to be SP No.2 crushing  
capacity of 565 psi.
- 7) Provide mechanical connection (by others) of truss to  
bearing plate capable of withstanding 38 lb uplift at joint  
1 and 56 lb uplift at joint 3.



July 31, 2024

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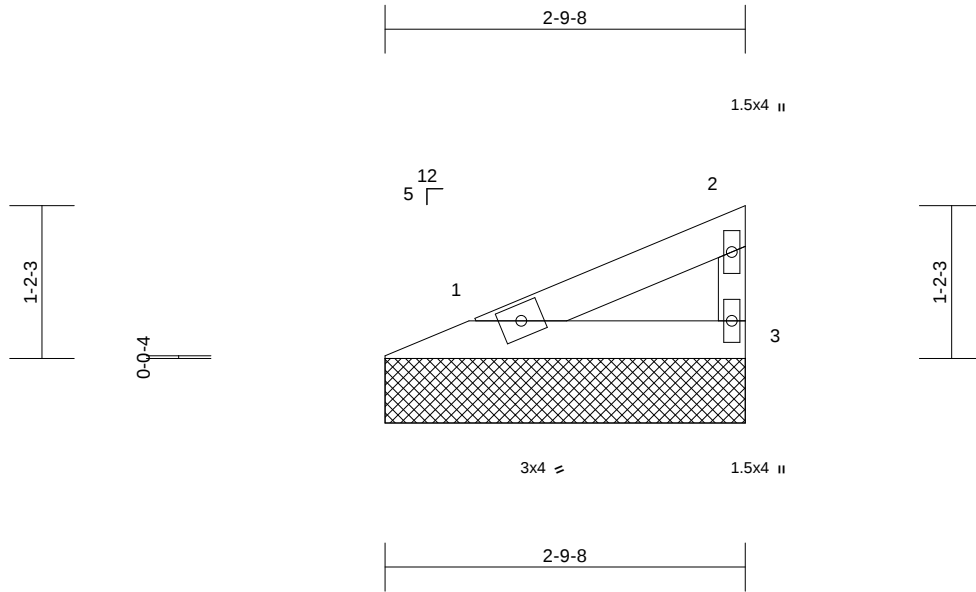
|            |       |            |     |     |                          |
|------------|-------|------------|-----|-----|--------------------------|
| Job        | Truss | Truss Type | Qty | Ply | Roof - HR Lot 75         |
| P240851-01 | V7    | Valley     | 1   | 1   | Job Reference (optional) |

RELEASE FOR CONSTRUCTION  
AS NOTED FOR PLAN REVIEW  
DEVELOPMENT SERVICES  
167189987  
LEE'S SUMMIT, MISSOURI

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Mon Jul 29 17:04:23 Page: 1  
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08/08/2024



Scale = 1:17.9

| 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       | 0.08 | 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       | 0.00 | Horiz(TL) | 0.00  | 3      | n/a | n/a    |                       |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-P |      |           |       |        |     |        | Weight: 8 lb FT = 20% |

#### LUMBER

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

8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

#### BRACING

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

#### REACTIONS

(size) 1=2-9-8, 3=2-9-8  
Max Horiz 1=39 (LC 9)  
Max Uplift 1=-16 (LC 12), 3=-23 (LC 12)  
Max Grav 1=89 (LC 1), 3=89 (LC 1)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-51/35, 2-3=-69/82  
BOT CHORD 1-3=-17/19

#### 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 and right  
exposed;C-C for members and forces & MWFRS for  
reactions shown; Lumber DOL=1.60 plate grip  
DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss  
only. For studs exposed to wind (normal to the face),  
see Standard Industry Gable End Details as applicable,  
or consult qualified building designer as per ANSI/TPI 1.
- 3) Gable requires continuous bottom chord bearing.
- 4) Gable studs spaced at 4-0-0 oc.
- 5) This truss has been designed for a 10.0 psf bottom  
chord live load nonconcurrent with any other live loads.
- 6) All bearings are assumed to be SP No.2 crushing  
capacity of 565 psi.
- 7) Provide mechanical connection (by others) of truss to  
bearing plate capable of withstanding 16 lb uplift at joint  
1 and 23 lb uplift at joint 3.



July 31,2024

**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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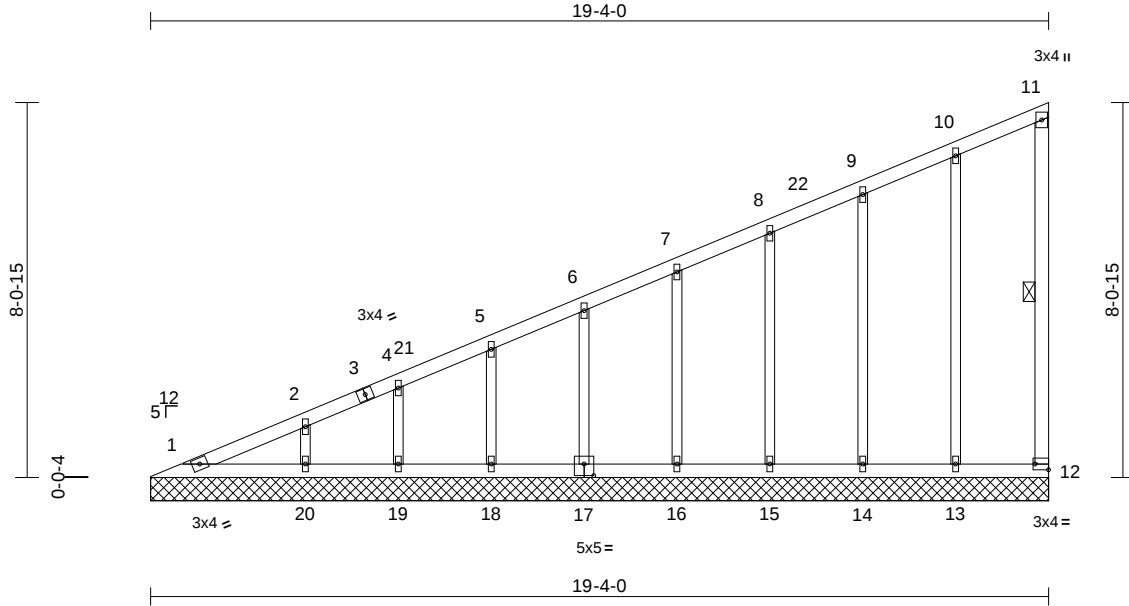
|            |       |            |     |     |                          |                          |
|------------|-------|------------|-----|-----|--------------------------|--------------------------|
| Job        | Truss | Truss Type | Qty | Ply | Roof - HR Lot 75         | RELEASE FOR CONSTRUCTION |
| P240851-01 | V8    | Valley     | 1   | 1   | Job Reference (optional) | AS NOTED FOR PLAN REVIEW |
|            |       |            |     |     |                          | DEVELOPMENT SERVICES     |
|            |       |            |     |     |                          | 167189988                |
|            |       |            |     |     |                          | LEE'S SUMMIT, MISSOURI   |

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Mon Jul 29 17:04:33

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08/08/2024



|                                                         |       |                 |                 |            |      |               |      |             |        |
|---------------------------------------------------------|-------|-----------------|-----------------|------------|------|---------------|------|-------------|--------|
| Scale = 1:49.6                                          |       |                 |                 |            |      |               |      |             |        |
| Plate Offsets (X, Y): [12:Edge,0-1-8], [17:0-2-8,0-3-0] |       |                 |                 |            |      |               |      |             |        |
| <b>Loading</b>                                          | (psf) | <b>Spacing</b>  | 2-0-0           | <b>CSI</b> |      | <b>DEFL</b>   | in   | (loc)       | l/defl |
| TCLL (roof)                                             | 25.0  | Plate Grip DOL  | 1.15            | TC         | 0.56 | Vert(LL)      | n/a  | -           | 999    |
| TCDL                                                    | 10.0  | Lumber DOL      | 1.15            | BC         | 0.27 | Vert(TL)      | n/a  | -           | 999    |
| BCLL                                                    | 0.0   | Rep Stress Incr | YES             | WB         | 0.19 | Horiz(TL)     | 0.00 | 12          | n/a    |
| BCDL                                                    | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S   |      |               |      |             |        |
|                                                         |       |                 |                 |            |      | <b>PLATES</b> |      | <b>GRIP</b> |        |
|                                                         |       |                 |                 |            |      | MT20          |      | 244/190     |        |
|                                                         |       |                 |                 |            |      | Weight: 94 lb |      | FT = 20%    |        |

|                                                          |                                                                                                                                                              |
|----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>LUMBER</b>                                            |                                                                                                                                                              |
| TOP CHORD                                                | 2x4 SP No.2                                                                                                                                                  |
| BOT CHORD                                                | 2x4 SP No.2                                                                                                                                                  |
| WEBS                                                     | 2x4 SP No.2                                                                                                                                                  |
| OTHERS                                                   | 2x3 SPF No.2                                                                                                                                                 |
| <b>BRACING</b>                                           |                                                                                                                                                              |
| 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 11-12                                                                                                                                         |
| <b>REACTIONS</b> (size)                                  | 1=19-4-0, 12=19-4-0, 13=19-4-0, 14=19-4-0, 15=19-4-0, 16=19-4-0, 17=19-4-0, 18=19-4-0, 19=19-4-0, 20=19-4-0                                                  |
|                                                          | Max Horiz 1=360 (LC 9)                                                                                                                                       |
|                                                          | Max Uplift 12=40 (LC 9), 13=60 (LC 12), 14=51 (LC 12), 15=56 (LC 12), 16=54 (LC 12), 17=54 (LC 12), 18=56 (LC 12), 19=48 (LC 12), 20=76 (LC 12)              |
|                                                          | Max Grav 1=144 (LC 20), 12=70 (LC 1), 13=187 (LC 1), 14=180 (LC 1), 15=180 (LC 1), 16=180 (LC 1), 17=179 (LC 1), 18=185 (LC 1), 19=158 (LC 1), 20=248 (LC 1) |
| <b>FORCES</b> (lb) - Maximum Compression/Maximum Tension |                                                                                                                                                              |
| TOP CHORD                                                | 1-2=-558/305, 2-4=-497/279, 4-5=-454/267, 5-6=-407/251, 6-7=-360/236, 7-8=-315/221, 8-9=-266/205, 9-10=-208/195, 10-11=-140/165, 11-12=-54/49                |
| BOT CHORD                                                | 1-20=-152/198, 19-20=-152/198, 18-19=-152/198, 16-18=-152/198, 15-16=-152/198, 14-15=-152/198, 13-14=-152/198, 12-13=-152/198                                |

**WEBS** 10-13=-163/199, 9-14=-141/127, 8-15=-140/104, 7-16=-140/97, 6-17=-139/96, 5-18=-143/98, 4-19=-125/111, 2-20=-186/184

- 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 Corner(3E) 0-9-1 to 5-9-1, Exterior(2N) 5-9-1 to 19-2-13 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 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) All plates are 1.5x4 MT20 unless otherwise indicated.
  - 4) Gable requires continuous bottom chord bearing.
  - 5) Gable studs spaced at 2-0-0 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 40 lb uplift at joint 12, 60 lb uplift at joint 13, 51 lb uplift at joint 14, 56 lb uplift at joint 15, 54 lb uplift at joint 16, 54 lb uplift at joint 17, 56 lb uplift at joint 18, 48 lb uplift at joint 19 and 76 lb uplift at joint 20.
  - 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



July 31,2024

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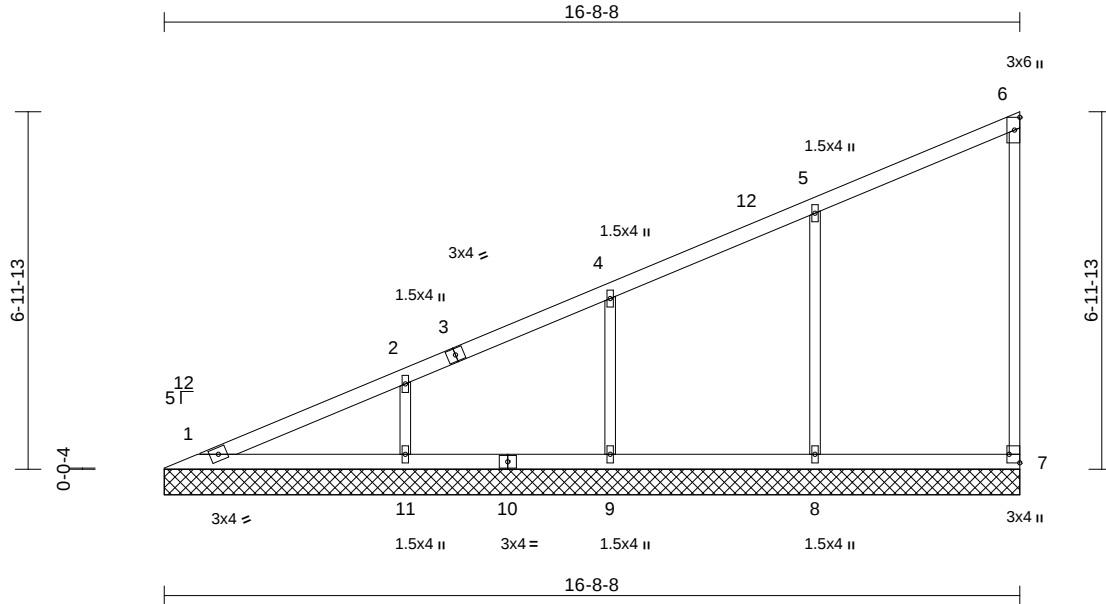
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Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

|            |       |            |     |     |                          |                          |
|------------|-------|------------|-----|-----|--------------------------|--------------------------|
| Job        | Truss | Truss Type | Qty | Ply | Roof - HR Lot 75         | RELEASE FOR CONSTRUCTION |
| P240851-01 | V9    | Valley     | 1   | 1   | Job Reference (optional) | AS NOTED FOR PLAN REVIEW |
|            |       |            |     |     |                          | DEVELOPMENT SERVICES     |
|            |       |            |     |     |                          | 167189989                |
|            |       |            |     |     |                          | LEE'S SUMMIT, MISSOURI   |

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Mon Jul 29 17:04:33  
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Scale = 1:45  
Plate Offsets (X, Y): [7:Edge,0-2-8]

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      | DEFL | in        | (loc) | l/defl | L/d | PLATES | GRIP                   |
|-------------|-------|-----------------|-----------------|----------|------|-----------|-------|--------|-----|--------|------------------------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.59 | Vert(LL)  | n/a   | -      | n/a | 999    | MT20                   |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.20 | Vert(TL)  | n/a   | -      | n/a | 999    | 244/190                |
| BCLL        | 0.0   | Rep Stress Incr | YES             | WB       | 0.19 | Horiz(TL) | 0.00  | 7      | n/a | n/a    |                        |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      |           |       |        |     |        | Weight: 63 lb FT = 20% |

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

**REACTIONS** (size) 1=16-8-8, 7=16-8-8, 8=16-8-8, 9=16-8-8, 11=16-8-8  
Max Horiz 1=310 (LC 9)  
Max Uplift 7=-41 (LC 9), 8=-120 (LC 12), 9=-102 (LC 12), 11=-125 (LC 12)  
Max Grav 1=166 (LC 20), 7=141 (LC 1), 8=398 (LC 1), 9=339 (LC 1), 11=410 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-405/239, 2-4=-317/200, 4-5=-242/175, 5-6=-141/123, 6-7=-109/93  
BOT CHORD 1-11=-132/144, 9-11=-132/144, 8-9=-132/144, 7-8=-132/144  
WEBS 5-8=-309/224, 4-9=-265/162, 2-11=-311/196

**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) 0-9-1 to 5-9-1, Interior (1) 5-9-1 to 16-7-13 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60  
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.

- 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 41 lb uplift at joint 7, 120 lb uplift at joint 8, 102 lb uplift at joint 9 and 125 lb uplift at joint 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



July 31, 2024

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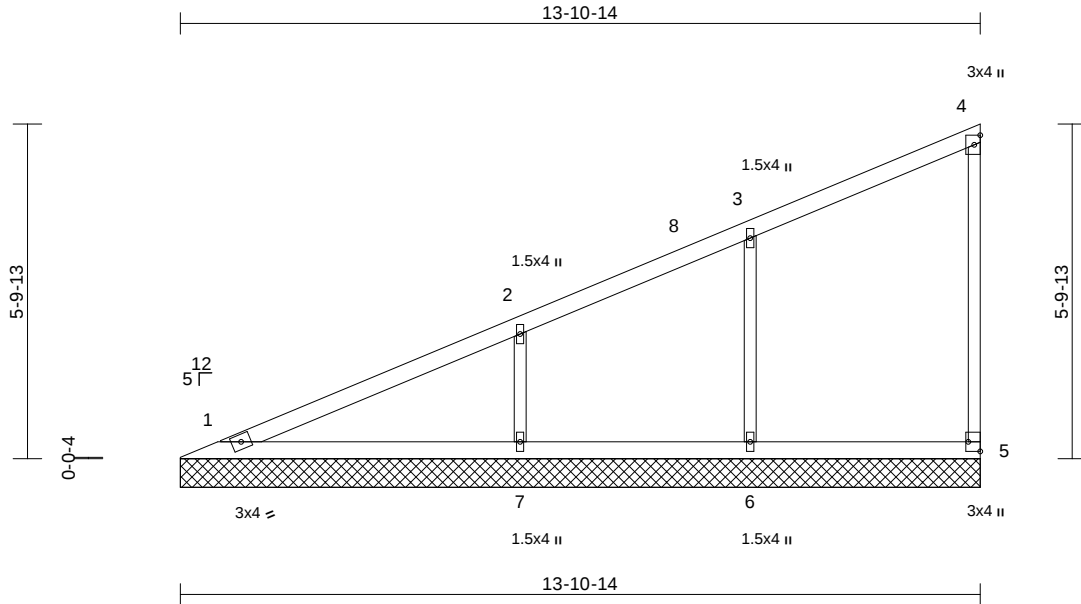
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|            |       |            |     |     |                          |                          |
|------------|-------|------------|-----|-----|--------------------------|--------------------------|
| Job        | Truss | Truss Type | Qty | Ply | Roof - HR Lot 75         | RELEASE FOR CONSTRUCTION |
| P240851-01 | V10   | Valley     | 1   | 1   | Job Reference (optional) | AS NOTED FOR PLAN REVIEW |
|            |       |            |     |     |                          | DEVELOPMENT SERVICES     |
|            |       |            |     |     |                          | 167189990                |
|            |       |            |     |     |                          | LEE'S SUMMIT, MISSOURI   |

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

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08/08/2024



|                                      |       |                 |                 |            |      |             |      |       |        |
|--------------------------------------|-------|-----------------|-----------------|------------|------|-------------|------|-------|--------|
| Scale = 1:40.1                       |       |                 |                 |            |      |             |      |       |        |
| Plate Offsets (X, Y): [5:Edge,0-2-8] |       |                 |                 |            |      |             |      |       |        |
| <b>Loading</b>                       | (psf) | <b>Spacing</b>  | 2-0-0           | <b>CSI</b> |      | <b>DEFL</b> | in   | (loc) | l/defl |
| TCLL (roof)                          | 25.0  | Plate Grip DOL  | 1.15            | TC         | 0.39 | Vert(LL)    | n/a  | -     | n/a    |
| TCDL                                 | 10.0  | Lumber DOL      | 1.15            | BC         | 0.21 | Vert(TL)    | n/a  | -     | n/a    |
| BCLL                                 | 0.0   | Rep Stress Incr | YES             | WB         | 0.11 | Horiz(TL)   | 0.00 | 5     | n/a    |
| BCDL                                 | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S   |      |             |      |       |        |
| <b>PLATES</b> <b>GRIP</b>            |       |                 |                 |            |      |             |      |       |        |
| MT20 244/190                         |       |                 |                 |            |      |             |      |       |        |
| Weight: 51 lb FT = 20%               |       |                 |                 |            |      |             |      |       |        |

|                                                                 |                                                                                       |  |
|-----------------------------------------------------------------|---------------------------------------------------------------------------------------|--|
| <b>LUMBER</b>                                                   |                                                                                       |  |
| TOP CHORD                                                       | 2x4 SP No.2                                                                           |  |
| BOT CHORD                                                       | 2x4 SP No.2                                                                           |  |
| WEBS                                                            | 2x3 SPF No.2                                                                          |  |
| OTHERS                                                          | 2x3 SPF No.2                                                                          |  |
| <b>BRACING</b>                                                  |                                                                                       |  |
| 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.                                  |  |
| <b>REACTIONS</b> (size)                                         |                                                                                       |  |
| 1=13-10-14, 5=13-10-14, 6=13-10-14, 7=13-10-14                  |                                                                                       |  |
| Max Horiz 1=255 (LC 9)                                          |                                                                                       |  |
| Max Uplift 5=-37 (LC 9), 6=-106 (LC 12), 7=-147 (LC 12)         |                                                                                       |  |
| Max Grav 1=192 (LC 1), 5=150 (LC 1), 6=351 (LC 1), 7=486 (LC 1) |                                                                                       |  |
| <b>FORCES</b> (lb) - Maximum Compression/Maximum Tension        |                                                                                       |  |
| TOP CHORD                                                       | 1-2=-341/210, 2-3=-231/156, 3-4=-128/111, 4-5=-115/105                                |  |
| BOT CHORD                                                       | 1-7=-110/120, 6-7=-110/120, 5-6=-110/120                                              |  |
| WEBS                                                            | 3-6=-278/220, 2-7=-365/257                                                            |  |

- 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) 0-9-1 to 5-11-8, Interior (1) 5-11-8 to 13-10-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - 3) Gable requires continuous bottom chord bearing.
  - 4) Gable studs spaced at 4-0-0 oc.

- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 37 lb uplift at joint 5, 106 lb uplift at joint 6 and 147 lb uplift at joint 7.
- 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



July 31, 2024

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|            |       |            |     |     |                          |
|------------|-------|------------|-----|-----|--------------------------|
| Job        | Truss | Truss Type | Qty | Ply | Roof - HR Lot 75         |
| P240851-01 | V11   | Valley     | 1   | 1   | Job Reference (optional) |

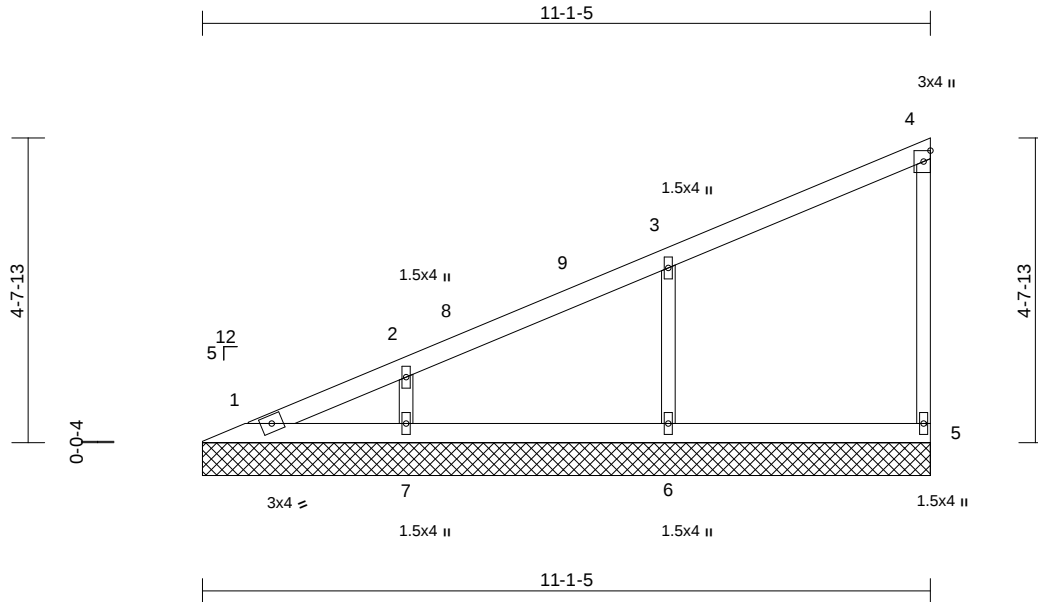
AS NOTED FOR PLAN REVIEW  
DEVELOPMENT SERVICES  
167189991  
LEE'S SUMMIT, MISSOURI

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Mon Jul 29 17:04:23  
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Page: 1

08/08/2024



Scale = 1:35.2

| 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       | 0.25 | n/a       | -     | n/a    | 999 | MT20          | 244/190  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.13 | Vert(TL)  | n/a   | -      | 999 |               |          |
| BCLL        | 0.0   | Rep Stress Incr | YES             | WB       | 0.07 | Horiz(TL) | 0.00  | 5      | n/a |               |          |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      |           |       |        |     | Weight: 39 lb | FT = 20% |

**LUMBER**

|           |              |
|-----------|--------------|
| TOP CHORD | 2x4 SP No.2  |
| BOT CHORD | 2x4 SP No.2  |
| WEBS      | 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.                                  |

|                         |                                                        |
|-------------------------|--------------------------------------------------------|
| <b>REACTIONS</b> (size) | 1=11-1-5, 5=11-1-5, 6=11-1-5, 7=11-1-5                 |
| Max Horiz               | 1=201 (LC 9)                                           |
| Max Uplift              | 5=-32 (LC 9), 6=-121 (LC 12), 7=-95 (LC 12)            |
| Max Grav                | 1=93 (LC 20), 5=141 (LC 1), 6=402 (LC 1), 7=312 (LC 1) |

**FORCES**

|           |                                                       |
|-----------|-------------------------------------------------------|
|           | (lb) - Maximum Compression/Maximum Tension            |
| TOP CHORD | 1-2=-306/178, 2-3=-236/149, 3-4=-114/93, 4-5=-108/108 |
| BOT CHORD | 1-7=-86/95, 6-7=-86/95, 5-6=-86/95                    |
| WEBS      | 3-6=-314/270, 2-7=-240/206                            |

**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) 0-9-1 to 5-9-1, Interior (1) 5-9-1 to 11-0-10 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) Gable requires continuous bottom chord bearing.
- 4) Gable studs spaced at 4-0-0 oc.

- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 32 lb uplift at joint 5, 121 lb uplift at joint 6 and 95 lb uplift at joint 7.
- 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard

July 31, 2024

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

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|            |       |            |     |     |                          |
|------------|-------|------------|-----|-----|--------------------------|
| Job        | Truss | Truss Type | Qty | Ply | Roof - HR Lot 75         |
| P240851-01 | V12   | Valley     | 1   | 1   | Job Reference (optional) |

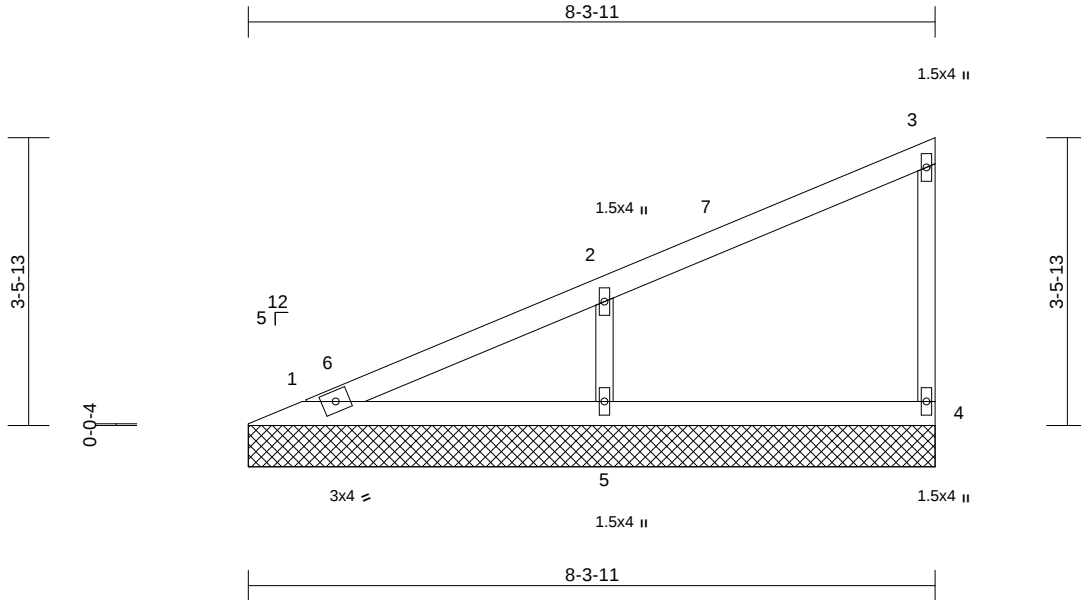
AS NOTED FOR PLAN REVIEW  
DEVELOPMENT SERVICES  
167189992  
LEE'S SUMMIT, MISSOURI

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Mon Jul 29 17:04:33  
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Page: 1

08/08/2024



Scale = 1:27.9

| 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       | 0.27 | Vert(LL)  | n/a   | -      | n/a | 999    | MT20          | 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       | 0.08 | Horiz(TL) | 0.00  | 4      | n/a | n/a    |               |          |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-P |      |           |       |        |     |        | Weight: 28 lb | FT = 20% |

**LUMBER**

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

**REACTIONS**

(size) 1=8-3-11, 4=8-3-11, 5=8-3-11  
Max Horiz 1=146 (LC 9)  
Max Uplift 4=-27 (LC 12), 5=-128 (LC 12)  
Max Grav 1=118 (LC 1), 4=135 (LC 1), 5=422 (LC 1)

**FORCES**

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-239/144, 2-3=-105/80, 3-4=-105/118  
BOT CHORD 1-5=-65/70, 4-5=-65/70  
WEBS 2-5=-328/309

**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) 0-9-1 to 5-9-1,  
Interior (1) 5-9-1 to 8-3-1 zone; cantilever left and right  
exposed; end vertical left and right exposed; C-C for  
members and forces & MWFRS for reactions shown;  
Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss  
only. For studs exposed to wind (normal to the face),  
see Standard Industry Gable End Details as applicable,  
or consult qualified building designer as per ANSI/TPI 1.
- 3) Gable requires continuous bottom chord bearing.
- 4) Gable studs spaced at 4-0-0 oc.
- 5) This truss has been designed for a 10.0 psf bottom  
chord live load nonconcurrent with any other live loads.
- 6) All bearings are assumed to be SP No.2 crushing  
capacity of 565 psi.

- 7) Provide mechanical connection (by others) of truss to  
bearing plate capable of withstanding 27 lb uplift at joint  
4 and 128 lb uplift at joint 5.
- 8) This truss is designed in accordance with the 2018  
International Residential Code sections R502.11.1 and  
R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard

July 31, 2024

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

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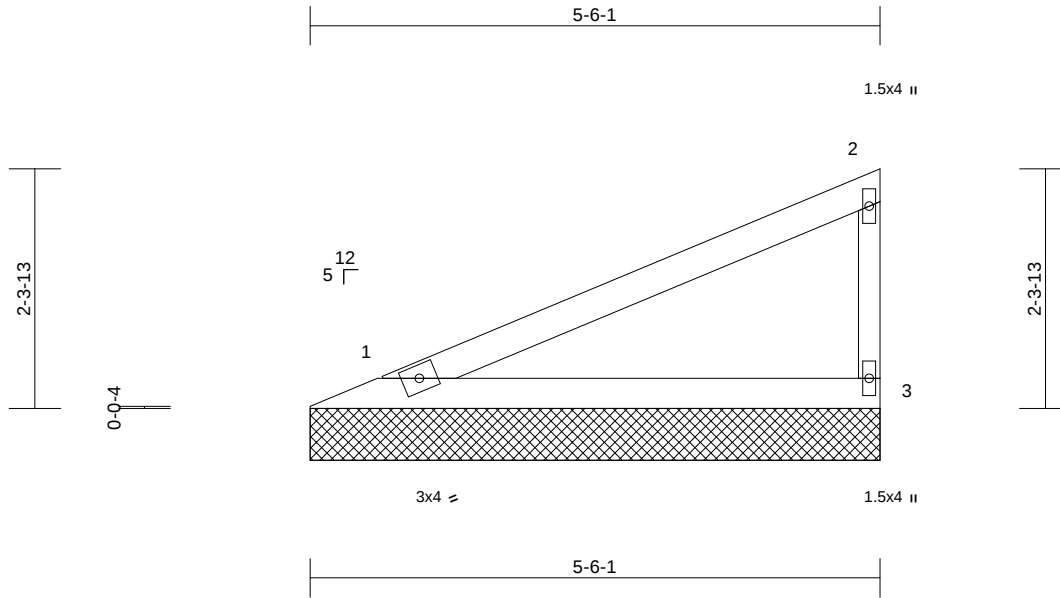
|            |       |            |     |     |                          |
|------------|-------|------------|-----|-----|--------------------------|
| Job        | Truss | Truss Type | Qty | Ply | Roof - HR Lot 75         |
| P240851-01 | V13   | Valley     | 1   | 1   | Job Reference (optional) |

RELEASE FOR CONSTRUCTION  
AS NOTED FOR PLAN REVIEW  
DEVELOPMENT SERVICES  
167189993  
LEE'S SUMMIT, MISSOURI

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Mon Jul 29 17:04:23  
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08/08/2024



|                |       |                 |                 |            |      |             |      |       |        |     |               |             |
|----------------|-------|-----------------|-----------------|------------|------|-------------|------|-------|--------|-----|---------------|-------------|
| <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         | 0.50 | Vert(LL)    | n/a  | -     | n/a    | 999 | MT20          | 244/190     |
| TCDL           | 10.0  | Lumber DOL      | 1.15            | BC         | 0.27 | Vert(TL)    | n/a  | -     | n/a    | 999 |               |             |
| 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: 17 lb | FT = 20%    |

**LUMBER**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x3 SPF No.2

8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 5-6-11 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 1=5-6-1, 3=5-6-1  
Max Horiz 1=92 (LC 9)  
Max Uplift 1=-37 (LC 12), 3=-55 (LC 12)  
Max Grav 1=211 (LC 1), 3=211 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-119/81, 2-3=-164/191  
BOT CHORD 1-3=-41/44

- 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 and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - 3) Gable requires continuous bottom chord bearing.
  - 4) Gable studs spaced at 4-0-0 oc.
  - 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 6) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
  - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 37 lb uplift at joint 1 and 55 lb uplift at joint 3.



July 31,2024

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|            |       |            |     |     |                          |
|------------|-------|------------|-----|-----|--------------------------|
| Job        | Truss | Truss Type | Qty | Ply | Roof - HR Lot 75         |
| P240851-01 | V14   | Valley     | 1   | 1   | Job Reference (optional) |

AS NOTED FOR PLAN REVIEW  
DEVELOPMENT SERVICES  
167189994  
LEE'S SUMMIT, MISSOURI

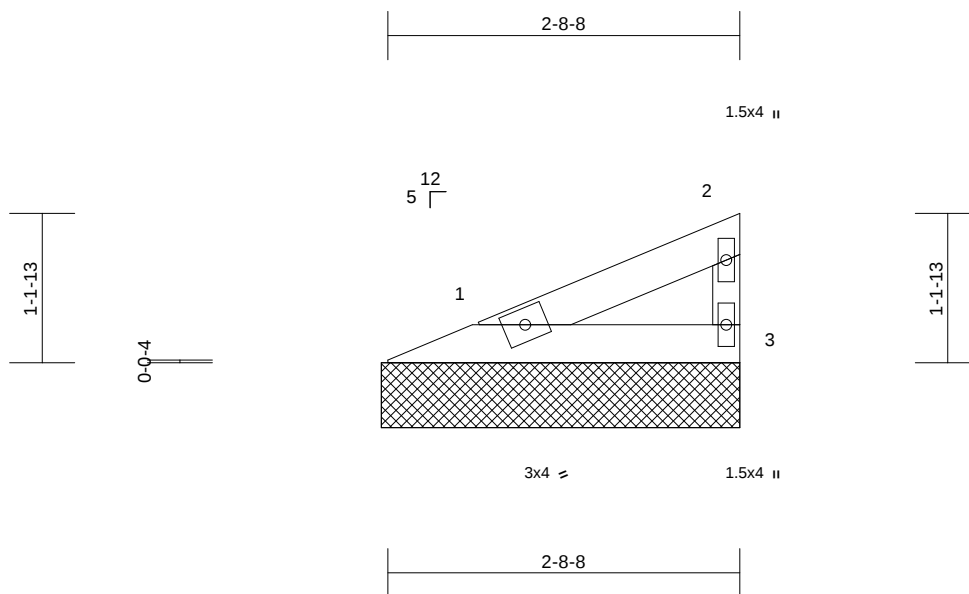
Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

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Page: 1

08/08/2024



Scale = 1:17.7

| 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       | 0.07 | 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       | 0.00 | Horiz(TL) | 0.00  | 3      | n/a | n/a    |                       |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-P |      |           |       |        |     |        | Weight: 8 lb FT = 20% |

**LUMBER**

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

8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 2-9-1 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS**

(size) 1=2-9-1, 3=2-9-1  
Max Horiz 1=37 (LC 11)  
Max Uplift 1=-15 (LC 12), 3=-22 (LC 12)  
Max Grav 1=85 (LC 1), 3=85 (LC 1)

**FORCES**

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-49/33, 2-3=-66/79  
BOT CHORD 1-3=-17/18

**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 and right  
exposed; C-C for members and forces & MWFRS for  
reactions shown; Lumber DOL=1.60 plate grip  
DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss  
only. For studs exposed to wind (normal to the face),  
see Standard Industry Gable End Details as applicable,  
or consult qualified building designer as per ANSI/TPI 1.
- 3) Gable requires continuous bottom chord bearing.
- 4) Gable studs spaced at 4-0-0 oc.
- 5) This truss has been designed for a 10.0 psf bottom  
chord live load nonconcurrent with any other live loads.
- 6) All bearings are assumed to be SP No.2 crushing  
capacity of 565 psi.
- 7) Provide mechanical connection (by others) of truss to  
bearing plate capable of withstanding 15 lb uplift at joint  
1 and 22 lb uplift at joint 3.



July 31, 2024

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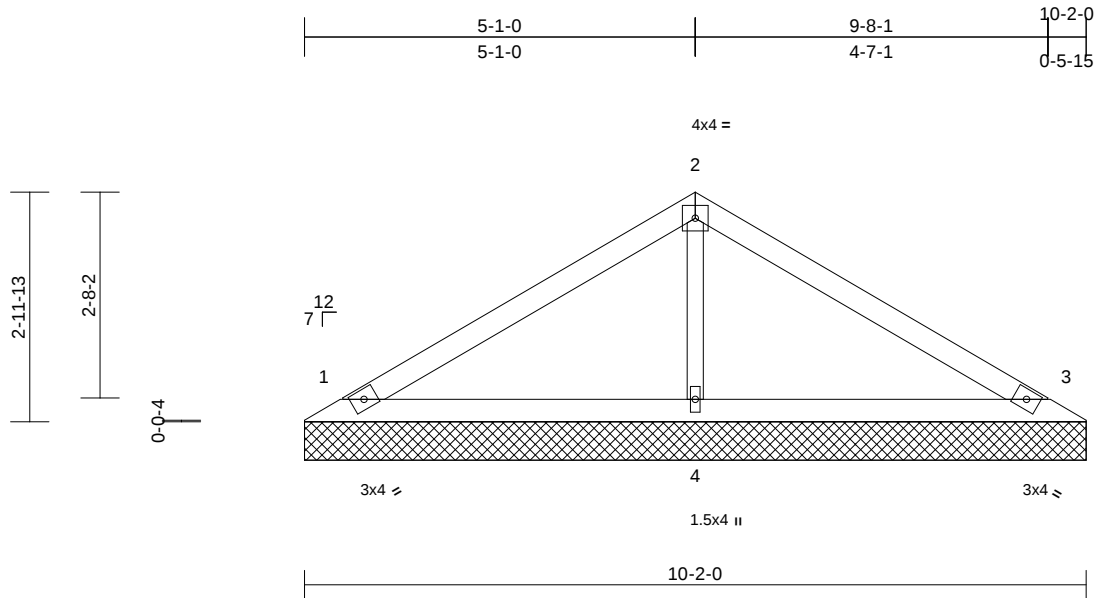
|            |       |            |     |     |                          |                                                                                         |
|------------|-------|------------|-----|-----|--------------------------|-----------------------------------------------------------------------------------------|
| Job        | Truss | Truss Type | Qty | Ply | Roof - HR Lot 75         | AS NOTED FOR PLAN REVIEW<br>DEVELOPMENT SERVICES<br>167189995<br>LEE'S SUMMIT, MISSOURI |
| P240851-01 | V15   | Valley     | 1   | 1   | Job Reference (optional) |                                                                                         |

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

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Page: 1

08/08/2024



Scale = 1:30

| 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       | 0.35 | Vert(LL)  | n/a   | -      | n/a | 999    | MT20          | 244/190  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.21 | Vert(TL)  | n/a   | -      | n/a | 999    |               |          |
| BCLL        | 0.0   | Rep Stress Incr | YES             | WB       | 0.07 | Horiz(TL) | 0.00  | 3      | n/a | n/a    |               |          |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      |           |       |        |     |        | Weight: 33 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=10-2-0, 3=10-2-0, 4=10-2-0  
Max Horiz 1=-75 (LC 8)  
Max Uplift 1=-46 (LC 12), 3=-56 (LC 13),  
4=-30 (LC 12)  
Max Grav 1=202 (LC 1), 3=202 (LC 1), 4=419 (LC 1)

**FORCES**

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-141/72, 2-3=-139/71  
BOT CHORD 1-4=-14/65, 3-4=-14/65  
WEBS 2-4=-280/128

**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 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 46 lb uplift at joint 1, 56 lb uplift at joint 3 and 30 lb uplift at joint 4.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



July 31, 2024

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

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|            |       |            |     |     |                          |
|------------|-------|------------|-----|-----|--------------------------|
| Job        | Truss | Truss Type | Qty | Ply | Roof - HR Lot 75         |
| P240851-01 | V16   | Valley     | 1   | 1   | Job Reference (optional) |

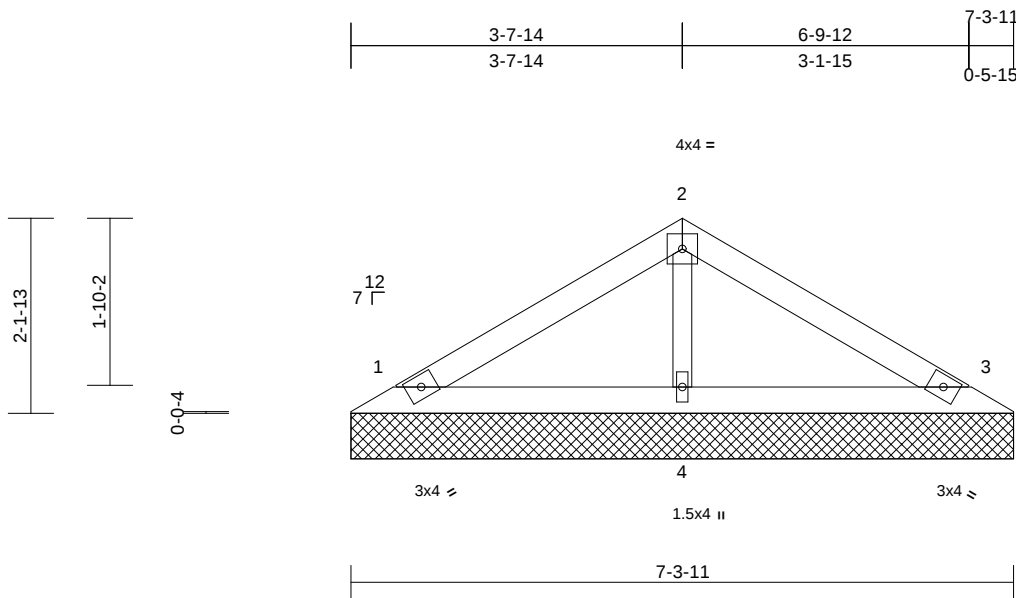
AS NOTED FOR PLAN REVIEW  
DEVELOPMENT SERVICES  
167189996  
LEE'S SUMMIT, MISSOURI

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

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Page: 1

08/08/2024



Scale = 1:25.4

| 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       | 0.21 | Vert(LL)  | n/a   | -      | n/a | 999    | MT20          | 244/190  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.10 | 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: 23 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=7-3-11, 3=7-3-11, 4=7-3-11  
Max Horiz 1=-51 (LC 8)  
Max Uplift 1=-40 (LC 12), 3=-46 (LC 13), 4=-5 (LC 12)  
Max Grav 1=154 (LC 1), 3=154 (LC 1), 4=260 (LC 1)

**FORCES**

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-88/55, 2-3=-84/55  
BOT CHORD 1-4=-10/41, 3-4=-10/41  
WEBS 2-4=-181/104

**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 40 lb uplift at joint 1, 46 lb uplift at joint 3 and 5 lb uplift at joint 4.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



July 31, 2024

**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](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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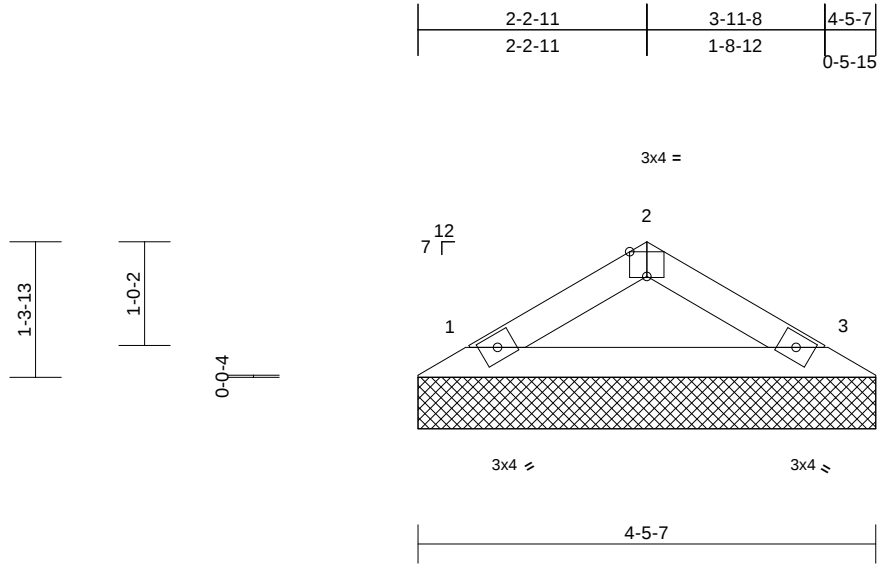
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Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

|            |       |            |     |     |                          |                          |
|------------|-------|------------|-----|-----|--------------------------|--------------------------|
| Job        | Truss | Truss Type | Qty | Ply | Roof - HR Lot 75         | RELEASE FOR CONSTRUCTION |
| P240851-01 | V17   | Valley     | 1   | 1   | Job Reference (optional) | AS NOTED FOR PLAN REVIEW |
|            |       |            |     |     |                          | DEVELOPMENT SERVICES     |
|            |       |            |     |     |                          | 167189997                |
|            |       |            |     |     |                          | LEE'S SUMMIT, MISSOURI   |

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

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08/08/2024



Scale = 1:22.4

| 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       |  | 0.06 | Vert(LL)  | n/a  | -     | n/a    | 999 | MT20          | 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       |  | 0.00 | Horiz(TL) | 0.00 | 3     | 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  
**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 4-6-5 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
**REACTIONS** (size) 1=4-5-7, 3=4-5-7  
Max Horiz 1=-28 (LC 8)  
Max Uplift 1=-23 (LC 12), 3=-23 (LC 13)  
Max Grav 1=155 (LC 1), 3=155 (LC 1)  
**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-144/102, 2-3=-144/102  
BOT CHORD 1-3=-49/103

- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 23 lb uplift at joint 1 and 23 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

- 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/TPI 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.



July 31, 2024

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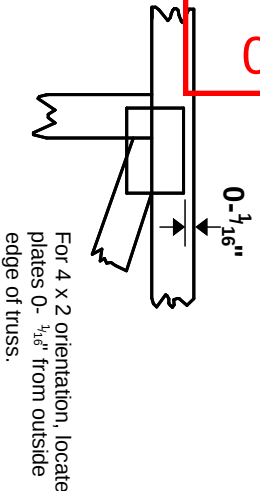
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# Symbols

## PLATE LOCATION AND ORIENTATION

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



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

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

## PLATE SIZE

4 X 4

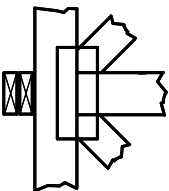
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## LATERAL BRACING LOCATION



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

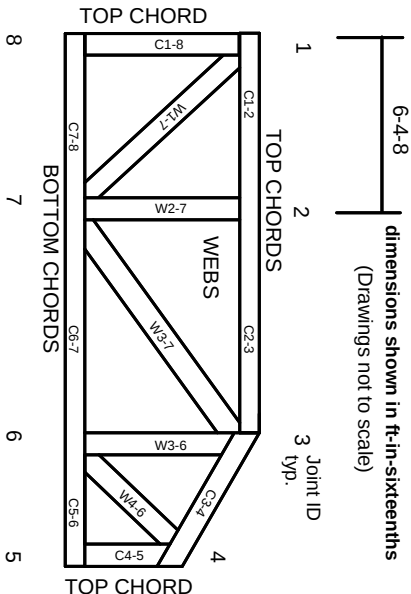
## BEARING



Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/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 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.