

RE: P240301 -

**Site Information:**

Project Customer: Clover & Hive Project Name: Twin Honeydew - Farmhouse  
Lot/Block: 80 Subdivision: Osage

Model: Twin Honeydew - Farmhouse

Address: 3722/3724 SW Knoxville Ct

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   | I64525595 | A1         | 3/28/24 |
| 2   | I64525596 | A2         | 3/28/24 |
| 3   | I64525597 | A3         | 3/28/24 |
| 4   | I64525598 | A4         | 3/28/24 |
| 5   | I64525599 | A5         | 3/28/24 |
| 6   | I64525600 | A6         | 3/28/24 |
| 7   | I64525601 | B1         | 3/28/24 |
| 8   | I64525602 | B2         | 3/28/24 |
| 9   | I64525603 | C1         | 3/28/24 |
| 10  | I64525604 | C2         | 3/28/24 |
| 11  | I64525605 | C3         | 3/28/24 |
| 12  | I64525606 | C4         | 3/28/24 |
| 13  | I64525607 | D1         | 3/28/24 |
| 14  | I64525608 | D2         | 3/28/24 |
| 15  | I64525609 | PB1        | 3/28/24 |
| 16  | I64525610 | PB2        | 3/28/24 |
| 17  | I64525611 | V1         | 3/28/24 |
| 18  | I64525612 | V2         | 3/28/24 |
| 19  | I64525613 | V3         | 3/28/24 |
| 20  | I64525614 | V4         | 3/28/24 |
| 21  | I64525615 | V5         | 3/28/24 |
| 22  | I64525616 | V6         | 3/28/24 |
| 23  | I64525617 | V7         | 3/28/24 |
| 24  | I64525618 | V8         | 3/28/24 |

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: Nathan Fox

My license renewal date for the state of Missouri is December 31, 2024.

**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.



March 28, 2024

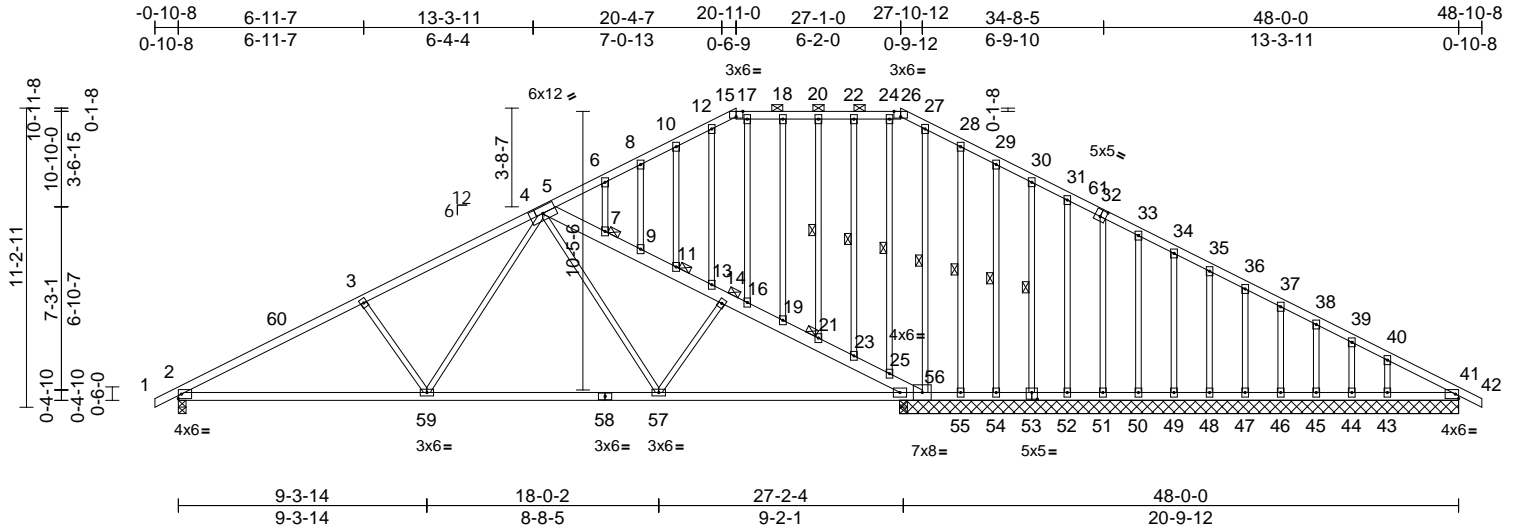
|                          |       |                                 |     |     |           |
|--------------------------|-------|---------------------------------|-----|-----|-----------|
| Job                      | Truss | Truss Type                      | Qty | Ply |           |
| P240301                  | A1    | Piggyback Base Structural Gable | 2   | 1   | I64525595 |
| Job Reference (optional) |       |                                 |     |     |           |

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

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Page: 1

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Scale = 1:86.4

Plate Offsets (X, Y): [15:0-3-0,Edge], [26:0-3-0,Edge], [32:0-2-8,0-3-0], [53:0-2-8,0-3-0]

| 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       | 0.75 | Vert(LL) | -0.20 | 2-59   | >999 | 240    | MT20    |
| TCDL                    | 10.0  | Lumber DOL      | 1.15            | BC       | 0.95 | Vert(CT) | -0.43 | 2-59   | >771 | 180    | 244/190 |
| BCLL                    | 0.0   | Rep Stress Incr | YES             | WB       | 0.35 | Horz(CT) | 0.07  | 56     | n/a  | n/a    |         |
| BCDL                    | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      |          |       |        |      |        |         |
| Weight: 312 lb FT = 20% |       |                 |                 |          |      |          |       |        |      |        |         |

**LUMBER**  
TOP CHORD 2x4 SP No.2 \*Except\* 56-5:2x6 SPF 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 2-2-0 oc purlins, except 2-0-0 oc purlins (10-0-0 max.): 15-26, 5-56.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing, Except: 8-11-14 oc bracing: 2-59 10-0-0 oc bracing: 57-59 2-2-0 oc bracing: 56-57.  
WEBS 1 Row at midpt 20-21, 22-23, 24-25, 27-56, 28-55, 29-54, 30-53

**JOINTS** 1 Brace at Jt(s): 14, 21, 11, 7

**REACTIONS** (size)  
2=0-3-8, 41=20-11-8, 43=20-11-8, 44=20-11-8, 45=20-11-8, 46=20-11-8, 47=20-11-8, 48=20-11-8, 49=20-11-8, 50=20-11-8, 51=20-11-8, 52=20-11-8, 53=20-11-8, 54=20-11-8, 55=20-11-8, 56=20-11-8  
Max Horiz 2=204 (LC 12)  
Max Uplift 2=225 (LC 12), 41=29 (LC 25), 43=91 (LC 13), 44=28 (LC 13), 45=42 (LC 13), 46=41 (LC 13), 47=41 (LC 13), 48=41 (LC 13), 49=41 (LC 13), 50=42 (LC 13), 51=41 (LC 13), 52=39 (LC 13), 53=46 (LC 13), 54=23 (LC 13), 55=509 (LC 25), 56=162 (LC 12)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/17, 2-3=1983/353, 3-5=1735/359, 5-6=43/246, 6-8=12/263, 8-10=0/277, 10-12=0/296, 12-15=17/249, 15-17=15/234, 17-18=13/242, 18-20=13/242, 20-22=13/242, 22-24=13/242, 24-26=10/244, 26-27=47/223, 27-28=0/312, 28-29=6/254, 29-30=9/233, 30-31=7/227, 31-33=27/219, 33-34=46/203, 34-35=64/198, 35-36=83/198, 36-37=101/198, 37-38=120/198, 38-39=144/200, 39-40=170/189, 40-41=240/230, 41-42=0/17, 5-7=1799/395, 7-9=1829/416, 9-11=1862/436, 11-13=1892/457, 13-14=1977/479, 14-16=2050/498, 16-19=2125/504, 19-21=2155/510, 21-23=2187/516, 23-25=2216/523, 25-56=2226/522  
BOT CHORD 2-59=415/1683, 57-59=190/1108, 56-57=274/1789, 55-56=193/244, 54-55=193/244, 52-54=193/244, 51-52=193/244, 50-51=194/244, 49-50=194/244, 48-49=194/244, 47-48=194/244, 46-47=194/244, 45-46=194/244, 44-45=194/244, 43-44=194/244, 41-43=194/244

**WEBS** 3-59=411/269, 5-59=138/643, 5-57=9/737, 14-57=551/143, 20-21=74/35, 22-23=67/38, 24-25=49/21, 27-56=367/24, 28-55=12/84, 29-54=87/60, 30-53=98/56, 31-52=92/56, 32-51=93/56, 33-50=95/58, 34-49=93/57, 35-48=93/57, 36-47=93/57, 37-46=93/57, 38-45=97/59, 39-44=69/41, 40-43=174/115, 18-19=73/40, 16-17=169/20, 12-13=190/48, 10-11=67/47, 8-9=73/46, 6-7=60/41

**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) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 20-11-0, Exterior(2E) 20-11-0 to 27-1-0, Exterior(2R) 27-1-0 to 34-1-14, Interior (1) 34-1-14 to 48-10-8 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



March 28, 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) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcsccomponents.com)

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16023 Swingley Ridge Rd.  
Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

|         |       |                                 |     |     |                          |
|---------|-------|---------------------------------|-----|-----|--------------------------|
| Job     | Truss | Truss Type                      | Qty | Ply |                          |
| P240301 | A1    | Piggyback Base Structural Gable | 2   | 1   | I64525595                |
|         |       |                                 |     |     | Job Reference (optional) |

- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) Provide adequate drainage to prevent water ponding.
- 5) All plates are 3x4 MT20 unless otherwise indicated.
- 6) Gable studs spaced at 1-4-0 oc.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 225 lb uplift at joint 2, 162 lb uplift at joint 56, 29 lb uplift at joint 41, 509 lb uplift at joint 55, 23 lb uplift at joint 54, 46 lb uplift at joint 53, 39 lb uplift at joint 52, 41 lb uplift at joint 51, 42 lb uplift at joint 50, 41 lb uplift at joint 49, 41 lb uplift at joint 48, 41 lb uplift at joint 47, 41 lb uplift at joint 46, 42 lb uplift at joint 45, 28 lb uplift at joint 44 and 91 lb uplift at joint 43.
- 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

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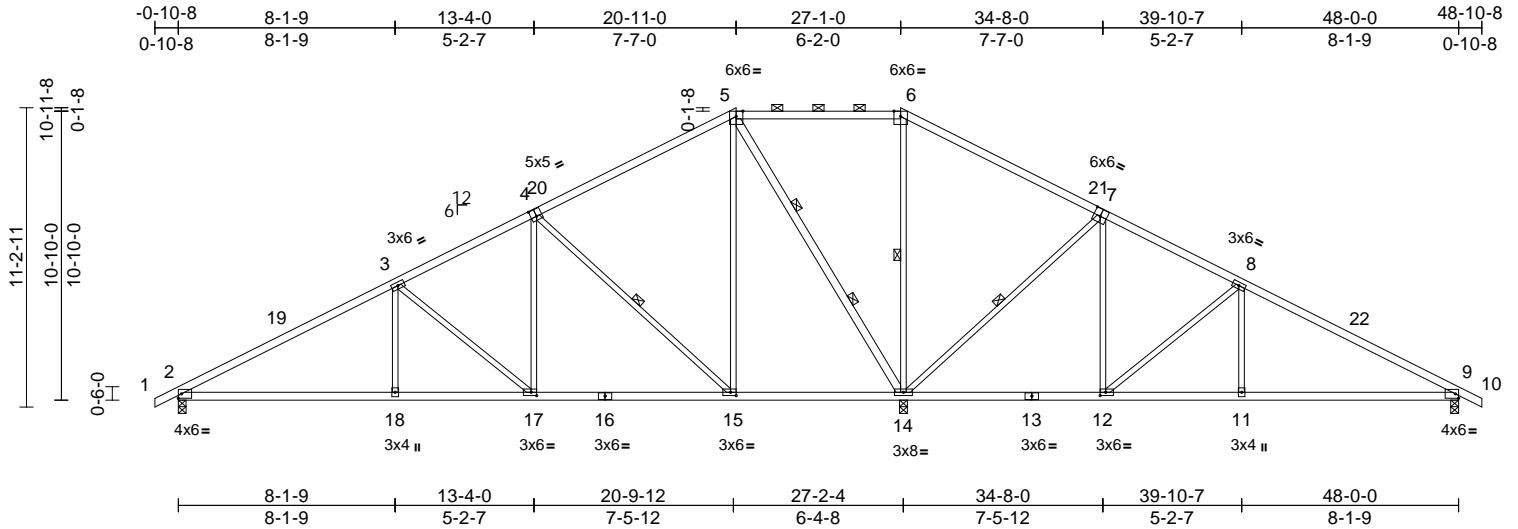
|         |       |                |     |     |                          |
|---------|-------|----------------|-----|-----|--------------------------|
| Job     | Truss | Truss Type     | Qty | Ply |                          |
| P240301 | A2    | Piggyback Base | 6   | 1   | Job Reference (optional) |
|         |       |                |     |     | I64525596                |

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Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Wed Mar 27 14:09:14

Page: 1

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Scale = 1:86.4

Plate Offsets (X, Y): [4:0-2-8,0-3-4], [7:0-3-0,0-3-4], [12:0-2-8,0-1-8], [15:0-2-8,0-1-8], [17:0-2-8,0-1-8]

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      |      | DEFL     | in    | (loc) | l/defl | L/d | PLATES         | GRIP     |
|-------------|-------|-----------------|-----------------|----------|------|----------|-------|-------|--------|-----|----------------|----------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.94 | Vert(LL) | -0.13 | 2-18  | >999   | 240 | MT20           | 197/144  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.76 | Vert(CT) | -0.30 | 2-18  | >999   | 180 |                |          |
| BCLL        | 0.0   | Rep Stress Incr | YES             | WB       | 0.91 | Horz(CT) | 0.04  | 14    | n/a    | n/a |                |          |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      |          |       |       |        |     | Weight: 232 lb | FT = 20% |

#### LUMBER

TOP CHORD 2x4 SP No.2 \*Except\* 1-4,7-10:2x4 SP 1650F 1.5E  
 BOT CHORD 2x4 SP No.2  
 WEBS 2x3 SPF No.2 \*Except\* 14-5:2x4 SP No.2

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except 2-0-0 oc purlins (10-0-0 max.): 5-6.  
 BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.  
 WEBS 1 Row at midpt 4-15, 6-14, 7-14  
 WEBS 2 Rows at 1/3 pts 5-14

#### REACTIONS

(size) 2=0-3-8, 9=0-3-8, 14=0-3-8  
 Max Horiz 2=204 (LC 12)  
 Max Uplift 2=-198 (LC 12), 9=-184 (LC 13), 14=-303 (LC 12)  
 Max Grav 2=1034 (LC 25), 9=689 (LC 26), 14=2925 (LC 1)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-2=0/17, 2-3=-1514/257, 3-5=-926/229, 5-6=0/834, 6-8=-184/1051, 8-9=-783/228, 9-10=0/17  
 BOT CHORD 2-18=-312/1230, 17-18=-312/1230, 15-17=-143/748, 14-15=-152/328, 12-14=-340/183, 11-12=-102/585, 9-11=-102/585  
 WEBS 3-18=0/297, 3-17=-623/218, 4-17=-60/504, 4-15=-911/325, 5-15=-137/756, 5-14=-1467/285, 6-14=-882/186, 7-14=-927/326, 7-12=-60/514, 8-12=-651/219, 8-11=0/300

#### 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) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 20-11-0, Exterior(2E) 20-11-0 to 27-1-0, Exterior(2R) 27-1-0 to 34-1-14, Interior (1) 34-1-14 to 48-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Provide adequate drainage to prevent water ponding.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) 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 198 lb uplift at joint 2, 303 lb uplift at joint 14 and 184 lb uplift at joint 9.
- 7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



March 28,2024

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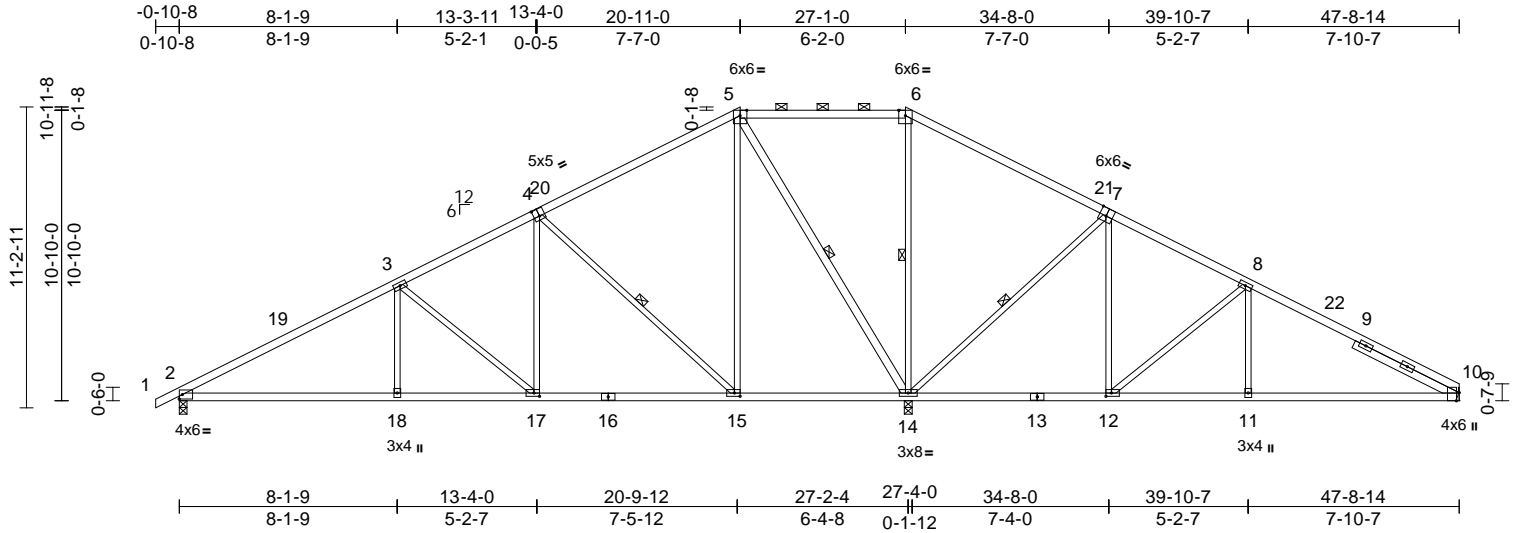
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|--------------------------|-------|----------------|-----|-----|-----------|
| Job                      | Truss | Truss Type     | Qty | Ply |           |
| P240301                  | A3    | Piggyback Base | 2   | 1   | 164525597 |
| Job Reference (optional) |       |                |     |     |           |

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Page: 1

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Scale = 1:85.9

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

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      |      | DEFL     | in    | (loc) | l/defl | L/d | PLATES         | GRIP     |
|-------------|-------|-----------------|-----------------|----------|------|----------|-------|-------|--------|-----|----------------|----------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.89 | Vert(LL) | -0.13 | 2-18  | >999   | 240 | MT20           | 197/144  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.77 | Vert(CT) | -0.31 | 2-18  | >999   | 180 |                |          |
| BCLL        | 0.0   | Rep Stress Incr | YES             | WB       | 0.96 | Horz(CT) | 0.05  | 10    | n/a    | n/a |                |          |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      |          |       |       |        |     | Weight: 236 lb | FT = 20% |

#### LUMBER

TOP CHORD 2x4 SP No.2 \*Except\* 4-1,7-10:2x4 SP 1650F 1.5E  
 BOT CHORD 2x4 SP No.2  
 WEBS 2x3 SPF No.2 \*Except\* 14-5:2x4 SP No.2  
 SLIDER Right 2x4 SP No.2 -- 4-4-0

#### BRACING

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

WEBS 1 Row at midpt 6-14, 5-14, 7-14, 4-15  
**REACTIONS** (size) 2=0-3-8, 10= Mechanical, 14=0-3-8  
 Max Horiz 2=209 (LC 12)  
 Max Uplift 2=-212 (LC 12), 10=-202 (LC 13), 14=-270 (LC 12)  
 Max Grav 2=1056 (LC 25), 10=696 (LC 26), 14=2770 (LC 1)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 5-6=0/665, 1-2=0/17, 2-3=-1560/287, 3-5=-973/270, 6-8=-364/860, 8-10=-913/318  
 BOT CHORD 2-18=-344/1270, 17-18=-344/1270, 15-17=-176/790, 14-15=-70/250, 12-14=-285/252, 11-12=-167/718, 10-11=-167/718  
 WEBS 3-18=0/297, 5-15=-136/754, 6-14=-796/153, 8-11=0/287, 5-14=-1391/268, 4-17=-59/501, 3-17=-619/217, 7-12=-51/500, 7-14=-925/324, 8-12=-615/201, 4-15=-908/324

#### 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) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 20-11-0, Exterior(2E) 20-11-0 to 27-1-0, Exterior(2R) 27-1-0 to 34-1-14, Interior (1) 34-1-14 to 47-8-14 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Provide adequate drainage to prevent water ponding.
- 4) All plates are 3x6 MT20 unless otherwise indicated.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) Bearings are assumed to be: Joint 2 SP No.2 crushing capacity of 565 psi, Joint 14 SP No.2 crushing capacity of 565 psi.
- 7) Refer to girder(s) for truss to truss connections.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 202 lb uplift at joint 10, 212 lb uplift at joint 2 and 270 lb uplift at joint 14.
- 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard



March 28, 2024

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

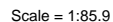
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall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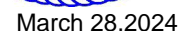


Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Wed Mar 27 14:09:14 Page: 1  
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[illegible]

- 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) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 20-11-0, Exterior(2E) 20-11-0 to 27-1-0, Exterior(2R) 27-1-0 to 34-1-14, Interior (1) 34-1-14 to 47-8-14 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Provide adequate drainage to prevent water ponding.
- 4) All plates are 3x6 MT20 unless otherwise indicated.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) Bearings are assumed to be: Joint 2 SP No.2 crushing capacity of 565 psi, Joint 15 SP No.2 crushing capacity of 565 psi.
- 7) Refer to girder(s) for truss to truss connections.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 358 lb uplift at joint 11, 221 lb uplift at joint 15 and 233 lb uplift at joint 2.
- 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.1.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

## NOTES



**WARNING – verify design parameters and noted notes on this and included MiTek Reference Tag M-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/TP1 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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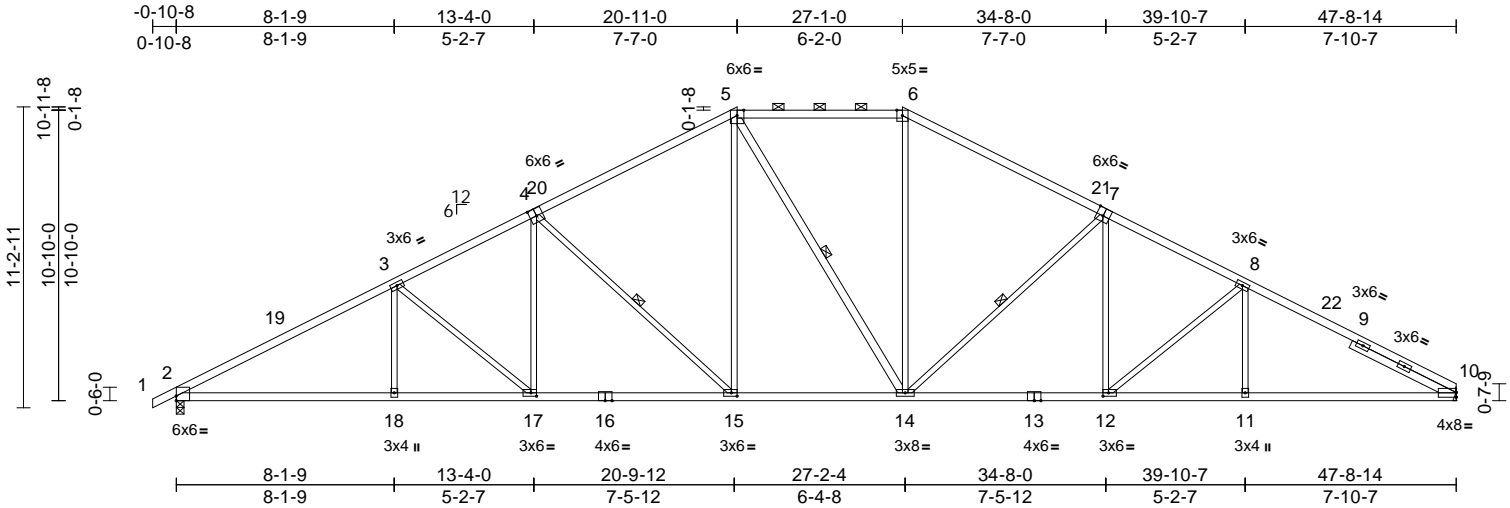
|         |       |                |     |     |                          |
|---------|-------|----------------|-----|-----|--------------------------|
| Job     | Truss | Truss Type     | Qty | Ply |                          |
| P240301 | A5    | Piggyback Base | 10  | 1   | Job Reference (optional) |
|         |       |                |     |     | I64525599                |

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Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Wed Mar 27 14:09:15

Page: 1

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Scale = 1:85.9

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

| Loading                 | (psf) | Spacing         | 2-0-0           | CSI      | DEFL | in       | (loc) | l/defl | L/d  | PLATES | GRIP    |
|-------------------------|-------|-----------------|-----------------|----------|------|----------|-------|--------|------|--------|---------|
| TCLL (roof)             | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.97 | Vert(LL) | -0.26 | 15-17  | >999 | 240    | MT20    |
| TCDL                    | 10.0  | Lumber DOL      | 1.15            | BC       | 0.82 | Vert(CT) | -0.53 | 15-17  | >999 | 180    | 197/144 |
| BCLL                    | 0.0   | Rep Stress Incr | YES             | WB       | 0.81 | Horz(CT) | 0.23  | 10     | n/a  | n/a    |         |
| BCDL                    | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      |          |       |        |      |        |         |
| Weight: 236 lb FT = 20% |       |                 |                 |          |      |          |       |        |      |        |         |

#### LUMBER

TOP CHORD 2x4 SP 1650F 1.5E \*Except\* 5-6:2x4 SP No.2, 4-1:2x4 SP 2400F 2.0E  
 BOT CHORD 2x4 SP 1650F 1.5E  
 WEBS 2x3 SPF No.2 \*Except\* 14-5:2x4 SP No.2  
 SLIDER Right 2x4 SP No.2 -- 4-4-0

#### BRACING

TOP CHORD Structural wood sheathing directly applied, except  
 2-0-0 oc purlins (2-2-0 max.): 5-6.  
 BOT CHORD Rigid ceiling directly applied or 9-5-7 oc bracing.

WEBS 1 Row at midpt 5-14, 7-14, 4-15

REACTIONS (size) 2=0-3-8, 10= Mechanical  
 Max Horiz 2=209 (LC 16)  
 Max Uplift 2=-329 (LC 12), 10=-301 (LC 13)  
 Max Grav 2=2214 (LC 1), 10=2141 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/17, 2-3=-4010/580, 3-5=-3462/598,  
 5-6=-2386/554, 6-8=-3430/590,  
 8-10=-3898/580

BOT CHORD 2-18=-561/3433, 17-18=-561/3433,  
 15-17=-401/3019, 14-15=-175/2388,  
 12-14=-330/3010, 11-12=-404/3340,  
 10-11=-404/3340

WEBS 3-18=0/291, 5-15=-134/725, 6-14=-80/718,  
 8-11=0/270, 5-14=-282/275, 4-17=-53/466,  
 3-17=-547/206, 7-12=-44/425,  
 7-14=-851/319, 8-12=-452/190,  
 4-15=-860/321

#### 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) -0-10-8 to 4-1-8,  
 Interior (1) 4-1-8 to 20-11-0, Exterior(2E) 20-11-0 to  
 27-1-0, Exterior(2R) 27-1-0 to 34-1-14, Interior (1)  
 34-1-14 to 47-8-14 zone; cantilever left and right  
 exposed ; end vertical left and right exposed;C-C for  
 members and forces & MWFRS for reactions shown;  
 Lumber DOL=1.60 plate grip DOL=1.60
- 3) Provide adequate drainage to prevent water ponding.
- 4) This truss has been designed for a 10.0 psf bottom  
 chord live load nonconcurrent with any other live loads.
- 5) Bearings are assumed to be: Joint 2 SP 1650F 1.5E  
 crushing capacity of 565 psi.
- 6) Refer to girder(s) for truss to truss connections.
- 7) Provide mechanical connection (by others) of truss to  
 bearing plate capable of withstanding 301 lb uplift at  
 joint 10 and 329 lb uplift at joint 2.
- 8) This truss is designed in accordance with the 2018  
 International Residential Code sections R502.11.1 and  
 R802.10.2 and referenced standard ANSI/TPI 1.
- 9) Graphical purlin representation does not depict the size  
 or the orientation of the purlin along the top and/or  
 bottom chord.

LOAD CASE(S) Standard



March 28, 2024

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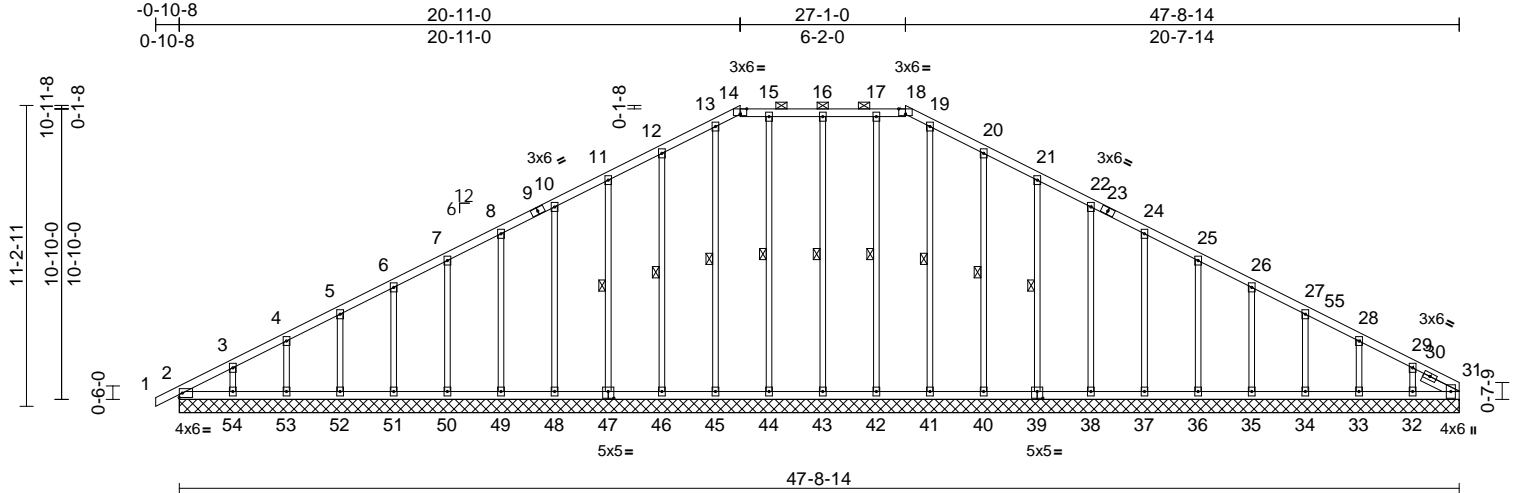
|                          |       |                                |     |     |           |
|--------------------------|-------|--------------------------------|-----|-----|-----------|
| Job                      | Truss | Truss Type                     | Qty | Ply |           |
| P240301                  | A6    | Piggyback Base Supported Gable | 2   | 1   | I64525600 |
| Job Reference (optional) |       |                                |     |     |           |

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Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Wed Mar 27 14:09:15

Page: 1

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Scale = 1:85.9

Plate Offsets (X, Y): [14:0-3-0,Edge], [18:0-3-0,Edge], [31:0-3-2,0-1-12], [39:0-2-8,0-3-0], [47:0-2-8,0-3-0]

| 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       | 0.13 | Vert(LL) | n/a   | -      | n/a | 999    | MT20    |
| TCDL                    | 10.0  | Lumber DOL      | 1.15            | BC       | 0.05 | Vert(CT) | n/a   | -      | n/a | 999    | 244/190 |
| BCLL                    | 0.0   | Rep Stress Incr | YES             | WB       | 0.18 | Horz(CT) | 0.02  | 31     | n/a | n/a    |         |
| BCDL                    | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      |          |       |        |     |        |         |
| Weight: 267 lb FT = 20% |       |                 |                 |          |      |          |       |        |     |        |         |

|                         |  |   |   |      |  |  |  |  |  |  |  |
|-------------------------|--|---|---|------|--|--|--|--|--|--|--|
| <b>LUMBER</b>           |  | Max Grav  | 2=178 (LC 21), 31=119 (LC 22),<br>32=179 (LC 26), 33=182 (LC 1),<br>34=180 (LC 26), 35=180 (LC 1),<br>36=180 (LC 26), 37=180 (LC 1),<br>38=180 (LC 26), 39=180 (LC 26),<br>40=180 (LC 1), 41=174 (LC 26),<br>42=177 (LC 26), 43=183 (LC 26),<br>44=177 (LC 25), 45=176 (LC 22),<br>46=180 (LC 1), 47=180 (LC 25),<br>48=180 (LC 25), 49=180 (LC 1),<br>50=180 (LC 1), 51=180 (LC 25),<br>52=180 (LC 1), 53=179 (LC 25),<br>54=181 (LC 25) | WEBS | 16-43=143/107, 17-42=137/33,<br>19-41=134/0, 20-40=140/112,<br>21-39=140/96, 22-38=140/96,<br>24-37=140/96, 25-36=140/97,<br>26-35=140/96, 27-34=139/106,<br>28-33=142/147, 29-32=137/191,<br>15-44=137/36, 13-45=136/8,<br>12-46=140/112, 11-47=140/96,<br>10-48=140/96, 8-49=140/96, 7-50=140/96,<br>6-51=140/97, 5-52=140/97, 4-53=140/123,<br>3-54=138/171 |  |  |  |  |  |  |
| <b>TOP CHORD</b>        |  | 2x4 SP No.2   |   |      |  |  |  |  |  |  |  |
| <b>BOT CHORD</b>        |  | 2x4 SP No.2   |   |      |  |  |  |  |  |  |  |
| <b>OTHERS</b>           |  | 2x3 SPF No.2  |   |      |  |  |  |  |  |  |  |
| <b>SLIDER</b>           |  | Right 2x4 SP No.2 -- 1-5-12   |   |      |  |  |  |  |  |  |  |
| <b>BRACING</b>          |  |   |   |      |  |  |  |  |  |  |  |
| <b>TOP CHORD</b>        |  | Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 14-18.  |   |      |  |  |  |  |  |  |  |
| <b>BOT CHORD</b>        |  | Rigid ceiling directly applied or 10-0-0 oc bracing.  |   |      |  |  |  |  |  |  |  |
| <b>WEBS</b>             |  | 1 Row at midpt  | 16-43, 17-42, 19-41, 20-40, 21-39, 15-44, 13-45, 12-46, 11-47   |      |  |  |  |  |  |  |  |
| <b>REACTIONS</b> (size) |  |   |   |      |  |  |  |  |  |  |  |
|                         |  | 2=47-8-14, 31=47-8-14, 32=47-8-14, 33=47-8-14, 34=47-8-14, 35=47-8-14, 36=47-8-14, 37=47-8-14, 38=47-8-14, 39=47-8-14, 40=47-8-14, 41=47-8-14, 42=47-8-14, 43=47-8-14, 44=47-8-14, 45=47-8-14, 46=47-8-14, 47=47-8-14, 48=47-8-14, 49=47-8-14, 50=47-8-14, 51=47-8-14, 52=47-8-14, 53=47-8-14, 54=47-8-14   |   |      |  |  |  |  |  |  |  |
| <b>Max Horiz</b>        |  | 2=209 (LC 16)   |   |      |  |  |  |  |  |  |  |
| <b>Max Uplift</b>       |  | 2=-26 (LC 8), 32=-103 (LC 13), 33=-59 (LC 13), 34=-62 (LC 13), 35=-61 (LC 13), 36=-61 (LC 13), 37=-61 (LC 13), 38=-61 (LC 13), 39=-60 (LC 13), 40=-74 (LC 13), 42=-9 (LC 9), 43=-58 (LC 8), 44=-12 (LC 9), 46=-71 (LC 12), 47=-61 (LC 12), 48=-61 (LC 12), 49=-61 (LC 12), 50=-61 (LC 12), 51=-61 (LC 12), 52=-61 (LC 12), 53=-61 (LC 12), 54=-87 (LC 12)   |   |      |  |  |  |  |  |  |  |
| <b>FORCES</b>           |  |   |   |      |  |  |  |  |  |  |  |
|                         |  | (lb) - Maximum Compression/Maximum Tension  |   |      |  |  |  |  |  |  |  |
| <b>TOP CHORD</b>        |  | 1-2=0/17, 2-3=-295/92, 3-4=-229/87, 4-5=-181/97, 5-6=-136/110, 6-7=-110/135, 7-8=-84/162, 8-10=-71/190, 10-11=-88/234, 11-12=-106/287, 12-13=-127/347, 13-14=-126/341, 14-15=-119/341, 15-16=-118/342, 16-17=-118/342, 17-18=-119/341, 18-19=-126/341, 19-20=-127/347, 20-21=-106/287, 21-22=-88/234, 22-24=-69/180, 24-25=-56/126, 25-26=-56/72, 26-27=-74/27, 27-28=-100/27, 28-29=-146/43, 29-31=-232/67 |   |      |  |  |  |  |  |  |  |
| <b>BOT CHORD</b>        |  | 2-54=-59/225, 53-54=-59/225, 52-53=-59/225, 51-52=-59/225, 50-51=-59/225, 49-50=-59/225, 48-49=-59/225, 46-48=-59/225, 45-46=-59/225, 44-45=-59/225, 43-44=-59/225, 42-43=-59/225, 41-42=-59/225, 40-41=-59/225, 38-40=-59/225, 37-38=-59/225, 36-37=-59/225, 35-36=-59/225, 34-35=-59/225, 33-34=-59/225, 32-33=-59/225, 31-32=-59/225   |   |      |  |  |  |  |  |  |  |
| <b>NOTES</b>            |  |   |   |      |  |  |  |  |  |  |  |
|                         |  | 1) Unbalanced roof live loads have been considered for this design.   |   |      |  |  |  |  |  |  |  |



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



March 28, 2024

Continued on page 2

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|         |       |                                |     |     |                          |
|---------|-------|--------------------------------|-----|-----|--------------------------|
| Job     | Truss | Truss Type                     | Qty | Ply | I64525600                |
| P240301 | A6    | Piggyback Base Supported Gable | 2   | 1   | Job Reference (optional) |

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

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Wed Mar 27 14:09:15

Page: 2

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- 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) -0-10-8 to 4-0-0,  
Exterior(2N) 4-0-0 to 20-11-0, Corner(3R) 20-11-0 to  
26-0-0, Exterior(2N) 26-0-0 to 27-1-0, Corner(3R) 27-1-0  
to 32-0-0, Exterior(2N) 32-0-0 to 47-8-14 zone;  
cantilever left and right exposed ; end vertical left and  
right exposed;C-C for members and forces & MWFRS  
for reactions shown; Lumber DOL=1.60 plate grip  
DOL=1.60
- 3) 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) Provide adequate drainage to prevent water ponding.
- 5) All plates are 3x4 MT20 unless otherwise indicated.
- 6) Gable requires continuous bottom chord bearing.
- 7) Gable studs spaced at 2-0-0 oc.
- 8) This truss has been designed for a 10.0 psf bottom  
chord live load nonconcurrent with any other live loads.
- 9) All bearings are assumed to be SP No.2 crushing  
capacity of 565 psi.
- 10) Provide mechanical connection (by others) of truss to  
bearing plate capable of withstanding 26 lb uplift at joint  
2, 58 lb uplift at joint 43, 9 lb uplift at joint 42, 74 lb uplift  
at joint 40, 60 lb uplift at joint 39, 61 lb uplift at joint 38,  
61 lb uplift at joint 37, 61 lb uplift at joint 36, 61 lb uplift  
at joint 35, 62 lb uplift at joint 34, 59 lb uplift at joint 33,  
103 lb uplift at joint 32, 12 lb uplift at joint 44, 71 lb uplift  
at joint 46, 61 lb uplift at joint 47, 61 lb uplift at joint 48,  
61 lb uplift at joint 49, 61 lb uplift at joint 50, 61 lb uplift  
at joint 51, 61 lb uplift at joint 52, 61 lb uplift at joint 53  
and 87 lb uplift at joint 54.
- 11) This truss is designed in accordance with the 2018  
International Residential Code sections R502.11.1 and  
R802.10.2 and referenced standard ANSI/TPI 1.
- 12) Graphical purlin representation does not depict the size  
or the orientation of the purlin along the top and/or  
bottom chord.

**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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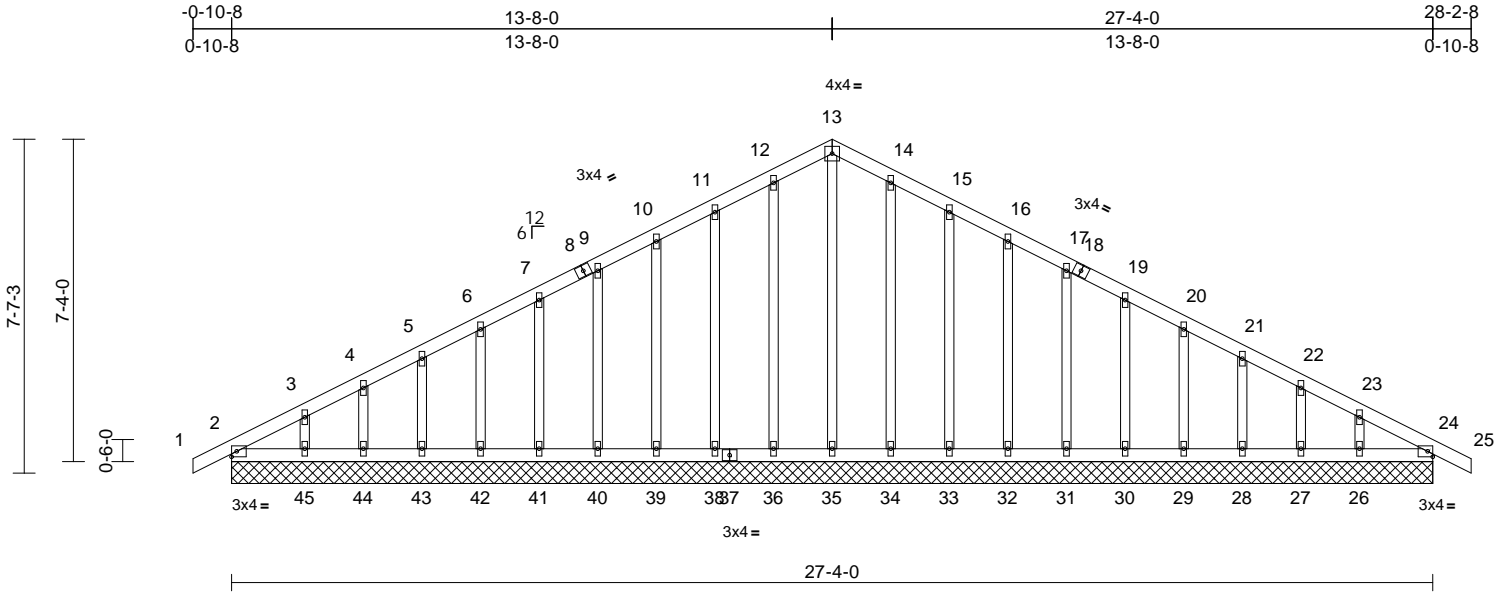
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|                          |       |                        |     |     |           |
|--------------------------|-------|------------------------|-----|-----|-----------|
| Job                      | Truss | Truss Type             | Qty | Ply |           |
| P240301                  | B1    | Common Supported Gable | 2   | 1   | I64525601 |
| Job Reference (optional) |       |                        |     |     |           |

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Page: 1



Scale = 1:52.4

| 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       | 0.07 | Vert(LL) | n/a   | -      | n/a | 999    | MT20    |
| TCDL                    | 10.0  | Lumber DOL      | 1.15            | BC       | 0.03 | Vert(CT) | n/a   | -      | n/a | 999    | 197/144 |
| BCLL                    | 0.0   | Rep Stress Incr | YES             | WB       | 0.18 | Horz(CT) | 0.01  | 24     | n/a | n/a    |         |
| BCDL                    | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      |          |       |        |     |        |         |
| Weight: 145 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) 2=27-4-0, 24=27-4-0, 26=27-4-0, 27=27-4-0, 28=27-4-0, 29=27-4-0, 30=27-4-0, 31=27-4-0, 32=27-4-0, 33=27-4-0, 34=27-4-0, 35=27-4-0, 36=27-4-0, 38=27-4-0, 39=27-4-0, 40=27-4-0, 41=27-4-0, 42=27-4-0, 43=27-4-0, 44=27-4-0, 45=27-4-0  
Max Horiz 2=137 (LC 13)  
Max Uplift 2=26 (LC 8), 24=4 (LC 9), 26=57 (LC 13), 27=40 (LC 13), 28=41 (LC 13), 29=41 (LC 13), 30=41 (LC 13), 31=41 (LC 13), 32=41 (LC 13), 33=48 (LC 13), 34=21 (LC 13), 36=27 (LC 12), 38=46 (LC 12), 39=41 (LC 12), 40=41 (LC 12), 41=41 (LC 12), 42=41 (LC 12), 43=41 (LC 12), 44=40 (LC 12), 45=63 (LC 12)  
Max Grav 2=150 (LC 1), 24=150 (LC 1), 26=130 (LC 26), 27=117 (LC 26), 28=121 (LC 1), 29=120 (LC 26), 30=120 (LC 26), 31=120 (LC 1), 32=120 (LC 1), 33=121 (LC 26), 34=123 (LC 26), 35=145 (LC 22), 36=123 (LC 25), 38=121 (LC 25), 39=120 (LC 1), 40=120 (LC 1), 41=120 (LC 25), 42=120 (LC 25), 43=121 (LC 1), 44=117 (LC 25), 45=130 (LC 25)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 13-14=89/255, 14-15=80/230, 15-16=66/191, 16-17=53/155, 17-19=41/119, 19-20=34/83, 20-21=35/48, 21-22=51/20, 22-23=74/22, 23-24=123/45, 24-25=0/17, 1-2=0/17, 2-3=181/64, 3-4=131/67, 4-5=99/76, 5-6=76/89, 6-7=59/107, 7-9=50/126, 9-10=53/155, 10-11=66/191, 11-12=80/230, 12-13=89/255  
BOT CHORD 2-45=40/160, 44-45=40/160, 43-44=40/160, 42-43=40/160, 41-42=40/160, 40-41=40/160, 39-40=40/160, 38-39=40/160, 36-38=40/160, 35-36=40/160, 34-35=40/160, 33-34=40/160, 32-33=40/160, 31-32=40/160, 30-31=40/160, 29-30=40/160, 28-29=40/160, 27-28=40/160, 26-27=40/160, 24-26=40/160  
WEBS 13-35=148/26, 12-36=96/43, 11-38=95/74, 10-39=93/64, 9-40=93/64, 7-41=93/64, 6-42=93/64, 5-43=94/82, 4-44=92/99, 3-45=99/122, 14-34=96/40, 15-33=95/74, 16-32=93/64, 17-31=93/64, 19-30=93/64, 20-29=93/64, 21-28=94/82, 22-27=92/99, 23-26=99/119

#### 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 4-4-0, Exterior(2N) 4-4-0 to 13-8-0, Corner(3R) 13-8-0 to 18-8-0, Exterior(2N) 18-8-0 to 28-2-8 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.
- Gable studs spaced at 1-4-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 26 lb uplift at joint 2, 27 lb uplift at joint 36, 46 lb uplift at joint 38, 41 lb uplift at joint 39, 41 lb uplift at joint 40, 41 lb uplift at joint 41, 41 lb uplift at joint 42, 41 lb uplift at joint 43, 40 lb uplift at joint 44, 63 lb uplift at joint 45, 21 lb uplift at joint 34, 48 lb uplift at joint 33, 41 lb uplift at joint 32, 41 lb uplift at joint 31, 41 lb uplift at joint 30, 41 lb uplift at joint 29, 41 lb uplift at joint 28, 40 lb uplift at joint 27, 57 lb uplift at joint 26 and 4 lb uplift at joint 24.
- 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.



March 28, 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.**

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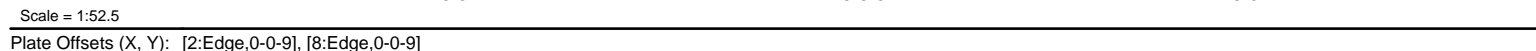
|         |       |                        |     |     |                          |
|---------|-------|------------------------|-----|-----|--------------------------|
| Job     | Truss | Truss Type             | Qty | Ply | I64525601                |
| P240301 | B1    | Common Supported Gable | 2   | 1   | Job Reference (optional) |

LOAD CASE(S) Standard

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Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Wed Mar 27 14:09:15 Page: 1  
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|                  |  |   |
|------------------|--|---|
| <b>LUMBER</b>    |  | 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 211 lb uplift at joint 2 and 211 lb uplift at joint 8.     |
| TOP CHORD        | 2x4 SP No.2  |   |
| BOT CHORD        | 2x4 SP No.2  |   |
| WEBS             | 2x3 SPF No.2   | 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1. |
| <b>BRACING</b>   |  | <b>LOAD CASE(S)</b> Standard  |
| TOP CHORD        | Structural wood sheathing directly applied or 2-6-11 oc purlins.               |   |
| BOT CHORD        | Rigid ceiling directly applied or 10-0-0 oc bracing.                           |   |
| <b>REACTIONS</b> | (size) 2=0-3-8, 8=0-3-8  |   |
|                  | Max Horiz 2=-137 (LC 13)   |   |
|                  | Max Uplift 2=-211 (LC 12), 8=-211 (LC 13)                                      |   |
|                  | Max Grav 2=1288 (LC 1), 8=1288 (LC 1)  |   |
| <b>FORCES</b>    | (lb) - Maximum Compression/Maximum Tension                                     |   |
| TOP CHORD        | 1-2=0/17, 2-3=-2072/392, 3-5=-1821/403, 5-7=-1821/403, 7-8=-2072/392, 8-9=0/17 |   |
| BOT CHORD        | 2-12=-328/1763, 10-12=-86/1180, 8-10=-263/1763                                 |   |
| WEBS             | 5-10=-154/672, 7-10=-451/287, 5-12=-153/672, 3-12=-451/287                     |   |

- 
- A circular blue seal for the State of Missouri Professional Engineer. The outer ring contains the text "STATE OF MISSOURI" at the top and "PROFESSIONAL ENGINEER" at the bottom, separated by a small blue star on the right. The center of the seal contains the name "NATHANIEL FOX" in blue capital letters, followed by the word "ENGINEER" and the license number "PE-2022042259". A large, stylized red signature "Nathaniel Fox" is written across the center of the seal, overlapping the text.

**⚠ 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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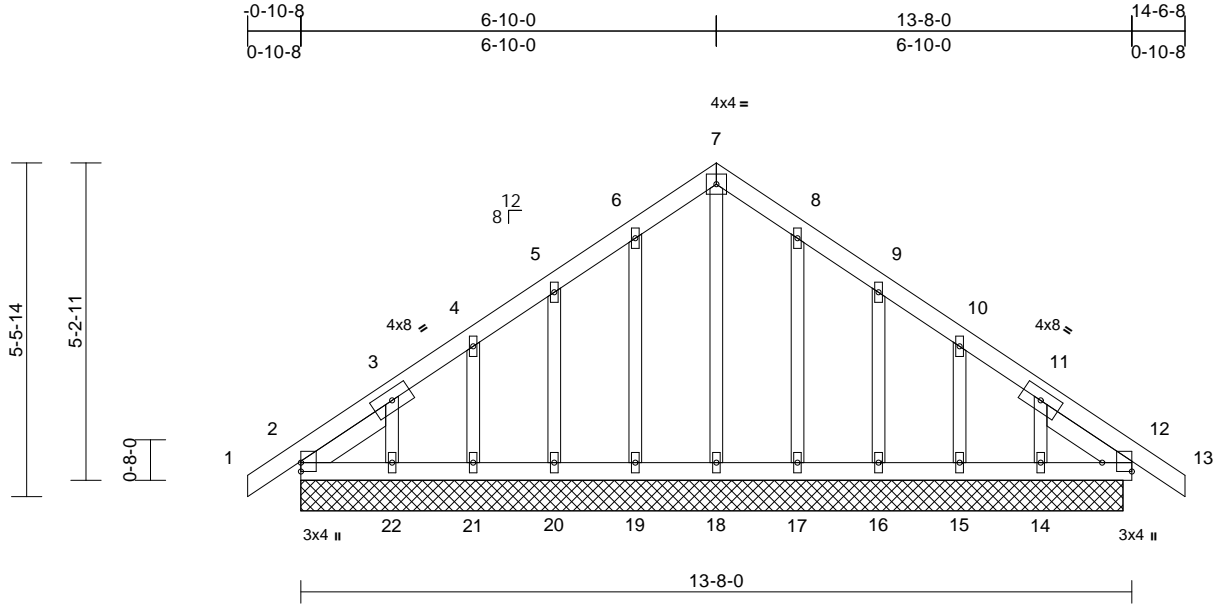
|           |       |                        |     |     |                          |
|-----------|-------|------------------------|-----|-----|--------------------------|
| Job       | Truss | Truss Type             | Qty | Ply |                          |
| P240301   | C1    | Common Supported Gable | 1   | 1   | Job Reference (optional) |
| I64525603 |       |                        |     |     |                          |

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Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Wed Mar 27 14:09:15

Page: 1

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Scale = 1:37.9

Plate Offsets (X, Y): [12:Edge,0-5-14]

| 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           | 197/144  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.03 | Vert(CT) | n/a   | -      | n/a | 999           |          |
| BCLL        | 0.0   | Rep Stress Incr | YES             | WB       | 0.07 | Horz(CT) | 0.00  | 12     | n/a | n/a           |          |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      |          |       |        |     |               |          |
|             |       |                 |                 |          |      |          |       |        |     | Weight: 73 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 -- 1-8-5, Right 2x4 SP No.2 -- 1-8-5

**WEBS**  
7-18=-119/26, 8-17=-100/74, 9-16=-101/107,  
10-15=-100/111, 11-14=-102/129,  
6-19=-104/73, 5-20=-99/106, 4-21=-100/111,  
3-22=-109/131

**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=13-6-4, 12=13-6-4, 14=13-6-4,  
15=13-6-4, 16=13-6-4, 17=13-6-4,  
18=13-6-4, 19=13-6-4, 20=13-6-4,  
21=13-6-4, 22=13-6-4  
Max Horiz 2=-144 (LC 10)  
Max Uplift 2=-39 (LC 8), 12=-2 (LC 9), 14=-73 (LC 13), 15=-52 (LC 13), 16=-57 (LC 13), 17=-42 (LC 13), 19=-45 (LC 12), 20=-56 (LC 12), 21=-52 (LC 12), 22=-80 (LC 12)  
Max Grav 2=159 (LC 20), 12=154 (LC 1), 14=132 (LC 20), 15=125 (LC 20), 16=128 (LC 20), 17=127 (LC 20), 18=119 (LC 22), 19=131 (LC 19), 20=126 (LC 19), 21=126 (LC 19), 22=139 (LC 19)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 7-8=-91/176, 8-9=-66/126, 9-10=-49/59, 10-11=-58/29, 11-12=-112/57, 12-13=0/16, 1-2=0/16, 2-3=-140/112, 3-4=-96/80, 4-5=-87/72, 5-6=-77/126, 6-7=-91/176  
2-22=-52/150, 21-22=-52/150, 20-21=-52/150, 19-20=-52/150, 18-19=-52/150, 17-18=-52/150, 16-17=-52/150, 15-16=-52/150, 14-15=-52/150, 12-14=-52/150

- 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 4-2-0, Exterior(2N) 4-2-0 to 6-10-0, Corner(3R) 6-10-0 to 11-10-0, Exterior(2N) 11-10-0 to 14-6-8 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
  - 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 studs spaced at 1-4-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 2 lb uplift at joint 12, 39 lb uplift at joint 2, 42 lb uplift at joint 17, 57 lb uplift at joint 16, 52 lb uplift at joint 15, 73 lb uplift at joint 14, 45 lb uplift at joint 19, 56 lb uplift at joint 20, 52 lb uplift at joint 21 and 80 lb uplift at joint 22.
  - 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



March 28, 2024

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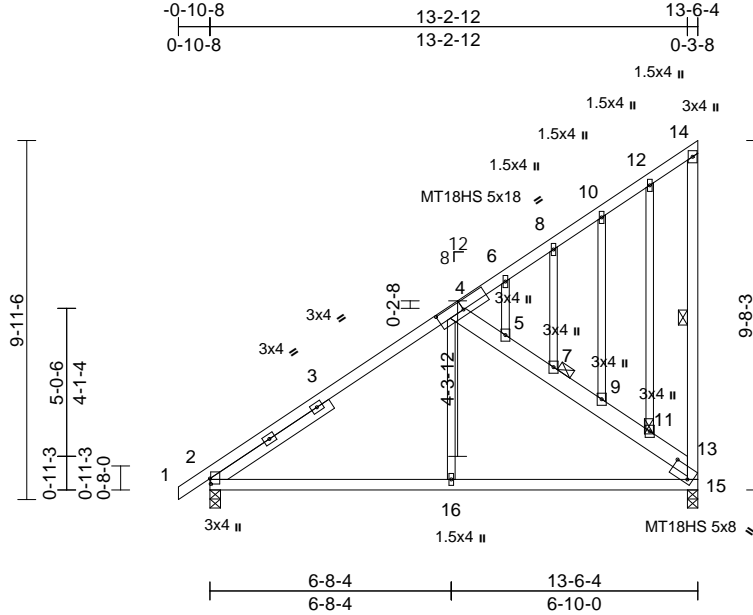
|                          |       |            |     |     |           |
|--------------------------|-------|------------|-----|-----|-----------|
| Job                      | Truss | Truss Type | Qty | Ply |           |
| P240301                  | C2    | Monopitch  | 1   | 1   | I64525604 |
| Job Reference (optional) |       |            |     |     |           |

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Page: 1

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Scale = 1:63.8

Plate Offsets (X, Y): [2:0-1-13,0-0-4], [4:0-9-0,0-3-0], [15:0-6-6,0-3-11]

| 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       | 0.65 | Vert(LL) | -0.04 | 15-16 | >999   | 240 | MT20     | 244/190 |
| TCDL          | 10.0  | Lumber DOL      | 1.15            | BC       | 0.44 | Vert(CT) | -0.09 | 2-16  | >999   | 180 | MT18HS   | 197/144 |
| BCLL          | 0.0   | Rep Stress Incr | YES             | WB       | 0.26 | Horz(CT) | 0.01  | 15    | n/a    | n/a |          |         |
| BCDL          | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      |          |       |       |        |     |          |         |
| Weight: 97 lb |       |                 |                 |          |      |          |       |       |        |     | FT = 20% |         |

#### LUMBER

|           |  |
|-----------|--|
| TOP CHORD | 2x4 SP No.2 *Except* 4-13:2x6 SPF No.2 |
| BOT CHORD | 2x4 SP No.2                            |
| WEBS      | 2x4 SP No.2 *Except* 4-16:2x3 SPF No.2 |
| OTHERS    | 2x3 SPF No.2                           |
| SLIDER    | Left 2x4 SP No.2 -- 3-11-10            |

#### BRACING

|           |   |
|-----------|---|
| TOP CHORD | Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals. |
| BOT CHORD | Rigid ceiling directly applied or 9-10-14 oc bracing.                                 |
| WEBS      | 1 Row at midpt 14-15  |
| JOINTS    | 1 Brace at Jt(s): 11, 7   |

#### REACTIONS

|            |                                |
|------------|--------------------------------|
| (size)     | 2=0-3-8, 15=0-3-8              |
| Max Horiz  | 2=399 (LC 9)                   |
| Max Uplift | 2=-83 (LC 12), 15=-202 (LC 12) |
| Max Grav   | 2=665 (LC 1), 15=658 (LC 19)   |

#### FORCES

|           |  |
|-----------|--|
|           | (lb) - Maximum Compression/Maximum Tension   |
| TOP CHORD | 1-2=0/16, 2-6=-708/227, 6-8=-276/239, 8-10=-236/218, 10-12=-204/204, 12-14=-95/98, 13-15=-600/366, 13-14=-89/85, 4-5=-538/231, 5-7=-560/246, 7-9=-606/280, 9-11=-648/313, 11-13=-725/370 |
| BOT CHORD | 2-16=-333/580, 15-16=-338/572  |
| WEBS      | 4-16=0/305, 11-12=-214/183, 9-10=-77/64, 7-8=-84/61, 5-6=-12/6   |

#### NOTES

- 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 13-4-8 zone; cantilever left and right  
exposed; end vertical left and right exposed; C-C for  
members and forces & MWFRS for reactions shown;  
Lumber DOL=1.60 plate grip DOL=1.60

- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.
- All plates are 3x4 MT20 unless otherwise indicated.
- Gable studs spaced at 1-4-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 202 lb uplift at joint 15 and 83 lb uplift at joint 2.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



March 28, 2024

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|         |       |                  |     |     |                          |
|---------|-------|------------------|-----|-----|--------------------------|
| Job     | Truss | Truss Type       | Qty | Ply |                          |
| P240301 | C3    | Monopitch Girder | 2   | 2   | Job Reference (optional) |

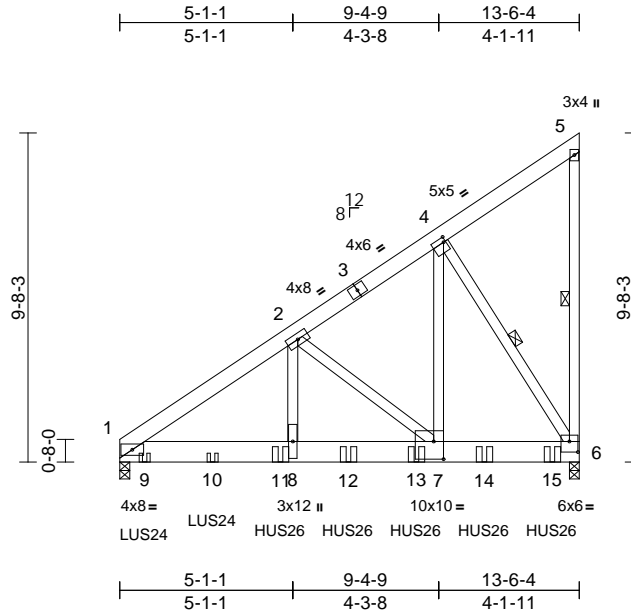
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Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

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Page: 1

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Scale = 1:67.8

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

| 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       | 0.29 | Vert(LL) | -0.07 | 7-8   | >999   | 240 | MT20           | 197/144  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.36 | Vert(CT) | -0.12 | 7-8   | >999   | 180 |                |          |
| BCLL        | 0.0   | Rep Stress Incr | NO              | WB       | 0.88 | Horz(CT) | 0.02  | 6     | n/a    | n/a |                |          |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      |          |       |       |        |     | Weight: 230 lb | FT = 20% |

**LUMBER**

TOP CHORD 2x6 SPF No.2  
 BOT CHORD 2x8 SP 2400F 2.0E  
 WEBS 2x4 SP No.2

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 5-5-9 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

WEBS 1 Row at midpt 5-6, 4-6

**REACTIONS** (size) 1=0-3-8, 6=0-3-8  
 Max Horiz 1=384 (LC 11)  
 Max Uplift 1=-1112 (LC 12), 6=-1295 (LC 12)  
 Max Grav 1=5503 (LC 1), 6=7639 (LC 1)

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

TOP CHORD 1-2=-7647/1389, 2-4=-4084/764,  
 4-5=-202/180, 5-6=-144/122  
 BOT CHORD 1-8=-1372/6184, 7-8=-1372/6184,  
 6-7=-721/3362

WEBS 2-8=-765/4127, 2-7=-3634/843,  
 4-7=-1201/7202, 4-6=-6287/1143

**NOTES**

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
 Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.  
 Bottom chords connected as follows: 2x8 - 4 rows staggered at 0-9-0 oc.  
 Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.

- 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 5-1-1,  
 Interior (1) 5-1-1 to 13-4-8 zone; cantilever left and right  
 exposed; end vertical left and right exposed; C-C for  
 members and forces & MWFRS for reactions shown;  
 Lumber DOL=1.60 plate grip DOL=1.60
- This truss has been designed for a 10.0 psf bottom  
 chord live load nonconcurrent with any other live loads.
- All bearings are assumed to be SP 2400F 2.0E crushing  
 capacity of 805 psi.
- Provide mechanical connection (by others) of truss to  
 bearing plate capable of withstanding 1295 lb uplift at  
 joint 6 and 1112 lb uplift at joint 1.
- 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 LUS24 (4-10d Girder, 2-10d  
 Truss, Single Ply Girder) or equivalent spaced at 2-0-0  
 oc max. starting at 0-8-12 from the left end to 2-8-12 to  
 connect truss(es) to back face of bottom chord.
- Use Simpson Strong-Tie HUS26 (14-10d Girder, 6-10d  
 Truss) or equivalent spaced at 2-0-0 oc max. starting at  
 4-8-12 from the left end to 12-8-12 to connect truss(es)  
 to back face of bottom chord.
- Fill all nail holes where hanger is in contact with lumber.

**LOAD CASE(S)** Standard

- Dead + Roof Live (balanced): Lumber Increase=1.15,  
 Plate Increase=1.15  
 Uniform Loads (lb/ft)  
 Vert: 1-5=-70, 1-6=-20  
 Concentrated Loads (lb)  
 Vert: 9=-680 (B), 10=-662 (B), 11=-2121 (B),  
 12=-2121 (B), 13=-2121 (B), 14=-2121 (B),  
 15=-2124 (B)



March 28, 2024

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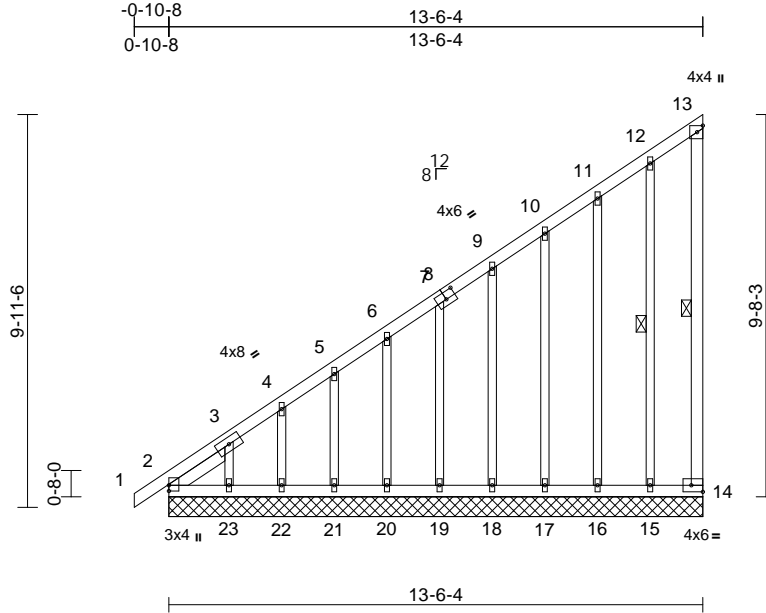
|         |       |                           |     |     |                          |
|---------|-------|---------------------------|-----|-----|--------------------------|
| Job     | Truss | Truss Type                | Qty | Ply |                          |
| P240301 | C4    | Monopitch Supported Gable | 1   | 1   | Job Reference (optional) |
|         |       |                           |     |     | I64525606                |

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Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Wed Mar 27 14:09:16

Page: 1

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Scale = 1:58.3

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

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      | DEFL | in       | (loc) | l/defl | L/d | PLATES        | GRIP     |
|-------------|-------|-----------------|-----------------|----------|------|----------|-------|--------|-----|---------------|----------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.77 | Vert(LL) | n/a   | -      | n/a | 999           | MT20     |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.37 | Vert(CT) | n/a   | -      | n/a | 999           | 244/190  |
| BCLL        | 0.0   | Rep Stress Incr | YES             | WB       | 0.14 | Horz(CT) | 0.00  | 14     | n/a | n/a           |          |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      |          |       |        |     |               |          |
|             |       |                 |                 |          |      |          |       |        |     | Weight: 96 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               |
| SLIDER    | Left 2x4 SP No.2 -- 1-8-10 |

#### 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 | 13-14, 12-15 |
|------|----------------|--------------|

|                  |  |
|------------------|--|
| REACTIONS (size) | 2=13-6-4, 14=13-6-4, 15=13-6-4, 16=13-6-4, 17=13-6-4, 18=13-6-4, 19=13-6-4, 20=13-6-4, 21=13-6-4, 22=13-6-4, 23=13-6-4 |
|------------------|--|

|            |  |
|------------|--|
| Max Horiz  | 2=399 (LC 9)   |
| Max Uplift | 2=101 (LC 8), 14=108 (LC 11), 15=83 (LC 12), 16=41 (LC 9), 17=63 (LC 12), 18=50 (LC 12), 19=53 (LC 12), 20=52 (LC 12), 21=51 (LC 12), 22=54 (LC 12), 23=118 (LC 12)          |
| Max Grav   | 2=258 (LC 20), 14=105 (LC 8), 15=124 (LC 20), 16=140 (LC 19), 17=122 (LC 19), 18=127 (LC 19), 19=126 (LC 19), 20=126 (LC 19), 21=126 (LC 19), 22=126 (LC 19), 23=160 (LC 19) |

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

|           |  |
|-----------|--|
| TOP CHORD | 1-2=0/16, 2-3=841/547, 3-4=686/452, 4-5=624/422, 5-6=566/394, 6-7=508/365, 7-9=449/337, 9-10=384/308, 10-11=316/282, 11-12=244/253, 12-13=127/149, 13-14=60/74 |
|-----------|--|

|           |   |
|-----------|---|
| BOT CHORD | 2-23=178/230, 22-23=178/230, 21-22=178/230, 20-21=178/230, 19-20=178/230, 18-19=178/230, 17-18=178/230, 16-17=178/230, 15-16=178/230, 14-15=178/230 |
| WEBS      | 12-15=221/207, 11-16=103/114, 10-17=98/107, 9-18=99/101, 7-19=99/90, 6-20=99/90, 5-21=99/99, 4-22=101/114, 3-23=179/231                             |

#### 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) -0-10-8 to 4-2-4, Exterior(2N) 4-2-4 to 13-4-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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 1-4-0 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 108 lb uplift at joint 14, 101 lb uplift at joint 2, 83 lb uplift at joint 15, 41 lb uplift at joint 16, 63 lb uplift at joint 17, 50 lb uplift at joint 18, 53 lb uplift at joint 19, 52 lb uplift at joint 20, 51 lb uplift at joint 21, 54 lb uplift at joint 22 and 118 lb uplift at joint 23.
- 9) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 2.

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

LOAD CASE(S) Standard



March 28, 2024

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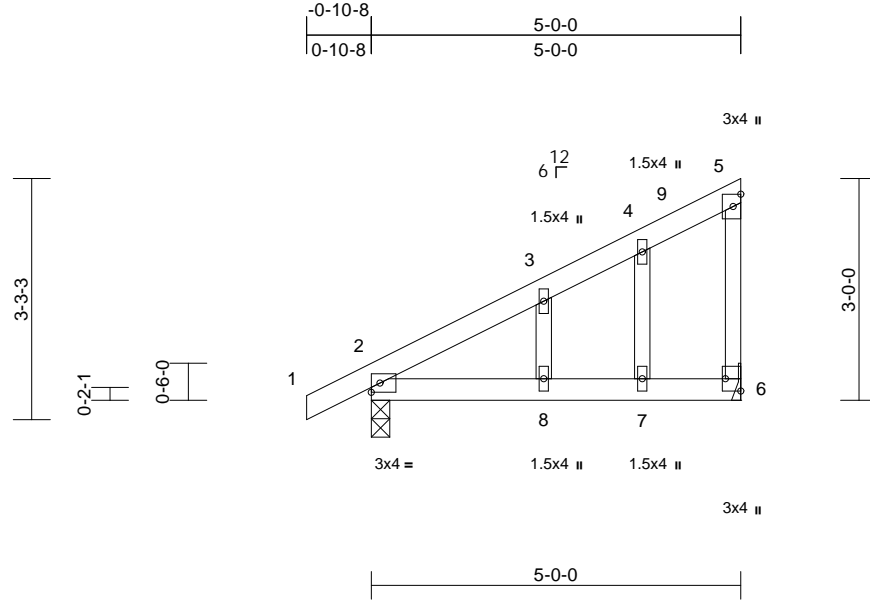
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|-----------|-------|------------|-----|-----|--------------------------|
| Job       | Truss | Truss Type | Qty | Ply |                          |
| P240301   | D1    | Monopitch  | 4   | 1   | Job Reference (optional) |
| I64525607 |       |            |     |     |                          |

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Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Wed Mar 27 14:09:16

Page: 1

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Scale = 1:31.2

Plate Offsets (X, Y): [6: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       | 0.20 | Vert(LL) | 0.04  | 7-8   | >999   | 240 | MT20          | 197/144  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.28 | Vert(CT) | -0.05 | 7-8   | >999   | 180 |               |          |
| BCLL        | 0.0   | Rep Stress Incr | YES             | WB       | 0.03 | Horz(CT) | 0.00  | 6     | n/a    | n/a |               |          |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      |          |       |       |        |     | Weight: 22 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 5-0-0 oc purlins, except end verticals. |
| BOT CHORD | Rigid ceiling directly applied or 10-0-0 oc bracing.                                  |

#### REACTIONS

|            |                              |
|------------|------------------------------|
| (size)     | 2=0-3-0, 6= Mechanical       |
| Max Horiz  | 2=123 (LC 9)                 |
| Max Uplift | 2=-59 (LC 12), 6=-60 (LC 12) |
| Max Grav   | 2=292 (LC 1), 6=207 (LC 1)   |

#### FORCES

|  |  |
|--|--|
| (lb) - Maximum Compression/Maximum Tension |  |
| TOP CHORD                                  | 1-2=0/17, 2-3=-169/71, 3-4=-102/61, 4-5=-65/57, 5-6=-106/113 |
| BOT CHORD                                  | 2-8=-67/74, 7-8=-67/74, 6-7=-67/74                           |
| WEBS                                       | 4-7=-36/69, 3-8=-48/105                                      |

#### 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) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 4-10-12 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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 studs spaced at 1-4-0 oc.
- 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 2 SP No. 2 crushing capacity of 565 psi.

- 6) Refer to girder(s) for truss to truss connections.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 60 lb uplift at joint 6 and 59 lb uplift at joint 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



March 28, 2024

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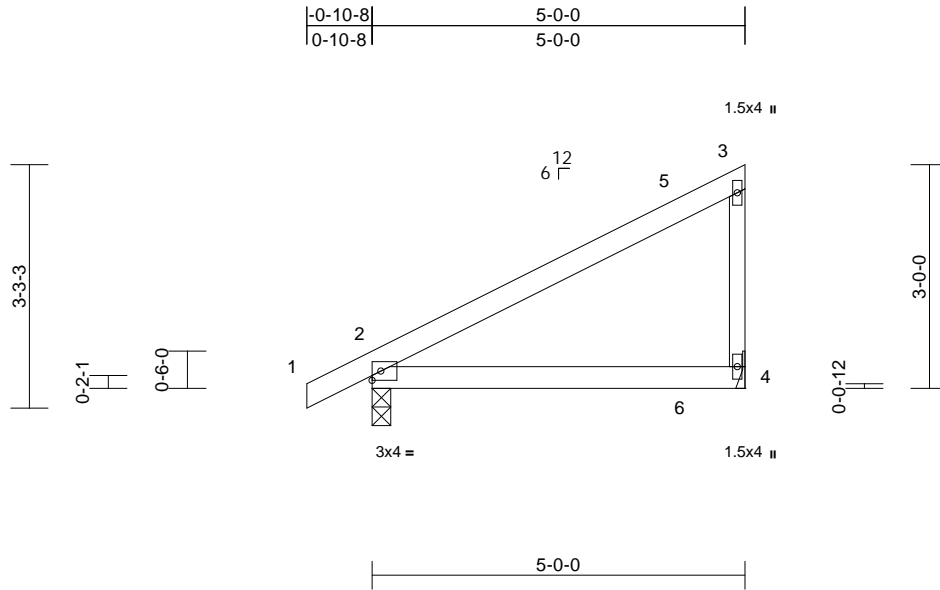
|                          |       |            |     |     |           |
|--------------------------|-------|------------|-----|-----|-----------|
| Job                      | Truss | Truss Type | Qty | Ply |           |
| P240301                  | D2    | Monopitch  | 10  | 1   | I64525608 |
| Job Reference (optional) |       |            |     |     |           |

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Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Wed Mar 27 14:09:16

Page: 1

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Scale = 1:30.9

| 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       | 0.48 | Vert(LL) | 0.09 | 2-4   | >603   | 240 | MT20          | 197/144  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.42 | Vert(CT) | 0.08 | 2-4   | >751   | 180 |               |          |
| BCLL        | 0.0   | Rep Stress Incr | YES             | WB       | 0.00 | Horz(CT) | 0.00 | 4     | n/a    | n/a |               |          |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-P |      |          |      |       |        |     | Weight: 19 lb | FT = 20% |

#### LUMBER

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

#### BRACING

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

**REACTIONS** (size) 2=0-3-0, 4= Mechanical  
Max Horiz 2=123 (LC 9)  
Max Uplift 2=-59 (LC 12), 4=-87 (LC 9)  
Max Grav 2=292 (LC 1), 4=207 (LC 1)

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

TOP CHORD 1-2=0/17, 2-3=-167/114, 3-4=-167/225  
BOT CHORD 2-4=-54/59

#### 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) -0-10-8 to 4-1-8,  
Interior (1) 4-1-8 to 4-10-12 zone; cantilever left and  
right exposed; end vertical left and right exposed; porch  
left and right exposed; C-C for members and forces &  
MWFRS for reactions shown; Lumber DOL=1.60 plate  
grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom  
chord live load nonconcurrent with any other live loads.
- 3) Bearings are assumed to be: Joint 2 SP No.2 crushing  
capacity of 565 psi.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to  
bearing plate capable of withstanding 87 lb uplift at joint  
4 and 59 lb uplift at joint 2.
- 6) This truss is designed in accordance with the 2018  
International Residential Code sections R502.11.1 and  
R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



March 28, 2024

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|         |       |            |     |     |                          |
|---------|-------|------------|-----|-----|--------------------------|
| Job     | Truss | Truss Type | Qty | Ply |                          |
| P240301 | PB1   | Piggyback  | 2   | 1   | Job Reference (optional) |

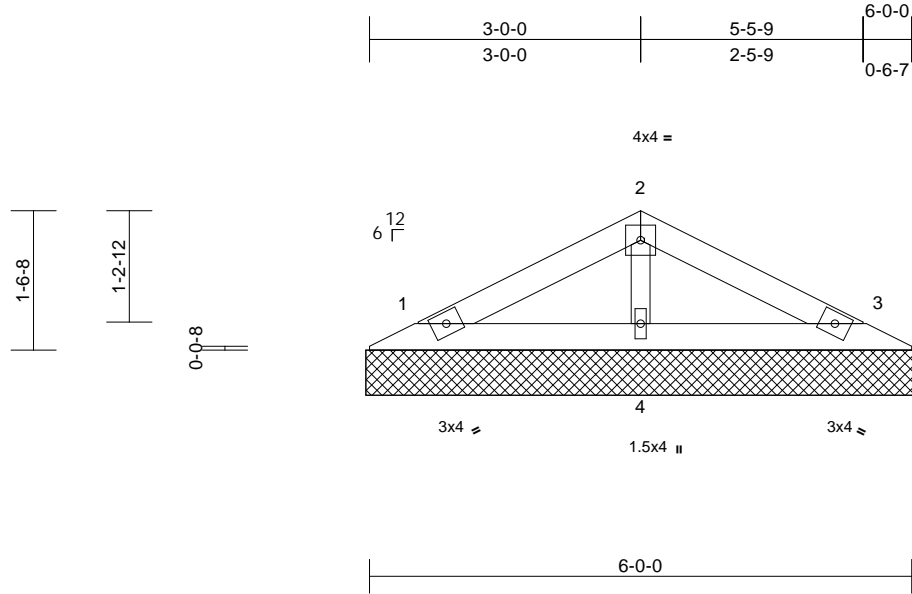
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Page: 1

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Scale = 1:25.5

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      | DEFL | in        | (loc) | l/defl | L/d | PLATES | GRIP                   |
|-------------|-------|-----------------|-----------------|----------|------|-----------|-------|--------|-----|--------|------------------------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.13 | Vert(LL)  | n/a   | -      | n/a | 999    | MT20                   |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.06 | Vert(TL)  | n/a   | -      | n/a | 999    | 244/190                |
| BCLL        | 0.0   | Rep Stress Incr | YES             | WB       | 0.03 | 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  
OTHERS 2x3 SPF No.2

#### BRACING

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

#### REACTIONS

(size) 1=6-1-0, 3=6-1-0, 4=6-1-0  
Max Horiz 1=23 (LC 12)  
Max Uplift 1=-30 (LC 12), 3=-34 (LC 13), 4=-7 (LC 12)  
Max Grav 1=115 (LC 1), 3=115 (LC 1), 4=211 (LC 1)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-55/46, 2-3=-55/52  
BOT CHORD 1-4=-1/25, 3-4=-1/25  
WEBS 2-4=-150/135

#### 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 1'-4" 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 30 lb uplift at joint 1, 34 lb uplift at joint 3 and 7 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.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard



March 28, 2024

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Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, and DSB-22** available from Truss Plate Institute ([www.tpinst.org](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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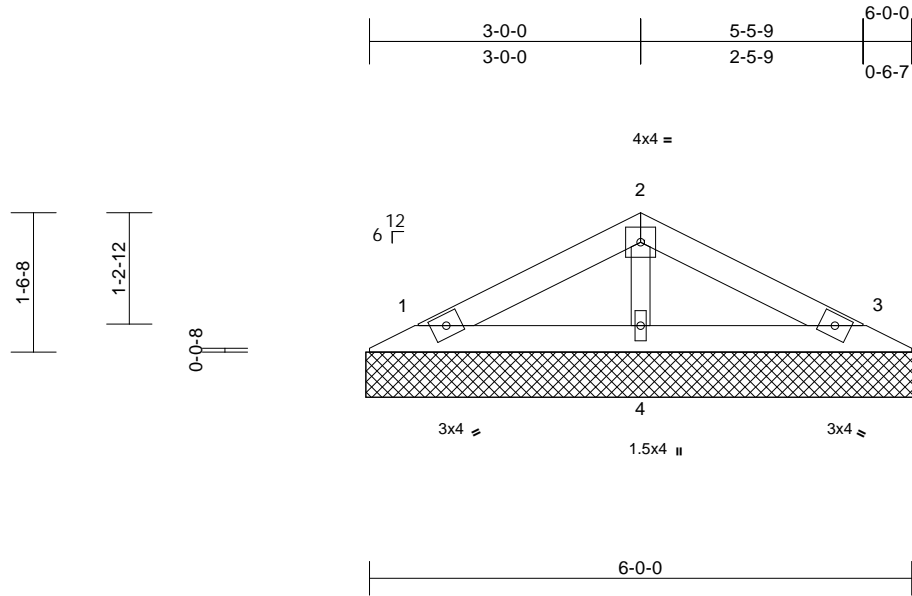
|         |       |            |     |     |                          |
|---------|-------|------------|-----|-----|--------------------------|
| Job     | Truss | Truss Type | Qty | Ply |                          |
| P240301 | PB2   | Piggyback  | 22  | 1   | Job Reference (optional) |
|         |       |            |     |     | I64525610                |

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

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Wed Mar 27 14:09:16

Page: 1

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Scale = 1:25.5

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      | DEFL | in        | (loc) | l/defl | L/d | PLATES | GRIP                   |
|-------------|-------|-----------------|-----------------|----------|------|-----------|-------|--------|-----|--------|------------------------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.13 | Vert(LL)  | n/a   | -      | n/a | 999    | MT20                   |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.06 | Vert(TL)  | n/a   | -      | n/a | 999    | 244/190                |
| BCLL        | 0.0   | Rep Stress Incr | YES             | WB       | 0.03 | 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  
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=6-1-0, 3=6-1-0, 4=6-1-0  
Max Horiz 1=23 (LC 12)  
Max Uplift 1=-30 (LC 12), 3=-34 (LC 13), 4=-7 (LC 12)  
Max Grav 1=115 (LC 1), 3=115 (LC 1), 4=211 (LC 1)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-55/46, 2-3=-55/52  
BOT CHORD 1-4=-1/25, 3-4=-1/25  
WEBS 2-4=-150/135

#### 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 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 30 lb uplift at joint 1, 34 lb uplift at joint 3 and 7 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.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard



March 28, 2024

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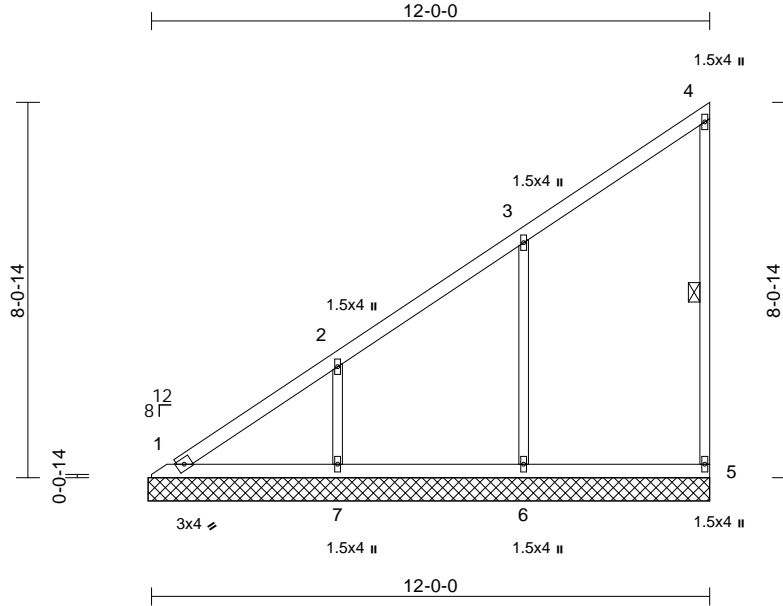
|                |             |                      |          |          |                                       |
|----------------|-------------|----------------------|----------|----------|---------------------------------------|
| Job<br>P240301 | Truss<br>V1 | Truss Type<br>Valley | Qty<br>2 | Ply<br>1 | Job Reference (optional)<br>I64525611 |
|----------------|-------------|----------------------|----------|----------|---------------------------------------|

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Scale = 1:49.5

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      | DEFL | in        | (loc) | l/defl | L/d | PLATES        | GRIP     |
|-------------|-------|-----------------|-----------------|----------|------|-----------|-------|--------|-----|---------------|----------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.25 | Vert(LL)  | 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       | 0.20 | Horiz(TL) | 0.00  | 5      | n/a |               |          |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      |           |       |        |     | Weight: 50 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" oc purlins, except end verticals. |
| BOT CHORD | Rigid ceiling directly applied or 10'-0" oc bracing.                                  |

|      |                |     |
|------|----------------|-----|
| WEBS | 1 Row at midpt | 4-5 |
|------|----------------|-----|

|           |            |  |
|-----------|------------|--|
| REACTIONS | (size)     | 1=12-0-15, 5=12-0-15, 6=12-0-15, 7=12-0-15                 |
|           | Max Horiz  | 1=335 (LC 12)  |
|           | Max Uplift | 5=-62 (LC 12), 6=-169 (LC 12), 7=-171 (LC 12)              |
|           | Max Grav   | 1=183 (LC 21), 5=149 (LC 19), 6=412 (LC 19), 7=388 (LC 19) |

#### FORCES

|           |  |
|-----------|--|
|           | (lb) - Maximum Compression/Maximum Tension           |
| TOP CHORD | 1-2=-377/251, 2-3=-228/156, 3-4=-104/51, 4-5=-116/84 |
| BOT CHORD | 1-7=-1/2, 6-7=-1/2, 5-6=-1/2                         |
| WEBS      | 3-6=-327/235, 2-7=-299/221                           |

#### 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) 0-7-13 to 5-7-13, Interior (1) 5-7-13 to 12-0-1 zone; cantilever left and right exposed; end vertical left 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 62 lb uplift at joint 5, 169 lb uplift at joint 6 and 171 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



March 28, 2024

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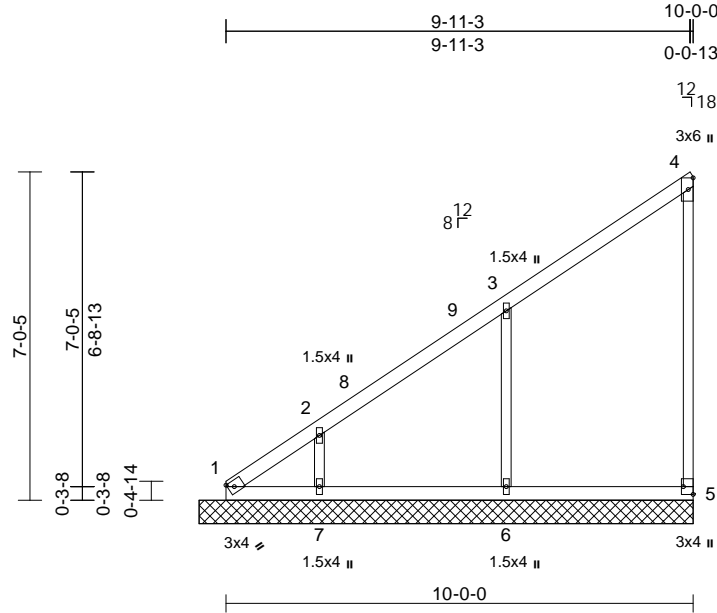
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|         |       |            |     |     |                          |
|---------|-------|------------|-----|-----|--------------------------|
| Job     | Truss | Truss Type | Qty | Ply |                          |
| P240301 | V2    | Valley     | 2   | 1   | Job Reference (optional) |
|         |       |            |     |     | I64525612                |

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Scale = 1:49.3

Plate Offsets (X, Y): [5: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       | 0.60 | 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       | 0.14 | Horiz(TL) | 0.00  | 5      | n/a | n/a    |                        |
| BCDL        | 10.0  | Code            | IRC2018/TPI2014 | Matrix-S |      |           |       |        |     |        | Weight: 42 lb FT = 20% |

#### LUMBER

|           |              |
|-----------|--------------|
| TOP CHORD | 2x4 SP No.2  |
| BOT CHORD | 2x4 SP No.2  |
| 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=10-6-15, 5=10-6-15, 6=10-6-15, 7=10-6-15                  |
|           | Max Horiz  | 1=285 (LC 9)  |
|           | Max Uplift | 1=-77 (LC 10), 5=-59 (LC 9), 6=-176 (LC 12), 7=-148 (LC 12) |
|           | Max Grav   | 1=164 (LC 9), 5=164 (LC 19), 6=426 (LC 19), 7=317 (LC 19)   |

#### FORCES

|           |  |
|-----------|--|
|           | (lb) - Maximum Compression/Maximum Tension             |
| TOP CHORD | 1-2=-503/322, 2-3=-372/260, 3-4=-177/152, 4-5=-129/138 |
| BOT CHORD | 1-7=-133/145, 6-7=-133/145, 5-6=-133/145               |
| WEBS      | 3-6=-344/303, 2-7=-249/215                             |

#### 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 10-6-1 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 77 lb uplift at joint 1, 59 lb uplift at joint 5, 176 lb uplift at joint 6 and 148 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



March 28, 2024

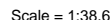
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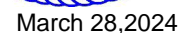


|  |   |
|--|---|
| <b>LUMBER</b>                              |   |
| TOP CHORD                                  | 2x4 SP No.2   |
| BOT CHORD                                  | 2x4 SP No.2   |
| WEBS                                       | 2x3 SPF No.2  |
| OTHERS                                     | 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=9-0-15, 4=9-0-15, 5=9-0-15  |
| Max Horiz                                  | 1=242 (LC 9)  |
| Max Uplift                                 | 1=-4 (LC 8), 4=-50 (LC 9), 5=-209 (LC 12)   |
| Max Grav                                   | 1=194 (LC 20), 4=143 (LC 19), 5=506 (LC 19)   |
| <b>FORCES</b>                              |   |
| (lb) - Maximum Compression/Maximum Tension |   |
| TOP CHORD                                  | 1-2=-388/267, 2-3=-172/145, 3-4=-134/142  |
| BOT CHORD                                  | 1-5=-116/126, 4-5=-116/126  |
| WEBS                                       | 2-5=-399/340  |

- 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 4 lb uplift at joint 1, 50 lb uplift at joint 4 and 209 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

- ## 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) 0-5-12 to 5-5-12,  
Interior (1) 5-5-12 to 9-0-1 zone; cantilever left and right  
exposed ; end vertical left and right exposed;C-C for  
members and forces & MWFRS for reactions shown;  
Lumber DOL=1.60 plate grip DOL=1.60
  - 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.



 **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 noted notes on this and included MiTek Reference Tag M-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/TP1 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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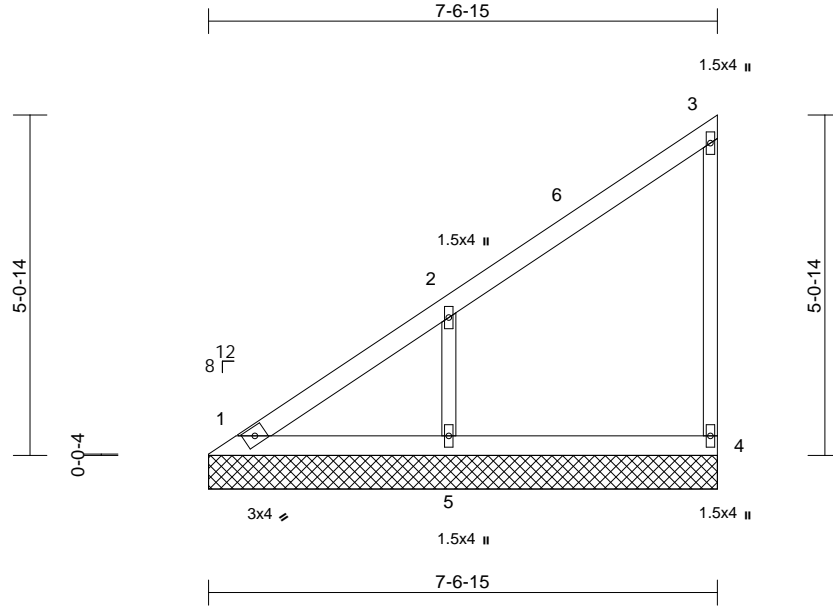


|         |       |            |     |     |                          |
|---------|-------|------------|-----|-----|--------------------------|
| Job     | Truss | Truss Type | Qty | Ply |                          |
| P240301 | V4    | Valley     | 2   | 1   | Job Reference (optional) |
|         |       |            |     |     | I64525614                |

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Page: 1



|                |       |                 |                 |            |      |             |      |       |        |     |               |             |
|----------------|-------|-----------------|-----------------|------------|------|-------------|------|-------|--------|-----|---------------|-------------|
| <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         | 0.45 | Vert(LL)    | n/a  | -     | n/a    | 999 | MT20          | 244/190     |
| TCDL           | 10.0  | Lumber DOL      | 1.15            | BC         | 0.13 | 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: 29 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=7-6-15, 4=7-6-15, 5=7-6-15                |
|                  | Max Horiz  | 1=199 (LC 9)                                |
|                  | Max Uplift | 1=-16 (LC 8), 4=-46 (LC 9), 5=-172 (LC 12)  |
|                  | Max Grav   | 1=132 (LC 20), 4=158 (LC 19), 5=418 (LC 19) |

|               |  |
|---------------|--|
| <b>FORCES</b> | (lb) - Maximum Compression/Maximum Tension |
|---------------|--|

|           |  |
|-----------|--|
| TOP CHORD | 1-2=-353/236, 2-3=-165/135, 3-4=-138/151 |
| BOT CHORD | 1-5=-96/105, 4-5=-96/105                 |
| WEBS      | 2-5=-330/305                             |

#### 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) 0-5-12 to 5-5-12,  
Interior (1) 5-5-12 to 7-6-1 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 16 lb uplift at joint  
1, 46 lb uplift at joint 4 and 172 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



March 28, 2024

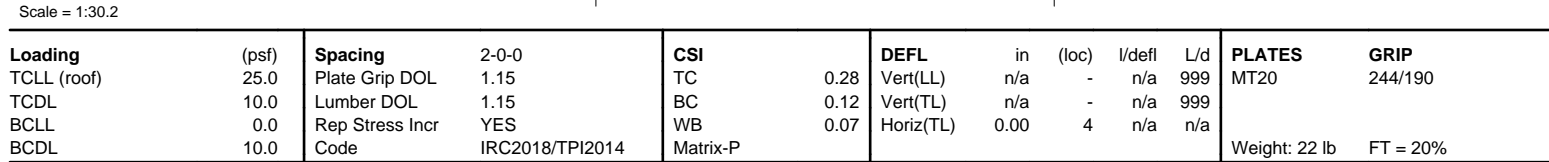
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Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters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

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- 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 56 lb uplift at joint 1, 41 lb uplift at joint 4 and 156 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

LOAD CASE(S) Standard

STATE OF MISSOURI  
NATHANIEL  
FOX  
MEMBER  
PE-2022042259  
PROFESSIONAL ENGINEER

March 28, 2024

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|         |       |            |     |     |                          |
|---------|-------|------------|-----|-----|--------------------------|
| Job     | Truss | Truss Type | Qty | Ply |                          |
| P240301 | V6    | Valley     | 2   | 1   | Job Reference (optional) |

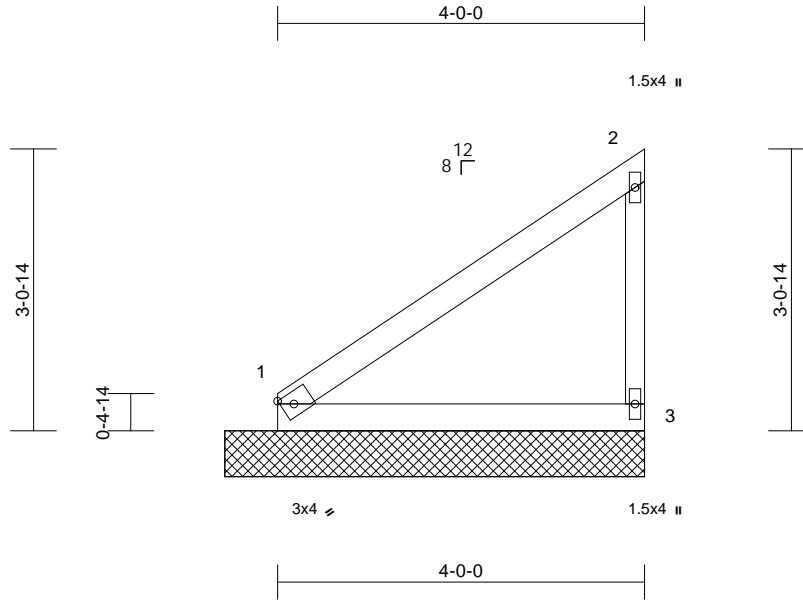
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Scale = 1:25.1

| Loading     | (psf) | Spacing         | 2-0-0           | CSI      | DEFL | in        | (loc) | l/defl | L/d | PLATES | GRIP                   |
|-------------|-------|-----------------|-----------------|----------|------|-----------|-------|--------|-----|--------|------------------------|
| TCLL (roof) | 25.0  | Plate Grip DOL  | 1.15            | TC       | 0.31 | Vert(LL)  | n/a   | -      | n/a | 999    | MT20                   |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.17 | 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: 15 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 4-7-5 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 1=4-6-15, 3=4-6-15  
 Max Horiz 1=114 (LC 9)  
 Max Uplift 1=-15 (LC 12), 3=-58 (LC 12)  
 Max Grav 1=169 (LC 1), 3=186 (LC 19)

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

TOP CHORD 1-2=-163/120, 2-3=-154/185  
 BOT CHORD 1-3=-55/60

**NOTES**

- 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 15 lb uplift at joint  
 1 and 58 lb uplift at joint 3.



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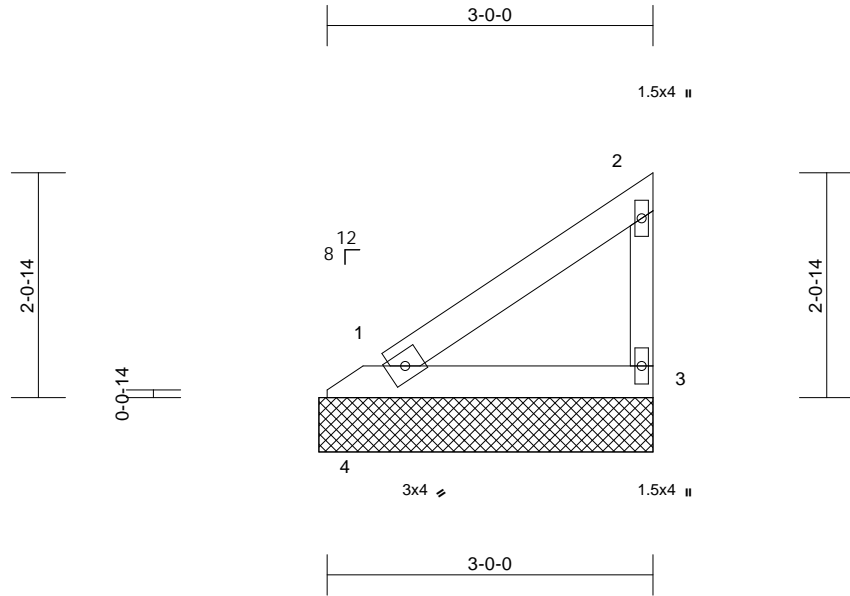
|                          |       |            |     |     |           |
|--------------------------|-------|------------|-----|-----|-----------|
| Job                      | Truss | Truss Type | Qty | Ply |           |
| P240301                  | V7    | Valley     | 2   | 1   | I64525617 |
| Job Reference (optional) |       |            |     |     |           |

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Scale = 1:21.2

| 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       | 0.11 | Vert(LL)  | n/a   | -      | n/a | 999    | MT20                   |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.05 | 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: 10 lb FT = 20% |

#### LUMBER

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

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 3-1-5 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 1=3-0-15, 3=3-0-15, 4=3-0-15  
Max Horiz 4=72 (LC 9)  
Max Uplift 3=39 (LC 12), 4=47 (LC 3)  
Max Grav 1=143 (LC 3), 3=110 (LC 19), 4=14 (LC 8)

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

TOP CHORD 1-2=-105/77, 2-3=-99/121  
BOT CHORD 1-4=-160/107, 1-3=-35/38

#### 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 39 lb uplift at joint  
3 and 47 lb uplift at joint 4.
- 8) This truss is designed in accordance with the 2018  
International Residential Code sections R502.11.1 and  
R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



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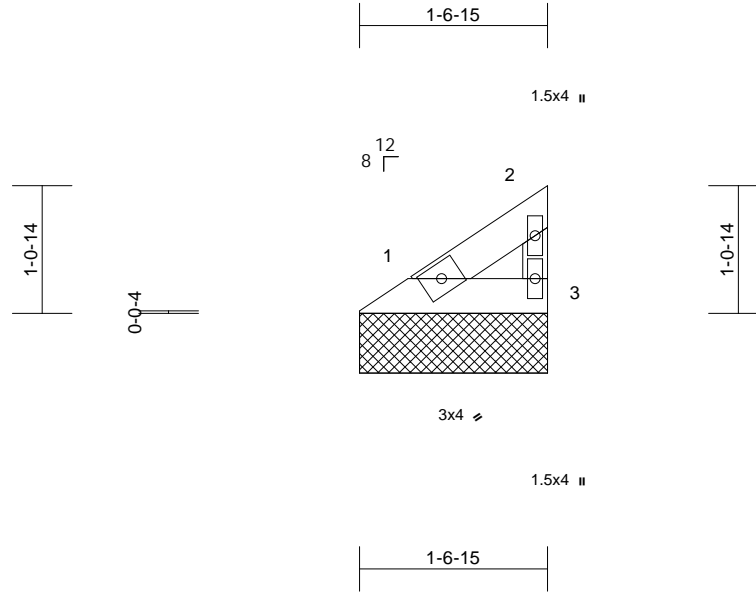
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|                          |       |            |     |     |           |
|--------------------------|-------|------------|-----|-----|-----------|
| Job                      | Truss | Truss Type | Qty | Ply |           |
| P240301                  | V8    | Valley     | 2   | 1   | I64525618 |
| Job Reference (optional) |       |            |     |     |           |

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Scale = 1:19.3

| 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       | 0.02 | Vert(LL)  | n/a   | -      | n/a | 999    | MT20                  |
| TCDL        | 10.0  | Lumber DOL      | 1.15            | BC       | 0.01 | 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: 5 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 1-7-5 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=1-6-15, 3=1-6-15

Max Horiz 1=29 (LC 9)  
Max Uplift 1=-5 (LC 12), 3=-15 (LC 12)  
Max Grav 1=46 (LC 1), 3=50 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-42/32, 2-3=-44/50  
BOT CHORD 1-3=-14/15

#### NOTES

- 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 5 lb uplift at joint 1  
and 15 lb uplift at joint 3.



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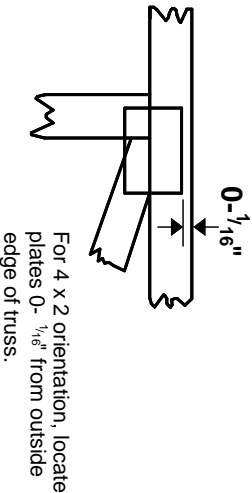
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## Symbols

### PLATE LOCATION AND ORIENTATION



\* 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

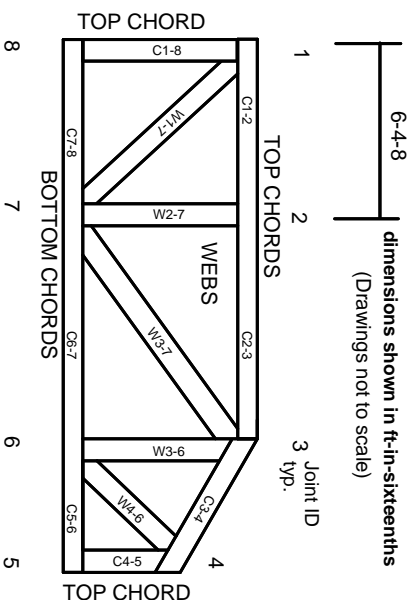


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

### Industry Standards:

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

## Numbering System



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

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

## Product Code Approvals

ICC-ES Reports:

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

## Design General Notes

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

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

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# MITek®

MITek Engineering Reference Sheet: MII-7473 rev. 1/2/2023

## 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.