RE: 210529
Lot 71 RR

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

**Site Information:**

Customer: Project Name: 210529
Lot/Block: Model:
Address: Subdivision:
City: State:

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

Design Code: IRC2018/TPI2014 Design Program: MiTek 20/20 8.4
Wind Code: ASCE 7 - 16[Low Rise] Wind Speed: 115 mph
Roof Load: 45.0 psf Floor Load: N/A psf

This package includes 81 individual, dated Truss Design Drawings and 0 Additional Drawings.

| No. | Seal# | Truss Name | Date | No. | Seal# | Truss Name | Date |
|---|---|---|---|---|---|---|---|
| 1 | I47674077 | A3 | 8/30/2021 | 21 | I47674097 | E3 | 8/30/2021 |
| 2 | I47674078 | A4 | 8/30/2021 | 22 | I47674098 | E4 | 8/30/2021 |
| 3 | I47674079 | A5 | 8/30/2021 | 23 | I47674099 | E5 | 8/30/2021 |
| 4 | I47674080 | B1 | 8/30/2021 | 24 | I47674100 | G1 | 8/30/2021 |
| 5 | I47674081 | B2 | 8/30/2021 | 25 | I47674101 | G2 | 8/30/2021 |
| 6 | I47674082 | B3 | 8/30/2021 | 26 | I47674102 | G3 | 8/30/2021 |
| 7 | I47674083 | C1 | 8/30/2021 | 27 | I47674103 | G4 | 8/30/2021 |
| 8 | I47674084 | C2 | 8/30/2021 | 28 | I47674104 | G5 | 8/30/2021 |
| 9 | I47674085 | C3 | 8/30/2021 | 29 | I47674105 | G6 | 8/30/2021 |
| 10 | I47674086 | C4 | 8/30/2021 | 30 | I47674106 | G7 | 8/30/2021 |
| 11 | I47674087 | C5 | 8/30/2021 | 31 | I47674107 | G8 | 8/30/2021 |
| 12 | I47674088 | C6 | 8/30/2021 | 32 | I47674108 | H1 | 8/30/2021 |
| 13 | I47674089 | C7 | 8/30/2021 | 33 | I47674109 | H2 | 8/30/2021 |
| 14 | I47674090 | D1 | 8/30/2021 | 34 | I47674110 | H3 | 8/30/2021 |
| 15 | I47674091 | D2 | 8/30/2021 | 35 | I47674111 | H4 | 8/30/2021 |
| 16 | I47674092 | D3 | 8/30/2021 | 36 | I47674112 | H5 | 8/30/2021 |
| 17 | I47674093 | D4 | 8/30/2021 | 37 | I47674113 | J4 | 8/30/2021 |
| 18 | I47674094 | D5 | 8/30/2021 | 38 | I47674114 | J5 | 8/30/2021 |
| 19 | I47674095 | E1 | 8/30/2021 | 39 | I47674115 | J6 | 8/30/2021 |
| 20 | I47674096 | E2 | 8/30/2021 | 40 | I47674116 | J7 | 8/30/2021 |

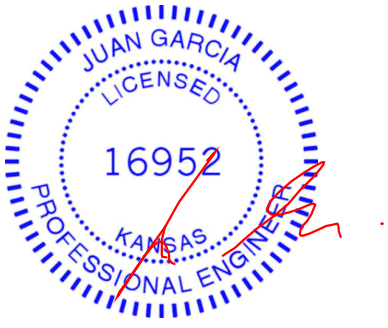
The truss drawing(s) referenced above have been prepared by MiTek USA, Inc under my direct supervision based on the parameters provided by Wheeler - Waverly.

Truss Design Engineer's Name: Garcia, Juan

My license renewal date for the state of Kansas is April 30, 2022.

Kansas COA: E-943

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




August 30, 2021

Garcia, Juan

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

RE: 210529 - Lot 71 RR

**Site Information:**

Project Customer: Project Name: 210529
Lot/Block: Subdivision:
Address:
City, County: State:

| No. | Seal# | Truss Name | Date |
|---|---|---|---|
| 41 | I47674117 | J8 | 8/30/2021 |
| 42 | I47674118 | J9 | 8/30/2021 |
| 43 | I47674119 | J10 | 8/30/2021 |
| 44 | I47674120 | J11 | 8/30/2021 |
| 45 | I47674121 | J12 | 8/30/2021 |
| 46 | I47674122 | J13 | 8/30/2021 |
| 47 | I47674123 | J14 | 8/30/2021 |
| 48 | I47674124 | J15 | 8/30/2021 |
| 49 | I47674125 | J16 | 8/30/2021 |
| 50 | I47674126 | J17 | 8/30/2021 |
| 51 | I47674127 | J18 | 8/30/2021 |
| 52 | I47674128 | J19 | 8/30/2021 |
| 53 | I47674129 | J20 | 8/30/2021 |
| 54 | I47674130 | J21 | 8/30/2021 |
| 55 | I47674131 | J22 | 8/30/2021 |
| 56 | I47674132 | J23 | 8/30/2021 |
| 57 | I47674133 | J24 | 8/30/2021 |
| 58 | I47674134 | J25 | 8/30/2021 |
| 59 | I47674135 | J26 | 8/30/2021 |
| 60 | I47674136 | J27 | 8/30/2021 |
| 61 | I47674137 | J28 | 8/30/2021 |
| 62 | I47674138 | J29 | 8/30/2021 |
| 63 | I47674139 | J30 | 8/30/2021 |
| 64 | I47674140 | J31 | 8/30/2021 |
| 65 | I47674141 | J32 | 8/30/2021 |
| 66 | I47674142 | J33 | 8/30/2021 |
| 67 | I47674143 | J34 | 8/30/2021 |
| 68 | I47674144 | J35 | 8/30/2021 |
| 69 | I47674145 | J36 | 8/30/2021 |
| 70 | I47674146 | J37 | 8/30/2021 |
| 71 | I47674147 | J38 | 8/30/2021 |
| 72 | I47674148 | K1 | 8/30/2021 |
| 73 | I47674149 | LAY1 | 8/30/2021 |
| 74 | I47674150 | LAY2 | 8/30/2021 |
| 75 | I47674151 | LAY3 | 8/30/2021 |
| 76 | I47674152 | LAY4 | 8/30/2021 |
| 77 | I47674153 | LAY5 | 8/30/2021 |
| 78 | I47674154 | LAY6 | 8/30/2021 |
| 79 | I47674155 | LAY7 | 8/30/2021 |
| 80 | I47674156 | LAY8 | 8/30/2021 |
| 81 | I47674157 | LAY9 | 8/30/2021 |

RE: 210529
Lot 71 RR

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

**Site Information:**

Customer: Project Name: 210529
Lot/Block: Model:
Address: Subdivision:
City: State:

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

Design Code: IRC2018/TPI2014 Design Program: MiTek 20/20 8.4
Wind Code: ASCE 7 - 16[Low Rise] Wind Speed: 115 mph
Roof Load: 45.0 psf Floor Load: N/A psf

This package includes 81 individual, dated Truss Design Drawings and 0 Additional Drawings.

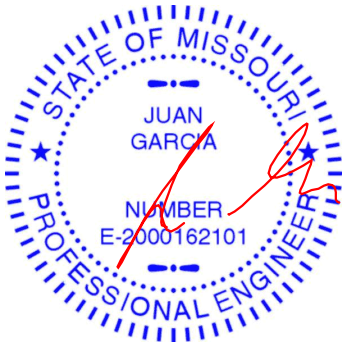
| No. | Seal# | Truss Name | Date | No. | Seal# | Truss Name | Date |
|---|---|---|---|---|---|---|---|
| 1 | I47674077 | A3 | 8/30/2021 | 21 | I47674097 | E3 | 8/30/2021 |
| 2 | I47674078 | A4 | 8/30/2021 | 22 | I47674098 | E4 | 8/30/2021 |
| 3 | I47674079 | A5 | 8/30/2021 | 23 | I47674099 | E5 | 8/30/2021 |
| 4 | I47674080 | B1 | 8/30/2021 | 24 | I47674100 | G1 | 8/30/2021 |
| 5 | I47674081 | B2 | 8/30/2021 | 25 | I47674101 | G2 | 8/30/2021 |
| 6 | I47674082 | B3 | 8/30/2021 | 26 | I47674102 | G3 | 8/30/2021 |
| 7 | I47674083 | C1 | 8/30/2021 | 27 | I47674103 | G4 | 8/30/2021 |
| 8 | I47674084 | C2 | 8/30/2021 | 28 | I47674104 | G5 | 8/30/2021 |
| 9 | I47674085 | C3 | 8/30/2021 | 29 | I47674105 | G6 | 8/30/2021 |
| 10 | I47674086 | C4 | 8/30/2021 | 30 | I47674106 | G7 | 8/30/2021 |
| 11 | I47674087 | C5 | 8/30/2021 | 31 | I47674107 | G8 | 8/30/2021 |
| 12 | I47674088 | C6 | 8/30/2021 | 32 | I47674108 | H1 | 8/30/2021 |
| 13 | I47674089 | C7 | 8/30/2021 | 33 | I47674109 | H2 | 8/30/2021 |
| 14 | I47674090 | D1 | 8/30/2021 | 34 | I47674110 | H3 | 8/30/2021 |
| 15 | I47674091 | D2 | 8/30/2021 | 35 | I47674111 | H4 | 8/30/2021 |
| 16 | I47674092 | D3 | 8/30/2021 | 36 | I47674112 | H5 | 8/30/2021 |
| 17 | I47674093 | D4 | 8/30/2021 | 37 | I47674113 | J4 | 8/30/2021 |
| 18 | I47674094 | D5 | 8/30/2021 | 38 | I47674114 | J5 | 8/30/2021 |
| 19 | I47674095 | E1 | 8/30/2021 | 39 | I47674115 | J6 | 8/30/2021 |
| 20 | I47674096 | E2 | 8/30/2021 | 40 | I47674116 | J7 | 8/30/2021 |

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

Truss Design Engineer's Name: Garcia, Juan

My license renewal date for the state of Missouri is December 31, 2022.

Missouri COA: 001193




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

August 30, 2021

Garcia, Juan

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

RE: 210529 - Lot 71 RR

**Site Information:**

Project Customer: Project Name: 210529
Lot/Block: Subdivision:
Address:
City, County: State:

| No. | Seal# | Truss Name | Date |
|---|---|---|---|
| 41 | I47674117 | J8 | 8/30/2021 |
| 42 | I47674118 | J9 | 8/30/2021 |
| 43 | I47674119 | J10 | 8/30/2021 |
| 44 | I47674120 | J11 | 8/30/2021 |
| 45 | I47674121 | J12 | 8/30/2021 |
| 46 | I47674122 | J13 | 8/30/2021 |
| 47 | I47674123 | J14 | 8/30/2021 |
| 48 | I47674124 | J15 | 8/30/2021 |
| 49 | I47674125 | J16 | 8/30/2021 |
| 50 | I47674126 | J17 | 8/30/2021 |
| 51 | I47674127 | J18 | 8/30/2021 |
| 52 | I47674128 | J19 | 8/30/2021 |
| 53 | I47674129 | J20 | 8/30/2021 |
| 54 | I47674130 | J21 | 8/30/2021 |
| 55 | I47674131 | J22 | 8/30/2021 |
| 56 | I47674132 | J23 | 8/30/2021 |
| 57 | I47674133 | J24 | 8/30/2021 |
| 58 | I47674134 | J25 | 8/30/2021 |
| 59 | I47674135 | J26 | 8/30/2021 |
| 60 | I47674136 | J27 | 8/30/2021 |
| 61 | I47674137 | J28 | 8/30/2021 |
| 62 | I47674138 | J29 | 8/30/2021 |
| 63 | I47674139 | J30 | 8/30/2021 |
| 64 | I47674140 | J31 | 8/30/2021 |
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| 69 | I47674145 | J36 | 8/30/2021 |
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| 75 | I47674151 | LAY3 | 8/30/2021 |
| 76 | I47674152 | LAY4 | 8/30/2021 |
| 77 | I47674153 | LAY5 | 8/30/2021 |
| 78 | I47674154 | LAY6 | 8/30/2021 |
| 79 | I47674155 | LAY7 | 8/30/2021 |
| 80 | I47674156 | LAY8 | 8/30/2021 |
| 81 | I47674157 | LAY9 | 8/30/2021 |

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | A3 | Hip Girder | 1 | 1 | Job Reference (optional) | I47674077 |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:14 Page: 1
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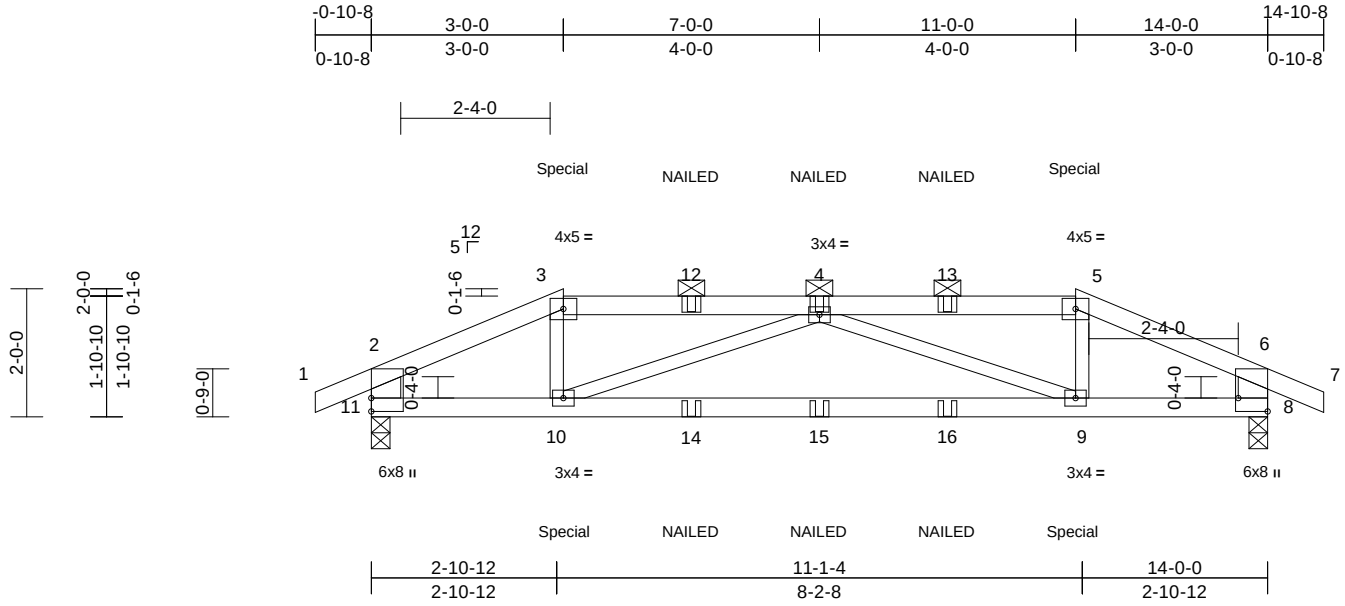


Scale = 1:36

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

| 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 | 0.83 | Vert(LL) | -0.16 | 9-10 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.73 | Vert(CT) | -0.36 | 9-10 | >452 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | NO | WB | 0.29 | Horz(CT) | 0.03 | 8 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | Wind(LL) | 0.10 | 9-10 | >999 | 240 | Weight: 46 lb | FT = 10% |

**LUMBER**
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 11-2,8-6:2x6 SP DSS

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 4-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins (5-10-9 max.): 3-5.
BOT CHORD Rigid ceiling directly applied or 8-11-14 oc bracing.

**REACTIONS** (lb/size) 8=743/0-3-8, 11=743/0-3-8
Max Horiz 11=17 (LC 7)
Max Uplift 8=-199 (LC 5), 11=-199 (LC 4)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/30, 2-3=-1064/250, 3-4=-892/235, 4-5=-892/236, 5-6=-1064/250, 6-7=0/30, 2-11=-674/167, 6-8=-674/167
BOT CHORD 10-11=-191/908, 9-10=-421/1414, 8-9=-186/908
WEBS 3-10=0/354, 5-9=0/354, 4-9=-576/251, 4-10=-576/251

**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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 199 lb uplift at joint 11 and 199 lb uplift at joint 8.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
9) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.
10) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 89 lb down and 138 lb up at 3-0-0, and 89 lb down and 138 lb up at 11-0-0 on top chord, and 30 lb down at 3-0-0, and 30 lb down at 10-11-4 on bottom chord. The design/ selection of such connection device(s) is the responsibility of others.
11) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-3=-70, 3-5=-70, 5-6=-70, 6-7=-70, 8-11=-20
Concentrated Loads (lb)
Vert: 3=-13 (F), 5=-13 (F), 10=-10 (F), 9=-10 (F), 4=-13 (F), 12=-13 (F), 13=-13 (F), 14=-10 (F), 15=-10 (F), 16=-10 (F)



August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | A4 | Hip | 1 | 1 | Job Reference (optional) | I47674078 |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:16 Page: 1
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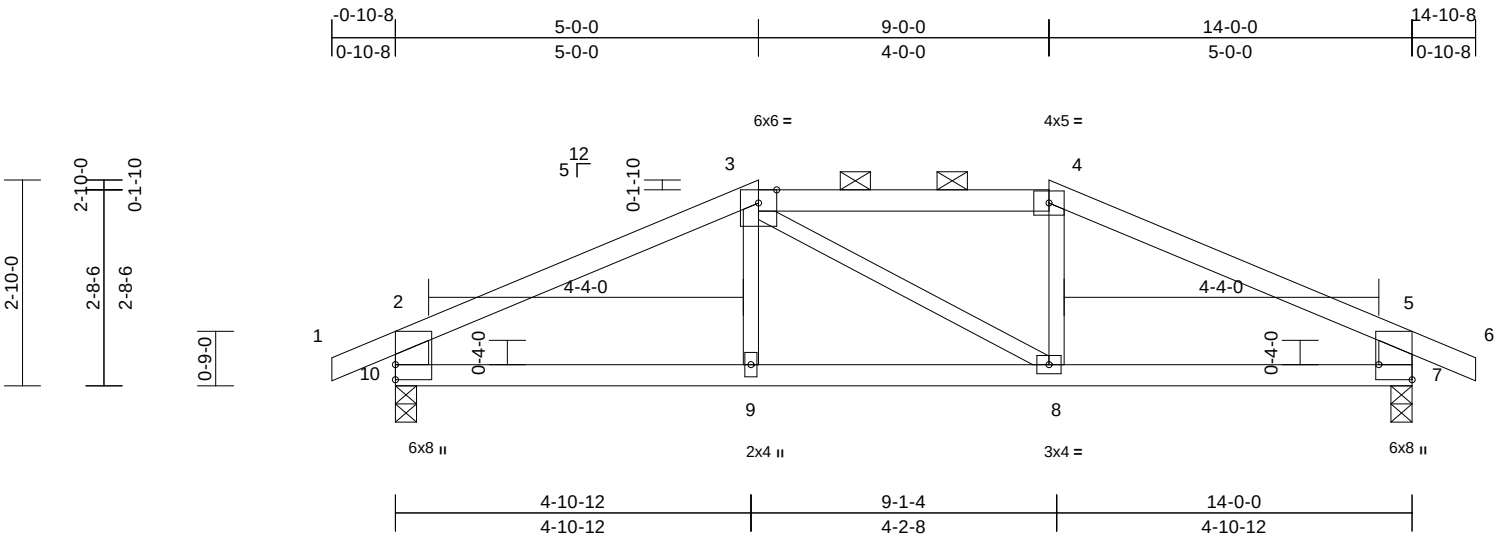


Scale = 1:31.7

Plate Offsets (X, Y): [7:Edge,0-5-8]

| 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 | 0.57 | Vert(LL) | -0.06 | 8-9 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.40 | Vert(CT) | -0.12 | 8-9 | >999 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.06 | Horz(CT) | 0.02 | 7 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | Wind(LL) | 0.04 | 8-9 | >999 | 240 | Weight: 44 lb | FT = 10% |

**LUMBER**
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 10-2,7-5:2x6 SPF No.2

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

**REACTIONS** (lb/size) 7=687/0-3-8, 10=687/0-3-8
Max Horiz 10=-24 (LC 13)
Max Uplift 7=-92 (LC 5), 10=-92 (LC 4)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/30, 2-3=-897/106, 3-4=-750/116, 4-5=-898/105, 5-6=0/30, 2-10=-610/119, 5-7=-610/119
BOT CHORD 9-10=-45/753, 8-9=-47/750, 7-8=-46/753
WEBS 3-9=0/159, 3-8=-98/98, 4-8=0/159

**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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 92 lb uplift at joint 10 and 92 lb uplift at joint 7.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) 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



August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | A5 | Common | 4 | 1 | Job Reference (optional) | I47674079 |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:17 Page: 1
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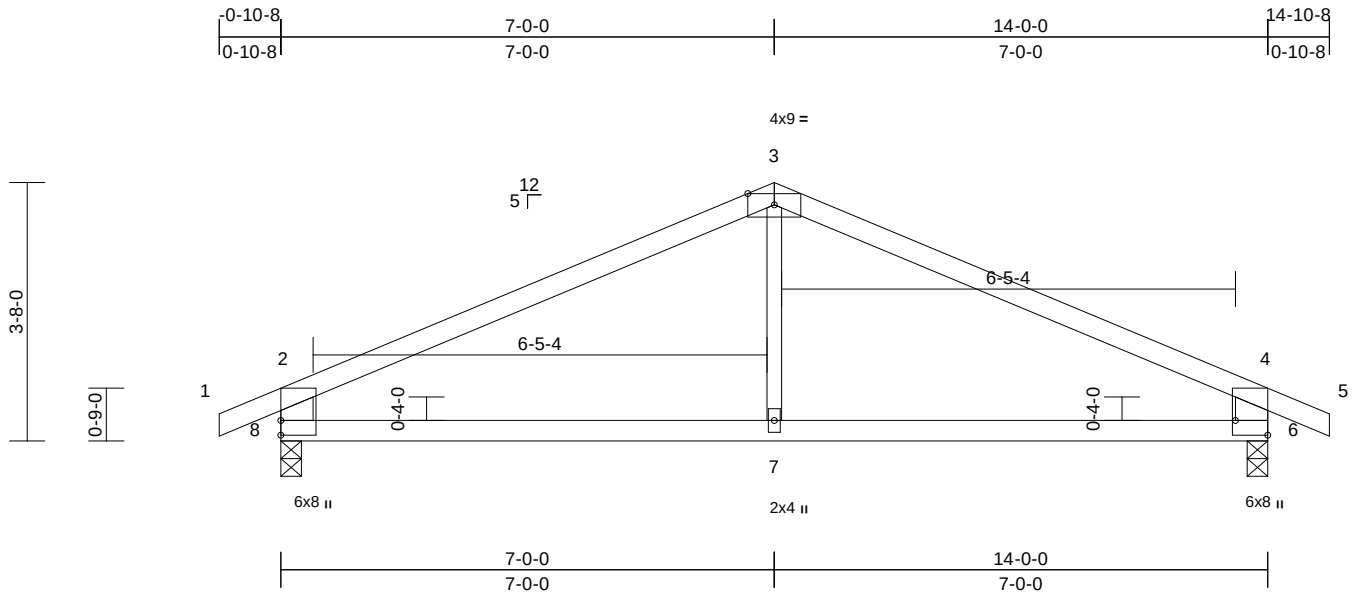



Scale = 1:32.7

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

| 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 | 0.61 | Vert(LL) | -0.05 | 6-7 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.36 | Vert(CT) | -0.10 | 6-7 | >999 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.09 | Horz(CT) | 0.01 | 6 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-R | | Wind(LL) | 0.02 | 7-8 | >999 | 240 | Weight: 39 lb | FT = 10% |

**LUMBER**
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x6 SPF No.2 *Except* 7-3:2x3 SPF No.2

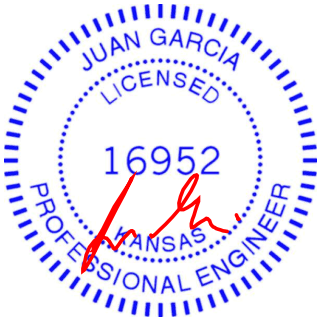
**BRACING**
TOP CHORD Structural wood sheathing directly applied or 5-8-5 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (lb/size) 6=687/0-3-8, 8=687/0-3-8
Max Horiz 8=-39 (LC 9)
Max Uplift 6=-103 (LC 9), 8=-103 (LC 8)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/30, 2-3=-819/104, 3-4=-819/104, 4-5=0/30, 2-8=-622/150, 4-6=-622/150
BOT CHORD 7-8=-31/660, 6-7=-31/660
WEBS 3-7=0/284

**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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 103 lb uplift at joint 8 and 103 lb uplift at joint 6.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard


August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | B1 | Hip Girder | 1 | 1 | Job Reference (optional) | I47674080 |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:17 Page: 1
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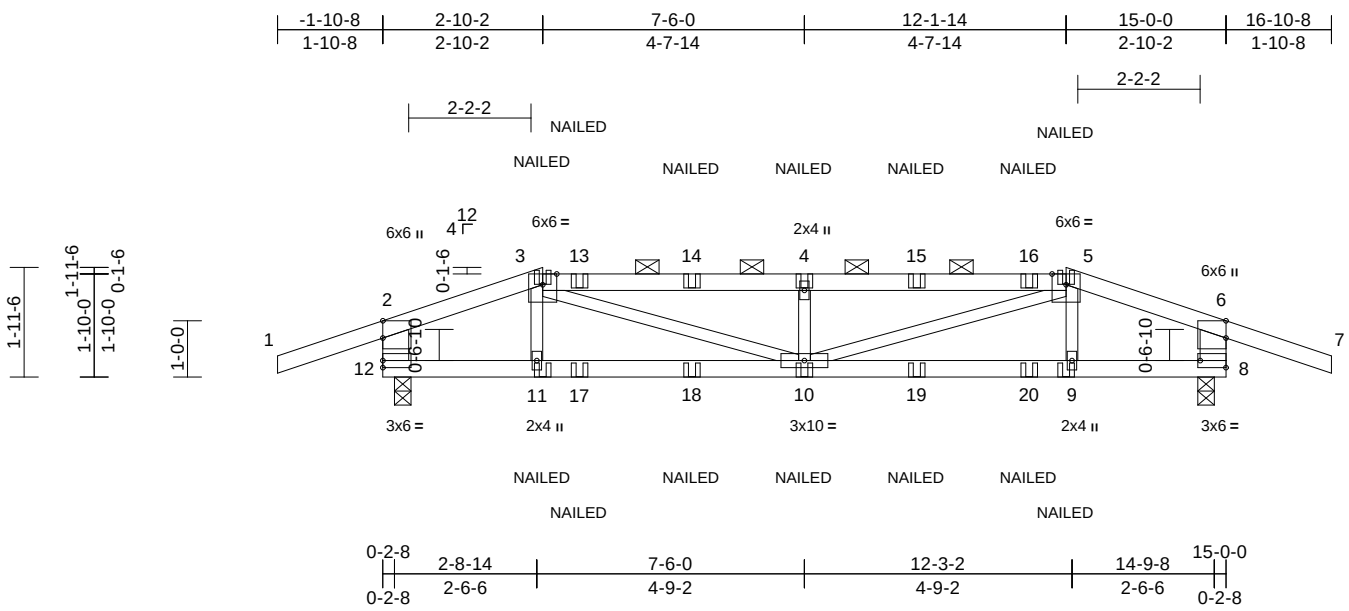


Scale = 1:41

Plate Offsets (X, Y): [2:0-3-11,Edge], [6:0-3-11,Edge], [8:Edge,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 | 0.70 | Vert(LL) | -0.12 | 9-10 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.75 | Vert(CT) | -0.22 | 9-10 | >784 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | NO | WB | 0.34 | Horz(CT) | 0.02 | 8 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | Wind(LL) | 0.11 | 10-11 | >999 | 240 | Weight: 52 lb | FT = 10% |

**LUMBER**
TOP CHORD 2x4 SPF 2100F 1.8E *Except* 3-5:2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 12-2,8-6:2x6 SPF No.2

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (4-0-8 max.): 3-5.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (lb/size) 8=834/0-3-8, 12=834/0-3-8
Max Horiz 12=-15 (LC 19)
Max Uplift 8=-242 (LC 5), 12=-242 (LC 4)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/47, 2-3=-882/185, 3-4=-1712/393, 4-5=-1712/393, 5-6=-882/185, 6-7=0/47, 2-12=-675/218, 6-8=-675/218
BOT CHORD 11-12=-118/759, 10-11=-124/765, 9-10=-127/765, 8-9=-122/759
WEBS 3-11=-91/90, 3-10=-238/999, 4-10=-469/209, 5-10=-238/999, 5-9=-91/90

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 242 lb uplift at joint 12 and 242 lb uplift at joint 8.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
9) "NAILED" indicates 2-12d (0.148"x3.25") toe-nails per NDS guidlines.
10) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-3=-70, 3-5=-70, 5-6=-70, 6-7=-70, 8-12=-20
Concentrated Loads (lb)
Vert: 11=8 (F), 10=-8 (F), 4=-8 (F), 9=8 (F), 13=-8 (F), 14=-8 (F), 15=-8 (F), 16=-8 (F), 17=-8 (F), 18=-8 (F), 19=-8 (F), 20=-8 (F)



August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | B2 | Hip | 1 | 1 | Job Reference (optional) | I47674081 |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:17
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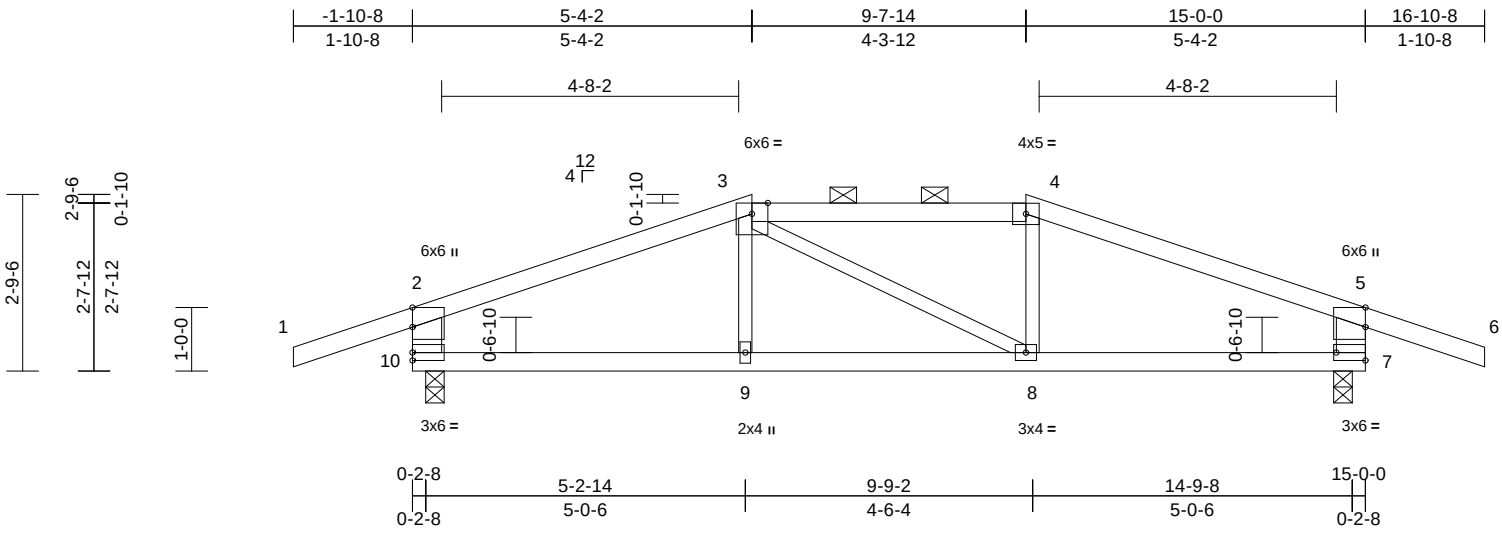


Scale = 1:36.3

Plate Offsets (X, Y): [2:0-3-11,Edge], [5:0-3-11,Edge], [7:Edge,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) | -0.18 | 8-9 | >991 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.74 | Vert(CT) | -0.32 | 8-9 | >540 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.06 | Horz(CT) | 0.02 | 7 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | Wind(LL) | 0.12 | 8-9 | >999 | 240 | Weight: 49 lb | FT = 10% |

**LUMBER**

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 10-2,7-5:2x6 SPF No.2

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins (5-8-5 max.): 3-4.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (lb/size) 7=802/0-3-8, 10=802/0-3-8
Max Horiz 10=-17 (LC 19)
Max Uplift 7=-202 (LC 5), 10=-202 (LC 4)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/47, 2-3=-930/139, 3-4=-802/153, 4-5=-930/139, 5-6=0/47, 2-10=-690/222, 5-7=-690/222
BOT CHORD 9-10=-73/803, 8-9=-76/802, 7-8=-58/803
WEBS 3-9=0/153, 3-8=-87/87, 4-8=-5/153

**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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 202 lb uplift at joint 10 and 202 lb uplift at joint 7.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) 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



August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | B3 | Common | 1 | 1 | Job Reference (optional) | I47674082 |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:18
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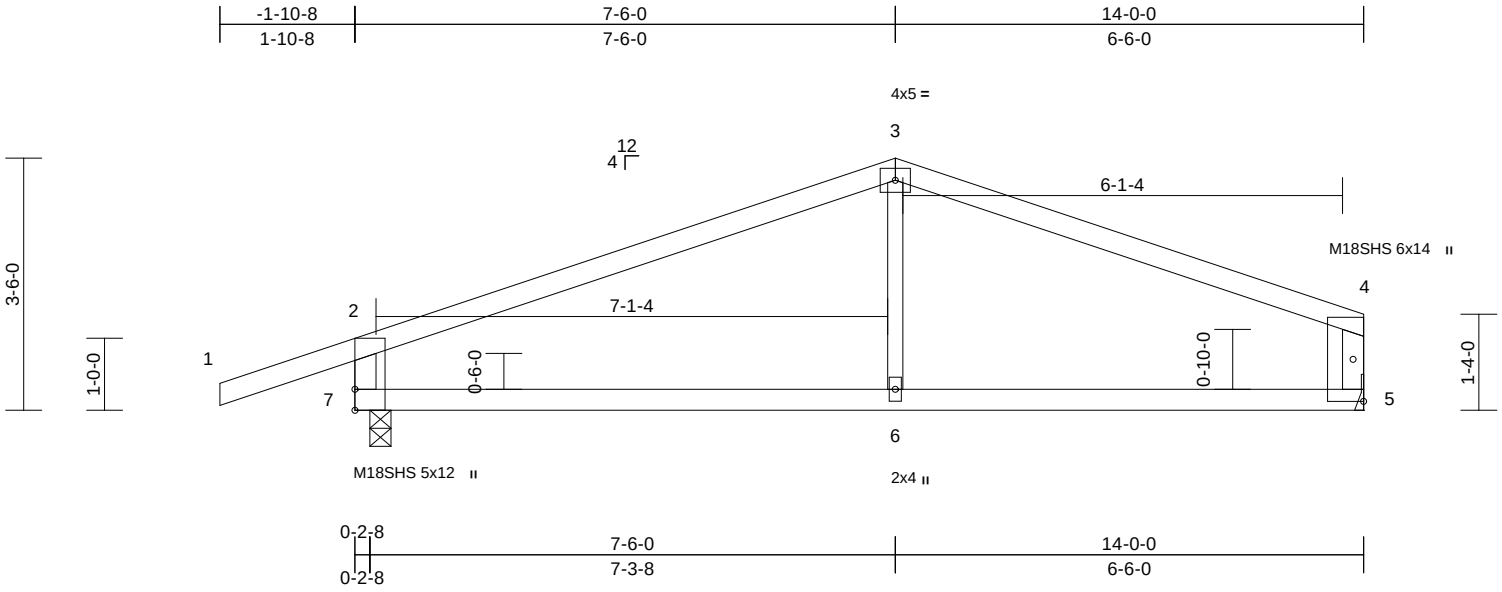


Scale = 1:32

| 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 | 0.83 | Vert(LL) | -0.17 | 6-7 | >972 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.69 | Vert(CT) | -0.35 | 6-7 | >474 | 240 | M18SHS | 197/144 |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.07 | Horz(CT) | 0.01 | 5 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-R | | Wind(LL) | 0.10 | 6-7 | >999 | 240 | Weight: 39 lb | FT = 10% |

**LUMBER**
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF 2100F 1.8E *Except* 6-3:2x3 SPF No.2

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

**REACTIONS** (lb/size) 5=606/ Mechanical, 7=769/0-3-8
Max Horiz 7=42 (LC 8)
Max Uplift 5=-86 (LC 5), 7=-183 (LC 4)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/45, 2-3=-767/107, 3-4=-754/108, 4-5=-483/118, 2-7=-666/226
BOT CHORD 6-7=-53/633, 5-6=-53/633
WEBS 3-6=0/230

**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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) All plates are MT20 plates unless otherwise indicated.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 183 lb uplift at joint 7 and 86 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



August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | I47674083 |
|---|---|---|---|---|---|---|
| 210529 | C1 | Hip Girder | 1 | 1 | Job Reference (optional) | |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:18 Page: 1
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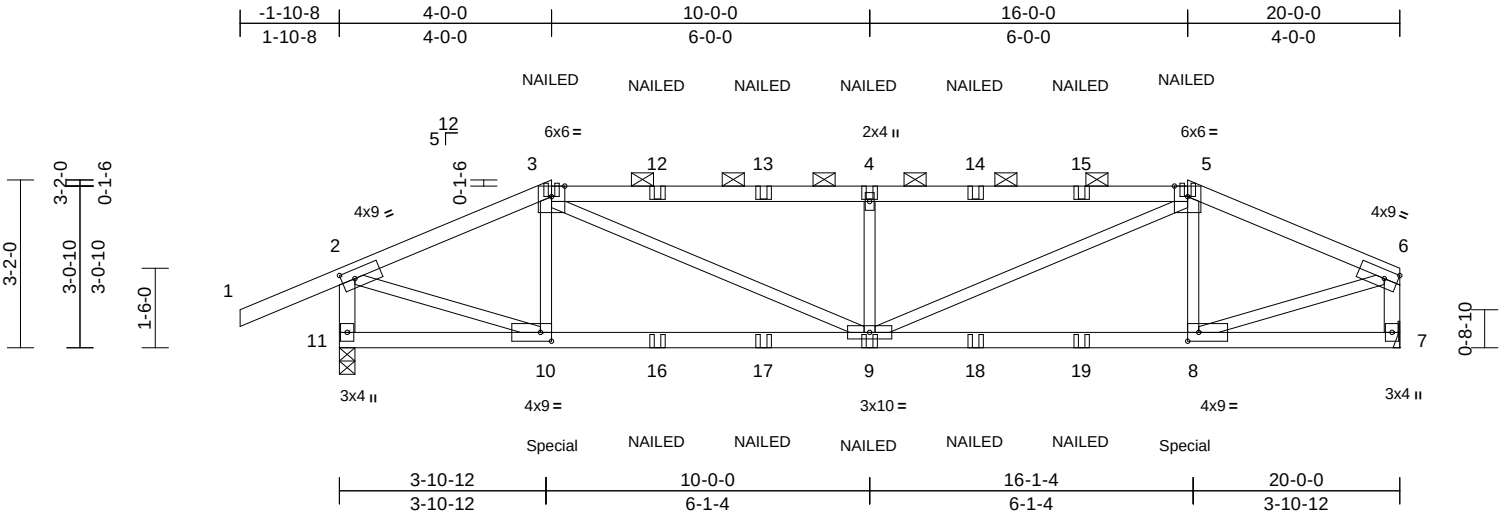


Scale = 1:43.5

Plate Offsets (X, Y): [2:0-2-15,0-2-0], [8:0-2-8,0-2-0], [10:0-2-8,0-2-0]

| 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 | 0.55 | Vert(LL) | -0.11 | 9 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.67 | Vert(CT) | -0.22 | 8-9 | >999 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | NO | WB | 0.64 | Horz(CT) | 0.04 | 7 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | Wind(LL) | 0.10 | 9 | >999 | 240 | Weight: 74 lb | FT = 10% |

**LUMBER**
TOP CHORD 2x4 SPF No.2 *Except* 3-5:2x4 SPF 2100F 1.8E
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 11-2,7-6:2x4 SPF No.2

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 4-0-2 oc purlins, except end verticals, and 2-0-0 oc purlins (3-11-13 max.): 3-5.
BOT CHORD Rigid ceiling directly applied or 8-10-12 oc bracing.

**REACTIONS** (lb/size) 7=1452/ Mechanical, 11=1608/0-3-8
Max Horiz 11=62 (LC 7)
Max Uplift 7=-321 (LC 5), 11=-385 (LC 4)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/54, 2-3=-1952/469, 3-4=-2911/727, 4-5=-2911/727, 5-6=-1981/467, 2-11=-1583/395, 6-7=-1425/330
BOT CHORD 10-11=-50/31, 9-10=-431/1770, 8-9=-430/1804, 7-8=-31/62
WEBS 3-10=-249/159, 3-9=-307/1284, 4-9=-808/390, 5-9=-301/1261, 5-8=-244/163, 2-10=-412/1849, 6-8=-421/1828

**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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 385 lb uplift at joint 11 and 321 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.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
10) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.
11) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 201 lb down and 55 lb up at 4-0-0, and 201 lb down and 55 lb up at 15-11-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
12) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-3=-70, 3-5=-70, 5-6=-70, 7-11=-20
Concentrated Loads (lb)
Vert: 3=-80 (F), 5=-80 (F), 10=-197 (F), 9=-38 (F), 4=-80 (F), 8=-197 (F), 12=-80 (F), 13=-80 (F), 14=-80 (F), 15=-80 (F), 16=-38 (F), 17=-38 (F), 18=-38 (F), 19=-38 (F)



August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | C2 | Roof Special Girder | 1 | 2 | Job Reference (optional) | I47674084 |

Wheeler Lumber, Waverly, KS - 66871,

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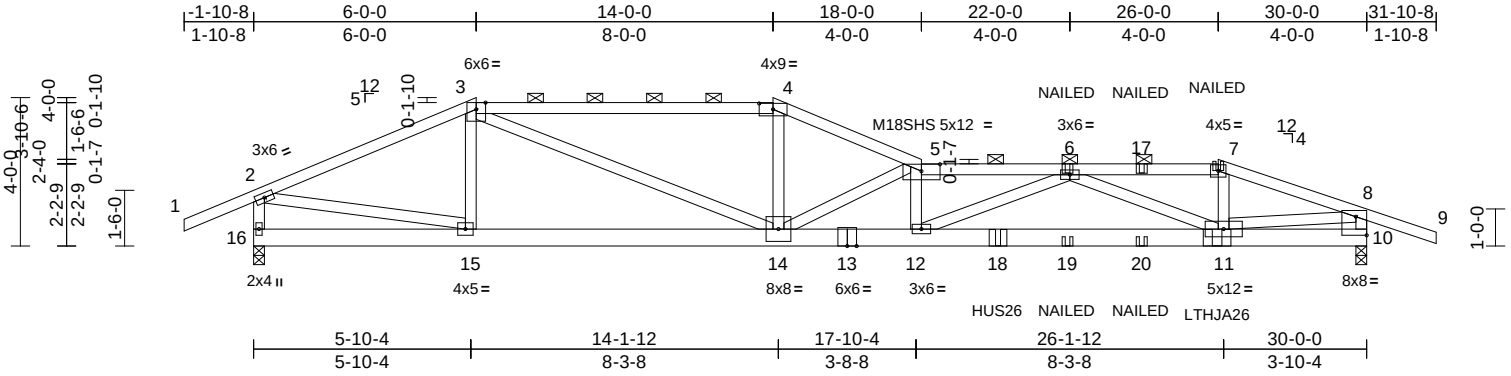



Scale = 1:62.1

Plate Offsets (X, Y): [4:0-4-8,0-1-15], [5:0-6-0,0-2-4], [10:Edge,0-6-0]

| 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 | 0.65 | Vert(LL) | -0.32 | 11-12 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.98 | Vert(CT) | -0.58 | 11-12 | >617 | 240 | M18SHS | 197/144 |
| BCLL | 0.0* | Rep Stress Incr | NO | WB | 0.56 | Horz(CT) | 0.06 | 10 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | Wind(LL) | 0.26 | 11-12 | >999 | 240 | Weight: 281 lb | FT = 10% |

**LUMBER**

TOP CHORD 2x4 SPF No.2 *Except* 3-4,5-7:2x4 SPF 2100F 1.8E

BOT CHORD 2x6 SPF No.2 *Except* 13-10:2x6 SPF 1650F 1.4E

WEBS 2x4 SPF No.2

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 5-3-6 oc purlins, except end verticals, and 2-0-0 oc purlins (5-2-5 max.): 3-4, 5-7.

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

**REACTIONS** (lb/size) 10=2623/0-3-8, 16=1923/0-3-8
Max Horiz 16=-39 (LC 9)
Max Uplift 10=-581 (LC 5), 16=-303 (LC 4)

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

TOP CHORD 1-2=0/54, 2-3=-2805/472, 3-4=-4536/862, 4-5=-4995/916, 5-6=-9472/1776, 6-7=-4734/914, 7-8=-5127/958, 8-9=0/45, 2-16=-1871/327, 8-10=-2680/594

BOT CHORD 15-16=-74/143, 14-15=-341/2538, 12-14=-1708/9503, 11-12=-1534/7822, 10-11=-67/323

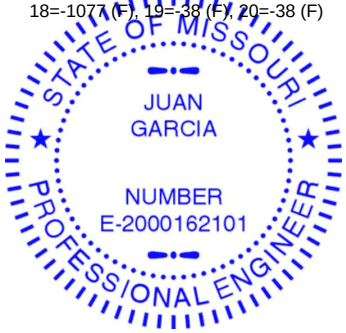
WEBS 3-15=-322/163, 3-14=-441/2252, 4-14=-180/1429, 5-14=-5469/1083, 5-12=-210/575, 7-11=-152/1288, 2-15=-349/2439, 8-11=-841/4579, 6-12=-183/1802, 6-11=-3382/760

**NOTES**

1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-7-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) Provide adequate drainage to prevent water ponding.
6) All plates are MT20 plates unless otherwise indicated.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 303 lb uplift at joint 16 and 581 lb uplift at joint 10.
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.
12) Use Simpson Strong-Tie HUS26 (14-10d Girder, 4-10d Truss) or equivalent at 20-0-12 from the left end to connect truss(es) to front face of bottom chord.
13) Use Simpson Strong-Tie LTHJA26 (LTHJA26 on 2 ply, Right Hand Hip) or equivalent at 25-11-10 from the left end to connect truss(es) to front face of bottom chord.
14) Fill all nail holes where hanger is in contact with lumber.
15) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.

**LOAD CASE(S)** Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-3=-70, 3-4=-70, 4-5=-70, 5-7=-70, 7-8=-70, 8-9=-70, 10-16=-20
Concentrated Loads (lb)
Vert: 7=-80 (F), 11=-197 (F), 6=-80 (F), 17=-80 (F), 18=-1077 (F), 19=-38 (F), 20=-38 (F)





August 30,2021

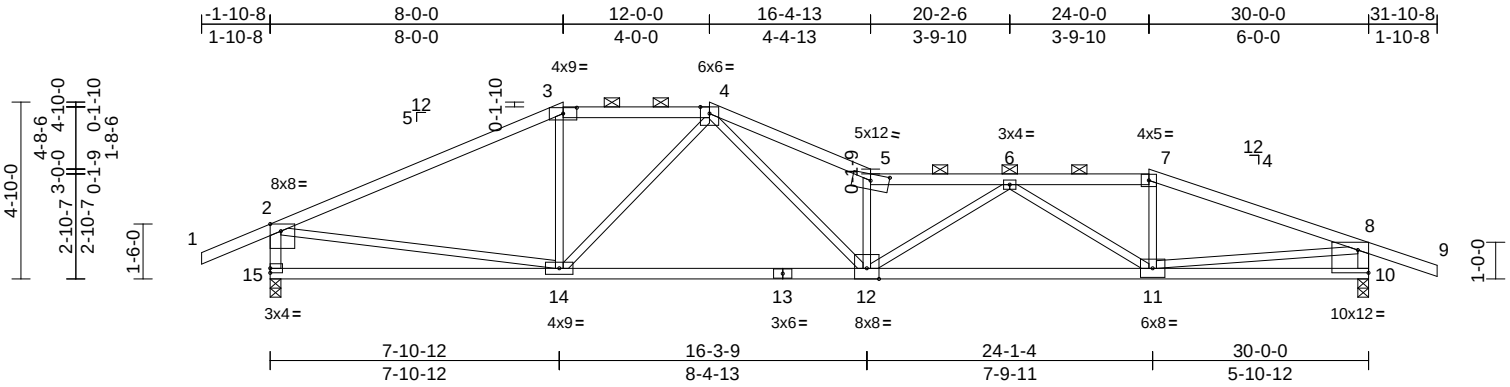


MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | C3 | Roof Special | 1 | 1 | Job Reference (optional) | I47674085 |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:19 Page: 1
ID:_Cex3H3UMZljV8UGZJPWd4z1kqC-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f




Scale = 1:62.9

Plate Offsets (X, Y): [2:0-3-8,Edge], [3:0-4-8,0-1-15], [5:0-6-0,0-2-3], [10:Edge,0-7-8]

| 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) | -0.29 | 11-12 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.95 | Vert(CT) | -0.54 | 11-12 | >658 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.77 | Horz(CT) | 0.08 | 10 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | Wind(LL) | 0.21 | 11-12 | >999 | 240 | Weight: 111 lb | FT = 10% |

**LUMBER**
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 15-2,10-8:2x4 SPF No.2

**BRACING**
TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (2-8-10 max.): 3-4, 5-7.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
2-2-0 oc bracing: 11-12.

**REACTIONS** (lb/size) 10=1478/0-3-8, 15=1478/0-3-8
Max Horiz 15=-51 (LC 9)
Max Uplift 10=-298 (LC 5), 15=-152 (LC 4)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/54, 2-3=-2009/250, 3-4=-1743/256, 4-5=-4004/574, 5-6=-3727/506, 6-7=-2344/370, 7-8=-2558/365, 8-9=0/45, 2-15=-1406/192, 8-10=-1418/323
BOT CHORD 14-15=-131/284, 12-14=-185/2098, 11-12=-435/3322, 10-11=-78/313
WEBS 3-14=-5/413, 5-12=-1726/320, 7-11=0/510, 2-14=-91/1485, 8-11=-236/2066, 4-14=-626/161, 4-12=-340/2248, 6-12=-8/482, 6-11=-1175/198

**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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 152 lb uplift at joint 15 and 298 lb uplift at joint 10.
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



August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | I47674086 |
|---|---|---|---|---|---|---|
| 210529 | C4 | Roof Special | 1 | 1 | Job Reference (optional) | |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:19 Page: 1
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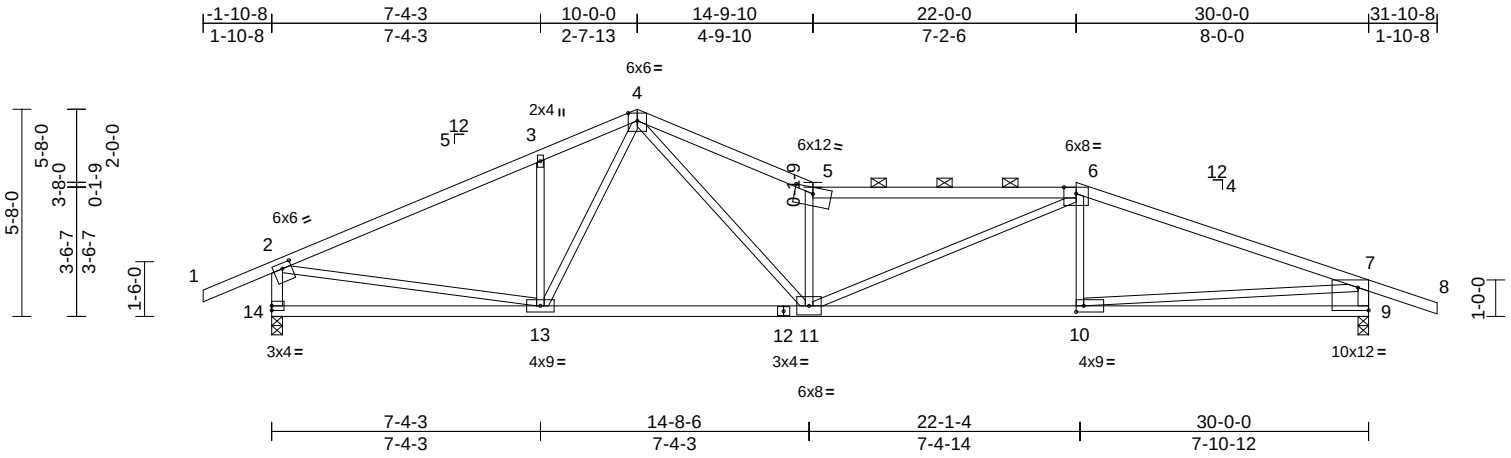


Scale = 1:63

Plate Offsets (X, Y): [2:0-3-0,0-1-12], [5:0-6-0,0-2-3], [9:Edge,0-7-8], [10:0-2-8,0-2-0]

| 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 | 0.87 | Vert(LL) | -0.22 | 10-11 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.70 | Vert(CT) | -0.42 | 10-11 | >850 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.71 | Horz(CT) | 0.06 | 9 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | Wind(LL) | 0.16 | 10-11 | >999 | 240 | Weight: 114 lb | FT = 10% |

**LUMBER**

TOP CHORD 2x4 SPF No.2 *Except* 5-6,6-8:2x4 SPF 2100F 1.8E
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 14-2,9-7:2x4 SPF No.2

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 2-8-9 oc purlins, except end verticals, and 2-0-0 oc purlins (2-2-0 max.): 5-6.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (lb/size) 9=1478/0-3-8, 14=1478/0-3-8
Max Horiz 14=-67 (LC 13)
Max Uplift 9=-290 (LC 5), 14=-172 (LC 8)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/54, 2-3=-1996/239, 3-4=-1947/282, 4-5=-3305/541, 5-6=-3025/455, 6-7=-2591/392, 7-8=0/45, 2-14=-1409/210, 7-9=-1400/330
BOT CHORD 13-14=-107/211, 11-13=-81/1617, 10-11=-294/2374, 9-10=-145/544
WEBS 5-11=-1702/384, 6-11=-80/715, 6-10=-23/196, 7-10=-146/1838, 4-11=-371/2055, 4-13=-135/423, 3-13=-402/216, 2-13=-122/1561

**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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 172 lb uplift at joint 14 and 290 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



August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | I47674087 |
|---|---|---|---|---|---|---|
| 210529 | C5 | Roof Special | 1 | 1 | Job Reference (optional) | |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:20
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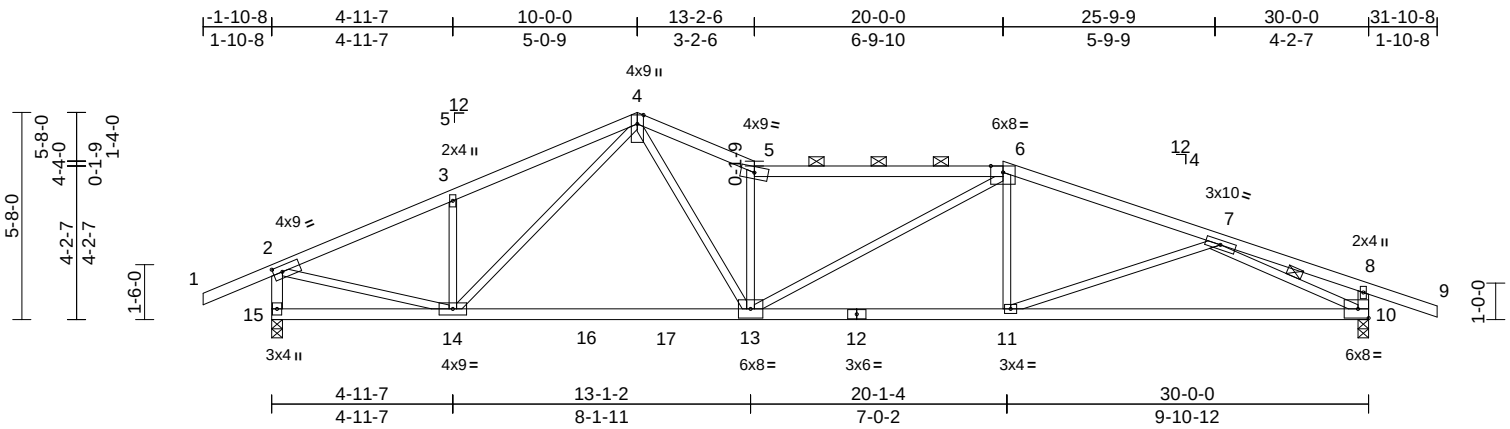



Scale = 1:63

Plate Offsets (X, Y): [2:0-2-15,0-2-0]

| 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 | 0.69 | Vert(LL) | -0.25 | 13-14 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.83 | Vert(CT) | -0.45 | 10-11 | >788 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.61 | Horz(CT) | 0.07 | 10 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | Wind(LL) | 0.12 | 11-13 | >999 | 240 | Weight: 115 lb | FT = 10% |

**LUMBER**

TOP CHORD 2x4 SPF No.2 *Except* 5-6:2x4 SPF 2100F 1.8E

BOT CHORD 2x4 SPF No.2 *Except* 12-10:2x4 SPF 2100F 1.8E

WEBS 2x3 SPF No.2 *Except* 15-2,10-8:2x4 SPF No.2

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 2-7-11 oc purlins, except end verticals, and 2-0-0 oc purlins (3-10-7 max.): 5-6.

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

WEBS 1 Row at midpt 7-10

**REACTIONS** (lb/size) 10=1478/0-3-8, 15=1478/0-3-8
Max Horiz 15=-67 (LC 9)
Max Uplift 10=-297 (LC 5), 15=-172 (LC 8)
Max Grav 10=1501 (LC 2), 15=1512 (LC 2)

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

TOP CHORD 1-2=0/54, 2-3=-1984/199, 3-4=-1985/257, 4-5=-2842/446, 5-6=-2608/378, 6-7=-2540/377, 7-8=-336/0, 8-9=0/45, 2-15=-1458/189, 8-10=-347/118

BOT CHORD 14-15=-56/99, 13-14=-83/1686, 11-13=-245/2363, 10-11=-367/2175

WEBS 4-13=-284/1771, 5-13=-1409/324, 6-13=-75/287, 6-11=0/289, 7-11=0/241, 2-14=-119/1790, 7-10=-2219/500, 3-14=-357/192, 4-14=-115/271

**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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 172 lb uplift at joint 15 and 297 lb uplift at joint 10.
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



August 30,2021



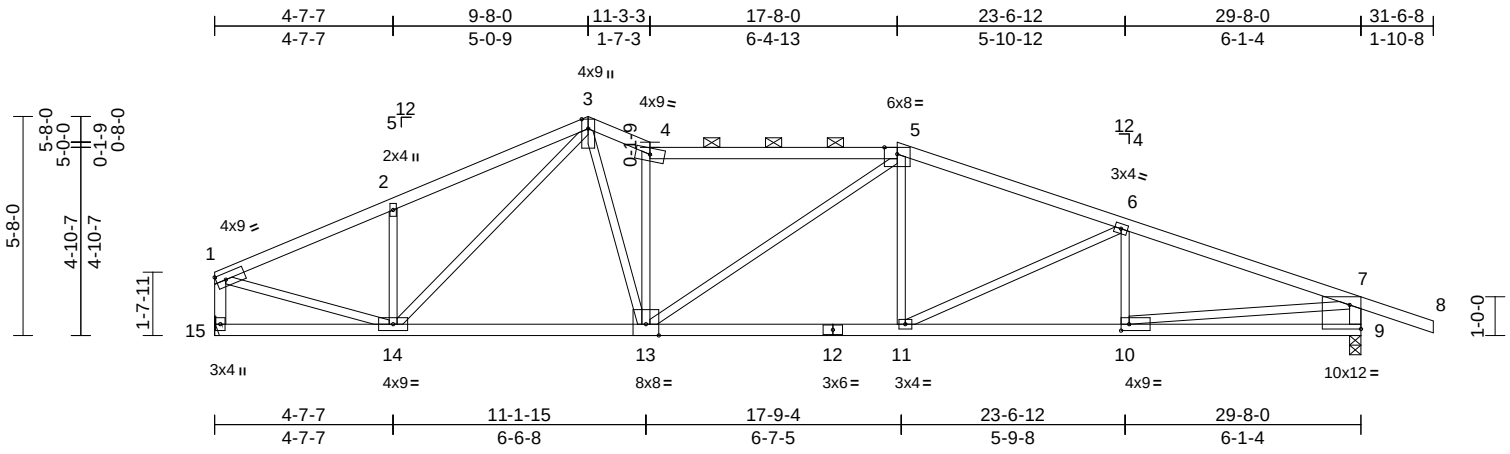
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | I47674088 |
|---|---|---|---|---|---|---|
| 210529 | C6 | Roof Special | 1 | 1 | Job Reference (optional) | |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:20 ID:VS6jnp933DYOCU3SZ4?Z?3z1kmC-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1




Scale = 1:59.6

Plate Offsets (X, Y): [9:Edge,0-7-8], [10:0-2-8,0-2-0]

| 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 | 0.93 | Vert(LL) | -0.14 | 10-11 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.64 | Vert(CT) | -0.28 | 11-13 | >999 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.71 | Horz(CT) | 0.06 | 9 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | Wind(LL) | 0.11 | 10-11 | >999 | 240 | Weight: 115 lb | FT = 10% |

**LUMBER**

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 15-1,9-7:2x4 SPF No.2

**BRACING**

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

**REACTIONS** (lb/size) 9=1468/0-3-8, 15=1317/ Mechanical
Max Horiz 15=-82 (LC 9)
Max Uplift 9=-302 (LC 5), 15=-128 (LC 5)

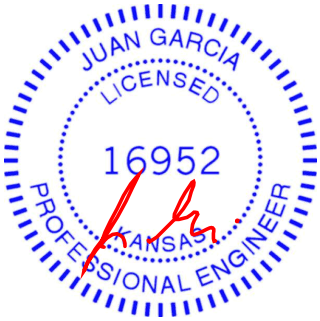
**FORCES** (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-1773/209, 2-3=-1793/273, 3-4=-2186/372, 4-5=-1992/324, 5-6=-2216/372, 6-7=-2519/402, 7-8=0/45, 1-15=-1274/147, 7-9=-1397/332
BOT CHORD 14-15=-33/114, 13-14=-72/1590, 11-13=-207/2041, 10-11=-317/2322, 9-10=-49/284
WEBS 2-14=-369/196, 3-14=-197/196, 3-13=-251/1397, 4-13=-1175/280, 5-13=-192/106, 5-11=0/336, 6-11=-339/122, 6-10=-159/115, 1-14=-144/1591, 7-10=-297/2054

**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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 128 lb uplift at joint 15 and 302 lb uplift at joint 9.
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


August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | C7 | Roof Special | 1 | 1 | Job Reference (optional) | I47674089 |

Wheeler Lumber, Waverly, KS - 66871,

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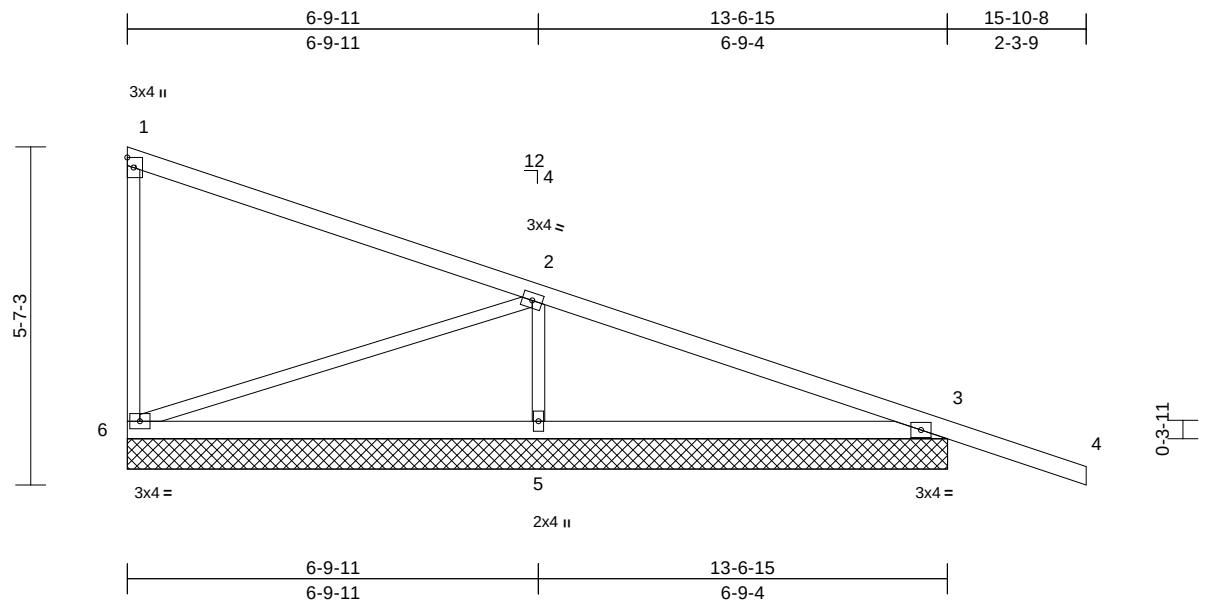


Scale = 1:38.1

| 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 | 0.60 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.41 | Vert(CT) | n/a | - | n/a | 999 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.11 | Horz(CT) | 0.00 | 3 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | | | | | | Weight: 45 lb | FT = 10% |

**LUMBER**
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 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** (lb/size) 3=441/13-6-15, 5=684/13-6-15, 6=249/13-6-15
Max Horiz 6=-217 (LC 6)
Max Uplift 3=-167 (LC 5), 5=-92 (LC 9), 6=-79 (LC 5)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-6=-186/79, 1-2=-145/29, 2-3=-111/41, 3-4=0/50
BOT CHORD 5-6=0/75, 3-5=0/75
WEBS 2-6=-27/117, 2-5=-521/182

**NOTES**
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Gable requires continuous bottom chord bearing.
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 79 lb uplift at joint 6, 167 lb uplift at joint 3 and 92 lb uplift at joint 5.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | D1 | Hip Girder | 1 | 2 | Job Reference (optional) | I47674090 |

Wheeler Lumber, Waverly, KS - 66871, Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:21 Page: 1
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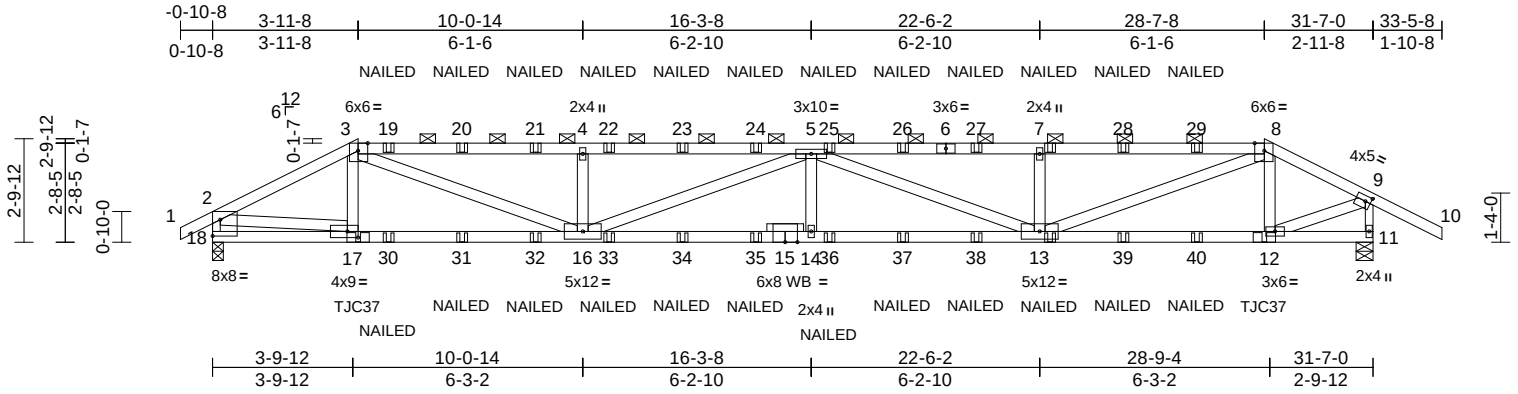


Scale = 1:62.7

Plate Offsets (X, Y): [3:0-3-2,Edge], [8:0-3-2,Edge], [9:0-1-12,0-1-12], [17:0-3-8,0-2-0], [18:Edge,0-5-5]

| 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 | 0.91 | Vert(LL) | -0.30 | 14 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.51 | Vert(CT) | -0.55 | 14-16 | >687 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | NO | WB | 0.52 | Horz(CT) | 0.08 | 11 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | Wind(LL) | 0.27 | 14 | >999 | 240 | Weight: 253 lb | FT = 10% |

**LUMBER**

TOP CHORD 2x4 SPF No.2 *Except* 3-6:2x4 SPF 2100F 1.8E
BOT CHORD 2x4 SPF 2100F 1.8E
WEBS 2x4 SPF No.2 *Except* 11-9,18-2:2x3 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, and 2-0-0 oc purlins (3-10-14 max.): 3-8.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 11-12.

**REACTIONS** (lb/size) 11=2293/0-5-8, 18=2384/0-3-8
Max Horiz 18=64 (LC 7)
Max Uplift 11=-509 (LC 4), 18=-454 (LC 5)

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

TOP CHORD 1-2=0/31, 2-3=-3842/783, 3-4=-6848/1474, 4-5=-6845/1472, 5-7=-6299/1400, 7-8=-6302/1402, 8-9=-2644/643, 9-10=0/62, 9-11=-2302/508, 2-18=-2349/459
BOT CHORD 17-18=-87/259, 16-17=-705/3408, 14-16=-1649/7749, 13-14=-1649/7749, 12-13=-543/2392, 11-12=-26/20
WEBS 3-17=-110/125, 3-16=-827/3739, 4-16=-799/361, 5-16=-996/235, 5-14=0/419, 5-13=-1564/309, 7-13=-785/356, 8-13=-881/4219, 8-12=-765/184, 9-12=-579/2550, 2-17=-636/3186

**NOTES**

1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc, 2x3 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) Provide adequate drainage to prevent water ponding.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 454 lb uplift at joint 18 and 509 lb uplift at joint 11.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
11) Use Simpson Strong-Tie TJC37 (4 nail, 30-90) or equivalent at 3-11-8 from the left end to connect truss (es) to front face of bottom chord, skewed 33.7 deg.to the left, sloping 0.0 deg. down.
12) Use Simpson Strong-Tie TJC37 (4 nail 90-150) or equivalent at 28-7-8 from the left end to connect truss (es) to front face of bottom chord, skewed 33.7 deg.to the right, sloping 0.0 deg. down.
13) Fill all nail holes where hanger is in contact with lumber.
14) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.

**LOAD CASE(S)** Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-3=-70, 3-8=-70, 8-9=-70, 9-10=-70, 11-18=-20
Concentrated Loads (lb)
Vert: 17=-224 (F), 7=-83 (F), 13=-85 (F), 12=-7 (F), 19=-83 (F), 20=-83 (F), 21=-83 (F), 22=-83 (F), 23=-83 (F), 24=-83 (F), 25=-83 (F), 26=-83 (F), 27=-83 (F), 28=-83 (F), 29=-83 (F), 30=-35 (F), 31=-35 (F), 32=-35 (F), 33=-35 (F), 34=-35 (F), 35=-35 (F), 36=-35 (F), 37=-35 (F), 38=-35 (F), 39=-35 (F), 40=-35 (F)


August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | D2 | Hip | 1 | 1 | Job Reference (optional) | I47674091 |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:22 Page: 1
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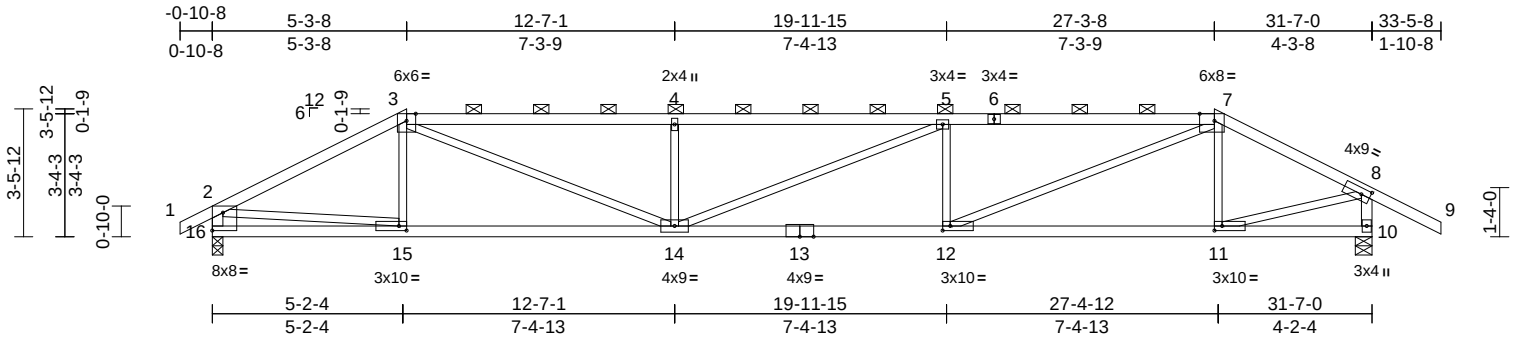


Scale = 1:62.7

Plate Offsets (X, Y): [7:0-4-13,Edge], [8:0-2-15,0-2-0], [11:0-2-8,0-1-8], [12:0-2-8,0-1-8], [15:0-2-8,0-1-8], [16:Edge,0-5-13]

| 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) | -0.27 | 12-14 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.93 | Vert(CT) | -0.52 | 12-14 | >722 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.68 | Horz(CT) | 0.09 | 10 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | Wind(LL) | 0.21 | 12-14 | >999 | 240 | Weight: 114 lb | FT = 10% |

**LUMBER**

TOP CHORD 2x4 SPF No.2 *Except* 3-6,6-7:2x4 SPF 2100F 1.8E
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 10-8,16-2:2x4 SPF No.2

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 3-6-6 oc purlins, except end verticals, and 2-0-0 oc purlins (3-1-13 max.): 3-7.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
2-2-0 oc bracing: 12-14.

**REACTIONS** (lb/size) 10=1553/0-5-8, 16=1476/0-3-8
Max Horiz 16=73 (LC 7)
Max Uplift 10=-202 (LC 4), 16=-185 (LC 5)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/32, 2-3=-2292/340, 3-4=-3559/624, 4-5=-3557/622, 5-7=-3444/607, 7-8=-1882/295, 8-9=0/63, 8-10=-1524/215, 2-16=-1427/206
BOT CHORD 15-16=-128/371, 14-15=-297/1984, 12-14=-564/3444, 11-12=-208/1644, 10-11=-8/30
WEBS 3-15=-67/127, 3-14=-361/1772, 4-14=-573/231, 5-14=-31/148, 5-12=-633/244, 7-12=-386/1988, 7-11=-313/137, 8-11=-234/1677, 2-15=-241/1622

**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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 185 lb uplift at joint 16 and 202 lb uplift at joint 10.
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



August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | I47674092 |
|---|---|---|---|---|---|---|
| 210529 | D3 | Hip | 1 | 1 | Job Reference (optional) | |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:22 Page: 1
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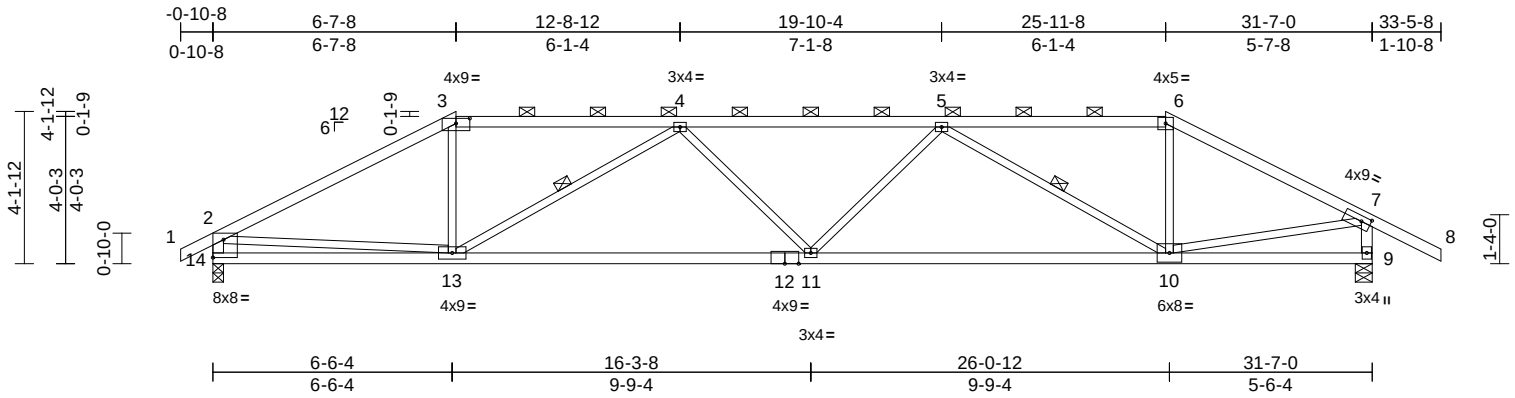



Scale = 1:62.8

Plate Offsets (X, Y): [3:0-4-8,0-1-11], [7:0-3-0,0-1-12], [14:Edge,0-5-13]

| 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 | 0.73 | Vert(LL) | -0.21 | 10-11 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.99 | Vert(CT) | -0.49 | 11-13 | >766 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.68 | Horz(CT) | 0.10 | 9 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | Wind(LL) | 0.15 | 11-13 | >999 | 240 | Weight: 113 lb | FT = 10% |

**LUMBER**
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 9-7:2x4 SPF No.2, 14-2:2x4 SPF 2100F 1.8E

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 3-0-7 oc purlins, except end verticals, and 2-0-0 oc purlins (2-7-11 max.): 3-6.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 1 Row at midpt 4-13, 5-10

**REACTIONS** (lb/size) 9=1553/0-5-8, 14=1476/0-3-8
Max Horiz 14=82 (LC 7)
Max Uplift 9=-176 (LC 4), 14=-161 (LC 5)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/32, 2-3=-2292/301, 3-4=-1940/292, 4-5=-2929/431, 5-6=-1685/263, 6-7=-1984/272, 7-8=0/63, 7-9=-1513/194, 2-14=-1420/188
BOT CHORD 13-14=-227/573, 11-13=-466/2876, 10-11=-439/2784, 9-10=-47/107
WEBS 3-13=-31/631, 4-13=-1173/298, 4-11=0/243, 5-11=0/329, 5-10=-1334/314, 6-10=-23/541, 7-10=-191/1622, 2-13=-184/1452

**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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 161 lb uplift at joint 14 and 176 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



August 30,2021



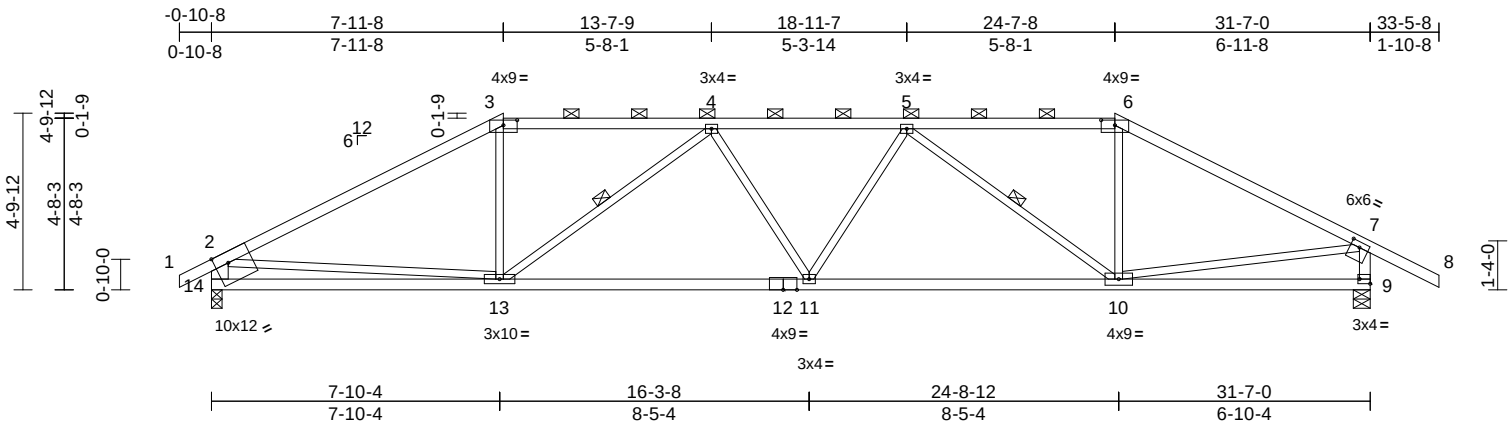
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | I47674093 |
|---|---|---|---|---|---|---|
| 210529 | D4 | Hip | 1 | 1 | Job Reference (optional) | |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:22 ID:UgWWKZ6I0YjEXMxwfA4faZz1joI-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f






Scale = 1:62.8

Plate Offsets (X, Y): [3:0-4-8,0-1-11], [6:0-4-8,0-1-11], [7:0-3-0,0-1-12], [9:Edge,0-1-8], [14:0-4-6,Edge]

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 25.0 | Plate Grip DOL | 1.15 | TC | 0.54 | Vert(LL) | -0.15 | 11 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.76 | Vert(CT) | -0.31 | 10-11 | >999 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.51 | Horz(CT) | 0.08 | 9 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | Wind(LL) | 0.11 | 11 | >999 | 240 | Weight: 117 lb | FT = 10% |

**LUMBER**

TOP CHORD 2x4 SPF 2100F 1.8E *Except* 3-6:2x4 SPF No.2

BOT CHORD 2x4 SPF No.2

WEBS 2x3 SPF No.2 *Except* 9-7:2x4 SPF No.2, 14-2:2x6 SPF No.2

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 4-5-15 oc purlins, except end verticals, and 2-0-0 oc purlins (3-6-0 max.): 3-6.

BOT CHORD Rigid ceiling directly applied or 9-11-7 oc bracing.

WEBS 1 Row at midpt 4-13, 5-10

**REACTIONS** (lb/size) 9=1549/0-5-8, 14=1478/0-3-8
Max Horiz 14=91 (LC 7)
Max Uplift 9=-149 (LC 4), 14=-137 (LC 5)

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

TOP CHORD 1-2=0/35, 2-3=-2229/267, 3-4=-1865/265, 4-5=-2481/348, 5-6=-1690/248, 6-7=-2012/250, 7-8=0/63, 7-9=-1487/181, 2-14=-1407/177

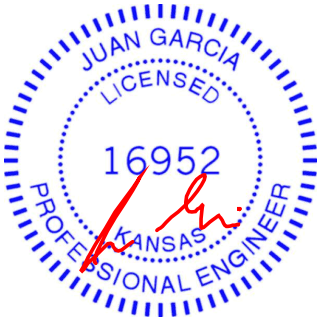
BOT CHORD 13-14=-305/767, 11-13=-344/2456, 10-11=-323/2402, 9-10=-81/223

WEBS 3-13=-16/568, 4-13=-844/219, 4-11=0/166, 5-11=0/234, 5-10=-969/228, 6-10=-13/514, 7-10=-170/1495, 2-13=-161/1258

**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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 137 lb uplift at joint 14 and 149 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


August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | D5 | Hip | 1 | 1 | Job Reference (optional) | I47674094 |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:23

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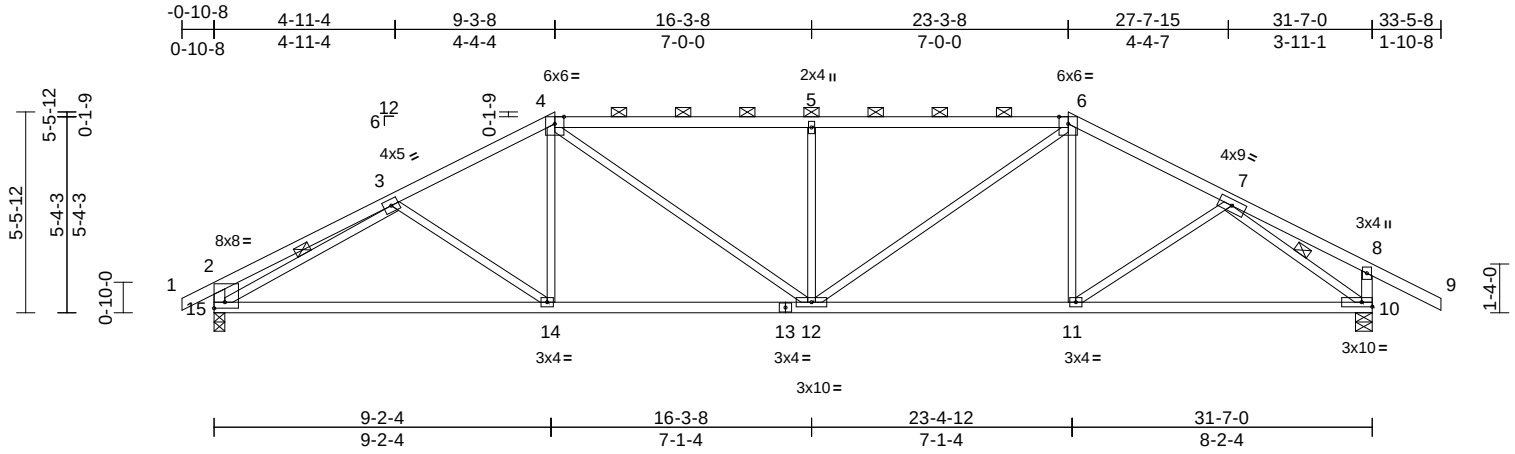


Scale = 1:62.8

Plate Offsets (X, Y): [2: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 | 0.85 | Vert(LL) | -0.18 | 14-15 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.74 | Vert(CT) | -0.37 | 14-15 | >999 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.55 | Horz(CT) | 0.09 | 10 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | Wind(LL) | 0.09 | 12-14 | >999 | 240 | Weight: 121 lb | FT = 10% |

**LUMBER**

TOP CHORD 2x4 SPF No.2

BOT CHORD 2x4 SPF No.2

WEBS 2x3 SPF No.2 *Except* 10-8,15-2:2x4 SPF No.2

**BRACING**

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

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

WEBS 1 Row at midpt 7-10, 3-15

**REACTIONS** (lb/size) 10=1553/0-5-8, 15=1476/0-3-8

Max Horiz 15=99 (LC 7)

Max Uplift 10=-153 (LC 9), 15=-141 (LC 8)

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

TOP CHORD 1-2=0/32, 2-3=-588/84, 3-4=-2087/236, 4-5=-2242/312, 5-6=-2242/312, 6-7=-1932/225, 7-8=-171/39, 8-9=0/63, 8-10=-334/103, 2-15=-487/120

BOT CHORD 14-15=-224/1883, 12-14=-176/1813, 11-12=-112/1679, 10-11=-101/1503

WEBS 3-14=-105/181, 4-14=0/324, 4-12=-173/642, 5-12=-597/239, 6-12=-179/782, 6-11=-16/210, 7-11=-42/325, 7-10=-1830/181, 3-15=-1693/192

**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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 153 lb uplift at joint 10 and 141 lb uplift at joint 15.
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



August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | E1 | Roof Special | 1 | 1 | Job Reference (optional) | I47674095 |

Wheeler Lumber, Waverly, KS - 66871,

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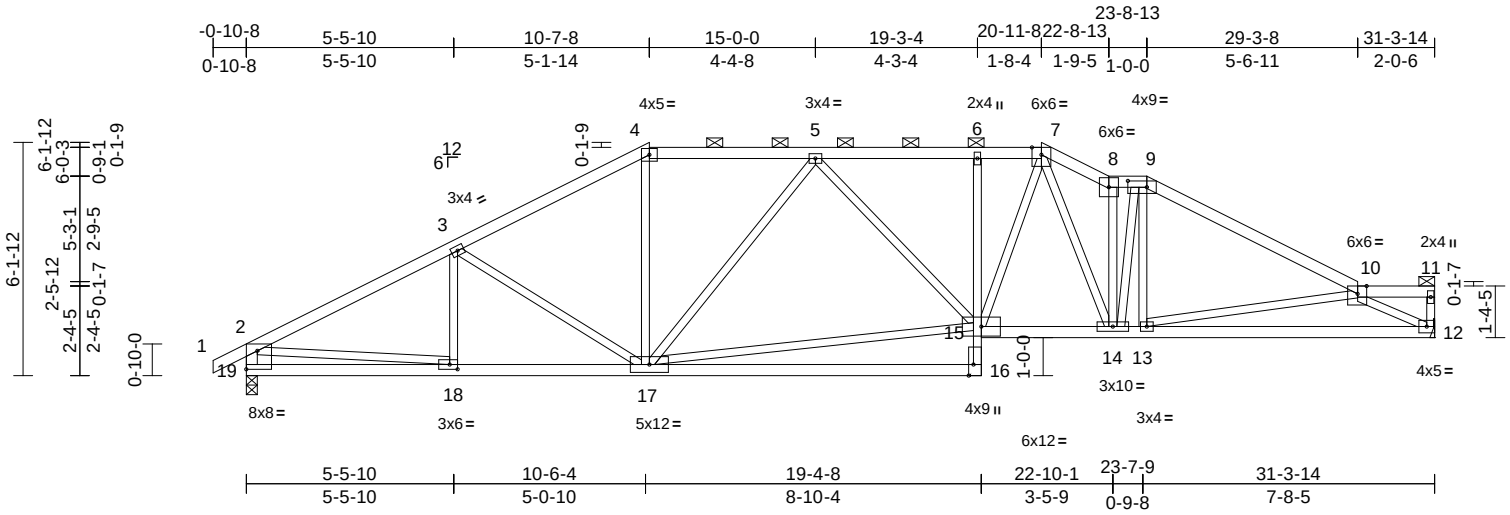
Page: 1




Scale = 1:60.7

Plate Offsets (X, Y): [9:0-6-0,0-2-0], [10:0-2-14,Edge], [16:0-3-8,Edge], [18:0-2-8,0-1-8], [19:Edge,0-5-13]

| 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 | 0.67 | Vert(LL) | -0.20 | 16-17 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.70 | Vert(CT) | -0.45 | 16-17 | >826 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.87 | Horz(CT) | 0.10 | 12 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | Wind(LL) | 0.10 | 14-15 | >999 | 240 | Weight: 137 lb | FT = 10% |

**LUMBER**
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 16-6:2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except* 19-2:2x4 SPF No.2

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 2-8-6 oc purlins, except end verticals, and 2-0-0 oc purlins (3-9-4 max.): 4-7, 8-9, 10-11.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (lb/size) 12=1397/ Mechanical, 19=1471/0-3-8
Max Horiz 19=124 (LC 5)
Max Uplift 12=-132 (LC 9), 19=-155 (LC 8)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/32, 2-3=-2243/207, 3-4=-1989/192, 4-5=-1708/189, 5-6=-2164/224, 6-7=-2175/226, 7-8=-2392/241, 8-9=-2149/199, 9-10=-2390/177, 10-11=-93/0, 11-12=-56/25, 2-19=-1403/186
BOT CHORD 18-19=-181/402, 17-18=-224/1928, 16-17=0/194, 15-16=0/162, 6-15=-270/100, 14-15=-161/2006, 13-14=-112/2060, 12-13=-278/2247
WEBS 3-18=-103/60, 3-17=-278/172, 4-17=0/546, 5-17=-663/170, 15-17=-256/1890, 5-15=-27/226, 8-14=-850/74, 9-14=-149/469, 9-13=0/391, 10-13=-215/181, 10-12=-2535/343, 2-18=-64/1536, 7-15=-111/587, 7-14=-113/460

**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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 132 lb uplift at joint 12 and 155 lb uplift at joint 19.
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



August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | E2 | Roof Special | 1 | 1 | Job Reference (optional) | I47674096 |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:24
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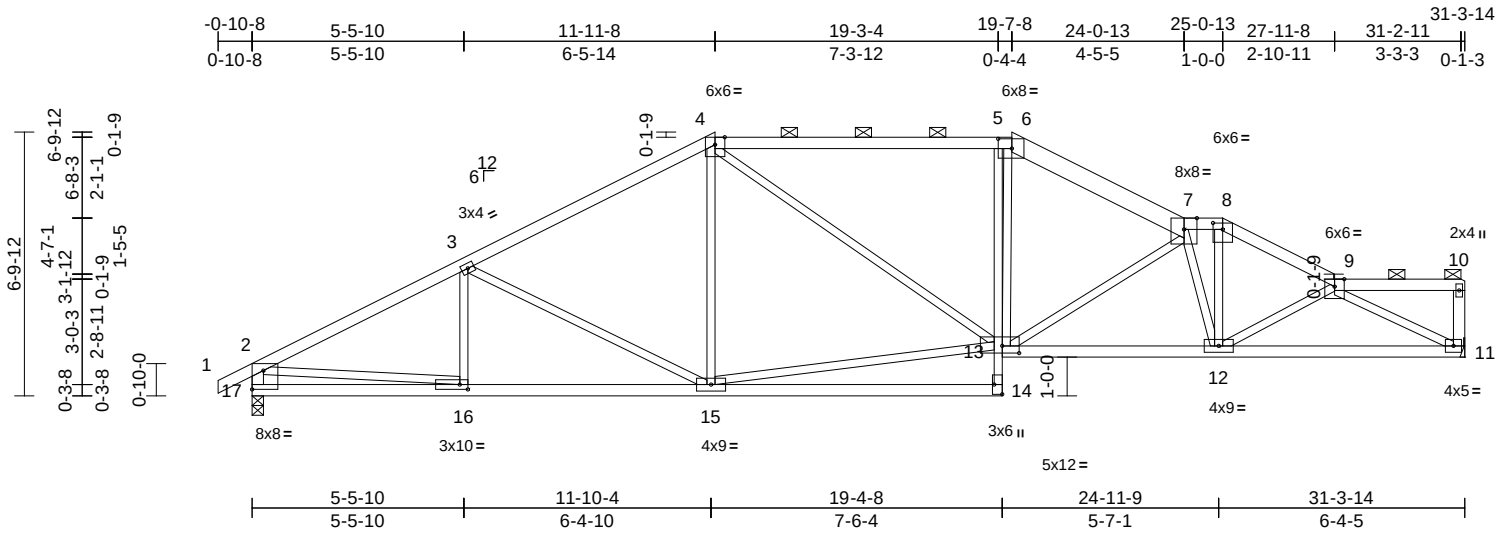
Page: 1




Scale = 1:59.5

Plate Offsets (X, Y): [6:0-4-4,0-3-0], [8:0-3-0,0-2-0], [13:0-5-4,0-2-4], [14:Edge,0-2-8], [16:0-2-8,0-1-8], [17:Edge,0-5-13]

| 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 | 0.95 | Vert(LL) | -0.14 | 12-13 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.67 | Vert(CT) | -0.30 | 14-15 | >999 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.89 | Horz(CT) | 0.10 | 11 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | Wind(LL) | 0.07 | 12-13 | >999 | 240 | Weight: 135 lb | FT = 10% |

**LUMBER**

TOP CHORD 2x4 SPF No.2 *Except* 6-7:2x6 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 14-5:2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except* 17-2,11-10:2x4 SPF No.2

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 3-0-7 oc purlins, except end verticals, and 2-0-0 oc purlins (2-2-0 max.): 4-6, 7-8, 9-10.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (lb/size) 11=1395/ Mechanical, 17=1469/0-3-8
Max Horiz 17=124 (LC 5)
Max Uplift 11=-2 (LC 9), 17=-10 (LC 8)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/32, 2-3=-2262/12, 3-4=-1914/11, 4-5=-1948/18, 5-6=-1946/17, 6-7=-2129/0, 7-8=-2136/0, 8-9=-2408/0, 9-10=-61/7, 2-17=-1407/38, 10-11=-134/25
BOT CHORD 16-17=-108/359, 15-16=-37/1950, 14-15=0/95, 13-14=0/134, 5-13=-446/163, 12-13=0/2334, 11-12=-17/2230
WEBS 3-16=-82/102, 3-15=-390/106, 4-15=0/275, 13-15=-10/1547, 4-13=-46/527, 7-13=-528/50, 8-12=0/912, 9-12=-150/61, 9-11=-2485/20, 2-16=0/1602, 6-13=-74/760, 7-12=-732/16

**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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 10 lb uplift at joint 17 and 2 lb uplift at joint 11.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
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



August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | E3 | Roof Special | 1 | 1 | Job Reference (optional) | I47674097 |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:24 Page: 1
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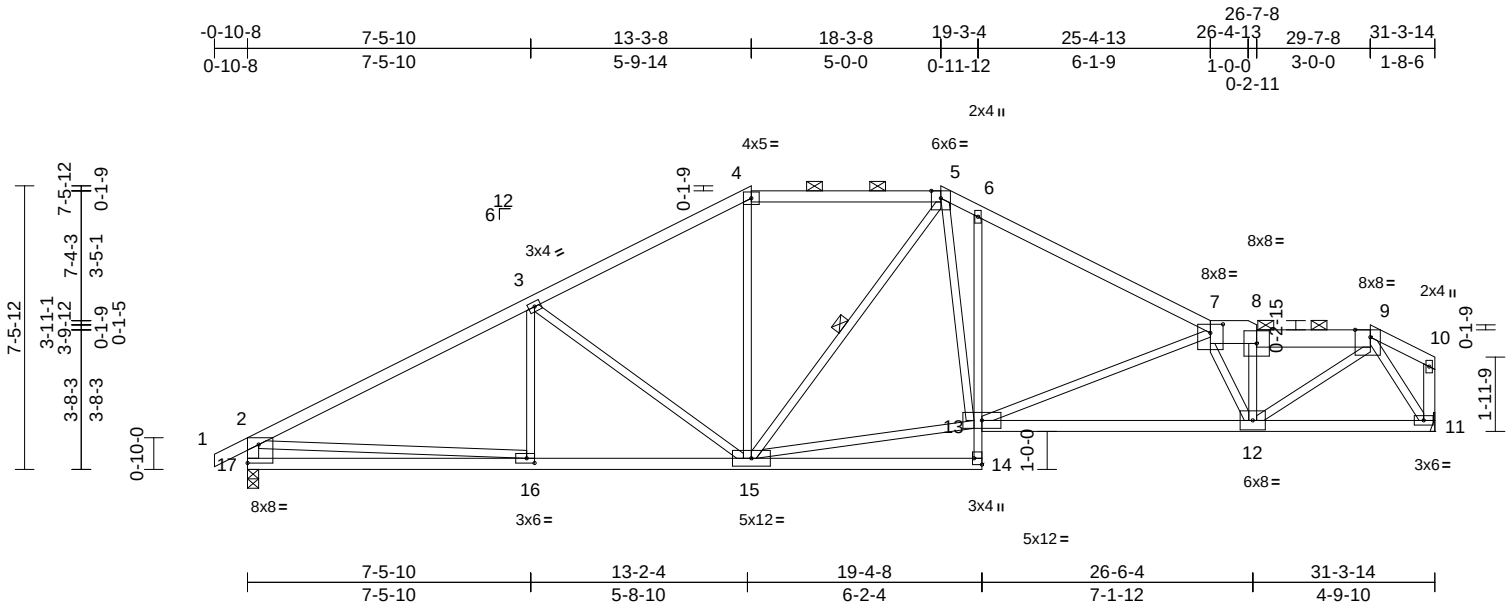


Scale = 1:60.8

Plate Offsets (X, Y): [7:0-4-0,0-2-12], [9:0-4-13,Edge], [14:Edge,0-2-8], [16:0-2-8,0-1-8], [17:Edge,0-5-13]

| 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 | 0.67 | Vert(LL) | -0.14 | 12-13 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.79 | Vert(CT) | -0.31 | 12-13 | >999 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.87 | Horz(CT) | 0.09 | 11 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | Wind(LL) | 0.07 | 12-13 | >999 | 240 | Weight: 138 lb | FT = 10% |

**LUMBER**

TOP CHORD 2x4 SPF No.2 *Except* 7-8:2x8 SP DSS, 8-9:2x6 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 14-6:2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except* 17-2:2x4 SPF 2400F 2.0E, 11-10:2x4 SPF No.2

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 3-0-8 oc purlins, except end verticals, and 2-0-0 oc purlins (4-3-8 max.): 4-5, 7-9.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 5-15

**REACTIONS** (lb/size) 11=1395/ Mechanical, 17=1469/0-3-8
Max Horiz 17=132 (LC 5)
Max Uplift 11=-8 (LC 9), 17=-16 (LC 8)

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

TOP CHORD 1-2=0/32, 2-3=-2246/20, 3-4=-1782/37, 4-5=-1509/56, 5-6=-2094/86, 6-7=-2148/13, 7-9=-2296/0, 9-10=-67/27, 2-17=-1392/59, 10-11=-69/16
BOT CHORD 16-17=-161/660, 15-16=-29/1901, 14-15=-6/67, 13-14=0/109, 6-13=-338/152, 12-13=-8/2555, 11-12=-13/810
WEBS 3-16=0/199, 3-15=-511/99, 4-15=0/382, 7-13=-774/70, 9-12=0/1886, 2-16=0/1246, 9-11=-1505/16, 5-15=-402/35, 7-12=-728/52, 8-12=-359/38, 5-13=-96/1039, 13-15=0/1619

**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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) The Fabrication Tolerance at joint 2 = 6%
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 16 lb uplift at joint 17 and 8 lb uplift at joint 11.
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



August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | E4 | Roof Special | 1 | 1 | Job Reference (optional) | I47674098 |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:24 Page: 1
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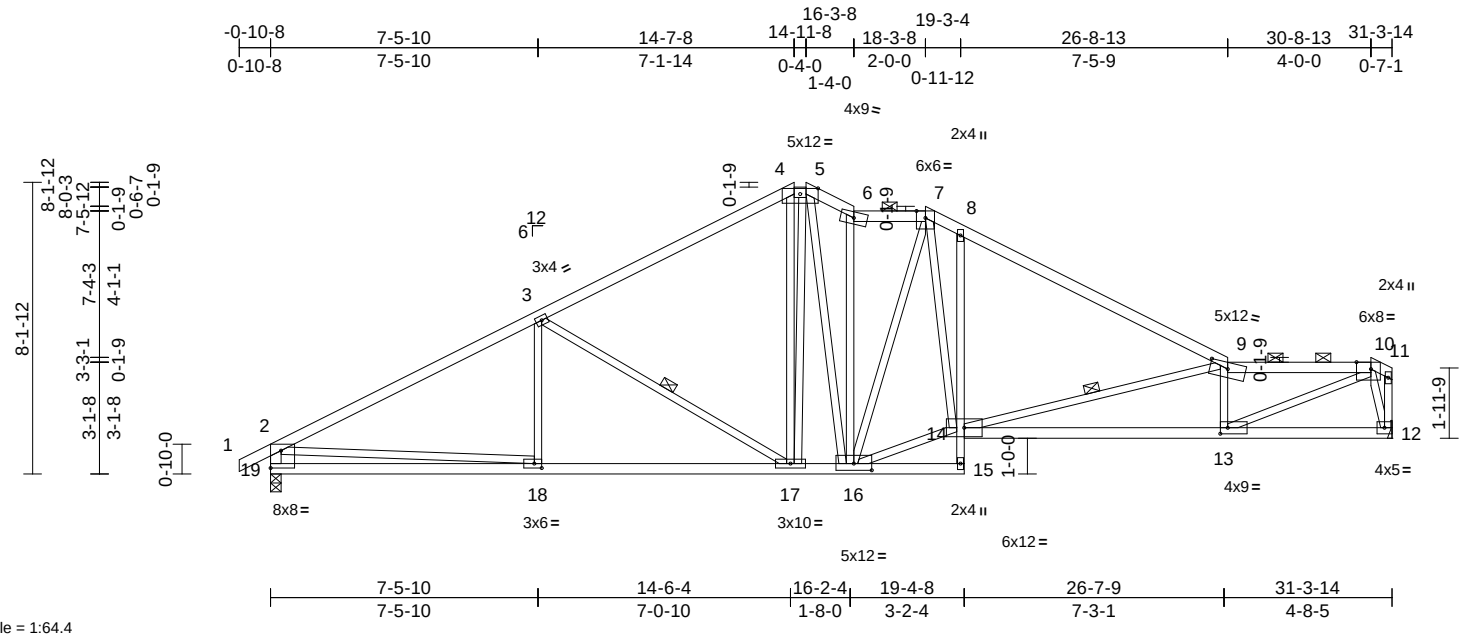



Scale = 1:64.4

Plate Offsets (X, Y): [4:0-6-0,0-1-15], [9:0-6-0,0-2-3], [10:0-4-13,Edge], [13:0-2-8,0-2-0], [16:0-6-0,0-2-4], [18:0-2-8,0-1-8], [19:Edge,0-5-13]

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 25.0 | Plate Grip DOL | 1.15 | TC | 0.64 | Vert(LL) | -0.19 | 13-14 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.90 | Vert(CT) | -0.42 | 13-14 | >886 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.98 | Horz(CT) | 0.09 | 12 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | Wind(LL) | 0.10 | 13-14 | >999 | 240 | Weight: 148 lb | FT = 10% |

**LUMBER**

TOP CHORD 2x4 SPF No.2 *Except* 7-9:2x4 SPF 2100F 1.8E
BOT CHORD 2x4 SPF No.2 *Except* 15-8:2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except* 19-2:2x4 SPF 2100F 1.8E

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 3-2-6 oc purlins, except end verticals, and 2-0-0 oc purlins (3-2-11 max.): 4-5, 6-7, 9-10.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 15-16.
WEBS 1 Row at midpt 3-17, 9-14

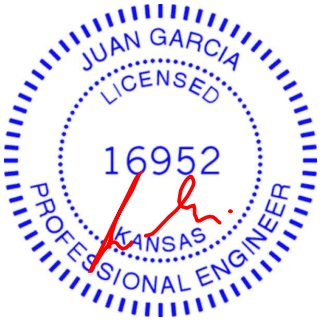
**REACTIONS** (lb/size) 12=1397/ Mechanical, 19=1471/0-3-8
Max Horiz 19=142 (LC 5)
Max Uplift 12=-25 (LC 9), 19=-22 (LC 8)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/32, 2-3=-2265/32, 3-4=-1705/62, 4-5=-1454/80, 5-6=-1675/85, 6-7=-1513/67, 7-8=-2191/151, 8-9=-2205/51, 9-10=-2962/33, 10-11=-47/18, 2-19=-1396/62, 11-12=-42/23
BOT CHORD 18-19=-159/609, 17-18=-48/1924, 16-17=0/1403, 15-16=-32/28, 14-15=0/63, 8-14=-541/213, 13-14=-34/2903, 12-13=-18/383
WEBS 3-18=0/230, 3-17=-631/109, 4-17=0/241, 5-17=-65/396, 6-16=-764/53, 9-14=-1063/51, 9-13=-1073/98, 10-13=-23/2840, 2-18=0/1320, 7-16=-496/27, 5-16=-88/698, 7-14=-150/1454, 14-16=0/1691, 10-12=-1415/52

**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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 22 lb uplift at joint 19 and 25 lb uplift at joint 12.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) 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


August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | E5 | Roof Special | 1 | 1 | Job Reference (optional) | I47674099 |

Wheeler Lumber, Waverly, KS - 66871,

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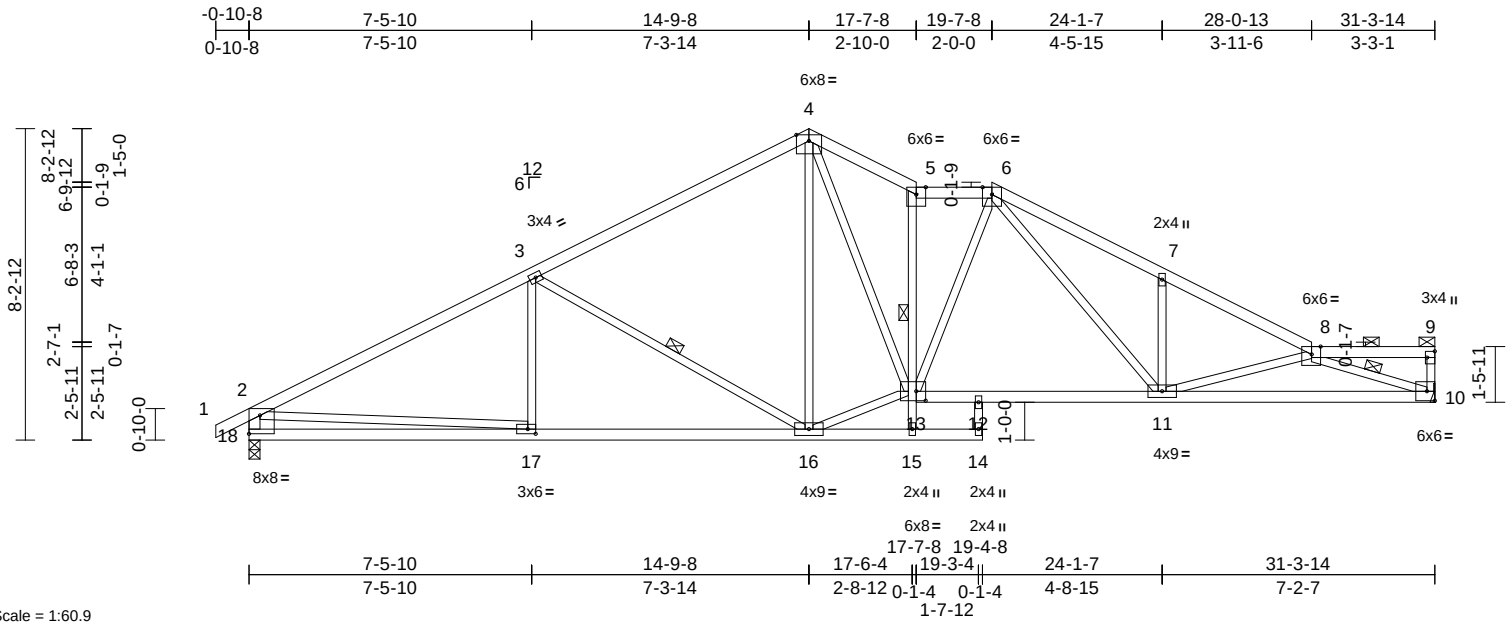



Scale = 1:60.9

Plate Offsets (X, Y): [8:0-2-14,Edge], [9:Edge,0-2-8], [13:0-3-0,0-3-0], [17:0-2-8,0-1-8], [18:Edge,0-5-13]

| 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 | 0.73 | Vert(LL) | -0.20 | 11-12 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.89 | Vert(CT) | -0.39 | 11-12 | >952 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.67 | Horz(CT) | 0.11 | 10 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | Wind(LL) | 0.14 | 11-12 | >999 | 240 | Weight: 133 lb | FT = 10% |

**LUMBER**
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 18-2:2x4 SPF 2100F 1.8E

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins (4-1-7 max.): 5-6, 8-9.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
8-7-14 oc bracing: 10-11.
WEBS 1 Row at midpt 5-15, 8-10, 3-16

**REACTIONS** (lb/size) 10=1397/ Mechanical, 18=1471/0-3-8
Max Horiz 18=154 (LC 5)
Max Uplift 10=-186 (LC 9), 18=-190 (LC 8)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/32, 2-3=-2268/264, 3-4=-1684/251, 4-5=-2204/352, 5-6=-1955/281, 6-7=-2748/436, 7-8=-2737/331, 8-9=-85/0, 9-10=-136/44, 2-18=-1397/229
BOT CHORD 17-18=-304/599, 16-17=-290/1928, 15-16=0/23, 14-15=0/0, 12-13=-145/1865, 11-12=-145/1865, 10-11=-457/3135
WEBS 12-14=-2/7, 13-15=0/99, 5-13=-1057/204, 6-11=-188/847, 8-10=-3280/488, 2-17=-34/1333, 3-17=0/237, 4-16=-118/104, 13-16=-96/1453, 3-16=-659/234, 7-11=-288/181, 8-11=-765/201, 4-13=-247/1472, 6-13=-47/308

**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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 186 lb uplift at joint 10 and 190 lb uplift at joint 18.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
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



August 30,2021



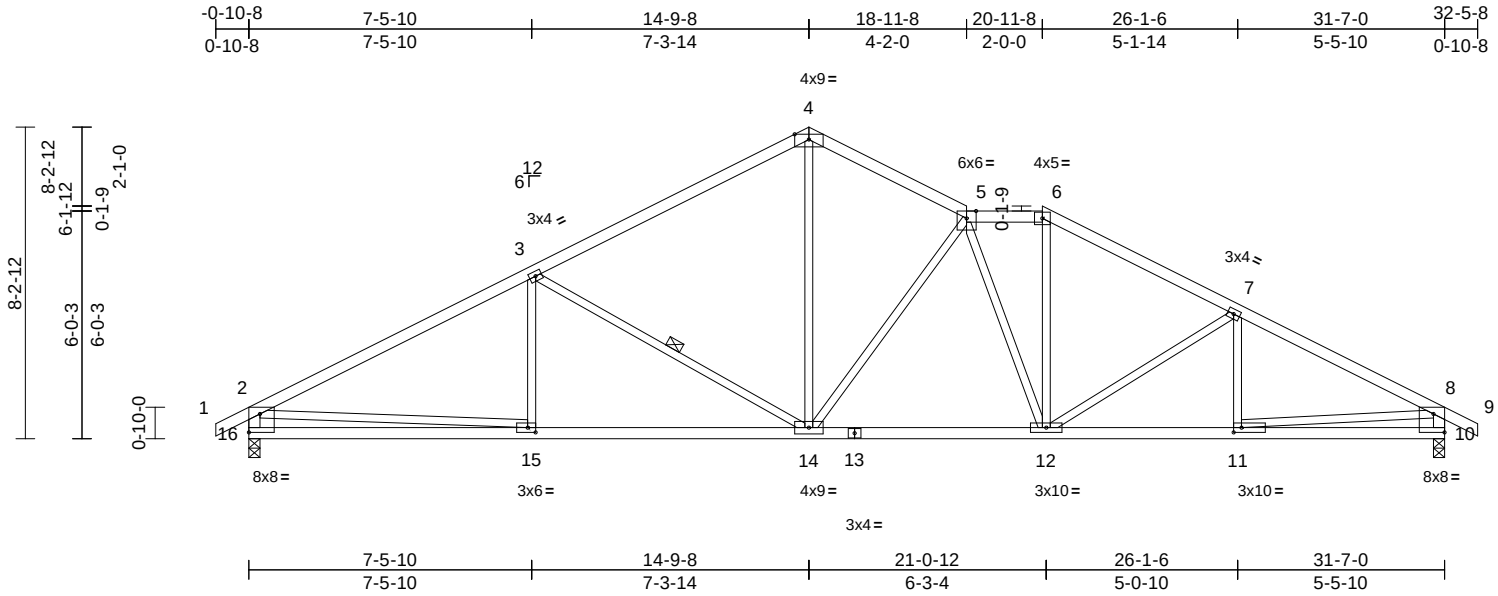
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | I47674100 |
|---|---|---|---|---|---|---|
| 210529 | G1 | Roof Special | 1 | 1 | Job Reference (optional) | |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:25 ID:8eT1wkdp2lXI7W8itOegd6z1jZR-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f






Scale = 1:60.9

Plate Offsets (X, Y): [10:Edge,0-5-13], [11:0-2-8,0-1-8], [15:0-2-8,0-1-8], [16:Edge,0-5-13]

| 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) | -0.12 | 14-15 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.59 | Vert(CT) | -0.26 | 14-15 | >999 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.89 | Horz(CT) | 0.07 | 10 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | Wind(LL) | 0.08 | 14-15 | >999 | 240 | Weight: 127 lb | FT = 10% |

**LUMBER**

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 16-2,10-8:2x4 SPF 2100F 1.8E

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins (4-4-12 max.): 5-6.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 3-14

**REACTIONS** (lb/size) 10=1480/0-3-8, 16=1480/0-3-8
Max Horiz 16=124 (LC 7)
Max Uplift 10=-209 (LC 9), 16=-191 (LC 8)

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

TOP CHORD 1-2=0/32, 2-3=-2285/267, 3-4=-1702/259, 4-5=-1623/251, 5-6=-1707/292, 6-7=-1997/288, 7-8=-2264/301, 8-9=0/32, 2-16=-1405/230, 8-10=-1415/236
BOT CHORD 15-16=-271/602, 14-15=-259/1942, 12-14=-80/1819, 11-12=-194/1946, 10-11=-91/406
WEBS 6-12=-35/569, 7-12=-314/146, 7-11=-87/85, 2-15=-35/1345, 8-11=-104/1550, 4-14=-115/1020, 5-14=-707/220, 3-14=-659/237, 3-15=0/231, 5-12=-326/93

**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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 191 lb uplift at joint 16 and 209 lb uplift at joint 10.
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



August 30,2021



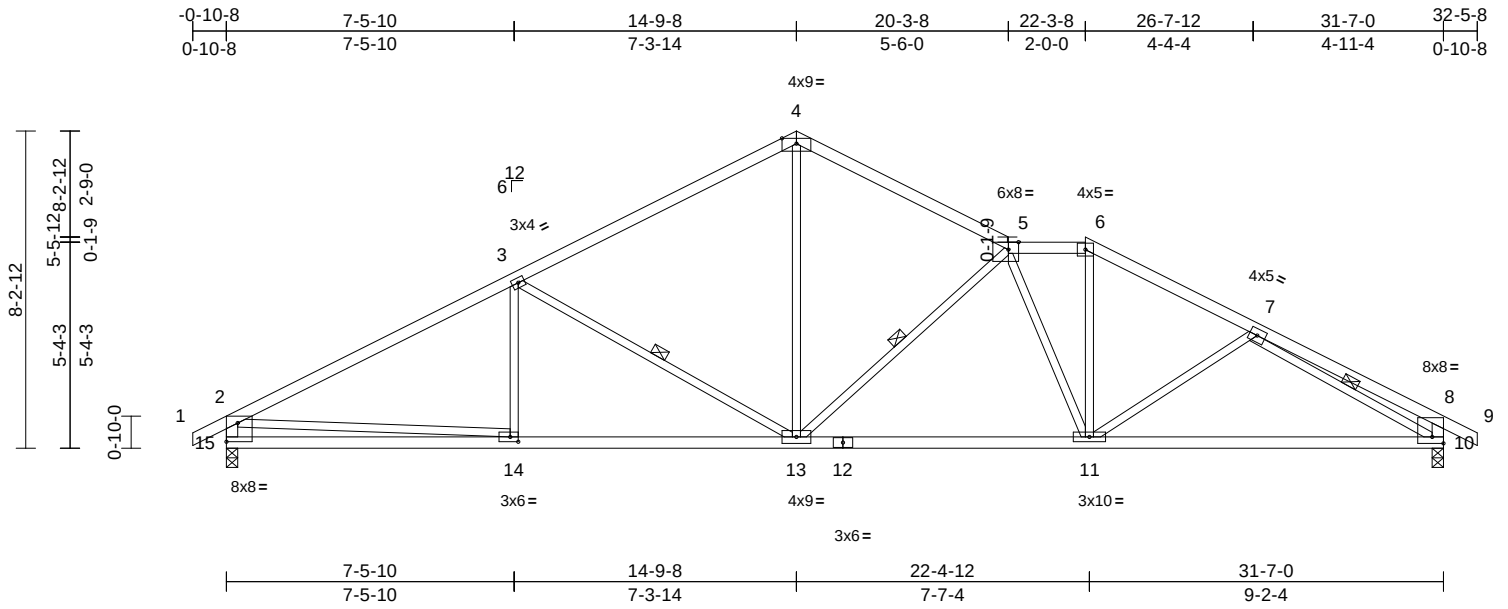
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | G2 | Roof Special | 1 | 1 | Job Reference (optional) | I47674101 |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:26 ID:CoP7dh?uWaamzQbrl6DAwsz1jYx-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f






Scale = 1:59.8

Plate Offsets (X, Y): [5:0-3-3,Edge], [8:Edge,0-2-0], [14:0-2-8,0-1-8], [15:Edge,0-5-13]

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 25.0 | Plate Grip DOL | 1.15 | TC | 0.74 | Vert(LL) | -0.17 | 10-11 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.74 | Vert(CT) | -0.37 | 10-11 | >999 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.55 | Horz(CT) | 0.08 | 10 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | Wind(LL) | 0.08 | 11-13 | >999 | 240 | Weight: 124 lb | FT = 10% |

**LUMBER**

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 15-2,10-8:2x4 SPF 2100F 1.8E

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins (4-3-9 max.): 5-6.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 3-13, 5-13, 7-10

**REACTIONS** (lb/size) 10=1480/0-3-8, 15=1480/0-3-8
Max Horiz 15=124 (LC 7)
Max Uplift 10=-209 (LC 9), 15=-191 (LC 8)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/32, 2-3=-2284/267, 3-4=-1703/260, 4-5=-1664/249, 5-6=-1799/283, 6-7=-2088/282, 7-8=-592/104, 8-9=0/32, 2-15=-1405/230, 8-10=-487/131
BOT CHORD 14-15=-271/605, 13-14=-259/1941, 11-13=-116/1979, 10-11=-228/1892
WEBS 3-14=0/230, 3-13=-659/237, 4-13=-91/984, 5-13=-775/230, 5-11=-474/120, 6-11=-47/663, 7-11=-140/166, 2-14=-32/1340, 7-10=-1698/239

**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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 191 lb uplift at joint 15 and 209 lb uplift at joint 10.
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



August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | G3 | Roof Special | 1 | 1 | Job Reference (optional) | I47674102 |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:26
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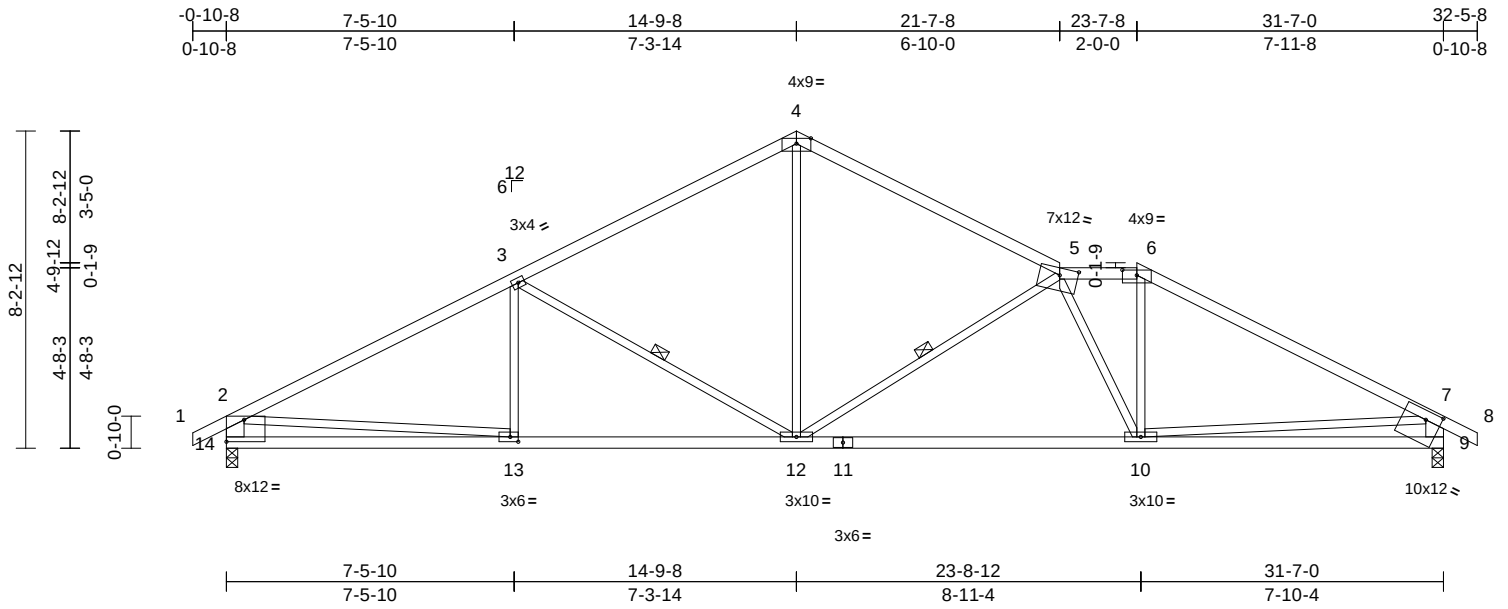



Scale = 1:59.8

Plate Offsets (X, Y): [5:0-5-10,0-2-4], [6:0-4-8,0-1-11], [9:0-4-12,0-2-12], [13:0-2-8,0-1-8], [14:Edge,0-6-13]

| 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) | -0.15 | 10-12 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.73 | Vert(CT) | -0.36 | 10-12 | >999 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.54 | Horz(CT) | 0.07 | 9 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | Wind(LL) | 0.08 | 12-13 | >999 | 240 | Weight: 122 lb | FT = 10% |

**LUMBER**
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 14-2,9-7:2x6 SPF No.2

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

**REACTIONS** (lb/size) 9=1478/0-3-8, 14=1478/0-3-8
Max Horiz 14=125 (LC 7)
Max Uplift 9=-210 (LC 9), 14=-192 (LC 8)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/35, 2-3=-2245/265, 3-4=-1692/257, 4-5=-1679/241, 5-6=-1859/293, 6-7=-2228/269, 7-8=0/35, 2-14=-1403/232, 7-9=-1407/249
BOT CHORD 13-14=-261/574, 12-13=-255/1906, 10-12=-166/2117, 9-10=-277/767
WEBS 3-13=0/207, 3-12=-635/237, 4-12=-61/928, 5-12=-851/261, 5-10=-603/121, 6-10=-6/623, 2-13=-32/1338, 7-10=0/1111

**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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 192 lb uplift at joint 14 and 210 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



August 30,2021

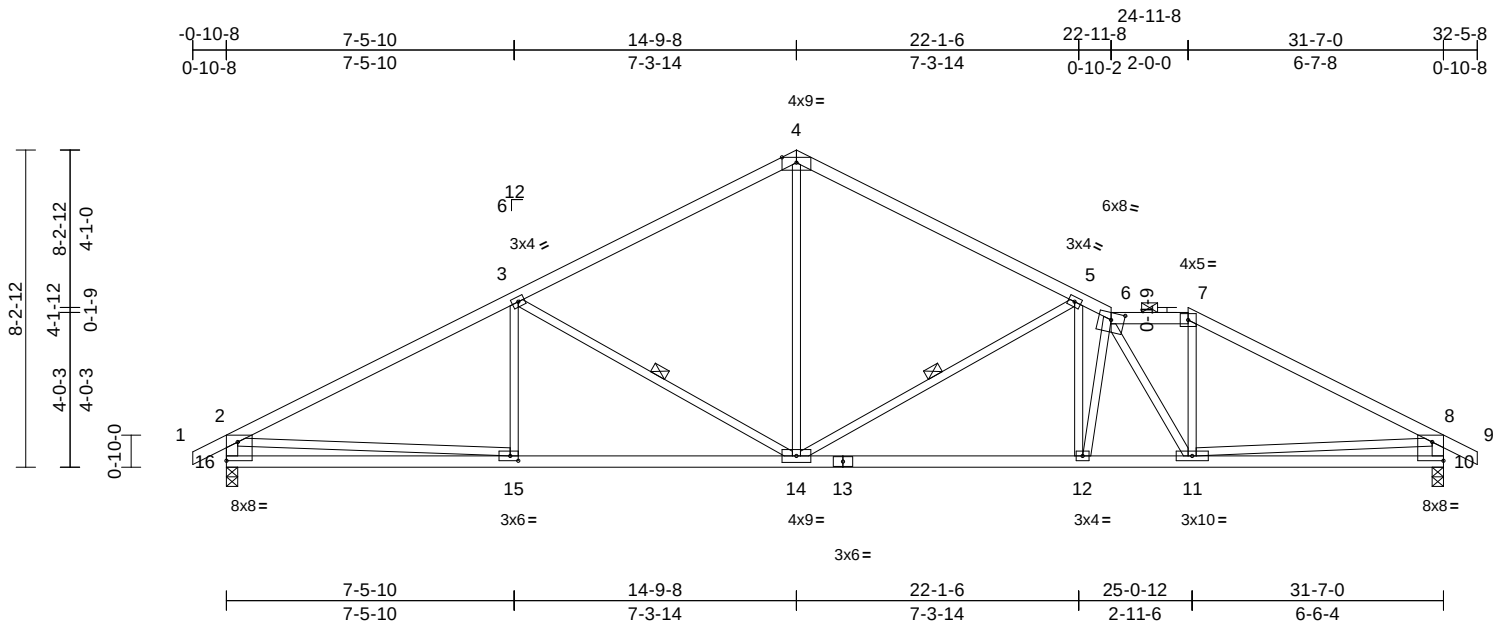


MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | G4 | Roof Special | 1 | 1 | Job Reference (optional) | I47674103 |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:26 Page: 1
ID:djjO6n45ncfGWyKmvbopUQz1jXZ-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f




Scale = 1:59.8

Plate Offsets (X, Y): [6:0-4-0,0-2-4], [10:Edge,0-5-13], [15:0-2-8,0-1-8], [16:Edge,0-5-13]

| 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 | 0.73 | Vert(LL) | -0.14 | 12-14 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.70 | Vert(CT) | -0.30 | 12-14 | >999 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.64 | Horz(CT) | 0.07 | 10 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | Wind(LL) | 0.09 | 12-14 | >999 | 240 | Weight: 125 lb | FT = 10% |

**LUMBER**
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 16-2:2x4 SPF 2400F 2.0E, 10-8:2x4 SPF 2100F 1.8E

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins (4-0-11 max.): 6-7.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 3-14, 5-14

**REACTIONS** (lb/size) 10=1480/0-3-8, 16=1480/0-3-8
Max Horiz 16=125 (LC 7)
Max Uplift 10=-209 (LC 9), 16=-191 (LC 8)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/32, 2-3=-2282/268, 3-4=-1707/260, 4-5=-1708/245, 5-6=-2415/268, 6-7=-1917/302, 7-8=-2271/289, 8-9=0/32, 2-16=-1404/231, 8-10=-1407/246
BOT CHORD 15-16=-272/613, 14-15=-259/1939, 12-14=-197/2242, 11-12=-181/2311, 10-11=-185/610
WEBS 3-15=0/223, 3-14=-655/239, 4-14=-71/946, 5-14=-957/287, 6-11=-801/69, 7-11=-5/651, 2-15=-30/1330, 8-11=-6/1330, 5-12=0/515, 6-12=-318/3

**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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 191 lb uplift at joint 16 and 209 lb uplift at joint 10.
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



August 30,2021



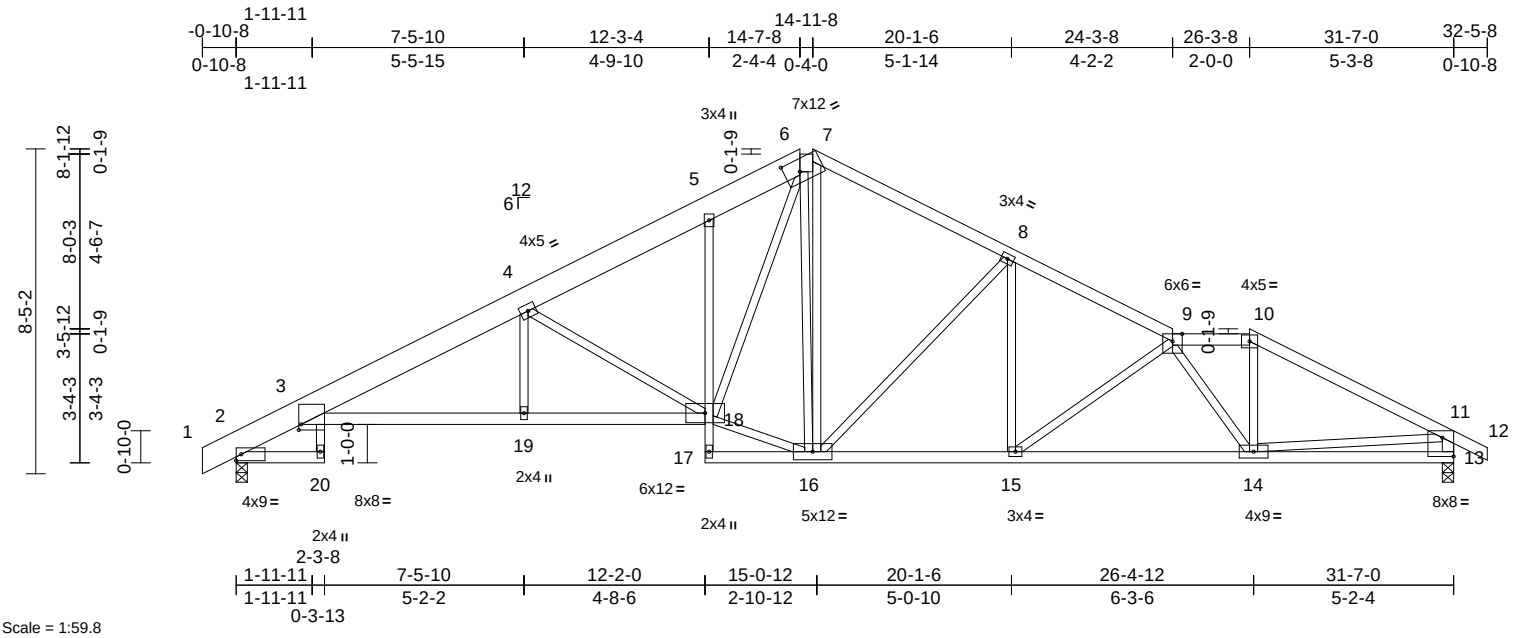
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | I47674104 |
|---|---|---|---|---|---|---|
| 210529 | G5 | Roof Special | 1 | 1 | Job Reference (optional) | |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:27 ID:M440JW2KPiB8a?H5yKD1boz1jV0-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f






Scale = 1:59.8

Plate Offsets (X, Y): [3:0-0-11,0-1-12], [6:0-4-12,0-3-12], [13:Edge,0-5-13]

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 25.0 | Plate Grip DOL | 1.15 | TC | 0.52 | Vert(LL) | -0.19 | 18-19 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.85 | Vert(CT) | -0.35 | 18-19 | >999 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.99 | Horz(CT) | 0.25 | 13 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | Wind(LL) | 0.14 | 18-19 | >999 | 240 | Weight: 169 lb | FT = 10% |

**LUMBER**

TOP CHORD 2x4 SPF No.2 *Except* 1-6:2x8 SP DSS, 6-7:2x6 SPF No.2

BOT CHORD 2x4 SPF No.2 *Except* 5-17:2x3 SPF No.2

WEBS 2x3 SPF No.2 *Except* 13-11:2x4 SPF No.2

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 3-6-1 oc purlins, except end verticals, and 2-0-0 oc purlins (4-2-3 max.): 6-7, 9-10.

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

**REACTIONS** (lb/size) 2=1492/0-3-8, 13=1480/0-3-8
Max Horiz 2=131 (LC 8)
Max Uplift 2=-183 (LC 8), 13=-208 (LC 9)

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

TOP CHORD 1-2=0/6, 2-3=-863/164, 3-4=-2978/349, 4-5=-2223/272, 5-6=-2089/329, 6-7=-1286/251, 7-8=-1668/245, 8-9=-2250/298, 9-10=-1931/288, 10-11=-2270/282, 11-12=0/32, 11-13=-1423/231

BOT CHORD 2-20=-27/0, 3-19=-351/2737, 18-19=-350/2737, 17-18=0/28, 5-18=-109/97, 16-17=-12/46, 15-16=-107/1968, 14-15=-240/2470, 13-14=-121/421

WEBS 3-20=0/55, 4-18=-1032/259, 6-18=-233/1273, 7-16=-53/189, 8-16=-763/215, 9-14=-962/114, 10-14=-13/719, 11-14=-56/1545, 8-15=-27/493, 9-15=-626/166, 4-19=0/221, 16-18=-43/1488, 6-16=-167/51

**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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 183 lb uplift at joint 2 and 208 lb uplift at joint 13.
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



August 30,2021



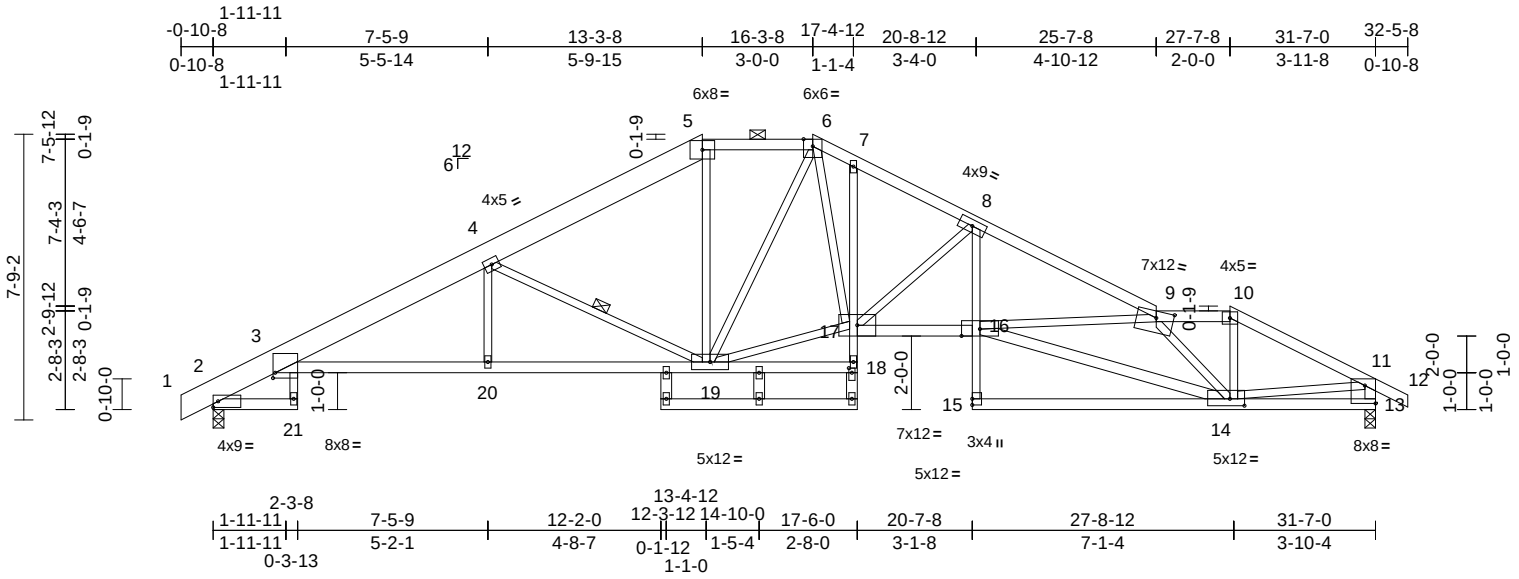
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | G6 | Roof Special | 1 | 1 | Job Reference (optional) | I47674105 |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:27 ID:WSrcGbvRHiOtL1AP8qRr03z1jQ1-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f






Scale = 1:62.6

Plate Offsets (X, Y): [3:0-0-11,0-1-12], [9:0-5-10,0-2-4], [13:Edge,0-5-13], [14:0-4-12,0-2-4], [18:0-1-8,0-1-0]

| 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 | 0.80 | Vert(LL) | -0.31 | 16-17 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.94 | Vert(CT) | -0.56 | 16-17 | >671 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.88 | Horz(CT) | 0.38 | 13 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | Wind(LL) | 0.19 | 16-17 | >999 | 240 | Weight: 175 lb | FT = 10% |

**LUMBER**

TOP CHORD 2x4 SPF No.2 *Except* 1-5:2x8 SP DSS

BOT CHORD 2x4 SPF No.2 *Except* 18-7,8-15:2x3 SPF No.2

WEBS 2x3 SPF No.2 *Except* 22-23,14-16,13-11,18-24,25-26:2x4 SPF No.2

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins (4-1-8 max.): 5-6, 9-10.

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 2-21
2-2-0 oc bracing: 16-17.

WEBS 1 Row at midpt 4-19

**REACTIONS** (lb/size) 2=1492/0-3-8, 13=1480/0-3-8
Max Horiz 2=120 (LC 8)
Max Uplift 2=-173 (LC 8), 13=-198 (LC 9)

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

TOP CHORD 1-2=0/6, 2-3=-863/147, 3-4=-2957/318, 4-5=-2107/216, 5-6=-1803/233, 6-7=-2592/297, 7-8=-2695/262, 8-9=-4022/380, 9-10=-2024/260, 10-11=-2241/257, 11-12=0/32, 11-13=-1430/209

BOT CHORD 2-21=-27/0, 3-20=-311/2713, 19-20=-309/2713, 18-19=-4/81, 17-18=0/58, 7-17=-38/62, 16-17=-190/3543, 15-16=0/126, 8-16=-78/1339, 14-15=0/66, 13-14=-73/297

WEBS 3-21=0/55, 4-19=-1051/279, 5-19=-31/557, 6-19=-596/78, 17-19=-34/1994, 6-17=-182/1548, 8-17=-1593/255, 14-16=-377/3596, 9-16=-55/174, 9-14=-2503/311, 10-14=-37/780, 11-14=-99/1671, 4-20=0/231

**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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 173 lb uplift at joint 2 and 198 lb uplift at joint 13.
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



August 30,2021

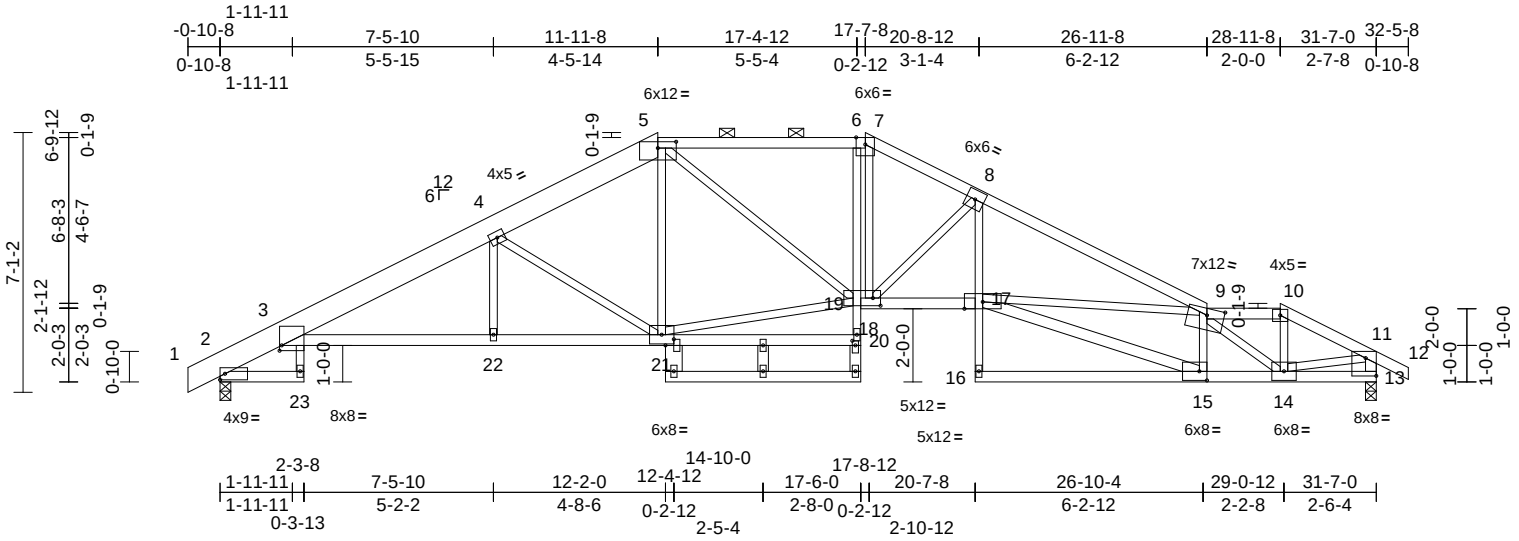


MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | G7 | Roof Special | 1 | 1 | Job Reference (optional) | I47674106 |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:28 Page: 1
ID:Vz_TTjrIkZKmrzWsgan3hbz1jKy-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f




Scale = 1:62.9

Plate Offsets (X, Y): [3:0-0-11,0-1-12], [5:0-6-0,0-2-1], [9:0-5-10,0-2-4], [13:Edge,0-5-13], [15:0-2-8,0-3-0], [19:0-2-8,0-2-8], [20:0-1-8,0-1-0], [21:0-2-0,0-2-12]

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 25.0 | Plate Grip DOL | 1.15 | TC | 0.68 | Vert(LL) | -0.28 | 17-18 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.93 | Vert(CT) | -0.50 | 17-18 | >747 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.77 | Horz(CT) | 0.36 | 13 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | Wind(LL) | 0.16 | 17-18 | >999 | 240 | Weight: 170 lb | FT = 10% |

**LUMBER**

TOP CHORD 2x4 SPF No.2 *Except* 1-5:2x8 SP DSS, 7-9:2x4 SPF 2100F 1.8E

BOT CHORD 2x4 SPF No.2 *Except* 20-6,8-16:2x3 SPF No.2

WEBS 2x3 SPF No.2 *Except* 21-24:2x6 SPF No.2, 15-17,13-11,20-25,26-27:2x4 SPF No.2

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 2-10-6 oc purlins, except end verticals, and 2-0-0 oc purlins (2-11-10 max.): 5-7, 9-10.

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 2-23
2-2-0 oc bracing: 17-18.

**REACTIONS** (lb/size) 2=1492/0-3-8, 13=1480/0-3-8
Max Horiz 2=108 (LC 12)
Max Uplift 2=-161 (LC 8), 13=-189 (LC 9)

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

TOP CHORD 1-2=0/6, 2-3=-863/129, 3-4=-2953/281, 4-5=-2282/218, 5-6=-2473/230, 6-7=-2423/230, 7-8=-2812/246, 8-9=-4095/345, 9-10=-1700/222, 10-11=-1986/234, 11-12=0/32, 11-13=-1420/202

BOT CHORD 2-23=-27/0, 3-22=-263/2711, 21-22=-261/2710, 20-21=-8/135, 19-20=0/101, 6-19=-334/127, 18-19=-17/2466, 17-18=-166/3559, 16-17=0/115, 8-17=-54/1324, 15-16=0/53, 14-15=-295/3068, 13-14=-25/184

WEBS 3-23=0/55, 4-21=-916/236, 19-21=-67/1849, 8-18=-1488/252, 15-17=-306/3138, 9-17=-15/555, 9-15=-941/178, 9-14=-1791/171, 10-14=-67/752, 11-14=-148/1609, 5-21=-55/314, 4-22=0/194, 5-19=-85/736, 7-18=-109/1200

**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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 161 lb uplift at joint 2 and 189 lb uplift at joint 13.
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



August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | G8 | Roof Special Girder | 1 | 1 | Job Reference (optional) | I47674107 |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:28 Page: 1
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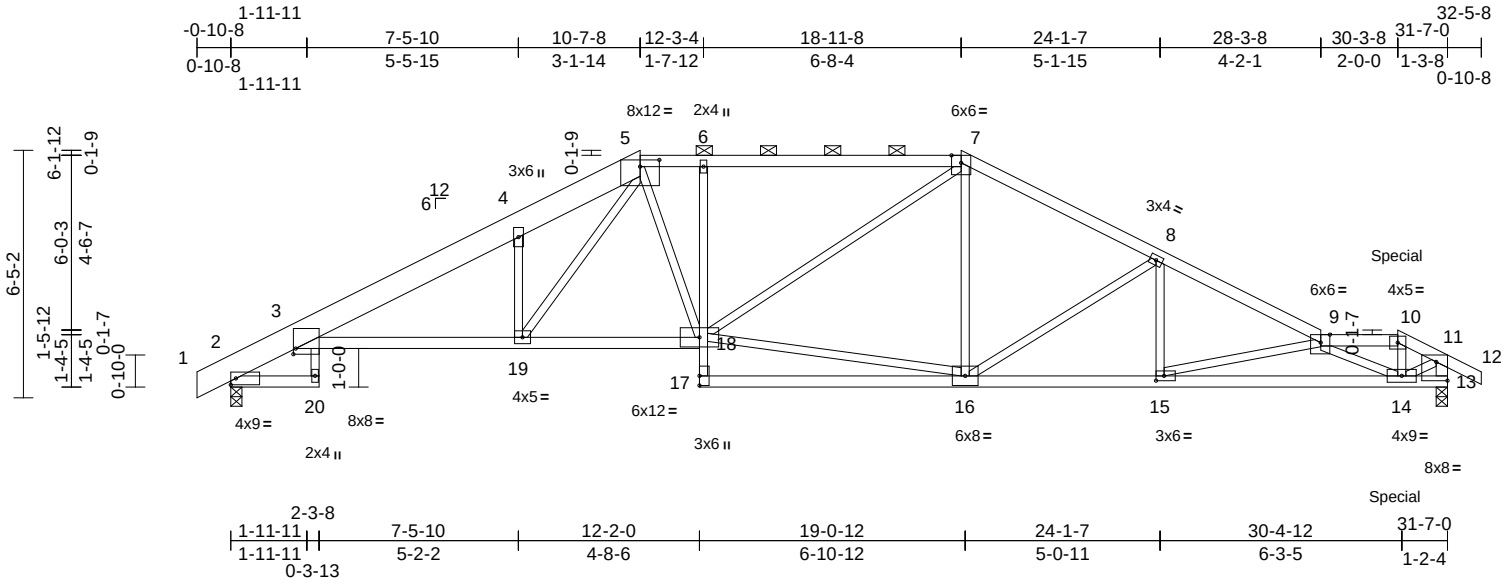


Scale = 1:59.8

Plate Offsets (X, Y): [3:0-0-11,0-1-12], [5:0-6-0,0-2-1], [9:0-2-14,Edge], [13:Edge,0-5-13], [15:0-2-8,0-1-8]

| 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) | -0.21 | 6 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.92 | Vert(CT) | -0.39 | 16-17 | >974 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | NO | WB | 0.63 | Horz(CT) | 0.26 | 13 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | Wind(LL) | 0.13 | 18-19 | >999 | 240 | Weight: 150 lb | FT = 10% |

**LUMBER**

TOP CHORD 2x4 SPF No.2 *Except* 1-5:2x8 SP DSS
BOT CHORD 2x4 SPF No.2 *Except* 6-17:2x3 SPF No.2, 17-13:2x4 SPF 2100F 1.8E
WEBS 2x3 SPF No.2 *Except* 13-11:2x4 SPF No.2

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 3-2-10 oc purlins, except end verticals, and 2-0-0 oc purlins (2-7-11 max.): 5-7, 9-10.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 2-20.

**REACTIONS** (lb/size) 2=1489/0-3-8, 13=1399/0-3-8
Max Horiz 2=97 (LC 8)
Max Uplift 2=-150 (LC 8), 13=-205 (LC 9)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/6, 2-3=-861/113, 3-4=-2954/239, 4-5=-3141/375, 5-6=-2243/203, 6-7=-2245/209, 7-8=-2145/211, 8-9=-2784/285, 9-10=-1192/137, 10-11=-1383/145, 11-12=0/32, 11-13=-1350/157
BOT CHORD 2-20=-27/0, 3-19=-210/2711, 18-19=-112/2067, 17-18=0/127, 6-18=-458/202, 16-17=0/118, 15-16=-178/2447, 14-15=-380/3364, 13-14=-15/85
WEBS 3-20=0/55, 4-19=-844/273, 16-18=-61/1749, 7-18=-122/605, 7-16=-32/339, 8-16=-706/208, 8-15=0/362, 9-15=-949/209, 9-14=-2472/319, 10-14=-69/581, 11-14=-106/1330, 5-19=-238/1135, 5-18=-154/638

**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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 150 lb uplift at joint 2 and 205 lb uplift at joint 13.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 126 lb down and 235 lb up at 30-3-8 on top chord, and 17 lb down and 65 lb up at 30-2-6 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
10) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-5=-70, 5-7=-70, 7-9=-70, 9-10=-70, 10-11=-70, 11-12=-70, 2-20=-20, 3-18=-20, 13-17=-20
Concentrated Loads (lb)
Vert: 10=58 (B), 14=26 (B)



August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | H1 | Hip | 1 | 1 | Job Reference (optional) | I47674108 |

Wheeler Lumber, Waverly, KS - 66871,

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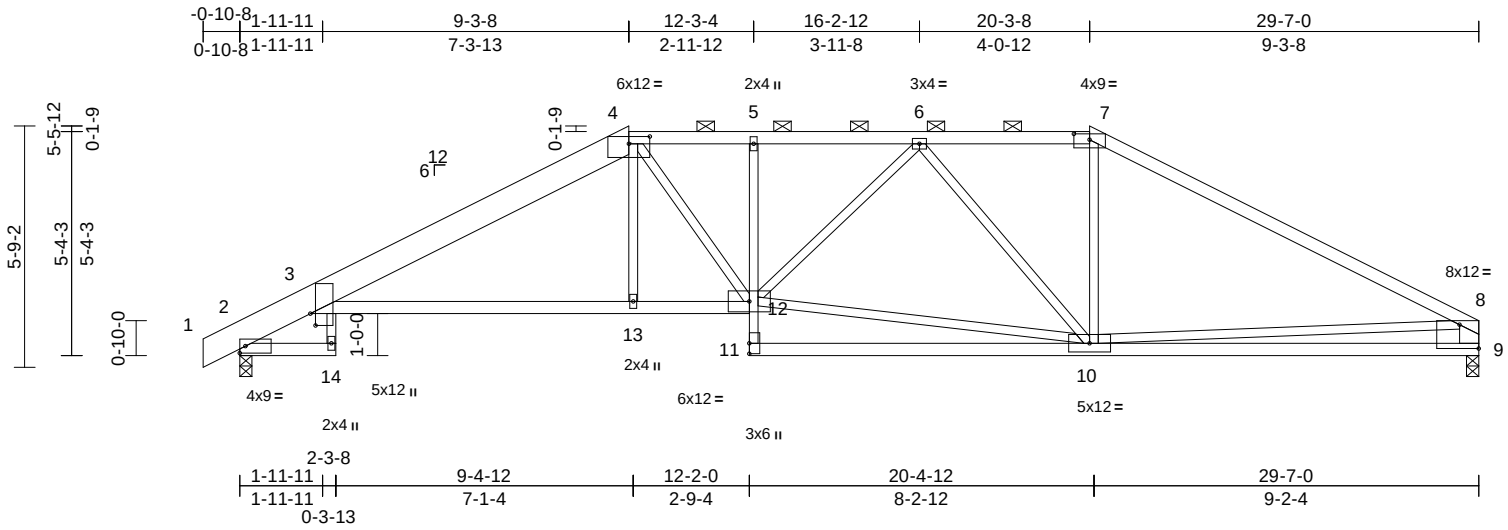


Scale = 1:55

Plate Offsets (X, Y): [3:0-3-6,0-1-8], [4:0-6-0,0-2-1], [7:0-4-8,0-1-11], [8:Edge,0-6-13]

| 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 | 0.88 | Vert(LL) | -0.19 | 3-13 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.79 | Vert(CT) | -0.42 | 3-13 | >830 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.77 | Horz(CT) | 0.26 | 9 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | Wind(LL) | 0.13 | 3-13 | >999 | 240 | Weight: 134 lb | FT = 10% |

**LUMBER**

TOP CHORD 2x8 SP DSS *Except* 4-7:2x4 SPF No.2, 7-8:2x4 SPF 2400F 2.0E
BOT CHORD 2x4 SPF No.2 *Except* 5-11:2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except* 9-8:2x6 SPF No.2

**BRACING**

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (3-7-4 max.): 4-7.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 2-14.

**REACTIONS** (lb/size) 2=1399/0-3-8, 9=1314/0-3-8
Max Horiz 2=94 (LC 12)
Max Uplift 2=-133 (LC 8), 9=-115 (LC 9)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/6, 2-3=-805/75, 3-4=-2375/206, 4-5=-2284/266, 5-6=-2276/266, 6-7=-1680/185, 7-8=-2014/172, 8-9=-1227/165
BOT CHORD 2-14=-26/0, 3-13=-187/2122, 12-13=-184/2125, 11-12=0/133, 5-12=-210/106, 10-11=0/194, 9-10=-200/704
WEBS 3-14=0/54, 4-13=0/319, 4-12=-149/399, 10-12=-216/1884, 6-12=-33/345, 6-10=-727/195, 7-10=0/475, 8-10=-111/1025

**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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 133 lb uplift at joint 2 and 115 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



August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | I47674109 |
|---|---|---|---|---|---|---|
| 210529 | H2 | Hip | 1 | 1 | Job Reference (optional) | |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:29 Page: 1
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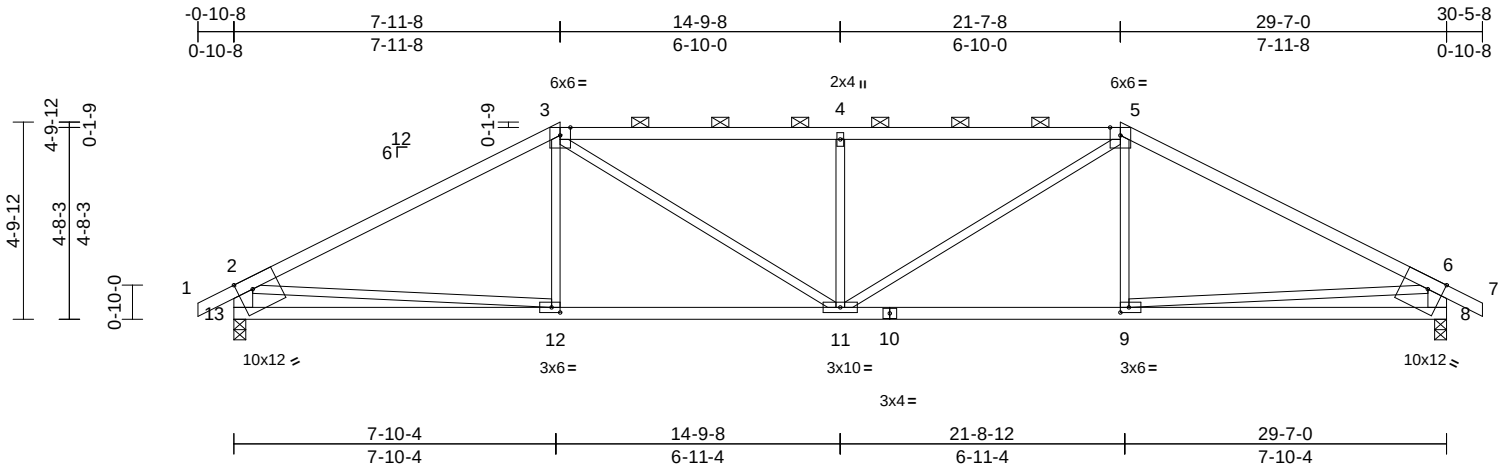


Scale = 1:56.2

Plate Offsets (X, Y): [8:0-4-6,Edge], [9:0-2-8,0-1-8], [12:0-2-8,0-1-8], [13:0-4-6,Edge]

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 25.0 | Plate Grip DOL | 1.15 | TC | 0.85 | Vert(LL) | -0.12 | 11 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.56 | Vert(CT) | -0.23 | 9-11 | >999 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.39 | Horz(CT) | 0.06 | 8 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | Wind(LL) | 0.09 | 11 | >999 | 240 | Weight: 109 lb | FT = 10% |

**LUMBER**
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 13-2,8-6:2x6 SPF No.2

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

**REACTIONS** (lb/size) 8=1388/0-3-8, 13=1388/0-3-8
Max Horiz 13=80 (LC 7)
Max Uplift 8=-126 (LC 9), 13=-126 (LC 8)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/35, 2-3=-2053/224, 3-4=-2251/317, 4-5=-2251/317, 5-6=-2053/224, 6-7=0/35, 2-13=-1314/170, 6-8=-1314/170
BOT CHORD 12-13=-315/745, 11-12=-180/1717, 9-11=-119/1717, 8-9=-263/745
WEBS 3-12=0/245, 3-11=-178/749, 4-11=-576/233, 5-11=-177/749, 5-9=0/245, 2-12=-145/1138, 6-9=-149/1138

**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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 126 lb uplift at joint 13 and 126 lb uplift at joint 8.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
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



August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | I47674110 |
|---|---|---|---|---|---|---|
| 210529 | H3 | Hip | 1 | 1 | Job Reference (optional) | |

Wheeler Lumber, Waverly, KS - 66871,

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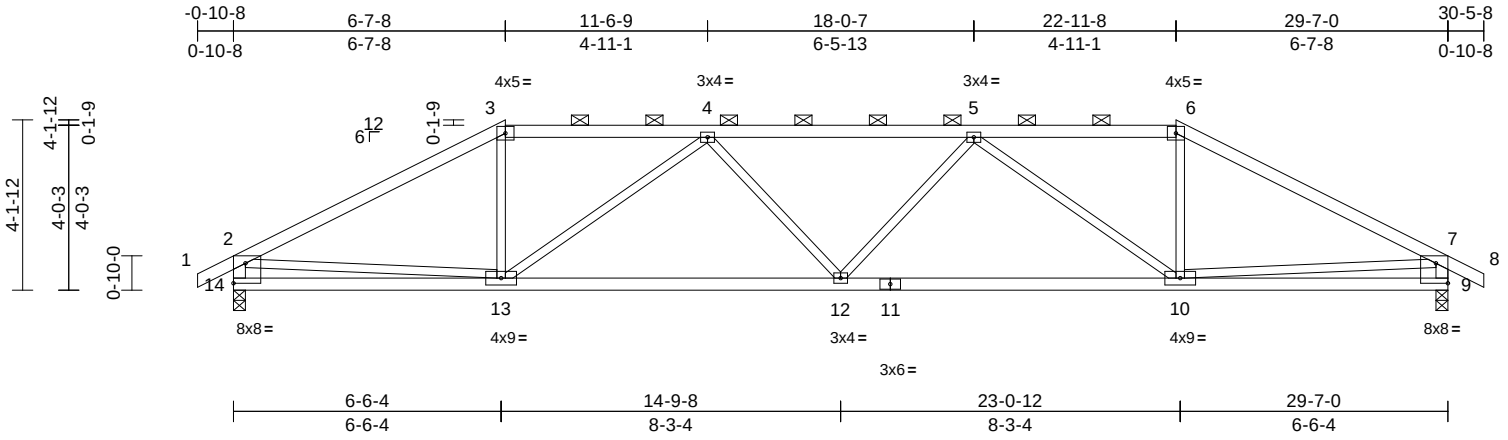


Scale = 1:56.1

Plate Offsets (X, Y): [9:Edge,0-5-13], [14:Edge,0-5-13]

| 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 | 0.62 | Vert(LL) | -0.16 | 12 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.77 | Vert(CT) | -0.33 | 10-12 | >999 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.95 | Horz(CT) | 0.08 | 9 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | Wind(LL) | 0.12 | 12 | >999 | 240 | Weight: 106 lb | FT = 10% |

**LUMBER**
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 14-2,9-7:2x4 SPF 2100F 1.8E

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 3-2-15 oc purlins, except end verticals, and 2-0-0 oc purlins (3-0-4 max.): 3-6.
BOT CHORD Rigid ceiling directly applied or 9-7-4 oc bracing.

**REACTIONS** (lb/size) 9=1390/0-3-8, 14=1390/0-3-8
Max Horiz 14=70 (LC 7)
Max Uplift 9=-138 (LC 4), 14=-138 (LC 5)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/32, 2-3=-2115/261, 3-4=-1781/255, 4-5=-2569/354, 5-6=-1781/255, 6-7=-2115/261, 7-8=0/32, 2-14=-1329/169, 7-9=-1329/169
BOT CHORD 13-14=-227/580, 12-13=-370/2494, 10-12=-349/2494, 9-10=-186/580
WEBS 3-13=-35/602, 4-13=-967/243, 4-12=0/227, 5-12=0/227, 5-10=-967/243, 6-10=-35/602, 2-13=-156/1283, 7-10=-161/1283

**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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 138 lb uplift at joint 14 and 138 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



August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | I47674111 |
|---|---|---|---|---|---|---|
| 210529 | H4 | Hip | 1 | 1 | Job Reference (optional) | |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:30 Page: 1
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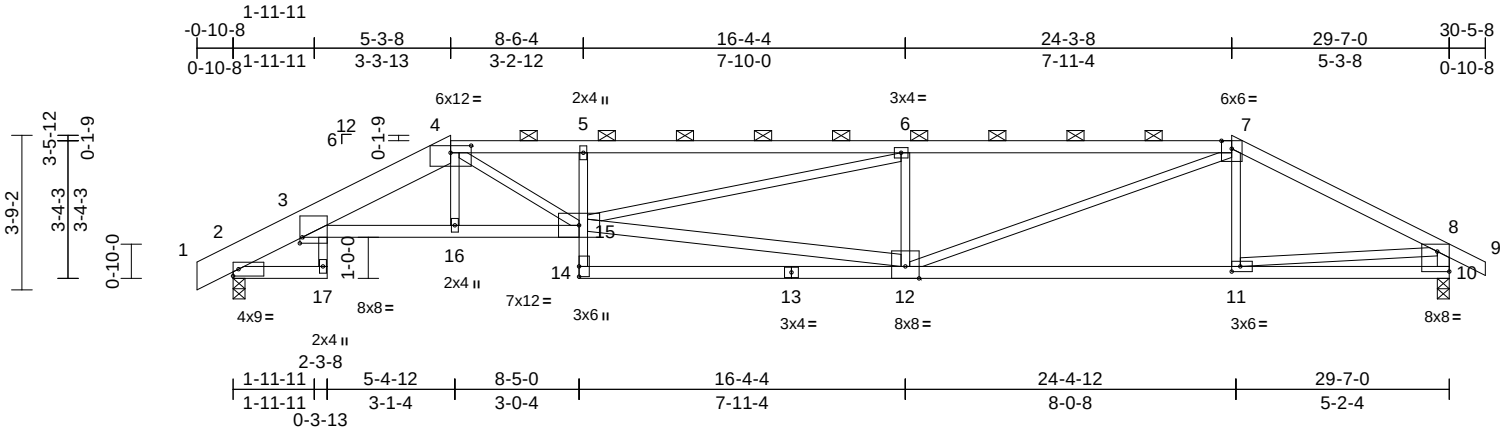


Scale = 1:56

Plate Offsets (X, Y): [3:0-0-11,0-1-12], [4:0-6-0,0-2-1], [10:Edge,0-5-13], [11:0-2-8,0-1-8]

| 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 | 0.84 | Vert(LL) | -0.27 | 5 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.86 | Vert(CT) | -0.54 | 12-14 | >651 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.75 | Horz(CT) | 0.22 | 10 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | Wind(LL) | 0.20 | 5 | >999 | 240 | Weight: 124 lb | FT = 10% |

**LUMBER**

TOP CHORD 2x8 SP DSS *Except* 4-7:2x4 SPF 2100F 1.8E, 7-9:2x4 SPF No.2

BOT CHORD 2x4 SPF No.2 *Except* 5-14:2x3 SPF No.2

WEBS 2x3 SPF No.2 *Except* 12-15,10-8:2x4 SPF No.2

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 3-8-6 oc purlins, except end verticals, and 2-0-0 oc purlins (2-4-4 max.): 4-7.

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

**REACTIONS** (lb/size) 2=1402/0-3-8, 10=1390/0-3-8
Max Horiz 2=57 (LC 7)
Max Uplift 2=-156 (LC 5), 10=-164 (LC 4)

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

TOP CHORD 1-2=0/6, 2-3=-806/121, 3-4=-2992/431, 4-5=-3855/644, 5-6=-3836/651, 6-7=-3287/549, 7-8=-2141/302, 8-9=0/32, 8-10=-1345/185

BOT CHORD 2-17=-26/0, 3-16=-396/2799, 15-16=-392/2801, 14-15=0/141, 5-15=-372/169, 12-14=-9/259, 11-12=-210/1850, 10-11=-104/346

WEBS 3-17=0/54, 4-16=0/152, 4-15=-299/1299, 12-15=-503/3050, 6-15=-115/596, 6-12=-798/289, 7-12=-322/1610, 7-11=-45/148, 8-11=-220/1513

**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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 156 lb uplift at joint 2 and 164 lb uplift at joint 10.
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



August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | H5 | Hip Girder | 1 | **2** | Job Reference (optional) | I47674112 |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:31 Page: 1
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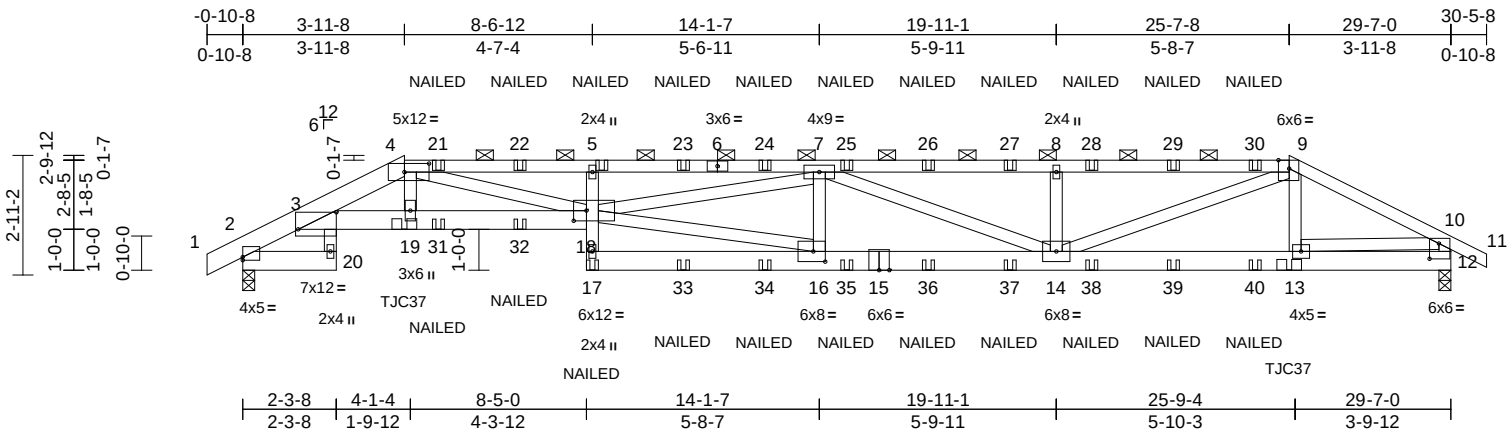


Scale = 1:56.4

Plate Offsets (X, Y): [2:Edge,0-0-15], [3:0-11-3,0-5-0], [4:0-7-4,0-2-8], [9:0-3-2,Edge], [12:0-2-12,0-4-8], [16:0-3-8,0-3-0], [18:0-3-12,0-3-0]

| 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 | 0.95 | Vert(LL) | -0.36 | 18 | >973 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.39 | Vert(CT) | -0.66 | 18 | >529 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | NO | WB | 0.80 | Horz(CT) | 0.21 | 12 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | Wind(LL) | 0.32 | 18 | >999 | 240 | Weight: 321 lb | FT = 10% |

**LUMBER**

TOP CHORD 2x4 SPF No.2 *Except* 1-4:2x6 SP DSS, 4-6:2x4 SPF 2100F 1.8E

BOT CHORD 2x6 SP 2400F 2.0E *Except* 20-3:2x4 SPF No.2

WEBS 2x4 SPF No.2

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (2-10-9 max.): 4-9.

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 2-20.

**REACTIONS** (lb/size) 2=2300/0-3-8, 12=2268/0-3-8
Max Horiz 2=45 (LC 7)
Max Uplift 2=-394 (LC 5), 12=-416 (LC 4)

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

TOP CHORD 1-2=0/6, 2-3=-1448/281, 3-4=-6550/1252, 4-5=-10211/2072, 5-7=-9682/1980, 7-8=-6264/1290, 8-9=-6268/1292, 9-10=-3723/736, 10-11=0/32, 10-12=-2192/415

BOT CHORD 2-20=-165/20, 3-20=-33/273, 3-19=-1157/6085, 18-19=-1164/6173, 16-17=-152/779, 14-16=-1435/7224, 13-14=-617/3293, 12-13=-127/594

WEBS 17-18=0/214, 5-18=-412/235, 4-19=-65/806, 4-18=-954/4257, 16-18=-1302/6544, 7-18=-534/2525, 7-16=-885/351, 7-14=-1060/203, 8-14=-724/332, 9-14=-684/3252, 9-13=0/163, 10-13=-547/2725

**NOTES**

1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) Provide adequate drainage to prevent water ponding.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 394 lb uplift at joint 2 and 416 lb uplift at joint 12.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
11) Use Simpson Strong-Tie TJC37 (6 nail 90-150) or equivalent at 3-11-8 from the left end to connect truss (es) to back face of bottom chord, skewed 33.7 deg.to the right, sloping 0.0 deg. down.
12) Use Simpson Strong-Tie TJC37 (4 nail, 30-90) or equivalent at 25-7-8 from the left end to connect truss (es) to back face of bottom chord, skewed 33.7 deg.to the left, sloping 0.0 deg. down.
13) Fill all nail holes where hanger is in contact with lumber.
14) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.

**LOAD CASE(S)** Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-70, 3-4=-70, 4-9=-70, 9-10=-70, 10-11=-70, 2-20=-20, 3-18=-20, 12-17=-20
Concentrated Loads (lb)
Vert: 18=-35 (B), 5=-83 (B), 19=-240 (B), 13=-224 (B), 21=-76 (B), 22=-76 (B), 23=-83 (B), 24=-83 (B), 25=-83 (B), 26=-83 (B), 27=-83 (B), 28=-83 (B), 29=-83 (B), 30=-83 (B), 31=-49 (B), 32=-49 (B), 33=-35 (B), 34=-35 (B), 35=-35 (B), 36=-35 (B), 37=-35 (B), 38=-35 (B), 39=-35 (B), 40=-35 (B)


August 30,2021




MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | J4 | Jack-Closed Supported Gable | 2 | 1 | Job Reference (optional) | I47674113 |

Wheeler Lumber, Waverly, KS - 66871,

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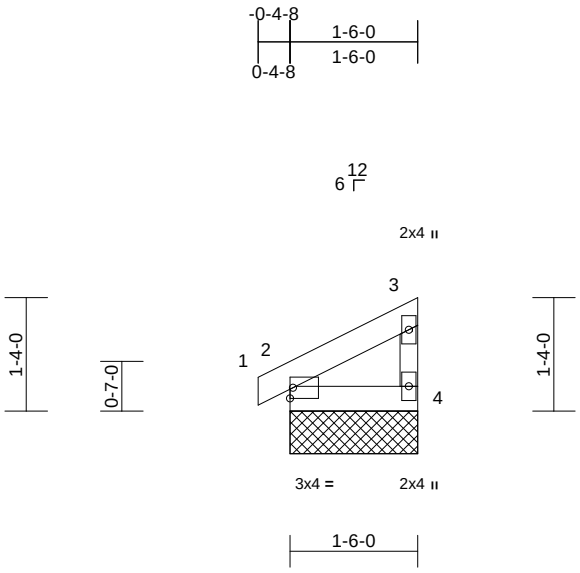
Page: 1




Scale = 1:27.1

| 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 | 0.03 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.02 | Vert(CT) | n/a | - | n/a | 999 | | |
| 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: 5 lb | FT = 10% |

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

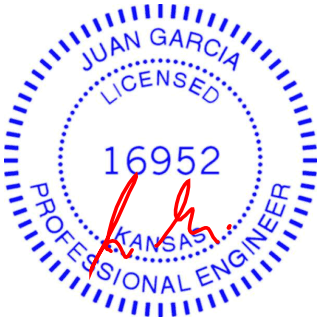
**BRACING**
TOP CHORD Structural wood sheathing directly applied or 1-6-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (lb/size) 2=93/1-6-0, 4=59/1-6-0
Max Horiz 2=39 (LC 5)
Max Uplift 2=-14 (LC 8), 4=-18 (LC 8)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-6/0, 2-3=-43/21, 3-4=-45/26
BOT CHORD 2-4=-14/10

**NOTES**
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; 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 2-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 18 lb uplift at joint 4 and 14 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


August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | J5 | Jack-Closed | 2 | 1 | Job Reference (optional) | I47674114 |

Wheeler Lumber, Waverly, KS - 66871,

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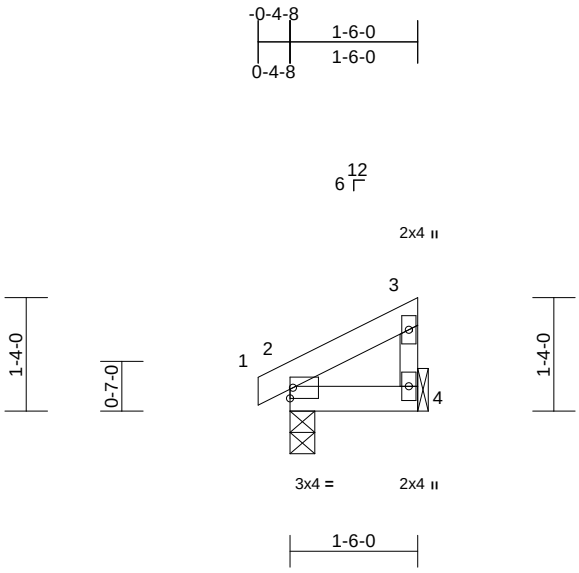


Scale = 1:27.1

| 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 | 0.02 | Vert(LL) | 0.00 | 2-4 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.03 | Vert(CT) | 0.00 | 2-4 | >999 | 240 | | |
| 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: 5 lb | FT = 10% |

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

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 1-6-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (lb/size) 2=94/0-3-8, 4=57/ Mechanical
Max Horiz 2=39 (LC 5)
Max Uplift 2=-15 (LC 8), 4=-17 (LC 8)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-6/0, 2-3=-43/21, 3-4=-44/25
BOT CHORD 2-4=-14/10

**NOTES**
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 17 lb uplift at joint 4 and 15 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



August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | J6 | Jack-Open Girder | 2 | 1 | Job Reference (optional) | I47674115 |

Wheeler Lumber, Waverly, KS - 66871,

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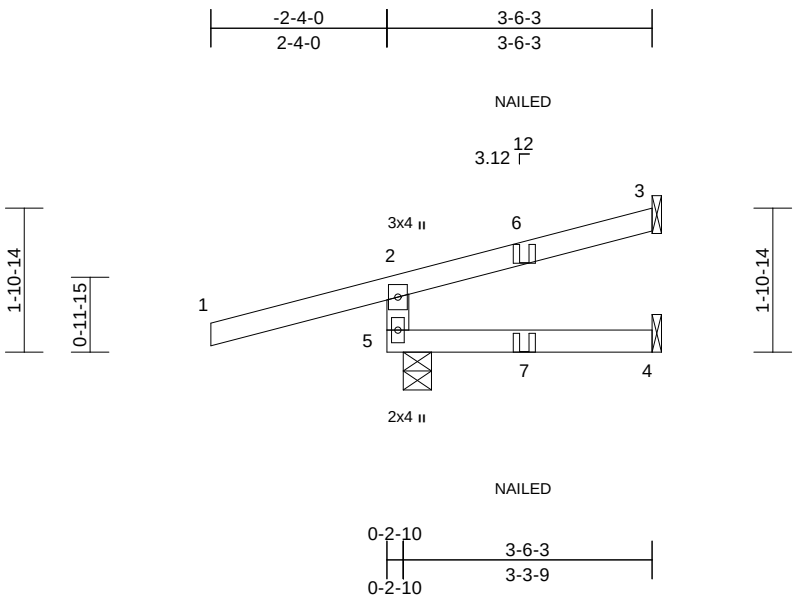


Scale = 1:30.5

| 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 | 0.49 | Vert(LL) | -0.01 | 4-5 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.11 | Vert(CT) | -0.01 | 4-5 | >999 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | NO | WB | 0.00 | Horz(CT) | 0.01 | 3 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-R | | Wind(LL) | -0.01 | 4-5 | >999 | 240 | Weight: 12 lb | FT = 10% |

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

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 4-1-6 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (lb/size) 3=67/ Mechanical, 4=15/ Mechanical, 5=386/0-4-8
Max Horiz 5=58 (LC 4)
Max Uplift 3=-37 (LC 8), 5=-157 (LC 4)
Max Grav 3=67 (LC 1), 4=56 (LC 3), 5=386 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-337/174, 1-2=0/44, 2-3=-44/11
BOT CHORD 4-5=0/0

**NOTES**
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 157 lb uplift at joint 5 and 37 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidlines.
8) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-3=-70, 4-5=-20
Concentrated Loads (lb)
Vert: 7=2 (F)



August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | I47674116 |
|---|---|---|---|---|---|---|
| 210529 | J7 | Jack-Open | 5 | 1 | Job Reference (optional) | |

Wheeler Lumber, Waverly, KS - 66871,

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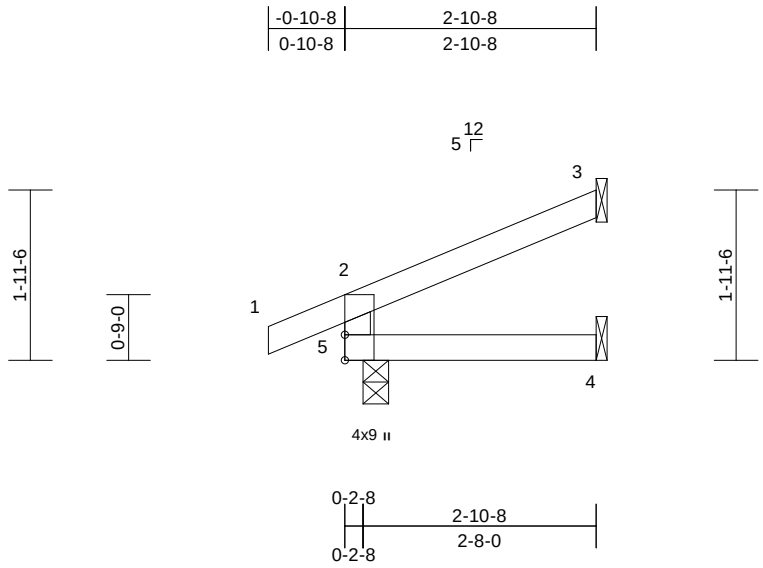


Scale = 1:26.4

| 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 | 0.09 | Vert(LL) | 0.00 | 4-5 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.06 | Vert(CT) | -0.01 | 4-5 | >999 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.00 | Horz(CT) | 0.00 | 3 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-R | | Wind(LL) | 0.00 | 4-5 | >999 | 240 | Weight: 8 lb | FT = 10% |

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

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 2-10-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (lb/size) 3=78/ Mechanical, 4=28/ Mechanical, 5=205/0-3-8
Max Horiz 5=53 (LC 8)
Max Uplift 3=-43 (LC 8), 5=-31 (LC 8)
Max Grav 3=78 (LC 1), 4=49 (LC 3), 5=205 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-180/57, 1-2=0/27, 2-3=-46/23
BOT CHORD 4-5=0/0

**NOTES**
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 31 lb uplift at joint 5 and 43 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | J8 | Jack-Open | 2 | 1 | Job Reference (optional) | I47674117 |

Wheeler Lumber, Waverly, KS - 66871,

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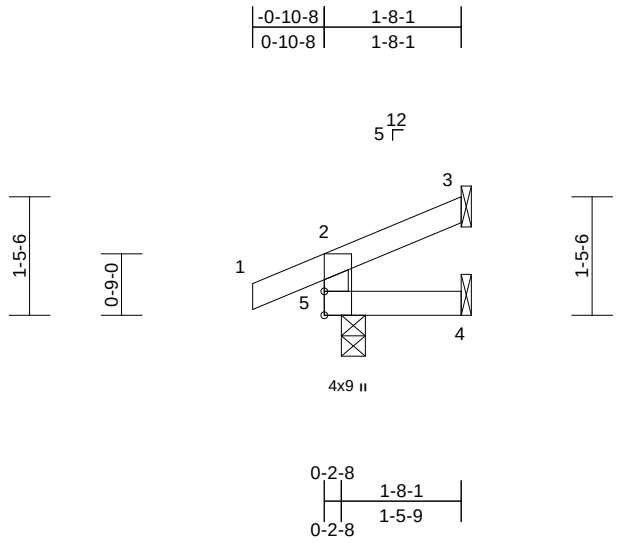


Scale = 1:28.1

| 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 | 0.07 | Vert(LL) | 0.00 | 4-5 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.02 | Vert(CT) | 0.00 | 4-5 | >999 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.00 | Horz(CT) | 0.00 | 3 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-R | | Wind(LL) | 0.00 | 4-5 | >999 | 240 | Weight: 5 lb | FT = 10% |

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

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 1-8-1 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (lb/size) 3=34/ Mechanical, 4=10/ Mechanical, 5=164/0-3-8
Max Horiz 5=37 (LC 5)
Max Uplift 3=-24 (LC 8), 5=-34 (LC 4)
Max Grav 3=34 (LC 1), 4=27 (LC 3), 5=164 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-143/46, 1-2=0/27, 2-3=-28/9
BOT CHORD 4-5=0/0

**NOTES**
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 34 lb uplift at joint 5 and 24 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | J9 | Diagonal Hip Girder | 2 | 1 | Job Reference (optional) | I47674118 |

Wheeler Lumber, Waverly, KS - 66871,

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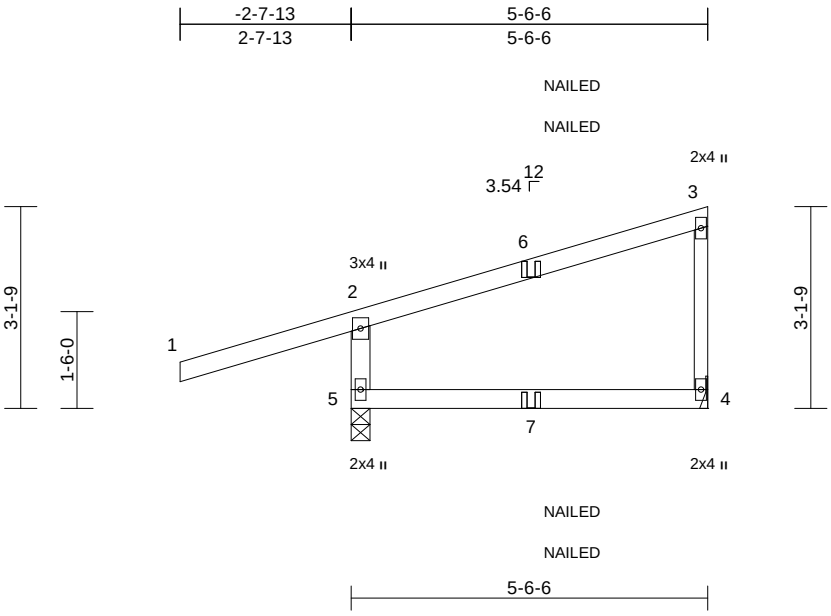


Scale = 1:35.7

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 25.0 | Plate Grip DOL | 1.15 | TC | 0.64 | Vert(LL) | -0.03 | 4-5 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.24 | Vert(CT) | -0.06 | 4-5 | >999 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | NO | WB | 0.00 | Horz(CT) | 0.00 | 4 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-R | | Wind(LL) | 0.02 | 4-5 | >999 | 240 | Weight: 19 lb | FT = 10% |

**LUMBER**
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2 *Except* 3-4:2x3 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** (lb/size) 4=187/ Mechanical, 5=487/0-3-8
Max Horiz 5=133 (LC 5)
Max Uplift 4=-54 (LC 5), 5=-190 (LC 4)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-429/217, 1-2=0/55, 2-3=-116/19, 3-4=-137/68
BOT CHORD 4-5=-39/50

**NOTES**
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 190 lb uplift at joint 5 and 54 lb uplift at joint 4.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidlines.
8) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-3=-70, 4-5=-20
Concentrated Loads (lb)
Vert: 7=-3 (F)



August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | I47674119 |
|---|---|---|---|---|---|---|
| 210529 | J10 | Jack-Open | 7 | 1 | Job Reference (optional) | |

Wheeler Lumber, Waverly, KS - 66871,

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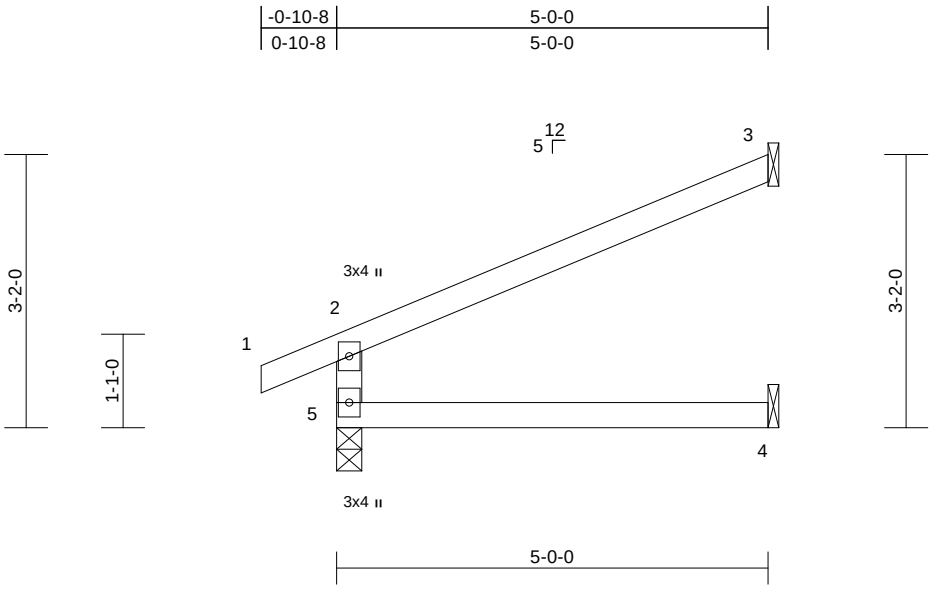


Scale = 1:26.7

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 25.0 | Plate Grip DOL | 1.15 | TC | 0.35 | Vert(LL) | -0.02 | 4-5 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.21 | Vert(CT) | -0.06 | 4-5 | >999 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.00 | Horz(CT) | 0.04 | 3 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-R | | Wind(LL) | 0.03 | 4-5 | >999 | 240 | Weight: 14 lb | FT = 10% |

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

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

**REACTIONS** (lb/size) 3=150/ Mechanical, 4=58/ Mechanical, 5=295/0-3-8
Max Horiz 5=85 (LC 8)
Max Uplift 3=-80 (LC 8), 5=-34 (LC 8)
Max Grav 3=150 (LC 1), 4=91 (LC 3), 5=295 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-256/81, 1-2=0/27, 2-3=-80/45
BOT CHORD 4-5=0/0

**NOTES**
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 34 lb uplift at joint 5 and 80 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | J11 | Jack-Open | 2 | 1 | Job Reference (optional) | I47674120 |

Wheeler Lumber, Waverly, KS - 66871,

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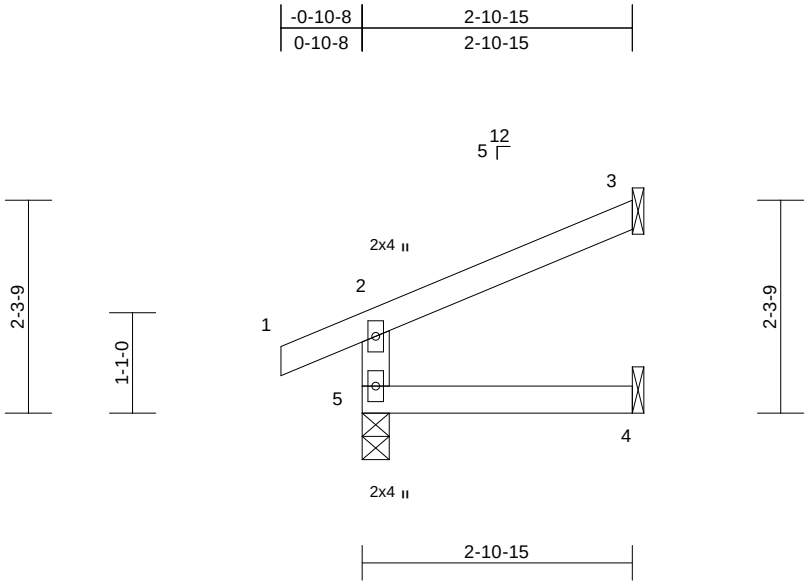
Page: 1




Scale = 1:24.8

| 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 | 0.09 | Vert(LL) | 0.00 | 4-5 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.06 | Vert(CT) | -0.01 | 4-5 | >999 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.00 | Horz(CT) | -0.01 | 3 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-R | | Wind(LL) | 0.00 | 4-5 | >999 | 240 | Weight: 9 lb | FT = 10% |

**LUMBER**
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF 2400F 2.0E

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 2-10-15 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (lb/size) 3=80/ Mechanical, 4=29/ Mechanical, 5=207/0-3-8
Max Horiz 5=58 (LC 5)
Max Uplift 3=-47 (LC 8), 5=-26 (LC 4)
Max Grav 3=80 (LC 1), 4=50 (LC 3), 5=207 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-181/54, 1-2=0/27, 2-3=-47/23
BOT CHORD 4-5=0/0

**NOTES**
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 26 lb uplift at joint 5 and 47 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | I47674121 |
|---|---|---|---|---|---|---|
| 210529 | J12 | Jack-Open | 1 | 1 | Job Reference (optional) | |

Wheeler Lumber, Waverly, KS - 66871,

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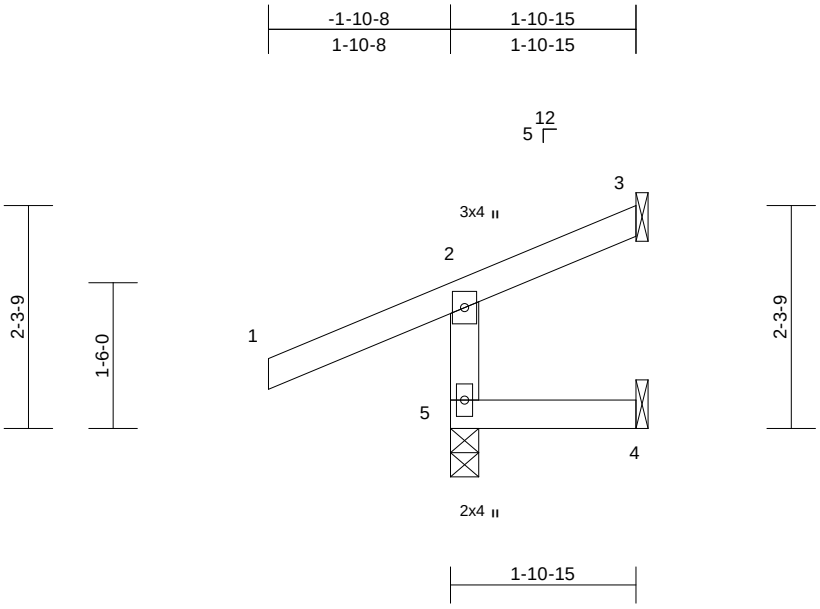


Scale = 1:23.7

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 25.0 | Plate Grip DOL | 1.15 | TC | 0.28 | Vert(LL) | 0.00 | 4-5 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.07 | Vert(CT) | 0.00 | 4-5 | >999 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.00 | Horz(CT) | -0.01 | 3 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-R | | Wind(LL) | 0.00 | 4-5 | >999 | 240 | Weight: 8 lb | FT = 10% |

**LUMBER**
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF 2400F 2.0E

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 1-10-15 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (lb/size) 3=1/ Mechanical, 4=-4/ Mechanical, 5=302/0-3-8
Max Horiz 5=65 (LC 5)
Max Uplift 3=-23 (LC 8), 4=-6 (LC 5), 5=-74 (LC 4)
Max Grav 3=8 (LC 19), 4=27 (LC 3), 5=302 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-263/90, 1-2=0/54, 2-3=-47/2
BOT CHORD 4-5=0/0

**NOTES**
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 74 lb uplift at joint 5, 6 lb uplift at joint 4 and 23 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | J13 | Jack-Open | 1 | 1 | Job Reference (optional) | I47674122 |

Wheeler Lumber, Waverly, KS - 66871,

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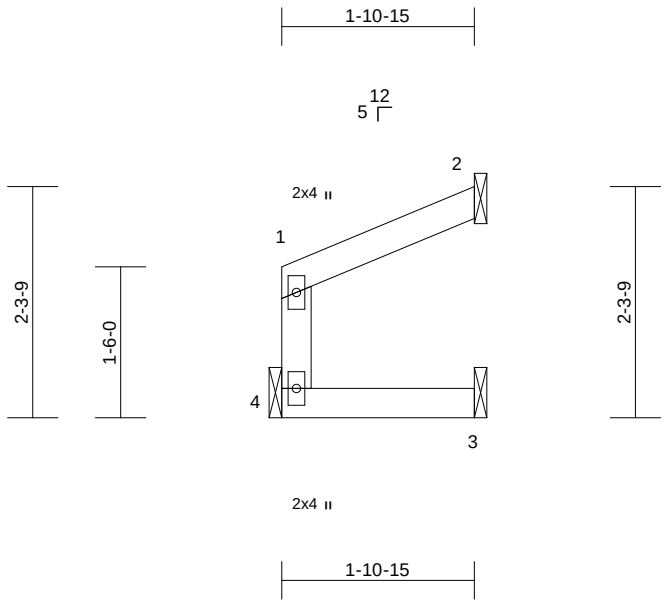


Scale = 1:22.9

| 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 | 0.05 | Vert(LL) | 0.00 | 3-4 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.04 | Vert(CT) | 0.00 | 3-4 | >999 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.00 | Horz(CT) | -0.01 | 2 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-R | | Wind(LL) | 0.00 | 3-4 | >999 | 240 | Weight: 6 lb | FT = 10% |

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

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 1-10-15 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (lb/size) 2=59/ Mechanical, 3=20/ Mechanical, 4=79/ Mechanical
Max Horiz 4=47 (LC 5)
Max Uplift 2=-37 (LC 8), 3=-4 (LC 5)
Max Grav 2=59 (LC 1), 3=34 (LC 3), 4=79 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-4=-64/14, 1-2=-29/18
BOT CHORD 3-4=0/0

**NOTES**
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 37 lb uplift at joint 2 and 4 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | J14 | Jack-Closed Girder | 1 | 1 | Job Reference (optional) | I47674123 |

Wheeler Lumber, Waverly, KS - 66871,

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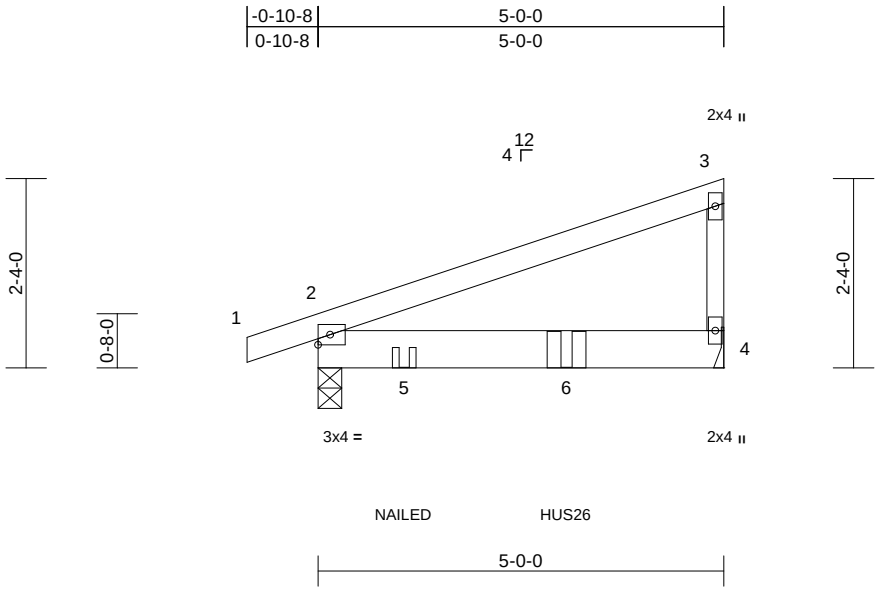


Scale = 1:28.4

| 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 | 0.57 | Vert(LL) | -0.08 | 2-4 | >750 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.86 | Vert(CT) | -0.14 | 2-4 | >409 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | NO | WB | 0.00 | Horz(CT) | 0.00 | 4 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-P | | Wind(LL) | 0.06 | 2-4 | >886 | 240 | Weight: 20 lb | FT = 10% |

**LUMBER**
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x6 SP DSS
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 4-10-2 oc bracing.

**REACTIONS** (lb/size) 2=894/0-3-8, 4=1097/ Mechanical
Max Horiz 2=85 (LC 5)
Max Uplift 2=-201 (LC 4), 4=-248 (LC 8)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/1, 2-3=-77/47, 3-4=-159/74
BOT CHORD 2-4=-27/21

**NOTES**
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 248 lb uplift at joint 4 and 201 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.
7) Use Simpson Strong-Tie HUS26 (14-10d Girder, 6-10d Truss, Single Ply Girder) or equivalent at 3-0-12 from the left end to connect truss(es) to back face of bottom chord, skewed 0.0 deg.to the right, sloping 0.0 deg. down.
8) Fill all nail holes where hanger is in contact with lumber.
9) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.
10) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-70, 2-4=-20
Concentrated Loads (lb)
Vert: 5=-60 (B), 6=-1432 (B)



August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | J15 | Diagonal Hip Girder | 1 | 1 | Job Reference (optional) | I47674124 |

Wheeler Lumber, Waverly, KS - 66871,

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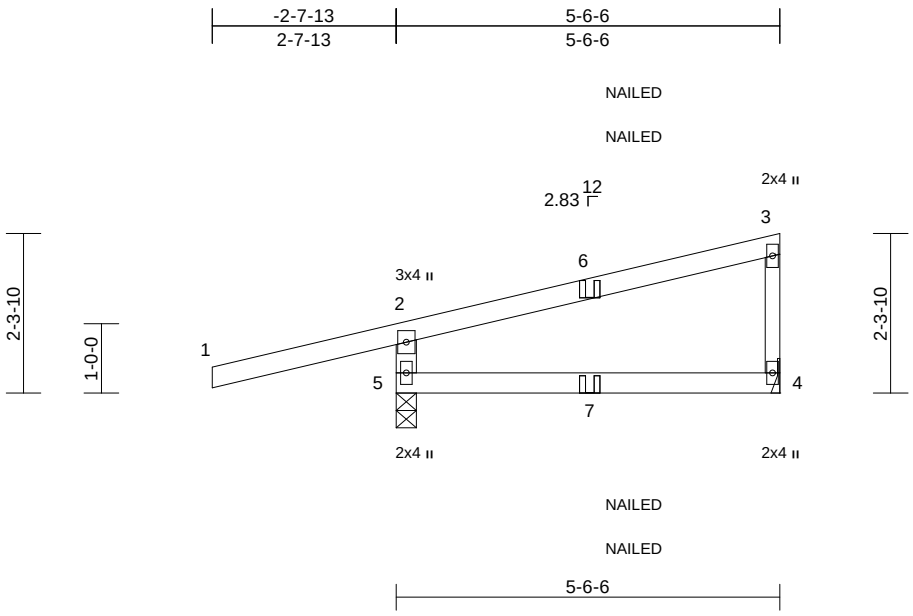


Scale = 1:33.2

| 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 | 0.63 | Vert(LL) | -0.03 | 4-5 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.23 | Vert(CT) | -0.06 | 4-5 | >999 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | NO | WB | 0.00 | Horz(CT) | 0.00 | 4 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-R | | Wind(LL) | -0.02 | 4-5 | >999 | 240 | Weight: 18 lb | FT = 10% |

**LUMBER**
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2 *Except* 3-4:2x3 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** (lb/size) 4=187/ Mechanical, 5=487/0-3-8
Max Horiz 5=95 (LC 5)
Max Uplift 4=-34 (LC 8), 5=-187 (LC 4)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-428/217, 1-2=0/45, 2-3=-107/11, 3-4=-137/63
BOT CHORD 4-5=-26/58

**NOTES**
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 187 lb uplift at joint 5 and 34 lb uplift at joint 4.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidlines.
8) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-3=-70, 4-5=-20
Concentrated Loads (lb)
Vert: 7=-3 (B)

STATE OF MISSOURI
JUAN GARCIA
NUMBER E-2000162101
PROFESSIONAL ENGINEER

JUAN GARCIA
LICENSED
16952
KANSAS
PROFESSIONAL ENGINEER

August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | J16 | Jack-Open | 1 | 1 | Job Reference (optional) | I47674125 |

Wheeler Lumber, Waverly, KS - 66871,

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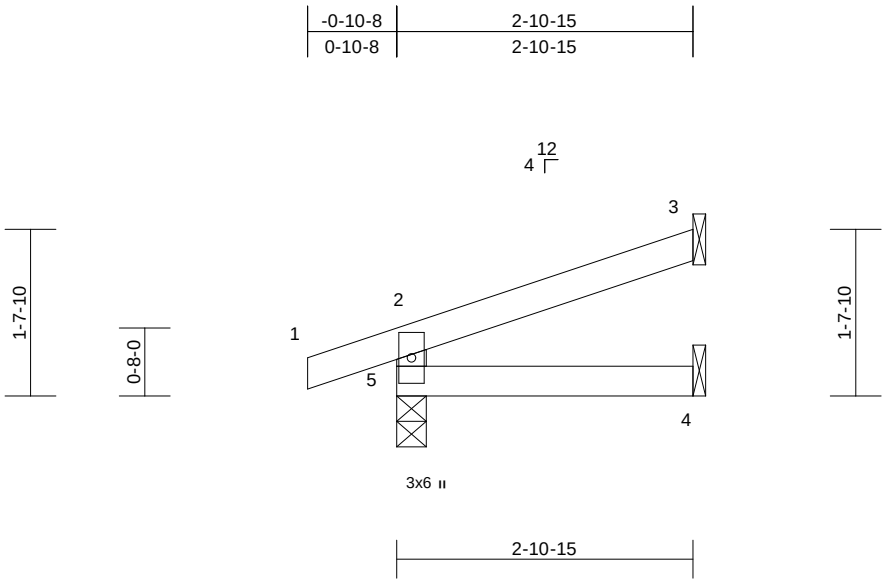


Scale = 1:22.6

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 25.0 | Plate Grip DOL | 1.15 | TC | 0.09 | Vert(LL) | 0.00 | 4-5 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.06 | Vert(CT) | -0.01 | 4-5 | >999 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.00 | Horz(CT) | 0.00 | 3 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-R | | Wind(LL) | 0.00 | 4-5 | >999 | 240 | Weight: 8 lb | FT = 10% |

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

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 2-10-15 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (lb/size) 3=80/ Mechanical, 4=29/ Mechanical, 5=207/0-3-8
Max Horiz 5=48 (LC 4)
Max Uplift 3=-39 (LC 8), 5=-61 (LC 4)
Max Grav 3=80 (LC 1), 4=50 (LC 3), 5=207 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-181/84, 1-2=0/23, 2-3=-37/19
BOT CHORD 4-5=0/0

**NOTES**
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 61 lb uplift at joint 5 and 39 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | I47674126 |
|---|---|---|---|---|---|---|
| 210529 | J17 | Jack-Open | 1 | 1 | Job Reference (optional) | |

Wheeler Lumber, Waverly, KS - 66871,

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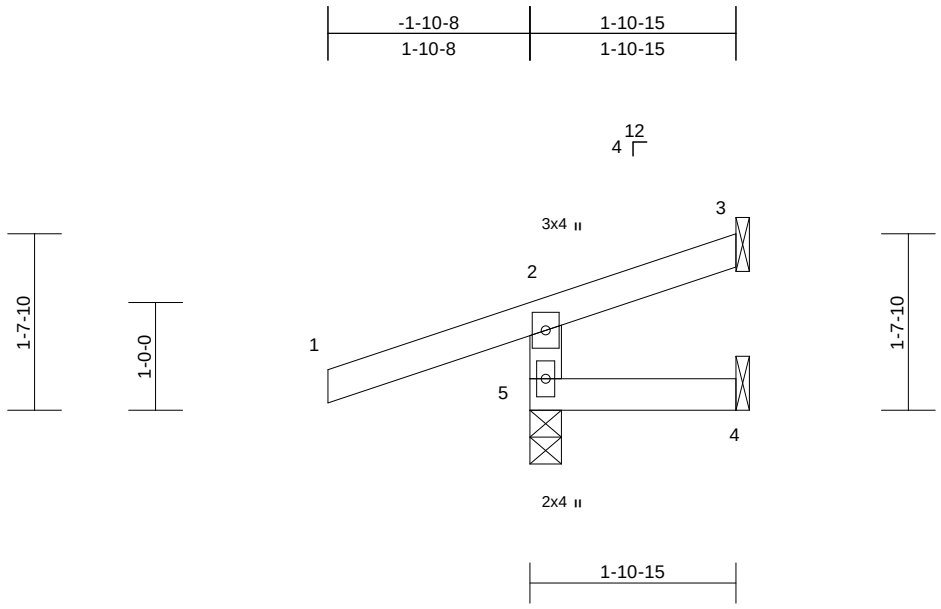


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| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 25.0 | Plate Grip DOL | 1.15 | TC | 0.28 | Vert(LL) | 0.00 | 4-5 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.08 | Vert(CT) | 0.00 | 4-5 | >999 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.00 | Horz(CT) | -0.01 | 3 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-R | | Wind(LL) | 0.00 | 4-5 | >999 | 240 | Weight: 7 lb | FT = 10% |

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

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 1-10-15 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (lb/size) 3=2/ Mechanical, 4=-5/ Mechanical, 5=302/0-3-8
Max Horiz 5=48 (LC 4)
Max Uplift 3=-14 (LC 8), 4=-5 (LC 1), 5=-130 (LC 4)
Max Grav 3=5 (LC 19), 4=26 (LC 3), 5=302 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-262/137, 1-2=0/45, 2-3=-38/1
BOT CHORD 4-5=0/0

**NOTES**
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 130 lb uplift at joint 5, 5 lb uplift at joint 4 and 14 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | J18 | Jack-Open | 3 | 1 | Job Reference (optional) | I47674127 |

Wheeler Lumber, Waverly, KS - 66871,

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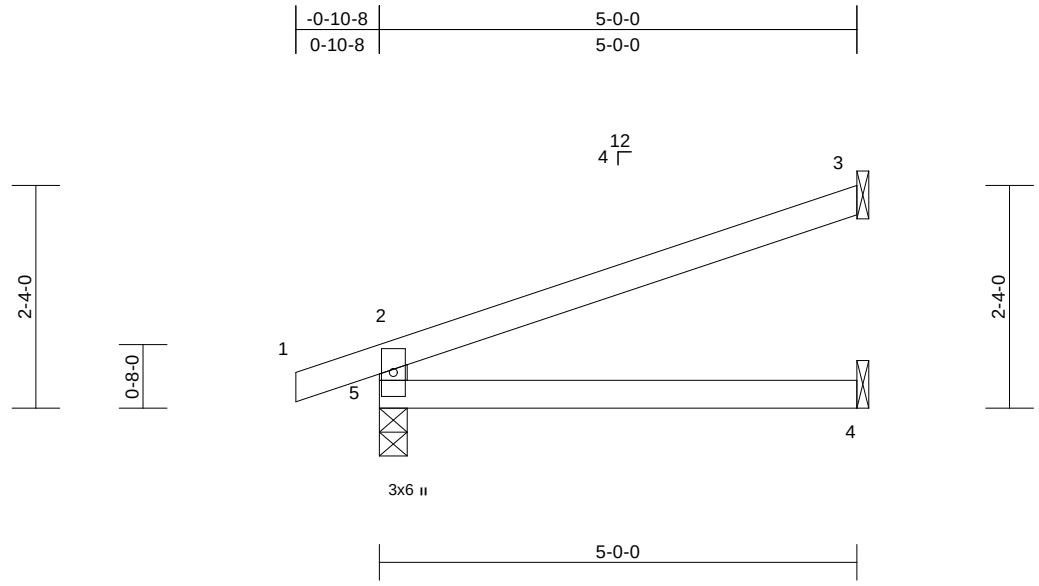
Page: 1




Scale = 1:24.1

| 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 | 0.35 | Vert(LL) | -0.02 | 4-5 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.21 | Vert(CT) | -0.05 | 4-5 | >999 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.00 | Horz(CT) | 0.02 | 3 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-R | | Wind(LL) | 0.02 | 4-5 | >999 | 240 | Weight: 13 lb | FT = 10% |

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

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

**REACTIONS** (lb/size) 3=150/ Mechanical, 4=58/ Mechanical, 5=295/0-3-8
Max Horiz 5=77 (LC 4)
Max Uplift 3=-69 (LC 8), 5=-71 (LC 4)
Max Grav 3=150 (LC 1), 4=90 (LC 3), 5=295 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-257/113, 1-2=0/23, 2-3=-64/37
BOT CHORD 4-5=0/0

**NOTES**
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 71 lb uplift at joint 5 and 69 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | J19 | Diagonal Hip Girder | 2 | 1 | Job Reference (optional) | I47674128 |

Wheeler Lumber, Waverly, KS - 66871,

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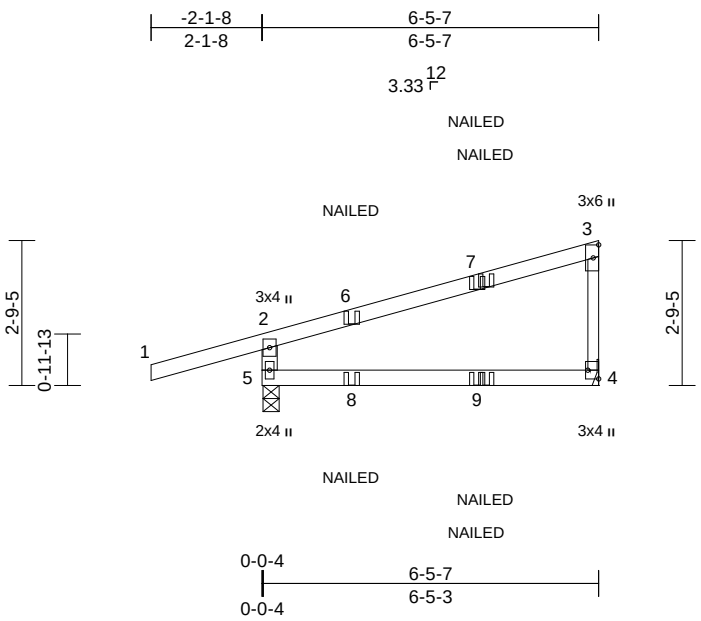


Scale = 1:44.1

Plate Offsets (X, Y): [4: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 | 0.50 | Vert(LL) | -0.06 | 4-5 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.34 | Vert(CT) | -0.12 | 4-5 | >630 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | NO | WB | 0.00 | Horz(CT) | 0.00 | 4 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-R | | Wind(LL) | 0.02 | 4-5 | >999 | 240 | Weight: 20 lb | FT = 10% |

**LUMBER**
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2 *Except* 3-4:2x3 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** (lb/size) 4=248/ Mechanical, 5=463/0-3-11
Max Horiz 5=116 (LC 7)
Max Uplift 4=-58 (LC 8), 5=-164 (LC 4)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-412/202, 1-2=0/43, 2-3=-147/17, 3-4=-181/85
BOT CHORD 4-5=-36/59

**NOTES**
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 164 lb uplift at joint 5 and 58 lb uplift at joint 4.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) "NAILED" indicates 2-12d (0.148"x3.25") toe-nails per NDS guidlines.
8) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-3=-70, 4-5=-20
Concentrated Loads (lb)
Vert: 8=4 (B), 9=2 (F=3, B=-1)



August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | J20 | Diagonal Hip Girder | 1 | 1 | Job Reference (optional) | I47674129 |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:34 Page: 1
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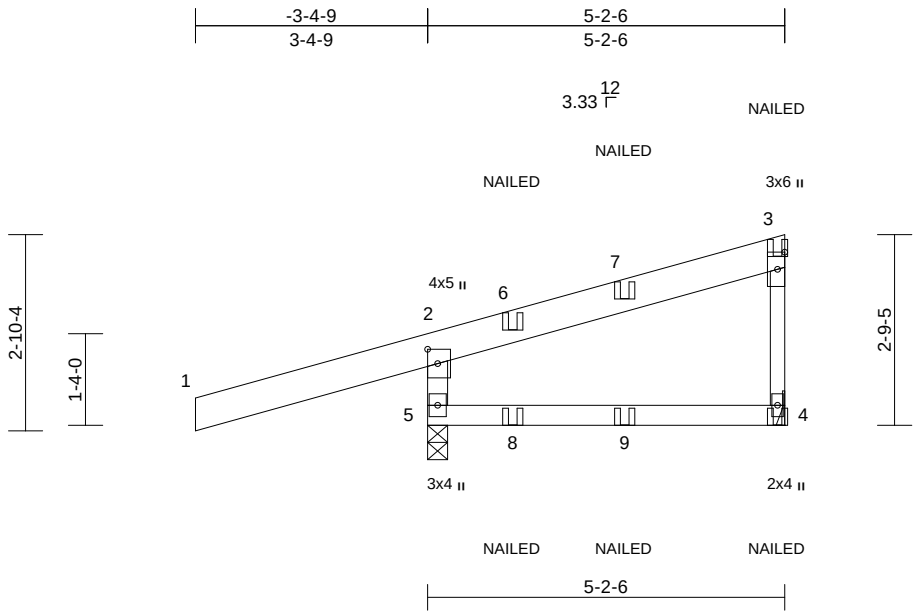


Scale = 1:33.5

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

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 25.0 | Plate Grip DOL | 1.15 | TC | 0.65 | Vert(LL) | 0.02 | 4-5 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.11 | Vert(CT) | -0.03 | 4-5 | >999 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | NO | WB | 0.00 | Horz(CT) | 0.00 | 4 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-R | | Wind(LL) | -0.01 | 4-5 | >999 | 240 | Weight: 29 lb | FT = 10% |

**LUMBER**
TOP CHORD 2x6 SP DSS
BOT CHORD 2x4 SPF 2400F 2.0E
WEBS 2x4 SPF No.2 *Except* 3-4:2x3 SPF No.2

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

**REACTIONS** (lb/size) 4=31/ Mechanical, 5=964/0-3-8
Max Horiz 5=118 (LC 7)
Max Uplift 4=-108 (LC 21), 5=-330 (LC 4)
Max Grav 4=224 (LC 24), 5=964 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-897/351, 1-2=-11/133, 2-3=-105/21, 3-4=-145/123
BOT CHORD 4-5=-54/44

**NOTES**
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 330 lb uplift at joint 5 and 108 lb uplift at joint 4.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidlines.
8) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 260 lb down and 47 lb up at -2-1-8 on top chord. The design/selection of such connection device(s) is the responsibility of others.
9) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-3=-70, 4-5=-20
Concentrated Loads (lb)
Vert: 1=-250, 3=-65 (B), 4=-27 (B), 7=29 (F), 8=11 (B)



August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | J21 | Jack-Open | 21 | 1 | Job Reference (optional) | I47674130 |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:34 Page: 1
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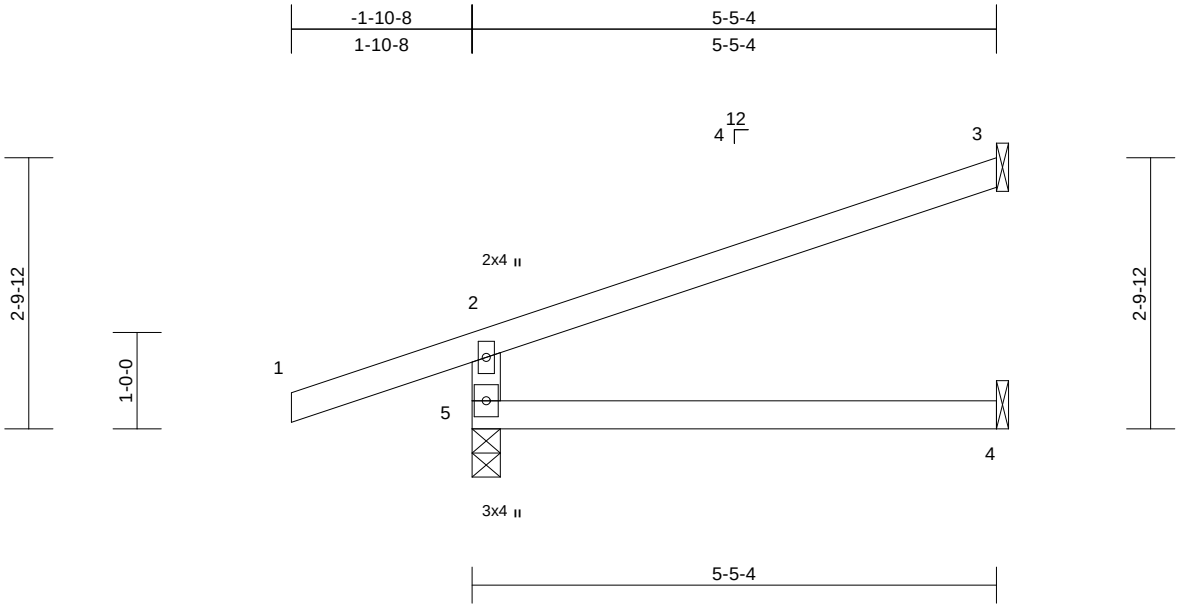



Scale = 1:23.9

| 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 | 0.37 | Vert(LL) | -0.03 | 4-5 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.24 | Vert(CT) | -0.07 | 4-5 | >863 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.00 | Horz(CT) | 0.03 | 3 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-R | | Wind(LL) | 0.03 | 4-5 | >999 | 240 | Weight: 16 lb | FT = 10% |

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

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

**REACTIONS** (lb/size) 3=153/ Mechanical, 4=55/ Mechanical, 5=404/0-3-8
Max Horiz 5=95 (LC 4)
Max Uplift 3=-75 (LC 8), 5=-122 (LC 4)
Max Grav 3=153 (LC 1), 4=96 (LC 3), 5=404 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-354/165, 1-2=0/45, 2-3=-72/37
BOT CHORD 4-5=0/0

**NOTES**
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 122 lb uplift at joint 5 and 75 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



August 30,2021



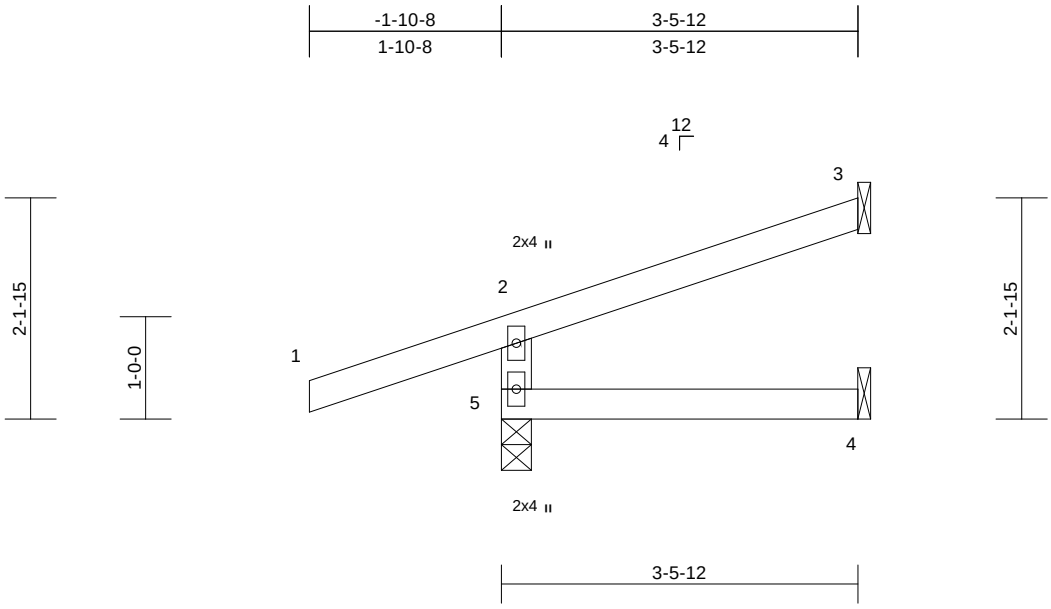
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | I47674131 |
|---|---|---|---|---|---|---|
| 210529 | J22 | Jack-Open | 2 | 1 | Job Reference (optional) | |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:35 ID:ceu7iGYL4?SMn9TQlxRZhyz1lkz-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f






Scale = 1:22.5

| 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 | 0.28 | Vert(LL) | -0.01 | 4-5 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.08 | Vert(CT) | -0.01 | 4-5 | >999 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.00 | Horz(CT) | 0.00 | 3 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-R | | Wind(LL) | 0.00 | 4-5 | >999 | 240 | Weight: 11 lb | FT = 10% |

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

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 3-5-12 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (lb/size) 3=80/ Mechanical, 4=24/ Mechanical, 5=332/0-3-8
Max Horiz 5=69 (LC 4)
Max Uplift 3=-44 (LC 8), 5=-119 (LC 4)
Max Grav 3=80 (LC 1), 4=58 (LC 3), 5=332 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-291/142, 1-2=0/45, 2-3=-48/18
BOT CHORD 4-5=0/0

**NOTES**
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 119 lb uplift at joint 5 and 44 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



August 30,2021



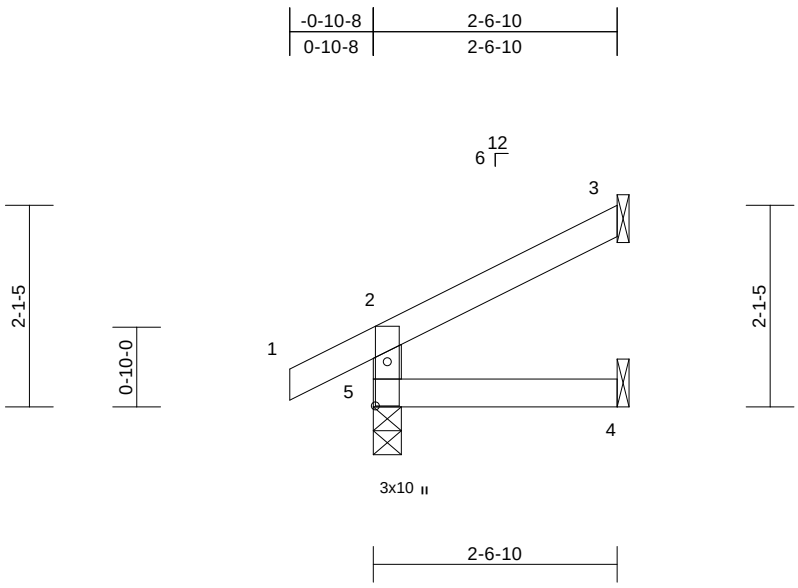
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | J23 | Jack-Open | 2 | 1 | Job Reference (optional) | I47674132 |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:35 ID:1DaFKIaDNwqxedC?Q3_GJbz1lkw-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f






Scale = 1:24.1

Plate Offsets (X, Y): [5:0-5-9,0-1-8]

| 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 | 0.07 | Vert(LL) | 0.00 | 4-5 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.04 | Vert(CT) | 0.00 | 4-5 | >999 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.00 | Horz(CT) | 0.00 | 3 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-R | | Wind(LL) | 0.00 | 4-5 | >999 | 240 | Weight: 8 lb | FT = 10% |

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

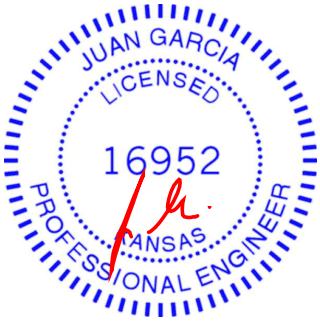
**BRACING**
TOP CHORD Structural wood sheathing directly applied or 2-6-10 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (lb/size) 3=67/ Mechanical, 4=23/ Mechanical, 5=192/0-3-8
Max Horiz 5=57 (LC 8)
Max Uplift 3=-43 (LC 8), 5=-23 (LC 8)
Max Grav 3=67 (LC 1), 4=43 (LC 3), 5=192 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-169/48, 1-2=0/32, 2-3=-48/22
BOT CHORD 4-5=0/0

**NOTES**
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 23 lb uplift at joint 5 and 43 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard


August 30,2021



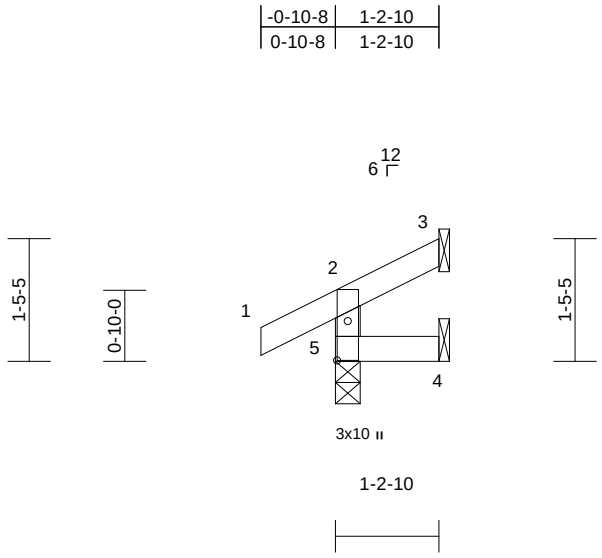
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | J24 | Jack-Open | 4 | 1 | Job Reference (optional) | I47674133 |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:35 ID:RoFOzJd6frCWV4wa5BYzxDz1lkt-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f






Scale = 1:27.1

Plate Offsets (X, Y): [5:0-5-9,0-1-8]

| 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 | 0.07 | Vert(LL) | 0.00 | 5 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.02 | Vert(CT) | 0.00 | 5 | >999 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.00 | Horz(CT) | 0.00 | 3 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-R | | Wind(LL) | 0.00 | 4-5 | >999 | 240 | Weight: 5 lb | FT = 10% |

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

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

**REACTIONS** (lb/size) 3=11/ Mechanical, 4=2/ Mechanical, 5=154/0-3-8
Max Horiz 5=36 (LC 5)
Max Uplift 3=-18 (LC 8), 4=-2 (LC 5), 5=-23 (LC 8)
Max Grav 3=12 (LC 15), 4=18 (LC 3), 5=154 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-134/36, 1-2=0/32, 2-3=-28/3
BOT CHORD 4-5=0/0

**NOTES**
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 23 lb uplift at joint 5, 2 lb uplift at joint 4 and 18 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



August 30,2021



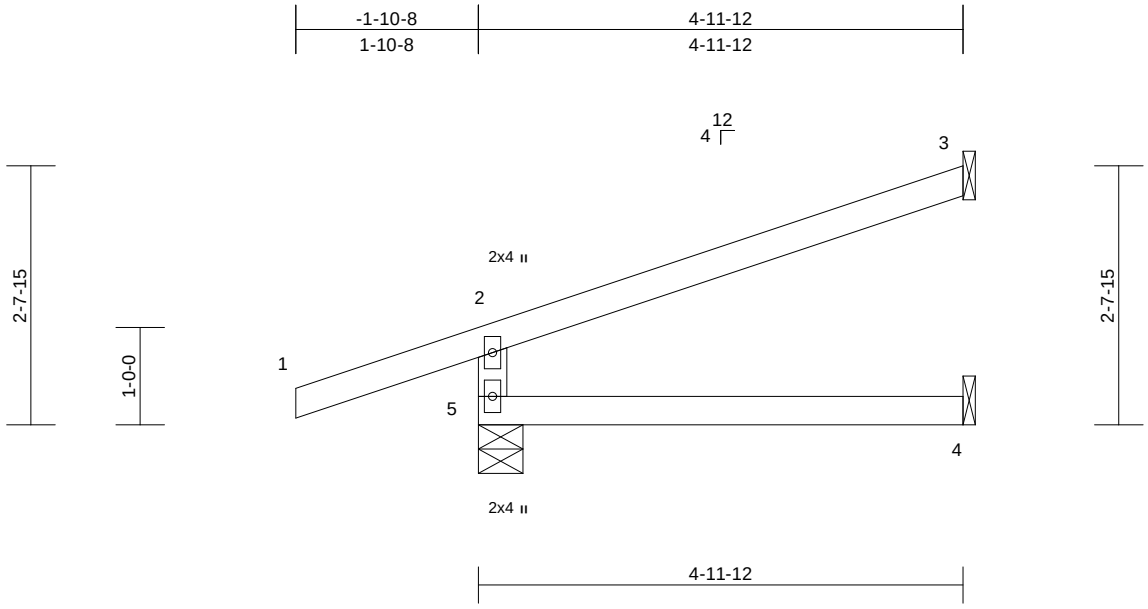
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | I47674134 |
|---|---|---|---|---|---|---|
| 210529 | J25 | Jack-Open | 1 | 1 | Job Reference (optional) | |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:35 ID:rNxWbLf_ymb4MYf9mK5gZsz1lkq-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f






Scale = 1:23.7

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 25.0 | Plate Grip DOL | 1.15 | TC | 0.29 | Vert(LL) | -0.02 | 4-5 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.20 | Vert(CT) | -0.05 | 4-5 | >999 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.00 | Horz(CT) | 0.02 | 3 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-R | | Wind(LL) | 0.02 | 4-5 | >999 | 240 | Weight: 15 lb | FT = 10% |

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

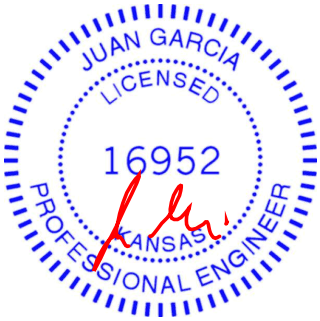
**BRACING**
TOP CHORD Structural wood sheathing directly applied or 4-11-12 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (lb/size) 3=137/ Mechanical, 4=48/ Mechanical, 5=386/0-5-8
Max Horiz 5=89 (LC 4)
Max Uplift 3=-68 (LC 8), 5=-121 (LC 4)
Max Grav 3=137 (LC 1), 4=87 (LC 3), 5=386 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-339/159, 1-2=0/45, 2-3=-66/33
BOT CHORD 4-5=0/0

**NOTES**
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 121 lb uplift at joint 5 and 68 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard


August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | I47674135 |
|---|---|---|---|---|---|---|
| 210529 | J26 | Jack-Open | 1 | 1 | Job Reference (optional) | |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:35 Page: 1
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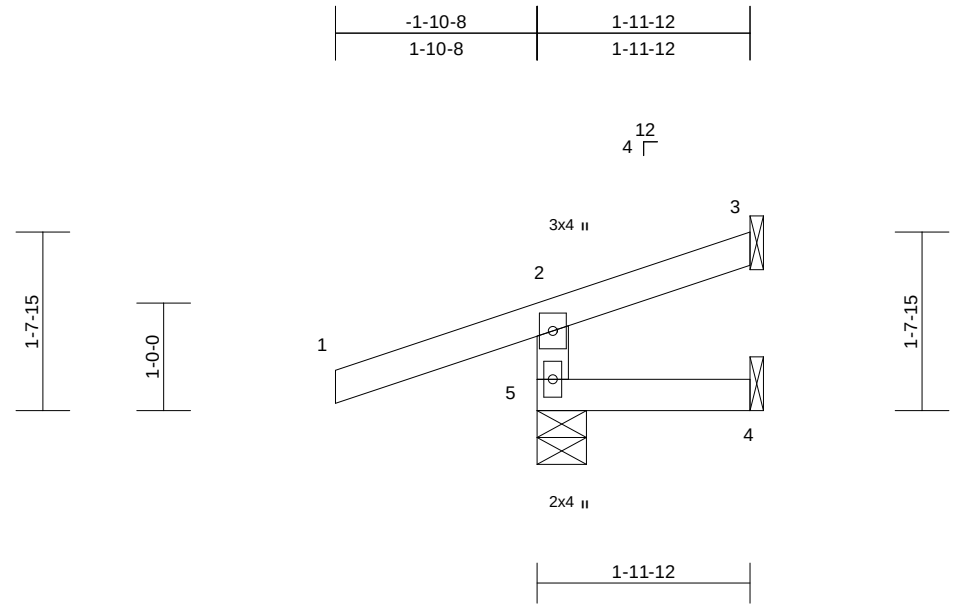



Scale = 1:21.4

| 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 | 0.28 | Vert(LL) | 0.00 | 4-5 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.08 | Vert(CT) | 0.00 | 4-5 | >999 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.00 | Horz(CT) | -0.01 | 3 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-R | | Wind(LL) | 0.00 | 4-5 | >999 | 240 | Weight: 8 lb | FT = 10% |

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

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 1-11-12 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (lb/size) 3=7/ Mechanical, 4=-3/ Mechanical, 5=302/0-5-8
Max Horiz 5=49 (LC 4)
Max Uplift 3=-16 (LC 8), 4=-3 (LC 1), 5=-128 (LC 4)
Max Grav 3=7 (LC 1), 4=28 (LC 3), 5=302 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-262/136, 1-2=0/45, 2-3=-38/1
BOT CHORD 4-5=0/0

**NOTES**
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 128 lb uplift at joint 5, 3 lb uplift at joint 4 and 16 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



August 30,2021



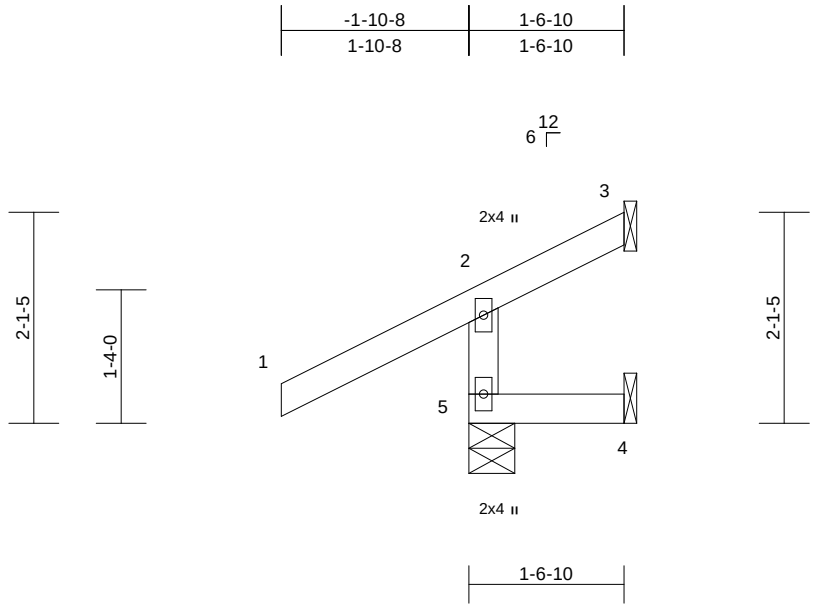
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | I47674136 |
|---|---|---|---|---|---|---|
| 210529 | J27 | Jack-Open | 1 | 1 | Job Reference (optional) | |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:35 ID:gXIosOklYcLE4T6J7aC4o6z1lkk-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f






Scale = 1:23

| 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) | 0.00 | 4-5 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.06 | Vert(CT) | 0.00 | 4-5 | >999 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.00 | Horz(CT) | -0.01 | 3 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-R | | Wind(LL) | 0.00 | 4-5 | >999 | 240 | Weight: 7 lb | FT = 10% |

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

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 1-6-10 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (lb/size) 3=-30/ Mechanical, 4=-10/ Mechanical, 5=307/0-5-8
Max Horiz 5=60 (LC 5)
Max Uplift 3=-30 (LC 1), 4=-10 (LC 16), 5=-53 (LC 8)
Max Grav 3=10 (LC 4), 4=20 (LC 3), 5=307 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-269/74, 1-2=0/63, 2-3=-57/4
BOT CHORD 4-5=0/0

**NOTES**
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 53 lb uplift at joint 5, 10 lb uplift at joint 4 and 30 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



August 30,2021

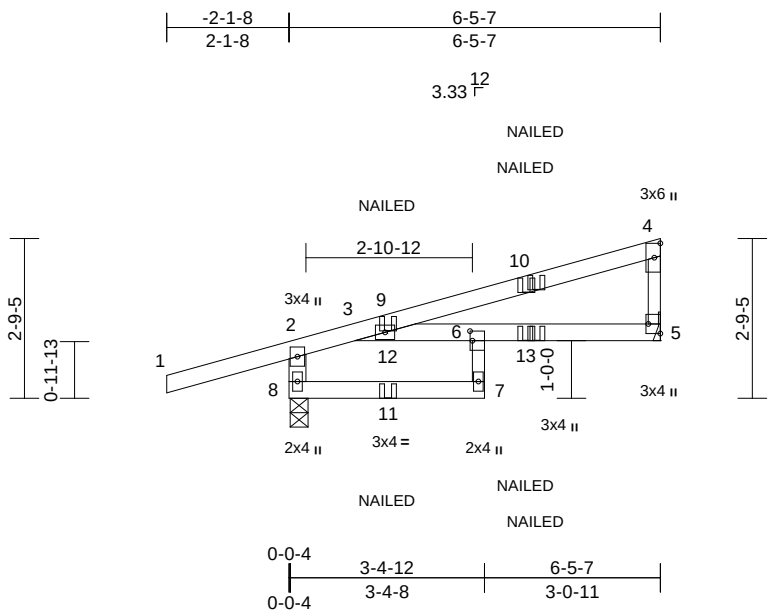


MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | J28 | Diagonal Hip Girder | 1 | 1 | Job Reference (optional) | I47674137 |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:36 Page: 1
ID:xzcSQbu1Ocuq3zIi6gv2Zsz1lhx-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f




Scale = 1:40

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

| 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 | 0.43 | Vert(LL) | -0.05 | 5-6 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.38 | Vert(CT) | -0.11 | 5-6 | >708 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | NO | WB | 0.00 | Horz(CT) | 0.03 | 5 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-R | | Wind(LL) | 0.05 | 5-6 | >999 | 240 | Weight: 22 lb | FT = 10% |

**LUMBER**
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 7-6:2x3 SPF No.2
WEBS 2x4 SPF No.2 *Except* 4-5:2x3 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** (lb/size) 5=264/ Mechanical, 8=473/0-3-11
Max Horiz 8=99 (LC 5)
Max Uplift 5=-66 (LC 8), 8=-166 (LC 4)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-8=-440/184, 1-2=0/43, 2-3=-182/24, 3-4=-168/20, 4-5=-159/68
BOT CHORD 7-8=-50/92, 6-7=0/60, 3-6=-8/29, 5-6=-31/99

**NOTES**
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 166 lb uplift at joint 8 and 66 lb uplift at joint 5.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidlines.
8) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-4=-70, 7-8=-20, 5-6=-20
Concentrated Loads (lb)
Vert: 11=4 (F), 13=-23 (F=-24, B=1)



August 30,2021



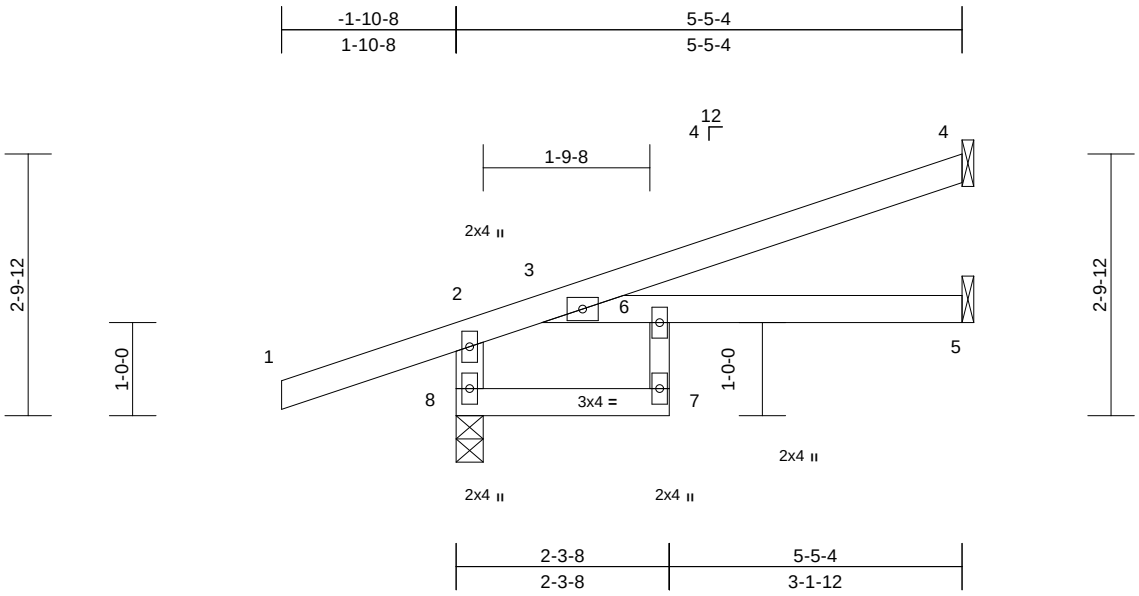
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | I47674138 |
|---|---|---|---|---|---|---|
| 210529 | J29 | Jack-Open | 2 | 1 | Job Reference (optional) | |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:36 ID:NeJIFNE1C0A2fAUQDTzSeTz1llN-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f






Scale = 1:24.8

| 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 | 0.33 | Vert(LL) | -0.03 | 5-6 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.26 | Vert(CT) | -0.08 | 5-6 | >821 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.00 | Horz(CT) | 0.03 | 5 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-R | | Wind(LL) | 0.04 | 5-6 | >999 | 240 | Weight: 18 lb | FT = 10% |

**LUMBER**
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 7-6:2x3 SPF No.2
WEBS 2x4 SPF No.2

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

**REACTIONS** (lb/size) 4=146/ Mechanical, 5=69/ Mechanical, 8=423/0-3-8
Max Horiz 8=95 (LC 4)
Max Uplift 4=-63 (LC 8), 8=-111 (LC 4)
Max Grav 4=146 (LC 1), 5=104 (LC 3), 8=423 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-8=-396/134, 1-2=0/45, 2-3=-115/0, 3-4=-53/36
BOT CHORD 7-8=-39/39, 6-7=-1/39, 3-6=-39/39, 5-6=0/0

**NOTES**
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 111 lb uplift at joint 8 and 63 lb uplift at joint 4.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



August 30,2021



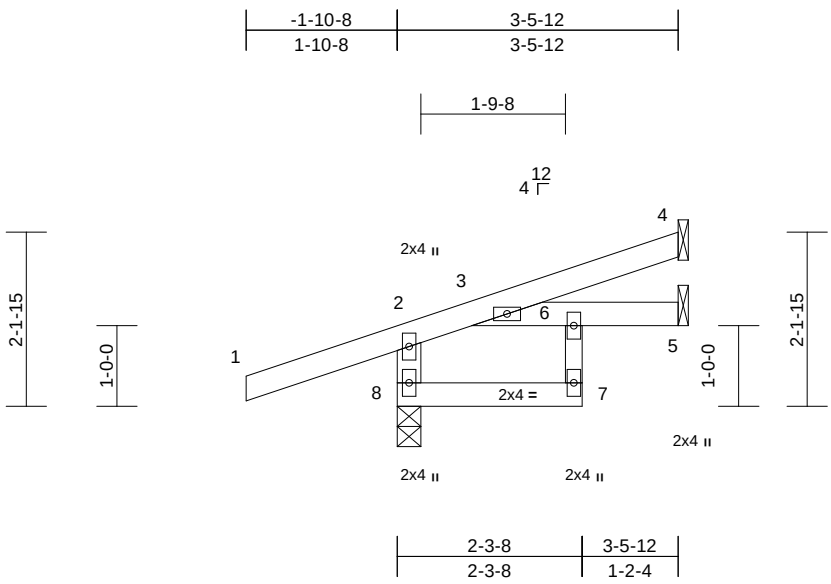
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | I47674139 |
|---|---|---|---|---|---|---|
| 210529 | J30 | Jack-Open | 1 | 1 | Job Reference (optional) | |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:36 ID:UcYMrB_s8ZX1exNOUZ5XI2z1lli-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f






Scale = 1:28.6

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 25.0 | Plate Grip DOL | 1.15 | TC | 0.28 | Vert(LL) | 0.00 | 7 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.10 | Vert(CT) | -0.01 | 7 | >999 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.00 | Horz(CT) | 0.00 | 5 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-R | | Wind(LL) | 0.00 | 3-6 | >999 | 240 | Weight: 13 lb | FT = 10% |

**LUMBER**
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 7-6:2x3 SPF No.2
WEBS 2x4 SPF No.2

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 3-5-12 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

**REACTIONS** (lb/size) 4=80/ Mechanical, 5=35/ Mechanical, 8=347/0-3-8
Max Horiz 8=69 (LC 4)
Max Uplift 4=-35 (LC 8), 8=-110 (LC 4)
Max Grav 4=80 (LC 1), 5=73 (LC 3), 8=347 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-8=-315/126, 1-2=0/45, 2-3=-51/0, 3-4=-30/20
BOT CHORD 7-8=-10/20, 6-7=0/38, 3-6=-20/10, 5-6=0/0

**NOTES**
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 110 lb uplift at joint 8 and 35 lb uplift at joint 4.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



August 30,2021



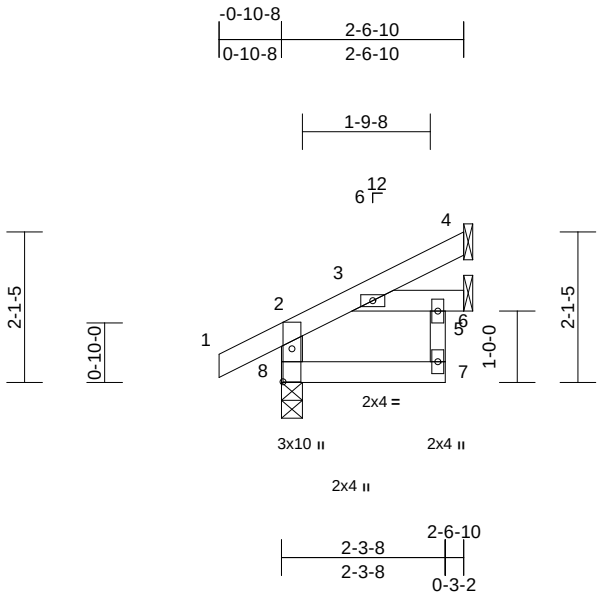
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | J31 | Jack-Open | 1 | 1 | Job Reference (optional) | I47674140 |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:36 ID:cZnPR0jh56u0diGMmfDcxcz1lm1-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f






Scale = 1:32.3

Plate Offsets (X, Y): [8:0-5-9,0-1-8]

| 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 | 0.07 | Vert(LL) | 0.00 | 3 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.05 | Vert(CT) | 0.00 | 3 | >999 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.00 | Horz(CT) | 0.00 | 5 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-R | | Wind(LL) | 0.00 | 3 | >999 | 240 | Weight: 10 lb | FT = 10% |

**LUMBER**
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 7-6:2x3 SPF No.2
WEBS 2x4 SPF No.2

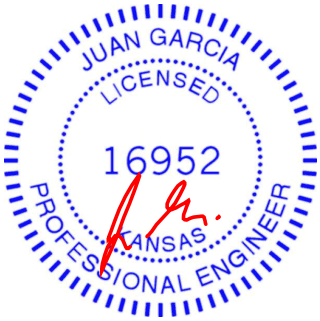
**BRACING**
TOP CHORD Structural wood sheathing directly applied or 2-6-10 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (lb/size) 4=56/ Mechanical, 5=48/ Mechanical, 8=202/0-3-8
Max Horiz 8=57 (LC 8)
Max Uplift 4=-29 (LC 8), 5=-2 (LC 8), 8=-17 (LC 8)
Max Grav 4=56 (LC 1), 5=73 (LC 3), 8=202 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-8=-181/38, 1-2=0/32, 2-3=-61/0, 3-4=-24/21
BOT CHORD 7-8=-14/19, 6-7=0/41, 3-6=-19/14, 5-6=0/0

**NOTES**
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 17 lb uplift at joint 8, 29 lb uplift at joint 4 and 2 lb uplift at joint 5.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard


August 30,2021



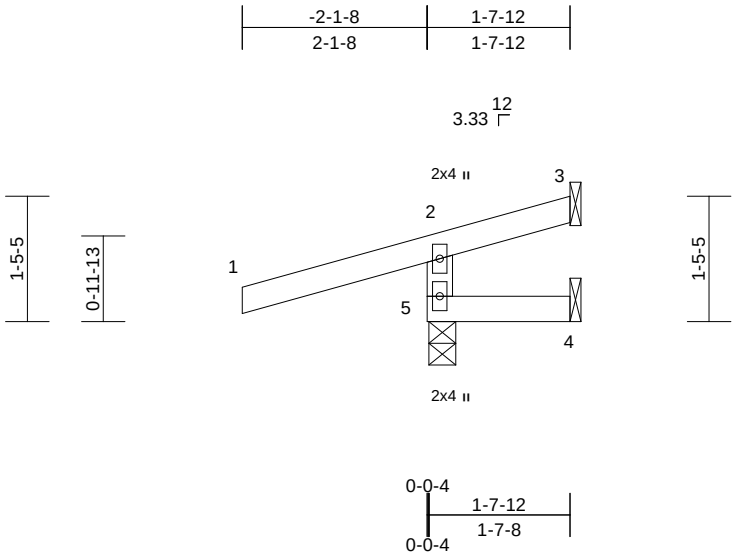
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | I47674141 |
|---|---|---|---|---|---|---|
| 210529 | J32 | Jack-Open Girder | 1 | 1 | Job Reference (optional) | |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:36 ID:M09krV?2DgKXQUhqF28XVzz1Imz-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f






Scale = 1:26.5

| 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 | 0.27 | Vert(LL) | 0.00 | 4-5 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.07 | Vert(CT) | 0.00 | 4-5 | >999 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | NO | WB | 0.00 | Horz(CT) | -0.01 | 3 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-R | | Wind(LL) | 0.00 | 4-5 | >999 | 240 | Weight: 7 lb | FT = 10% |

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

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 1-7-12 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (lb/size) 3=-43/ Mechanical, 4=-20/ Mechanical, 5=175/0-3-11
Max Horiz 5=51 (LC 7)
Max Uplift 3=-43 (LC 1), 4=-20 (LC 1), 5=-146 (LC 6)
Max Grav 3=33 (LC 4), 4=17 (LC 4), 5=175 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-149/147, 1-2=-5/23, 2-3=-18/9
BOT CHORD 4-5=0/0

**NOTES**
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 146 lb uplift at joint 5, 20 lb uplift at joint 4 and 43 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 25 lb down and 9 lb up at -2-1-8, and 25 lb down and 9 lb up at -2-1-8 on top chord. The design/selection of such connection device(s) is the responsibility of others.
8) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Concentrated Loads (lb)
Vert: 1=-38 (F=-19, B=-19)
Trapezoidal Loads (lb/ft)
Vert: 1=0 (F=35, B=35)-to-2=-40 (F=15, B=15), 2=-3 (F=34, B=34)-to-3=-29 (F=21, B=21), 5=0 (F=10, B=10)-to-4=-8 (F=6, B=6)



August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | J33 | Jack-Open | 1 | 1 | Job Reference (optional) | I47674142 |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:37 Page: 1
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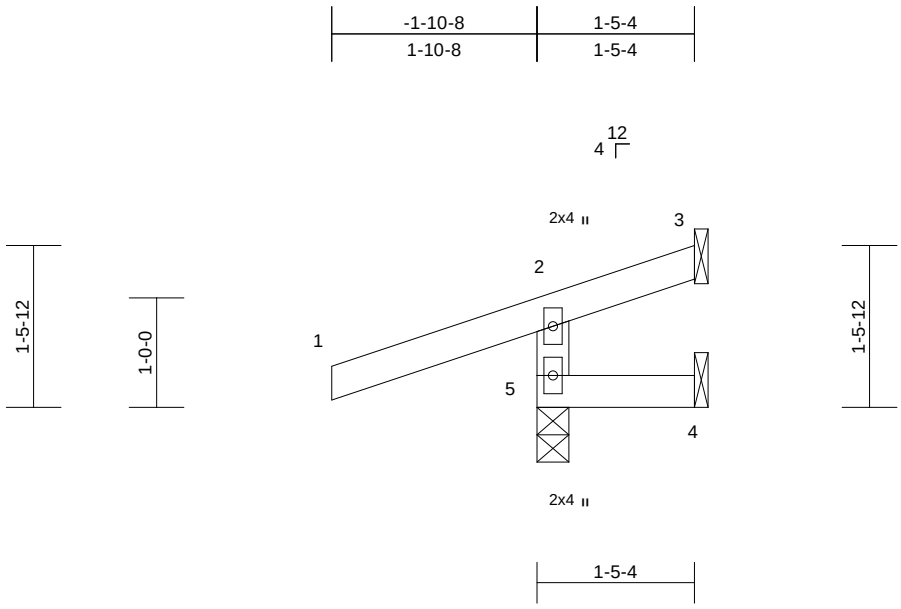


Scale = 1:21

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 25.0 | Plate Grip DOL | 1.15 | TC | 0.28 | Vert(LL) | 0.00 | 4-5 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.07 | Vert(CT) | 0.00 | 4-5 | >999 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.00 | Horz(CT) | -0.01 | 3 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-R | | Wind(LL) | 0.00 | 4-5 | >999 | 240 | Weight: 6 lb | FT = 10% |

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

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 1-5-4 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (lb/size) 3=-38/ Mechanical, 4=-16/ Mechanical, 5=311/0-3-8
Max Horiz 5=43 (LC 5)
Max Uplift 3=-38 (LC 1), 4=-16 (LC 1), 5=-143 (LC 4)
Max Grav 3=22 (LC 4), 4=16 (LC 3), 5=311 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-269/145, 1-2=0/45, 2-3=-40/7
BOT CHORD 4-5=0/0

**NOTES**
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 143 lb uplift at joint 5, 16 lb uplift at joint 4 and 38 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



August 30,2021



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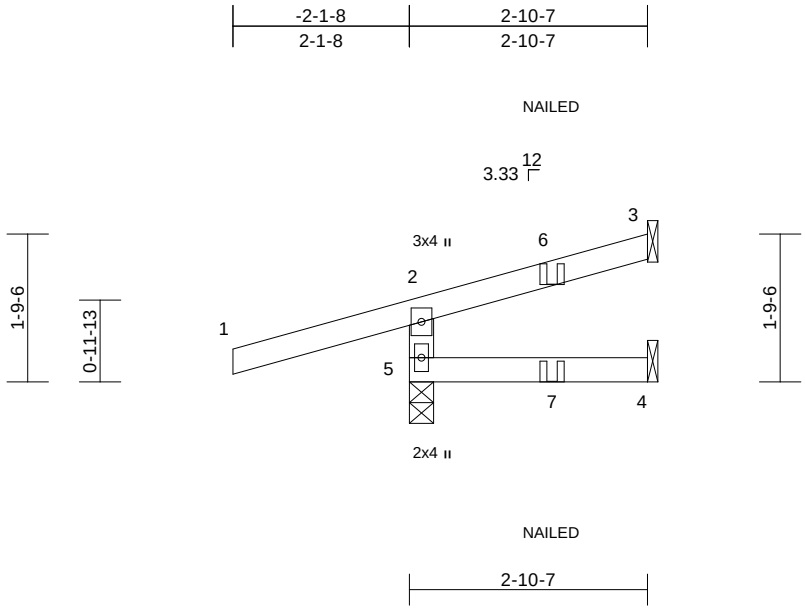
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | I47674143 |
|---|---|---|---|---|---|---|
| 210529 | J34 | Jack-Open Girder | 2 | 1 | Job Reference (optional) | |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:37 ID:u4p7U73lUKxV2MG50XodzAyy7Pq-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



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| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 25.0 | Plate Grip DOL | 1.15 | TC | 0.41 | Vert(LL) | 0.00 | 4-5 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.10 | Vert(CT) | 0.00 | 4-5 | >999 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | NO | WB | 0.00 | Horz(CT) | -0.01 | 3 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-R | | Wind(LL) | 0.00 | 4-5 | >999 | 240 | Weight: 10 lb | FT = 10% |

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

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

**REACTIONS** (lb/size) 3=44/ Mechanical, 4=6/ Mechanical, 5=345/0-3-8
Max Horiz 5=52 (LC 4)
Max Uplift 3=-28 (LC 8), 5=-146 (LC 4)
Max Grav 3=44 (LC 1), 4=44 (LC 3), 5=345 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-302/156, 1-2=0/43, 2-3=-39/7
BOT CHORD 4-5=0/0

**NOTES**
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 146 lb uplift at joint 5 and 28 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidlines.
8) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-3=-70, 4-5=-20
Concentrated Loads (lb)
Vert: 7=4 (F)



August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | J35 | Jack-Open | 3 | 1 | Job Reference (optional) | I47674144 |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:37
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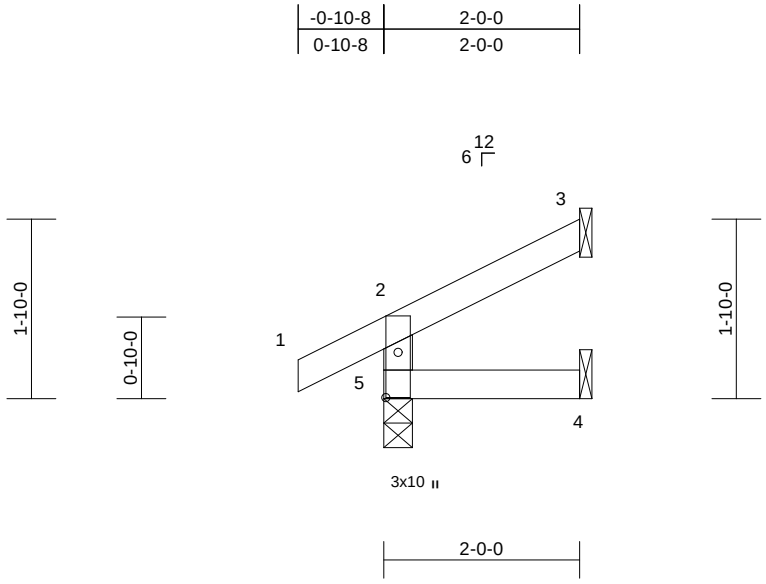


Scale = 1:23.5

Plate Offsets (X, Y): [5:0-5-9,0-1-8]

| 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 | 0.07 | Vert(LL) | 0.00 | 4-5 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.02 | Vert(CT) | 0.00 | 4-5 | >999 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.00 | Horz(CT) | 0.00 | 3 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-R | | Wind(LL) | 0.00 | 4-5 | >999 | 240 | Weight: 7 lb | FT = 10% |

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

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

**REACTIONS** (lb/size) 3=48/ Mechanical, 4=15/ Mechanical, 5=174/0-3-8
Max Horiz 5=47 (LC 8)
Max Uplift 3=-34 (LC 8), 5=-22 (LC 8)
Max Grav 3=48 (LC 1), 4=33 (LC 3), 5=174 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-153/42, 1-2=0/32, 2-3=-39/16
BOT CHORD 4-5=0/0

**NOTES**
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 22 lb uplift at joint 5 and 34 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



August 30,2021



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Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | J36 | Jack-Open | 1 | 1 | Job Reference (optional) | I47674145 |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:37 Page: 1
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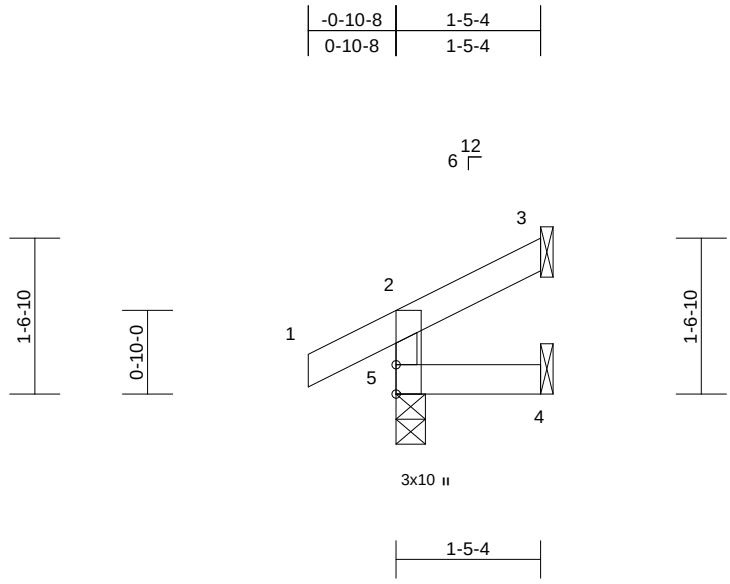



Scale = 1:22.9

| 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 | 0.07 | Vert(LL) | 0.00 | 4-5 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.01 | Vert(CT) | 0.00 | 4-5 | >999 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.00 | Horz(CT) | 0.00 | 3 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-R | | Wind(LL) | 0.00 | 4-5 | >999 | 240 | Weight: 5 lb | FT = 10% |

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

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 1-5-4 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (lb/size) 3=24/ Mechanical, 4=10/ Mechanical, 5=153/0-3-8
Max Horiz 5=38 (LC 5)
Max Uplift 3=-24 (LC 8), 5=-21 (LC 8)
Max Grav 3=24 (LC 1), 4=24 (LC 3), 5=153 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-137/37, 1-2=0/31, 2-3=-31/7
BOT CHORD 4-5=0/0

**NOTES**
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 21 lb uplift at joint 5 and 24 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



August 30,2021



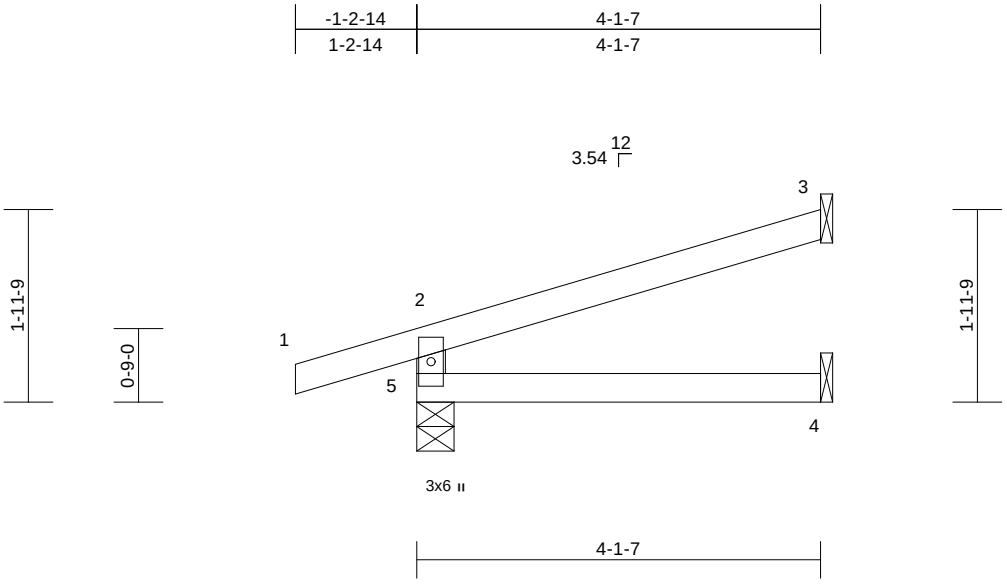
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | I47674146 |
|---|---|---|---|---|---|---|
| 210529 | J37 | Diagonal Hip Girder | 2 | 1 | Job Reference (optional) | |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:37 ID:zi19zGyGCSD3fcDziGLfY7yjciX-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

Page: 1




Scale = 1:23.5

| 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 | 0.15 | Vert(LL) | -0.01 | 4-5 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.10 | Vert(CT) | -0.02 | 4-5 | >999 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | NO | WB | 0.00 | Horz(CT) | -0.01 | 3 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-R | | Wind(LL) | 0.01 | 4-5 | >999 | 240 | Weight: 11 lb | FT = 10% |

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

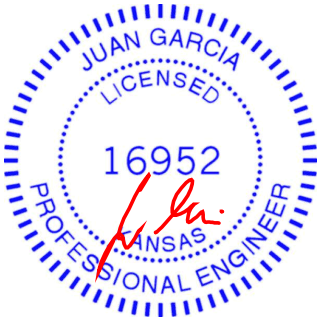
**BRACING**
TOP CHORD Structural wood sheathing directly applied or 4-1-7 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (lb/size) 3=80/ Mechanical, 4=24/ Mechanical, 5=144/0-4-9
Max Horiz 5=63 (LC 12)
Max Uplift 3=-48 (LC 12), 5=-92 (LC 6)
Max Grav 3=80 (LC 1), 4=60 (LC 3), 5=144 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-128/119, 1-2=-6/21, 2-3=-30/15
BOT CHORD 4-5=0/0

**NOTES**
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 92 lb uplift at joint 5 and 48 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 30 lb down and 11 lb up at -1-2-14, and 30 lb down and 11 lb up at -1-2-14 on top chord. The design/selection of such connection device(s) is the responsibility of others.
8) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Concentrated Loads (lb)
Vert: 1=-46 (F=-23, B=-23)
Trapezoidal Loads (lb/ft)
Vert: 1=0 (F=35, B=35)-to-2=-24 (F=23, B=23), 2=-3 (F=34, B=34)-to-3=-72 (F=-1, B=-1), 5=0 (F=10, B=10)-to-4=-21 (F=0, B=0)


August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | J38 | Jack-Open | 5 | 1 | Job Reference (optional) | I47674147 |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:38 Page: 1
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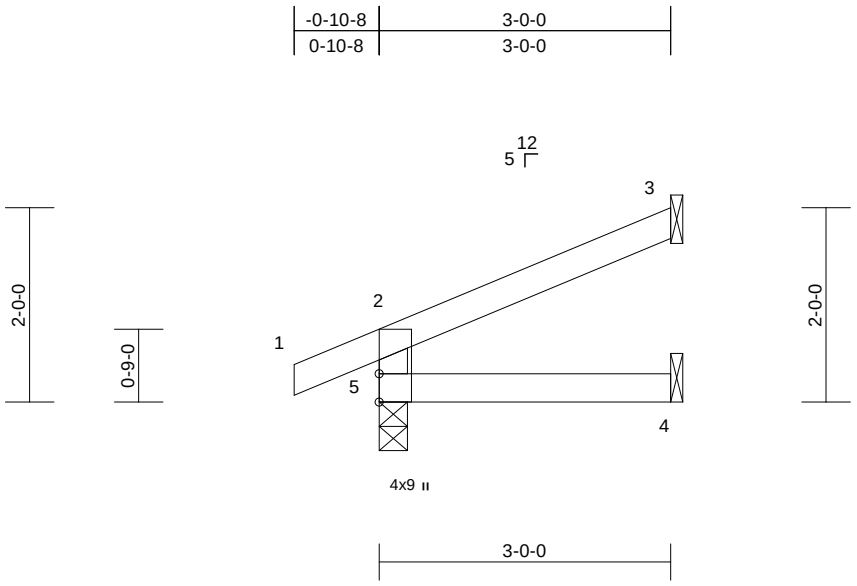


Scale = 1:23.7

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 25.0 | Plate Grip DOL | 1.15 | TC | 0.10 | Vert(LL) | 0.00 | 4-5 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.06 | Vert(CT) | -0.01 | 4-5 | >999 | 240 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.00 | Horz(CT) | 0.00 | 3 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-R | | Wind(LL) | 0.00 | 4-5 | >999 | 240 | Weight: 9 lb | FT = 10% |

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

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

**REACTIONS** (lb/size) 3=83/ Mechanical, 4=30/ Mechanical, 5=210/0-3-8
Max Horiz 5=55 (LC 8)
Max Uplift 3=-45 (LC 8), 5=-32 (LC 8)
Max Grav 3=83 (LC 1), 4=52 (LC 3), 5=210 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-184/58, 1-2=0/27, 2-3=-48/24
BOT CHORD 4-5=0/0

**NOTES**
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 32 lb uplift at joint 5 and 45 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | K1 | Hip Girder | 1 | 2 | Job Reference (optional) | I47674148 |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:38 Page: 1
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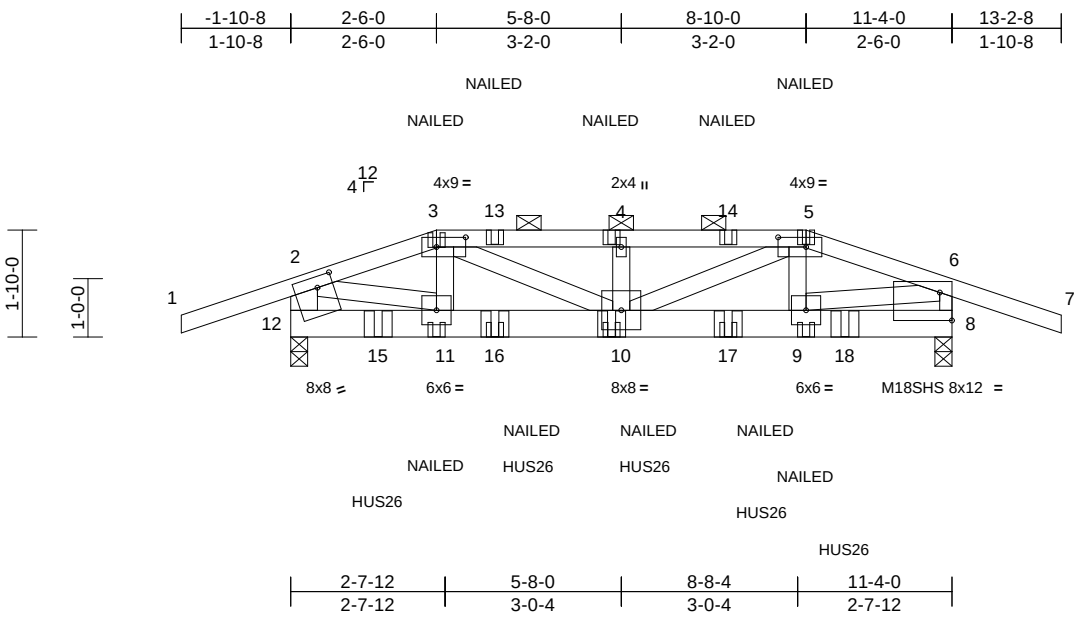



Scale = 1:39.5

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

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 25.0 | Plate Grip DOL | 1.15 | TC | 0.46 | Vert(LL) | -0.08 | 9-10 | >999 | 360 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.38 | Vert(CT) | -0.14 | 9-10 | >925 | 240 | M18SHS | 197/144 |
| BCLL | 0.0* | Rep Stress Incr | NO | WB | 0.66 | Horz(CT) | 0.01 | 8 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | Wind(LL) | 0.05 | 9-10 | >999 | 240 | Weight: 122 lb | FT = 10% |

**LUMBER**
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x6 SP 2400F 2.0E
WEBS 2x4 SPF No.2 *Except* 12-2:2x6 SPF No.2, 8-6:2x3 SPF No.2

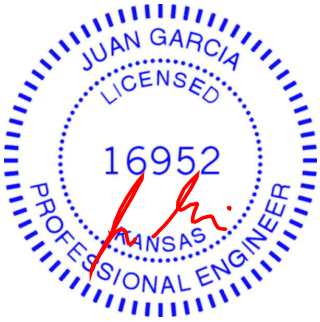
**BRACING**
TOP CHORD Structural wood sheathing directly applied or 4-9-10 oc purlins, except end verticals, and 2-0-0 oc purlins (4-1-8 max.): 3-5.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (lb/size) 8=3939/0-3-8, 12=4195/0-3-8
Max Horiz 12=-13 (LC 31)
Max Uplift 8=-404 (LC 5), 12=-379 (LC 4)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/47, 2-3=-5743/325, 3-4=-7780/426, 4-5=-7780/426, 5-6=-5993/407, 6-7=0/44, 2-12=-3435/312, 6-8=-3546/358
BOT CHORD 11-12=-36/917, 10-11=-255/5456, 9-10=-346/5711, 8-9=-20/431
WEBS 3-11=-7/652, 5-9=-75/833, 2-11=-291/4747, 6-9=-356/5415, 5-10=-39/2284, 4-10=-171/108, 3-10=-135/2558

**NOTES**
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc, 2x6 - 2 rows staggered at 0-9-0 oc, 2x3 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-8-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) Provide adequate drainage to prevent water ponding.
6) All plates are MT20 plates unless otherwise indicated.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 379 lb uplift at joint 12 and 404 lb uplift at joint 8.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
12) Use Simpson Strong-Tie HUS26 (14-10d Girder, 4-10d Truss) or equivalent spaced at 2-0-0 oc max. starting at 1-6-0 from the left end to 9-6-0 to connect truss(es) to back face of bottom chord.
13) Fill all nail holes where hanger is in contact with lumber.
14) "NAILED" indicates 2-12d (0.148"x3.25") toe-nails per NDS guidlines.

**LOAD CASE(S)** Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-3=-70, 3-5=-70, 5-6=-70, 6-7=-70, 8-12=-20
Concentrated Loads (lb)
Vert: 11=10 (F), 9=10 (F), 10=-1374 (F=1, B=-1375), 15=-1377 (B), 16=-1374 (F=1, B=-1375), 17=-1376 (F=1, B=-1377), 18=-1377 (B)


August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | LAY1 | Lay-In Gable | 1 | 1 | Job Reference (optional) | I47674149 |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:38
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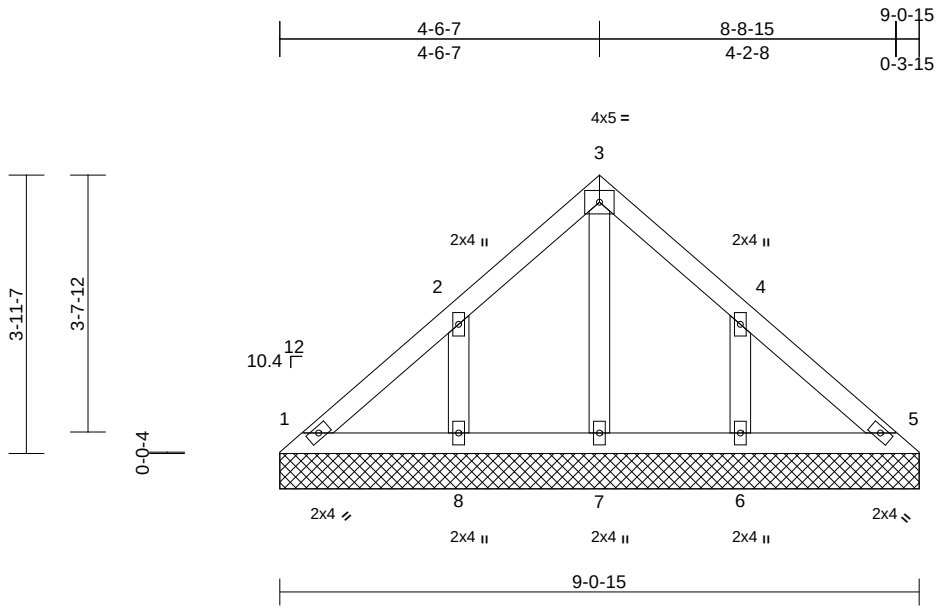
Page: 1




Scale = 1:32.7

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 25.0 | Plate Grip DOL | 1.15 | TC | 0.06 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.03 | Vert(TL) | n/a | - | n/a | 999 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.02 | Horiz(TL) | 0.00 | 5 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | | | | | | Weight: 31 lb | FT = 10% |

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

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

**REACTIONS** (lb/size) 1=94/9-0-15, 5=94/9-0-15, 6=224/9-0-15, 7=116/9-0-15, 8=224/9-0-15
Max Horiz 1=-94 (LC 4)
Max Uplift 1=-10 (LC 4), 6=-119 (LC 9), 8=-120 (LC 8)
Max Grav 1=103 (LC 16), 5=94 (LC 1), 6=242 (LC 16), 7=124 (LC 18), 8=242 (LC 15)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-93/74, 2-3=-86/80, 3-4=-79/64, 4-5=-77/54
BOT CHORD 1-8=-34/74, 7-8=-34/74, 6-7=-34/74, 5-6=-34/74
WEBS 3-7=-89/0, 2-8=-188/142, 4-6=-187/141

**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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 10 lb uplift at joint 1, 120 lb uplift at joint 8 and 119 lb uplift at joint 6.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | LAY2 | Lay-In Gable | 1 | 1 | Job Reference (optional) | I47674150 |

Wheeler Lumber, Waverly, KS - 66871,

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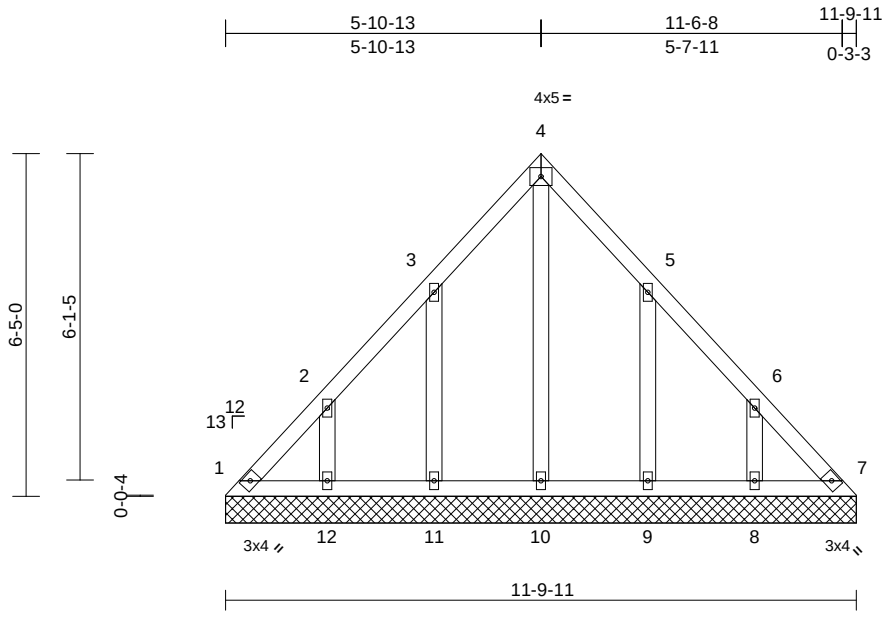


Scale = 1:43.1

| 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 | 0.05 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.03 | Vert(TL) | n/a | - | n/a | 999 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.07 | Horiz(TL) | 0.00 | 7 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | | | | | | Weight: 51 lb | FT = 10% |

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

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

**REACTIONS** (lb/size) 1=78/11-9-11, 7=78/11-9-11, 8=178/11-9-11, 9=188/11-9-11, 10=119/11-9-11, 11=188/11-9-11, 12=178/11-9-11
Max Horiz 1=162 (LC 5)
Max Uplift 1=-57 (LC 6), 7=-30 (LC 7), 8=-129 (LC 9), 9=-135 (LC 9), 11=-136 (LC 8), 12=-129 (LC 8)
Max Grav 1=137 (LC 17), 7=124 (LC 18), 8=203 (LC 16), 9=216 (LC 16), 10=155 (LC 18), 11=217 (LC 15), 12=202 (LC 15)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-200/135, 2-3=-130/89, 3-4=-104/121, 4-5=-89/99, 5-6=-103/53, 6-7=-177/99
BOT CHORD 1-12=-68/145, 11-12=-68/145, 10-11=-68/145, 9-10=-68/145, 8-9=-68/145, 7-8=-68/145
WEBS 4-10=-115/8, 3-11=-178/161, 2-12=-158/147, 5-9=-177/160, 6-8=-158/147

**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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 57 lb uplift at joint 1, 30 lb uplift at joint 7, 136 lb uplift at joint 11, 129 lb uplift at joint 12, 135 lb uplift at joint 9 and 129 lb uplift at joint 8.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | LAY3 | Lay-In Gable | 1 | 1 | Job Reference (optional) | I47674151 |

Wheeler Lumber, Waverly, KS - 66871,

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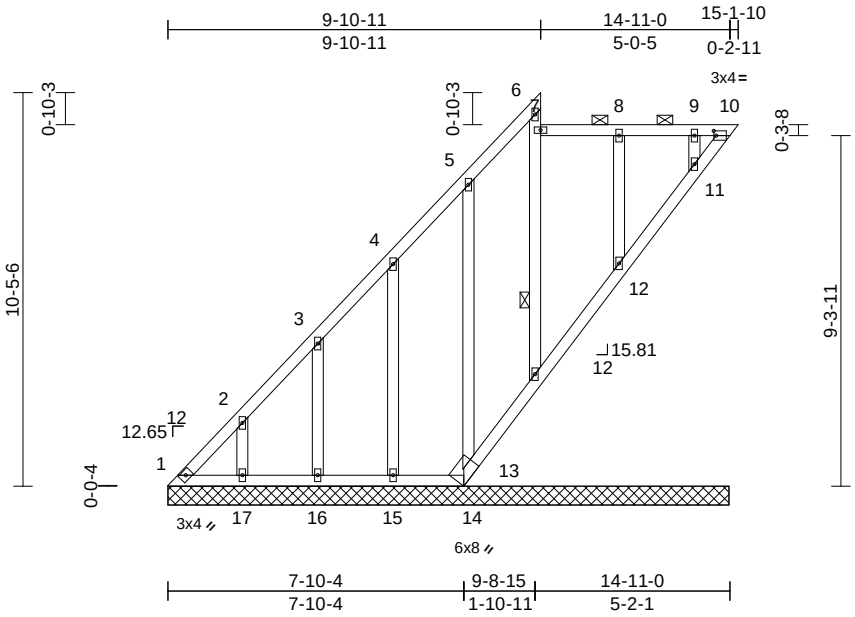



Scale = 1:61.2

Plate Offsets (X, Y): [10:0-0-12,0-1-8]

| 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 | 0.06 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.04 | Vert(TL) | n/a | - | n/a | 999 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.17 | Horiz(TL) | -0.01 | 10 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | | | | | | Weight: 79 lb | FT = 10% |

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

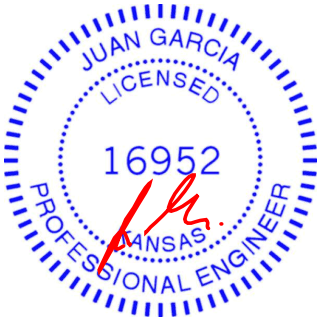
**BRACING**
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 7-13, 7-10. Except:
1 Row at midpt 7-13
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 10-11.

**REACTIONS** (lb/size) 1=62/14-10-11, 10=30/14-10-11, 11=145/14-10-11, 12=219/14-10-11, 13=141/14-10-11, 14=172/14-10-11, 15=182/14-10-11, 16=179/14-10-11, 17=183/14-10-11
Max Horiz 1=433 (LC 8)
Max Uplift 1=-102 (LC 6), 10=-78 (LC 8), 11=-29 (LC 9), 12=-83 (LC 9), 14=-113 (LC 8), 15=-126 (LC 8), 16=-123 (LC 8), 17=-126 (LC 8)
Max Grav 1=353 (LC 8), 10=48 (LC 15), 11=145 (LC 1), 12=219 (LC 1), 13=176 (LC 17), 14=191 (LC 15), 15=206 (LC 15), 16=202 (LC 15), 17=207 (LC 15)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-503/202, 2-3=-384/156, 3-4=-259/110, 4-5=-131/72, 5-6=-63/29, 7-13=-115/39, 6-7=-51/28, 7-8=-30/61, 8-9=-30/61, 9-10=-31/63
BOT CHORD 1-17=-61/27, 16-17=-61/27, 15-16=-61/27, 14-15=-61/28, 13-14=-65/32, 12-13=-173/94, 11-12=-116/63, 10-11=-111/49
WEBS 2-17=-161/144, 3-16=-163/149, 4-15=-165/152, 5-14=-161/139, 8-12=-168/73, 9-11=-111/47

**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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; 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 2x4 MT20 unless otherwise indicated.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 102 lb uplift at joint 1, 78 lb uplift at joint 10, 113 lb uplift at joint 14, 126 lb uplift at joint 17, 123 lb uplift at joint 16, 126 lb uplift at joint 15, 83 lb uplift at joint 12 and 29 lb uplift at joint 11.
10) Non Standard bearing condition. Review required.
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


August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | LAY4 | Lay-In Gable | 3 | 1 | Job Reference (optional) | I47674152 |

Wheeler Lumber, Waverly, KS - 66871,

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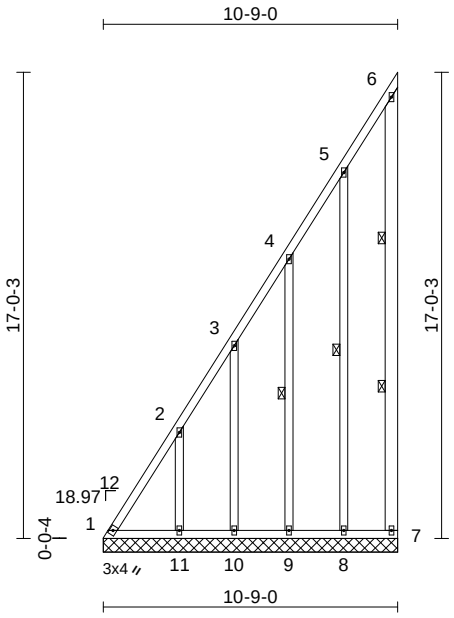


Scale = 1:84.1

| 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 | 0.15 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.04 | Vert(TL) | n/a | - | n/a | 999 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.17 | Horiz(TL) | 0.00 | 7 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | | | | | | Weight: 103 lb | FT = 10% |

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

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 5-6-9 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 4-9, 5-8
WEBS 2 Rows at 1/3 pts 6-7

**REACTIONS** (lb/size) 1=93/10-9-0, 7=67/10-9-0, 8=177/10-9-0, 9=187/10-9-0, 10=161/10-9-0, 11=240/10-9-0
Max Horiz 1=662 (LC 8)
Max Uplift 1=-367 (LC 6), 7=-94 (LC 8), 8=-224 (LC 8), 9=-249 (LC 8), 10=-213 (LC 8), 11=-316 (LC 8)
Max Grav 1=923 (LC 8), 7=95 (LC 15), 8=245 (LC 15), 9=262 (LC 15), 10=226 (LC 15), 11=337 (LC 15)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1109/524, 2-3=-808/376, 3-4=-584/278, 4-5=-335/164, 5-6=-100/66, 6-7=-79/99
BOT CHORD 1-11=-1/1, 10-11=-1/1, 9-10=-1/1, 8-9=-1/1, 7-8=-1/1
WEBS 2-11=-268/326, 3-10=-195/242, 4-9=-219/270, 5-8=-207/254

**NOTES**
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left exposed; 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 2x4 MT20 unless otherwise indicated.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 367 lb uplift at joint 1, 94 lb uplift at joint 7, 316 lb uplift at joint 11, 213 lb uplift at joint 10, 249 lb uplift at joint 9 and 224 lb uplift at joint 8.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | LAY5 | Lay-In Gable | 1 | 1 | Job Reference (optional) | I47674153 |

Wheeler Lumber, Waverly, KS - 66871,

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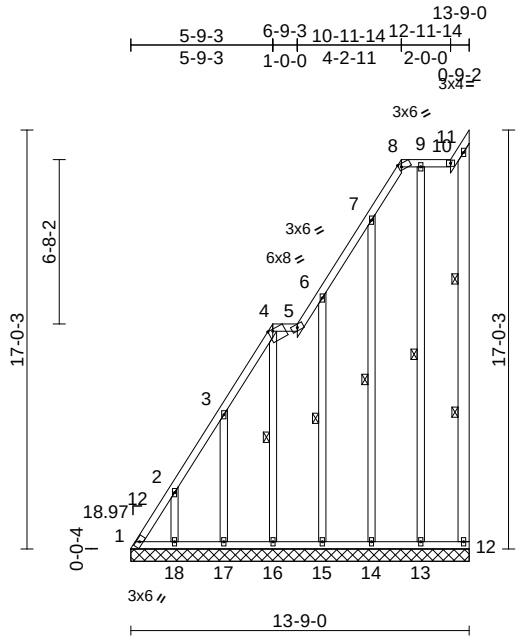
Page: 1




Scale = 1:93.6

Plate Offsets (X, Y): [4:0-2-5,Edge], [8:0-1-5,Edge]

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 25.0 | Plate Grip DOL | 1.15 | TC | 0.18 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.02 | Vert(TL) | n/a | - | n/a | 999 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.18 | Horiz(TL) | 0.00 | 12 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | | | | | | Weight: 134 lb | FT = 10% |

**LUMBER**

| | |
|---|---|
| TOP CHORD | 2x4 SPF No.2 |
| BOT CHORD | 2x4 SPF No.2 |
| WEBS | 2x6 SPF No.2 |
| OTHERS | 2x4 SPF No.2 |

**BRACING**

| | |
|---|---|
| TOP CHORD | Structural wood sheathing directly applied or 5-6-14 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-5, 8-10. |
| BOT CHORD | Rigid ceiling directly applied or 10-0-0 oc bracing. |
| WEBS | 1 Row at midpt 4-16, 6-15, 7-14, 9-13 |
| WEBS | 2 Rows at 1/3 pts 11-12 |

**REACTIONS** (lb/size) 1=52/13-9-0, 12=66/13-9-0, 13=181/13-9-0, 14=178/13-9-0, 15=188/13-9-0, 16=169/13-9-0, 17=186/13-9-0, 18=175/13-9-0
Max Horiz 1=650 (LC 8)
Max Uplift 1=-410 (LC 6), 13=-51 (LC 8), 14=-285 (LC 8), 16=-354 (LC 8), 17=-294 (LC 8), 18=-215 (LC 8)
Max Grav 1=955 (LC 8), 12=66 (LC 1), 13=181 (LC 1), 14=268 (LC 15), 15=188 (LC 1), 16=255 (LC 15), 17=279 (LC 15), 18=240 (LC 15)

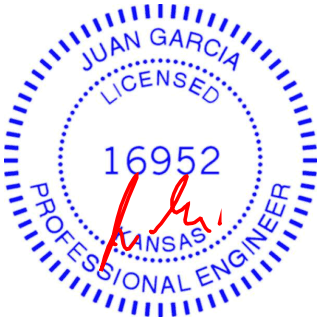
**FORCES** (lb) - Maximum Compression/Maximum Tension

| | |
|---|---|
| TOP CHORD | 1-2=-1138/535, 2-3=-933/442, 3-4=-641/302, 4-5=-301/142, 5-6=-330/165, 6-7=-348/184, 7-8=-77/39, 8-9=-16/13, 9-10=-16/13, 10-11=-9/40, 11-12=-51/5 |
| BOT CHORD | 1-18=-1/1, 17-18=-1/1, 16-17=-1/1, 15-16=-1/1, 14-15=-1/1, 13-14=-1/1, 12-13=-1/1 |
| WEBS | 2-18=-192/224, 3-17=-240/321, 4-16=-214/377, 6-15=-148/0, 7-14=-227/308, 9-13=-141/82 |

**NOTES**

1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left exposed; 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) Provide adequate drainage to prevent water ponding.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 410 lb uplift at joint 1, 215 lb uplift at joint 18, 294 lb uplift at joint 17, 354 lb uplift at joint 16, 285 lb uplift at joint 14 and 51 lb uplift at joint 13.
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


August 30,2021



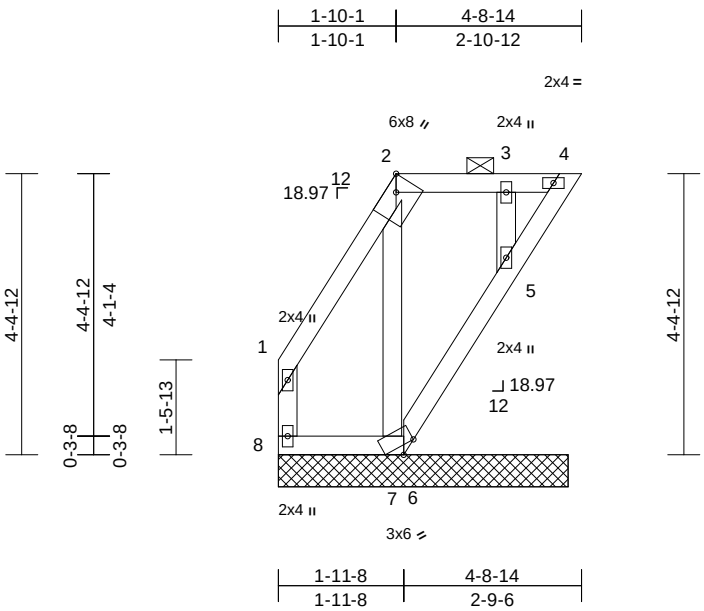
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | LAY6 | Lay-In Gable | 1 | 1 | Job Reference (optional) | I47674154 |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:40
ID:1plP9TDjxVuxNOFgPp08Kyz1lrs-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1




Scale = 1:36

Plate Offsets (X, Y): [2:0-2-15,Edge], [6:0-3-0,Edge]

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 25.0 | Plate Grip DOL | 1.15 | TC | 0.09 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.03 | Vert(TL) | n/a | - | n/a | 999 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.03 | Horiz(TL) | 0.00 | 4 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-P | | | | | | | Weight: 22 lb | FT = 10% |

**LUMBER**

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

**BRACING**

| | |
|---|---|
| TOP CHORD | Structural wood sheathing directly applied or 4-8-14 oc purlins, except end verticals, and 2-0-0 oc purlins: 2-4. |
| BOT CHORD | Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 4-5. |

**REACTIONS** (lb/size) 4=17/4-6-6, 5=158/4-6-6, 6=-22/4-6-6, 7=164/4-6-6, 8=72/4-6-6
Max Horiz 8=95 (LC 8)
Max Uplift 4=-165 (LC 8), 5=-32 (LC 5), 6=-130 (LC 6), 7=-2 (LC 4), 8=-93 (LC 8)
Max Grav 4=109 (LC 6), 5=158 (LC 1), 6=161 (LC 8), 7=164 (LC 1), 8=126 (LC 15)

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

| | |
|---|---|
| TOP CHORD | 1-8=-114/100, 1-2=-96/96, 2-3=-68/103, 3-4=-67/104 |
| BOT CHORD | 7-8=-104/67, 6-7=-104/67, 5-6=-206/146, 4-5=-202/127 |
| WEBS | 2-7=-109/42, 3-5=-124/52 |

**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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; 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) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
6) Gable studs spaced at 1-9-6 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 93 lb uplift at joint 8, 165 lb uplift at joint 4, 130 lb uplift at joint 6, 2 lb uplift at joint 7 and 32 lb uplift at joint 5.
10) Non Standard bearing condition. Review required.
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



August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | LAY7 | Lay-In Gable | 1 | 1 | Job Reference (optional) | I47674155 |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:40 Page: 1
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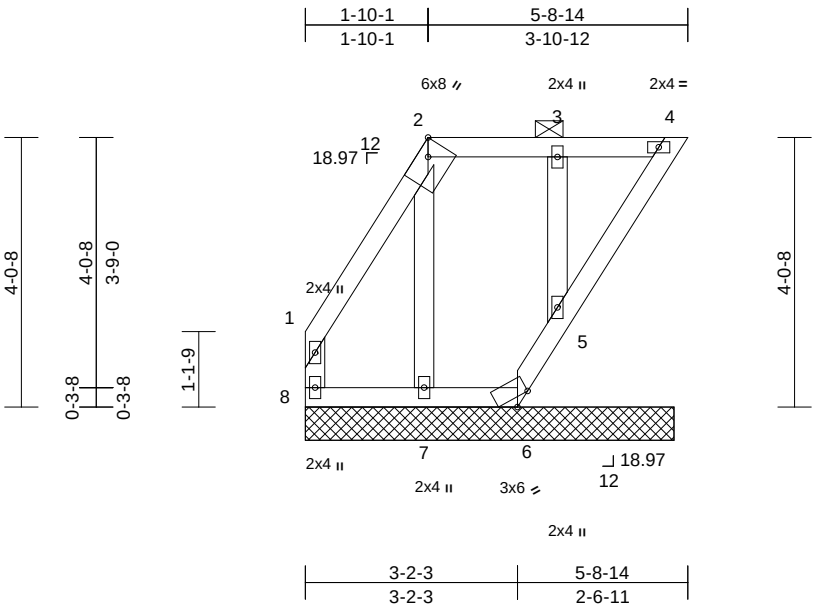


Scale = 1:34.6

Plate Offsets (X, Y): [2:0-2-15,Edge], [6:0-3-0,Edge]

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 25.0 | Plate Grip DOL | 1.15 | TC | 0.09 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.03 | Vert(TL) | n/a | - | n/a | 999 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.03 | Horiz(TL) | 0.00 | 4 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-P | | | | | | | Weight: 25 lb | FT = 10% |

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

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 5-8-14 oc purlins, except end verticals, and 2-0-0 oc purlins: 2-4.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 4-5.

**REACTIONS** (lb/size) 4=59/5-6-6, 5=193/5-6-6, 6=4/5-6-6, 7=151/5-6-6, 8=72/5-6-6
Max Horiz 8=100 (LC 8)
Max Uplift 4=-167 (LC 8), 5=-56 (LC 5), 6=-104 (LC 6), 7=-10 (LC 4), 8=-97 (LC 8)
Max Grav 4=111 (LC 15), 5=193 (LC 1), 6=194 (LC 8), 7=151 (LC 1), 8=120 (LC 15)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-8=-108/104, 1-2=-89/101, 2-3=-63/106, 3-4=-62/106
BOT CHORD 7-8=-107/62, 6-7=-106/62, 5-6=-215/140, 4-5=-209/125
WEBS 2-7=-113/35, 3-5=-158/66

**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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; 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) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 97 lb uplift at joint 8, 167 lb uplift at joint 4, 104 lb uplift at joint 6, 10 lb uplift at joint 7 and 56 lb uplift at joint 5.
10) Non Standard bearing condition. Review required.
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



August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | I47674156 |
|---|---|---|---|---|---|---|
| 210529 | LAY8 | Lay-In Gable | 1 | 1 | Job Reference (optional) | |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:40 Page: 1
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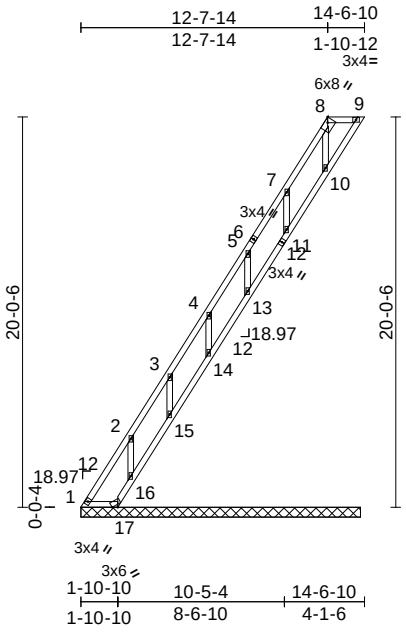



Scale = 1:118.2

Plate Offsets (X, Y): [8:0-2-15,Edge], [17:0-3-0,Edge]

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 25.0 | Plate Grip DOL | 1.15 | TC | 0.13 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.16 | Vert(TL) | n/a | - | n/a | 999 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.06 | Horiz(TL) | -0.03 | 9 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-S | | | | | | | Weight: 74 lb | FT = 10% |

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

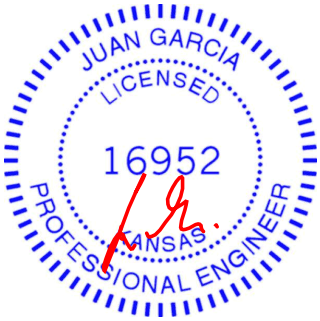
**BRACING**
TOP CHORD Structural wood sheathing directly applied or 5-9-8 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 8-9.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

**REACTIONS** (lb/size) 1=81/14-4-2, 9=35/14-4-2, 10=294/14-4-2, 13=325/14-4-2, 14=120/14-4-2, 15=191/14-4-2, 16=186/14-4-2, 17=30/14-4-2
Max Horiz 1=804 (LC 8)
Max Uplift 1=-348 (LC 6), 9=-223 (LC 8), 10=-17 (LC 8), 13=-439 (LC 8), 14=-155 (LC 8), 15=-249 (LC 8), 16=-299 (LC 8), 17=-110 (LC 6)
Max Grav 1=861 (LC 8), 9=83 (LC 6), 10=294 (LC 1), 13=460 (LC 15), 14=167 (LC 15), 15=267 (LC 15), 16=275 (LC 15), 17=313 (LC 8)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1028/483, 2-3=-751/351, 3-4=-511/241, 4-5=-300/162, 5-7=-100/36, 7-8=-89/206, 8-9=-89/190
BOT CHORD 1-17=-192/86, 16-17=-378/176, 15-16=-372/181, 14-15=-359/167, 13-14=-400/204, 11-13=-307/124, 10-11=-433/231, 9-10=-332/146
WEBS 8-10=-180/8, 7-11=-112/173, 5-13=-307/353, 4-14=-174/225, 3-15=-212/260, 2-16=-246/301

**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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; 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 2x4 MT20 unless otherwise indicated.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Bearing at joint(s) 9, 10 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 223 lb uplift at joint 9, 348 lb uplift at joint 1, 110 lb uplift at joint 17, 17 lb uplift at joint 10, 439 lb uplift at joint 13, 155 lb uplift at joint 14, 249 lb uplift at joint 15 and 299 lb uplift at joint 16.
11) Non Standard bearing condition. Review required.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
13) 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


August 30,2021



MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

| Job | Truss | Truss Type | Qty | Ply | Lot 71 RR | |
|---|---|---|---|---|---|---|
| 210529 | LAY9 | Lay-In Gable | 1 | 1 | Job Reference (optional) | I47674157 |

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Fri Aug 27 15:04:40 Page: 1
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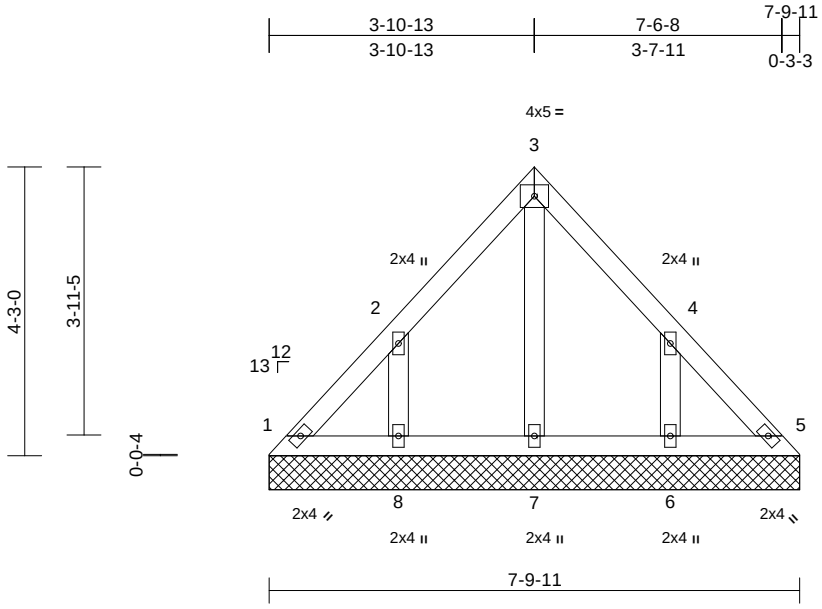



Scale = 1:33.9

| 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 | 0.05 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.02 | Vert(TL) | n/a | - | n/a | 999 | | |
| BCLL | 0.0* | Rep Stress Incr | YES | WB | 0.03 | Horiz(TL) | 0.00 | 5 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2018/TPI2014 | Matrix-P | | | | | | | Weight: 29 lb | FT = 10% |

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

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

**REACTIONS** (lb/size) 1=71/7-9-11, 5=71/7-9-11, 6=198/7-9-11, 7=110/7-9-11, 8=198/7-9-11
Max Horiz 1=-104 (LC 4)
Max Uplift 1=-25 (LC 4), 5=-8 (LC 5), 6=-147 (LC 9), 8=-147 (LC 8)
Max Grav 1=96 (LC 16), 5=87 (LC 18), 6=226 (LC 16), 7=122 (LC 18), 8=226 (LC 15)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-115/87, 2-3=-98/77, 3-4=-90/62, 4-5=-99/64
BOT CHORD 1-8=-42/89, 7-8=-42/89, 6-7=-42/89, 5-6=-42/89
WEBS 3-7=-82/0, 2-8=-186/171, 4-6=-186/171

**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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 25 lb uplift at joint 1, 8 lb uplift at joint 5, 147 lb uplift at joint 8 and 147 lb uplift at joint 6.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



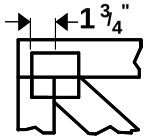
August 30,2021



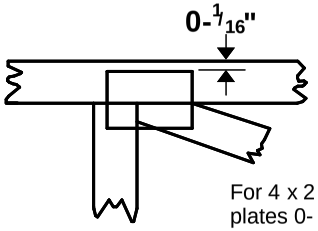
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

# Symbols

## PLATE LOCATION AND ORIENTATION




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




For 4 x 2 orientation, locate plates 0- 1/16" from outside edge of truss.

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

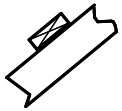
*** Plate location details available in MiTek 20/20 software or upon request.**

## PLATE SIZE

4 x 4

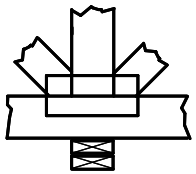
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## LATERAL BRACING LOCATION



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

## BEARING

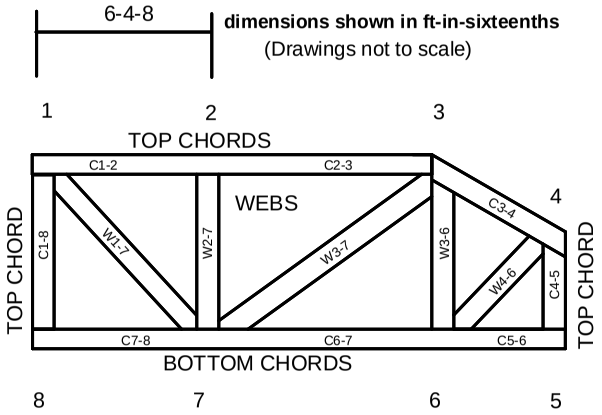


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

**Industry Standards:**

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing & 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-1311, ESR-1352, ESR1988
ER-3907, ESR-2362, ESR-1397, ESR-3282

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

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



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

# General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI 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/TPI 1 Quality Criteria.

21.The design does not take into account any dynamic or other loads other than those expressly stated.