RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
06/06/2024

MiTek®

RE: P240417-01
Roof - HR Lot 163

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

Site Information:

Customer: Clayton Properties Project Name: P240417-01
Lot/Block: 163 Model:
Address: 1620 SW Buckthorn St. Subdivision: Hawthorne Ridge
City: Lee's Summit State: MO

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

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

This package includes 25 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	I65257556	A01	5/2/2024	21	I65257576	V01	5/2/2024
2	I65257557	A02	5/2/2024	22	I65257577	V02	5/2/2024
3	I65257558	A03	5/2/2024	23	I65257578	V03	5/2/2024
4	I65257559	A04	5/2/2024	24	I65257579	V04	5/2/2024
5	I65257560	B01	5/2/2024	25	I65257580	V05	5/2/2024
6	I65257561	C01	5/2/2024				
7	I65257562	C02	5/2/2024				
8	I65257563	C03	5/2/2024				
9	I65257564	C04	5/2/2024				
10	I65257565	C05	5/2/2024				
11	I65257566	C06	5/2/2024				
12	I65257567	C07	5/2/2024				
13	I65257568	C08	5/2/2024				
14	I65257569	C09	5/2/2024				
15	I65257570	CJ01	5/2/2024				
16	I65257571	J01	5/2/2024				
17	I65257572	J02	5/2/2024				
18	I65257573	LG01	5/2/2024				
19	I65257574	PB1	5/2/2024				
20	I65257575	PB2	5/2/2024				

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

Truss Design Engineer's Name: Sevier, Scott

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

Missouri COA: 001193

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

May 02, 2024

Sevier, Scott

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 163
P240417-01	A01	Hip Girder	1	2	Job Reference (optional)

I65257556

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

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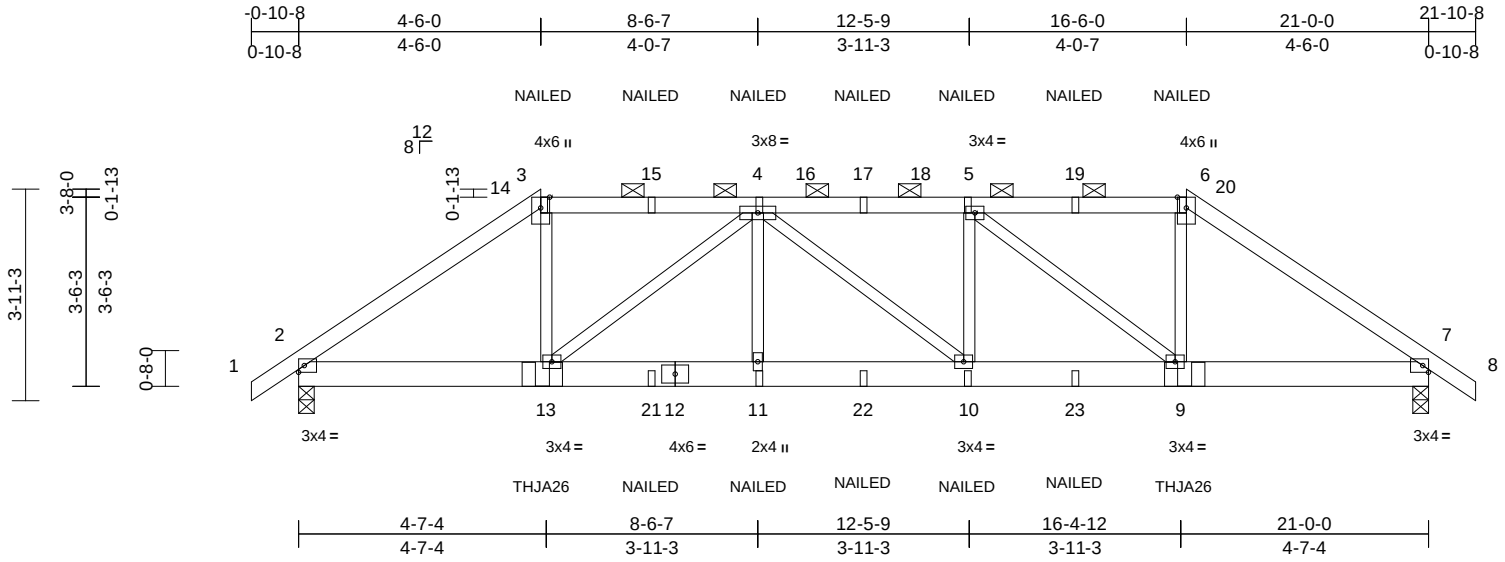

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.37	Vert(LL)	0.05	10-11	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.32	Vert(CT)	-0.08	10-11	>999	180		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.17	Horz(CT)	0.02	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 191 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SPF No.2
WEBS 2x3 SPF No.2

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

REACTIONS (size) 2=0-3-8, 7=0-3-8
Max Horiz 2=98 (LC 11)
Max Uplift 2=-536 (LC 12), 7=-536 (LC 13)
Max Grav 2=1596 (LC 1), 7=1596 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/21, 2-3=-2349/858, 3-4=-1852/750, 4-5=-2598/1040, 5-6=-1852/743, 6-7=-2350/863, 7-8=0/21
BOT CHORD 2-13=-704/1817, 11-13=-1010/2603, 10-11=-1010/2603, 9-10=-990/2598, 7-9=-631/1818
WEBS 3-13=-296/980, 4-13=-1009/452, 4-11=0/251, 4-10=-28/27, 5-10=0/249, 5-9=-1001/446, 6-9=-296/980

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 0-9-0 oc.
Web connected as follows: 2x3 - 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=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 4-6-0, Exterior(2R) 4-6-0 to 11-6-14, Interior (1) 11-6-14 to 16-6-0, Exterior(2E) 16-6-0 to 21-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 536 lb uplift at joint 2 and 536 lb uplift at joint 7.
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 THJA26 (THJA26 on 2 ply, Left Hand Hip) or equivalent at 4-6-6 from the left end to connect truss(es) to front face of bottom chord.
13) Use Simpson Strong-Tie THJA26 (THJA26 on 2 ply, Right Hand Hip) or equivalent at 16-5-10 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 Girder: 3-10d (0.148" x 3") toe-nails per NDS guidelines.

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, 3-6=-70, 6-8=-70, 2-7=-20
Concentrated Loads (lb)
Vert: 3=-79 (F), 6=-79 (F), 13=-254 (F), 4=-79 (F), 11=-24 (F), 10=-24 (F), 5=-79 (F), 9=-254 (F), 15=-79 (F), 17=-79 (F), 19=-79 (F), 21=-24 (F), 22=-24 (F), 23=-24 (F)

May 2,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 163
P240417-01	A02	Hip	1	1	Job Reference (optional)

I65257557

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

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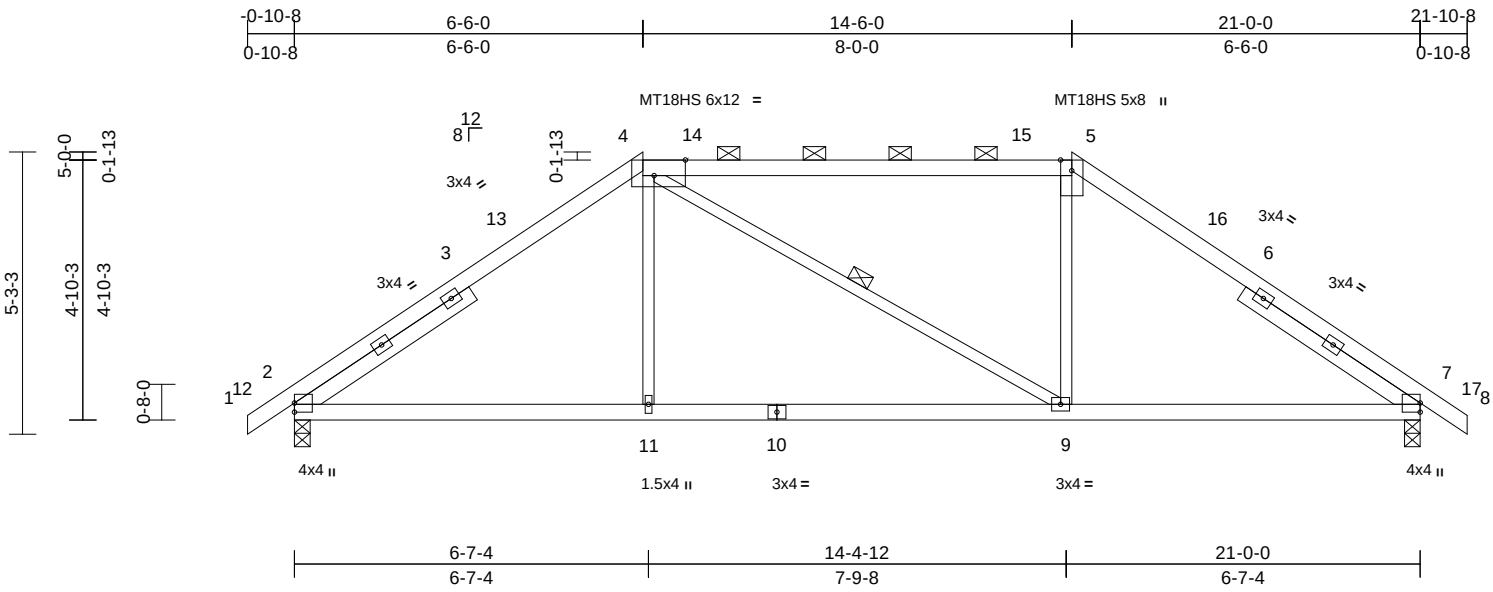

Scale = 1:43

Plate Offsets (X, Y): [4:0-7-0,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	0.96	Vert(LL)	-0.07	9-11	>999	240	MT18HS	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.53	Vert(CT)	-0.15	9-11	>999	180	MT20	244/190
BCLL	0.0*	Rep Stress Incr	YES	WB	0.10	Horz(CT)	0.03	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 96 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2 *Except* 4-5:2x4 SP 1650F 1.5E
BOT CHORD	2x4 SP No.2
WEBS	2x3 SPF No.2
SLIDER	Left 2x4 SP No.2 -- 3-11-1, Right 2x4 SP No.2 -- 3-11-1

BRACING

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

REACTIONS (size) 2=0-3-8, 7=0-3-8
Max Horiz 2=-136 (LC 10)
Max Uplift 2=-125 (LC 12), 7=-125 (LC 13)
Max Grav 2=1006 (LC 1), 7=1006 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/16, 2-4=-1287/212, 4-5=-975/245, 5-7=-1287/211, 7-8=0/16
BOT CHORD	2-11=-133/971, 9-11=-131/975, 7-9=-57/971
WEBS	4-11=0/307, 4-9=-117/118, 5-9=0/307

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 6-6-0, Exterior(2R) 6-6-0 to 13-6-14, Interior (1) 13-6-14 to 14-6-0, Exterior(2R) 14-6-0 to 21-6-14, Interior (1) 21-6-14 to 21-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are MT20 plates unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 125 lb uplift at joint 2 and 125 lb uplift at joint 7.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
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

May 2,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 163
P240417-01	A03	Hip	1	1	Job Reference (optional)

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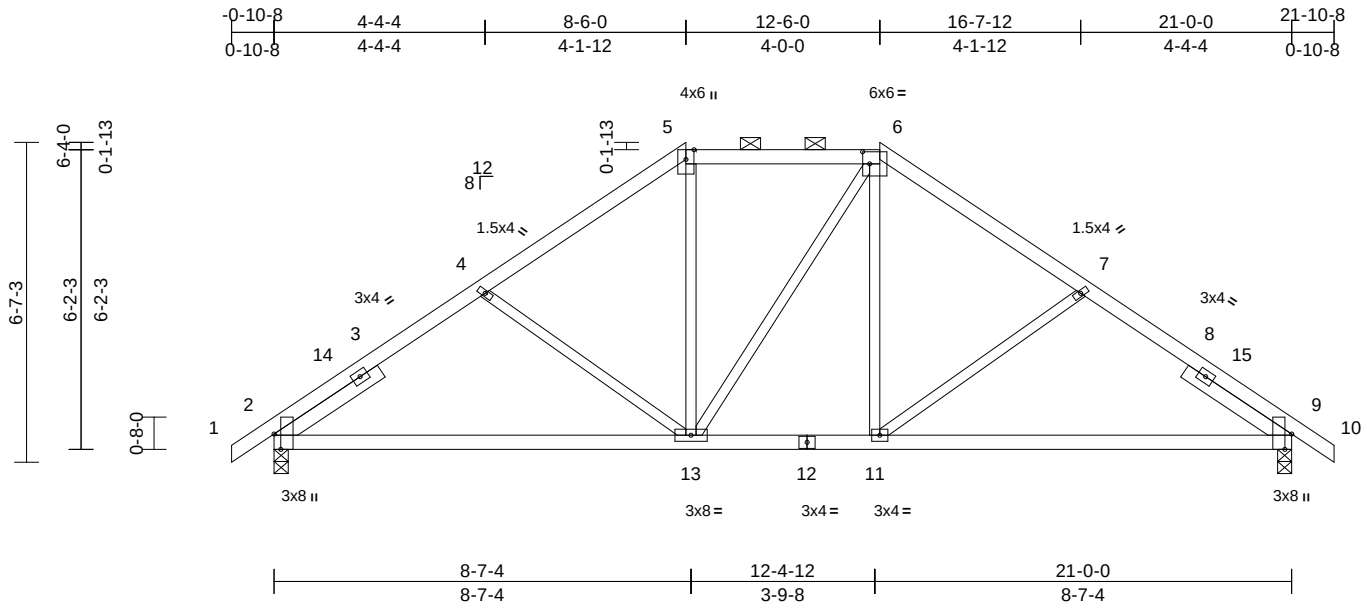

Scale = 1:47.5

Plate Offsets (X, Y): [2:0-3-13,Edge], [6:0-1-12,0-3-0], [9:0-3-13,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	0.27	Vert(LL)	-0.15	9-11	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.67	Vert(CT)	-0.31	9-11	>802	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.18	Horz(CT)	0.03	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 102 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 2-6-14, Right 2x4 SP No.2 -- 2-6-14

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

REACTIONS (size) 2=0-3-8, 9=0-3-8
Max Horiz 2=173 (LC 11)
Max Uplift 2=-143 (LC 12), 9=-143 (LC 13)
Max Grav 2=1006 (LC 1), 9=1006 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/16, 2-4=-1295/252, 4-5=-1064/218, 5-6=-826/225, 6-7=-1064/214, 7-9=-1294/229, 9-10=0/16
BOT CHORD 2-13=-185/991, 11-13=-4/826, 9-11=-112/991
WEBS 4-13=-254/200, 5-13=-24/287, 6-13=-108/110, 6-11=-42/287, 7-11=-255/200

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-2-11, Interior (1) 4-2-11 to 8-6-0, Exterior(2E) 8-6-0 to 12-6-0, Exterior(2R) 12-6-0 to 19-6-14, Interior (1) 19-6-14 to 21-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 143 lb uplift at joint 2 and 143 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

May 2,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 163
P240417-01	A04	Hip Girder	1	3	Job Reference (optional) I65257559

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

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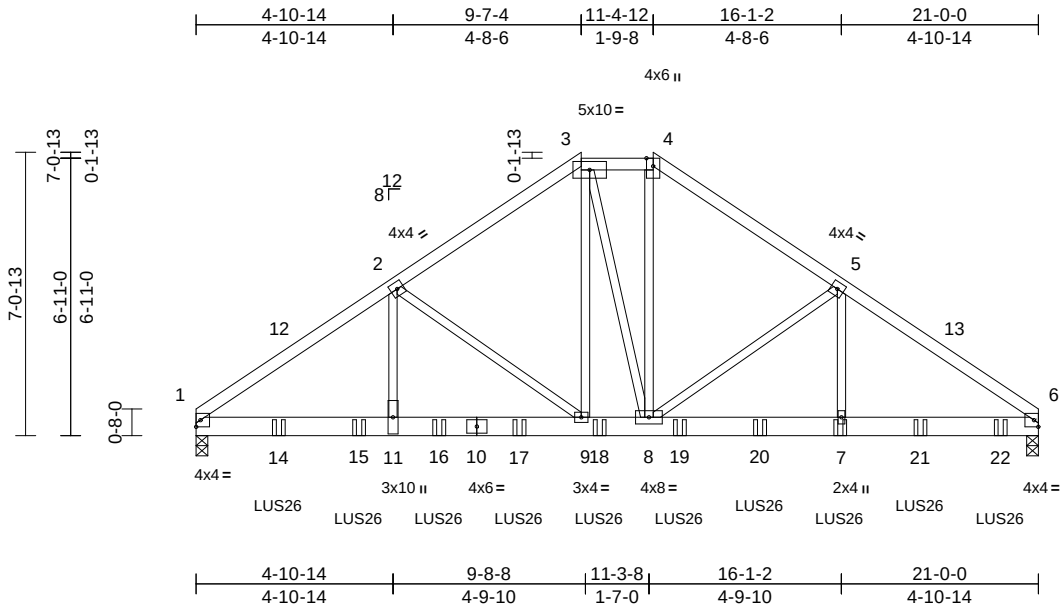

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.66	Vert(LL)	-0.07	9-11	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.81	Vert(CT)	-0.12	9-11	>999	180		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.27	Horz(CT)	0.04	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 314 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SPF No.2
WEBS 2x3 SPF No.2

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

REACTIONS (size) 1=0-3-8, 6=0-3-8
Max Horiz 1=-184 (LC 8)
Max Uplift 1=-1069 (LC 12), 6=-1208 (LC 13)
Max Grav 1=4948 (LC 19), 6=5373 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-7206/1600, 2-3=-5003/1199, 3-4=-4222/1060, 4-5=-5067/1225, 5-6=-7179/1621
BOT CHORD 1-11=-1312/5869, 9-11=-1312/5869, 8-9=-865/4221, 7-8=-1240/5709, 6-7=-1240/5709
WEBS 2-11=-464/2440, 2-9=-2092/566, 3-9=-555/2350, 3-8=-144/336, 4-8=-610/2576, 5-8=-1993/579, 5-7=-482/2335

NOTES
1) 3-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 0-6-0 oc.
Web connected as follows: 2x3 - 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=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-12 to 4-10-14, Interior (1) 4-10-14 to 9-7-4, Exterior(2E) 9-7-4 to 11-4-12, Exterior(2R) 11-4-12 to 18-5-10, Interior (1) 18-5-10 to 20-10-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1069 lb uplift at joint 1 and 1208 lb uplift at joint 6.
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 LUS26 (4-10d Girder, 4-10d Truss) or equivalent spaced at 2-0-0 oc max. starting at 2-0-12 from the left end to 20-0-12 to connect truss(es) to back face of bottom chord.
13) Fill all nail holes where hanger is in contact with lumber.

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, 4-6=-70, 1-6=-20
Concentrated Loads (lb)
Vert: 7=-767 (B), 14=-805 (B), 15=-805 (B), 16=-767 (B), 17=-767 (B), 18=-767 (B), 19=-767 (B), 20=-767 (B), 21=-767 (B), 22=-769 (B)

May 2,2024

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Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 163
P240417-01	B01	Common Supported Gable	1	1	Job Reference (optional) I65257560

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

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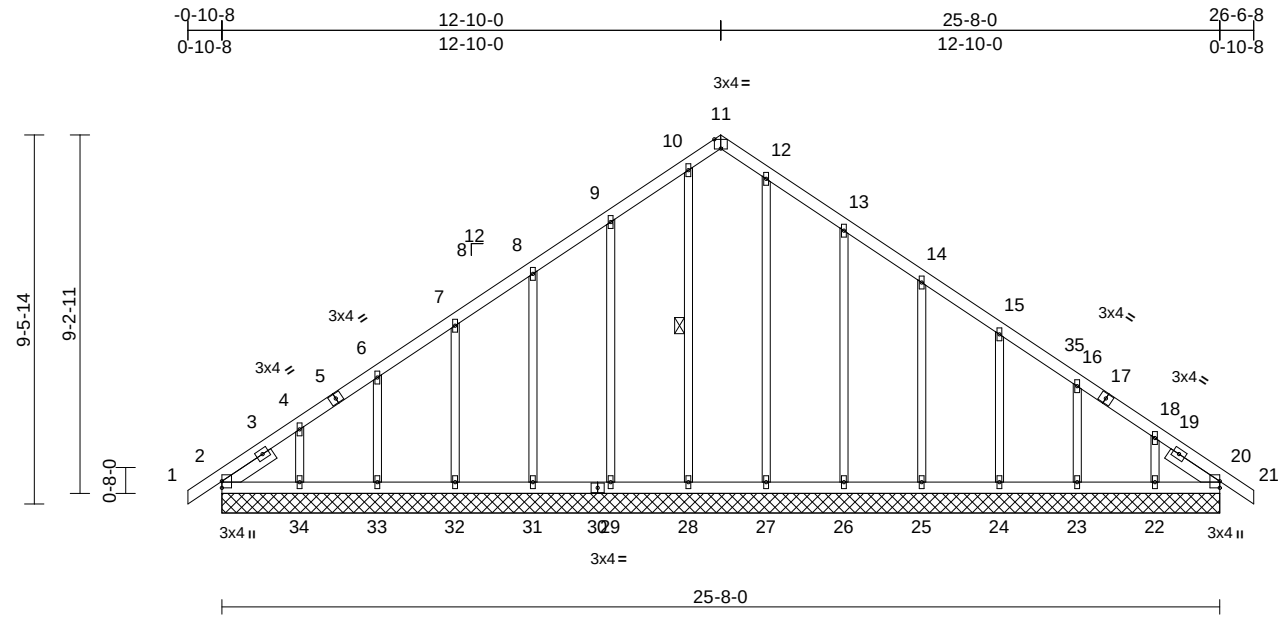

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Plate Offsets (X, Y): [11:0-2-0,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.11	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.20	Horz(CT)	0.01	20	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 138 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 1-6-4, Right 2x4 SP No.2 -- 1-6-5

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.
WEBS 1 Row at midpt 10-28

REACTIONS (size) 2=25-8-0, 20=25-8-0, 22=25-8-0, 23=25-8-0, 24=25-8-0, 25=25-8-0, 26=25-8-0, 27=25-8-0, 28=25-8-0, 29=25-8-0, 31=25-8-0, 32=25-8-0, 33=25-8-0, 34=25-8-0
Max Horiz 2=255 (LC 11)
Max Uplift 2=-55 (LC 8), 20=-16 (LC 9), 22=-125 (LC 13), 23=-76 (LC 13), 24=-79 (LC 13), 25=-75 (LC 13), 26=-101 (LC 13), 29=-98 (LC 12), 31=-75 (LC 12), 32=-80 (LC 12), 33=-70 (LC 12), 34=-137 (LC 12)
Max Grav 2=215 (LC 21), 20=189 (LC 22), 22=183 (LC 20), 23=192 (LC 20), 24=188 (LC 20), 25=188 (LC 20), 26=197 (LC 20), 27=163 (LC 1), 28=175 (LC 22), 29=192 (LC 19), 31=189 (LC 19), 32=190 (LC 19), 33=186 (LC 19), 34=213 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/16, 2-4=-316/190, 4-6=-211/148, 6-7=-148/125, 7-8=-131/99, 8-9=-116/109, 9-10=-108/160, 10-11=-92/129, 11-12=-101/144, 12-13=-100/143, 13-14=-71/65, 14-15=-86/39, 15-16=-117/64, 16-18=-182/90, 18-20=-280/134, 20-21=0/16
BOT CHORD 2-34=-113/248, 33-34=-113/248, 32-33=-113/248, 31-32=-113/248, 29-31=-113/248, 28-29=-113/248, 27-28=-113/248, 26-27=-113/248, 25-26=-113/248, 24-25=-113/248, 23-24=-113/248, 22-23=-113/248, 20-22=-113/248
WEBS 4-34=-167/156, 6-33=-148/98, 7-32=-149/104, 8-31=-149/99, 9-29=-152/122, 10-28=-135/22, 12-27=-123/0, 13-26=-157/125, 14-25=-148/99, 15-24=-148/103, 16-23=-152/105, 18-22=-144/144

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 4-0-0, Exterior(2N) 4-0-0 to 12-10-0, Corner(3R) 12-10-0 to 18-0-0, Exterior(2N) 18-0-0 to 26-6-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 1.5x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) 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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 55 lb uplift at joint 2, 137 lb uplift at joint 34, 70 lb uplift at joint 33, 80 lb uplift at joint 32, 75 lb uplift at joint 31, 98 lb uplift at joint 29, 101 lb uplift at joint 26, 75 lb uplift at joint 25, 79 lb uplift at joint 24, 76 lb uplift at joint 23, 125 lb uplift at joint 22 and 16 lb uplift at joint 20.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

May 2,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 163	I65257561
P240417-01	C01	Piggyback Base Structural Gable	1	1	Job Reference (optional)	

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

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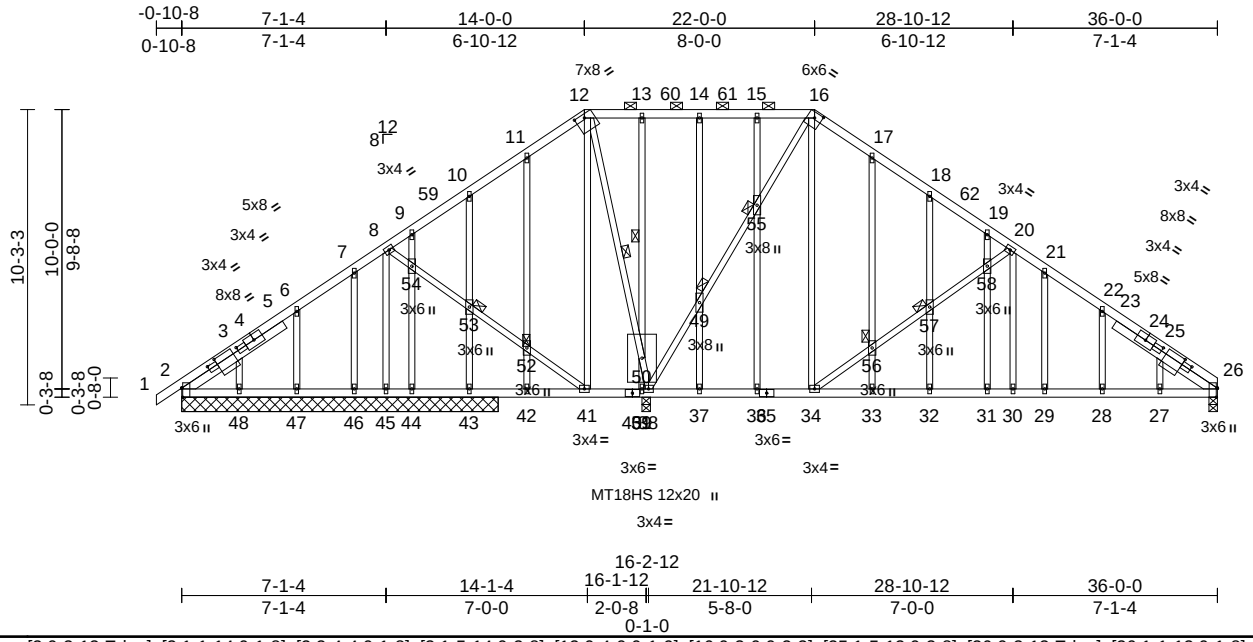

Plate Offsets (X, Y): [2:0-3-13,Edge], [2:1-1-14,0-1-8], [2:2-4-4,0-1-8], [3:1-5-14,0-2-8], [12:0-4-0,0-1-9], [16:0-3-0,0-2-3], [25:1-5-12,0-2-8], [26:0-3-13,Edge], [26:1-1-12,0-1-8], [26:2-4-1,0-1-8]

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	0.45	Vert(LL)	0.09	27-28	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.59	Vert(CT)	-0.13	32-33	>999	180	MT18HS	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.44	Horz(CT)	0.02	26	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 252 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2
OTHERS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 4-2-10, Right 2x4 SP No.2 -- 4-2-10

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-5-9 oc purlins, except 2-0-0 oc purlins (10-0-0 max.): 12-16.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 12-38, 13-50
JOINTS 1 Brace at Jt(s): 49, 52, 53, 55, 56, 57

REACTIONS (size) 2=11-0-0, 26=0-3-8, 38=0-3-8, 39=0-3-8, 43=11-0-0, 44=11-0-0, 45=11-0-0, 46=11-0-0, 47=11-0-0, 48=11-0-0
Max Horiz 2=275 (LC 11)
Max Uplift 2=-82 (LC 8), 26=-165 (LC 13), 38=-195 (LC 9), 39=-462 (LC 25), 43=-150 (LC 12), 44=-10 (LC 12), 45=-10 (LC 9), 46=-49 (LC 12), 47=-96 (LC 12), 48=-89 (LC 12)
Max Grav 2=141 (LC 20), 26=821 (LC 1), 38=1657 (LC 1), 39=214 (LC 9), 43=373 (LC 19), 44=54 (LC 25), 45=133 (LC 25), 46=156 (LC 19), 47=209 (LC 19), 48=194 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/16, 2-3=-237/258, 3-6=-176/239, 6-7=-124/210, 7-8=-91/175, 8-9=-80/147, 9-10=-56/161, 10-11=-62/156, 11-12=-67/193, 12-13=-37/181, 13-14=-38/181, 14-15=-38/181, 15-16=-38/181, 16-17=-353/261, 17-18=-387/209, 18-19=-420/149, 19-20=-476/130, 20-21=-867/284, 21-22=-937/255, 22-25=-967/189, 25-26=-1080/162
BOT CHORD 2-48=-145/176, 47-48=-148/179, 46-47=-148/179, 45-46=-148/179, 44-45=-148/179, 43-44=-148/179, 42-43=-148/179, 41-42=-148/179, 39-41=-155/249, 38-39=-155/249, 37-38=0/312, 36-37=0/312, 34-36=0/312, 33-34=-62/780, 32-33=-62/780, 31-32=-62/780, 30-31=-62/780, 29-30=-62/780, 28-29=-62/780, 27-28=-62/780, 26-27=-62/778
WEBS 8-45=-95/13, 8-54=-30/88, 53-54=-35/88, 52-53=-25/87, 41-52=-36/89, 12-41=-46/102, 12-50=-271/23, 50-51=-462/103, 38-51=-311/27, 38-49=-870/156, 49-55=-836/149, 16-55=-795/145, 16-34=-189/578, 34-56=-656/290, 56-57=-646/284, 57-58=-622/274, 20-58=-668/295, 20-30=-127/316, 14-49=-114/57, 37-49=-90/63, 13-50=-215/94, 39-51=-179/93, 11-52=-80/75, 42-52=-58/65, 10-53=-216/131, 43-53=-239/140, 9-54=-93/56, 44-54=-80/52, 7-46=-126/72, 6-47=-169/120, 3-48=-151/113, 15-55=-69/48, 36-55=-33/51, 17-56=-57/67, 33-56=-39/58, 18-57=-103/85, 32-57=-62/68, 19-58=0/67, 31-58=-35/47, 21-29=-17/39, 22-28=-93/92, 25-27=0/91

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-0-0, Interior (1) 4-0-0 to 14-0-0, Exterior(2R) 14-0-0 to 19-0-0, Interior (1) 19-0-0 to 22-0-0, Exterior(2R) 22-0-0 to 27-0-0, Interior (1) 27-0-0 to 36-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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 MT20 plates unless otherwise indicated.
6) All plates are 1.5x4 MT20 unless otherwise indicated.
7) Gable studs spaced at 2-0-0 oc.

May 2,2024

Continued on page 2

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

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 163
P240417-01	C01	Piggyback Base Structural Gable	1	1	Job Reference (optional)

8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * 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.
10) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 82 lb uplift at joint 2, 10 lb uplift at joint 45, 195 lb uplift at joint 38, 165 lb uplift at joint 26, 462 lb uplift at joint 39, 150 lb uplift at joint 43, 10 lb uplift at joint 44, 49 lb uplift at joint 46, 96 lb uplift at joint 47 and 89 lb uplift at joint 48.
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

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 163
P240417-01	C02	Piggyback Base	2	1	Job Reference (optional) I65257562

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

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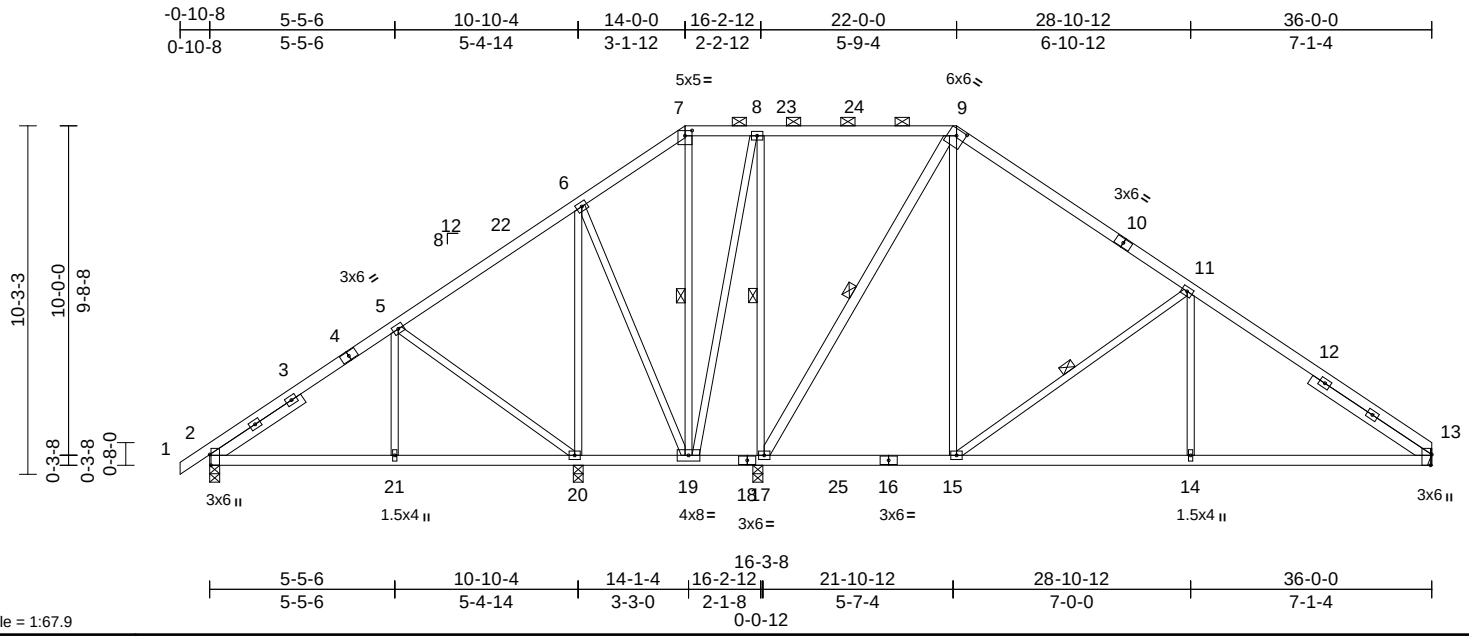

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Plate Offsets (X, Y): [2:0-3-13,Edge], [7:0-2-8,0-1-13], [9:0-3-0,0-2-3], [13:0-3-13,Edge]

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	0.69	Vert(LL)	-0.07	13-14	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.57	Vert(CT)	-0.14	13-14	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.63	Horz(CT)	0.02	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 207 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 17-9:2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 3-2-11, Right 2x4 SP No.2 -- 4-2-10

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-1-9 oc purlins, except 2-0-0 oc purlins (10-0-0 max.): 7-9.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 19-20,17-19.
WEBS 1 Row at midpt 7-19, 9-17, 11-15, 8-17

REACTIONS (size) 2=0-3-8, 13= Mechanical, 17=0-3-8, 20=0-3-8
Max Horiz 2=275 (LC 9)
Max Uplift 2=-89 (LC 12), 13=-176 (LC 13), 17=-63 (LC 13), 20=-198 (LC 12)
Max Grav 2=486 (LC 25), 13=909 (LC 20), 17=1371 (LC 2), 20=881 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/16, 2-5=-450/125, 5-6=-45/322, 6-7=-59/260, 7-8=-44/209, 8-9=-32/231, 9-11=-505/239, 11-13=-1120/246
BOT CHORD 2-21=-161/411, 20-21=-161/411, 19-20=-232/195, 17-19=-245/218, 15-17=-14/354, 14-15=-78/825, 13-14=-78/825
WEBS 7-19=-153/0, 9-17=-929/125, 9-15=-90/691, 11-15=-748/288, 11-14=0/309, 8-17=-451/148, 8-19=-9/149, 6-20=-389/128, 6-19=-23/92, 5-20=-573/214, 5-21=0/237

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 14-0-0, Exterior(2R) 14-0-0 to 19-0-0, Interior (1) 19-0-0 to 22-0-0, Exterior(2R) 22-0-0 to 27-0-0, Interior (1) 27-0-0 to 36-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are 3x4 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, with BCDL = 10.0psf.
7) Bearings are assumed to be: Joint 2 SP No.2 crushing capacity of 565 psi, Joint 20 SP No.2 crushing capacity of 565 psi, Joint 17 SP No.2 crushing capacity of 565 psi.
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 89 lb uplift at joint 2, 63 lb uplift at joint 17, 176 lb uplift at joint 13 and 198 lb uplift at joint 20.
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

May 2,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 163
P240417-01	C03	Piggyback Base	8	1	I65257563 Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
06/06/2024

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

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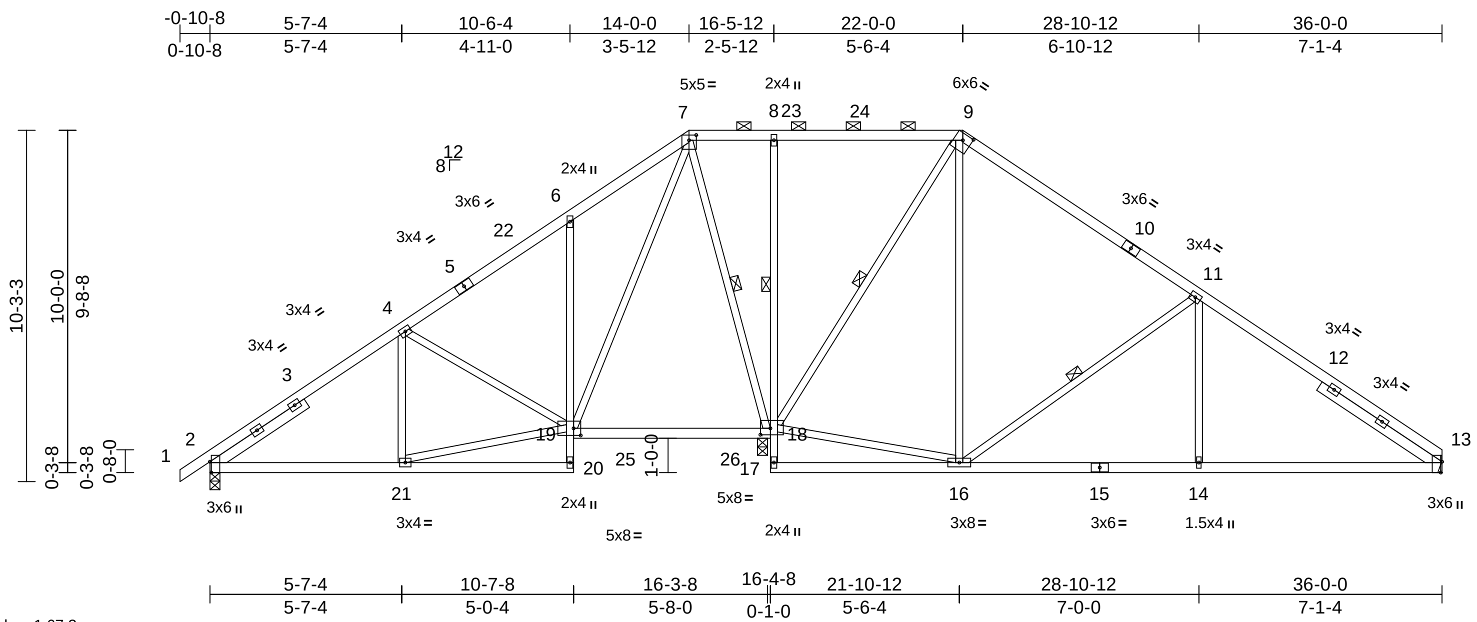

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Plate Offsets (X, Y): [2:0-3-13,Edge], [7:0-2-8,0-1-13], [9:0-3-0,0-2-3], [13:0-3-13,Edge], [18:0-3-8,0-2-4], [19:0-2-8,0-2-8]

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	0.70	Vert(LL)	-0.08	18-19	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.55	Vert(CT)	-0.14	13-14	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.87	Horz(CT)	0.02	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 199 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 20-6,8-17:2x3 SPF No.2
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 3-3-13, Right 2x4 SP No.2 -- 4-2-10

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-3-5 oc purlins, except 2-0-0 oc purlins (10-0-0 max.): 7-9.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing. Except:
1 Row at midpt 8-18
WEBS 1 Row at midpt 7-18, 9-18, 11-16

REACTIONS (size) 2=0-3-8, 13= Mechanical, 18=0-3-8
Max Horiz 2=275 (LC 9)
Max Uplift 2=-140 (LC 12), 13=-194 (LC 13), 18=-157 (LC 12)
Max Grav 2=684 (LC 19), 13=851 (LC 20), 18=2023 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/16, 2-4=-748/160, 4-6=-389/184, 6-7=-370/314, 7-8=0/385, 8-9=0/386, 9-11=-441/272, 11-13=-1023/278
BOT CHORD 2-21=-202/703, 20-21=-42/5, 19-20=0/79, 6-19=-327/218, 18-19=-188/211, 17-18=0/88, 8-18=-369/174, 16-17=-64/0, 14-16=-104/746, 13-14=-104/746
WEBS 4-21=0/174, 19-21=-187/735, 4-19=-434/173, 7-18=-878/184, 16-18=0/284, 9-18=-935/132, 9-16=-112/632, 11-16=-754/287, 11-14=0/308, 7-19=-308/961

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 14-0-0, Exterior(2R) 14-0-0 to 19-0-0, Interior (1) 19-0-0 to 22-0-0, Exterior(2R) 22-0-0 to 27-0-0, Interior (1) 27-0-0 to 36-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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) Bearings are assumed to be: Joint 2 SP No.2 crushing capacity of 565 psi, Joint 18 SP No.2 crushing capacity of 565 psi.
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 140 lb uplift at joint 2, 157 lb uplift at joint 18 and 194 lb uplift at joint 13.
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

May 2,2024

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
06/06/2024

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 163
P240417-01	C04	Piggyback Base	4	1	I65257564 Job Reference (optional)

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

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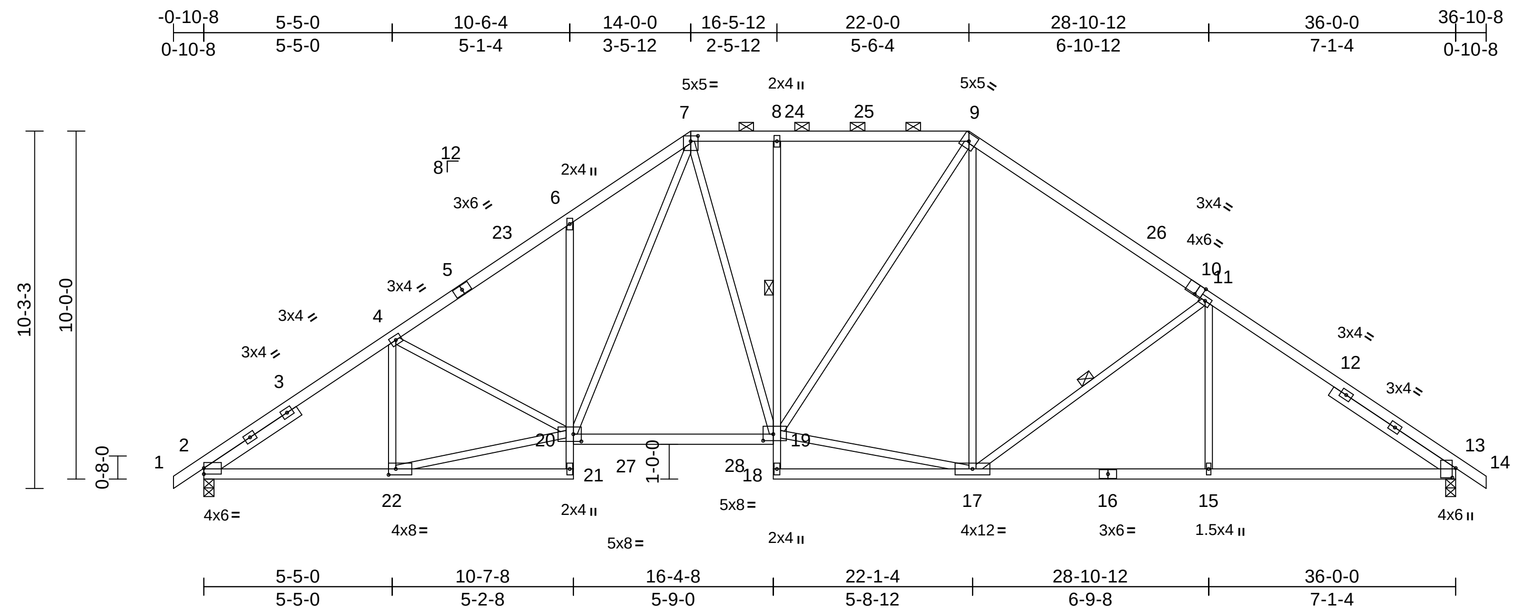

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Plate Offsets (X, Y): [2:Edge,0-2-1], [7:0-2-8,0-1-13], [10:0-2-5,Edge], [13:0-3-5,0-1-3], [19:0-3-8,0-2-4], [20:0-2-12,0-2-8], [22:0-2-8,0-2-0]

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	0.66	Vert(LL)	-0.20	19-20	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.81	Vert(CT)	-0.35	19-20	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.69	Horz(CT)	0.14	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 201 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2 *Except* 5-7,9-10:2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP No.2 *Except* 21-6,8-18:2x3 SPF No.2
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 3-2-8, Right 2x4 SP No.2 -- 4-2-10

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-11-6 oc purlins, except
2-0-0 oc purlins (3-11-11 max.): 7-9.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 17-18.
1 Row at midpt 8-19
WEBS 1 Row at midpt 11-17

REACTIONS (size) 2=0-3-8, 13=0-3-8
Max Horiz 2=277 (LC 11)
Max Uplift 2=-225 (LC 12), 13=-225 (LC 13)
Max Grav 2=1744 (LC 2), 13=1733 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/16, 2-4=-2557/353, 4-6=-2494/412, 6-7=-2497/549, 7-8=-1765/403, 8-9=-1763/404, 9-11=-1947/394, 11-13=-2479/363, 13-14=0/16
BOT CHORD 2-22=-316/2131, 21-22=-21/59, 20-21=0/92, 6-20=-369/230, 19-20=-123/1680, 18-19=0/95, 8-19=-330/173, 17-18=-19/29, 15-17=-187/1953, 13-15=-187/1953
WEBS 4-22=-264/127, 20-22=-301/2131, 4-20=-100/143, 7-19=-180/476, 17-19=-29/1540, 9-19=-187/537, 9-17=-112/393, 11-17=-670/284, 11-15=0/292, 7-20=-321/1093

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 14-0-0, Exterior(2R) 14-0-0 to 19-0-0, Interior (1) 19-0-0 to 22-0-0, Exterior(2R) 22-0-0 to 27-0-0, Interior (1) 27-0-0 to 36-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 225 lb uplift at joint 2 and 225 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

May 2,2024

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
06/06/2024

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 163
P240417-01	C05	Piggyback Base	1	1	I65257565 Job Reference (optional)

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

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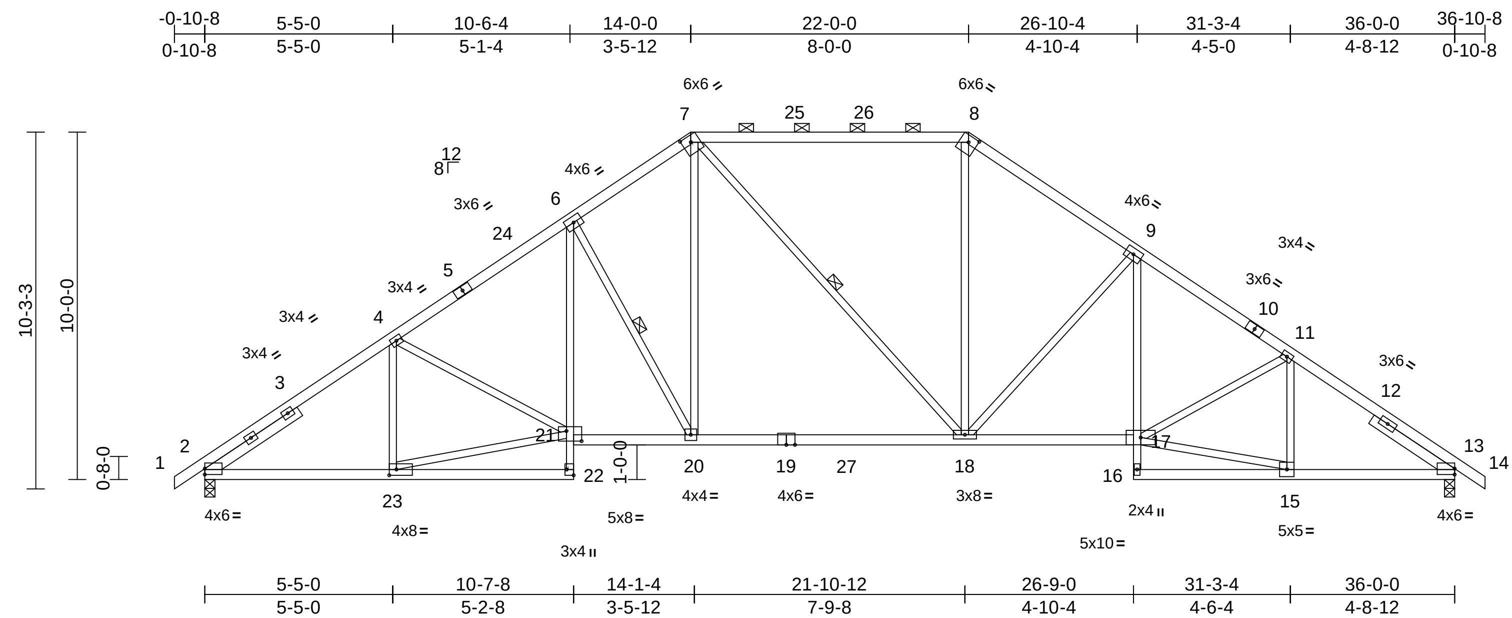

Scale = 1:66.4

Plate Offsets (X, Y): [2:Edge,0-2-1], [7:0-3-0,0-2-3], [8:0-3-0,0-2-3], [13:Edge,0-2-1], [21:0-5-4,0-3-8], [22:Edge,0-2-8], [23:0-2-8,0-2-0]

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	0.71	Vert(LL)	-0.23	18-20	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.96	Vert(CT)	-0.40	18-20	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.97	Horz(CT)	0.16	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 195 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 7-8:2x4 SP 2400F 2.0E
BOT CHORD 2x4 SP No.2 *Except* 22-6,9-16:2x3 SPF No.2
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 3-2-8, Right 2x4 SP No.2 -- 2-9-8

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-9-12 oc purlins, except 2-0-0 oc purlins (4-7-10 max.): 7-8.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 2-2-0 oc bracing: 20-21.
WEBS 1 Row at midpt 6-20, 7-18

REACTIONS (size) 2=0-3-8, 13=0-3-8
Max Horiz 2=277 (LC 11)
Max Uplift 2=-225 (LC 12), 13=-225 (LC 13)
Max Grav 2=1751 (LC 2), 13=1745 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/16, 2-4=-2569/354, 4-6=-2554/420, 6-7=-2123/425, 7-8=-1725/391, 8-9=-2137/409, 9-11=-2606/415, 11-13=-2560/349, 13-14=0/16
BOT CHORD 2-23=-316/2141, 22-23=-1/115, 21-22=0/93, 6-21=-110/638, 20-21=-201/2135, 18-20=-122/1742, 17-18=-161/2138, 16-17=0/84, 9-17=-51/484, 15-16=-9/105, 13-15=-200/1996
WEBS 4-23=-317/140, 21-23=-323/2078, 4-21=-74/150, 6-20=-820/279, 7-20=-154/938, 7-18=-186/187, 8-18=-52/795, 9-18=-738/256, 11-17=-80/221, 11-15=-327/105, 15-17=-196/1936

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 14-0-0, Exterior(2R) 14-0-0 to 19-0-0, Interior (1) 19-0-0 to 22-0-0, Exterior(2R) 22-0-0 to 26-10-4, Interior (1) 26-10-4 to 36-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 225 lb uplift at joint 2 and 225 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

May 2,2024

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 163
P240417-01	C06	Piggyback Base	6	1	I65257566 Job Reference (optional)

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

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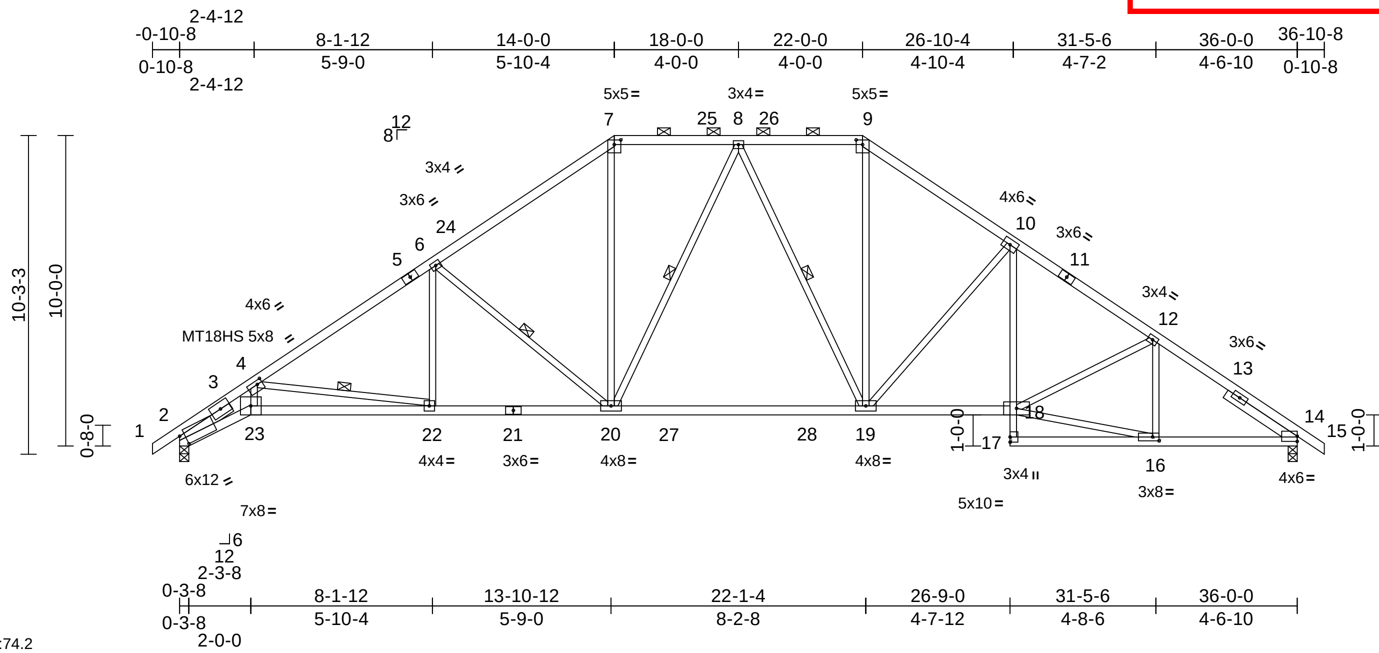

Scale = 1:74.2

Plate Offsets (X, Y): [2:0-1-15,0-4-3], [4:0-2-0,0-1-8], [7:0-2-8,0-1-13], [9:0-2-8,0-1-13], [14:Edge,0-2-1], [16:0-2-8,0-1-8]

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)	-0.31	19-20	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.96	Vert(CT)	-0.53	19-20	>807	180	MT18HS	244/190
BCLL	0.0*	Rep Stress Incr	YES	WB	0.93	Horz(CT)	0.29	14	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 191 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2 *Except* 1-5,11-15:2x4 SP 2400F 2.0E
BOT CHORD 2x4 SP 1650F 1.5E *Except* 10-17:2x3 SPF No.2, 17-14,21-18:2x4 SP No.2
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 1-11-11, Right 2x4 SP No.2 -- 2-8-4

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-5-3 oc purlins, except 2-0-0 oc purlins (4-4-5 max.): 7-9.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 1 Row at midpt 4-22, 6-20, 8-20, 8-19

REACTIONS (size) 2=0-3-8, 14=0-3-8
Max Horiz 2=-278 (LC 10)
Max Uplift 2=-226 (LC 12), 14=-224 (LC 13)
Max Grav 2=1750 (LC 2), 14=1742 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/12, 2-4=-5248/803, 4-6=-2775/409, 6-7=-2169/402, 7-8=-1701/390, 8-9=-1709/386, 9-10=-2155/410, 10-12=-2602/413, 12-14=-2560/346, 14-15=0/16
BOT CHORD 2-23=-820/4519, 22-23=-710/3847, 20-22=-300/2406, 19-20=-98/1756, 18-19=-162/2136, 17-18=0/88, 10-18=-49/460, 16-17=-6/120, 14-16=-200/1993
WEBS 4-23=-290/2047, 4-22=-1460/416, 6-22=-4/449, 6-20=-882/303, 7-20=-93/884, 9-19=-110/905, 10-19=-733/263, 8-20=-322/211, 8-19=-306/211, 12-16=-307/105, 16-18=-198/1915, 12-18=-85/218

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 14-0-0, Exterior(2R) 14-0-0 to 19-0-0, Interior (1) 19-0-0 to 22-0-0, Exterior(2R) 22-0-0 to 26-10-4, Interior (1) 26-10-4 to 36-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are MT20 plates unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Bearings are assumed to be: Joint 2 SP 1650F 1.5E crushing capacity of 565 psi, Joint 14 SP No.2 crushing capacity of 565 psi.
8) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 226 lb uplift at joint 2 and 224 lb uplift at joint 14.
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

STATE OF MISSOURI
SCOTT M. SEVIER
NUMBER
PE-2001018807
PROFESSIONAL ENGINEER

May 2,2024

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
06/06/2024

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 163
P240417-01	C07	Piggyback Base	2	1	Job Reference (optional) I65257567

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

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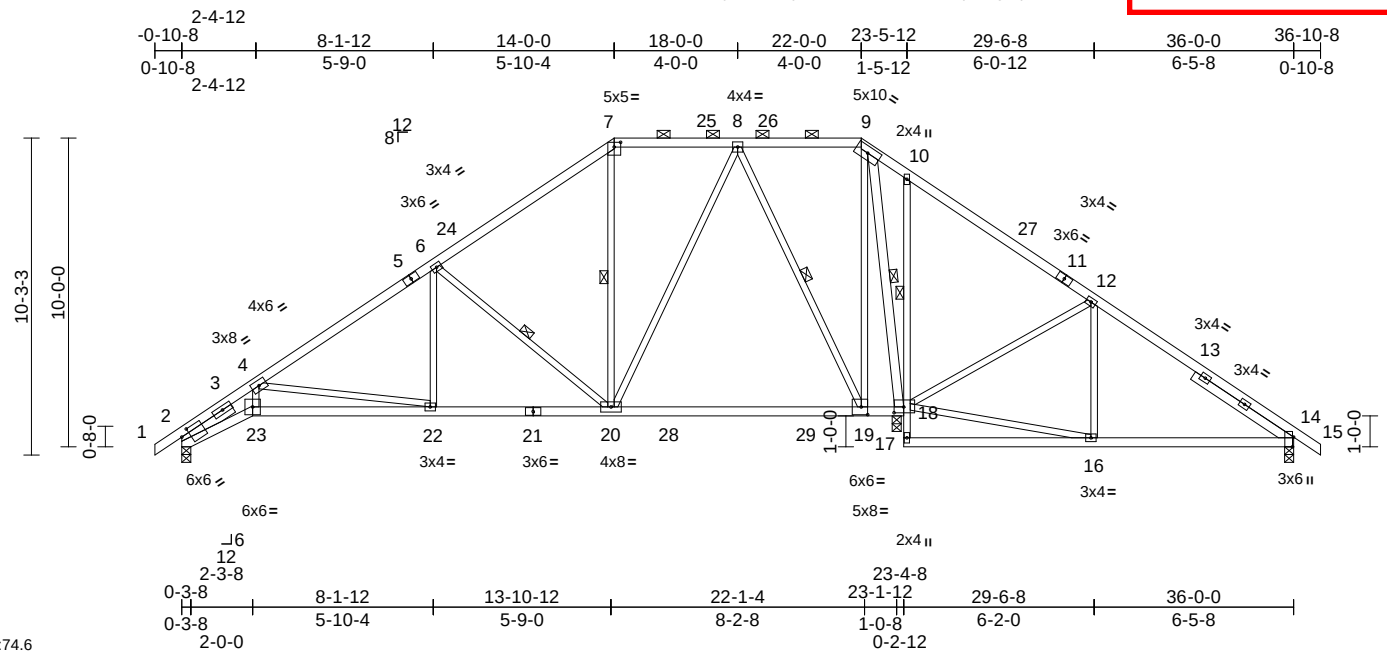

Scale = 1:74.6

Plate Offsets (X, Y): [2:0-3-3,0-1-11], [7:0-2-8,0-1-13], [14:0-3-13,Edge], [18:0-3-12,0-2-4], [19:0-2-8,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.83	Vert(LL)	-0.20	19-20	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.76	Vert(CT)	-0.33	19-20	>841	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.95	Horz(CT)	0.12	14	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 205 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 10-17:2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except* 18-9:2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 1-11-11, Right 2x4 SP No.2 -- 3-10-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 7-9.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing. Except:
1 Row at midpt 10-18
WEBS 1 Row at midpt 6-20, 7-20, 9-18, 8-19

REACTIONS (size) 2=0-3-8, 14=0-3-8, 18=0-3-8
Max Horiz 2=278 (LC 11)
Max Uplift 2=-142 (LC 12), 14=-163 (LC 13), 18=-241 (LC 12)
Max Grav 2=1004 (LC 19), 14=466 (LC 26), 18=2168 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/12, 2-4=-3002/553, 4-6=-1271/209, 6-7=-725/210, 7-8=-510/231, 8-9=-36/325, 9-10=-102/678, 10-12=-95/761, 12-14=-373/268, 14-15=0/16
BOT CHORD 2-23=-615/2688, 22-23=-535/2277, 20-22=-197/1162, 19-20=-98/318, 18-19=-282/232, 17-18=0/98, 10-18=-375/243, 16-17=-60/38, 14-16=-182/228
WEBS 4-23=-201/1265, 4-22=-1130/380, 6-22=0/387, 6-20=-799/295, 7-20=-28/154, 9-19=-66/1187, 9-18=-1627/190, 16-18=-124/250, 12-18=-692/245, 12-16=0/288, 8-20=-160/840, 8-19=-988/214

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 14-0-0, Exterior(2R) 14-0-0 to 19-0-0, Interior (1) 19-0-0 to 22-0-0, Exterior(2R) 22-0-0 to 27-0-0, Interior (1) 27-0-0 to 36-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
7) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 142 lb uplift at joint 2, 163 lb uplift at joint 14 and 241 lb uplift at joint 18.
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

May 2,2024

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

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
06/06/2024

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 163
P240417-01	C08	Piggyback Base	5	1	I65257568 Job Reference (optional)

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

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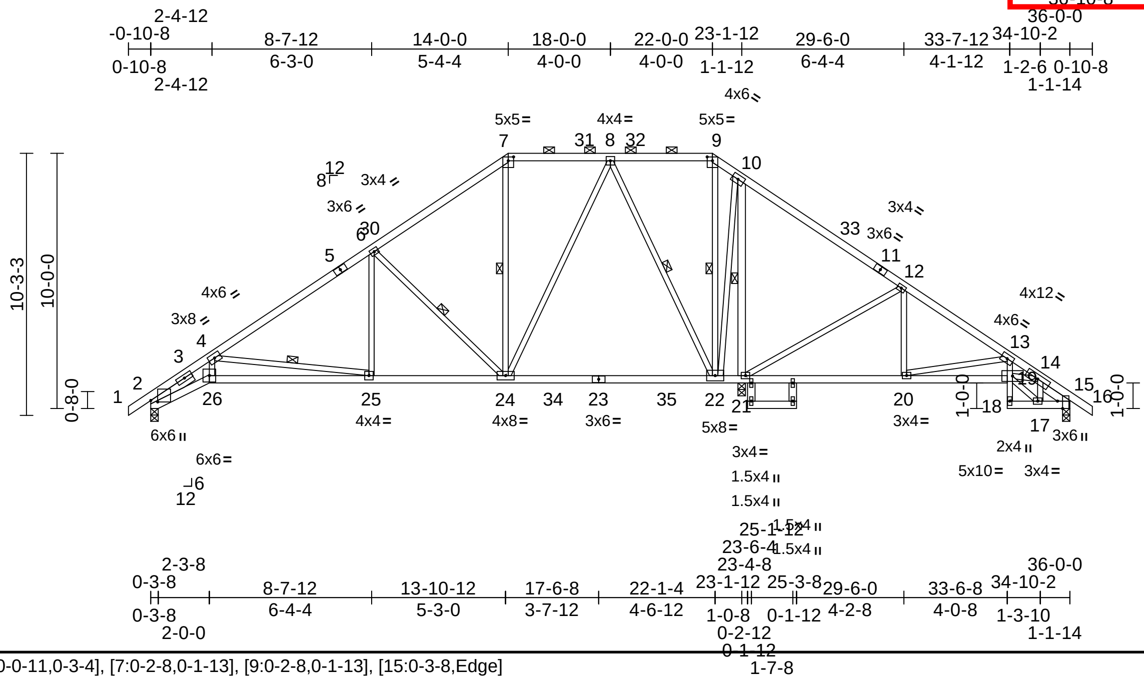

Scale = 1:90.3

Plate Offsets (X, Y): [2:0-0-11,0-3-4], [7:0-2-8,0-1-13], [9:0-2-8,0-1-13], [15:0-3-8,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	0.88	Vert(LL)	-0.20	22-24	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.82	Vert(CT)	-0.34	22-24	>811	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.90	Horz(CT)	0.13	15	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 207 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 13-18:2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except* 27-21,28-29,10-21:2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 1-11-11, Right 2x4 SP No.2 -- 1-3-6

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-1-4 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 7-9.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 4-25, 6-24, 7-24, 9-22, 8-22, 10-21

REACTIONS (size) 2=0-3-8, 15=0-3-8, 21=0-3-8
Max Horiz 2=-278 (LC 10)
Max Uplift 2=-141 (LC 12), 15=-105 (LC 13), 21=-236 (LC 12)
Max Grav 2=982 (LC 27), 15=392 (LC 26), 21=2256 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/12, 2-4=-2948/579, 4-6=-1194/178, 6-7=-687/191, 7-8=-482/209, 8-9=0/425, 9-10=0/430, 10-12=-93/797, 12-13=-190/262, 13-14=-713/200, 14-15=-395/98, 15-16=0/16
BOT CHORD 2-26=-640/2658, 25-26=-559/2250, 24-25=-243/1042, 22-24=-205/307, 21-22=-566/287, 20-21=-195/186, 19-20=-127/612, 18-19=0/29, 13-19=-12/280, 17-18=-9/27, 15-17=-47/248
WEBS 4-26=-204/1265, 4-25=-1221/426, 6-25=0/385, 6-24=-778/290, 7-24=-24/131, 9-22=-225/69, 13-20=-536/143, 8-24=-157/869, 8-22=-1049/210, 10-22=-135/1331, 10-21=-1825/244, 12-21=-669/240, 12-20=0/292, 14-17=-194/54, 17-19=-50/298, 14-19=-78/338

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 14-0-0, Exterior(2R) 14-0-0 to 19-0-0, Interior (1) 19-0-0 to 22-0-0, Exterior(2R) 22-0-0 to 27-0-0, Interior (1) 27-0-0 to 36-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
7) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 141 lb uplift at joint 2, 105 lb uplift at joint 15 and 236 lb uplift at joint 21.
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

STATE OF MISSOURI
SCOTT M. SEVIER
NUMBER PE-2001018807
PROFESSIONAL ENGINEER

May 2,2024

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 163	I65257569
P240417-01	C09	Piggyback Base Supported Gable	1	1	Job Reference (optional)	

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

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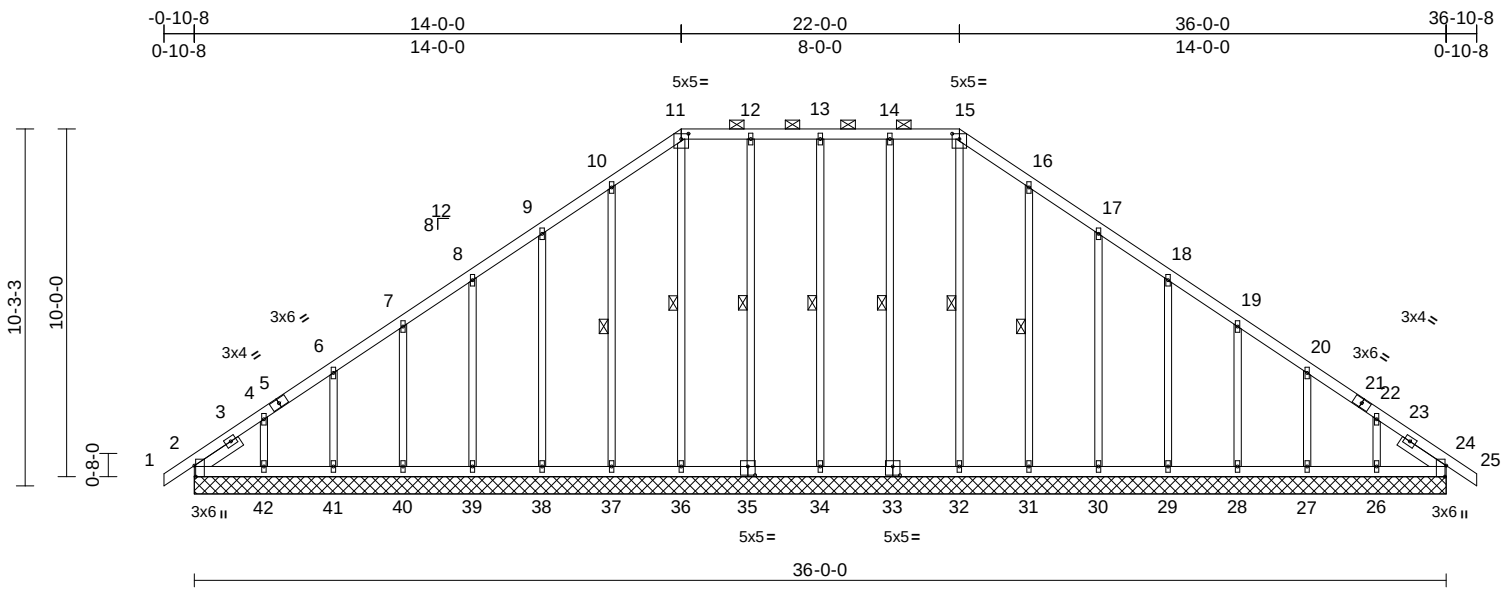

Scale = 1:66.3

Plate Offsets (X, Y): [2:0-3-13,Edge], [11:0-2-8,0-1-13], [15:0-2-8,0-1-13], [24:0-3-13,Edge], [33:0-2-8,0-3-0], [35:0-2-8,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.18	Horz(CT)	0.01	24	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 209 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 1-6-4, Right 2x4 SP No.2 -- 1-6-4

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 11-15.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 15-32, 14-33, 13-34, 12-35, 11-36, 10-37, 16-31

REACTIONS (size) 2=36-0-0, 24=36-0-0, 26=36-0-0, 27=36-0-0, 28=36-0-0, 29=36-0-0, 30=36-0-0, 31=36-0-0, 32=36-0-0, 33=36-0-0, 34=36-0-0, 35=36-0-0, 36=36-0-0, 37=36-0-0, 38=36-0-0, 39=36-0-0, 40=36-0-0, 41=36-0-0, 42=36-0-0
Max Horiz 2=-277 (LC 10)
Max Uplift 2=-100 (LC 8), 24=-20 (LC 9), 26=-118 (LC 13), 27=-73 (LC 13), 28=-79 (LC 13), 29=-77 (LC 13), 30=-82 (LC 13), 31=-76 (LC 13), 33=-43 (LC 9), 34=-41 (LC 8), 35=-42 (LC 9), 36=-15 (LC 9), 37=-78 (LC 12), 38=-81 (LC 12), 39=-77 (LC 12), 40=-80 (LC 12), 41=-71 (LC 12), 42=-132 (LC 12)
Max Grav 2=225 (LC 20), 24=171 (LC 1), 26=204 (LC 20), 27=187 (LC 20), 28=189 (LC 20), 29=189 (LC 20), 30=189 (LC 20), 31=196 (LC 20), 32=167 (LC 22), 33=187 (LC 25), 34=182 (LC 25), 35=187 (LC 26), 36=186 (LC 22), 37=199 (LC 19), 38=188 (LC 19), 39=189 (LC 19), 40=190 (LC 19), 41=185 (LC 19), 42=220 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/16, 2-4=-286/237, 4-6=-198/190, 6-7=-172/168, 7-8=-155/162, 8-9=-141/190, 9-10=-138/232, 10-11=-177/273, 11-12=-153/250, 12-13=-154/251, 13-14=-154/251, 14-15=-153/250, 15-16=-177/273, 16-17=-138/209, 17-18=-99/141, 18-19=-69/75, 19-20=-84/54, 20-22=-113/77, 22-24=-202/113, 24-25=0/16
BOT CHORD 2-42=-95/196, 41-42=-95/196, 40-41=-95/196, 39-40=-95/196, 38-39=-95/196, 37-38=-95/196, 36-37=-95/196, 34-36=-95/196, 32-34=-95/196, 31-32=-95/196, 30-31=-95/196, 29-30=-95/196, 28-29=-95/196, 27-28=-95/196, 26-27=-95/196, 24-26=-95/196
WEBS 15-32=-128/7, 14-33=-148/67, 13-34=-139/67, 12-35=-148/65, 11-36=-147/45, 10-37=-158/103, 9-38=-148/104, 8-39=-149/101, 7-40=-149/103, 6-41=-147/96, 4-42=-173/151, 16-31=-156/100, 17-30=-149/106, 18-29=-149/101, 19-28=-149/103, 20-27=-149/98, 22-26=-158/138

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 4-0-0, Exterior(2N) 4-0-0 to 14-0-0, Corner(3R) 14-0-0 to 19-0-0, Exterior(2N) 19-0-0 to 22-0-0, Corner(3R) 22-0-0 to 27-0-0, Exterior(2N) 27-0-0 to 36-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 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 1.5x4 MT20 unless otherwise indicated.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 2-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

May 2,2024

Continued on page 2

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

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 163	I65257569
P240417-01	C09	Piggyback Base Supported Gable	1	1	Job Reference (optional)	

9) * 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.
10) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint 2, 20 lb uplift at joint 24, 43 lb uplift at joint 33, 41 lb uplift at joint 34, 42 lb uplift at joint 35, 15 lb uplift at joint 36, 78 lb uplift at joint 37, 81 lb uplift at joint 38, 77 lb uplift at joint 39, 80 lb uplift at joint 40, 71 lb uplift at joint 41, 132 lb uplift at joint 42, 76 lb uplift at joint 31, 82 lb uplift at joint 30, 77 lb uplift at joint 29, 79 lb uplift at joint 28, 73 lb uplift at joint 27 and 118 lb uplift at joint 26.
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

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 163
P240417-01	CJ01	Diagonal Hip Girder	2	1	Job Reference (optional) I65257570

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

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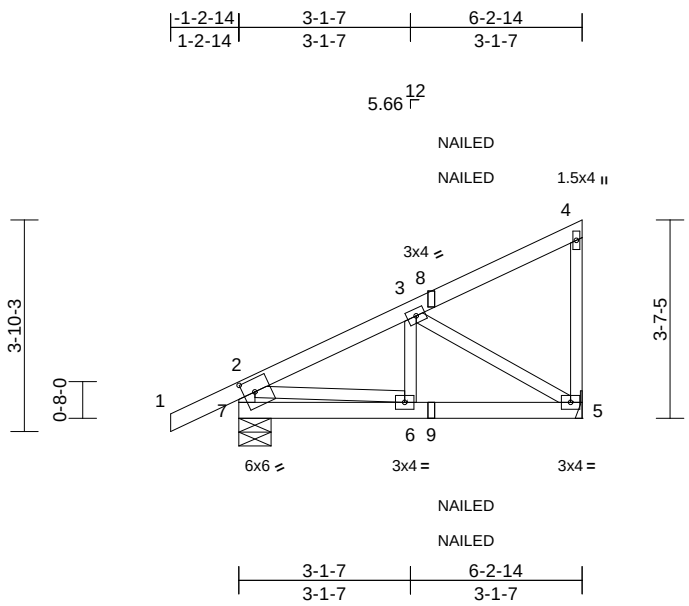

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Plate Offsets (X, Y): [7:0-2-8,0-2-12]

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	0.22	Vert(LL)	0.00	6	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.12	Vert(CT)	-0.01	5-6	>999	180		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.09	Horz(CT)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 31 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 9-11-10 oc bracing.

REACTIONS (size) 5= Mechanical, 7=0-7-0
Max Horiz 7=159 (LC 9)
Max Uplift 5=-94 (LC 9), 7=-94 (LC 12)
Max Grav 5=258 (LC 1), 7=378 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-7=-352/278, 1-2=0/41, 2-3=-353/123, 3-4=-214/102, 4-5=-90/117
BOT CHORD 6-7=-353/181, 5-6=-257/300
WEBS 3-6=0/121, 3-5=-290/247, 2-6=-63/329

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) -1-2-14 to 5-10-0, Exterior(2R) 5-10-0 to 6-1-10 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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) Bearings are assumed to be: Joint 7 SP No.2 crushing capacity of 565 psi.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 94 lb uplift at joint 7 and 94 lb uplift at joint 5.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) "NAILED" indicates Girder: 3-10d (0.148" x 3") toe-nails per NDS guidelines.
9) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

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

May 2,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 163
P240417-01	J01	Jack-Open	4	1	Job Reference (optional)

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

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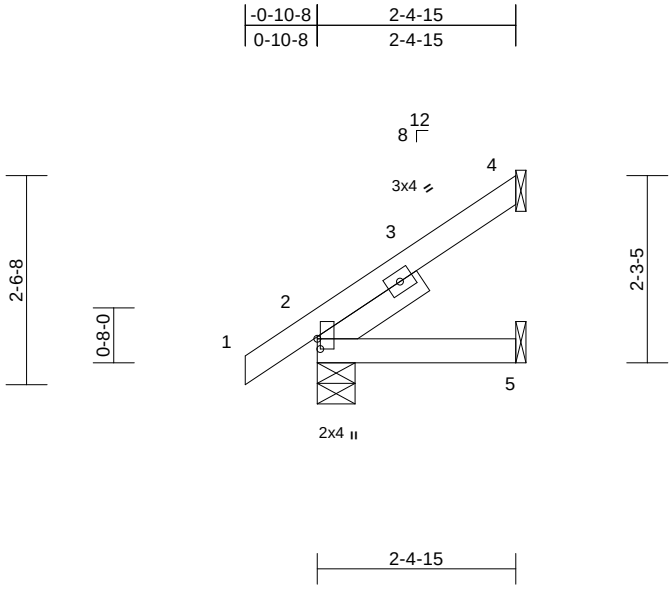

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Plate Offsets (X, Y): [2:0-1-8,0-0-7]

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	0.12	Vert(LL)	0.00	2-5	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	0.00	2-5	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 12 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 1-5-9

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-4-15 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 4= Mechanical, 5= Mechanical
Max Horiz 2=92 (LC 12)
Max Uplift 2=-16 (LC 12), 4=-67 (LC 12)
Max Grav 2=178 (LC 1), 4=80 (LC 19), 5=47 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/16, 2-4=-78/47
BOT CHORD 2-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) 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) Bearings are assumed to be: , Joint 2 SP No.2 crushing capacity of 565 psi.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 67 lb uplift at joint 4 and 16 lb uplift at joint 2.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

May 2,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 163
P240417-01	J02	Jack-Open	7	1	Job Reference (optional)

I65257572

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

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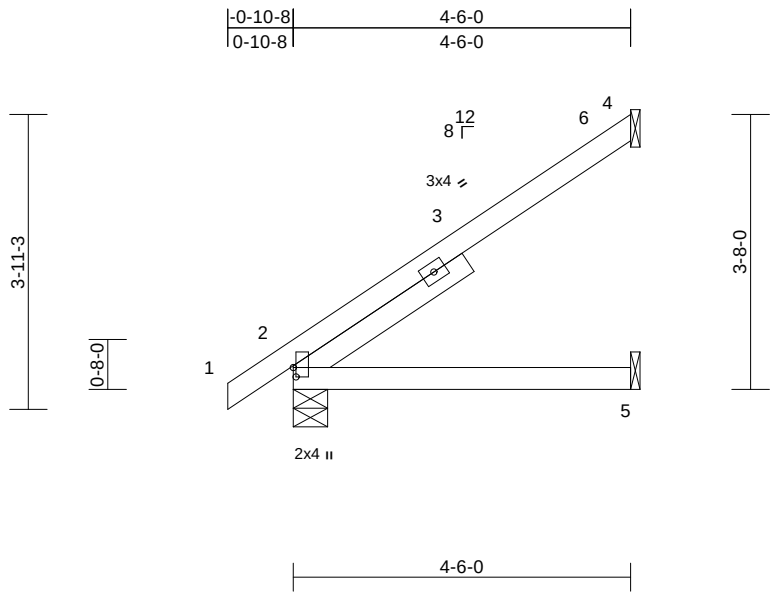

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Plate Offsets (X, Y): [2:0-1-8,0-0-7]

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	0.42	Vert(LL)	-0.02	2-5	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.24	Vert(CT)	-0.05	2-5	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.01	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 21 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 2-8-10

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-6-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 4= Mechanical, 5= Mechanical
Max Horiz 2=153 (LC 12)
Max Uplift 2=-15 (LC 12), 4=-121 (LC 12)
Max Grav 2=267 (LC 1), 4=163 (LC 19), 5=89 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/16, 2-4=-131/80
BOT CHORD 2-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 4-5-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Bearings are assumed to be: , Joint 2 SP No.2 crushing capacity of 565 psi.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 121 lb uplift at joint 4 and 15 lb uplift at joint 2.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

May 2,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 163
P240417-01	LG01	Lay-In Gable	1	1	Job Reference (optional)

I65257573

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
06/06/2024

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

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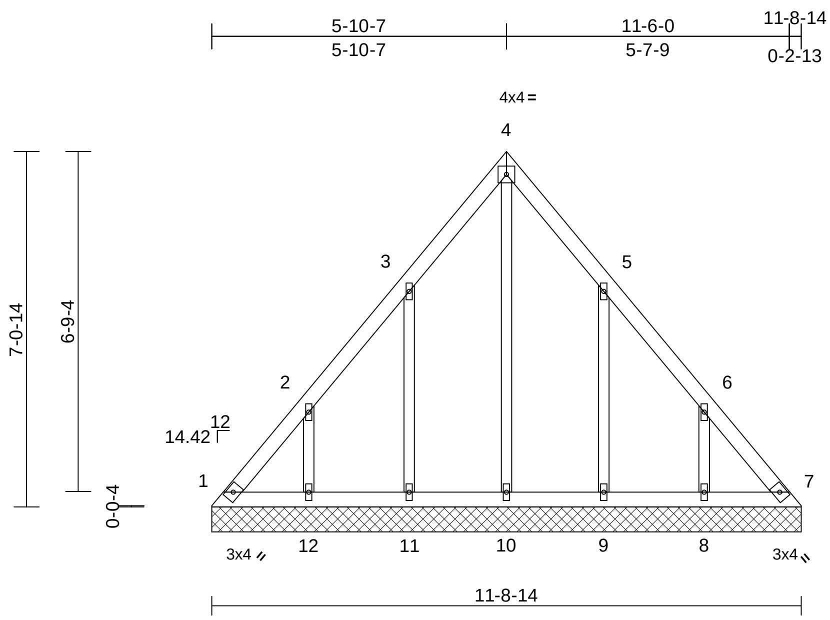

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.12	Horiz(TL)	0.00	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 58 lb	FT = 20%

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

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

REACTIONS (size) 1=11-8-14, 7=11-8-14, 8=11-8-14, 9=11-8-14, 10=11-8-14, 11=11-8-14, 12=11-8-14
Max Horiz 1=197 (LC 9)
Max Uplift 1=-82 (LC 10), 7=-57 (LC 11), 8=-168 (LC 13), 9=-165 (LC 13), 11=-167 (LC 12), 12=-168 (LC 12)
Max Grav 1=190 (LC 12), 7=174 (LC 13), 8=220 (LC 20), 9=225 (LC 20), 10=142 (LC 22), 11=226 (LC 19), 12=219 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-264/171, 2-3=-150/105, 3-4=-135/124, 4-5=-135/119, 5-6=-125/71, 6-7=-243/171
BOT CHORD 1-12=-129/187, 11-12=-130/188, 10-11=-130/188, 9-10=-130/188, 8-9=-130/188, 7-8=-129/187
WEBS 2-12=-218/185, 3-11=-221/192, 4-10=-114/77, 5-9=-221/191, 6-8=-218/185

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-3-12 to 5-3-12, Interior (1) 5-3-12 to 5-10-10, Exterior(2R) 5-10-10 to 10-10-10, Interior (1) 10-10-10 to 11-5-9 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 1.5x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 0-0-0 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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 82 lb uplift at joint 1, 57 lb uplift at joint 7, 168 lb uplift at joint 12, 167 lb uplift at joint 11, 165 lb uplift at joint 9 and 168 lb uplift at joint 8.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

May 2,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 163
P240417-01	PB1	Piggyback	2	1	Job Reference (optional) I65257574

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

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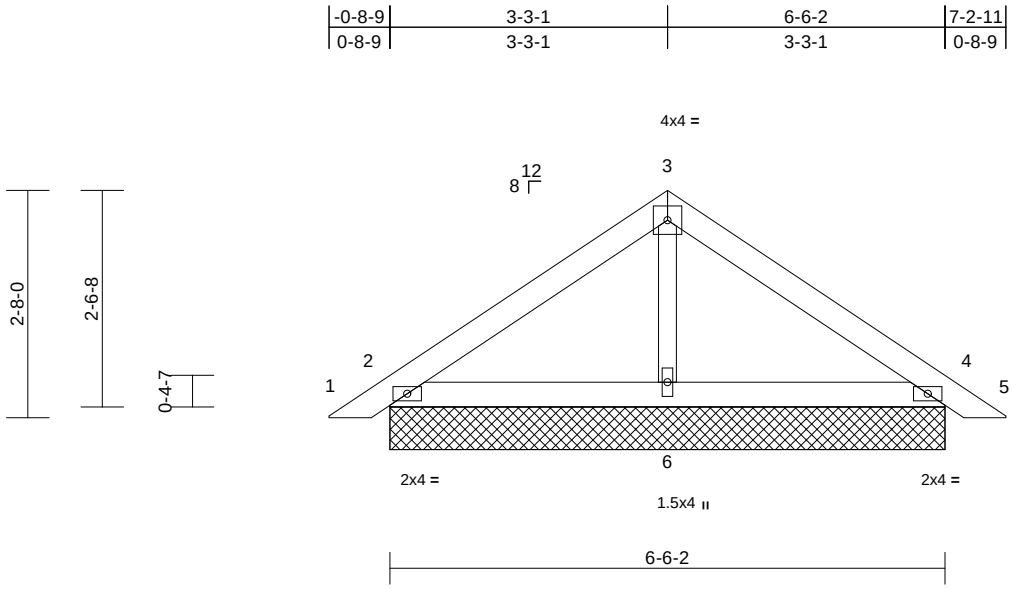

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.22	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.11	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 25 lb	FT = 20%

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

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

REACTIONS (size) 2=6-6-2, 4=6-6-2, 6=6-6-2
Max Horiz 2=-69 (LC 10)
Max Uplift 2=-55 (LC 12), 4=-64 (LC 13)
Max Grav 2=200 (LC 1), 4=200 (LC 1), 6=251 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/16, 2-3=-106/75, 3-4=-100/76, 4-5=0/16
BOT CHORD 2-6=-13/53, 4-6=-13/53
WEBS 3-6=-170/93

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=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 55 lb uplift at joint 2 and 64 lb uplift at joint 4.
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) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

May 2,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 163
P240417-01	PB2	Piggyback	28	1	Job Reference (optional)

I65257575

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

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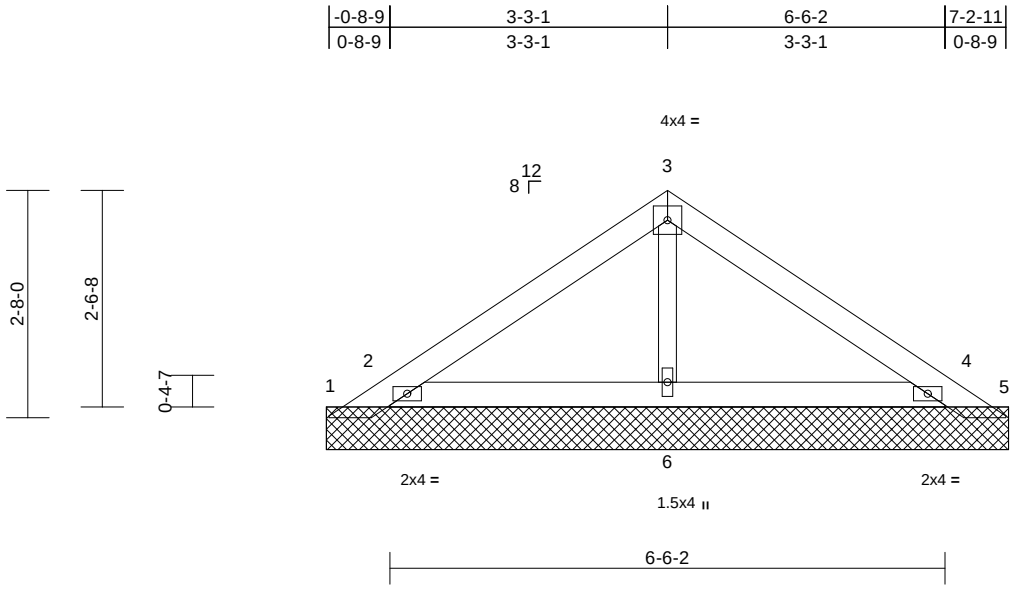

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.19	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.11	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 25 lb	FT = 20%

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

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

REACTIONS (size) 1=8-0-0, 2=8-0-0, 4=8-0-0, 5=8-0-0, 6=8-0-0
Max Horiz 1=-69 (LC 8)
Max Uplift 1=-195 (LC 19), 2=-213 (LC 12), 4=-196 (LC 13), 5=-166 (LC 20)
Max Grav 1=149 (LC 12), 2=404 (LC 19), 4=385 (LC 20), 5=123 (LC 13), 6=223 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-113/159, 2-3=-111/70, 3-4=-110/70, 4-5=-92/99
BOT CHORD 2-6=-19/51, 4-6=-19/51
WEBS 3-6=-142/60

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 195 lb uplift at joint 1, 166 lb uplift at joint 5, 213 lb uplift at joint 2 and 196 lb uplift at joint 4.
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) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

May 2,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 163	I65257576
P240417-01	V01	Valley	1	1	Job Reference (optional)	

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

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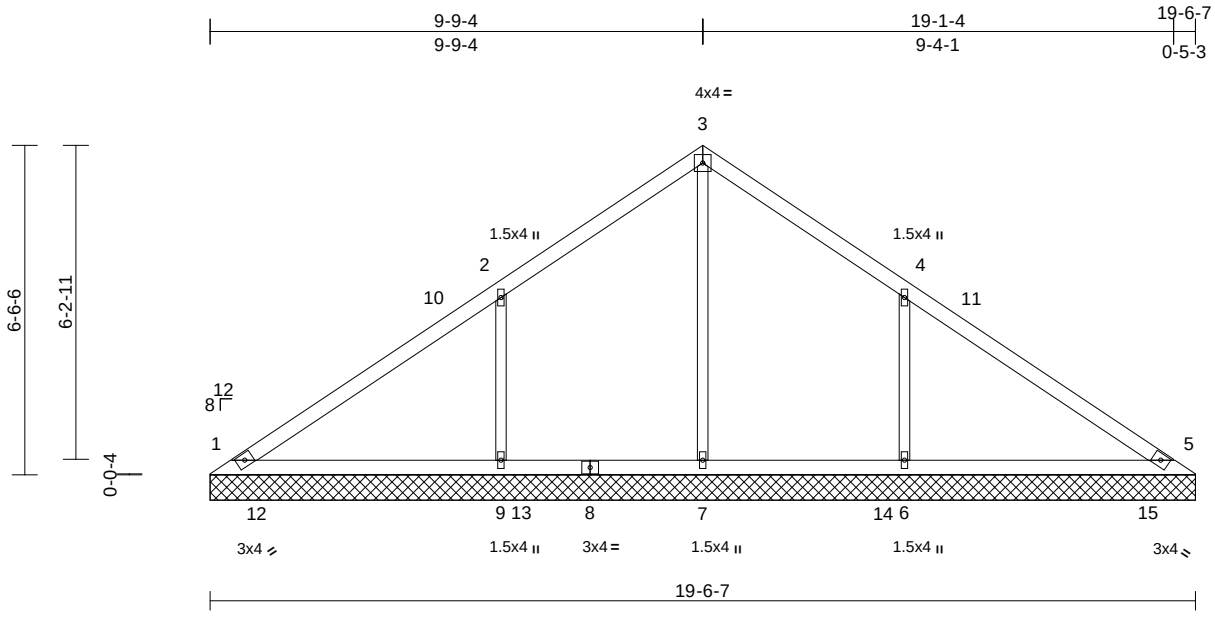

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.43	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.26	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.15	Horiz(TL)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 73 lb	FT = 20%

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

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

REACTIONS (size) 1=19-6-7, 5=19-6-7, 6=19-6-7, 7=19-6-7, 9=19-6-7
Max Horiz 1=-174 (LC 8)
Max Uplift 1=-21 (LC 13), 6=-229 (LC 13), 9=-229 (LC 12)
Max Grav 1=234 (LC 20), 5=216 (LC 1), 6=653 (LC 20), 7=331 (LC 22), 9=654 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-169/146, 2-3=-154/156, 3-4=-141/135, 4-5=-130/102
BOT CHORD 1-9=-56/124, 7-9=-56/124, 6-7=-56/124, 5-6=-56/124
WEBS 3-7=-160/0, 2-9=-422/281, 4-6=-422/281

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-5-12 to 5-5-12, Interior (1) 5-5-12 to 9-9-10, Exterior(2R) 9-9-10 to 14-9-10, Interior (1) 14-9-10 to 19-1-7 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 4-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * 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.
8) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 21 lb uplift at joint 1, 229 lb uplift at joint 9 and 229 lb uplift at joint 6.
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

May 2,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 163
P240417-01	V02	Valley	1	1	Job Reference (optional) I65257577

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

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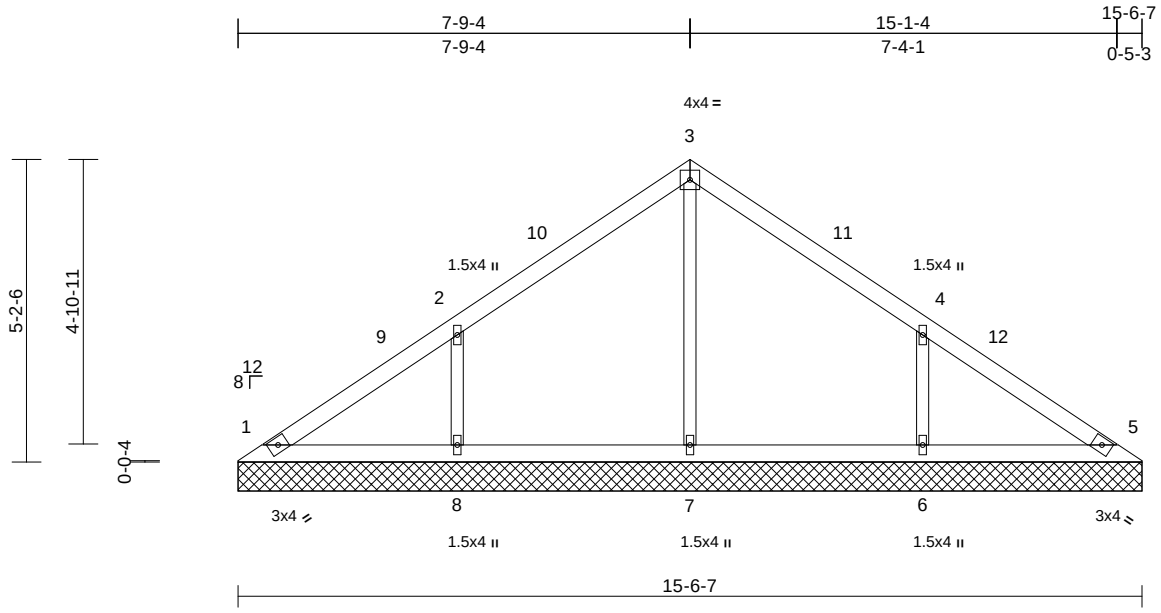

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.23	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.11	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.11	Horiz(TL)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 56 lb	FT = 20%

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

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

REACTIONS (size) 1=15-6-7, 5=15-6-7, 6=15-6-7, 7=15-6-7, 8=15-6-7
Max Horiz 1=-136 (LC 8)
Max Uplift 1=-17 (LC 13), 6=-175 (LC 13), 8=-175 (LC 12)
Max Grav 1=146 (LC 20), 5=139 (LC 1), 6=408 (LC 20), 7=270 (LC 1), 8=408 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-142/100, 2-3=-149/124, 3-4=-140/112, 4-5=-107/56
BOT CHORD 1-8=-38/88, 7-8=-38/88, 6-7=-38/88, 5-6=-38/88
WEBS 3-7=-193/5, 2-8=-321/218, 4-6=-321/218

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-5-12 to 5-5-12, Interior (1) 5-5-12 to 7-9-10, Exterior(2R) 7-9-10 to 12-9-10, Interior (1) 12-9-10 to 15-1-7 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 4-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * 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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 17 lb uplift at joint 1, 175 lb uplift at joint 8 and 175 lb uplift at joint 6.
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

STATE OF MISSOURI
SCOTT M. SEVIER
NUMBER PE-2001018807
PROFESSIONAL ENGINEER

May 2,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 163	I65257578
P240417-01	V03	Valley	1	1	Job Reference (optional)	

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

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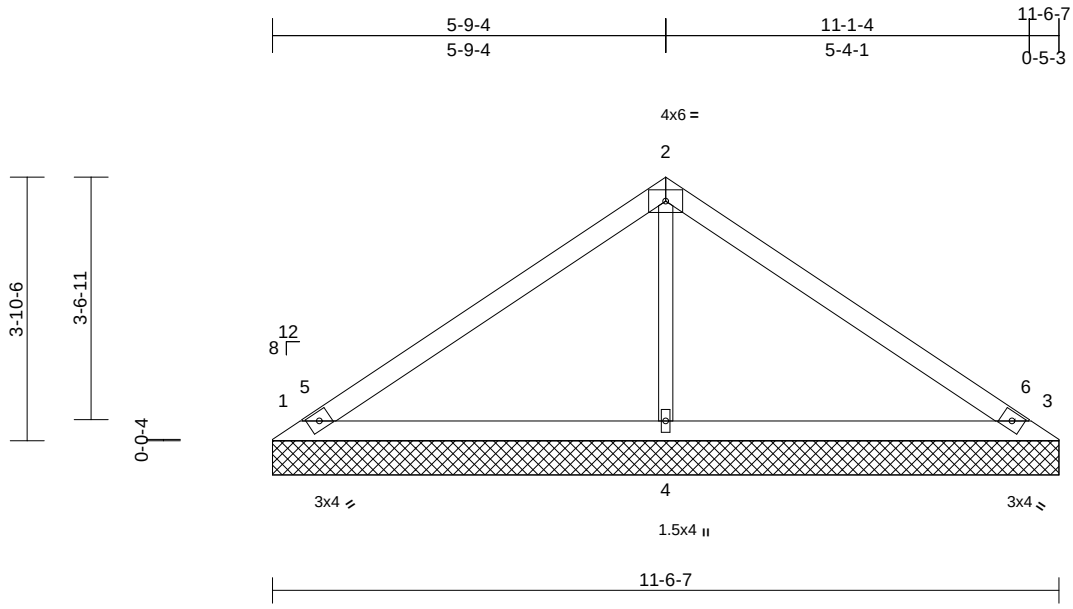

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.48	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.28	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.10	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 39 lb	FT = 20%

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

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

REACTIONS (size) 1=11-6-7, 3=11-6-7, 4=11-6-7
Max Horiz 1=-99 (LC 10)
Max Uplift 1=-54 (LC 12), 3=-66 (LC 13), 4=-29 (LC 12)
Max Grav 1=246 (LC 1), 3=246 (LC 1), 4=465 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-186/93, 2-3=-183/88
BOT CHORD 1-4=-20/87, 3-4=-20/87
WEBS 2-4=-303/124

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-5-12 to 5-5-12, Interior (1) 5-5-12 to 5-9-10, Exterior(2R) 5-9-10 to 10-9-10, Interior (1) 10-9-10 to 11-1-7 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 4-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * 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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 54 lb uplift at joint 1, 66 lb uplift at joint 3 and 29 lb uplift at joint 4.
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

May 2,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 163	I65257579
P240417-01	V04	Valley	1	1	Job Reference (optional)	

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

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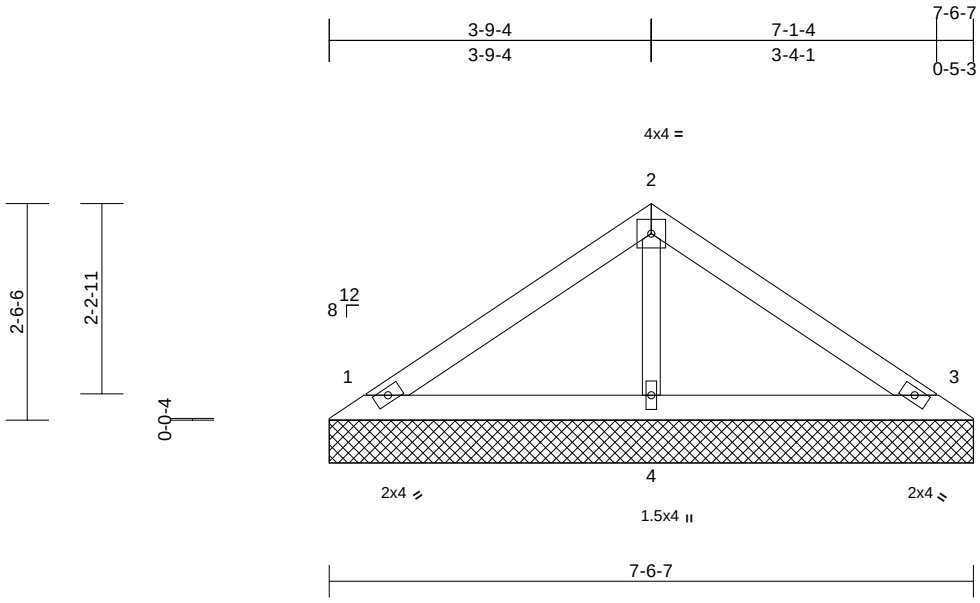

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.24	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.11	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.04	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 25 lb	FT = 20%

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

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

REACTIONS (size) 1=7-6-7, 3=7-6-7, 4=7-6-7
Max Horiz 1=62 (LC 11)
Max Uplift 1=-42 (LC 12), 3=-50 (LC 13)
Max Grav 1=168 (LC 1), 3=168 (LC 1), 4=261 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-105/64, 2-3=-100/64
BOT CHORD 1-4=-13/50, 3-4=-13/50
WEBS 2-4=-178/96

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 4-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * 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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 42 lb uplift at joint 1 and 50 lb uplift at joint 3.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

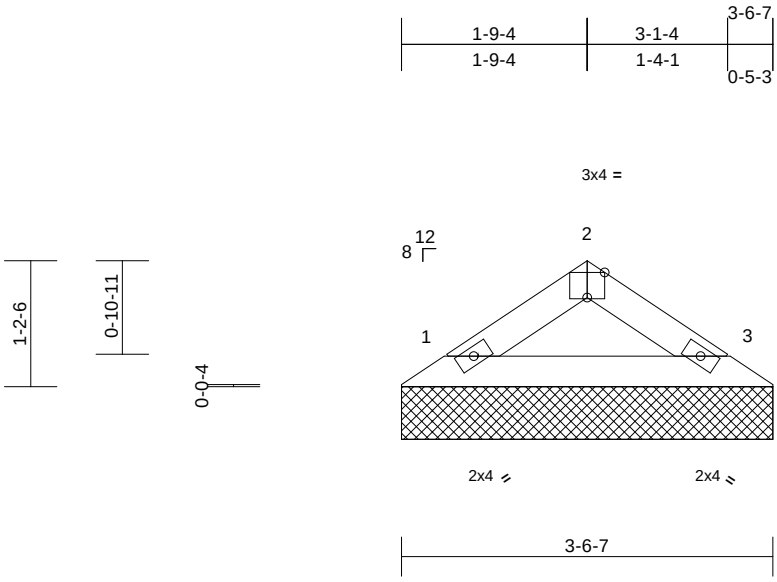
May 2,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 163	I65257580
P240417-01	V05	Valley	1	1	Job Reference (optional)	

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

Run: 8.63 S Apr 26 2024 Print: 8.630 S Apr 26 2024 MiTek Industries, Inc. Tue Apr 30 10:13:26 Page: 1
ID:6ru7F9CpA2ag5pbhdMPJqdzkXVF-RfC?PsB70Hq3NSgPqnL8w3uITXbGCWrCDoi794z3C?f



Scale = 1:21.9

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.04	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.08	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 10 lb	FT = 20%

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

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

REACTIONS (size) 1=3-6-7, 3=3-6-7
Max Horiz 1=25 (LC 11)
Max Uplift 1=-17 (LC 12), 3=-17 (LC 13)
Max Grav 1=119 (LC 1), 3=119 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-104/71, 2-3=-104/71
BOT CHORD 1-3=-26/69

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 4-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * 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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 17 lb uplift at joint 1 and 17 lb uplift at joint 3.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

May 2,2024

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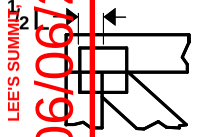
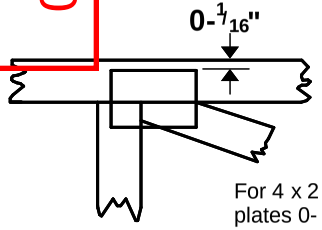
Symbols

PLATE LOCATION AND ORIENTATION



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



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.

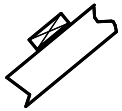
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

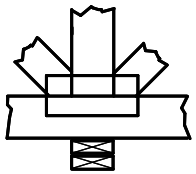
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



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

BEARING

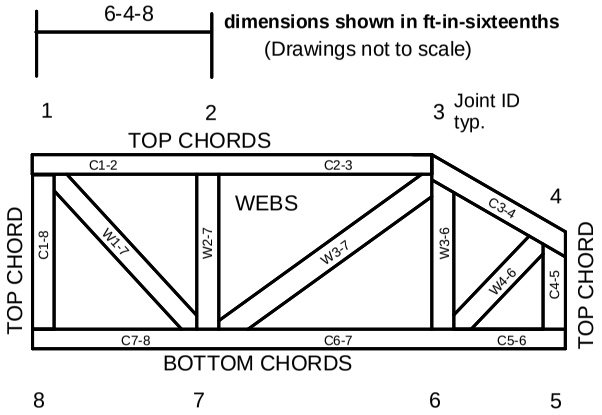


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-22: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



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

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

Product Code Approvals

ICC-ES Reports:

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

Design General Notes

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

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

MiTek®

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.