MiTek®

RE: P240463-01
Roof - HR Lot 161

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

Site Information:

Customer: Clayton Properties Project Name: P240463-01
Lot/Block: 204 Model:
Address: 1612 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 23 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	I64148478	V05	3/12/2024	21	I64148498	A03	3/12/2024
2	I64148479	V04	3/12/2024	22	I64148499	A02	3/12/2024
3	I64148480	V03	3/12/2024	23	I64148500	A01	3/12/2024
4	I64148481	V02	3/12/2024				
5	I64148482	V01	3/12/2024				
6	I64148483	LG01	3/12/2024				
7	I64148484	J02	3/12/2024				
8	I64148485	J01	3/12/2024				
9	I64148486	CJ01	3/12/2024				
10	I64148487	C09	3/12/2024				
11	I64148488	C08	3/12/2024				
12	I64148489	C07	3/12/2024				
13	I64148490	C06	3/12/2024				
14	I64148491	C05	3/12/2024				
15	I64148492	C04	3/12/2024				
16	I64148493	C03	3/12/2024				
17	I64148494	C02	3/12/2024				
18	I64148495	C01	3/12/2024				
19	I64148496	B01	3/12/2024				
20	I64148497	A04	3/12/2024				

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.

March 12, 2024

Sevier, Scott

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
06/07/2024 4:05:05

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 161
P240463-01	V05	Valley	1	1	I64148478 Job Reference (optional)

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Mon Mar 11 08:14:34 Page: 1
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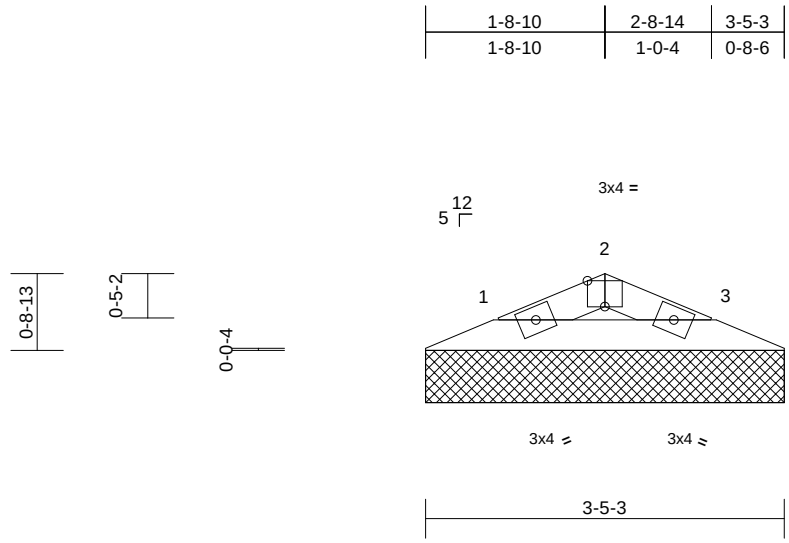

Scale = 1:22.1

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	0.03	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.05	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: 8 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 3-6-6 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=3-5-3, 3=3-5-3
Max Horiz 1=-8 (LC 13)
Max Uplift 1=-14 (LC 12), 3=-14 (LC 13)
Max Grav 1=91 (LC 1), 3=91 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-101/94, 2-3=-101/98
BOT CHORD 1-3=-72/83

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 14 lb uplift at joint 1 and 14 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

March 12,2024

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 161
P240463-01	V04	Valley	1	1	I64148479 Job Reference (optional)

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

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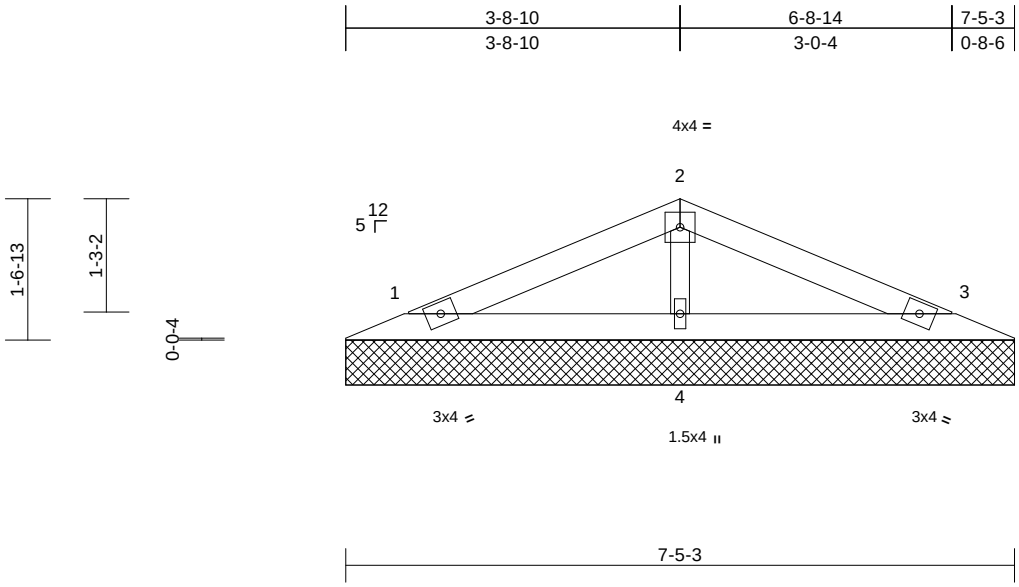

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.19	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.09	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.04	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 22 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=7-5-3, 3=7-5-3, 4=7-5-3
Max Horiz 1=-24 (LC 13)
Max Uplift 1=-36 (LC 12), 3=-40 (LC 13), 4=-13 (LC 12)
Max Grav 1=137 (LC 1), 3=137 (LC 1), 4=269 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-55/43, 2-3=-55/48
BOT CHORD 1-4=-1/24, 3-4=-1/24
WEBS 2-4=-193/164

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 36 lb uplift at joint 1, 40 lb uplift at joint 3 and 13 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

March 12,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 161
P240463-01	V03	Valley	1	1	I64148480 Job Reference (optional)

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

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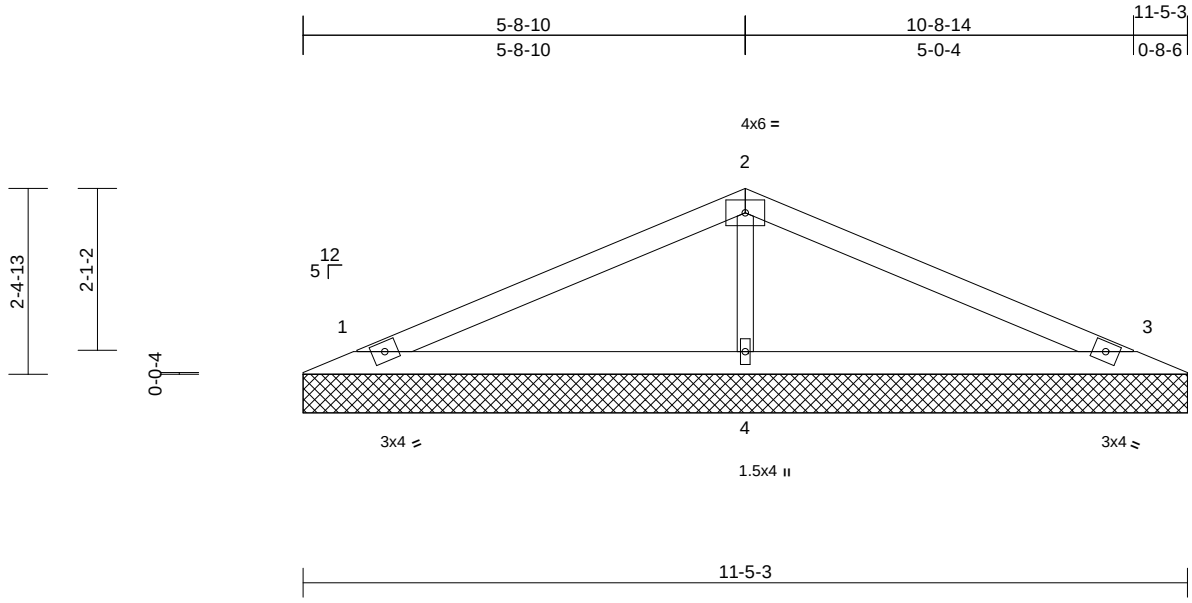

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.42	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.25	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.07	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 35 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=11-5-3, 3=11-5-3, 4=11-5-3
Max Horiz 1=-40 (LC 13)
Max Uplift 1=-49 (LC 12), 3=-56 (LC 13), 4=-43 (LC 12)
Max Grav 1=207 (LC 25), 3=207 (LC 26), 4=496 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-106/64, 2-3=-106/70
BOT CHORD 1-4=-3/43, 3-4=-3/43
WEBS 2-4=-345/234

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 49 lb uplift at joint 1, 56 lb uplift at joint 3 and 43 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

March 12,2024

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 161
P240463-01	V02	Valley	1	1	I64148481 Job Reference (optional)

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

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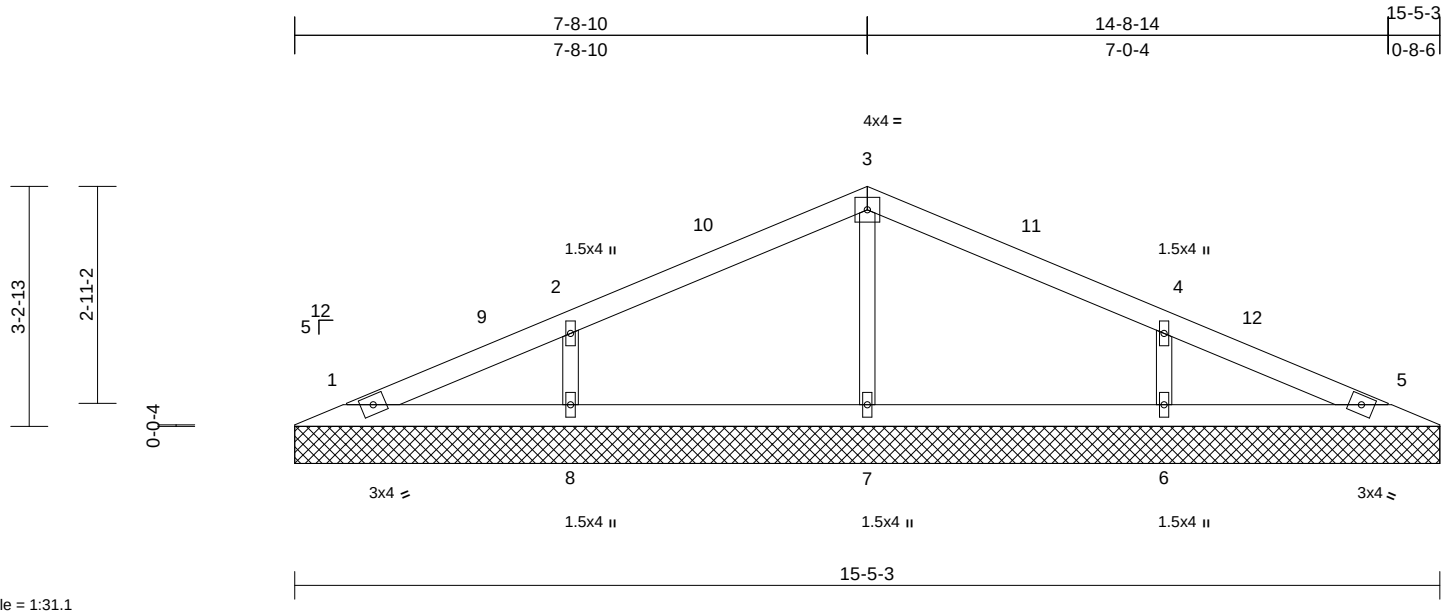

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.22	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.11	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.06	Horiz(TL)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 49 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=15-5-3, 5=15-5-3, 6=15-5-3, 7=15-5-3, 8=15-5-3
Max Horiz 1=55 (LC 16)
Max Uplift 1=-12 (LC 13), 5=-10 (LC 13), 6=-119 (LC 13), 8=-120 (LC 12)
Max Grav 1=106 (LC 1), 5=106 (LC 1), 6=375 (LC 26), 7=315 (LC 1), 8=375 (LC 25)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-71/46, 2-3=-87/104, 3-4=-87/98, 4-5=-53/35
BOT CHORD 1-8=-4/43, 7-8=-4/43, 6-7=-4/43, 5-6=-4/43
WEBS 3-7=-235/88, 2-8=-295/222, 4-6=-295/222

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) 0-9-1 to 5-9-1, Interior (1) 5-9-1 to 7-9-3, Exterior(2R) 7-9-3 to 12-9-3, Interior (1) 12-9-3 to 14-9-6 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 12 lb uplift at joint 1, 10 lb uplift at joint 5, 120 lb uplift at joint 8 and 119 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

March 12,2024

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 161
P240463-01	V01	Valley	1	1	I64148482 Job Reference (optional)

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Mon Mar 11 08:14:33 Page: 1
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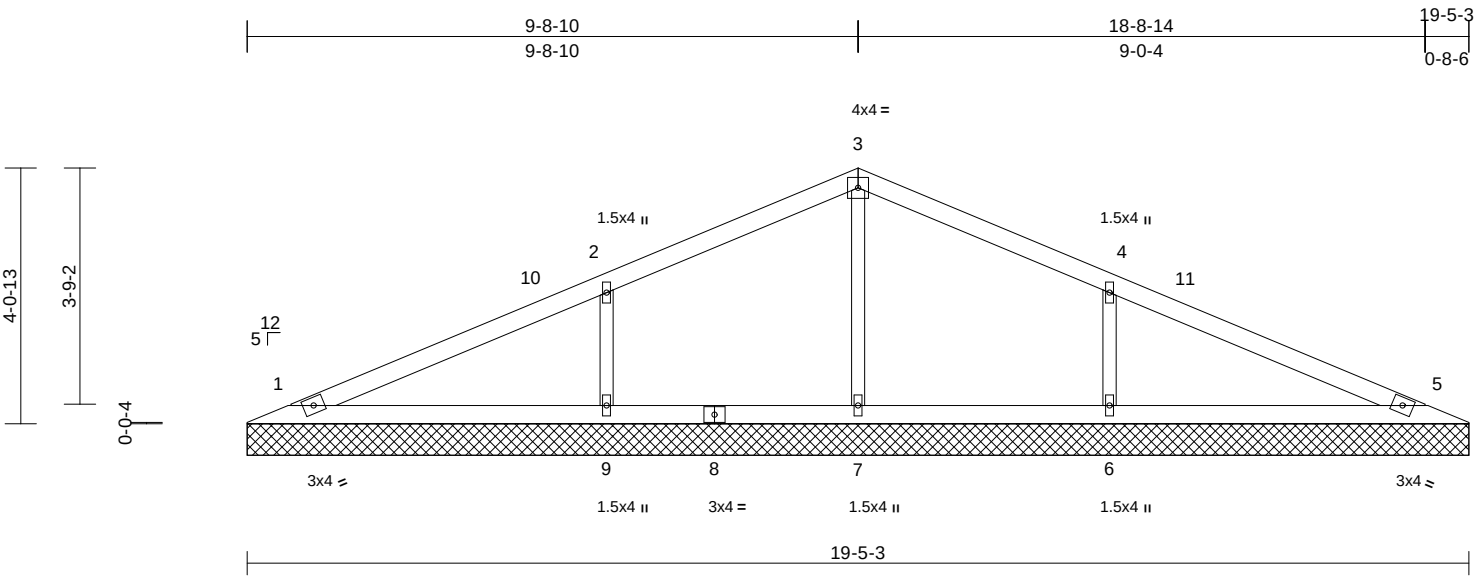

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.37	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.20	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.08	Horiz(TL)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 64 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
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=19-5-3, 5=19-5-3, 6=19-5-3, 7=19-5-3, 9=19-5-3
Max Horiz 1=-71 (LC 13)
Max Uplift 1=-19 (LC 12), 5=-31 (LC 13), 6=-154 (LC 13), 9=-154 (LC 12)
Max Grav 1=189 (LC 1), 5=189 (LC 1), 6=500 (LC 26), 7=250 (LC 1), 9=500 (LC 25)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-88/79, 2-3=-90/118, 3-4=-90/114, 4-5=-66/64
BOT CHORD 1-9=-11/56, 7-9=-11/56, 6-7=-11/56, 5-6=-11/56
WEBS 3-7=-195/30, 2-9=-381/231, 4-6=-381/231

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-9-1 to 5-9-3, Interior (1) 5-9-3 to 9-9-3, Exterior(2R) 9-9-3 to 14-9-3, Interior (1) 14-9-3 to 18-9-6 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 19 lb uplift at joint 1, 31 lb uplift at joint 5, 154 lb uplift at joint 9 and 154 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

March 12,2024

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
06/07/2024 4:05:05

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 161
P240463-01	LG01	Lay-In Gable	1	1	I64148483 Job Reference (optional)

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Mon Mar 11 08:14:33 Page: 1

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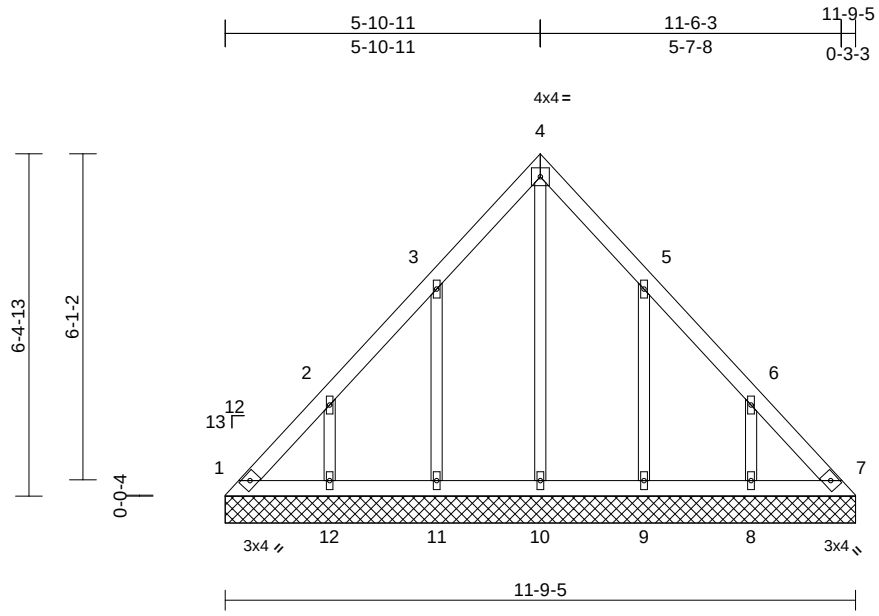

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.09	Horiz(TL)	0.00	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 55 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=11-9-5, 7=11-9-5, 8=11-9-5, 9=11-9-5, 10=11-9-5, 11=11-9-5, 12=11-9-5
Max Horiz 1=-173 (LC 8)
Max Uplift 1=-58 (LC 10), 7=-33 (LC 11), 8=-145 (LC 13), 9=-142 (LC 13), 11=-143 (LC 12), 12=-144 (LC 12)
Max Grav 1=148 (LC 21), 7=136 (LC 22), 8=210 (LC 20), 9=214 (LC 20), 10=141 (LC 22), 11=216 (LC 19), 12=210 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-218/139, 2-3=-137/89, 3-4=-130/119, 4-5=-130/114, 5-6=-111/55, 6-7=-196/135
BOT CHORD 1-12=-108/161, 11-12=-109/161, 10-11=-109/161, 9-10=-109/161, 8-9=-109/161, 7-8=-108/161
WEBS 2-12=-199/162, 3-11=-201/168, 4-10=-102/62, 5-9=-201/167, 6-8=-199/163

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) 0-4-0 to 5-4-0, Interior (1) 5-4-0 to 5-10-14, Exterior(2R) 5-10-14 to 10-10-14, Interior (1) 10-10-14 to 11-5-13 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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 58 lb uplift at joint 1, 33 lb uplift at joint 7, 144 lb uplift at joint 12, 143 lb uplift at joint 11, 142 lb uplift at joint 9 and 145 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

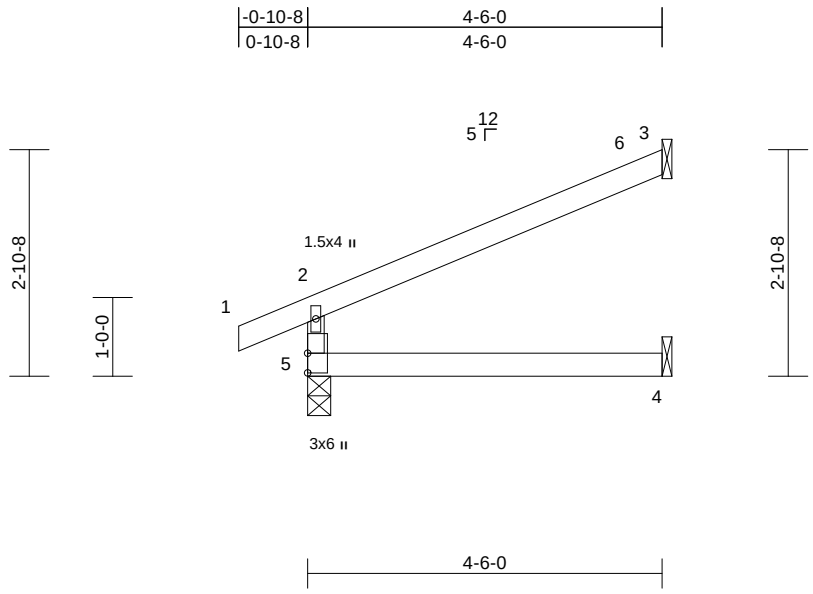
STATE OF MISSOURI
SCOTT M. SEVIER
NUMBER
PE-2001018807
PROFESSIONAL ENGINEER

March 12,2024

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
06/07/2024 4:05:05

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 161
P240463-01	J02	Jack-Open	7	1	I64148484 Job Reference (optional)

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Mon Mar 11 08:14:33 Page: 1
ID:TY9bk33I?M3NfzhOwrBVL5zkXVR-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:29.3

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.36	Vert(LL)	0.02	4-5	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.24	Vert(CT)	-0.04	4-5	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.03	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 16 lb	FT = 20%

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

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

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-3-8
Max Horiz 5=83 (LC 12)
Max Uplift 3=-82 (LC 12), 5=-39 (LC 12)
Max Grav 3=138 (LC 1), 4=83 (LC 3), 5=271 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-234/193, 1-2=0/26, 2-3=-80/45
BOT CHORD 4-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=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 5 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 39 lb uplift at joint 5 and 82 lb uplift at joint 3.
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

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

March 12,2024

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 161
P240463-01	J01	Jack-Open	4	1	I64148485 Job Reference (optional)

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

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Mon Mar 11 08:14:33 Page: 1
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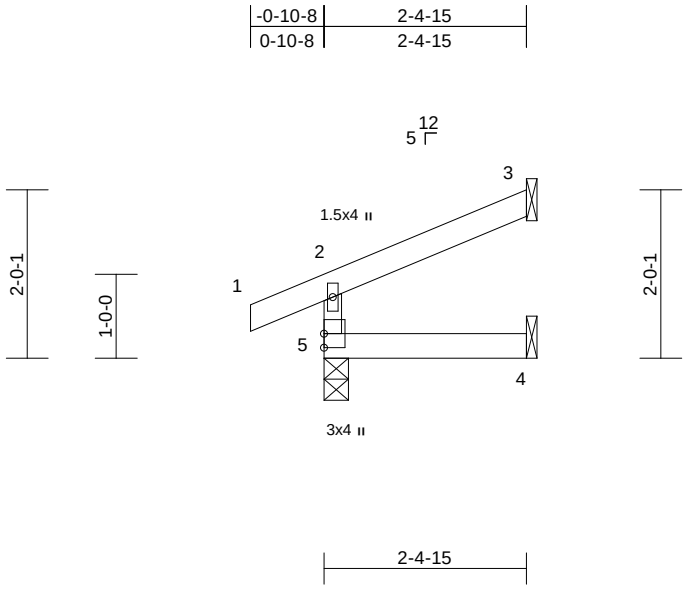

Scale = 1:27.4

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.15	Vert(LL)	0.00	4-5	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.08	Vert(CT)	0.00	4-5	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.01	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 9 lb	FT = 20%

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

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

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-3-8
Max Horiz 5=53 (LC 9)
Max Uplift 3=-44 (LC 12), 5=-31 (LC 8)
Max Grav 3=64 (LC 1), 4=43 (LC 3), 5=185 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-162/135, 1-2=0/26, 2-3=-43/24
BOT CHORD 4-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=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 5 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 31 lb uplift at joint 5 and 44 lb uplift at joint 3.
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

March 12,2024

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 161
P240463-01	CJ01	Diagonal Hip Girder	2	1	I64148486 Job Reference (optional)

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Mon Mar 11 08:14:32 Page: 1
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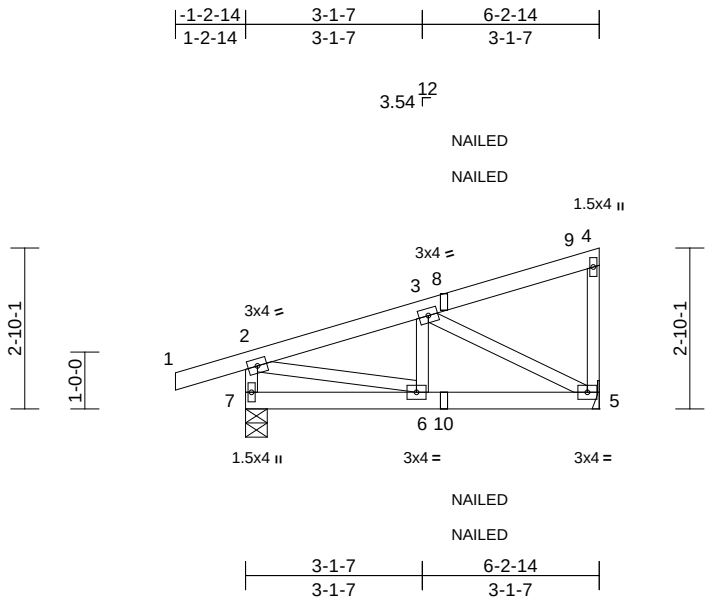


Scale = 1:40.7

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	0.22	Vert(LL)	0.00	6	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.13	Vert(CT)	-0.01	5-6	>999	180		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.10	Horz(CT)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 29 lb	FT = 20%

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

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

REACTIONS (size) 5= Mechanical, 7=0-4-9
Max Horiz 7=122 (LC 9)
Max Uplift 5=-66 (LC 12), 7=-118 (LC 8)
Max Grav 5=262 (LC 1), 7=376 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-7=-350/363, 1-2=0/27, 2-3=-318/195, 3-4=-86/73, 4-5=-87/111
BOT CHORD 6-7=-274/138, 5-6=-297/275
WEBS 2-6=-101/283, 3-6=0/98, 3-5=-313/297

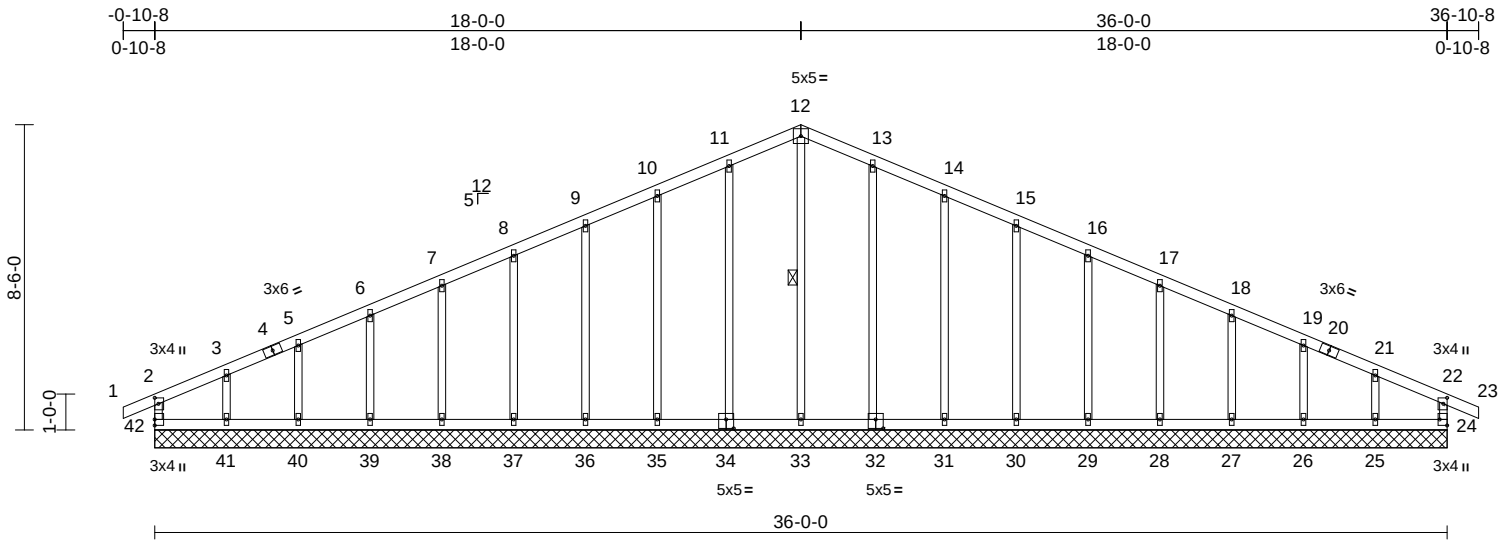
NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) -1-2-14 to 5-10-0, Exterior(2R) 5-10-0 to 6-1-10 zone; cantilever left and right exposed ; end vertical left and right 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 118 lb uplift at joint 7 and 66 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
Concentrated Loads (lb)
Vert: 10=-1 (F=-1, B=-1)

March 12,2024

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 161
P240463-01	C09	Common Supported Gable	1	1	I64148487 Job Reference (optional)

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Mon Mar 11 08:14:32 ID:ewrAceOsPybP0GqmZjh3U?zkXV?-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f Page: 1



Scale = 1:64.2

Plate Offsets (X, Y): [2:0-2-0,0-1-4], [22:0-2-0,0-1-4], [24:Edge,0-2-8], [32:0-2-8,0-3-0], [34:0-2-8,0-3-0]

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	0.12	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.20	Horz(CT)	0.01	24	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 176 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 12-33

REACTIONS (size) 24=36-0-0, 25=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 42=-121 (LC 13)
Max Uplift 24=-38 (LC 12), 25=-105 (LC 13), 26=-42 (LC 13), 27=-57 (LC 13), 28=-54 (LC 13), 29=-55 (LC 13), 30=-53 (LC 13), 31=-60 (LC 13), 32=-48 (LC 13), 34=-49 (LC 12), 35=-60 (LC 12), 36=-53 (LC 12), 37=-55 (LC 12), 38=-54 (LC 12), 39=-58 (LC 12), 40=-40 (LC 12), 41=-117 (LC 12), 42=-56 (LC 13)
Max Grav 24=159 (LC 1), 25=169 (LC 26), 26=183 (LC 1), 27=179 (LC 26), 28=180 (LC 1), 29=180 (LC 26), 30=180 (LC 1), 31=178 (LC 26), 32=189 (LC 26), 33=199 (LC 22), 34=189 (LC 25), 35=178 (LC 25), 36=180 (LC 1), 37=180 (LC 25), 38=180 (LC 1), 39=179 (LC 25), 40=183 (LC 1), 41=169 (LC 25), 42=159 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-42=-143/104, 1-2=0/26, 2-3=-112/85, 3-5=-74/96, 5-6=-53/120, 6-7=-51/142, 7-8=-66/183, 8-9=-81/227, 9-10=-96/270, 10-11=-112/316, 11-12=-128/355, 12-13=-128/355, 13-14=-112/316, 14-15=-96/270, 15-16=-81/227, 16-17=-66/183, 17-18=-51/140, 18-19=-37/98, 19-21=-56/75, 21-22=-88/61, 22-23=0/26, 22-24=-143/102
BOT CHORD 41-42=-34/89, 40-41=-34/89, 39-40=-34/89, 38-39=-34/89, 37-38=-34/89, 36-37=-34/89, 35-36=-34/89, 33-35=-34/89, 31-33=-34/90, 30-31=-34/90, 29-30=-34/90, 28-29=-34/90, 27-28=-34/90, 26-27=-34/90, 25-26=-34/90, 24-25=-34/90
WEBS 12-33=-185/27, 11-34=-150/77, 10-35=-139/95, 9-36=-140/88, 8-37=-140/89, 7-38=-140/90, 6-39=-139/90, 5-40=-143/112, 3-41=-127/147, 13-32=-150/77, 14-31=-139/95, 15-30=-140/88, 16-29=-140/89, 17-28=-140/90, 18-27=-139/90, 19-26=-143/112, 21-25=-127/148

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 18-0-0, Corner(3R) 18-0-0 to 23-0-0, Exterior(2N) 23-0-0 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) All plates are 1.5x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
7) Gable studs spaced at 2-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * 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.

STATE OF MISSOURI
SCOTT M. SEVIER
NUMBER PE-2001018807
PROFESSIONAL ENGINEER
March 12,2024

Continued on page 2

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

11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 56 lb uplift at joint 42, 38 lb uplift at joint 24, 49 lb uplift at joint 34, 60 lb uplift at joint 35, 53 lb uplift at joint 36, 55 lb uplift at joint 37, 54 lb uplift at joint 38, 58 lb uplift at joint 39, 40 lb uplift at joint 40, 117 lb uplift at joint 41, 48 lb uplift at joint 32, 60 lb uplift at joint 31, 53 lb uplift at joint 30, 55 lb uplift at joint 29, 54 lb uplift at joint 28, 57 lb uplift at joint 27, 42 lb uplift at joint 26 and 105 lb uplift at joint 25.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 161
P240463-01	C08	Roof Special	5	1	I64148488 Job Reference (optional)

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Mon Mar 11 08:14:31 Page: 1

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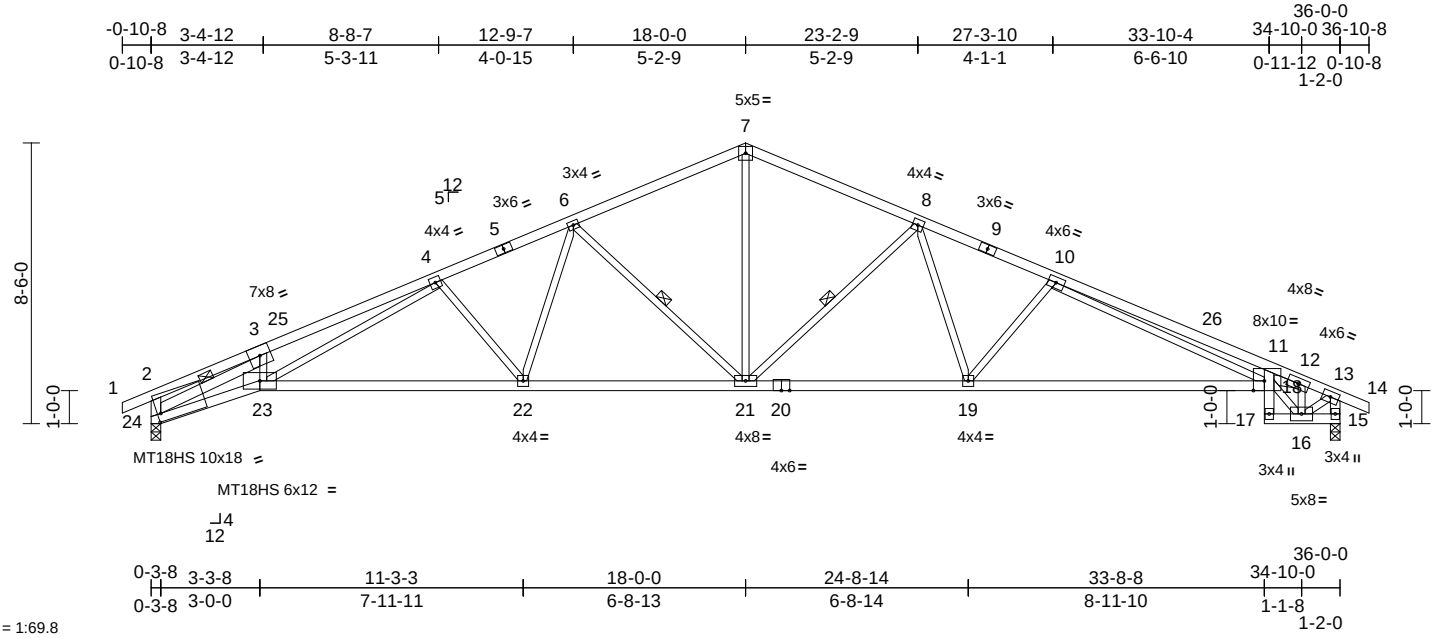

Scale = 1:69.8

Plate Offsets (X, Y): [11:0-4-0,Edge], [24:0-1-4,0-3-0]

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	0.71	Vert(LL)	-0.31	18-19	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.86	Vert(CT)	-0.71	18-19	>602	180	MT18HS	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.75	Horz(CT)	0.47	15	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 170 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2 *Except* 1-5,9-14:2x4 SP 2400F 2.0E

BOT CHORD 2x4 SP 1650F 1.5E *Except* 11-17,17-15:2x4 SP No.2

WEBS 2x3 SPF No.2 *Except* 24-2,24-3,15-13,18-12:2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-6-9 oc purlins, except end verticals.

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
7-8-11 oc bracing: 23-24
9-9-11 oc bracing: 22-23.

WEBS 1 Row at midpt 3-24, 6-21, 8-21

REACTIONS (size) 15=0-3-8, 24=0-3-8
Max Horiz 24=-120 (LC 17)
Max Uplift 15=-275 (LC 13), 24=-275 (LC 12)
Max Grav 15=1678 (LC 1), 24=1678 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/27, 2-3=-563/133, 3-4=-4517/886, 4-6=-3122/518, 6-7=-2247/446, 7-8=-2245/454, 8-10=-3147/520, 10-11=-5205/899, 11-12=-4627/723, 12-13=-1380/214, 13-14=0/27, 2-24=-490/151, 13-15=-1559/296

BOT CHORD 23-24=-865/4441, 22-23=-530/3187, 21-22=-347/2632, 19-21=-285/2634, 18-19=-414/3216, 17-18=-17/140, 11-18=-311/214, 16-17=-82/358, 15-16=-26/170

WEBS 3-23=-18/857, 7-21=-186/1305, 3-24=-4540/747, 13-16=-173/1270, 12-16=-1826/238, 16-18=-118/1190, 12-18=-493/3076, 4-22=-579/246, 4-23=-341/1120, 6-22=-99/658, 6-21=-865/275, 8-21=-867/261, 8-19=-96/697, 10-19=-602/249, 10-18=-377/1736

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 18-0-0, Exterior(2R) 18-0-0 to 23-2-9, Interior (1) 23-2-9 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) All plates are MT20 plates unless otherwise indicated.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Bearings are assumed to be: Joint 24 SP 1650F 1.5E crushing capacity of 565 psi, Joint 15 SP No.2 crushing capacity of 565 psi.
7) Bearing at joint(s) 24 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 275 lb uplift at joint 24 and 275 lb uplift at joint 15.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

March 12,2024

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 161
P240463-01	C07	Roof Special	2	1	I64148489 Job Reference (optional)

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Mon Mar 11 08:14:31 Page: 1

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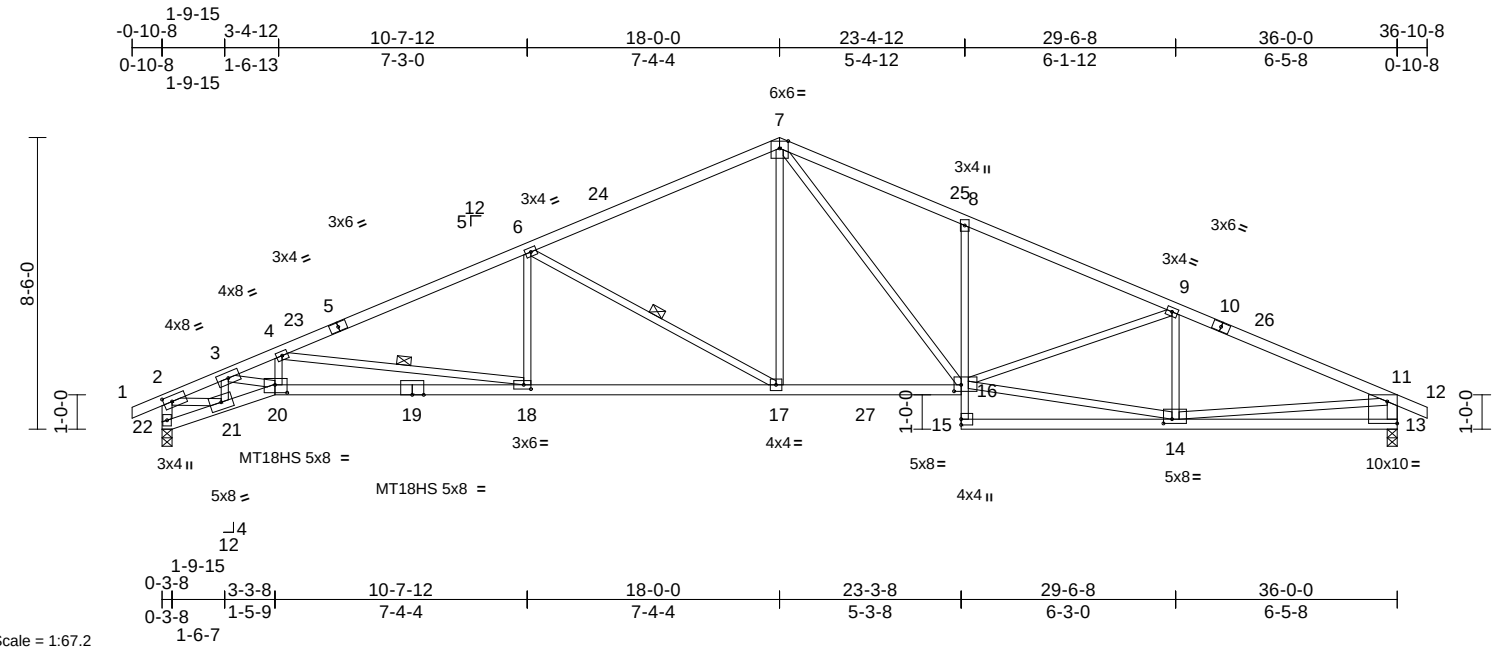

Scale = 1:67.2

Plate Offsets (X, Y): [2:0-2-15,0-2-0], [13:Edge,0-7-11], [14:0-3-0,0-1-8], [16:0-2-8,0-2-4], [18:0-2-8,0-1-8], [20:0-4-4,0-2-12]

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	0.76	Vert(LL)	-0.33	18-20	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.96	Vert(CT)	-0.59	18-20	>721	180	MT18HS	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.86	Horz(CT)	0.30	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 171 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP 1650F 1.5E *Except* 1-5,10-12:2x4 SP No.2

BOT CHORD 2x4 SP No.2 *Except* 20-19,19-16:2x4 SP 1650F 1.5E, 8-15:2x3 SPF No.2

WEBS 2x3 SPF No.2 *Except* 22-2,13-11:2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals.

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
7-9-13 oc bracing: 20-21
2-2-0 oc bracing: 18-20.

WEBS 1 Row at midpt 6-17, 4-18

REACTIONS (size) 13=0-3-8, 22=0-3-8
Max Horiz 22=-120 (LC 17)
Max Uplift 13=-275 (LC 13), 22=-275 (LC 12)
Max Grav 13=1730 (LC 2), 22=1728 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/27, 2-3=-2903/491, 3-4=-4868/843, 4-6=-3447/520, 6-7=-2395/436, 7-8=-3071/594, 8-9=-3068/497, 9-11=-2929/426, 11-12=0/27, 2-22=-1675/327, 11-13=-1617/334

BOT CHORD 21-22=-157/245, 20-21=-561/2775, 18-20=-876/4478, 17-18=-451/3120, 16-17=-171/2125, 15-16=0/113, 8-16=-432/236, 14-15=-13/149, 13-14=-122/430

WEBS 4-20=-1/456, 7-16=-338/1095, 14-16=-310/2517, 9-16=-26/206, 9-14=-529/167, 2-21=-392/2466, 11-14=-225/2220, 3-20=-355/1995, 3-21=-1223/188, 7-17=-90/843, 6-17=-1141/345, 6-18=0/491, 4-18=-1374/430

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 18-0-0, Exterior(2R) 18-0-0 to 23-0-0, Interior (1) 23-0-0 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) All plates are MT20 plates unless otherwise indicated.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
7) Bearing at joint(s) 22 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 275 lb uplift at joint 22 and 275 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.

LOAD CASE(S) Standard

March 12,2024

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 161
P240463-01	C06	Roof Special	6	1	I64148490 Job Reference (optional)

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Mon Mar 11 08:14:30 Page: 1

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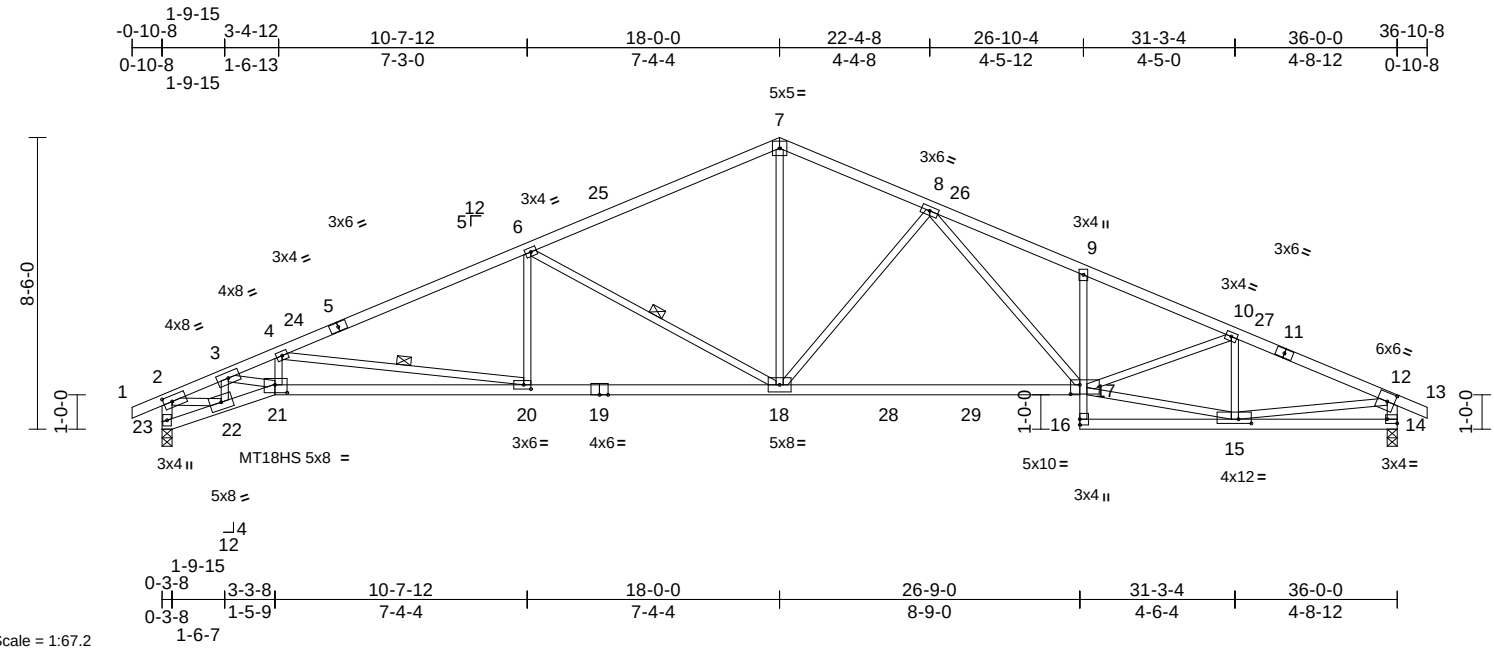

Scale = 1:67.2

Plate Offsets (X, Y): [2:0-2-15,0-2-0], [12:0-2-9,0-3-0], [14:Edge,0-1-8], [15:0-4-8,0-1-8], [17:0-3-4,0-3-4], [20:0-2-8,0-1-8], [21:0-4-4,0-2-12]

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	0.76	Vert(LL)	-0.46	17-18	>939	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.98	Vert(CT)	-0.82	17-18	>525	180	MT18HS	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.91	Horz(CT)	0.32	14	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 168 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2 *Except* 5-7:2x4 SP 1650F 1.5E

BOT CHORD 2x4 SP No.2 *Except* 21-19,19-17:2x4 SP 1650F 1.5E, 9-16:2x3 SPF No.2

WEBS 2x3 SPF No.2 *Except* 23-2,14-12:2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals.

BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.

WEBS 1 Row at midpt 4-20, 6-18

REACTIONS (size) 14=0-3-8, 23=0-3-8
Max Horiz 23=-120 (LC 17)
Max Uplift 14=-275 (LC 13), 23=-275 (LC 12)
Max Grav 14=1733 (LC 2), 23=1724 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/27, 2-3=-2894/491, 3-4=-4864/841, 4-6=-3430/522, 6-7=-2399/430, 7-8=-2353/449, 8-9=-3589/595, 9-10=-3561/528, 10-12=-2799/412, 12-13=0/27, 2-23=-1670/327, 12-14=-1638/324

BOT CHORD 22-23=-157/244, 21-22=-561/2768, 20-21=-875/4473, 18-20=-453/3104, 17-18=-276/2600, 16-17=0/85, 9-17=-320/168, 15-16=-42/76, 14-15=-70/299

WEBS 4-21=0/464, 4-20=-1385/426, 6-20=0/470, 6-18=-1118/354, 7-18=-171/1461, 8-18=-767/282, 8-17=-216/1043, 10-17=-55/764, 2-22=-392/2458, 12-15=-265/2260, 10-15=-824/176, 15-17=-289/2560, 3-21=-353/1999, 3-22=-1227/187

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 18-0-0, Exterior(2R) 18-0-0 to 23-0-0, Interior (1) 23-0-0 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) All plates are MT20 plates unless otherwise indicated.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
7) Bearing at joint(s) 23 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 275 lb uplift at joint 23 and 275 lb uplift at joint 14.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

March 12,2024

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 161
P240463-01	C05	Roof Special	1	1	I64148491 Job Reference (optional)

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Mon Mar 11 08:14:30 Page: 1
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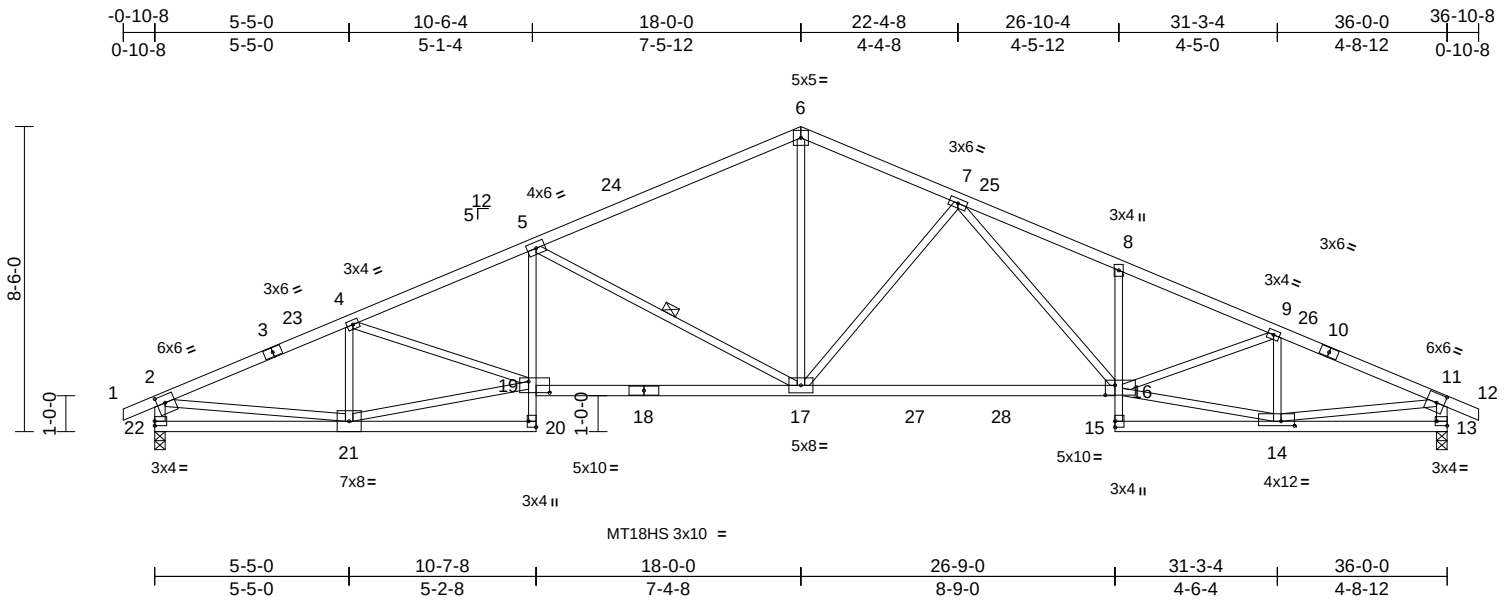

Scale = 1:64.2

Plate Offsets (X, Y): [2:0-2-12,0-2-8], [11:0-2-9,0-3-0], [13:Edge,0-1-8], [14:0-4-8,0-1-8], [16:0-3-4,0-3-4], [19:0-7-0,0-3-12], [20:Edge,0-2-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.72	Vert(LL)	-0.45	16-17	>946	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.88	Vert(CT)	-0.80	16-17	>534	180	MT18HS	244/190
BCLL	0.0*	Rep Stress Incr	YES	WB	0.91	Horz(CT)	0.21	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 174 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP 1650F 1.5E *Except* 1-3,10-12:2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 20-5,8-15:2x3 SPF No.2, 19-18,18-16:2x4 SP 1650F 1.5E
WEBS 2x3 SPF No.2 *Except* 22-2,13-11:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-0-15 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 14-15.
WEBS 1 Row at midpt 5-17

REACTIONS (size) 13=0-3-8, 22=0-3-8
Max Horiz 22=121 (LC 16)
Max Uplift 13=-275 (LC 13), 22=-275 (LC 12)
Max Grav 13=1733 (LC 2), 22=1724 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/27, 2-4=-2843/414, 4-5=-3464/544, 5-6=-2393/426, 6-7=-2348/447, 7-8=-3594/596, 8-9=-3564/529, 9-11=-2799/412, 11-12=0/27, 2-22=-1622/328, 11-13=-1638/324
BOT CHORD 21-22=-214/403, 20-21=-40/167, 19-20=0/97, 5-19=-33/589, 17-19=-472/3177, 16-17=-274/2596, 15-16=0/85, 8-16=-322/169, 14-15=-39/64, 13-14=-70/299
WEBS 4-21=-746/201, 19-21=-408/2455, 4-19=-78/633, 5-17=-1192/374, 6-17=-161/1436, 7-17=-767/282, 7-16=-218/1055, 9-16=-56/767, 2-21=-236/2221, 11-14=-265/2259, 9-14=-826/177, 14-16=-292/2570

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 18-0-0, Exterior(2R) 18-0-0 to 23-0-0, Interior (1) 23-0-0 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) All plates are MT20 plates unless otherwise indicated.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, 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 275 lb uplift at joint 22 and 275 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.

LOAD CASE(S) Standard

March 12,2024

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
06/07/2024 4:05:06

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 161
P240463-01	C04	Roof Special	4	1	I64148492 Job Reference (optional)

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

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Mon Mar 11 08:14:29 Page: 1
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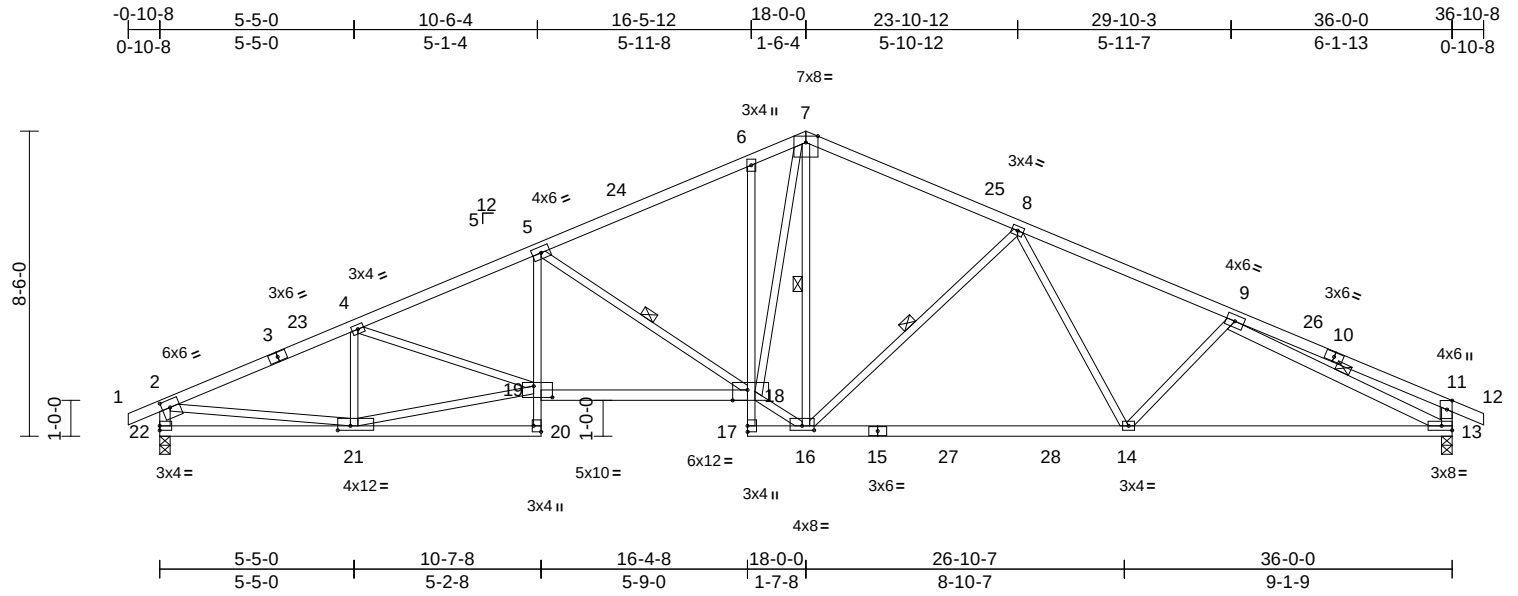

Scale = 1:64.2

Plate Offsets (X, Y): [2:0-2-12,0-2-8], [11:0-3-0,0-1-12], [16:0-4-0,0-1-8], [18:0-5-0,Edge], [19:0-6-4,0-3-12], [20:Edge,0-2-8], [21:0-4-4,0-1-8]

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	0.56	Vert(LL)	-0.31	14-16	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.77	Vert(CT)	-0.54	14-16	>789	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.87	Horz(CT)	0.20	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 185 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP 1650F 1.5E *Except* 22-20:2x4 SP No.2, 20-5,6-17:2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except* 22-2,13-11,13-9:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-10-6 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 17-18,16-17.
WEBS 1 Row at midpt 5-18, 9-13, 7-16, 8-16

REACTIONS (size) 13=0-3-8, 22=0-3-8
Max Horiz 22=121 (LC 16)
Max Uplift 13=-275 (LC 13), 22=-275 (LC 12)
Max Grav 13=1738 (LC 2), 22=1725 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/27, 2-4=-2851/418, 4-5=-3479/537, 5-6=-2543/455, 6-7=-2471/532, 7-8=-2099/424, 8-9=-2830/444, 9-11=-545/155, 11-12=0/27, 2-22=-1624/328, 11-13=-463/191
BOT CHORD 21-22=-208/396, 20-21=-25/91, 19-20=0/96, 5-19=-46/639, 18-19=-458/3186, 17-18=-172/0, 6-18=-293/186, 16-17=-42/45, 14-16=-261/2352, 13-14=-347/2583
WEBS 4-21=-766/207, 19-21=-428/2547, 4-19=-60/630, 5-18=-1092/300, 7-18=-397/1935, 2-21=-244/2239, 9-13=-2443/332, 7-16=-476/115, 16-18=-122/2231, 8-16=-698/272, 8-14=-27/468, 9-14=-178/195

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 18-0-0, Exterior(2R) 18-0-0 to 23-0-0, Interior (1) 23-0-0 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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
5) Bearings are assumed to be: Joint 22 SP No.2 crushing capacity of 565 psi, Joint 13 SP 1650F 1.5E crushing capacity of 565 psi.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 275 lb uplift at joint 22 and 275 lb uplift at joint 13.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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

March 12,2024

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 161
P240463-01	C03	Roof Special	8	1	I64148493 Job Reference (optional)

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Mon Mar 11 08:14:29 Page: 1

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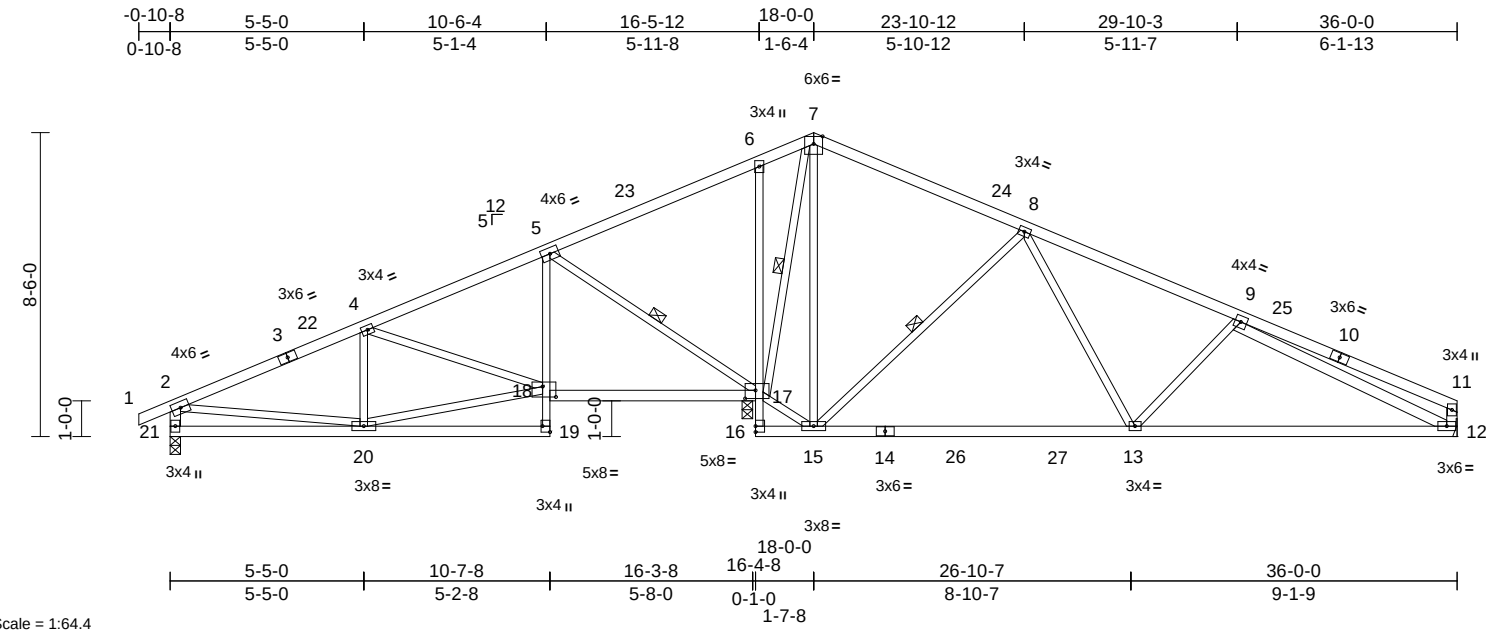


Scale = 1:64.4

Plate Offsets (X, Y): [17:0-3-8,0-2-12], [18:0-4-8,0-3-8], [19:Edge,0-2-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.52	Vert(LL)	-0.18	13-15	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.88	Vert(CT)	-0.30	13-15	>780	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.69	Horz(CT)	0.01	17	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 183 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2

BOT CHORD 2x4 SP No.2 *Except* 19-5,6-16:2x3 SPF No.2

WEBS 2x3 SPF No.2 *Except* 21-2,12-11,12-9:2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 5-7-8 oc purlins, except end verticals.

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

WEBS 1 Row at midpt 5-17, 7-17, 8-15

REACTIONS (size) 12= Mechanical, 17=0-3-8, 21=0-3-8

Max Horiz 21=129 (LC 16)

Max Uplift 12=-174 (LC 13), 17=-280 (LC 12), 21=-123 (LC 12)

Max Grav 12=805 (LC 28), 17=2014 (LC 2), 21=655 (LC 27)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/27, 2-4=-804/142, 4-5=-436/118, 5-6=-54/535, 6-7=0/456, 7-8=-55/270, 8-9=-966/267, 9-11=-358/92, 2-21=-602/189, 11-12=-292/114

BOT CHORD 20-21=-194/255, 19-20=-15/20, 18-19=0/86, 5-18=-21/458, 17-18=-66/360, 16-17=-159/0, 6-17=-370/201, 15-16=-138/0, 13-15=-61/535, 12-13=-231/1006

WEBS 4-20=-104/111, 18-20=-173/691, 4-18=-386/126, 5-17=-863/269, 7-17=-1301/190, 2-20=-13/488, 9-12=-851/224, 7-15=-194/918, 15-17=-145/212, 8-15=-812/283, 8-13=-47/640, 9-13=-346/217

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 18-0-0, Exterior(2R) 18-0-0 to 23-0-0, Interior (1) 23-0-0 to 35-10-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) All plates are 3x4 MT20 unless otherwise indicated.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * 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 21 SP No.2 crushing capacity of 565 psi, Joint 17 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 123 lb uplift at joint 21, 280 lb uplift at joint 17 and 174 lb uplift at joint 12.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

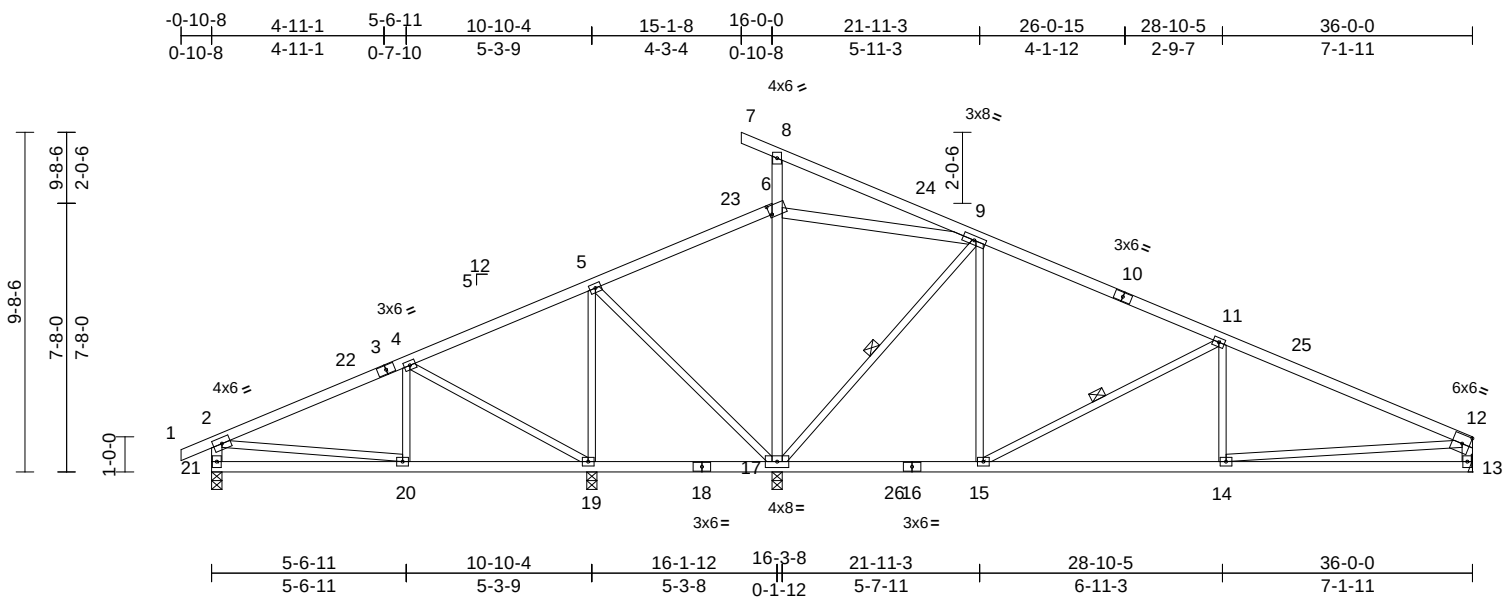
LOAD CASE(S) Standard

March 12,2024

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 161
P240463-01	C02	Roof Special	2	1	I64148494 Job Reference (optional)

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Mon Mar 11 08:14:28 Page: 1

ID:CHDmS3BtTjmRKi7v_C9xqvzkXEU-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:65.8

Plate Offsets (X, Y): [6:0-0-12,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.70	Vert(LL)	-0.06	13-14	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.52	Vert(CT)	-0.13	13-14	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.76	Horz(CT)	0.01	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 185 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 8-17,9-6,21-2,13-12:2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-7-7 oc purlins, except end verticals. Except: 6-0-0 oc bracing: 6-8
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 9-17, 11-15

REACTIONS (size) 13= Mechanical, 17=0-3-8, 19=0-3-8, 21=0-3-8
Max Horiz 21=-105 (LC 17)
Max Uplift 13=-144 (LC 13), 17=-329 (LC 13), 19=-160 (LC 12), 21=-95 (LC 12)
Max Grav 13=737 (LC 28), 17=1774 (LC 2), 19=650 (LC 25), 21=446 (LC 25)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/27, 2-4=-389/139, 4-5=-9/424, 5-6=0/586, 6-17=-615/215, 6-8=-237/211, 7-8=-27/0, 8-9=-112/64, 9-11=-353/134, 11-12=-1045/217, 2-21=-395/187, 12-13=-651/181
BOT CHORD 20-21=-169/235, 19-20=-111/293, 17-19=-332/195, 15-17=0/219, 14-15=-139/900, 13-14=-78/275
WEBS 6-9=0/508, 2-20=-97/106, 12-14=-62/629, 5-19=-274/134, 5-17=-257/102, 4-19=-589/176, 4-20=0/228, 9-17=-1082/267, 9-15=-38/602, 11-15=-750/242, 11-14=0/258

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 16-1-12, Exterior(2E) 15-1-8 to 20-1-8, Interior (1) 20-1-8 to 35-10-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) All plates are 3x4 MT20 unless otherwise indicated.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * 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 21 SP No.2 crushing capacity of 565 psi, Joint 19 SP No.2 crushing capacity of 565 psi, Joint 17 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 329 lb uplift at joint 17, 95 lb uplift at joint 21, 144 lb uplift at joint 13 and 160 lb uplift at joint 19.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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

March 12,2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcscomponents.com)

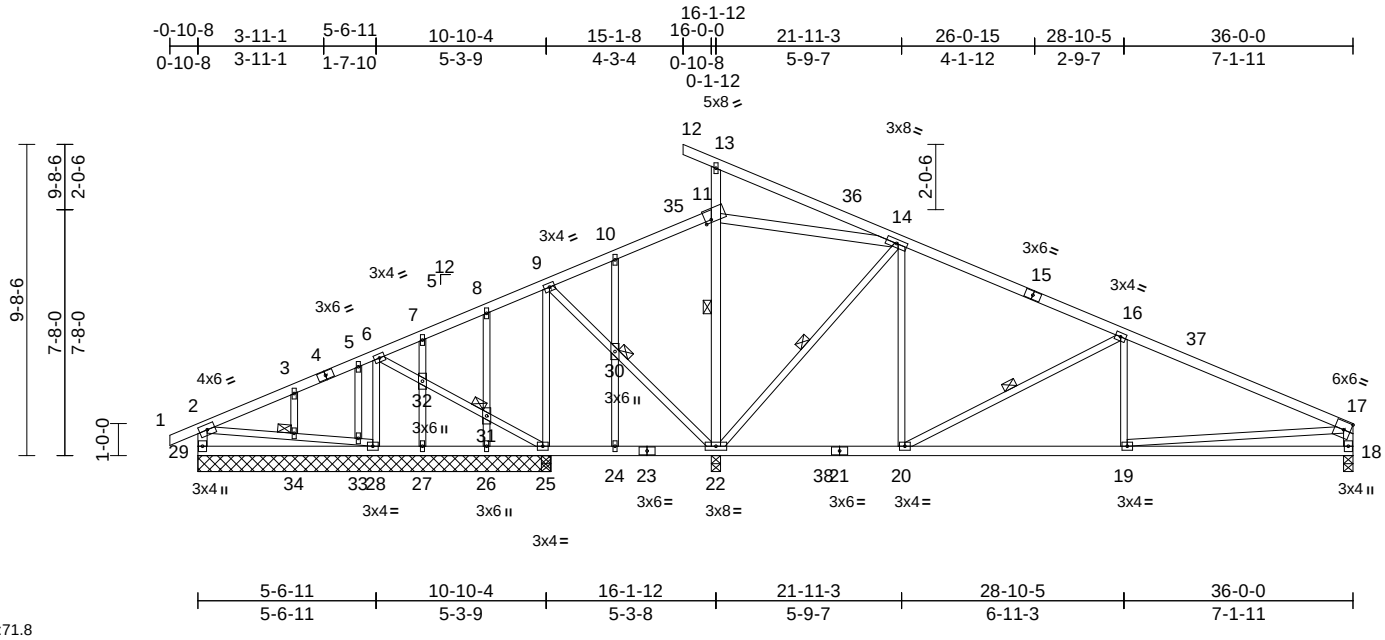
MiTek®
16023 Swingley Ridge Rd
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
06/07/2024 4:05:06

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 161
P240463-01	C01	Roof Special	1	1	I64148495 Job Reference (optional)

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Mon Mar 11 08:14:28 Page: 1

ID:ZPE42GuJG2XQkNP0lKB?1ezkXCH-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:71.8

Plate Offsets (X, Y): [11:0-2-4,0-1-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.69	Vert(LL)	-0.06	18-19	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.52	Vert(CT)	-0.13	18-19	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.76	Horz(CT)	0.01	18	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 198 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 29-2,18-17,13-22,14-11:2x4 SP No.2
OTHERS 2x3 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-6-15 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 13-22, 16-20, 14-22
JOINTS 1 Brace at Jt(s): 30, 31, 34

REACTIONS (size) 18=0-3-8, 22=0-3-8, 25=11-0-0, 26=11-0-0, 27=11-0-0, 28=11-0-0, 29=11-0-0
Max Horiz 29=-175 (LC 13)
Max Uplift 18=-131 (LC 13), 22=-297 (LC 13), 25=-120 (LC 12), 26=-1 (LC 12), 27=-41 (LC 12), 28=-73 (LC 12), 29=-57 (LC 8)
Max Grav 18=747 (LC 28), 22=1763 (LC 2), 25=330 (LC 25), 26=70 (LC 27), 27=65 (LC 1), 28=373 (LC 25), 29=271 (LC 25)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/27, 2-3=-42/121, 3-5=-22/163, 5-6=-1/155, 6-7=0/274, 7-8=0/292, 8-9=0/318, 9-10=0/492, 10-11=0/516, 12-13=-27/0, 13-14=-113/28, 14-16=-366/105, 16-17=-1064/190, 2-29=-221/140, 17-18=-656/168
BOT CHORD 28-29=-124/247, 27-28=-111/183, 26-27=-111/183, 25-26=-111/183, 24-25=-255/227, 22-24=-255/227, 20-22=0/248, 19-20=-114/917, 18-19=-77/277
WEBS 11-22=-534/211, 11-13=-217/223, 6-28=-184/120, 9-25=-103/154, 9-30=-276/66, 22-30=-285/70, 6-32=-191/57, 31-32=-188/56, 25-31=-192/57, 14-20=-36/597, 16-19=0/255, 17-19=-37/644, 2-34=-253/136, 33-34=-256/138, 28-33=-272/147, 16-20=-743/244, 14-22=-1079/272, 10-30=-107/94, 24-30=-94/87, 8-31=-91/61, 26-31=-87/59, 7-32=-49/24, 27-32=-56/27, 5-33=-56/30, 3-34=-32/18, 11-14=0/481

NOTES

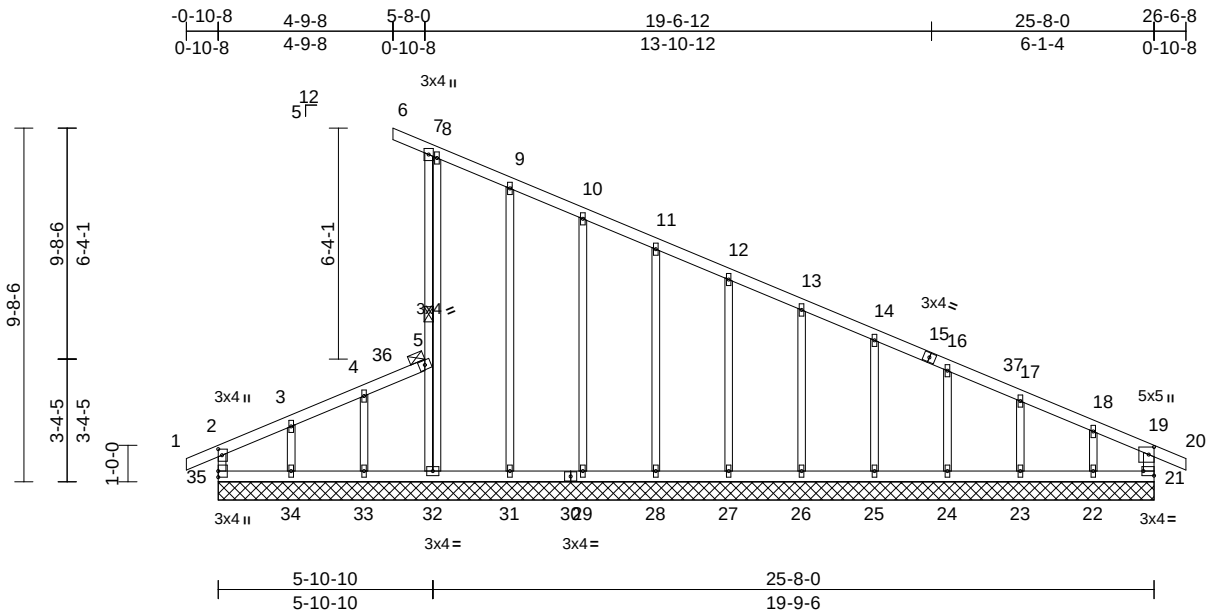
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 16-0-0, Exterior(2R) 15-1-8 to 20-1-8, Interior (1) 20-1-8 to 35-10-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 1.5x4 MT20 unless otherwise indicated.
5) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
6) Gable studs spaced at 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, with BCDL = 10.0psf.
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 131 lb uplift at joint 18, 57 lb uplift at joint 29, 297 lb uplift at joint 22, 73 lb uplift at joint 28, 120 lb uplift at joint 25, 1 lb uplift at joint 26 and 41 lb uplift at joint 27.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

March 12,2024

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 161
P240463-01	B01	Roof Special Supported Gable	1	1	I64148496 Job Reference (optional)

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Mon Mar 11 08:14:27 Page: 1
ID:bzCw6On6o49uPtGdBr3k7RzkXGI-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:63.2

Plate Offsets (X, Y): [2:0-2-0,0-1-4], [19:0-2-8,0-1-12], [21:Edge,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.40	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.36	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.21	Horz(CT)	0.02	21	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 135 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 19-21:2x4 SP No.2
OTHERS 2x3 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
Except:
6-0-0 oc bracing: 5-7
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 8-32
JOINTS 1 Brace at Jt(s): 5

REACTIONS (size) 21=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, 35=25-8-0
Max Horiz 35=-308 (LC 8)
Max Uplift 22=-262 (LC 13), 23=-17 (LC 13), 24=-64 (LC 13), 25=-52 (LC 13), 26=-55 (LC 13), 27=-54 (LC 13), 28=-54 (LC 13), 29=-61 (LC 13), 31=-27 (LC 13), 32=-154 (LC 12), 33=-60 (LC 8), 34=-215 (LC 12), 35=-52 (LC 10)
Max Grav 21=297 (LC 8), 22=141 (LC 1), 23=188 (LC 26), 24=178 (LC 1), 25=180 (LC 26), 26=180 (LC 26), 27=180 (LC 1), 28=180 (LC 26), 29=182 (LC 26), 31=174 (LC 26), 32=214 (LC 1), 33=168 (LC 1), 34=173 (LC 25), 35=195 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 2-35=-150/75, 1-2=0/26, 2-3=-272/104, 3-4=-197/93, 4-5=-197/133, 5-32=-136/239, 5-7=-85/193, 6-7=-26/0, 7-8=-77/86, 8-9=-106/99, 9-10=-163/90, 10-11=-217/71, 11-12=-259/86, 12-13=-303/101, 13-14=-346/116, 14-16=-389/131, 16-17=-435/147, 17-18=-467/158, 18-19=-580/197, 19-20=0/27, 19-21=-311/89
BOT CHORD 34-35=-182/533, 33-34=-182/533, 32-33=-182/533, 31-32=-186/546, 29-31=-186/546, 28-29=-186/546, 27-28=-186/546, 26-27=-186/546, 25-26=-186/546, 24-25=-186/546, 23-24=-186/546, 22-23=-186/546, 21-22=-186/546
WEBS 3-34=-131/172, 4-33=-130/134, 8-32=-78/86, 9-31=-133/138, 10-29=-142/116, 11-28=-140/88, 12-27=-140/89, 13-26=-140/89, 14-25=-140/88, 16-24=-139/96, 17-23=-146/97, 18-22=-140/300

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 4-0-0, Exterior(2N) 4-0-0 to 5-9-4, Corner(3E) 4-9-8 to 10-0-0, Exterior(2N) 10-0-0 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) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
7) Gable studs spaced at 2-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * 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 52 lb uplift at joint 35, 154 lb uplift at joint 32, 215 lb uplift at joint 34, 60 lb uplift at joint 33, 27 lb uplift at joint 31, 61 lb uplift at joint 29, 54 lb uplift at joint 28, 54 lb uplift at joint 27, 55 lb uplift at joint 26, 52 lb uplift at joint 25, 64 lb uplift at joint 24, 17 lb uplift at joint 23 and 262 lb uplift at joint 22.
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.

March 12,2024

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 161
P240463-01	B01	Roof Special Supported Gable	1	1	I64148496 Job Reference (optional)

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 161
P240463-01	A04	Hip Girder	1	2	I64148497 Job Reference (optional)

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Mon Mar 11 08:14:27 Page: 1
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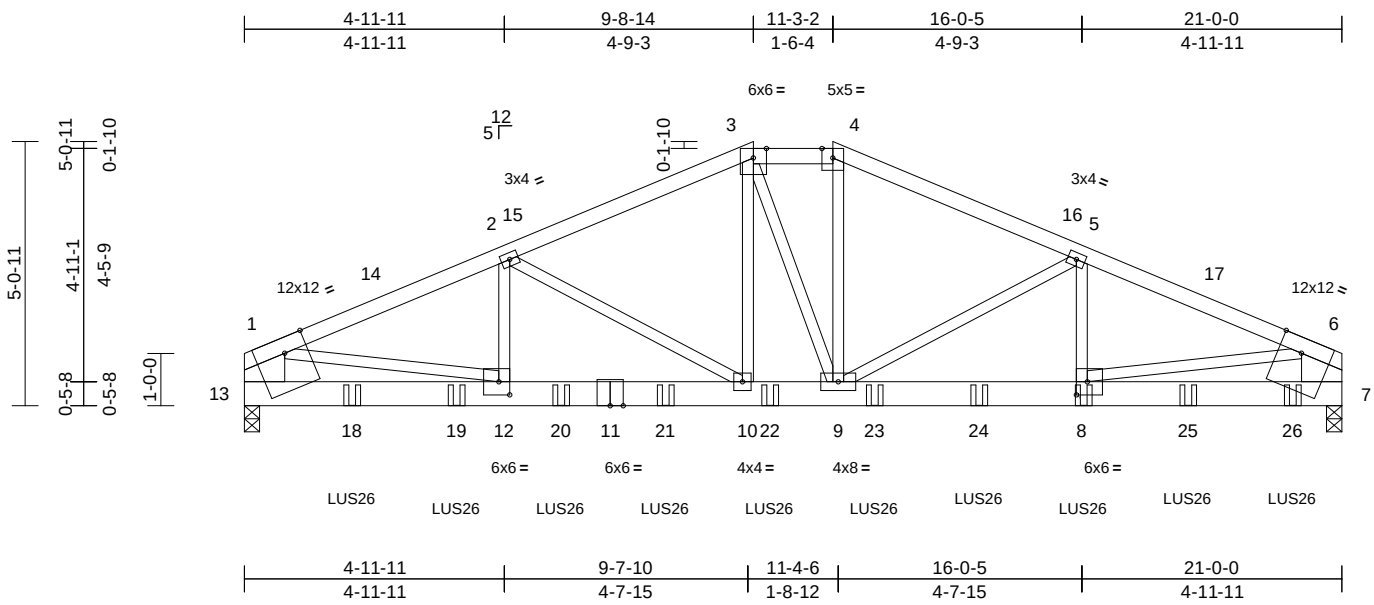

Scale = 1:44.1

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

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	0.46	Vert(LL)	-0.13	10-12	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.97	Vert(CT)	-0.23	10-12	>999	180		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.88	Horz(CT)	0.04	7	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 2x6 SPF No.2
WEBS 2x3 SPF No.2 *Except* 13-1,7-6:2x10 HF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-5-12 oc purlins, except end verticals, and 2-0-0 oc purlins (5-4-9 max.): 3-4.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 7=0-3-8, (req. 0-3-14), 13=0-3-8
Max Horiz 13=44 (LC 16)
Max Uplift 7=-1109 (LC 13), 13=-962 (LC 12)
Max Grav 7=4907 (LC 2), 13=4390 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-6931/1623, 2-3=-5771/1403, 3-4=-5303/1334, 4-5=-5824/1416, 5-6=-7010/1663, 1-13=-3679/886, 6-7=-3706/902
BOT CHORD 12-13=-330/1272, 10-12=-1485/6331, 9-10=-1190/5253, 8-9=-1492/6403, 7-8=-345/1375
WEBS 2-12=-184/916, 2-10=-1244/350, 3-10=-420/1841, 3-9=-96/281, 4-9=-457/1962, 5-9=-1269/378, 5-8=-214/954, 1-12=-1172/5131, 6-8=-1169/5099

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, 2x10 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Web connected as follows: 2x3 - 1 row at 0-9-0 oc.
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) 0-4-10 to 5-4-10, Interior (1) 5-4-10 to 9-8-14, Exterior(2E) 9-8-14 to 11-3-2, Exterior(2R) 11-3-2 to 18-4-0, Interior (1) 18-4-0 to 20-7-6 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) WARNING: Required bearing size at joint(s) 7 greater than input bearing size.
9) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 962 lb uplift at joint 13 and 1109 lb uplift at joint 7.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
13) Use Simpson Strong-Tie LUS26 (4-10d Girder, 4-10d Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 2-0-12 from the left end to 4-0-12 to connect truss(es) to back face of bottom chord.
14) Use Simpson Strong-Tie LUS26 (4-10d Girder, 4-10d Truss) or equivalent spaced at 2-0-0 oc max. starting at 6-0-12 from the left end to 20-0-12 to connect truss(es) to back face of bottom chord.
15) 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, 7-13=-20
Concentrated Loads (lb)
Vert: 8=-759 (B), 18=-697 (B), 19=-697 (B), 20=-759 (B), 21=-759 (B), 22=-759 (B), 23=-759 (B), 24=-759 (B), 25=-759 (B), 26=-760 (B)

SUPPLEMENTARY BEARING PLATES, SPECIAL ANCHORAGE, OR OTHER MEANS TO ALLOW FOR THE MINIMUM REQUIRED SUPPORT WIDTH (SUCH AS COLUMN CAPS, BEARING BLOCKS, ETC.) ARE THE RESPONSIBILITY OF THE TRUSS MANUFACTURER OR THE BUILDING DESIGNER.

March 12,2024

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 161
P240463-01	A03	Hip	1	1	I64148498 Job Reference (optional)

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

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Mon Mar 11 08:14:26

ID:fJZk7uYBGFlbdyJzaMEHrRzkXGb-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

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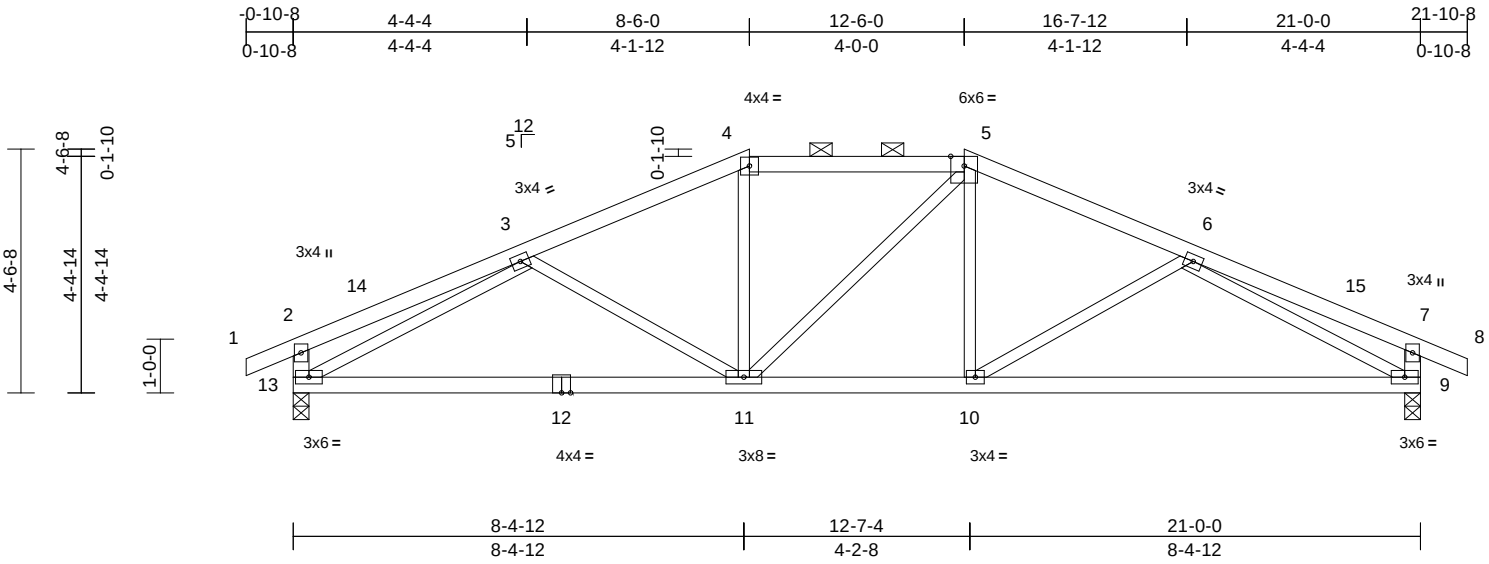


Scale = 1:42.9

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.27	Vert(LL)	-0.14	9-10	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.66	Vert(CT)	-0.28	9-10	>886	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.69	Horz(CT)	0.04	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 95 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2

BOT CHORD 2x4 SP No.2

WEBS 2x3 SPF No.2 *Except* 13-2,9-7:2x4 SP No.2

BRACING

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

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

REACTIONS (size) 9=0-3-8, 13=0-3-8

Max Horiz 13=-45 (LC 13)

Max Uplift 9=-153 (LC 13), 13=-153 (LC 12)

Max Grav 9=1003 (LC 1), 13=1003 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/27, 2-3=-304/73, 3-4=-1287/300, 4-5=-1136/306, 5-6=-1287/300, 6-7=-304/73, 7-8=0/27, 2-13=-318/148, 7-9=-318/148

BOT CHORD 11-13=-287/1224, 10-11=-144/1136, 9-10=-238/1224

WEBS 3-11=-130/168, 4-11=0/233, 5-11=-123/124, 5-10=-7/233, 6-10=-130/168, 3-13=-1166/300, 6-9=-1166/300

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-2-5, Interior (1) 4-2-5 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 153 lb uplift at joint 13 and 153 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.

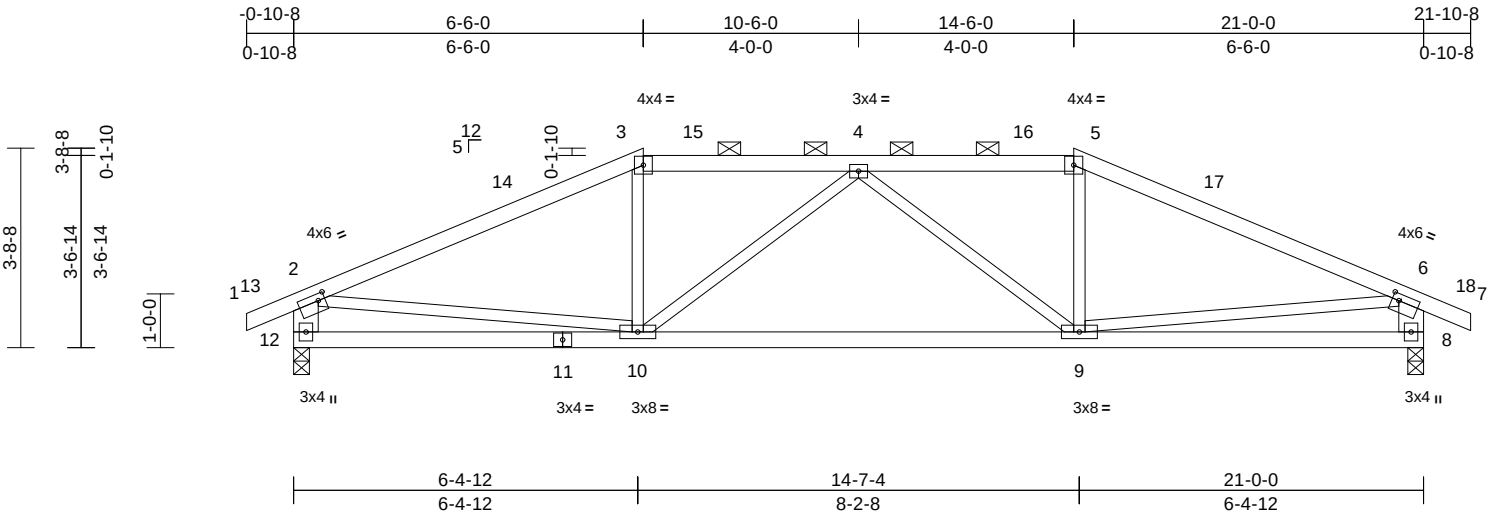
LOAD CASE(S) Standard

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

March 12,2024

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 161
P240463-01	A02	Hip	1	1	I64148499 Job Reference (optional)

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Mon Mar 11 08:14:26 ID:xNyy1URwdAV?QQY2_F2xRKzkXGl-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f Page: 1



Scale = 1:42.8

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

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	0.66	Vert(LL)	-0.10	9-10	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.61	Vert(CT)	-0.23	9-10	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.30	Horz(CT)	0.03	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 92 lb	FT = 20%

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

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

REACTIONS (size) 8=0-3-8, 12=0-3-8
Max Horiz 12=-28 (LC 17)
Max Uplift 8=-161 (LC 9), 12=-161 (LC 8)
Max Grav 8=1002 (LC 1), 12=1002 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/30, 2-3=-1437/301, 3-4=-1238/317, 4-5=-1238/317, 5-6=-1437/301, 6-7=0/30, 2-12=-948/289, 6-8=-948/289
BOT CHORD 10-12=-195/388, 9-10=-278/1435, 8-9=-151/388
WEBS 3-10=0/277, 5-9=0/277, 2-10=-52/867, 6-9=-55/867, 4-10=-350/120, 4-9=-350/119

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) 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 161 lb uplift at joint 12 and 161 lb uplift at joint 8.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

March 12,2024

Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 161
P240463-01	A01	Hip Girder	1	2	I64148500 Job Reference (optional)

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

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Mon Mar 11 08:14:24 ID:b9dePyA7oPj7n2spiefnYhzkXH5-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

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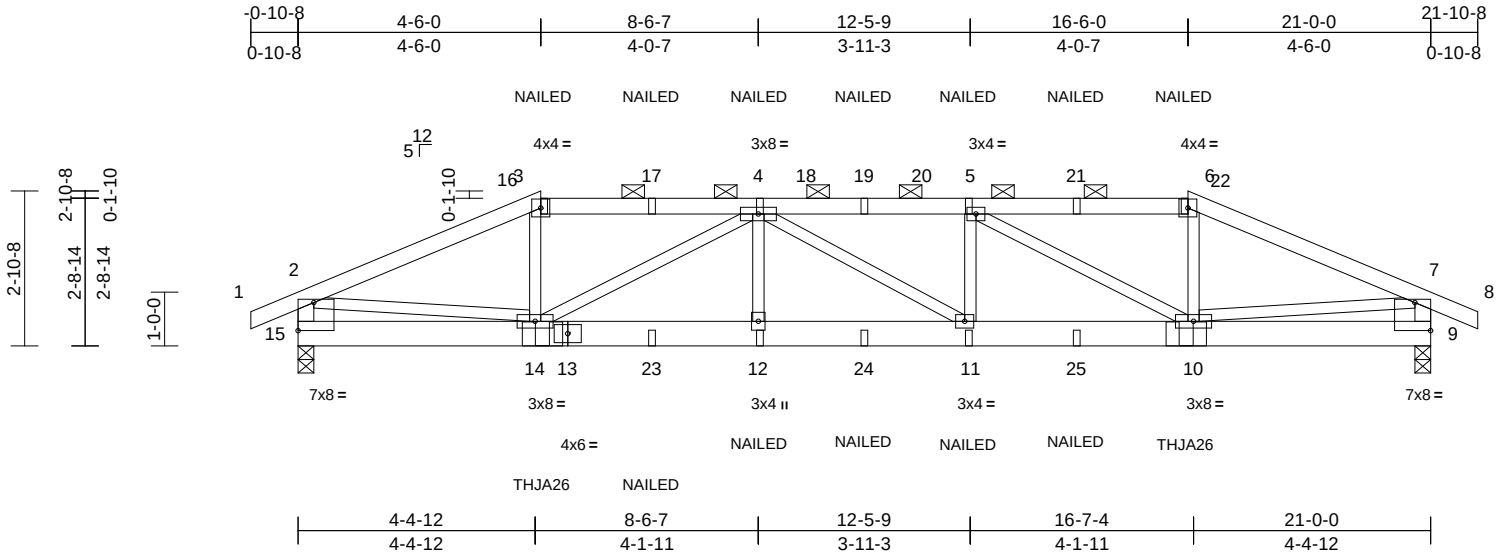


Scale = 1:42.7

Plate Offsets (X, Y): [9:Edge,0-6-4], [15:Edge,0-6-4]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.23	Vert(LL)	-0.07	11-12	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.37	Vert(CT)	-0.13	11-12	>999	180		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.33	Horz(CT)	0.02	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 196 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SPF No.2
WEBS 2x3 SPF No.2 *Except* 15-2,9-7:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 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) 9=0-3-8, 15=0-3-8
Max Horiz 15=-22 (LC 10)
Max Uplift 9=-404 (LC 9), 15=-404 (LC 8)
Max Grav 9=1577 (LC 1), 15=1577 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/27, 2-3=-2557/716, 3-4=-2286/684, 4-5=-3357/976, 5-6=-2288/685, 6-7=-2560/717, 7-8=0/27, 2-15=-1480/481, 7-9=-1481/482
BOT CHORD 14-15=-161/439, 12-14=-885/3370, 11-12=-885/3370, 10-11=-890/3357, 9-10=-133/438
WEBS 3-14=-94/646, 4-14=-1292/355, 4-12=0/258, 4-11=-44/21, 5-11=0/252, 5-10=-1276/348, 6-10=-94/645, 2-14=-484/1893, 7-10=-486/1897

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 404 lb uplift at joint 15 and 404 lb uplift at joint 9.
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.

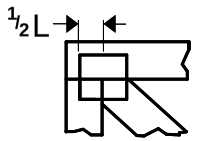
LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-3=-70, 3-6=-70, 6-7=-70, 7-8=-70, 9-15=-20
Concentrated Loads (lb)
Vert: 3=-68 (F), 6=-68 (F), 14=-263 (F), 4=-68 (F), 12=-30 (F), 11=-30 (F), 5=-68 (F), 10=-263 (F), 17=-68 (F), 19=-68 (F), 21=-68 (F), 23=-30 (F), 24=-30 (F), 25=-30 (F)

March 12,2024

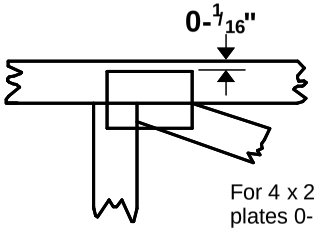
RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
06/07/2024 4:05:06

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.

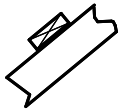
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

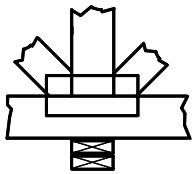
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

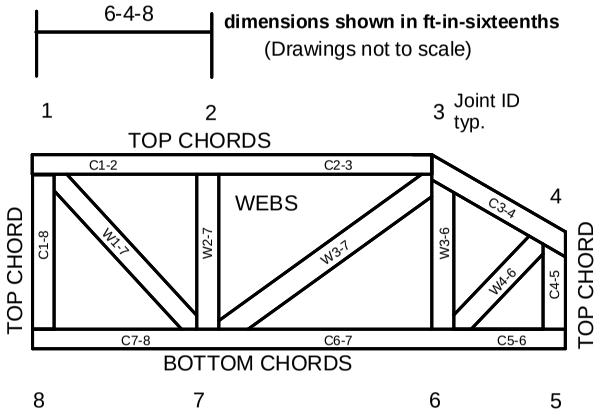


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

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®

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

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

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