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

Re: Serenade - Craftsman FH 3-Car
Serenade - Craftsman FH 3-Car

4421 SW Grindstone Cir
Lees Summit MO, 64082

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

Pages or sheets covered by this seal: I65799179 thru I65799216

My license renewal date for the state of Kansas is April 30, 2024.

Kansas COA: E-943

May 24,2024

Garcia, Juan

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

MiTek®

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

Re: Serenade - Craftsman FH 3-Car
Serenade - Craftsman FH 3-Car

4421 SW Grindstone Cir
Lees Summit MO, 64082

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

Pages or sheets covered by this seal: I65799179 thru I65799216

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

Missouri COA: Engineering 001193

May 24,2024

Garcia, Juan ,Engineer

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

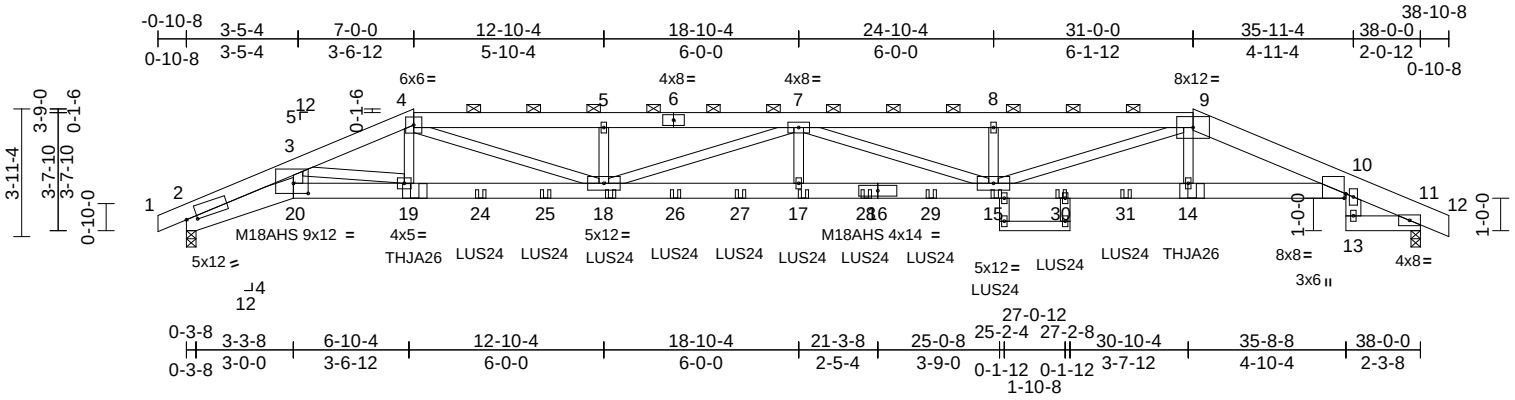
RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
03/20/2025

Job	Truss	Truss Type	Qty	Ply	Serenade - Craftsman FH 3-Car
Serenade - Craftsman	A1	Hip Girder	1	3	I65799179 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Thu May 23 14:07:35 ID:8GT8_f7kXJbYSdR78zEY2czym18-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

4421 SW Grindstone Cir
Lees Summit MO, 64082



Scale = 1:71

Plate Offsets (X, Y): [2:0-4-0,0-1-0], [10:0-0-11,Edge], [20:0-5-8,0-3-12]

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	0.64	Vert(LL)	-0.53	15-17	>855	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.50	Vert(CT)	-0.92	15-17	>493	240	M18AHS	186/179
BCLL	0.0*	Rep Stress Incr	NO	WB	0.48	Horz(CT)	0.39	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.46	15-17	>983	240	Weight: 715 lb	FT = 10%

LUMBER
TOP CHORD 2x6 SP 2400F 2.0E *Except* 9-12:2x8 SP 2400F 2.0E
BOT CHORD 2x6 SP 2400F 2.0E *Except* 2-20:2x8 SP 2400F 2.0E, 13-11:2x6 SPF No.2, 21-22:2x4 SPF No.2
WEBS 2x4 SPF No.2 *Except* 10-13:2x6 SPF No.2

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

REACTIONS (size) 2=0-3-8, 11=0-3-8
Max Horiz 2=-59 (LC 28)
Max Uplift 2=-990 (LC 4), 11=-950 (LC 5)
Max Grav 2=4099 (LC 1), 11=4093 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/3, 2-3=-15823/3835, 3-4=-12687/3197, 4-5=-17147/4373, 5-7=-17146/4372, 7-8=-17346/4361, 8-9=-17346/4362, 9-10=-12680/3060, 10-11=-2205/527, 11-12=0/6
BOT CHORD 2-20=-3439/14261, 19-20=-3142/12995, 18-19=-2906/11786, 17-18=-4804/19263, 15-17=-4804/19263, 14-15=-2872/12204, 10-14=-2853/12106, 11-13=0/0
WEBS 10-13=-64/341, 3-20=-825/3642, 3-19=-1117/297, 4-19=-454/1933, 9-14=-265/1398, 4-18=-1484/5839, 9-15=-1488/5584, 5-18=-436/186, 7-18=-2333/561, 7-17=-198/993, 7-15=-2119/568, 8-15=-294/232

NOTES
1) 3-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x8 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x8 - 2 rows staggered at 0-9-0 oc, 2x6 - 2 rows staggered at 0-9-0 oc.
Web connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) Provide adequate drainage to prevent water ponding.
6) All plates are MT20 plates unless otherwise indicated.
7) All plates are 2x4 MT20 unless otherwise indicated.
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 SPF No.2 .
11) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 950 lb uplift at joint 11 and 990 lb uplift at joint 2.
13) 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.
14) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
15) Use Simpson Strong-Tie THJA26 (THJA26 on 2-ply, Right Hand Hip) or equivalent at 7-0-6 from the left end to connect truss(es) to back face of bottom chord.
16) Use Simpson Strong-Tie LUS24 (4-10d Girder, 2-10d Truss) or equivalent spaced at 2-0-0 oc max. starting at 9-0-12 from the left end to 28-11-4 to connect truss(es) to back face of bottom chord.
17) Use Simpson Strong-Tie THJA26 (THJA26 on 2-ply, Left Hand Hip) or equivalent at 30-11-10 from the left end to connect truss(es) to back face of bottom chord.
18) Fill all nail holes where hanger is in contact with lumber.
19) Filler applied to ply: 1(Front)

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)

May 24,2024

Continued on page 2

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

Vert: 1-4=-70, 4-9=-70, 9-12=-70, 2-20=-20, 10-20=-20, 11-13=-20

Concentrated Loads (lb)

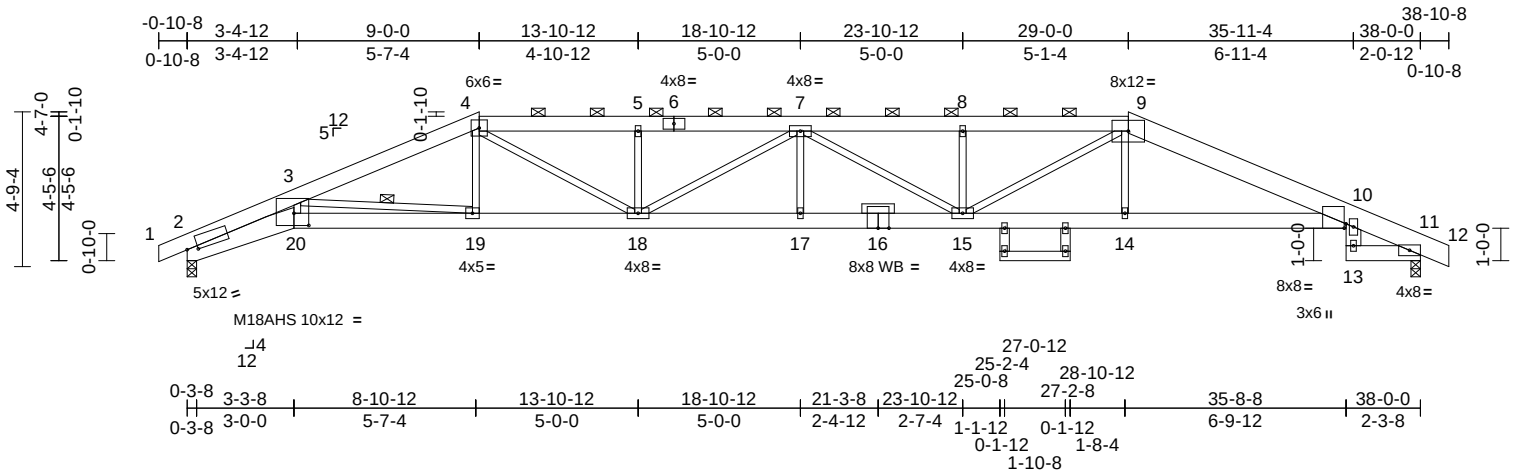
Vert: 19=-786 (B), 14=-807 (B), 18=-278 (B), 15=-278 (B), 17=-278 (B), 24=-278 (B), 25=-278 (B), 26=-278 (B), 27=-278 (B), 28=-278 (B), 29=-278 (B), 30=-278 (B), 31=-278 (B)

Job	Truss	Truss Type	Qty	Ply	Serenade - Craftsman FH 3-Car
Serenade - Craftsman	A2	Hip	1	1	I65799180 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Thu May 23 14:07:36 ID:7KnlPG4b8?pvAQ6KhopbbNzymBX-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

4421 SW Grindstone Cir
Lees Summit MO, 64082



Scale = 1:71

Plate Offsets (X, Y): [2:0-4-0,0-1-0], [10:0-0-11,Edge], [20:0-5-8,0-4-8]

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	0.81	Vert(LL)	-0.47	15-17	>954	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.59	Vert(CT)	-0.85	15-17	>530	240	M18AHS	142/136
BCLL	0.0*	Rep Stress Incr	YES	WB	0.53	Horz(CT)	0.49	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.35	17	>999	240	Weight: 220 lb	FT = 10%

LUMBER

TOP CHORD 2x6 SPF No.2 *Except* 9-12:2x8 SP 2400F 2.0E

BOT CHORD 2x6 SP 2400F 2.0E *Except* 2-20:2x8 SP 2400F 2.0E, 13-11:2x6 SPF No.2, 21-22:2x4 SPF No.2

WEBS 2x3 SPF No.2 *Except* 10-13:2x6 SPF No.2, 21-23,22-24:2x4 SPF No.2

OTHERS 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-2-4 oc purlins, except 2-0-0 oc purlins (3-0-4 max.): 4-9.

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

WEBS 1 Row at midpt 3-19

REACTIONS (size) 2=0-3-8, 11=0-3-8
Max Horiz 2=-74 (LC 9)
Max Uplift 2=-245 (LC 4), 11=-245 (LC 5)
Max Grav 2=1768 (LC 1), 11=1768 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/3, 2-3=-6416/817, 3-4=-4254/622, 4-5=-4909/797, 5-7=-4907/795, 7-8=-4932/798, 8-9=-4932/798, 9-10=-4273/612, 10-11=-921/138, 11-12=0/6

BOT CHORD 2-20=-718/5770, 19-20=-672/5327, 18-19=-491/3910, 17-18=-768/5378, 15-17=-768/5378, 14-15=-485/4008, 10-14=-487/3999, 11-13=0/0

WEBS 10-13=-5/148, 3-20=-123/1544, 3-19=-1414/286, 4-19=0/510, 9-14=0/342, 4-18=-242/1322, 9-15=-235/1235, 5-18=-366/149, 7-18=-631/105, 7-17=0/237, 7-15=-602/98, 8-15=-311/140

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are MT20 plates unless otherwise indicated.
5) All plates are 2x4 MT20 unless otherwise indicated.
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 .
9) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 245 lb uplift at joint 2 and 245 lb uplift at joint 11.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

May 24,2024

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

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEES SUMMIT, MISSOURI
03/20/2025

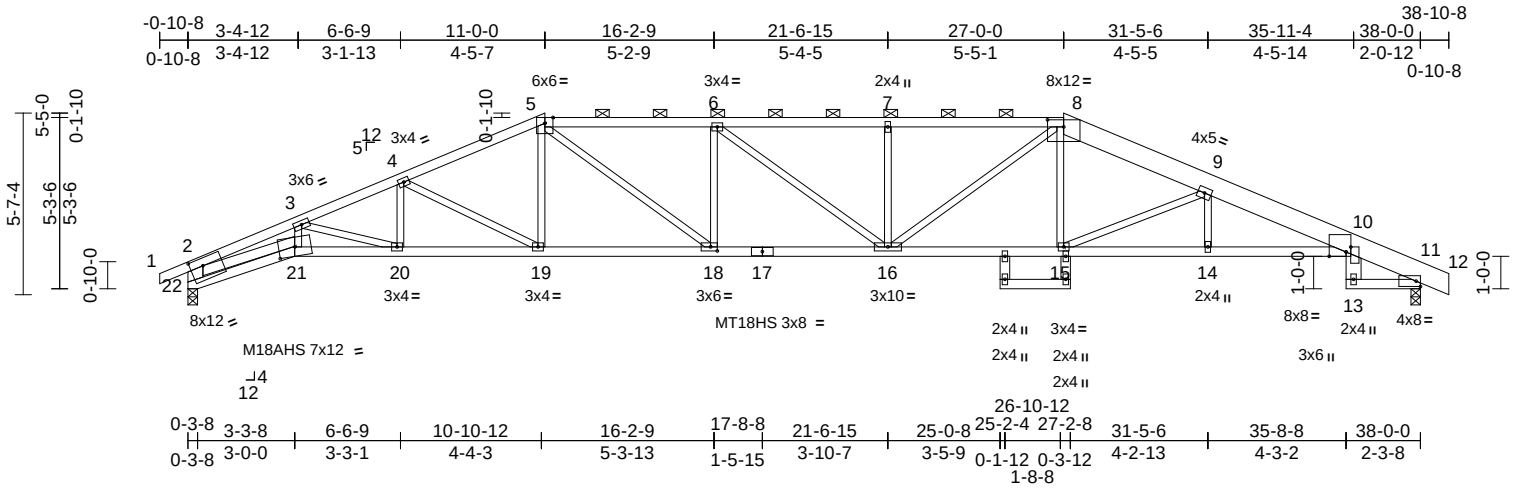
Job	Truss	Truss Type	Qty	Ply	Serenade - Craftsman FH 3-Car
Serenade - Craftsman	A3	Hip	1	1	I65799181
					Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 E Jan 4 2024 Print: 8.730 E Jan 4 2024 MiTek Industries, Inc. Fri May 24 08:34:11 Page: 1

ID:SJoxC1tR04ukLSBL1aYwD_zymEN-CnO9?X6gIB_pnY9Gm2T1d5hQogVZd?hO_MZwYxzDLGi

4421 SW Grindstone Cir
Lees Summit MO, 64082



Scale = 1:71

Plate Offsets (X, Y): [8:0-6-0,0-2-10], [10:0-6-4,Edge], [10:0-1-14,0-1-11], [18:0-2-8,0-1-8], [21:0-6-0,0-3-7], [22:0-4-12,0-2-12]

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	0.83	Vert(LL)	-0.46	16-18	>982	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.64	Vert(CT)	-0.83	16-18	>541	240	M18AHS	142/136
BCLL	0.0*	Rep Stress Incr	YES	WB	0.73	Horz(CT)	0.52	11	n/a	n/a	MT18HS	197/144
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.32	16-18	>999	240	Weight: 168 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2 *Except* 8-12:2x8 SP 2400F 2.0E

BOT CHORD 2x4 SPF No.2 *Except* 21-17,17-10:2x4 SPF 2100F 1.8E

WEBS 2x3 SPF No.2 *Except* 10-13,22-2:2x6 SPF No.2, 21-2:2x4 SPF 2100F 1.8E, 23-25,24-15:2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 1-11-9 oc purlins, except end verticals, and 2-0-0 oc purlins (2-3-11 max.): 5-8.

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

REACTIONS (lb/size) 11=1764/0-3-8, 22=1771/0-3-8
Max Horiz 22=-82 (LC 13)
Max Uplift 11=-220 (LC 5), 22=-223 (LC 4)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/30, 2-3=-5444/609, 3-4=-4305/534, 4-5=-3557/500, 5-6=-3942/609, 6-7=-3955/608, 7-8=-3956/607, 8-9=-3663/512, 9-10=-4557/550, 10-11=-911/123, 11-12=0/0, 2-22=-1814/246

BOT CHORD 21-22=-123/444, 20-21=-522/4872, 19-20=-425/3973, 18-19=-343/3231, 17-18=-472/3939, 16-17=-472/3939, 15-16=-343/3326, 14-15=-460/4396, 10-14=-462/4402, 11-13=0/0

WEBS 10-13=0/60, 3-21=-37/659, 5-19=-32/488, 8-15=-31/611, 9-15=-1194/213, 2-21=-493/4544, 4-19=-822/198, 4-20=-6/370, 3-20=-939/174, 9-14=-97/76, 8-16=-159/916, 6-18=-521/174, 5-18=-177/1023, 6-16=-109/145, 7-16=-376/159

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are MT20 plates unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
8) 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.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 223 lb uplift at joint 22 and 220 lb uplift at joint 11.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

May 24,2024

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

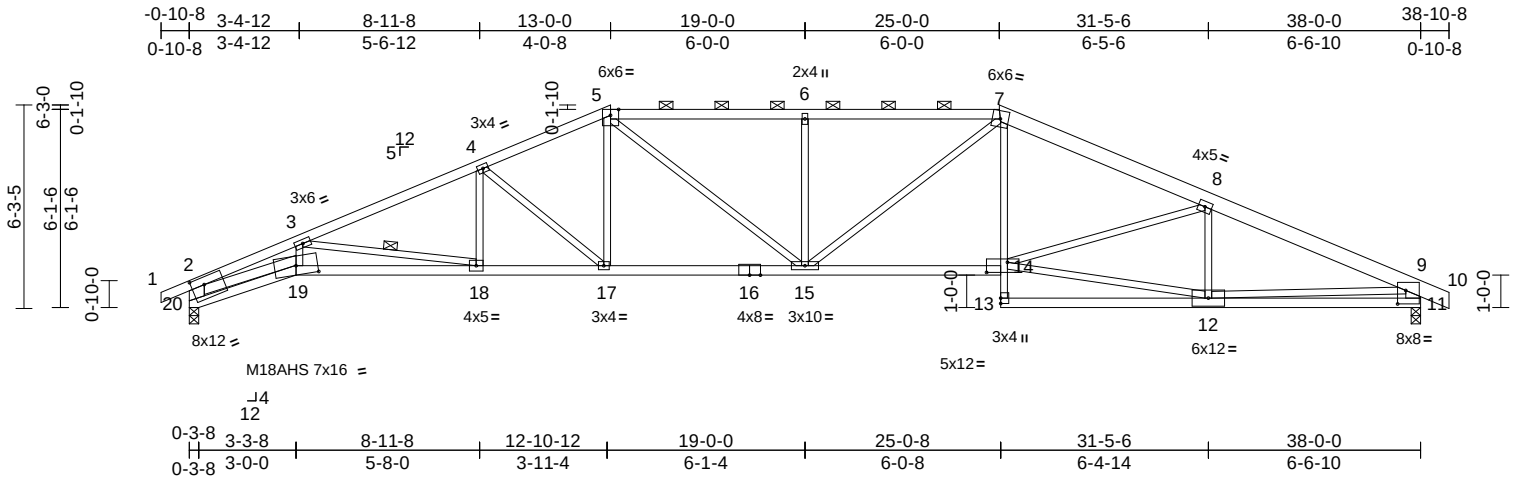
Job	Truss	Truss Type	Qty	Ply	Serenade - Craftsman FH 3-Car
Serenade - Craftsman	A4	Hip	1	1	I65799182
					Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Thu May 23 14:07:37 Page: 1

ID:aUMj1vUkVY9EIgxaGrXo0RzymK2-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

4421 SW Grindstone Cir
Lees Summit MO, 64082



Scale = 1:71.1

Plate Offsets (X, Y): [11:0-3-0,0-5-0], [14:0-7-12,0-3-12], [19:0-8-0,0-3-7], [20:0-4-12,0-2-12]

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	0.90	Vert(LL)	-0.34	15-17	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.85	Vert(CT)	-0.63	15-17	>715	240	M18AHS	142/136
BCLL	0.0*	Rep Stress Incr	YES	WB	0.95	Horz(CT)	0.34	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.23	15-17	>999	240	Weight: 160 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2 *Except* 7-10:2x6 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 19-16:2x4 SPF 2100F 1.8E, 7-13:2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except* 20-2:2x6 SPF No.2, 19-2:2x4 SPF 2100F 1.8E, 11-9:2x6 SP 2400F 2.0E

BRACING

TOP CHORD Structural wood sheathing directly applied or 1-10-13 oc purlins, except end verticals, and 2-0-0 oc purlins (2-2-0 max.): 5-7.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 3-18

REACTIONS (size) 11=0-3-8, 20=0-3-8
Max Horiz 20=-84 (LC 13)
Max Uplift 11=-198 (LC 5), 20=-198 (LC 4)
Max Grav 11=1767 (LC 1), 20=1767 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/30, 2-3=-5547/594, 3-4=-3871/432, 4-5=-3230/424, 5-6=-3347/478, 6-7=-3345/476, 7-8=-3398/430, 8-9=-3176/340, 9-10=0/30, 2-20=-1790/230, 9-11=-1696/229
BOT CHORD 19-20=-109/373, 18-19=-586/4981, 17-18=-304/3533, 15-17=-240/2926, 14-15=-256/3054, 13-14=0/115, 7-14=-25/624, 12-13=-7/104, 11-12=-121/987
WEBS 3-19=-29/692, 4-17=-773/199, 5-17=-70/580, 5-15=-110/706, 6-15=-513/203, 12-14=-246/2774, 8-14=-21/452, 8-12=-545/148, 2-19=-491/4727, 9-12=-154/1851, 4-18=0/384, 3-18=-1468/321, 7-15=-89/572

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are MT20 plates unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) All bearings are assumed to be SPF No.2 .
8) Bearing at joint(s) 20 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 198 lb uplift at joint 20 and 198 lb uplift at joint 11.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

May 24,2024

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

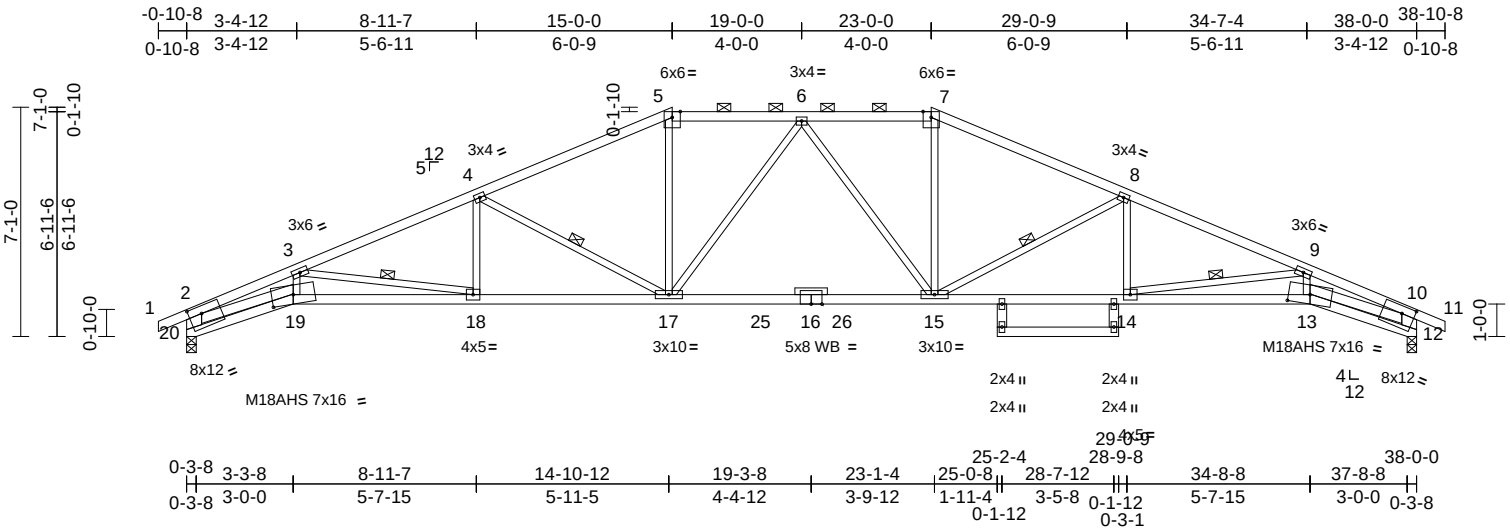
Job	Truss	Truss Type	Qty	Ply	Serenade - Craftsman FH 3-Car
Serenade - Craftsman	A5	Hip	1	1	I65799183
					Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Thu May 23 14:07:37 Page: 1

ID:T6IoFGMP6asF2g6H_VRbNEzymQf-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

4421 SW Grindstone Cir
Lees Summit MO, 64082



Scale = 1:71.2

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

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	0.81	Vert(LL)	-0.50	15-17	>909	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.72	Vert(CT)	-0.87	15-17	>519	240	M18AHS	142/136
BCLL	0.0*	Rep Stress Incr	YES	WB	0.51	Horz(CT)	0.47	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.24	15-17	>999	240	Weight: 153 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2

BOT CHORD 2x4 SPF No.2 *Except* 19-16,16-13:2x4 SPF 2100F 1.8E

WEBS 2x3 SPF No.2 *Except* 20-2,12-10:2x6 SPF No.2, 19-2,13-10:2x4 SPF 2100F 1.8E, 21-23,22-24:2x4 SPF No.2

OTHERS 2x3 SPF No.2

BRACING

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

BOT CHORD Rigid ceiling directly applied or 9-8-3 oc bracing.

WEBS 1 Row at midpt 3-18, 4-17, 8-15, 9-14

REACTIONS (size) 12=0-3-8, 20=0-3-8
Max Horiz 20=-94 (LC 13)
Max Uplift 12=-209 (LC 9), 20=-209 (LC 8)
Max Grav 12=1819 (LC 2), 20=1819 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/30, 2-3=-5743/669, 3-4=-4038/404, 4-5=-3118/335, 5-6=-2805/330, 6-7=-2805/330, 2-20=-1835/258, 10-12=-1835/228, 7-8=-3118/335, 8-9=-4038/373, 9-10=-5744/564, 10-11=0/30

BOT CHORD 19-20=-137/460, 18-19=-666/5151, 17-18=-353/3703, 15-17=-184/2915, 14-15=-248/3703, 13-14=-481/5151, 12-13=-37/422

WEBS 3-19=-45/788, 3-18=-1469/317, 4-18=0/464, 4-17=-1008/266, 5-17=-28/922, 7-15=-28/922, 8-15=-1008/252, 8-14=0/464, 9-14=-1469/255, 9-13=-4/788, 2-19=-546/4870, 10-13=-451/4870, 6-17=-407/103, 6-15=-407/103

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are MT20 plates unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) All bearings are assumed to be SPF No.2 .
8) Bearing at joint(s) 20, 12 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 209 lb uplift at joint 20 and 209 lb uplift at joint 12.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

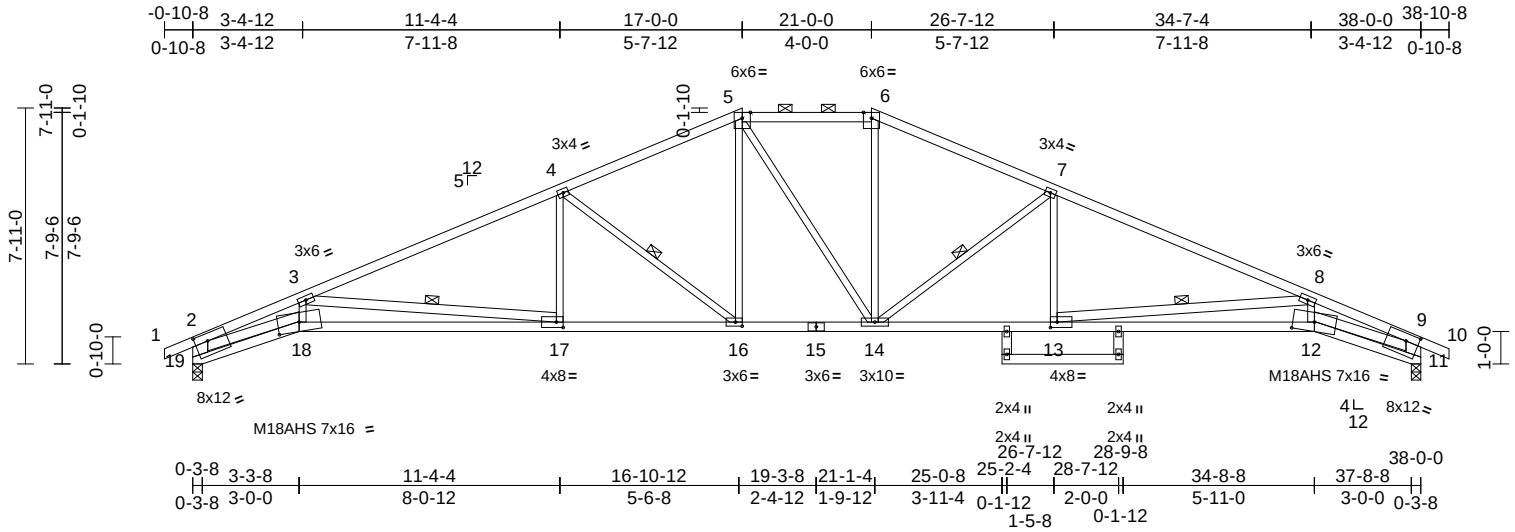
May 24,2024

Job	Truss	Truss Type	Qty	Ply	Serenade - Craftsman FH 3-Car
Serenade - Craftsman	A6	Hip	1	1	I65799184 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Thu May 23 14:07:37 Page: 1
ID:dbIP89GKYcOAdhfo9uJGB2zymS4-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

4421 SW Grindstone Cir
Lees Summit MO, 64082



Scale = 1:71.3

Plate Offsets (X, Y): [11:0-4-12,0-2-12], [12:0-8-0,0-3-7], [13:0-2-8,0-2-0], [16:0-2-8,0-1-8], [17:0-2-8,0-2-0], [18:0-8-0,0-3-7], [19:0-4-12,0-2-12]

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	0.74	Vert(LL)	-0.35	14-16	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.72	Vert(CT)	-0.70	17-18	>643	240	M18AHS	142/136
BCLL	0.0*	Rep Stress Incr	YES	WB	0.62	Horz(CT)	0.48	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.25	17-18	>999	240	Weight: 160 lb	FT = 10%

LUMBER

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

BOT CHORD 2x4 SPF No.2 *Except* 18-15,15-12:2x4 SPF 2100F 1.8E

WEBS 2x3 SPF No.2 *Except* 17-3,13-8,20-22,21-23:2x4 SPF No.2, 19-2,11-9:2x6 SPF No.2, 18-2,12-9:2x4 SPF 2100F 1.8E

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-8-12 oc purlins, except end verticals, and 2-0-0 oc purlins (3-6-4 max.): 5-6.

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
8-7-7 oc bracing: 17-18
9-11-12 oc bracing: 12-13.

WEBS 1 Row at midpt 3-17, 4-16, 7-14, 8-13

REACTIONS (size) 11=0-3-8, 19=0-3-8
Max Horiz 19=-109 (LC 13)
Max Uplift 11=-226 (LC 9), 19=-226 (LC 8)
Max Grav 11=1767 (LC 1), 19=1767 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 5-6=-2398/287, 6-7=-2696/283, 7-8=-3553/367, 8-9=-5709/692, 9-10=0/30, 2-19=-1785/261, 9-11=-1785/226, 1-2=0/30, 2-3=-5708/813, 3-4=-3554/395, 4-5=-2694/301

BOT CHORD 18-19=-114/341, 17-18=-827/5141, 16-17=-331/3215, 14-16=-121/2396, 13-14=-196/3214, 12-13=-613/5142, 11-12=0/323

WEBS 3-18=-40/741, 3-17=-1939/500, 4-17=0/478, 4-16=-1019/262, 5-16=-108/696, 5-14=-222/228, 6-14=-52/697, 7-14=-1016/250, 7-13=0/476, 8-13=-1941/420, 8-12=0/742, 2-18=-728/4945, 9-12=-619/4946

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are MT20 plates unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) All bearings are assumed to be SPF No.2 .
8) Bearing at joint(s) 19, 11 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 226 lb uplift at joint 19 and 226 lb uplift at joint 11.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

May 24,2024

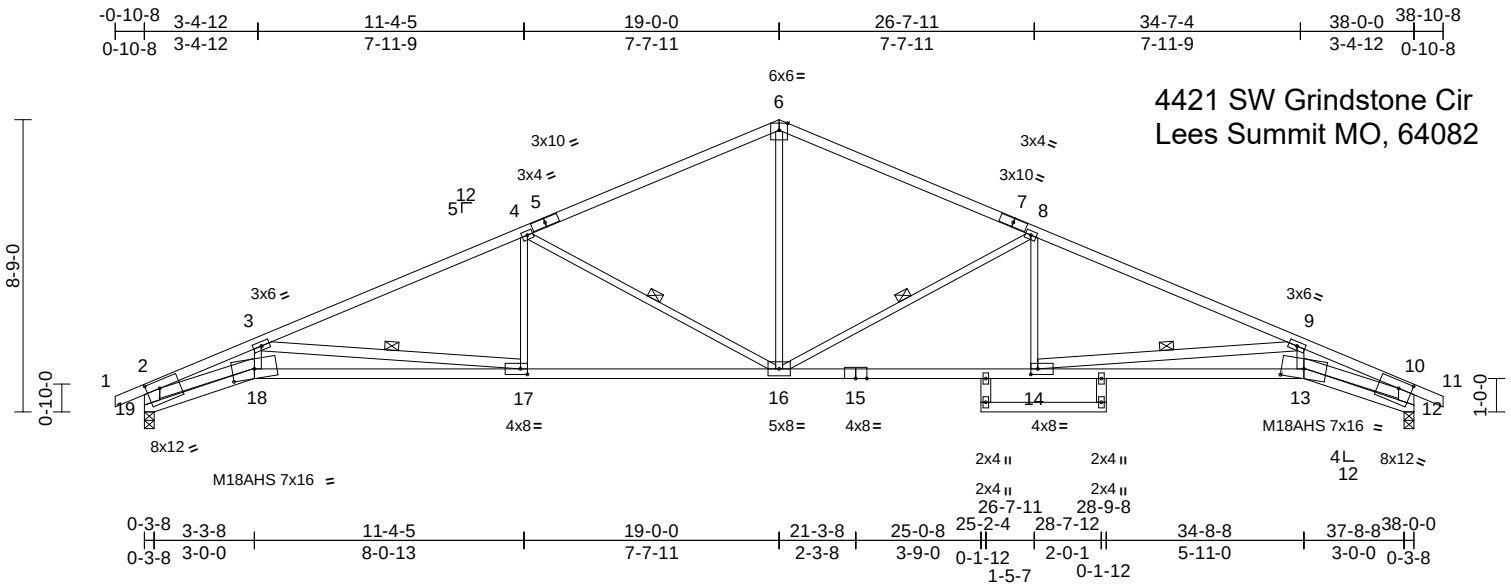
MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEES SUMMIT, MISSOURI
03/20/2025

Job	Truss	Truss Type	Qty	Ply	Serenade - Craftsman FH 3-Car
Serenade - Craftsman	B1	Roof Special	1	1	I65799185 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Thu May 23 14:07:37 ID:UzvNYmg1CzP7vKDHwiZDGqzymbt-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:69

Plate Offsets (X, Y): [12:0-4-12,0-2-12], [13:0-8-0,0-3-7], [14:0-2-8,0-2-0], [17:0-2-8,0-2-0], [18:0-8-0,0-3-7], [19:0-4-12,0-2-12]

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	0.67	Vert(LL)	-0.35	13-14	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.72	Vert(CT)	-0.71	13-14	>638	240	M18AHS	142/136
BCLL	0.0*	Rep Stress Incr	YES	WB	0.88	Horz(CT)	0.48	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.26	17-18	>999	240	Weight: 153 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF 2100F 1.8E
BOT CHORD 2x4 SPF No.2 *Except* 18-15,15-13:2x4 SPF 2100F 1.8E
WEBS 2x3 SPF No.2 *Except* 14-9,17-3,20-22,21-23:2x4 SPF No.2, 19-2,12-10:2x6 SPF No.2, 18-2,13-10:2x4 SPF 2100F 1.8E

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-11-15 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 8-3-13 oc bracing.
WEBS 1 Row at midpt 8-16, 9-14, 4-16, 3-17

REACTIONS (size) 12=0-3-8, 19=0-3-8
Max Horiz 19=124 (LC 8)
Max Uplift 12=-242 (LC 9), 19=-242 (LC 8)
Max Grav 12=1767 (LC 1), 19=1767 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/30, 2-3=-5684/871, 3-4=-3568/448, 4-6=-2454/302, 6-8=-2454/321, 8-9=-3568/416, 9-10=-5684/733, 10-11=0/30, 2-19=-1790/286, 10-12=-1790/245
BOT CHORD 18-19=-143/361, 17-18=-891/5115, 16-17=-398/3232, 14-16=-243/3232, 13-14=-647/5115, 12-13=-10/338
WEBS 6-16=-93/1339, 8-16=-1232/311, 8-14=0/499, 9-14=-1896/406, 9-13=0/740, 4-16=-1232/326, 4-17=0/499, 3-17=-1896/497, 3-18=-55/740, 2-18=-767/4905, 10-13=-642/4905

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) All plates are MT20 plates unless otherwise indicated.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) All bearings are assumed to be SPF No.2 .
7) Bearing at joint(s) 19, 12 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 242 lb uplift at joint 19 and 242 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

May 24,2024

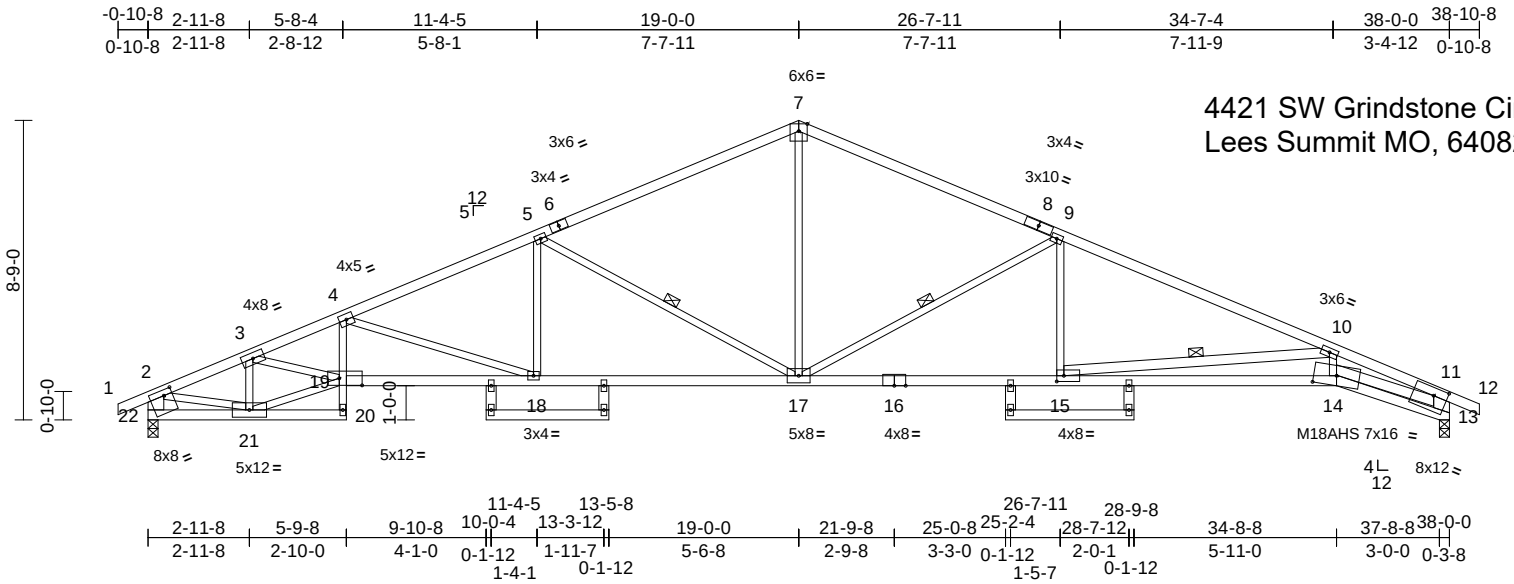
MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Serenade - Craftsman FH 3-Car
Serenade - Craftsman	B2	Roof Special	1	1	I65799186 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Thu May 23 14:07:38 ID:bO5a0y?X94TxptWjCf4KYEzymck-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

4421 SW Grindstone Cir
Lees Summit MO, 64082



Scale = 1:67.3

Plate Offsets (X, Y): [13:0-4-12,0-2-12], [14:0-8-0,0-3-7], [15:0-2-8,0-2-0], [19:0-8-0,0-2-8], [22:0-3-0,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.67	Vert(LL)	-0.33	14-15	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.72	Vert(CT)	-0.68	14-15	>666	240	M18AHS	142/136
BCLL	0.0*	Rep Stress Incr	YES	WB	0.87	Horz(CT)	0.38	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.23	14-15	>999	240	Weight: 160 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF 2100F 1.8E
BOT CHORD 2x4 SPF No.2 *Except* 20-4:2x3 SPF No.2, 19-16,16-14:2x4 SPF 2100F 1.8E
WEBS 2x3 SPF No.2 *Except* 22-2,13-11:2x6 SPF No.2, 14-11:2x4 SPF 2100F 1.8E, 23-25,24-26,27-29,28-30,15-10:2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-11-15 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 9-8-14 oc bracing.
WEBS 1 Row at midpt 5-17, 9-17, 10-15

REACTIONS (size) 13=0-3-8, 22=0-3-8
Max Horiz 22=125 (LC 12)
Max Uplift 13=-242 (LC 9), 22=-242 (LC 8)
Max Grav 13=1767 (LC 1), 22=1767 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/30, 2-3=-2616/331, 3-4=-4441/614, 4-5=-3512/452, 5-7=-2451/301, 7-9=-2457/320, 9-10=-3566/416, 10-11=-5687/733, 11-12=0/30, 2-22=-1695/250, 11-13=-1790/245
BOT CHORD 21-22=-162/345, 20-21=-31/149, 19-20=0/71, 4-19=-34/416, 18-19=-615/4119, 17-18=-390/3189, 15-17=-244/3230, 14-15=-647/5117, 13-14=-10/337
WEBS 10-14=0/741, 11-14=-642/4908, 4-18=-980/238, 7-17=-85/1320, 5-17=-1178/317, 5-18=0/504, 9-17=-1225/311, 9-15=0/495, 10-15=-1900/406, 3-21=-1290/233, 3-19=-229/1795, 19-21=-383/2346, 2-21=-235/2059

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) All plates are MT20 plates unless otherwise indicated.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) All bearings are assumed to be SPF No.2 .
8) Bearing at joint(s) 13 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 242 lb uplift at joint 22 and 242 lb uplift at joint 13.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

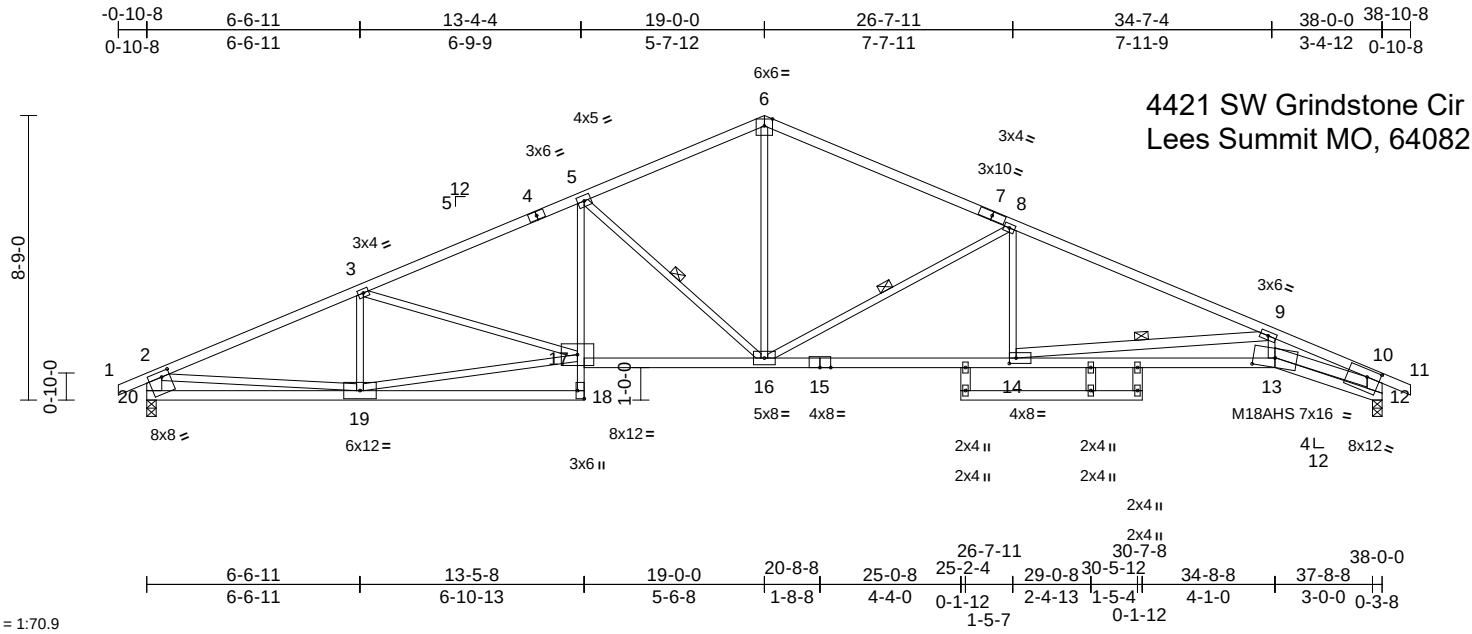
May 24,2024

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

Job	Truss	Truss Type	Qty	Ply	Serenade - Craftsman FH 3-Car
Serenade - Craftsman	B3	Roof Special	1	1	I65799187 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871, Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Thu May 23 14:07:38 Page: 1

ID:Iz3DGJ5Up10aJLHIJPEk?Pzymdv-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:70.9

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.66	Vert(LL)	-0.33	13-14	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.88	Vert(CT)	-0.67	13-14	>670	240	M18AHS	142/136
BCLL	0.0*	Rep Stress Incr	YES	WB	0.93	Horz(CT)	0.34	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.23	13-14	>999	240	Weight: 161 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF 2100F 1.8E

BOT CHORD 2x4 SPF No.2 *Except* 18-5:2x3 SPF No.2, 15-13:2x4 SPF 2100F 1.8E

WEBS 2x3 SPF No.2 *Except* 14-9,21-23,22-24,25-26:2x4 SPF No.2, 20-2,12-10:2x6 SPF No.2, 13-10:2x4 SPF 2100F 1.8E

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-11-15 oc purlins, except end verticals.

BOT CHORD Rigid ceiling directly applied or 9-9-0 oc bracing.

WEBS 1 Row at midpt 5-16, 8-16, 9-14

REACTIONS (size) 12=0-3-8, 20=0-3-8
Max Horiz 20=125 (LC 12)
Max Uplift 12=-242 (LC 9), 20=-242 (LC 8)
Max Grav 12=1767 (LC 1), 20=1767 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/30, 2-3=-3110/386, 3-5=-3283/419, 5-6=-2416/307, 6-8=-2453/320, 8-9=-3568/416, 9-10=-5683/733, 10-11=0/30, 2-20=-1694/272, 10-12=-1791/246

BOT CHORD 19-20=-250/618, 18-19=-8/124, 17-18=0/126, 5-17=-41/594, 16-17=-325/2955, 14-16=-243/3233, 13-14=-647/5113, 12-13=-10/339

WEBS 3-19=-551/178, 17-19=-405/2698, 3-17=-3/240, 5-16=-1077/285, 6-16=-124/1390, 8-16=-1236/310, 8-14=0/500, 9-14=-1893/406, 9-13=-1/741, 2-19=-158/2177, 10-13=-642/4901

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) All plates are MT20 plates unless otherwise indicated.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) All bearings are assumed to be SPF No.2 .
7) Bearing at joint(s) 12 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 242 lb uplift at joint 20 and 242 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

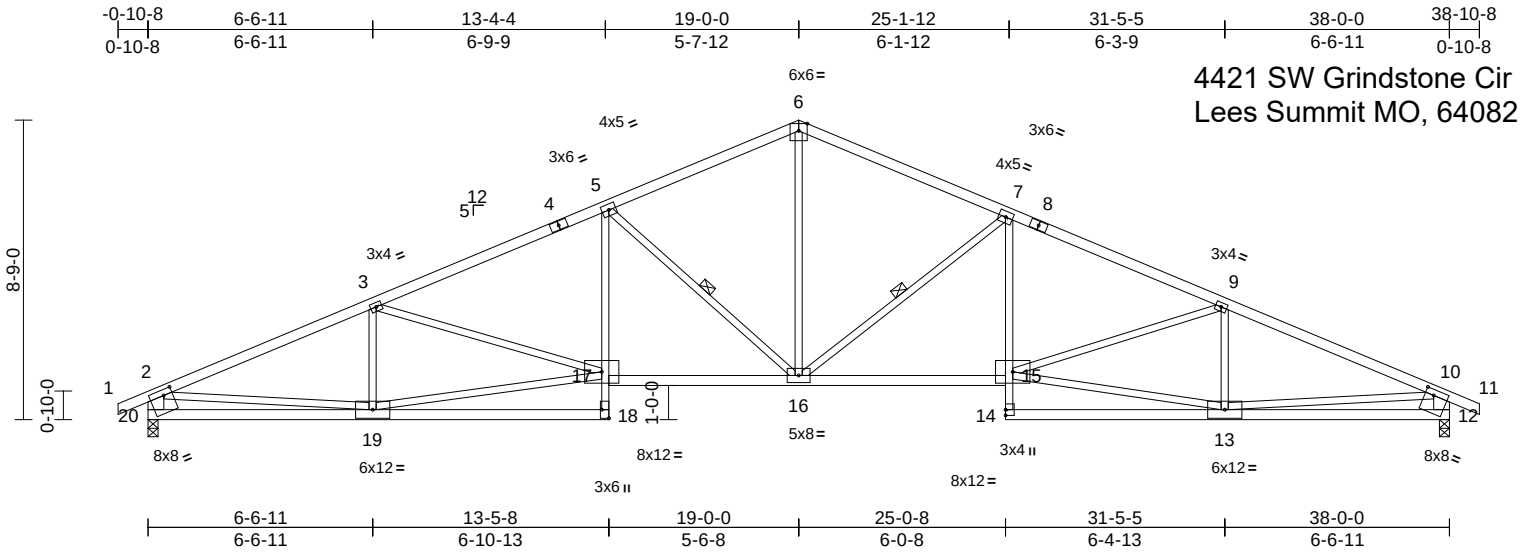
May 24,2024

Job	Truss	Truss Type	Qty	Ply	Serenade - Craftsman FH 3-Car
Serenade - Craftsman	B4	Roof Special	2	1	I65799188 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Thu May 23 14:07:38 ID:erlP2mLzfg4WFgzB7gbzy7zymeu-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:67.3

Plate Offsets (X, Y): [12:0-3-0,0-2-0], [18:Edge,0-2-8], [20:0-3-0,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.74	Vert(LL)	-0.29	16-17	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.87	Vert(CT)	-0.55	15-16	>821	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.93	Horz(CT)	0.21	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.19	16-17	>999	240	Weight: 157 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2

BOT CHORD 2x4 SPF No.2 *Except* 18-5,7-14:2x3 SPF No.2

WEBS 2x3 SPF No.2 *Except* 20-2,12-10:2x6 SPF 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.

WEBS 1 Row at midpt 5-16, 7-16

REACTIONS (size) 12=0-3-8, 20=0-3-8
Max Horiz 20=125 (LC 8)
Max Uplift 12=-242 (LC 9), 20=-242 (LC 8)
Max Grav 12=1767 (LC 1), 20=1767 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/30, 2-3=-3110/386, 3-5=-3283/419, 5-6=-2417/306, 6-7=-2424/322, 7-9=-3355/399, 9-10=-3099/384, 10-11=0/30, 2-20=-1693/272, 10-12=-1692/273

BOT CHORD 19-20=-252/588, 18-19=-8/131, 17-18=0/126, 5-17=-41/589, 16-17=-325/2955, 15-16=-189/3035, 14-15=0/116, 7-15=-22/594, 13-14=-11/119, 12-13=-144/611

WEBS 3-19=-555/178, 17-19=-405/2693, 3-17=-6/239, 5-16=-1079/287, 6-16=-132/1427, 7-16=-1124/279, 13-15=-273/2699, 9-15=-33/286, 9-13=-594/153, 2-19=-156/2208, 10-13=-136/2173

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
5) All bearings are assumed to be SPF No.2 .
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 242 lb uplift at joint 20 and 242 lb uplift at joint 12.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

May 24,2024

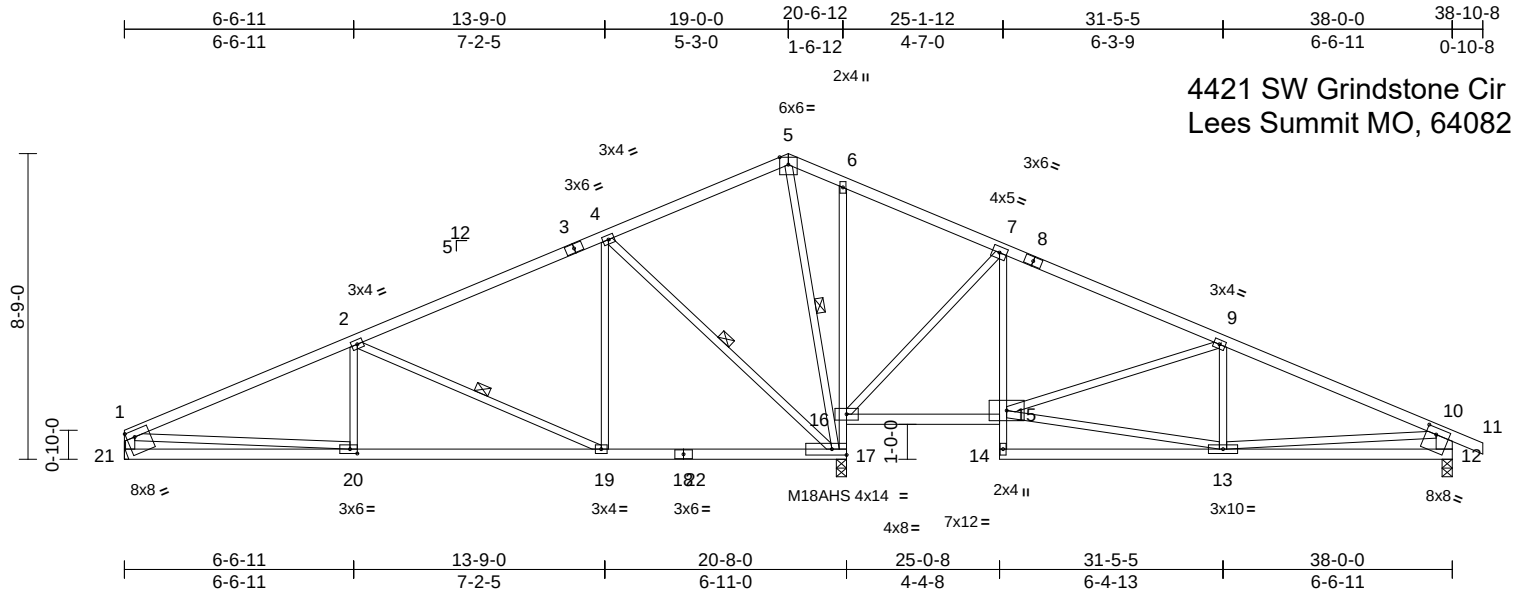
MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Serenade - Craftsman FH 3-Car
Serenade - Craftsman	B5A	Roof Special	5	1	I65799189 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Thu May 23 14:07:38 ID:911TRY5Mv167OrbPaYFpGPzymgV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

4421 SW Grindstone Cir
Lees Summit MO, 64082



Scale = 1:65.9

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.53	Vert(LL)	-0.08	17-19	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.61	Vert(CT)	-0.14	17-19	>999	240	M18AHS	142/136
BCLL	0.0*	Rep Stress Incr	YES	WB	0.89	Horz(CT)	0.02	17	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.04	19-20	>999	240	Weight: 159 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 17-6,7-14:2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except* 21-1:2x4 SPF No.2, 12-10:2x6 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-5-7 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 2-19, 4-17, 5-17

REACTIONS (size) 12=0-3-8, 17=0-3-8, 21= Mechanical
Max Horiz 21=-133 (LC 9)
Max Uplift 12=-191 (LC 9), 17=-132 (LC 8), 21=-157 (LC 8)
Max Grav 12=748 (LC 24), 17=2019 (LC 2), 21=862 (LC 23)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1385/272, 2-4=-699/204, 4-5=0/376, 5-6=0/402, 6-7=0/421, 7-9=-407/248, 9-10=-987/280, 10-11=0/30, 1-21=-774/190, 10-12=-686/223
BOT CHORD 20-21=-181/382, 19-20=-308/1220, 17-19=-120/571, 16-17=-928/266, 6-16=-251/116, 15-16=-44/295, 14-15=0/108, 7-15=-16/498, 13-14=-5/53, 12-13=-127/377
WEBS 2-20=0/230, 2-19=-720/206, 4-19=0/609, 4-17=-1011/242, 5-17=-384/0, 7-16=-810/216, 13-15=-182/807, 9-15=-598/146, 9-13=-52/160, 1-20=-128/894, 10-13=-57/479

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) All plates are MT20 plates unless otherwise indicated.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) All bearings are assumed to be SPF No.2 .
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 157 lb uplift at joint 21, 191 lb uplift at joint 12 and 132 lb uplift at joint 17.
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.

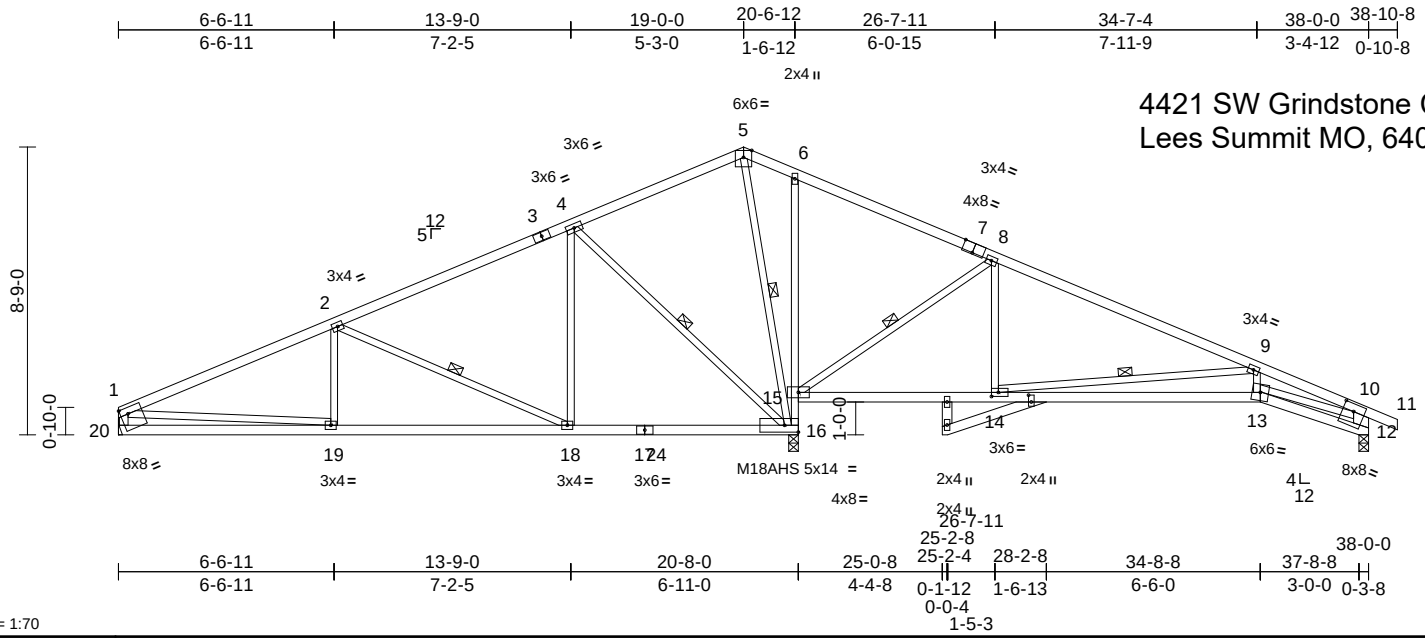
LOAD CASE(S) Standard

May 24,2024

Job	Truss	Truss Type	Qty	Ply	Serenade - Craftsman FH 3-Car
Serenade - Craftsman	B6A	Roof Special	1	1	I65799190 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871, Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Thu May 23 14:07:38 Page: 1

ID:N8vJvlz1pSOKkY_XeW4??ozymhy-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:70

Plate Offsets (X, Y): [7:0-4-0,Edge], [12:0-4-0,0-2-12], [14:0-2-8,0-1-8], [20:0-2-12,0-2-4], [23:0-2-8,0-1-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.71	Vert(LL)	-0.20	13-14	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.83	Vert(CT)	-0.39	13-14	>540	240	M18AHS	142/136
BCLL	0.0*	Rep Stress Incr	YES	WB	0.83	Horz(CT)	0.02	16	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.11	13-14	>999	240	Weight: 155 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2

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

WEBS 2x3 SPF No.2 *Except* 20-1,21-22:2x4 SPF No.2, 12-10:2x6 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-9-13 oc purlins, except end verticals.

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
8-8-13 oc bracing: 13-14.

WEBS 1 Row at midpt 2-18, 4-16, 5-16, 8-15, 9-14

REACTIONS (size) 12=0-3-8, 16=0-3-8, 20= Mechanical
Max Horiz 20=-132 (LC 9)
Max Uplift 12=-175 (LC 9), 16=-135 (LC 8), 20=-156 (LC 8)
Max Grav 12=694 (LC 24), 16=2114 (LC 2), 20=839 (LC 23)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-1336/269, 2-4=-656/200, 4-5=0/442, 5-6=0/477, 6-8=0/527, 8-9=-528/217, 9-10=-1979/508, 10-11=0/30, 1-20=-758/188, 10-12=-671/174

BOT CHORD 19-20=-180/378, 18-19=-304/1175, 16-18=-116/523, 15-16=-998/295, 6-15=-341/158, 14-15=-57/412, 13-14=-445/1760, 12-13=0/137

WEBS 2-19=0/233, 2-18=-728/206, 4-18=0/622, 4-16=-1027/243, 5-16=-420/0, 8-15=-975/240, 8-14=0/441, 9-14=-1357/391, 9-13=0/413, 1-19=-125/852, 10-13=-448/1701

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) All plates are MT20 plates unless otherwise indicated.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) All bearings are assumed to be SPF No.2 .
7) Refer to girder(s) for truss to truss connections.
8) Bearing at joint(s) 12 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 156 lb uplift at joint 20, 175 lb uplift at joint 12 and 135 lb uplift at joint 16.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

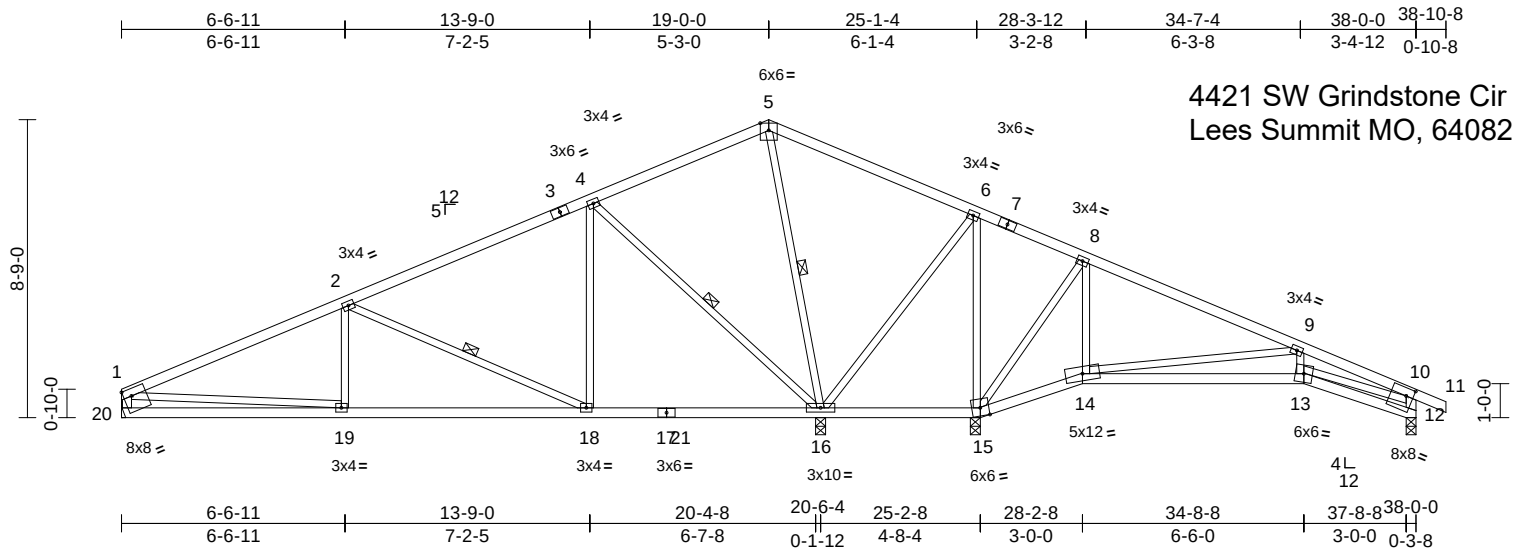
May 24,2024

Job	Truss	Truss Type	Qty	Ply	Serenade - Craftsman FH 3-Car
Serenade - Craftsman	B7A	Roof Special	3	1	I65799191 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Thu May 23 14:07:38 ID:EK6Z0o?jTTp2e1xquYlwfKzymqy-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:67.6

Plate Offsets (X, Y): [12:0-2-8,0-2-12], [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	0.58	Vert(LL)	-0.08	13-14	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.50	Vert(CT)	-0.17	13-14	>916	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.98	Horz(CT)	0.04	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.04	18-19	>999	240	Weight: 151 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 20-1,12-10:2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 5-0-6 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 2-18, 4-16, 5-16

REACTIONS (size) 12=0-3-8, 15=0-3-8, 16=0-3-8, 20= Mechanical
Max Horiz 20=-133 (LC 9)
Max Uplift 12=-76 (LC 9), 15=-234 (LC 9), 16=-267 (LC 8), 20=-118 (LC 8)
Max Grav 12=354 (LC 22), 15=1049 (LC 22), 16=1771 (LC 2), 20=715 (LC 23)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1090/190, 2-4=-384/111, 4-5=0/679, 5-6=-2/860, 6-8=-20/816, 8-9=-59/601, 9-10=-701/135, 10-11=0/27, 1-20=-646/151, 10-12=-331/83
BOT CHORD 19-20=-174/359, 18-19=-231/937, 16-18=-72/263, 15-16=-716/203, 14-15=-520/174, 13-14=-100/600, 12-13=-5/64
WEBS 6-15=-513/144, 8-15=-451/85, 8-14=0/199, 9-14=-962/259, 9-13=0/255, 1-19=-58/645, 10-13=-101/589, 2-19=0/254, 2-18=-769/216, 4-18=-4/604, 4-16=-1002/246, 5-16=-893/82, 6-16=-203/155

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
5) All bearings are assumed to be SPF No.2 .
6) Refer to girder(s) for truss to truss connections.
7) Bearing at joint(s) 12 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 118 lb uplift at joint 20, 234 lb uplift at joint 15, 76 lb uplift at joint 12 and 267 lb uplift at joint 16.
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.

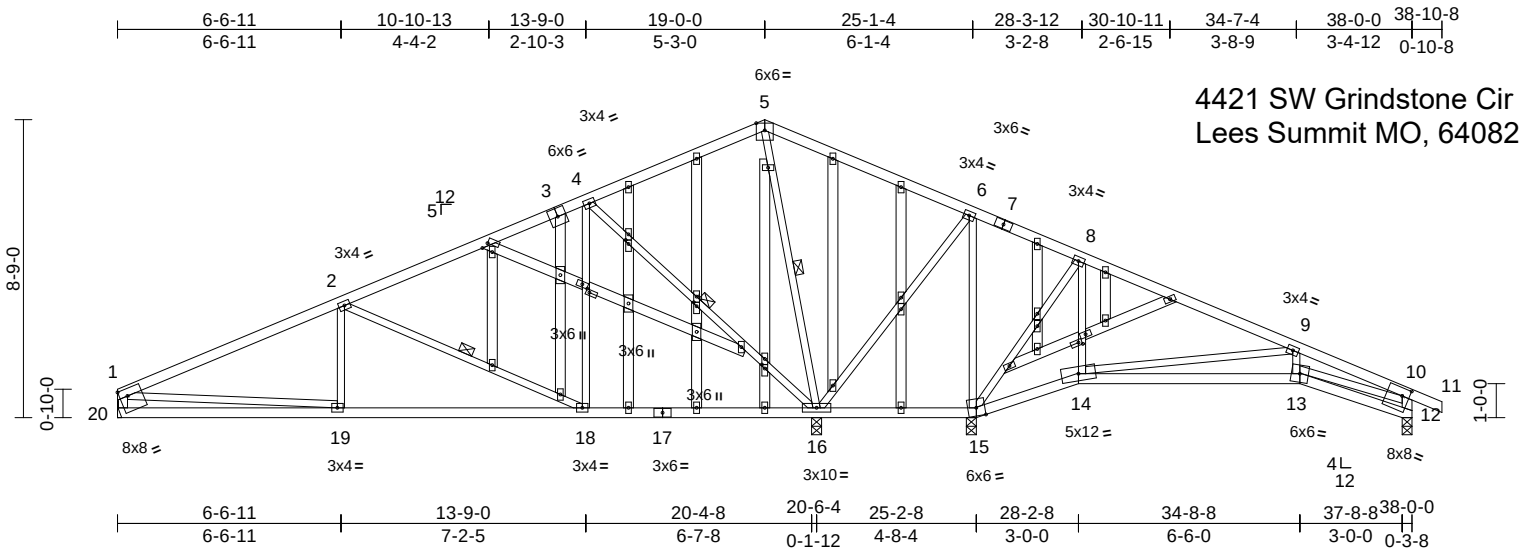
LOAD CASE(S) Standard

May 24,2024

Job	Truss	Truss Type	Qty	Ply	Serenade - Craftsman FH 3-Car
Serenade - Craftsman	B8A	Roof Special	1	1	I65799192 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Thu May 23 14:07:39 ID:JyvoXcSxTSvd_?2WEV?DHYzymvX-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



4421 SW Grindstone Cir
Lees Summit MO, 64082

Scale = 1:67.6

Plate Offsets (X, Y): [12:0-2-8,0-2-12], [20:Edge,0-2-8], [21:0-1-0,0-2-4], [22:0-1-4,0-1-0], [25:0-1-4,0-1-0], [27:0-1-6,0-1-0], [30:0-1-6,0-1-0], [34:0-1-6,0-1-0]

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	0.58	Vert(LL)	-0.07	13-14	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.39	Vert(CT)	-0.16	13-14	>978	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.97	Horz(CT)	0.04	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.04	18-19	>999	240	Weight: 221 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 20-1,12-10,21-22,22-23,24-25,25-26:2x4 SPF No.2
OTHERS 2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 5-0-6 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 2-18, 4-16, 5-16

REACTIONS (size) 12=0-3-8, 15=0-3-8, 16=0-3-8, 20= Mechanical
Max Horiz 20=-133 (LC 9)
Max Uplift 12=-76 (LC 9), 15=-234 (LC 9), 16=-267 (LC 8), 20=-118 (LC 8)
Max Grav 12=354 (LC 22), 15=1049 (LC 22), 16=1669 (LC 1), 20=708 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1090/190, 2-4=-384/111, 4-5=0/654, 5-6=-2/846, 6-8=-20/790, 8-9=-59/589, 9-10=-701/135, 10-11=0/27, 1-20=-646/151, 10-12=-331/83
BOT CHORD 19-20=-174/309, 18-19=-231/936, 16-18=-72/263, 15-16=-683/203, 14-15=-492/174, 13-14=-100/600, 12-13=-5/61
WEBS 2-19=0/254, 2-18=-756/216, 4-18=-4/492, 4-16=-936/246, 5-16=-893/82, 6-16=-203/155, 6-15=-513/144, 8-15=-444/85, 8-14=0/195, 9-14=-956/259, 9-13=0/252, 1-19=-58/645, 10-13=-101/589

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) All bearings are assumed to be SPF No.2 .
10) Refer to girder(s) for truss to truss connections.
11) Bearing at joint(s) 12 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 118 lb uplift at joint 20, 234 lb uplift at joint 15, 76 lb uplift at joint 12 and 267 lb uplift at joint 16.
13) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

May 24,2024

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

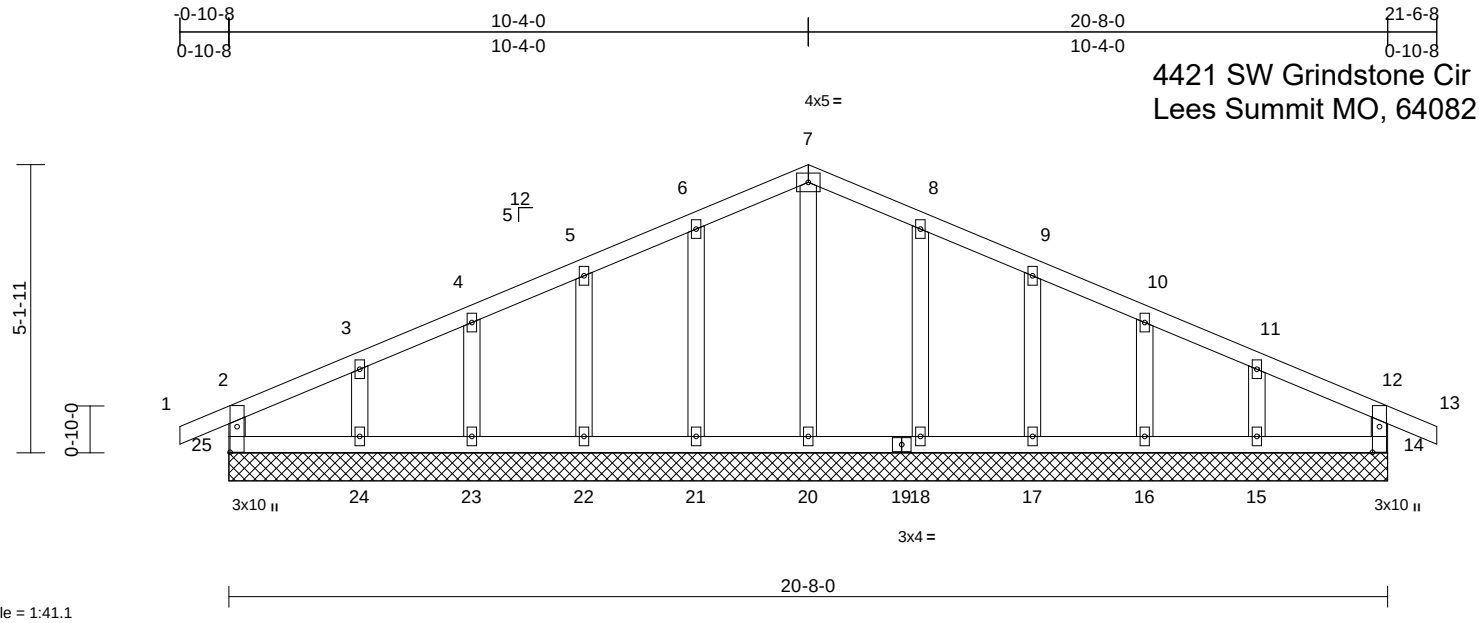
RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEES SUMMIT, MISSOURI
03/20/2025

Job	Truss	Truss Type	Qty	Ply	Serenade - Craftsman FH 3-Car
Serenade - Craftsman	C1	Common Supported Gable	1	1	I65799193 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Thu May 23 14:07:39 ID:pRvbEG8hlaWMk2g2kgbCjzzymzo-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:41.1

Plate Offsets (X, Y): [14:0-5-8,0-1-8], [25:0-5-8,0-1-8]

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	0.07	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	14	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 80 lb	FT = 10%

LUMBER

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

BRACING

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

REACTIONS (size) 14=20-8-0, 15=20-8-0, 16=20-8-0, 17=20-8-0, 18=20-8-0, 20=20-8-0, 21=20-8-0, 22=20-8-0, 23=20-8-0, 24=20-8-0, 25=20-8-0
Max Horiz 25=62 (LC 12)
Max Uplift 14=-35 (LC 5), 15=-70 (LC 9), 16=-42 (LC 9), 17=-50 (LC 9), 18=-50 (LC 9), 21=-50 (LC 8), 22=-50 (LC 8), 23=-40 (LC 8), 24=-75 (LC 8), 25=-36 (LC 4)
Max Grav 14=174 (LC 22), 15=187 (LC 1), 16=178 (LC 22), 17=179 (LC 1), 18=191 (LC 22), 20=164 (LC 1), 21=191 (LC 21), 22=179 (LC 1), 23=178 (LC 21), 24=187 (LC 1), 25=174 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 2-25=-154/49, 1-2=0/27, 2-3=-64/53, 3-4=-37/72, 4-5=-30/93, 5-6=-30/115, 6-7=-34/134, 7-8=-34/128, 8-9=-30/102, 9-10=-30/80, 10-11=-31/59, 11-12=-53/43, 12-13=0/27, 12-14=-154/49
BOT CHORD 24-25=-10/50, 23-24=-10/50, 22-23=-10/50, 21-22=-10/50, 20-21=-10/50, 18-20=-10/50, 17-18=-10/50, 16-17=-10/50, 15-16=-10/50, 14-15=-10/50
WEBS 7-20=-124/0, 6-21=-151/74, 5-22=-138/73, 4-23=-140/66, 3-24=-143/91, 8-18=-151/74, 9-17=-138/73, 10-16=-140/67, 11-15=-143/88

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) 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 SPF No.2 .
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 36 lb uplift at joint 25, 35 lb uplift at joint 14, 50 lb uplift at joint 21, 50 lb uplift at joint 22, 40 lb uplift at joint 23, 75 lb uplift at joint 24, 50 lb uplift at joint 18, 50 lb uplift at joint 17, 42 lb uplift at joint 16 and 70 lb uplift at joint 15.
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

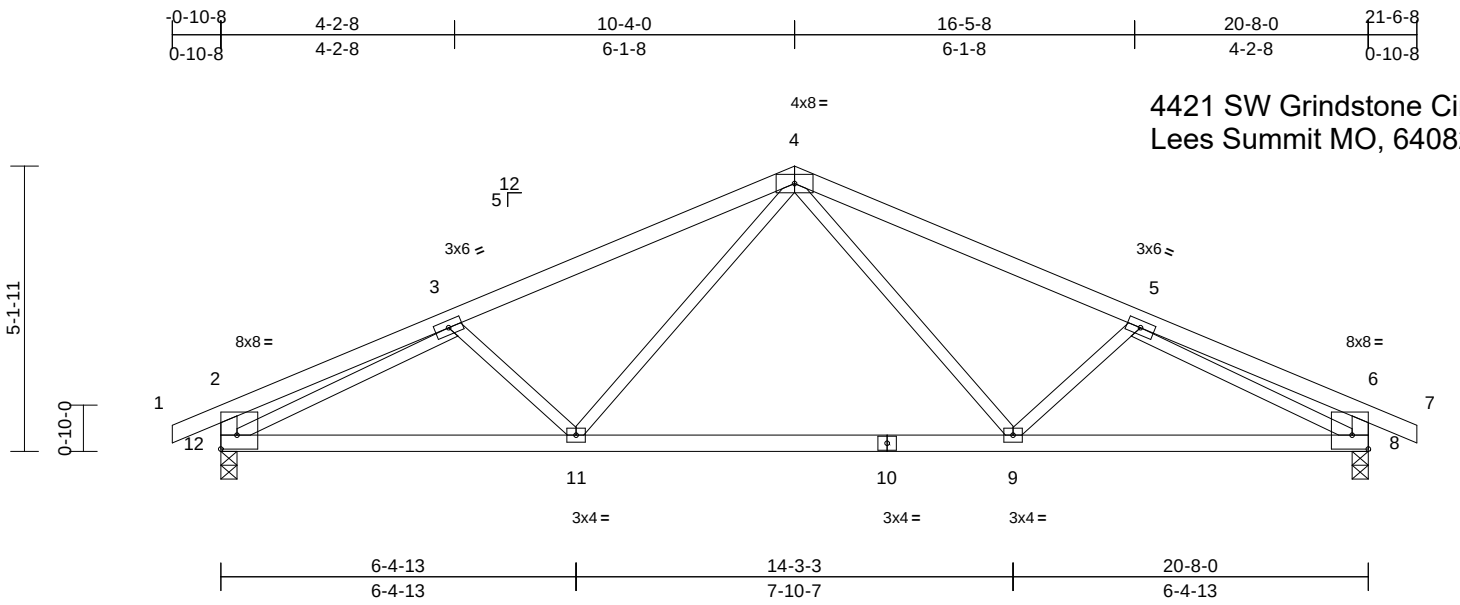
May 24,2024

Job	Truss	Truss Type	Qty	Ply	Serenade - Craftsman FH 3-Car
Serenade - Craftsman	C2	Common	1	1	I65799194 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Thu May 23 14:07:39 ID:EYea?vbu2xA6gk?9PxmtjmzymzD-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

4421 SW Grindstone Cir
Lees Summit MO, 64082



Scale = 1:41.5

Plate Offsets (X, Y): [2:Edge,0-3-0], [6:Edge,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	0.56	Vert(LL)	-0.08	9-11	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.48	Vert(CT)	-0.20	9-11	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.70	Horz(CT)	0.04	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.05	9-11	>999	240	Weight: 74 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-10-3 oc purlins, except end verticals.
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=62 (LC 8)
Max Uplift 8=-140 (LC 9), 12=-140 (LC 8)
Max Grav 8=988 (LC 1), 12=988 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/27, 2-3=-271/40, 3-4=-1396/189, 4-5=-1396/189, 5-6=-271/40, 6-7=0/27, 2-12=-279/73, 6-8=-279/73
BOT CHORD 11-12=-230/1358, 9-11=-61/973, 8-9=-168/1358
WEBS 4-9=-51/417, 5-9=-256/190, 4-11=-51/417, 3-11=-256/190, 3-12=-1323/197, 5-8=-1323/197

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
5) All bearings are assumed to be SPF No.2 .
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 140 lb uplift at joint 12 and 140 lb uplift at joint 8.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

May 24,2024

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

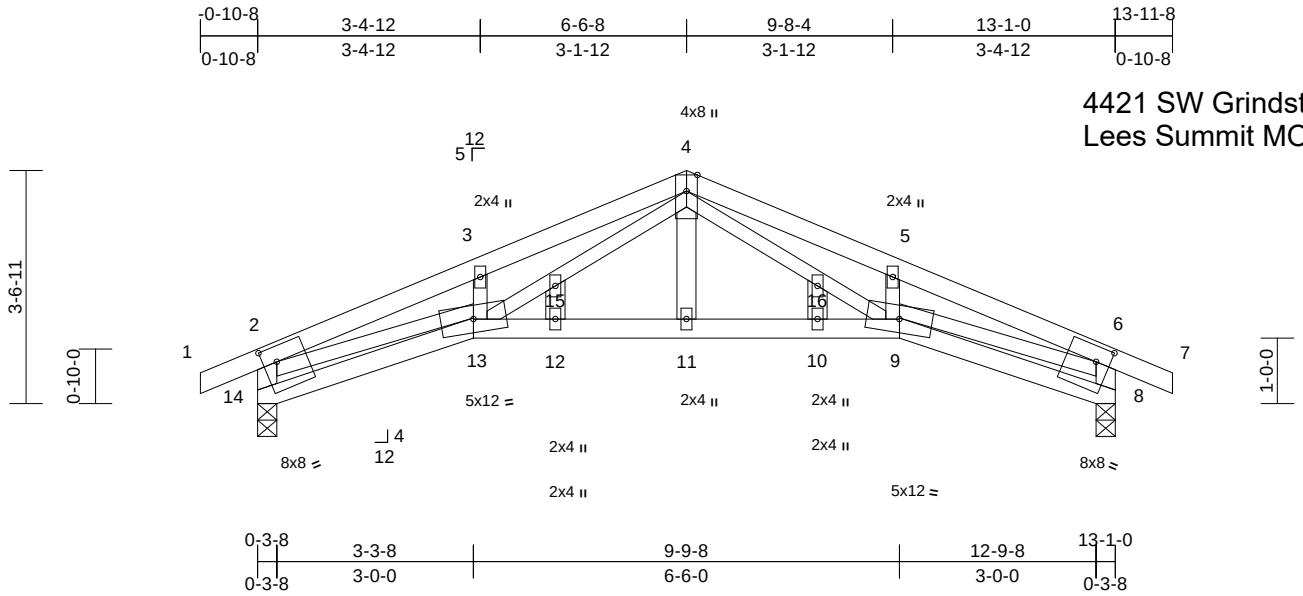
RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEES SUMMIT, MISSOURI
03/20/2025

Job	Truss	Truss Type	Qty	Ply	Serenade - Craftsman FH 3-Car
Serenade - Craftsman	D1	Roof Special	1	1	I65799195 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Thu May 23 14:07:39 ID:5NA8c2YPVemFhRSW6foDCZzynfA-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

4421 SW Grindstone Cir
Lees Summit MO, 64082



Scale = 1:35.2

Plate Offsets (X, Y): [8:0-2-8,0-2-12], [14:0-2-8,0-2-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.24	Vert(LL)	-0.07	9-10	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.30	Vert(CT)	-0.12	9-10	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.40	Horz(CT)	0.09	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.05	13	>999	240	Weight: 51 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 14-2,8-6:2x4 SPF No.2
OTHERS 2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-6-9 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 8=0-3-8, 14=0-3-8
Max Horiz 14=-33 (LC 9)
Max Uplift 8=-97 (LC 9), 14=-96 (LC 8)
Max Grav 8=647 (LC 1), 14=647 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/27, 2-3=-1544/189, 3-4=-1522/260, 4-5=-1523/230, 5-6=-1552/159, 6-7=0/27, 2-14=-652/130, 6-8=-652/120
BOT CHORD 13-14=-71/226, 12-13=-29/848, 11-12=-29/848, 10-11=-28/849, 9-10=-28/849, 8-9=-34/223
WEBS 4-16=-166/666, 9-16=-161/636, 5-9=-165/119, 13-15=-176/631, 4-15=-185/673, 3-13=-177/118, 2-13=-102/1162, 6-9=-77/1174, 4-11=0/133, 12-15=-16/74, 10-16=-10/56

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
5) Gable studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) All bearings are assumed to be SPF No.2 .
9) Bearing at joint(s) 14, 8 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 96 lb uplift at joint 14 and 97 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
JUAN GARCIA
NUMBER E-2000162101
PROFESSIONAL ENGINEER

JUAN GARCIA LICENSED
16952
KANSAS
PROFESSIONAL ENGINEER

May 24,2024

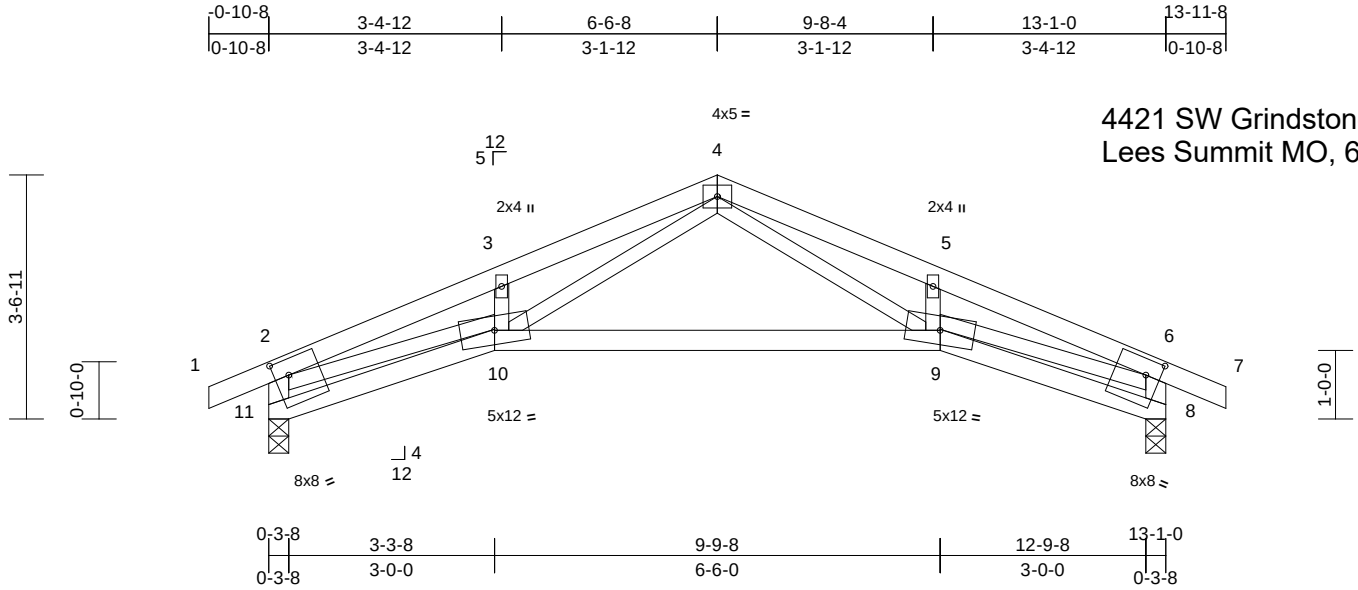
MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEES SUMMIT, MISSOURI
03/20/2025

Job	Truss	Truss Type	Qty	Ply	Serenade - Craftsman FH 3-Car
Serenade - Craftsman	D2	Roof Special	1	1	I65799196 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Thu May 23 14:07:39 ID:VDNipuoyooHP5V_MHs9v0nzynes-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



4421 SW Grindstone Cir
Lees Summit MO, 64082

Scale = 1:33.6

Plate Offsets (X, Y): [8:0-2-8,0-2-12], [11:0-2-8,0-2-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.25	Vert(LL)	-0.10	9-10	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.44	Vert(CT)	-0.23	9-10	>656	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.43	Horz(CT)	0.09	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.06	9-10	>999	240	Weight: 47 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-5-3 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 8=0-3-8, 11=0-3-8
Max Horiz 11=-33 (LC 9)
Max Uplift 8=-96 (LC 9), 11=-96 (LC 8)
Max Grav 8=647 (LC 1), 11=647 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/27, 2-3=-1620/185, 3-4=-1595/259, 4-5=-1595/221, 5-6=-1620/147, 6-7=0/27, 2-11=-673/128, 6-8=-673/117
BOT CHORD 10-11=-71/218, 9-10=-50/788, 8-9=-34/218
WEBS 4-9=-130/810, 5-9=-172/123, 4-10=-153/810, 3-10=-172/121, 2-10=-98/1247, 6-9=-65/1247

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
5) All bearings are assumed to be SPF No.2 .
6) Bearing at joint(s) 11, 8 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 96 lb uplift at joint 11 and 96 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.

LOAD CASE(S) Standard

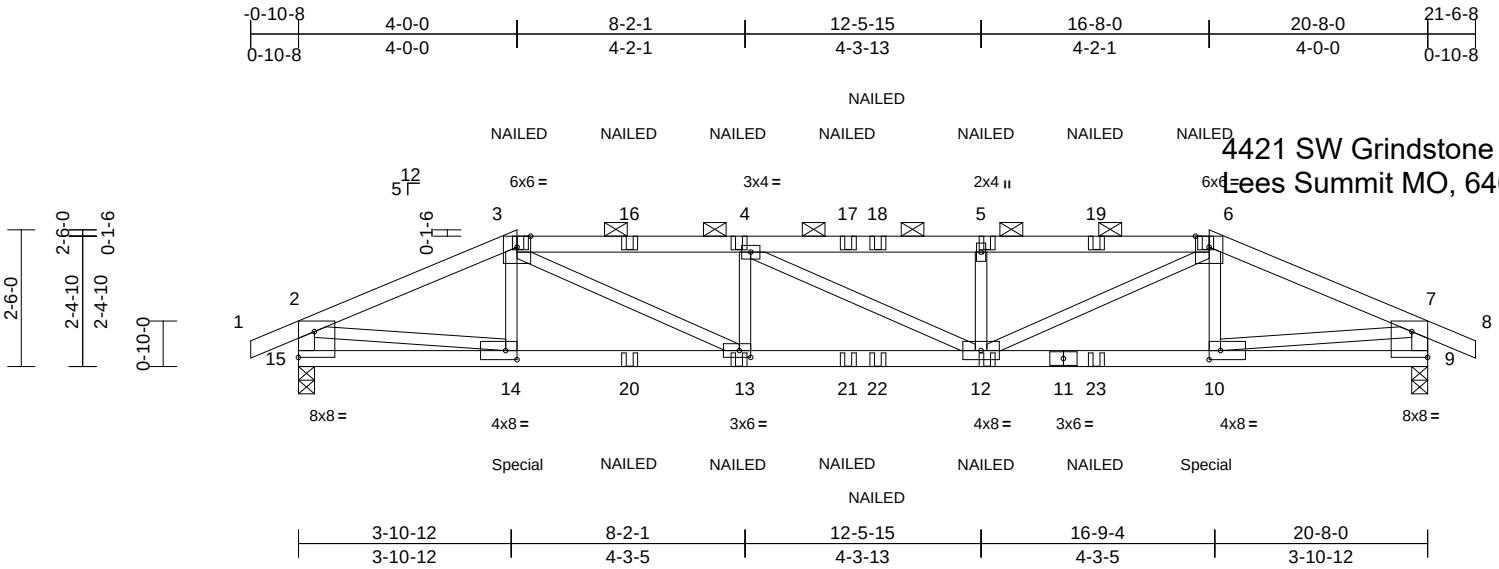
May 24,2024

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

Job	Truss	Truss Type	Qty	Ply	Serenade - Craftsman FH 3-Car
Serenade - Craftsman	G1	Hip Girder	1	1	I65799197 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871, Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Thu May 23 14:07:40 Page: 1
ID:skMjzGpYZW9lVGD25lOTMAzDbc5-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

4421 SW Grindstone Cir
Lees Summit MO, 64082



Scale = 1:42.2

Plate Offsets (X, Y): [9:Edge,0-5-11], [10:0-2-8,0-2-0], [13:0-2-8,0-1-8], [14:0-2-8,0-2-0], [15:Edge,0-5-11]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.69	Vert(LL)	-0.17	12-13	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.69	Vert(CT)	-0.31	12-13	>779	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.65	Horz(CT)	0.05	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.15	12-13	>999	240	Weight: 74 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF 2100F 1.8E *Except* 11-9:2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 15-2,9-7:2x4 SPF No.2

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

REACTIONS (size) 9=0-3-8, 15=0-3-8
Max Horiz 15=-18 (LC 6)
Max Uplift 9=-321 (LC 5), 15=-321 (LC 4)
Max Grav 9=1468 (LC 1), 15=1468 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/27, 2-3=-2418/543, 3-4=-3412/808, 4-5=-3403/804, 5-6=-3406/805, 6-7=-2422/545, 7-8=0/27, 2-15=-1409/334, 7-9=-1415/335
BOT CHORD 14-15=-101/336, 13-14=-464/2185, 12-13=-754/3410, 10-12=-467/2189, 9-10=-82/312
WEBS 3-14=-5/101, 6-10=0/103, 2-14=-406/1872, 7-10=-414/1900, 3-13=-326/1411, 6-12=-321/1401, 4-13=-493/227, 4-12=-33/19, 5-12=-480/227

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) All bearings are assumed to be SPF No.2 .
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 321 lb uplift at joint 15 and 321 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.
10) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.
11) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 219 lb down and 55 lb up at 4-0-0, and 219 lb down and 55 lb up at 16-7-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
12) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-3=-70, 3-6=-70, 6-7=-70, 7-8=-70, 9-15=-20
Concentrated Loads (lb)
Vert: 3=-47 (F), 6=-47 (F), 14=-219 (F), 10=-219 (F), 13=-24 (F), 12=-24 (F), 4=-47 (F), 5=-47 (F), 16=-47 (F), 17=-47 (F), 18=-47 (F), 19=-47 (F), 20=-24 (F), 21=-24 (F), 22=-24 (F), 23=-24 (F)

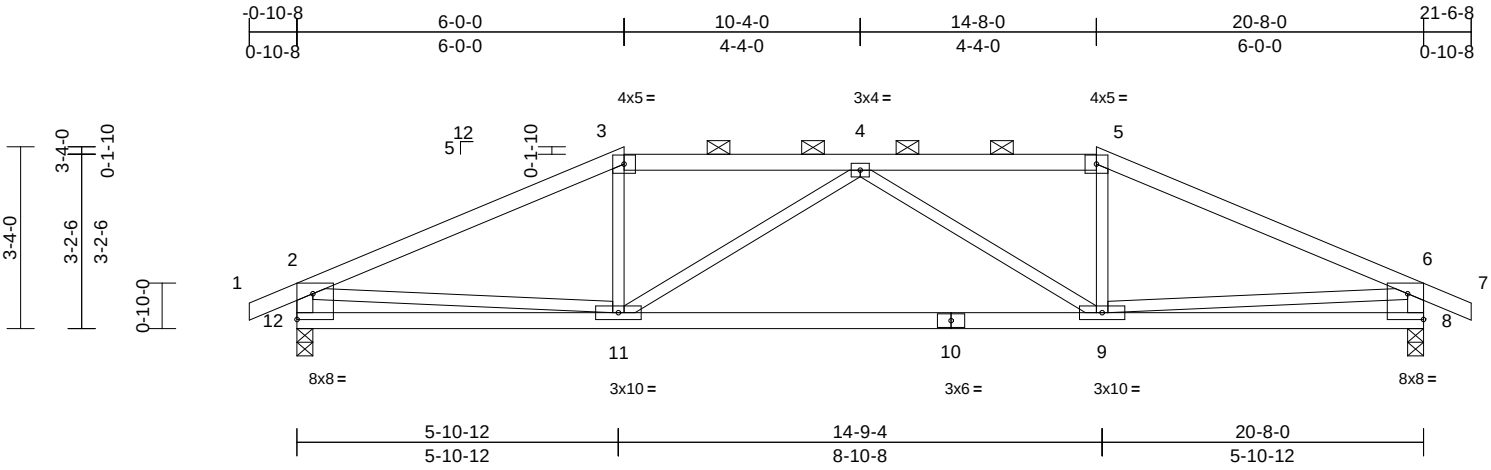
May 24,2024

Job	Truss	Truss Type	Qty	Ply	Serenade - Craftsman FH 3-Car
Serenade - Craftsman	G2	Hip	1	1	I65799198 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Thu May 23 14:07:40 Page: 1
ID:V24FVNz4kCf2x67MoGcHsizDbbv-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

4421 SW Grindstone Cir
Lees Summit MO, 64082



Scale = 1:42.3

Plate Offsets (X, Y): [8:Edge,0-5-11], [12:Edge,0-5-11]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.47	Vert(LL)	-0.15	9-11	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.63	Vert(CT)	-0.32	9-11	>761	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.32	Horz(CT)	0.03	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.05	9-11	>999	240	Weight: 73 lb	FT = 10%

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

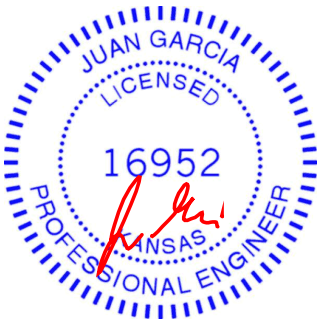
BRACING
TOP CHORD Structural wood sheathing directly applied or 4-3-4 oc purlins, except end verticals, and 2-0-0 oc purlins (4-11-2 max.): 3-5.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 8=0-3-8, 12=0-3-8
Max Horiz 12=-29 (LC 13)
Max Uplift 8=-134 (LC 5), 12=-134 (LC 4)
Max Grav 8=988 (LC 1), 12=988 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/27, 2-3=-1530/187, 3-4=-1329/194, 4-5=-1329/194, 5-6=-1530/187, 6-7=0/27, 2-12=-941/158, 6-8=-941/158
BOT CHORD 11-12=-166/432, 9-11=-220/1598, 8-9=-139/432
WEBS 3-11=0/308, 4-11=-417/131, 4-9=-417/131, 5-9=0/308, 2-11=-36/921, 6-9=-36/921

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) All bearings are assumed to be SPF No.2 .
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 134 lb uplift at joint 12 and 134 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



May 24,2024

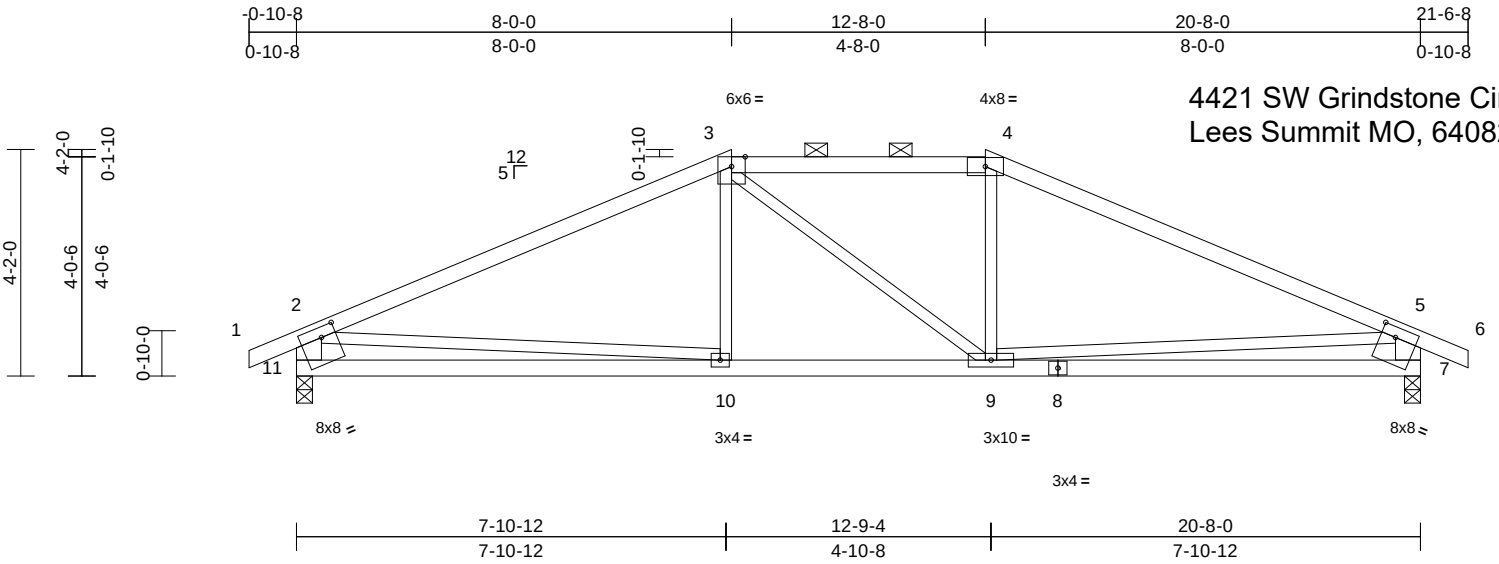
MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Serenade - Craftsman FH 3-Car
Serenade - Craftsman	G3	Hip	1	1	I65799199 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Thu May 23 14:07:40 ID:9Moo0T6bvuALNy2fVop5LEzDbbj-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:42.4

Plate Offsets (X, Y): [7:0-3-4,0-2-4], [11:0-3-4,0-2-4]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.82	Vert(LL)	-0.10	10-11	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.43	Vert(CT)	-0.21	10-11	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.21	Horz(CT)	0.03	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.03	9-10	>999	240	Weight: 75 lb	FT = 10%

LUMBER

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

BRACING

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

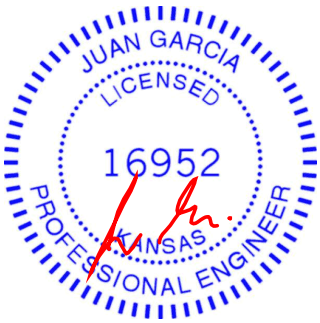
REACTIONS (size) 7=0-3-8, 11=0-3-8
Max Horiz 11=-43 (LC 9)
Max Uplift 7=-122 (LC 9), 11=-122 (LC 8)
Max Grav 7=987 (LC 1), 11=987 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/30, 2-3=-1401/150, 3-4=-1185/168, 4-5=-1401/150, 5-6=0/30, 2-11=-911/169, 5-7=-911/169
BOT CHORD 10-11=-280/743, 9-10=-59/1185, 7-9=-241/742
WEBS 3-10=0/220, 3-9=-151/151, 4-9=0/220, 2-10=0/607, 5-9=0/608

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) All bearings are assumed to be SPF No.2 .
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 122 lb uplift at joint 11 and 122 lb uplift at joint 7.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



May 24,2024

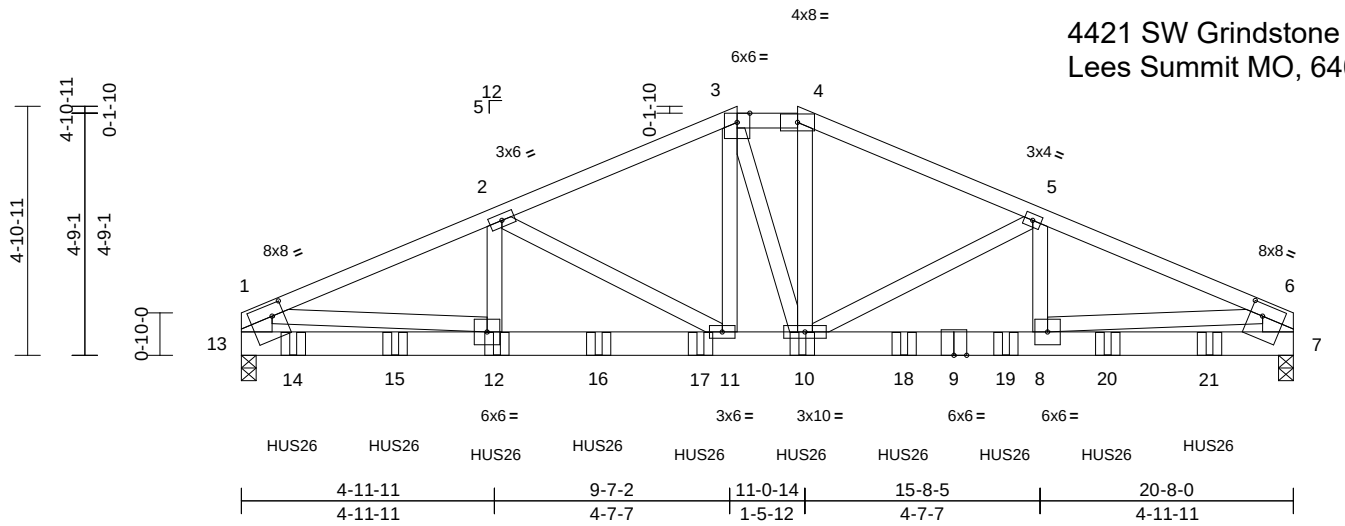
Job	Truss	Truss Type	Qty	Ply	Serenade - Craftsman FH 3-Car	
Serenade - Craftsman	G4	Hip Girder	1	2	Job Reference (optional)	I65799200

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Thu May 23 14:07:40

ID:DWkukPVgNkCpDtVpNWOce_zDbbD-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

4421 SW Grindstone Cir
Lees Summit MO, 64082



Scale = 1:45.3

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.46	Vert(LL)	-0.12	11-12	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.42	Vert(CT)	-0.21	11-12	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.61	Horz(CT)	0.03	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.09	11-12	>999	240	Weight: 232 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x6 SP 2400F 2.0E
WEBS 2x4 SPF No.2 *Except* 13-1,7-6:2x8 SP 2400F 2.0E

BRACING

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

REACTIONS (size) 7=0-3-8, 13=0-3-8, (req. 0-4-1)
Max Horiz 13=-49 (LC 9)
Max Uplift 7=-807 (LC 9), 13=-949 (LC 8)
Max Grav 7=4448 (LC 1), 13=5157 (LC 18)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-7916/1451, 2-3=-6139/1127, 3-4=-5582/1058, 4-5=-6142/1123, 5-6=-7380/1333, 1-13=-3785/727, 6-7=-3555/674
BOT CHORD 12-13=-459/2225, 11-12=-1347/7296, 10-11=-957/5635, 8-10=-1190/6769, 7-8=-365/1955
WEBS 2-12=-204/1419, 2-11=-1811/429, 3-11=-406/2162, 3-10=-97/188, 4-10=-392/2135, 5-10=-1332/309, 5-8=-111/945, 1-12=-895/5112, 6-8=-831/4884

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 0-6-0 oc, 2x8 - 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: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) Provide adequate drainage to prevent water ponding.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) WARNING: Required bearing size at joint(s) 13 greater than input bearing size.
9) All bearings are assumed to be SPF No.2 .
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 949 lb uplift at joint 13 and 807 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 HUS26 (14-10d Girder, 4-10d Truss) or equivalent spaced at 2-0-0 oc max. starting at 1-0-4 from the left end to 19-0-4 to connect truss(es) to back face of bottom chord.
14) 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: 12=-818 (B), 10=-802 (B), 14=-818 (B), 15=-818 (B), 16=-818 (B), 17=-818 (B), 18=-688 (B), 19=-688 (B), 20=-688 (B), 21=-688 (B)

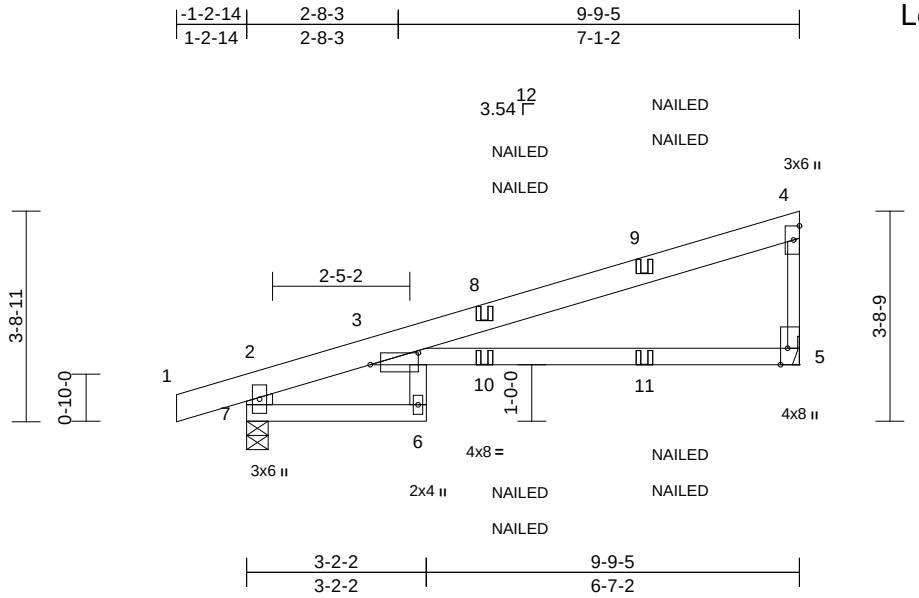
May 24,2024

Job	Truss	Truss Type	Qty	Ply	Serenade - Craftsman FH 3-Car
Serenade - Craftsman	J1	Diagonal Hip Girder	1	1	I65799201 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Thu May 23 14:07:40 Page: 1
ID:E8pjp5DOcWE6PV3pOholj8zyn49-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

4421 SW Grindstone Cir
Lees Summit MO, 64082



Scale = 1:40.7

Plate Offsets (X, Y): [3:0-10-3,0-2-8], [5:0-3-8,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.59	Vert(LL)	-0.20	6	>572	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.75	Vert(CT)	-0.46	3-5	>248	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.02	Horz(CT)	0.14	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.18	6	>631	240	Weight: 42 lb	FT = 10%

LUMBER
TOP CHORD 2x6 SP 2400F 2.0E
BOT CHORD 2x4 SPF No.2
WEBS 2x6 SPF No.2 *Except* 4-5:2x3 SPF No.2, 6-3:2x4 SPF No.2

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

REACTIONS (size) 5= Mechanical, 7=0-4-9
Max Horiz 7=134 (LC 5)
Max Uplift 5=-98 (LC 8), 7=-127 (LC 4)
Max Grav 5=557 (LC 1), 7=617 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-7=-592/147, 1-2=0/29, 2-3=-177/16, 3-4=-186/24, 4-5=-401/153
BOT CHORD 6-7=-47/0, 3-5=-19/106
WEBS 3-6=0/72

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) All bearings are assumed to be SPF No.2 .
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 127 lb uplift at joint 7 and 98 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 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidlines.
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, 6-7=-20, 3-5=-20
Concentrated Loads (lb)
Vert: 9=-80 (F=-40, B=-40), 10=-37 (F=-18, B=-18), 11=-87 (F=-43, B=-43)

STATE OF MISSOURI
JUAN GARCIA
NUMBER E-2000162101
PROFESSIONAL ENGINEER

JUAN GARCIA
LICENSED
16952
KANSAS
PROFESSIONAL ENGINEER

May 24,2024

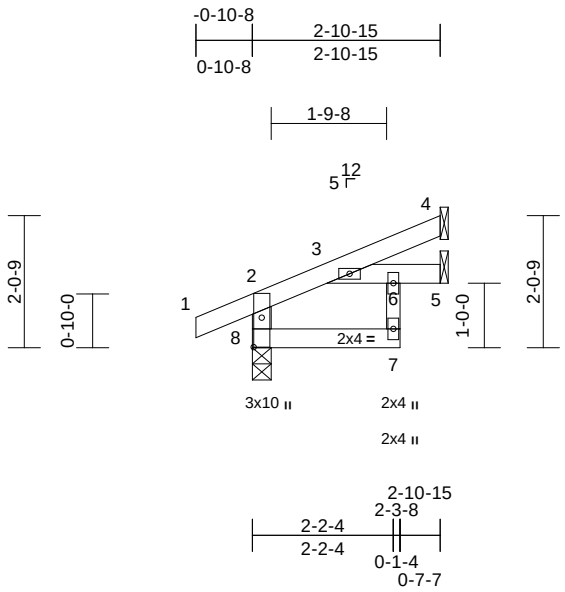
MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Serenade - Craftsman FH 3-Car
Serenade - Craftsman	J2	Jack-Open	2	1	I65799202 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Thu May 23 14:07:40 Page: 1
ID:T_47f_Ms2Ji?otvlP_5jzazynAQ-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

4421 SW Grindstone Cir
Lees Summit MO, 64082



Scale = 1:35.7

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

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	0.09	Vert(LL)	0.00	3	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	-0.01	3-6	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.01	Horz(CT)	-0.01	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.01	3	>999	240	Weight: 10 lb	FT = 10%

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

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

REACTIONS (size) 4= Mechanical, 5= Mechanical, 8=0-3-8
Max Horiz 8=53 (LC 8)
Max Uplift 4=-34 (LC 8), 8=-24 (LC 8)
Max Grav 4=73 (LC 1), 5=65 (LC 3), 8=216 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-8=-197/45, 1-2=0/27, 2-3=-52/0, 3-4=-20/24
BOT CHORD 7-8=0/0, 3-6=0/0, 5-6=0/0
WEBS 6-7=0/42

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) All bearings are assumed to be SPF No.2 .
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 24 lb uplift at joint 8 and 34 lb uplift at joint 4.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

May 24,2024

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)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEES SUMMIT, MISSOURI
03/20/2025

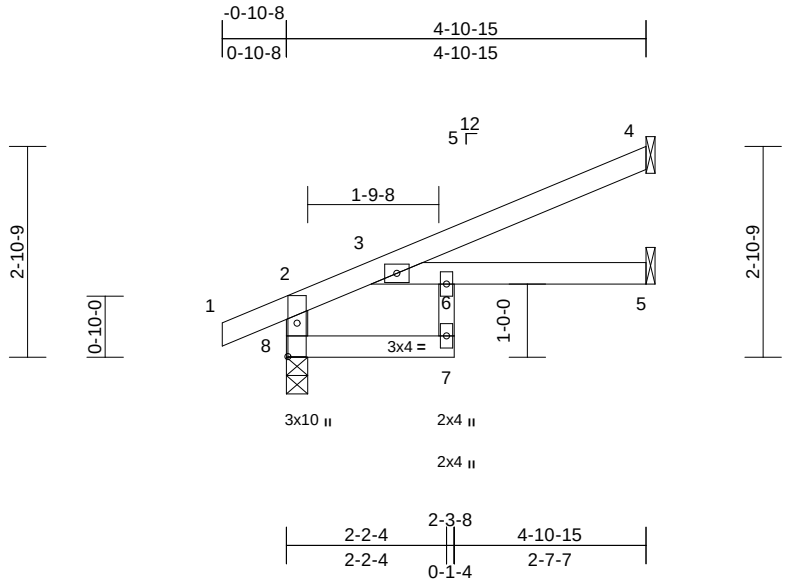
MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Serenade - Craftsman FH 3-Car
Serenade - Craftsman	J3	Jack-Open	2	1	I65799203 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Thu May 23 14:07:40 Page: 1
ID:uqIhrpcPKSEACyRbaASPnozynA6-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

4421 SW Grindstone Cir
Lees Summit MO, 64082



Scale = 1:31.5

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

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	0.29	Vert(LL)	-0.03	7	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.24	Vert(CT)	-0.06	5-6	>885	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.04	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.04	7	>999	240	Weight: 15 lb	FT = 10%

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

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

REACTIONS (size) 4= Mechanical, 5= Mechanical, 8=0-3-8
Max Horiz 8=87 (LC 8)
Max Uplift 4=-64 (LC 8), 8=-30 (LC 8)
Max Grav 4=139 (LC 1), 5=93 (LC 3), 8=305 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-8=-297/59, 1-2=0/27, 2-3=-93/0, 3-4=-48/44
BOT CHORD 7-8=0/0, 3-6=0/0, 5-6=0/0
WEBS 6-7=-5/48

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) All bearings are assumed to be SPF No.2 .
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 30 lb uplift at joint 8 and 64 lb uplift at joint 4.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

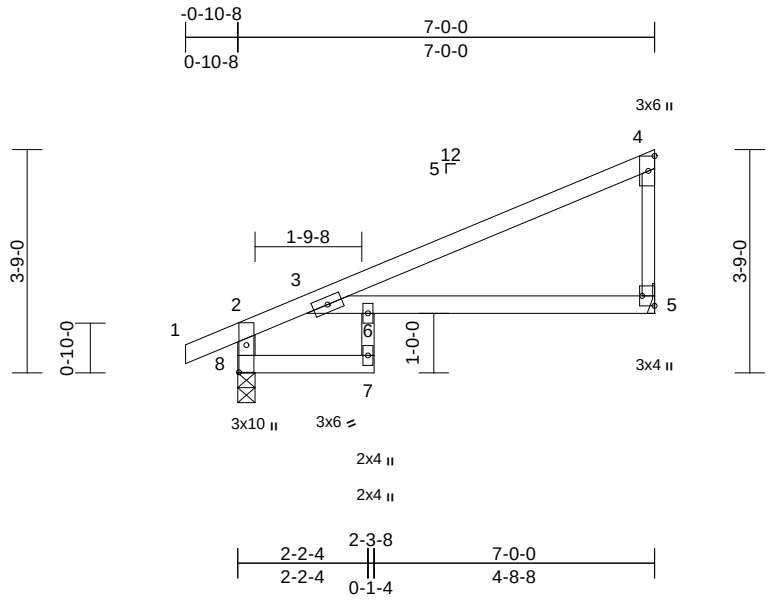
May 24,2024

Job	Truss	Truss Type	Qty	Ply	Serenade - Craftsman FH 3-Car
Serenade - Craftsman	J4	Jack-Closed	3	1	I65799204 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Thu May 23 14:07:40 ID:bVPwOnc9fHglbnNW7XkOC0zynUm-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

4421 SW Grindstone Cir
Lees Summit MO, 64082



Scale = 1:38.7

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

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	0.57	Vert(LL)	-0.11	5-6	>768	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.49	Vert(CT)	-0.21	5-6	>386	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.11	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.11	5-6	>709	240	Weight: 22 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 8-2:2x4 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, 8=0-3-8
Max Horiz 8=138 (LC 5)
Max Uplift 5=-74 (LC 8), 8=-63 (LC 8)
Max Grav 5=298 (LC 1), 8=381 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-8=-384/96, 1-2=0/27, 2-3=-165/0, 3-4=-136/13, 4-5=-192/84
BOT CHORD 7-8=0/0, 3-6=-31/66, 5-6=-31/66
WEBS 6-7=-13/50

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) All bearings are assumed to be SPF No.2 .
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 63 lb uplift at joint 8 and 74 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.

LOAD CASE(S) Standard

May 24,2024

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

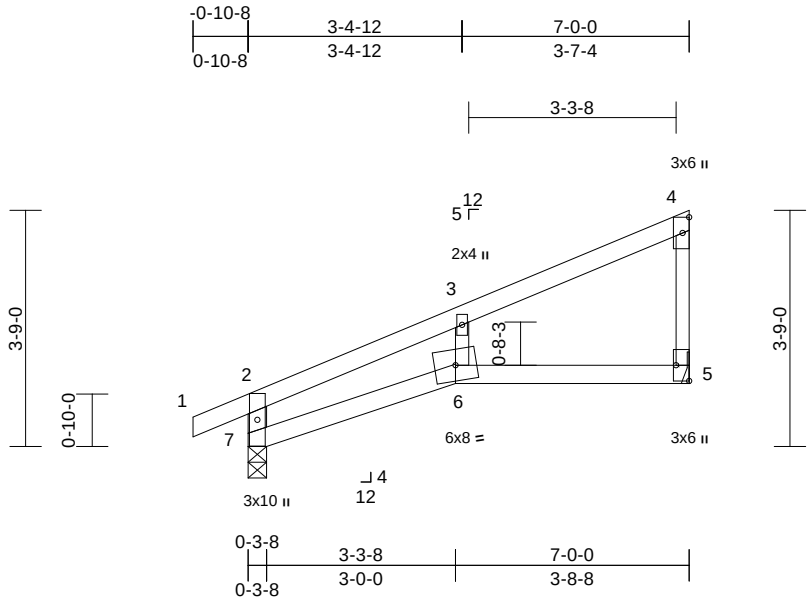
RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEES SUMMIT, MISSOURI
03/20/2025

Job	Truss	Truss Type	Qty	Ply	Serenade - Craftsman FH 3-Car
Serenade - Craftsman	J5	Jack-Closed	10	1	I65799205 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Thu May 23 14:07:41 Page: 1
ID:EhvSy4jsHxrtDeddr9JMI?zynOA-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

4421 SW Grindstone Cir
Lees Summit MO, 64082



Scale = 1:36.6

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.54	Vert(LL)	-0.15	6	>536	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.38	Vert(CT)	-0.27	6	>302	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.09	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.16	6	>511	240	Weight: 21 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 7-2:2x4 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=0-3-8
Max Horiz 7=139 (LC 5)
Max Uplift 5=-74 (LC 8), 7=-63 (LC 8)
Max Grav 5=298 (LC 1), 7=381 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-7=-324/71, 1-2=0/27, 2-3=-178/0, 3-4=-105/23, 4-5=-190/71
BOT CHORD 6-7=-40/82, 5-6=-38/87
WEBS 3-6=-31/83

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) All bearings are assumed to be SPF No.2 .
5) Refer to girder(s) for truss to truss connections.
6) Bearing at joint(s) 7 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 63 lb uplift at joint 7 and 74 lb uplift at joint 5.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

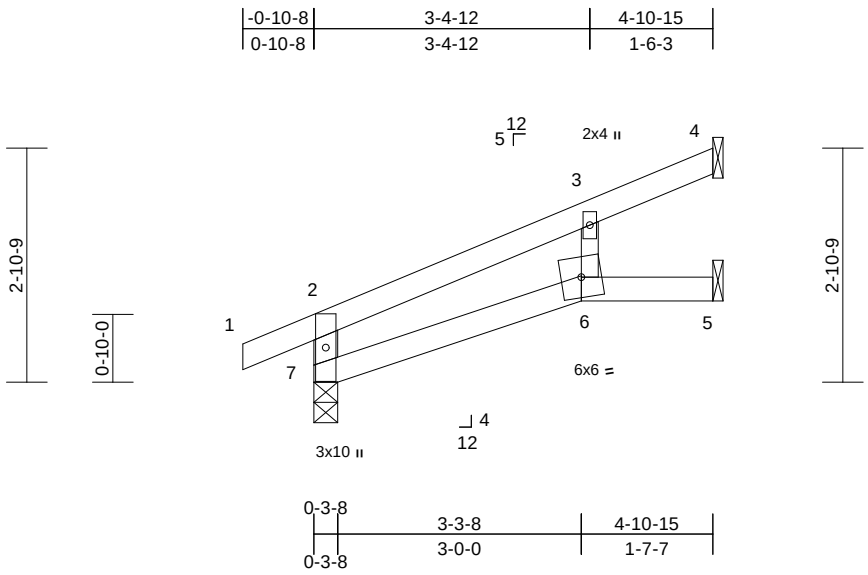
May 24,2024

Job	Truss	Truss Type	Qty	Ply	Serenade - Craftsman FH 3-Car
Serenade - Craftsman	J6	Jack-Open	2	1	I65799206 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Thu May 23 14:07:41 Page: 1
ID:qOllusue_EcuvniJg6ZetyzynNy-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

4421 SW Grindstone Cir
Lees Summit MO, 64082



Scale = 1:28.4

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.26	Vert(LL)	-0.03	6-7	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.24	Vert(CT)	-0.06	6-7	>923	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.03	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P		Wind(LL)	0.04	6-7	>999	240	Weight: 14 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-10-15 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 4= Mechanical, 5= Mechanical, 7=0-3-8
Max Horiz 7=86 (LC 8)
Max Uplift 4=-42 (LC 8), 5=-23 (LC 8), 7=-37 (LC 8)
Max Grav 4=114 (LC 1), 5=89 (LC 1), 7=291 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-7=-225/53, 1-2=0/27, 2-3=-75/26, 3-4=-22/40
BOT CHORD 6-7=-25/14, 5-6=0/0
WEBS 3-6=-62/64

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) All bearings are assumed to be SPF No.2 .
5) Refer to girder(s) for truss to truss connections.
6) Bearing at joint(s) 7 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 37 lb uplift at joint 7, 42 lb uplift at joint 4 and 23 lb uplift at joint 5.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

STATE OF MISSOURI
JUAN GARCIA
NUMBER E-2000162101
PROFESSIONAL ENGINEER

JUAN GARCIA
LICENSED
16952
KANSAS
PROFESSIONAL ENGINEER

May 24,2024

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

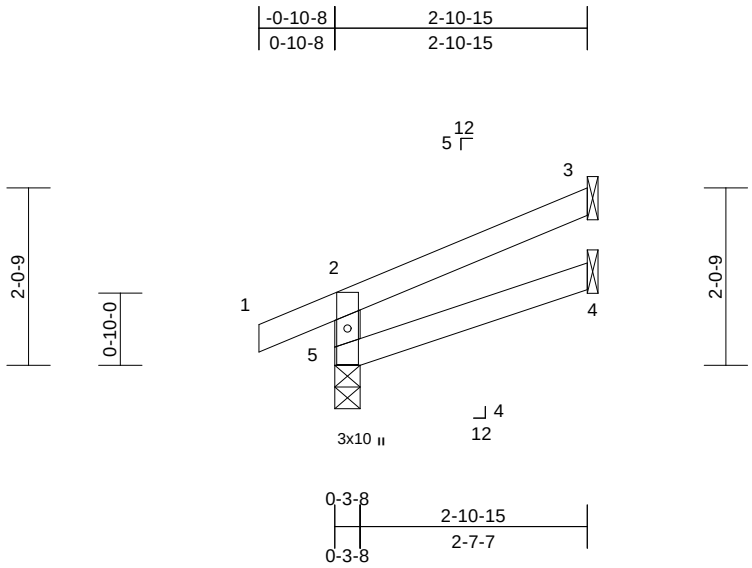
RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEES SUMMIT, MISSOURI
03/20/2025

Job	Truss	Truss Type	Qty	Ply	Serenade - Craftsman FH 3-Car
Serenade - Craftsman	J7	Jack-Open	2	1	I65799207 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Thu May 23 14:07:41 Page: 1
ID:fpeRjk94ZIVd9KykWRT1IpzynNb-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

4421 SW Grindstone Cir
Lees Summit MO, 64082



Scale = 1:26.6

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.09	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	-0.01	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 9 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-10-15 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-3-8
Max Horiz 5=53 (LC 5)
Max Uplift 3=-45 (LC 8), 5=-29 (LC 8)
Max Grav 3=80 (LC 1), 4=50 (LC 3), 5=207 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-181/56, 1-2=0/27, 2-3=-46/23
BOT CHORD 4-5=-18/12

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) All bearings are assumed to be SPF No.2 .
5) Refer to girder(s) for truss to truss connections.
6) Bearing at joint(s) 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 29 lb uplift at joint 5 and 45 lb uplift at joint 3.
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

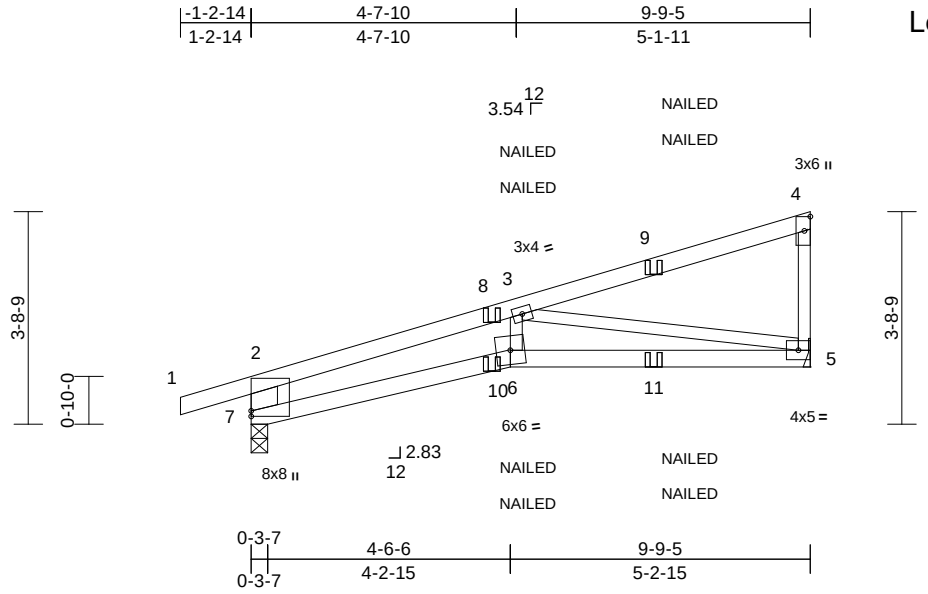
May 24,2024

Job	Truss	Truss Type	Qty	Ply	Serenade - Craftsman FH 3-Car
Serenade - Craftsman	J8	Diagonal Hip Girder	1	1	I65799208 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Thu May 23 14:07:41 Page: 1
ID:4r8r7GByjPcjowNaBUou2Czyn84-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

4421 SW Grindstone Cir
Lees Summit MO, 64082



Scale = 1:40.3

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	0.71	Vert(LL)	-0.16	5-6	>720	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.81	Vert(CT)	-0.28	5-6	>398	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.69	Horz(CT)	0.08	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.15	5-6	>749	240	Weight: 32 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF 2100F 1.8E
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 7-2:2x6 SP 2400F 2.0E

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-7-1 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 9-4-12 oc bracing.

REACTIONS (size) 5= Mechanical, 7=0-3-7
Max Horiz 7=138 (LC 22)
Max Uplift 5=-152 (LC 8), 7=-160 (LC 4)
Max Grav 5=536 (LC 1), 7=584 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-7=-745/246, 1-2=0/29, 2-3=-1267/325, 3-4=-135/26, 4-5=-217/76
BOT CHORD 6-7=-384/1159, 5-6=-366/1092
WEBS 3-6=-50/345, 3-5=-1043/341

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) All bearings are assumed to be SPF No.2 .
5) Refer to girder(s) for truss to truss connections.
6) Bearing at joint(s) 7 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 160 lb uplift at joint 7 and 152 lb uplift at joint 5.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidlines.
10) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-4=-70, 6-7=-20, 5-6=-20
Concentrated Loads (lb)
Vert: 9=-40 (F=-20, B=-20), 10=-5 (F=-3, B=-3), 11=-122 (F=-61, B=-61)

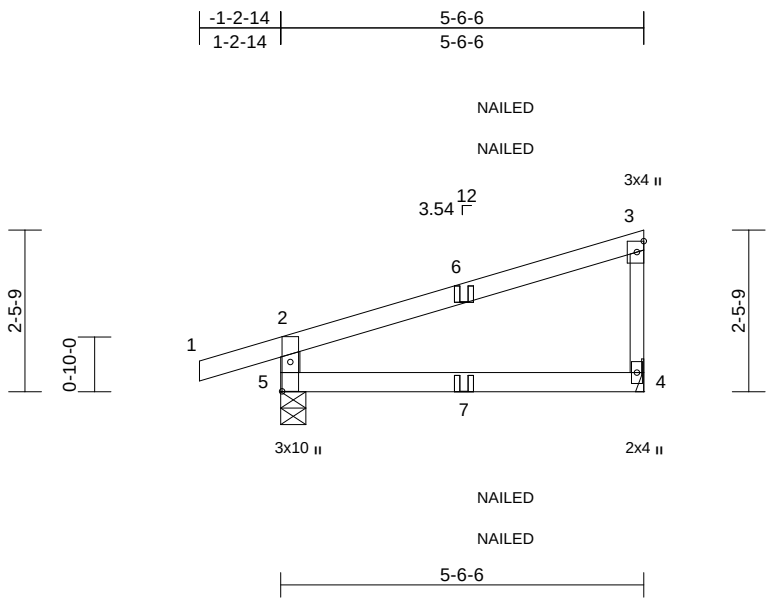
May 24,2024

Job	Truss	Truss Type	Qty	Ply	Serenade - Craftsman FH 3-Car
Serenade - Craftsman	J9	Diagonal Hip Girder	2	1	I65799209 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Thu May 23 14:07:41 Page: 1
ID:4ai7ufUYTjIMIMpvffQgv_zDbdp-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

4421 SW Grindstone Cir
Lees Summit MO, 64082



Scale = 1:35.1

Plate Offsets (X, Y): [5:0-5-6,0-1-8]

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)	-0.03	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.25	Vert(CT)	-0.06	4-5	>991	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.01	4-5	>999	240	Weight: 16 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2 *Except* 3-4:2x3 SPF No.2

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

REACTIONS (size) 4= Mechanical, 5=0-4-9
Max Horiz 5=99 (LC 5)
Max Uplift 4=-49 (LC 8), 5=-103 (LC 4)
Max Grav 4=224 (LC 1), 5=346 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-305/141, 1-2=0/27, 2-3=-128/14, 3-4=-161/72
BOT CHORD 4-5=-26/50

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) All bearings are assumed to be SPF No.2 .
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 103 lb uplift at joint 5 and 49 lb uplift at joint 4.
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 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidlines.
9) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

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

STATE OF MISSOURI
JUAN GARCIA
NUMBER E-2000162101
PROFESSIONAL ENGINEER

JUAN GARCIA
LICENSED
16952
KANSAS
PROFESSIONAL ENGINEER

May 24,2024

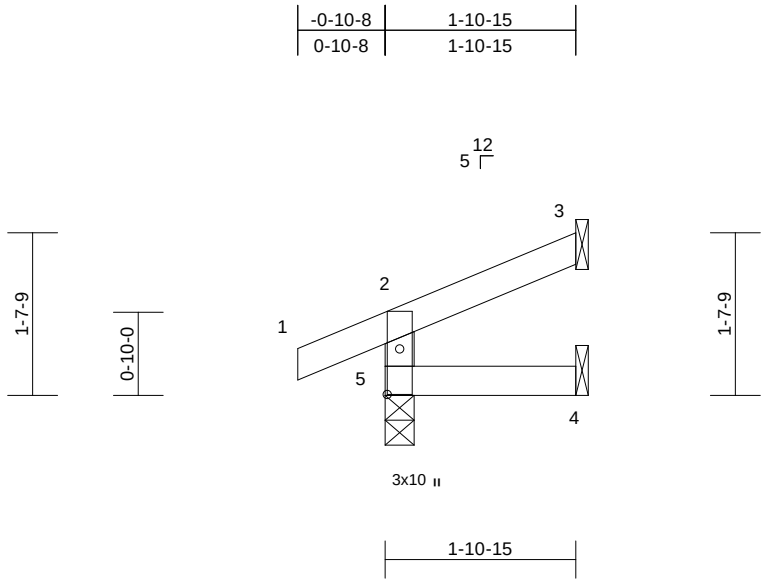
MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Serenade - Craftsman FH 3-Car
Serenade - Craftsman	J10	Jack-Open	4	1	I65799210 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Thu May 23 14:07:41 ID:UtsrysJmmQXLcCkDqi9OL1zDbe1-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

4421 SW Grindstone Cir
Lees Summit MO, 64082



Scale = 1:23.1

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

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	0.07	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	0.00	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 6 lb	FT = 10%

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

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

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-3-8
Max Horiz 5=41 (LC 5)
Max Uplift 3=-29 (LC 8), 5=-32 (LC 4)
Max Grav 3=44 (LC 1), 4=32 (LC 3), 5=171 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-150/47, 1-2=0/27, 2-3=-32/12
BOT CHORD 4-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) All bearings are assumed to be SPF No.2 .
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 32 lb uplift at joint 5 and 29 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

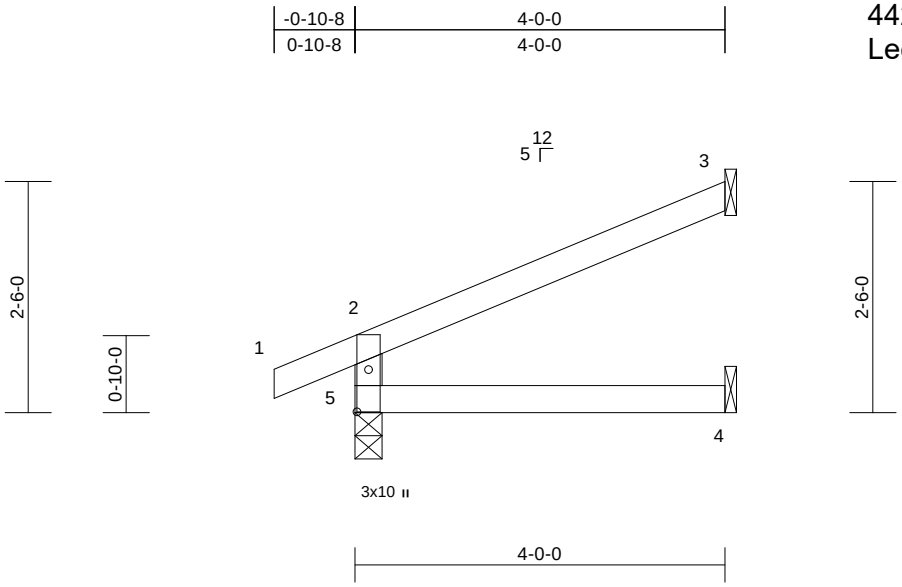
May 24,2024

Job	Truss	Truss Type	Qty	Ply	Serenade - Craftsman FH 3-Car
Serenade - Craftsman	J11	Jack-Open	8	1	I65799211 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Thu May 23 14:07:41 Page: 1
ID:vSYzauMe2LvwUgToVrj5zfzDbe_-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

4421 SW Grindstone Cir
Lees Summit MO, 64082



Scale = 1:24.9

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

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	0.20	Vert(LL)	-0.01	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.13	Vert(CT)	-0.02	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.01	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.01	4-5	>999	240	Weight: 11 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-0-0 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=71 (LC 8)
Max Uplift 3=-62 (LC 8), 5=-34 (LC 8)
Max Grav 3=117 (LC 1), 4=71 (LC 3), 5=252 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-220/71, 1-2=0/27, 2-3=-64/35
BOT CHORD 4-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) All bearings are assumed to be SPF No.2 .
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 34 lb uplift at joint 5 and 62 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

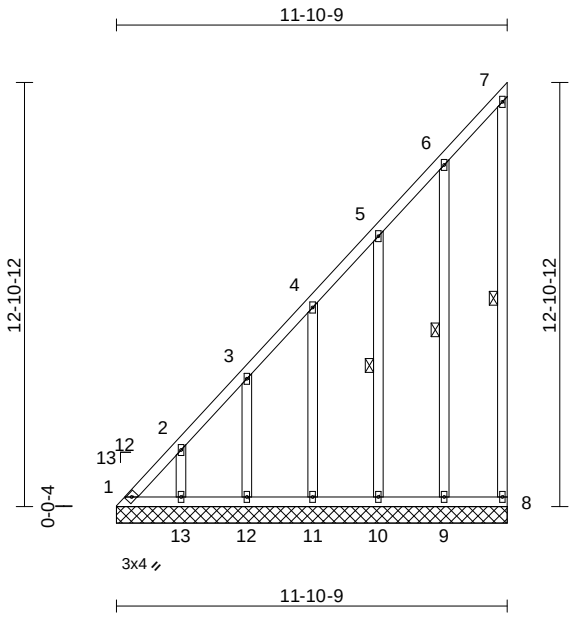
May 24,2024

Job	Truss	Truss Type	Qty	Ply	Serenade - Craftsman FH 3-Car
Serenade - Craftsman	LAY1	Lay-In Gable	2	1	I65799212 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Thu May 23 14:07:41 ID:QimbEXIPgtDQpcZcTTeraQzynM8-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

4421 SW Grindstone Cir
Lees Summit MO, 64082



Scale = 1:70.1

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.11	Horiz(TL)	0.00	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 81 lb	FT = 10%

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

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

REACTIONS (size) 1=11-10-9, 8=11-10-9, 9=11-10-9, 10=11-10-9, 11=11-10-9, 12=11-10-9, 13=11-10-9
Max Horiz 1=505 (LC 8)
Max Uplift 1=-160 (LC 6), 8=-49 (LC 8), 9=-129 (LC 8), 10=-131 (LC 8), 11=-129 (LC 8), 12=-129 (LC 8), 13=-131 (LC 8)
Max Grav 1=506 (LC 8), 8=74 (LC 15), 9=209 (LC 15), 10=206 (LC 15), 11=205 (LC 15), 12=205 (LC 15), 13=208 (LC 15)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-704/278, 2-3=-581/230, 3-4=-449/181, 4-5=-319/132, 5-6=-188/92, 6-7=-70/36, 7-8=-60/56
BOT CHORD 1-13=0/0, 12-13=0/0, 11-12=0/0, 10-11=0/0, 9-10=0/0, 8-9=0/0
WEBS 2-13=-163/148, 3-12=-166/155, 4-11=-165/153, 5-10=-166/155, 6-9=-168/155

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) All plates are 2x4 MT20 unless otherwise indicated.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) All bearings are assumed to be SPF No.2 .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 160 lb uplift at joint 1, 49 lb uplift at joint 8, 131 lb uplift at joint 13, 129 lb uplift at joint 12, 129 lb uplift at joint 11, 131 lb uplift at joint 10 and 129 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.

LOAD CASE(S) Standard

May 24,2024

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

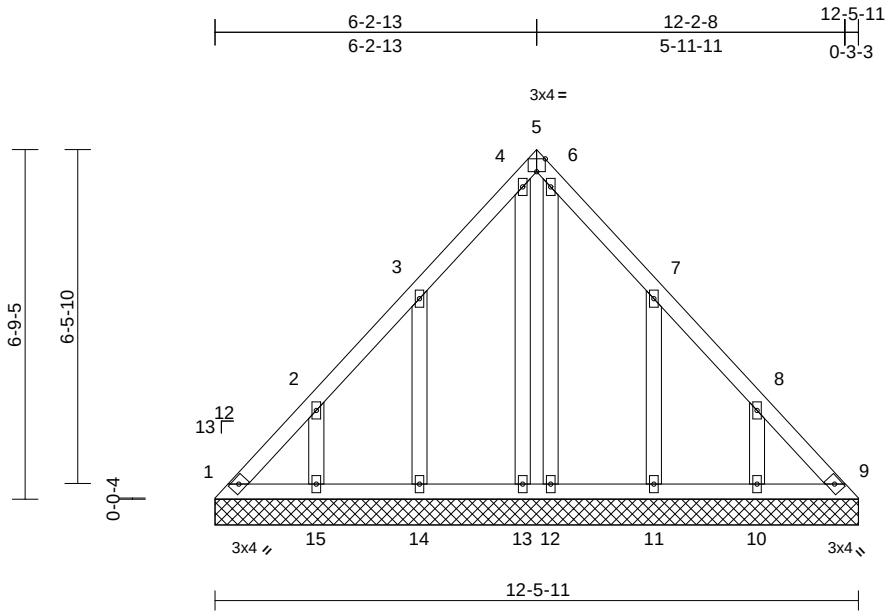
RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEES SUMMIT, MISSOURI
03/20/2025

Job	Truss	Truss Type	Qty	Ply	Serenade - Craftsman FH 3-Car
Serenade - Craftsman	LAY2	Lay-In Gable	1	1	I65799213 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Thu May 23 14:07:41 Page: 1
ID:vrIP5Wb7cbOhqHwG_oAxXnzDbk7-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

4421 SW Grindstone Cir
Lees Summit MO, 64082



Scale = 1:44.7

Plate Offsets (X, Y): [5:Edge,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	0.06	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.06	Horiz(TL)	0.00	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 60 lb	FT = 10%

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

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

REACTIONS (size) 1=12-5-11, 9=12-5-11, 10=12-5-11, 11=12-5-11, 12=12-5-11, 13=12-5-11, 14=12-5-11, 15=12-5-11
Max Horiz 1=-172 (LC 4)
Max Uplift 1=-66 (LC 6), 9=-34 (LC 7), 10=-130 (LC 9), 11=-137 (LC 9), 13=-18 (LC 5), 14=-137 (LC 8), 15=-130 (LC 8)
Max Grav 1=142 (LC 8), 9=121 (LC 9), 10=206 (LC 16), 11=215 (LC 16), 12=108 (LC 17), 13=125 (LC 18), 14=215 (LC 15), 15=206 (LC 15)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-210/150, 2-3=-125/103, 3-4=-99/130, 4-5=-25/74, 5-6=-31/79, 6-7=-73/101, 7-8=-92/66, 8-9=-181/106
BOT CHORD 1-15=-74/149, 14-15=-74/149, 13-14=-74/149, 12-13=-74/149, 11-12=-74/149, 10-11=-74/149, 9-10=-74/149
WEBS 2-15=-161/148, 3-14=-174/163, 4-13=-100/35, 8-10=-161/148, 7-11=-175/164, 6-12=-84/3

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) All bearings are assumed to be SPF No.2 .
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 66 lb uplift at joint 1, 34 lb uplift at joint 9, 130 lb uplift at joint 15, 137 lb uplift at joint 14, 18 lb uplift at joint 13, 130 lb uplift at joint 10 and 137 lb uplift at joint 11.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

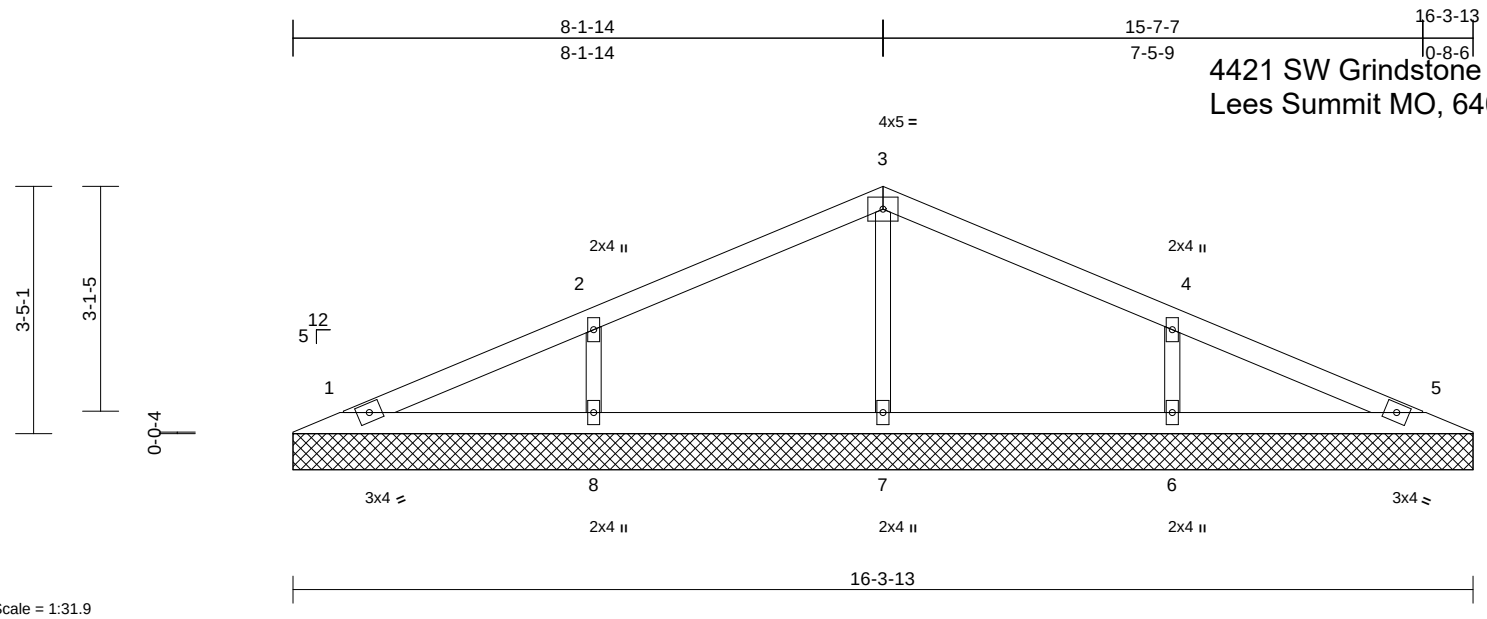
May 24,2024

Job	Truss	Truss Type	Qty	Ply	Serenade - Craftsman FH 3-Car
Serenade - Craftsman	V1	Valley	1	1	I65799214 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Thu May 23 14:07:41 ID:bDwL8pqcjd1oMJqa7NSYs5zDbfy-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

4421 SW Grindstone Cir
Lees Summit MO, 64082



Scale = 1:31.9

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	0.19	Vert(LL)	n/a	-	n/a	999	MT20	197/144
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	0.06	Horiz(TL)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 41 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF 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=16-3-13, 5=16-3-13, 6=16-3-13, 7=16-3-13, 8=16-3-13
Max Horiz 1=-55 (LC 13)
Max Uplift 1=-10 (LC 9), 5=-12 (LC 9), 6=-111 (LC 9), 8=-111 (LC 8)
Max Grav 1=126 (LC 1), 5=126 (LC 1), 6=398 (LC 22), 7=306 (LC 1), 8=398 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-73/51, 2-3=-87/82, 3-4=-87/69, 4-5=-55/40
BOT CHORD 1-8=0/43, 7-8=0/43, 6-7=0/43, 5-6=0/43
WEBS 3-7=-229/39, 2-8=-310/156, 4-6=-310/156

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 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 SPF No.2 .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 10 lb uplift at joint 1, 12 lb uplift at joint 5, 111 lb uplift at joint 8 and 111 lb uplift at joint 6.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

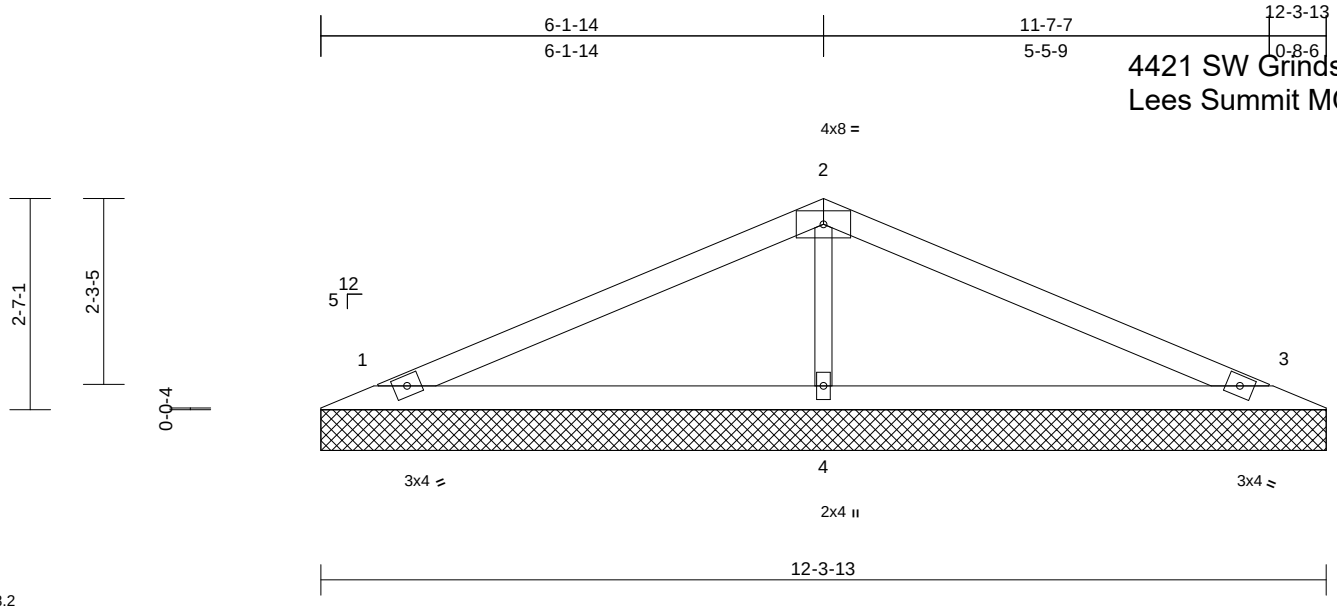
May 24,2024

Job	Truss	Truss Type	Qty	Ply	Serenade - Craftsman FH 3-Car
Serenade - Craftsman	V2	Valley	1	1	I65799215 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Thu May 23 14:07:42 ID:bDwL8pqcjd1oMJqa7NSYs5zDbfy-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



4421 SW Grindstone Cir
Lees Summit MO, 64082

Scale = 1:28.2

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.42	Vert(LL)	n/a	-	n/a	999	MT20	197/144
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	0.08	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 29 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF 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=12-3-13, 3=12-3-13, 4=12-3-13
Max Horiz 1=40 (LC 8)
Max Uplift 1=-46 (LC 8), 3=-53 (LC 9), 4=-34 (LC 8)
Max Grav 1=225 (LC 21), 3=225 (LC 22), 4=540 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-115/59, 2-3=-115/45
BOT CHORD 1-4=-2/46, 3-4=-2/46
WEBS 2-4=-376/99

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 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 SPF No.2 .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 46 lb uplift at joint 1, 53 lb uplift at joint 3 and 34 lb uplift at joint 4.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

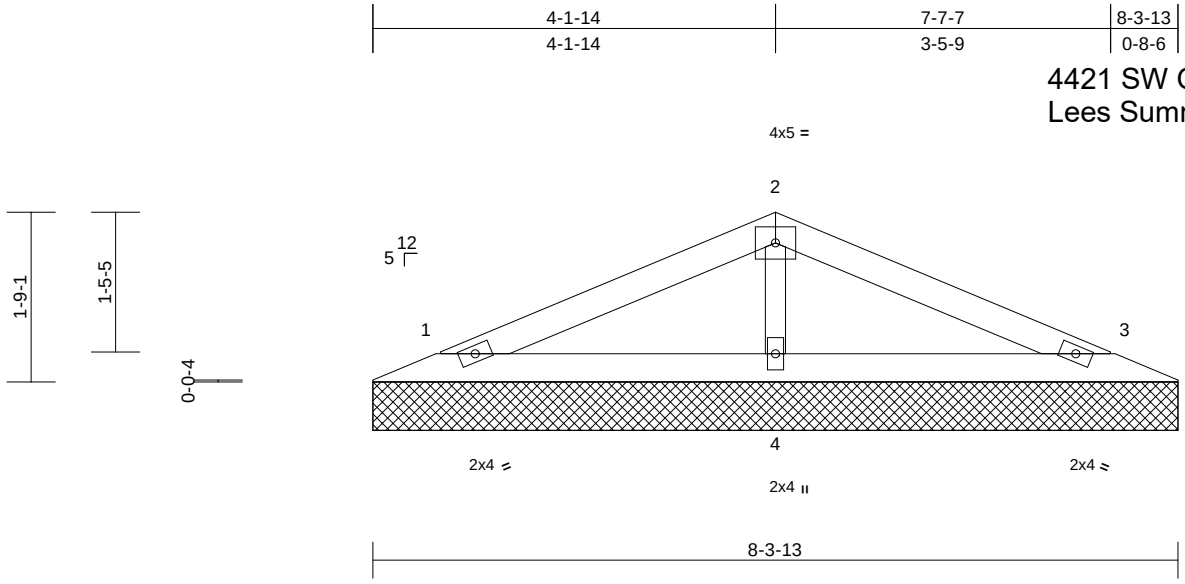
May 24,2024

Job	Truss	Truss Type	Qty	Ply	Serenade - Craftsman FH 3-Car
Serenade - Craftsman	V3	Valley	1	1	I65799216 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Apr 25 2024 Print: 8.730 S Apr 25 2024 MiTek Industries, Inc. Thu May 23 14:07:42 ID:bDwL8pqcjd1oMJqa7NSYs5zDbfy-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

4421 SW Grindstone Cir
Lees Summit MO, 64082



Scale = 1:23.8

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	0.22	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.10	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.04	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 19 lb	FT = 10%

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

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

REACTIONS (size) 1=8-3-13, 3=8-3-13, 4=8-3-13
Max Horiz 1=-26 (LC 9)
Max Uplift 1=-36 (LC 8), 3=-40 (LC 9), 4=-8 (LC 8)
Max Grav 1=157 (LC 1), 3=157 (LC 1), 4=308 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-63/36, 2-3=-63/25
BOT CHORD 1-4=-1/27, 3-4=-1/27
WEBS 2-4=-222/60

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 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 SPF No.2 .
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 8 lb uplift at joint 4.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

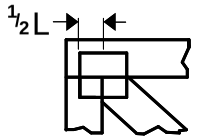
May 24,2024

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

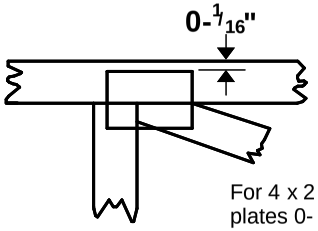
RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEES SUMMIT, MISSOURI
03/20/2025

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.

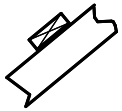
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

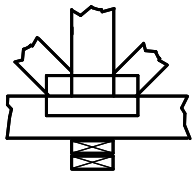
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

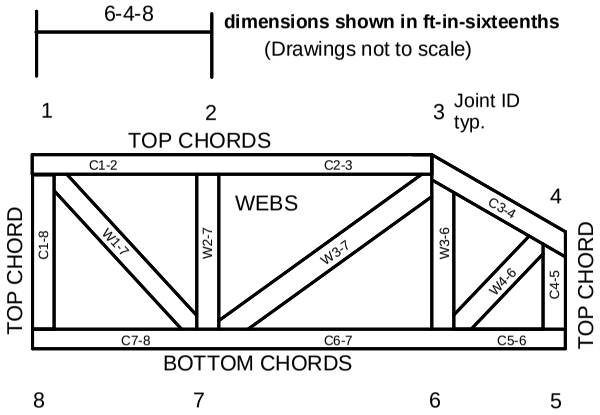


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

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.