RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI

04/06/2021

RE: 210322
Lot 89 MN

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

Site Information:

Customer: Project Name: 210322
Lot/Block: Model:
Address: Subdivision:
City: State:

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

Design Code: IRC2018/TPI2014 Design Program: MiTek 20/20 8.4
Wind Code: N/A Wind Speed: 115 mph
Roof Load: 45.0 psf Floor Load: N/A psf

This package includes 62 individual, dated Truss Design Drawings and 0 Additional Drawings.

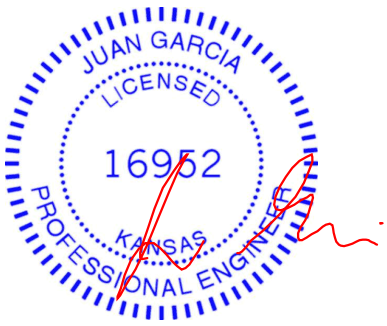
No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	I45104177	A1	3/9/2021	21	I45104197	C4	3/9/2021
2	I45104178	A2	3/9/2021	22	I45104198	C5	3/9/2021
3	I45104179	A3	3/9/2021	23	I45104199	C6	3/9/2021
4	I45104180	A4	3/9/2021	24	I45104200	D1	3/9/2021
5	I45104181	A5	3/9/2021	25	I45104201	D2	3/9/2021
6	I45104182	B1	3/9/2021	26	I45104202	D3	3/9/2021
7	I45104183	B2	3/9/2021	27	I45104203	D4	3/9/2021
8	I45104184	B3	3/9/2021	28	I45104204	D5	3/9/2021
9	I45104185	B4	3/9/2021	29	I45104205	D6	3/9/2021
10	I45104186	B5	3/9/2021	30	I45104206	D8	3/9/2021
11	I45104187	B6	3/9/2021	31	I45104207	E1	3/9/2021
12	I45104188	B7	3/9/2021	32	I45104208	E2	3/9/2021
13	I45104189	B8	3/9/2021	33	I45104209	E3	3/9/2021
14	I45104190	B9	3/9/2021	34	I45104210	J1	3/9/2021
15	I45104191	B10	3/9/2021	35	I45104211	J2	3/9/2021
16	I45104192	B11	3/9/2021	36	I45104212	J3	3/9/2021
17	I45104193	B12	3/9/2021	37	I45104213	J4	3/9/2021
18	I45104194	C1	3/9/2021	38	I45104214	LAY1	3/9/2021
19	I45104195	C2	3/9/2021	39	I45104215	LAY2	3/9/2021
20	I45104196	C3	3/9/2021	40	I45104216	LAY3	3/9/2021

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

Truss Design Engineer's Name: Garcia, Juan

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

Kansas COA: E-943



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

March 09, 2021

Garcia, Juan

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI

04/06/2021

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

RE: 210322 - Lot 89 MN

Site Information:

Project Customer: Project Name: 210322
Lot/Block: Subdivision:
Address:
City, County: State:

No.	Seal#	Truss Name	Date
41	I45104217	LAY4	3/9/2021
42	I45104218	V1	3/9/2021
43	I45104219	V2	3/9/2021
44	I45104220	V3	3/9/2021
45	I45104221	V4	3/9/2021
46	I45104222	V4A	3/9/2021
47	I45104223	V5	3/9/2021
48	I45104224	V6	3/9/2021
49	I45104225	V7	3/9/2021
50	I45104226	V8	3/9/2021
51	I45104227	V9	3/9/2021
52	I45104228	V10	3/9/2021
53	I45104229	V11	3/9/2021
54	I45104230	V12	3/9/2021
55	I45104231	V13	3/9/2021
56	I45104232	V14	3/9/2021
57	I45104233	V15	3/9/2021
58	I45104234	V16	3/9/2021
59	I45104235	V17	3/9/2021
60	I45104236	V18	3/9/2021
61	I45104237	V19	3/9/2021
62	I45104238	V20	3/9/2021

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI

04/06/2021

RE: 210322
Lot 89 MN

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

Site Information:

Customer: Project Name: 210322
Lot/Block: Model:
Address: Subdivision:
City: State:

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

Design Code: IRC2018/TPI2014 Design Program: MiTek 20/20 8.4
Wind Code: N/A Wind Speed: 115 mph
Roof Load: 45.0 psf Floor Load: N/A psf

This package includes 62 individual, dated Truss Design Drawings and 0 Additional Drawings.

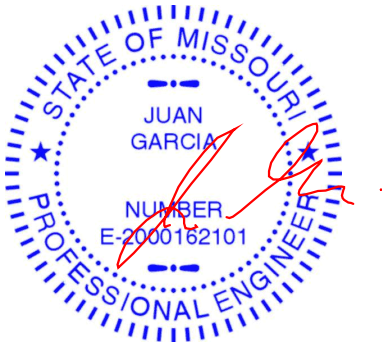
No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	I45104177	A1	3/9/2021	21	I45104197	C4	3/9/2021
2	I45104178	A2	3/9/2021	22	I45104198	C5	3/9/2021
3	I45104179	A3	3/9/2021	23	I45104199	C6	3/9/2021
4	I45104180	A4	3/9/2021	24	I45104200	D1	3/9/2021
5	I45104181	A5	3/9/2021	25	I45104201	D2	3/9/2021
6	I45104182	B1	3/9/2021	26	I45104202	D3	3/9/2021
7	I45104183	B2	3/9/2021	27	I45104203	D4	3/9/2021
8	I45104184	B3	3/9/2021	28	I45104204	D5	3/9/2021
9	I45104185	B4	3/9/2021	29	I45104205	D6	3/9/2021
10	I45104186	B5	3/9/2021	30	I45104206	D8	3/9/2021
11	I45104187	B6	3/9/2021	31	I45104207	E1	3/9/2021
12	I45104188	B7	3/9/2021	32	I45104208	E2	3/9/2021
13	I45104189	B8	3/9/2021	33	I45104209	E3	3/9/2021
14	I45104190	B9	3/9/2021	34	I45104210	J1	3/9/2021
15	I45104191	B10	3/9/2021	35	I45104211	J2	3/9/2021
16	I45104192	B11	3/9/2021	36	I45104212	J3	3/9/2021
17	I45104193	B12	3/9/2021	37	I45104213	J4	3/9/2021
18	I45104194	C1	3/9/2021	38	I45104214	LAY1	3/9/2021
19	I45104195	C2	3/9/2021	39	I45104215	LAY2	3/9/2021
20	I45104196	C3	3/9/2021	40	I45104216	LAY3	3/9/2021

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

Truss Design Engineer's Name: Garcia, Juan

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

Missouri COA: 001193



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

March 09, 2021

Garcia, Juan

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI

04/06/2021

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

RE: 210322 - Lot 89 MN

Site Information:

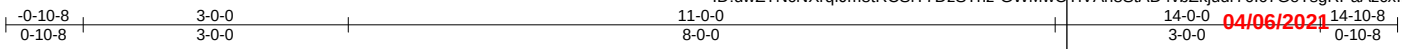
Project Customer: Project Name: 210322
Lot/Block: Subdivision:
Address:
City, County: State:

No.	Seal#	Truss Name	Date
41	I45104217	LAY4	3/9/2021
42	I45104218	V1	3/9/2021
43	I45104219	V2	3/9/2021
44	I45104220	V3	3/9/2021
45	I45104221	V4	3/9/2021
46	I45104222	V4A	3/9/2021
47	I45104223	V5	3/9/2021
48	I45104224	V6	3/9/2021
49	I45104225	V7	3/9/2021
50	I45104226	V8	3/9/2021
51	I45104227	V9	3/9/2021
52	I45104228	V10	3/9/2021
53	I45104229	V11	3/9/2021
54	I45104230	V12	3/9/2021
55	I45104231	V13	3/9/2021
56	I45104232	V14	3/9/2021
57	I45104233	V15	3/9/2021
58	I45104234	V16	3/9/2021
59	I45104235	V17	3/9/2021
60	I45104236	V18	3/9/2021
61	I45104237	V19	3/9/2021
62	I45104238	V20	3/9/2021

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	A1	Hip Girder	1	1	J45104177

Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 8 10:48:13 2021 Page 1
ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-GWMwOTlVAn8StAD4vbZkjudr76l67GoTsgRPaAzcxIK



Scale = 1:26.1

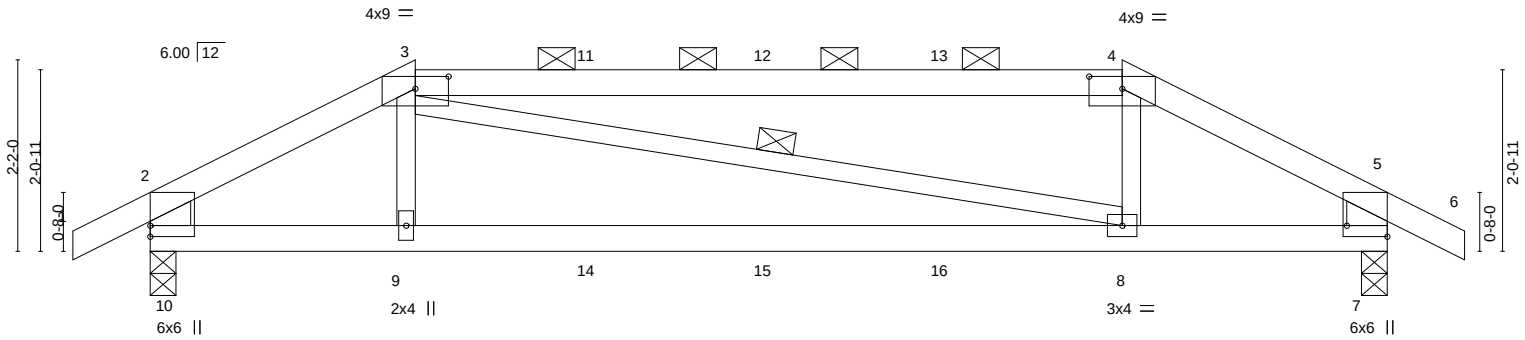


Plate Offsets (X,Y)-- [3:0-4-8,0-1-11], [4:0-4-8,0-1-11], [7:Edge,0-5-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.90	Vert(LL)	-0.15	8-9	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.68	Vert(CT)	-0.33	8-9	>493	240		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.09	Horz(CT)	0.02	7	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.10	8-9	>999	240	Weight: 46 lb	FT = 10%

LUMBER-
TOP CHORD 2x4 SPF No.2 *Except*
3-4: 2x4 SPF 2100F 1.8E
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except*
2-10,5-7: 2x6 SP DSS

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

REACTIONS. (size) 10=0-3-8, 7=0-3-8
Max Horz 10=43(LC 28)
Max Uplift 10=-195(LC 8), 7=-195(LC 9)
Max Grav 10=743(LC 1), 7=743(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1113/294, 3-4=-931/284, 4-5=-1099/290, 2-10=-667/164, 5-7=-670/164
BOT CHORD 9-10=-261/954, 8-9=-269/949, 7-8=-240/934
WEBS 3-9=0/275, 4-8=0/282

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) gable end 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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 10=195, 7=195.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 85 lb down and 145 lb up at 3-0-0, 70 lb down and 53 lb up at 5-0-0, 70 lb down and 53 lb up at 7-0-0, and 70 lb down and 53 lb up at 9-0-0, and 85 lb down and 145 lb up at 11-0-0 on top chord, and 30 lb down at 3-0-0, 18 lb down at 5-0-0, 18 lb down at 7-0-0, and 18 lb down at 9-0-0, and 30 lb down at 10-11-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
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

March 9,2021

Continued on page 2

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	A1	Hip Girder	1	1	Job Reference (optional)

J45104177

04/06/2021

LOAD CASE(S) Standard

Uniform Loads (plf)

Vert: 1-2=-70, 2-3=-70, 3-4=-70, 4-5=-70, 5-6=-70, 7-10=-20

Concentrated Loads (lb)

Vert: 3=-12(F) 4=-12(F) 9=-10(F) 8=-10(F) 11=-12(F) 12=-12(F) 13=-12(F) 14=-10(F) 15=-10(F) 16=-10(F)

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	A2	Hip	1	1	I45104178 Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
04/06/2021

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 8 15:51:38 2021 Page 1

ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-kjwIcpm8x5GJVJoGSI4zF5A7UWhdskVd5KAy6czcxIJ

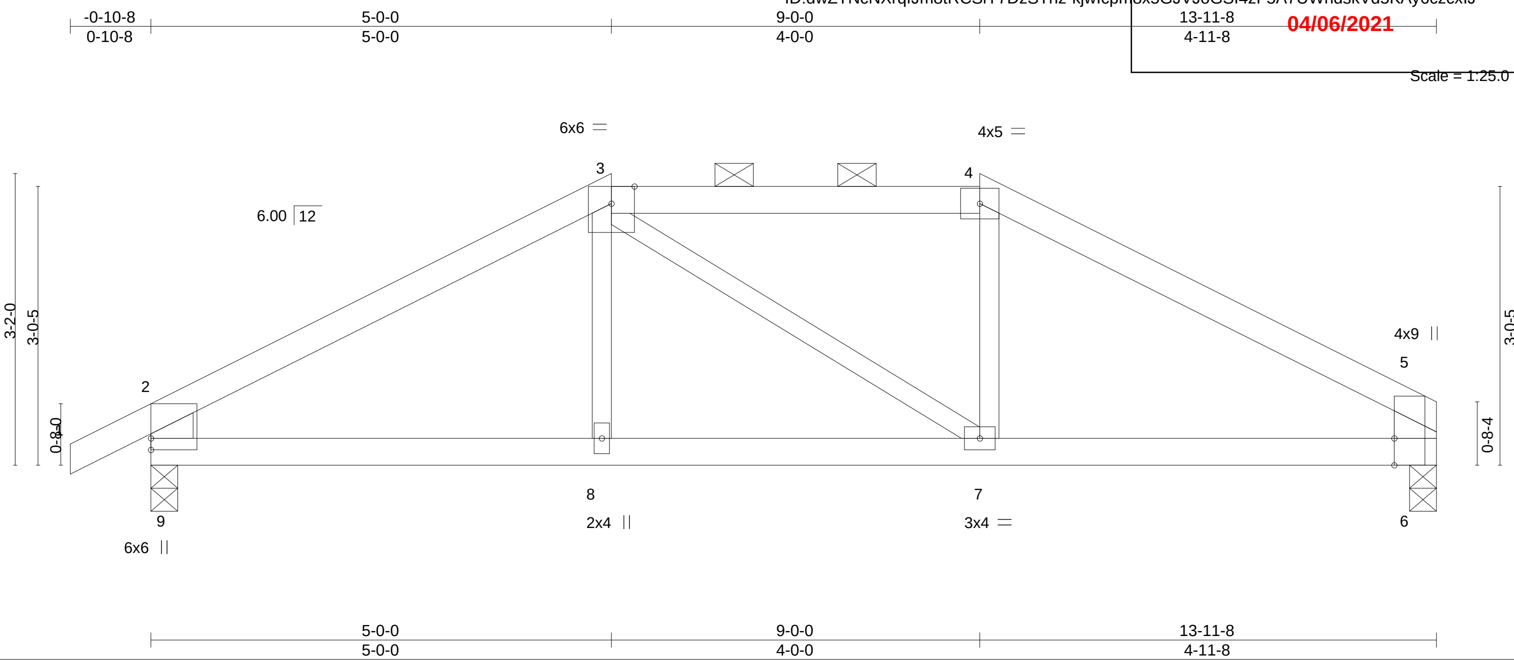


Plate Offsets (X,Y)-- [5:0-3-8,Edge]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.48	Vert(LL)	-0.05	7-8	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.41	Vert(CT)	-0.10	7-8	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.01	6	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.03	7-8	>999	240	Weight: 44 lb	FT = 10%

LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except*
2-9,5-6: 2x6 SPF No.2

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

REACTIONS. (size) 9=0-3-8, 6=0-3-8
Max Horz 9=59(LC 5)
Max Uplift 9=-85(LC 8), 6=-58(LC 9)
Max Grav 9=688(LC 1), 6=604(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-849/64, 3-4=-672/95, 4-5=-835/63, 2-9=-623/120, 5-6=-523/90
BOT CHORD 8-9=-53/679, 7-8=-55/676, 6-7=-23/674

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) gable end 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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 9, 6.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

March 9,2021

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	A3	Roof Special Girder	1	1	Job Reference (optional)

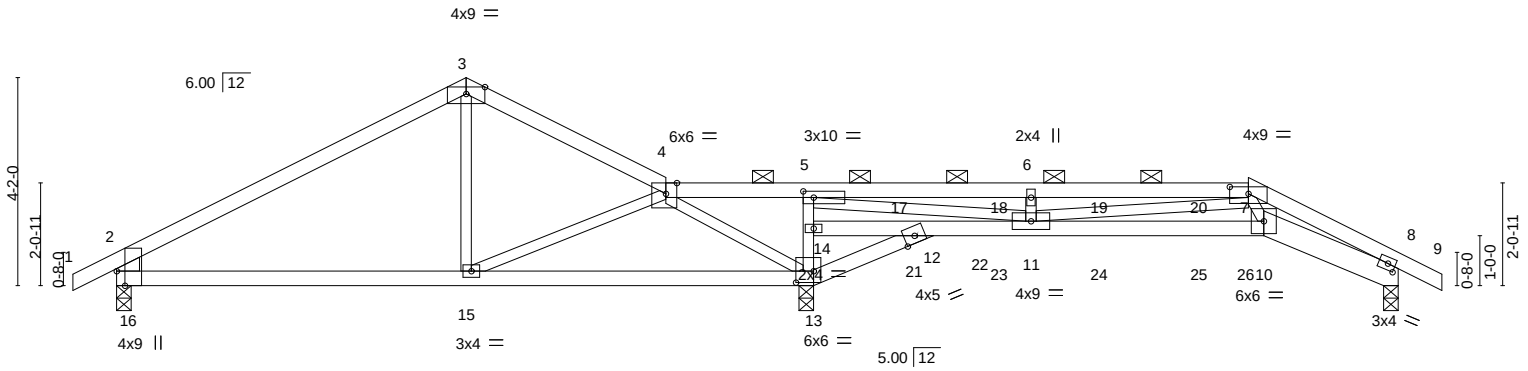
I45104179

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
04/08/2021

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 8 10:41:33 2021 Page 1
ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-CvUhp9nniOOA7TNS00cCoJjFMwzlb38mK_wWe2zcxII

0-10-8	7-0-0	11-0-0	13-11-8	18-3-12	22-8-0	25-8-0	26-6-8
0-10-8	7-0-0	4-0-0	2-11-8	4-4-4	4-4-4	3-0-0	0-10-8

Scale = 1:46.1



7-0-0	13-9-12	13-11-8	16-4-5	18-3-12	22-11-11	25-8-0
7-0-0	6-9-12	0-1-12	2-4-13	1-11-7	4-7-15	2-8-5

Plate Offsets (X,Y)-- [4:0-2-10,Edge], [5:0-2-8,0-1-8], [7:0-4-8,0-1-11], [8:0-1-13,0-1-8], [13:0-4-4,0-2-12], [16:0-3-8,Edge]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.66	Vert(LL)	-0.11	10-11	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.67	Vert(CT)	-0.21	10-11	>661	240		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.55	Horz(CT)	0.07	8	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.11	10-11	>999	240	Weight: 87 lb	FT = 10%

LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except*
8-10: 2x6 SPF No.2
WEBS 2x3 SPF No.2 *Except*
2-16: 2x6 SPF No.2

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

REACTIONS. (size) 16=0-3-8, 13=0-3-8, 8=0-3-8
Max Horz 16=-63(LC 13)
Max Uplift 16=-148(LC 29), 13=-276(LC 9), 8=-167(LC 9)
Max Grav 16=590(LC 1), 13=1428(LC 1), 8=520(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-579/164, 3-4=-506/197, 4-5=-118/750, 5-6=-830/331, 6-7=-830/331, 7-8=-1817/562, 2-16=-541/192
BOT CHORD 15-16=-105/432, 13-15=-331/310, 12-13=-855/217, 11-12=-767/191, 10-11=-406/1198, 8-10=-497/1629
WEBS 4-15=-54/380, 4-13=-993/151, 13-14=-532/206, 5-14=-594/220, 5-11=-455/1590, 6-11=-338/184, 7-11=-393/165, 7-10=-143/786

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) gable end 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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Bearing at joint(s) 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 100 lb uplift at joint(s) except (jt=lb) 16=148, 13=276, 8=167.
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) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 71 lb down and 54 lb up at 15-8-0, 71 lb down and 54 lb up at 17-8-0, 71 lb down and 54 lb up at 19-8-0, and 71 lb down and 54 lb up at 21-8-0, and 118 lb down and 146 lb up at 22-8-0 on top chord, and 18 lb down at 15-8-0, 18 lb down at 17-8-0, 18 lb down at 19-8-0, and 18 lb down at 21-8-0, and 30 lb down at 22-7-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
11) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

Continued on page 2

STATE OF MISSOURI
JUAN GARCIA
NUMBER E-2000162101
PROFESSIONAL ENGINEER

JUAN GARCIA
LICENSED
16952
KANSAS
PROFESSIONAL ENGINEER

March 9,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	A3	Roof Special Girder	1	1	Job Reference (optional)

J45104179

LOAD CASE(S) Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (plf)
   Vert: 1-2=-70, 2-3=-70, 3-4=-70, 4-7=-70, 7-9=-70, 13-16=-20, 12-13=-20, 10-12=-20, 8-10=-20
   Concentrated Loads (lb)
   Vert: 7=-13(F) 17=-13(F) 18=-13(F) 19=-13(F) 20=-13(F) 21=-10(F) 23=-10(F) 24=-10(F) 25=-10(F) 26=-10(F)

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	A4	Roof Special	1	1	Job Reference (optional)

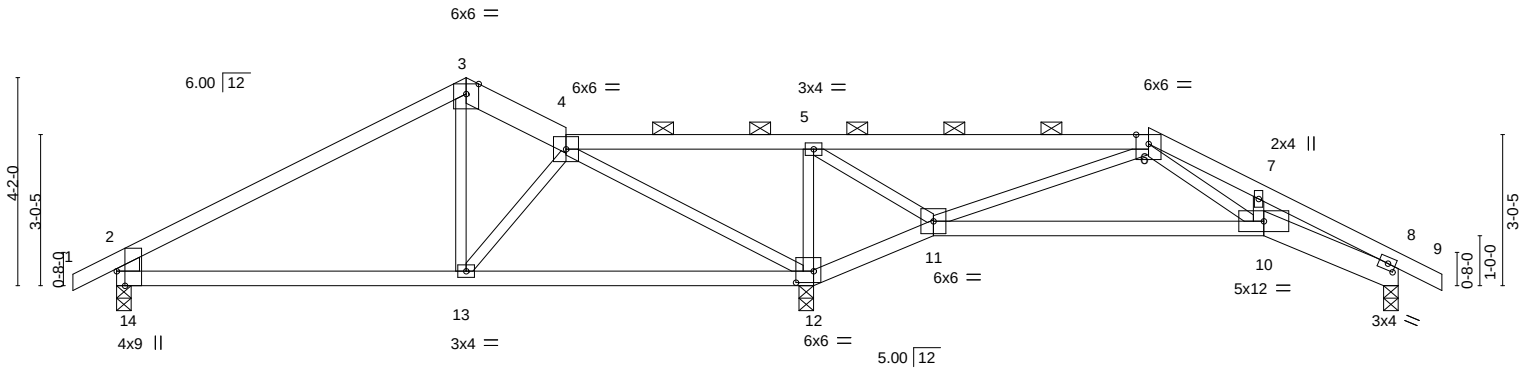
J45104180

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
04/06/2021

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 8 10:41:40 2021 Page 1
ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-g5231VoOSiW1kdyfaj7RKWFQIKMaKTowYef3AUzcxIH

0-10-8 7-0-0 9-0-0 13-11-8 20-8-0 22-11-11 25-8-0 26-6-8
0-10-8 7-0-0 2-0-0 4-11-8 6-8-8 2-3-11 2-8-5 0-10-8

Scale = 1:46.1



7-0-0 13-11-8 16-4-5 22-11-11 25-8-0
7-0-0 6-11-8 2-4-13 6-7-6 2-8-5

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

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.65	Vert(LL)	-0.08	10-11	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.51	Vert(CT)	-0.16	10-11	>845	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.71	Horz(CT)	0.05	8	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.03	10-11	>999	240	Weight: 88 lb	FT = 10%

LUMBER-
TOP CHORD 2x4 SPF No.2 *Except* 3-4: 2x6 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 8-10: 2x6 SPF No.2
WEBS 2x3 SPF No.2 *Except* 2-14: 2x6 SPF No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins (10-0-0 max.): 4-6.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 11-12.

REACTIONS. (size) 14=0-3-8, 12=0-3-8, 8=0-3-8
Max Horz 14=-62(LC 13)
Max Uplift 14=-128(LC 8), 12=-187(LC 9), 8=-114(LC 9)
Max Grav 14=581(LC 1), 12=1388(LC 1), 8=456(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-572/129, 3-4=-461/160, 4-5=0/521, 5-6=0/307, 6-7=-1007/221, 7-8=-1201/182, 2-14=-533/172
BOT CHORD 13-14=-78/413, 12-13=-123/334, 11-12=-600/71, 10-11=-101/478, 8-10=-115/1032
WEBS 4-12=-907/54, 5-12=-667/192, 5-11=0/311, 6-11=-801/177, 6-10=-29/549

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) gable end 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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Bearing at joint(s) 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 100 lb uplift at joint(s) except (jt=lb) 14=128, 12=187, 8=114.
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.

STATE OF MISSOURI
JUAN GARCIA
NUMBER E-2000162101
PROFESSIONAL ENGINEER

JUAN GARCIA LICENSED
16952
KANSAS
PROFESSIONAL ENGINEER

March 9,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN	
210322	A5	HALF HIP GIRDER	1	2	Job Reference (optional)	I45104181

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI

Wheeler Lumber, Waverly, KS 66871, Mitek

8.430 e Nov 30 2020 MiTek Industries, Inc. Tue Mar 09 2021 Page 1
ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-TTqb80mTNf_Yfa1OZZUDm1lFMrCF2TEe0?a9qyzcgL5

04/06/2021

Scale = 1:22.5

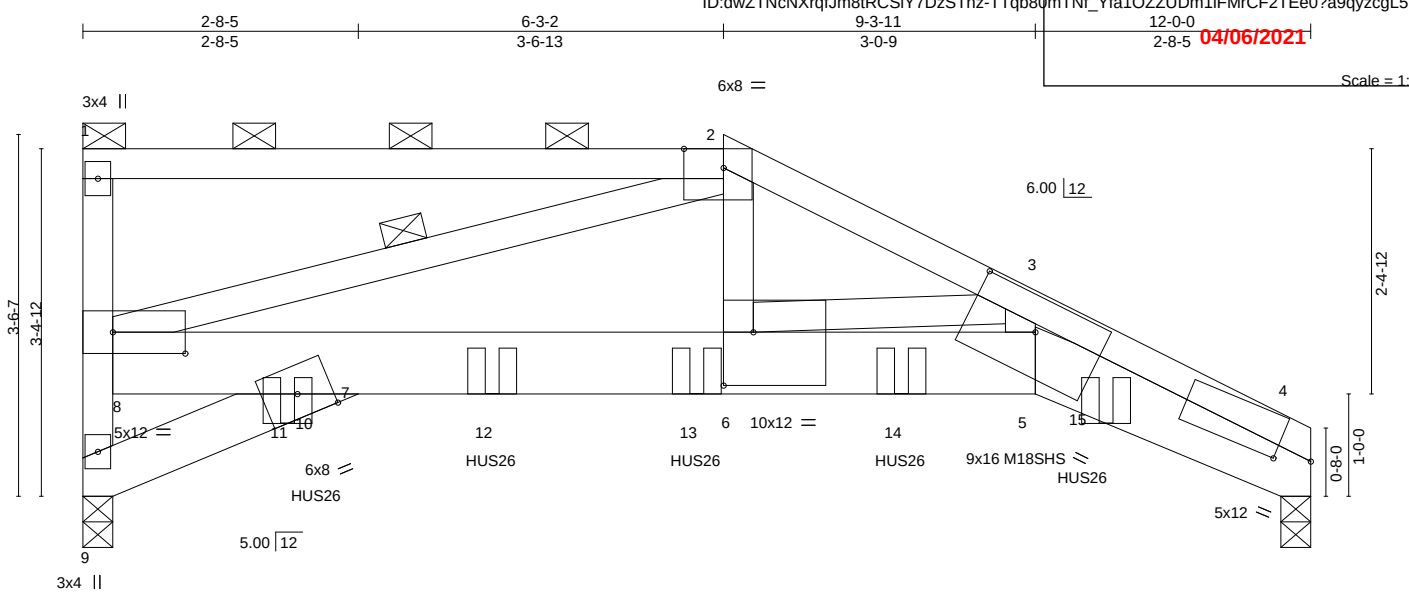


Plate Offsets (X,Y)-- [2:0-4-10,Edge], [4:0-4-3,0-1-5], [5:0-8-0,0-4-0], [6:0-3-8,0-6-4], [8:0-8-8,0-2-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.83	Vert(LL)	-0.13	5-6	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.63	Vert(CT)	-0.23	5-6	>622	240	M18SHS	197/144
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.59	Horz(CT)	0.18	4	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.08	5-6	>999	240	Weight: 147 lb	FT = 10%

LUMBER-

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

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 4-7-5 oc purlins, except[PSA] end verticals, and 2-0-0 oc purlins (6-0-0 max.): 1-2.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 2-8

REACTIONS. (lb/size) 9=3571/0-3-8, 4=3571/0-3-8
Max Horz 9=-125(LC 6)
Max Uplift 9=-283(LC 4), 4=-401(LC 9)
Max Grav 9=3571(LC 1), 4=3581(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

TOP CHORD	8-9=-3200/256, 1-2=-420/67, 2-3=-7491/553, 3-4=-11431/1174
BOT CHORD	7-10=-41/535, 8-11=-524/6259, 7-11=-524/6259, 7-12=-458/6443, 12-13=-458/6443, 6-13=-458/6443, 6-14=-853/8830, 5-14=-854/8836, 5-15=-1046/10392, 4-15=-980/9910
WEBS	2-8=-6355/486, 2-6=-299/4827, 3-6=-2108/466, 3-5=-437/3419

NOTES-

1) N/A
2) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
   Top chords connected as follows: 2x4 - 1 row at 0-4-0 oc.
   Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-2-0 oc, 2x8 - 4 rows staggered at 0-2-0 oc.
   Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
3) 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.
4) Unbalanced roof live loads have been considered for this design.
5) 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) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
6) Provide adequate drainage to prevent water ponding.
7) All plates are MT20 plates 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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
10) Bearing at joint(s) 9, 4 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 283 lb uplift at joint 9 and 401 lb uplift at joint 4.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

STATE OF MISSOURI
JUAN GARCIA
NUMBER E-2000162101
PROFESSIONAL ENGINEER

JUAN GARCIA
LICENSED
16952
KANSAS
PROFESSIONAL ENGINEER

March 9,2021

Continued on page 2

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	A5	HALF HIP GIRDER	1	2	Job Reference (optional)

I45104181

Wheeler Lumber, Waverly, KS 66871, Mitek

8.430 e Nov 30 2020 MiTek Industries, Inc. Tue Mar 30 11:09:12 2021 Page 2

ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-TTqb80mTNf_Yfa1OZZUDm1lFMrCF2TEe0?a9qyzcgL5

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
04/06/2021

NOTES-

14) Use Simpson Strong-Tie HUS26 (14-10d Girder, 4-10d Truss) or equivalent spaced at 2-0-0 oc max. starting at 2-0-0 from the left end to 10-0-0 to connect truss(es) to back face of bottom chord.
15) Fill all nail holes where hanger is in contact with lumber.

LOAD CASE(S) Standard

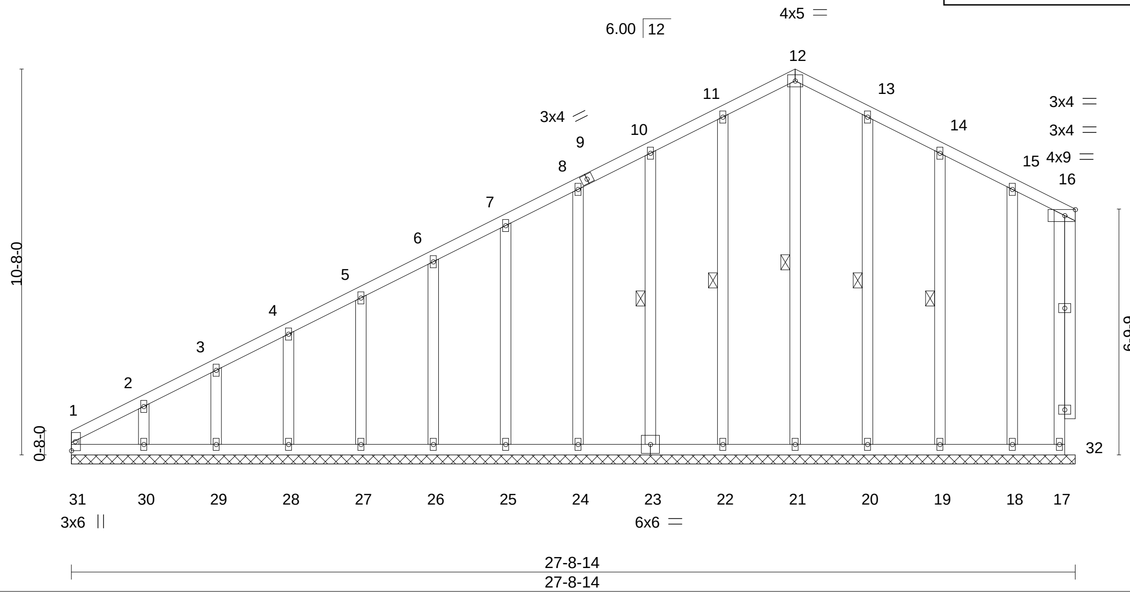
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (plf)
      Vert: 1-2=-70, 2-4=-70, 7-9=-20, 5-7=-20, 4-5=-20
   Concentrated Loads (lb)
      Vert: 10=-1218(B) 12=-1217(B) 13=-1217(B) 14=-1219(B) 15=-1217(B)

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	B1	Common Supported Gable	1	1	I45104182 Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
04/06/2021

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 8 15:51:42 2021 Page 1

ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-cUApRBpe_Jml_x61h89vQxKue78boWLD0y8AFNzcxIF



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.15	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.09	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.13	Horz(CT)	-0.00	17	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-R							Weight: 173 lb	FT = 10%

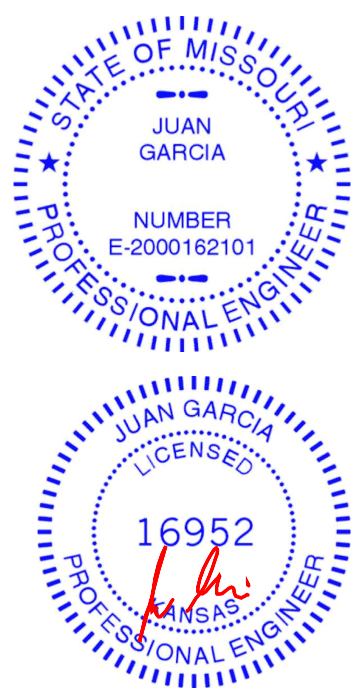
LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except*
16-17: 2x4 SPF No.2
OTHERS 2x4 SPF No.2

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 12-21, 11-22, 10-23, 13-20, 14-19

REACTIONS. All bearings 27-8-14.
(lb) - Max Horz 31=323(LC 5)
Max Uplift All uplift 100 lb or less at joint(s) 31, 17, 21, 22, 23, 24, 25, 26, 27, 28, 29, 20, 19, 18 except 30=-143(LC 8)
Max Grav All reactions 250 lb or less at joint(s) 31, 17, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 20, 19, 18

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-296/102

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) gable end 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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 31, 17, 21, 22, 23, 24, 25, 26, 27, 28, 29, 20, 19, 18 except (jt=lb) 30=143.
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.



March 9,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
04/06/2021

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	B2	Roof Special	1	1	I45104183 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 8 15:51:46 2021 Page 1
ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-VFPKHYs92YGBSYPow_EranVTalNZkA9oxa6NO8zcxIB

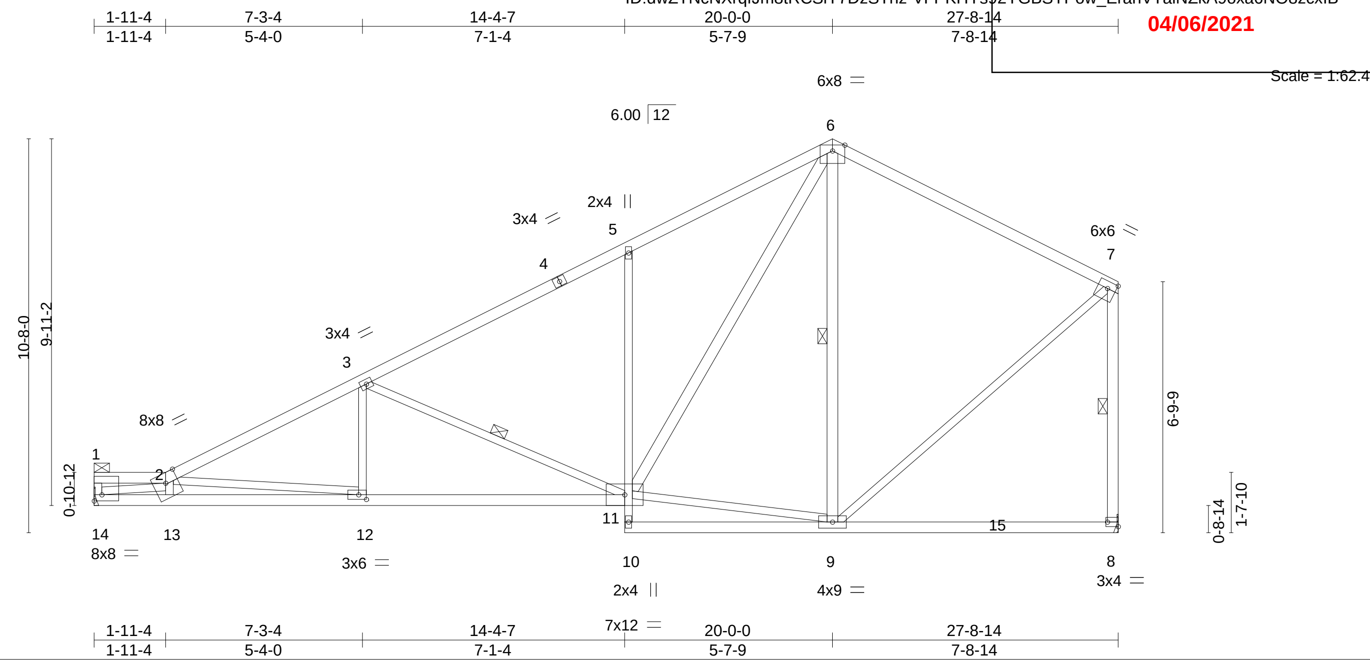


Plate Offsets (X,Y)-- [7:Edge,0-2-4], [8:Edge,0-1-8], [12:0-2-8,0-1-8], [14:Edge,0-2-0]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.60	Vert(LL)	-0.17	11-12	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.60	Vert(CT)	-0.32	11-12	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.72	Horz(CT)	0.07	8	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.12	12-13	>999	240	Weight: 131 lb	FT = 10%

LUMBER-
TOP CHORD 2x4 SPF No.2 *Except*
6-7: 2x4 SPF 2100F 1.8E
BOT CHORD 2x3 SPF No.2 *Except*
11-14: 2x4 SPF 2100F 1.8E, 8-10: 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except*
6-11,6-9,7-8: 2x4 SPF No.2

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

REACTIONS. (size) 14=Mechanical, 8=Mechanical
Max Horz 14=310(LC 7)
Max Uplift 14=-181(LC 8), 8=-147(LC 8)
Max Grav 14=1274(LC 2), 8=1316(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-273/35, 2-3=-2495/347, 3-5=-1563/254, 5-6=-1535/401, 6-7=-892/221, 7-8=-1167/190
BOT CHORD 13-14=-589/3197, 12-13=-575/3180, 11-12=-403/2222, 5-11=-474/265
WEBS 2-14=-3079/426, 2-12=-978/173, 3-12=0/424, 3-11=-981/249, 9-11=-41/726, 6-11=-345/1199, 6-9=-500/145, 7-9=-89/910

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) gable end 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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 14=181, 8=147.
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.

STATE OF MISSOURI
JUAN GARCIA
NUMBER E-2000162101
PROFESSIONAL ENGINEER

JUAN GARCIA
LICENSED
16952
KANSAS
PROFESSIONAL ENGINEER

March 9,2021

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	B3	Roof Special	1	1	I45104184 Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
04/06/2021

Wheeler Lumber, Waverly, KS - 66871,

8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 8 15:51:47 2021 Page 1
ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-zRziVutnpsO24i_?Uhl47?2Zz8jNTa1y9EsxwazcxIA

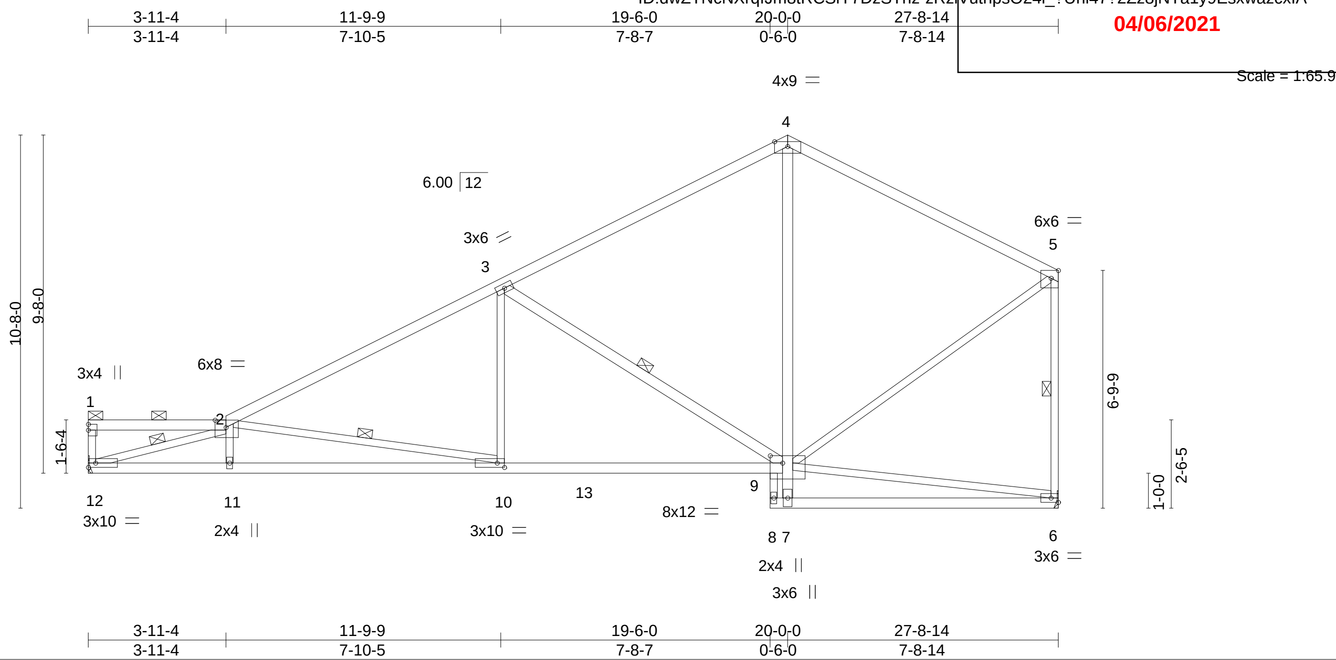


Plate Offsets (X,Y)-- [2:0-3-12,0-2-8], [5:0-2-8,Edge], [9:0-4-4,0-2-8], [10:0-2-8,0-1-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.94	Vert(LL)	-0.24	10-11	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.62	Vert(CT)	-0.44	10-11	>751	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.94	Horz(CT)	0.08	6	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.16	10-11	>999	240	Weight: 124 lb	FT = 10%

LUMBER-
TOP CHORD 2x4 SPF 2100F 1.8E *Except*
1-2: 2x4 SPF No.2
BOT CHORD 2x4 SPF 2100F 1.8E *Except*
8-9: 2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except*
3-9,4-7: 2x4 SPF No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 4-6-4 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 1-2.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 8-9.
WEBS 1 Row at midpt 2-12, 2-10, 3-9, 5-6

REACTIONS. (size) 12=Mechanical, 6=Mechanical
Max Horz 12=304(LC 7)
Max Uplift 12=-184(LC 8), 6=-143(LC 8)
Max Grav 12=1293(LC 2), 6=1291(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2075/287, 3-4=-1036/198, 4-5=-975/227, 5-6=-1163/185
BOT CHORD 11-12=-557/3352, 10-11=-550/3364, 9-10=-278/1808, 8-9=-572/0
WEBS 2-12=-3430/460, 2-10=-1587/275, 3-10=0/616, 3-9=-1181/319, 7-9=0/780, 4-9=-26/434, 5-9=-93/971

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) gable end 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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 12=184, 6=143.
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.

STATE OF MISSOURI
JUAN GARCIA
NUMBER E-2000162101
PROFESSIONAL ENGINEER

JUAN GARCIA
LICENSED
16952
KANSAS
PROFESSIONAL ENGINEER

March 9,2021

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	B4	Roof Special	1	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI

I45104185

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 8 13:48:12 2021 Page 1
ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-ReX4iEuPa9XuisZB2PGJfCapmY1mC1f5OubUT1zcxI9

04/06/2021

Scale = 1:71.0

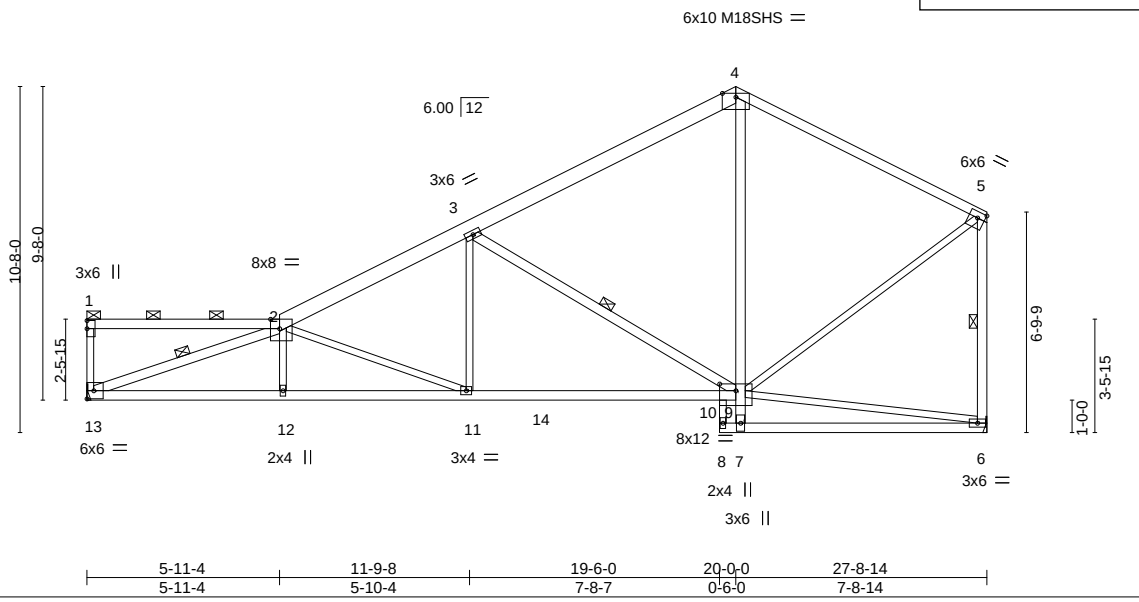


Plate Offsets (X,Y)-- [2:0-3-6,Edge], [5:Edge,0-2-4], [9:0-6-0,0-2-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.56	Vert(LL)	-0.14	11-12	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.74	Vert(CT)	-0.26	10-11	>999	240	M18SHS	197/144
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.91	Horz(CT)	0.09	6	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.08	11-12	>999	240	Weight: 139 lb	FT = 10%

LUMBER-
TOP CHORD 2x4 SPF No.2 *Except*
2-4: 2x6 SPF No.2, 4-5: 2x4 SPF 2100F 1.8E
BOT CHORD 2x4 SPF No.2 *Except*
8-10: 2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except*
2-13,3-9,4-7,5-6: 2x4 SPF No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 4-11-7 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 1-2.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 2-13, 3-9, 5-6

REACTIONS. (size) 13=Mechanical, 6=Mechanical
Max Horz 13=244(LC 7)
Max Uplift 13=-34(LC 8), 6=-7(LC 8)
Max Grav 13=1237(LC 1), 6=1237(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1970/65, 3-4=-998/73, 4-5=-968/93, 5-6=-1173/41
BOT CHORD 12-13=-81/2600, 11-12=-78/2605, 10-11=-43/1696, 9-10=-14/1736, 8-10=-496/0
WEBS 2-13=-2718/56, 2-11=-972/37, 3-11=0/522, 3-9=-1112/132, 7-9=0/700, 4-9=0/362, 5-9=0/923

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) 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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 13, 6.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

March 9,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	B5	Roof Special	1	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI

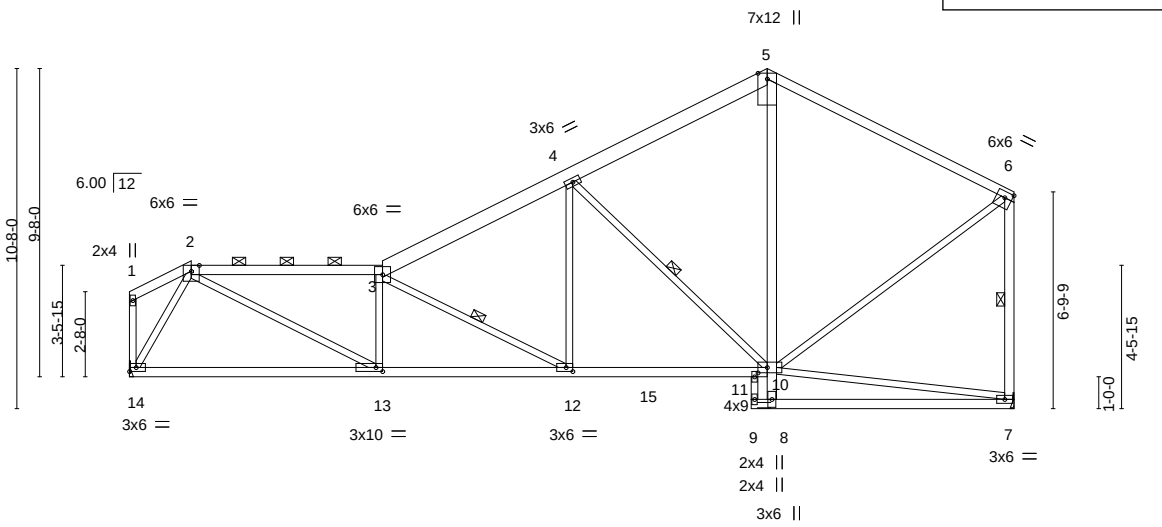
I45104186

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 01 15:01:15 2021 Page 1
ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-N0er7wvf6nncx9ja9qInkdg5lMiUg_LOrC4bXvzcxI7

04/06/2021

1-11-4 7-11-4 13-9-9 19-6-0 20-0-0 27-8-14
1-11-4 6-0-0 5-10-5 5-8-7 0-6-0 7-8-14

Scale = 1:72.3



1-11-4 7-11-4 13-9-9 19-6-0 20-0-0 27-8-14
1-11-4 6-0-0 5-10-5 5-8-7 0-6-0 7-8-14

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

LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.78	Vert(LL)	-0.15	13-14	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.79	Vert(CT)	-0.30	13-14	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.71	Horz(CT)	0.06	7	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.06	12-13	>999	240	Weight: 138 lb	FT = 10%

LUMBER-
TOP CHORD 2x4 SPF No.2 *Except*
3-5: 2x6 SPF No.2, 5-6: 2x4 SPF 2100F 1.8E
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except*
5-8,6-7: 2x4 SPF No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-5-5 oc purlins, except end verticals, and 2-0-0 oc purlins (2-8-12 max.): 2-3.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 3-12, 4-10, 6-7

REACTIONS. (size) 7=Mechanical, 14=Mechanical
Max Horz 14=244(LC 7)
Max Uplift 7=-7(LC 8), 14=-35(LC 8)
Max Grav 7=1295(LC 2), 14=1289(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2306/47, 3-4=-1748/67, 4-5=-983/84, 5-6=-989/96, 6-7=-1176/44
BOT CHORD 13-14=-159/713, 12-13=-54/2325, 11-12=-26/1524, 10-11=-26/1524
WEBS 9-11=-417/0, 2-13=0/1864, 3-13=-696/92, 3-12=-941/47, 4-12=0/677, 4-10=-998/112, 8-10=0/618, 5-10=0/470, 2-14=-1313/92, 6-10=0/977

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 7, 14.
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.

March 9,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
04/06/2021

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	B6	Roof Special	1	1	I45104187 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 8 15:51:50 2021 Page 1

ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-N0er7wvf6nncx9ja9qInkdg40MfQg_6OrC4bXvzcxI7

Scale = 1:65.9

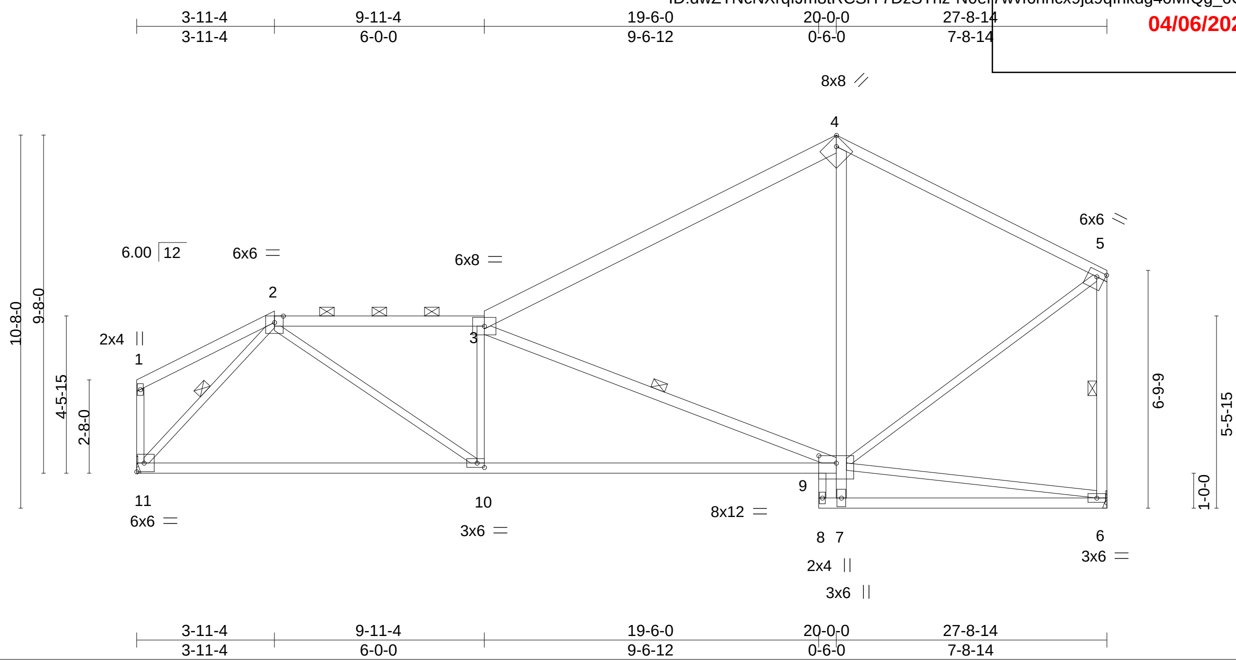


Plate Offsets (X,Y)-- [4:0-2-12,0-2-11], [5:0-2-12,0-2-0], [9:0-6-0,0-2-8], [10:0-2-8,0-1-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.89	Vert(LL)	-0.21	10-11	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.99	Vert(CT)	-0.46	9-10	>725	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.72	Horz(CT)	0.06	6	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.05	9-10	>999	240	Weight: 135 lb	FT = 10%

LUMBER-
TOP CHORD 2x4 SPF No.2 *Except*
3-4: 2x6 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except*
8-9: 2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except*
3-9,4-7,5-6: 2x4 SPF No.2

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

REACTIONS. (size) 6=Mechanical, 11=Mechanical
Max Horz 11=244(LC 7)
Max Uplift 6=-5(LC 8), 11=-35(LC 8)
Max Grav 6=1239(LC 1), 11=1238(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1938/53, 3-4=-1039/62, 4-5=-981/98, 5-6=-1167/45
BOT CHORD 10-11=-125/952, 9-10=-31/1949, 8-9=-405/0
WEBS 2-10=0/1215, 3-10=-491/116, 3-9=-1270/105, 7-9=0/600, 4-9=0/340, 2-11=-1367/71, 5-9=0/930

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 6, 11.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

STATE OF MISSOURI
JUAN GARCIA
NUMBER E-2000162101
PROFESSIONAL ENGINEER

JUAN GARCIA
LICENSED
16952
KANSAS
PROFESSIONAL ENGINEER

March 9,2021

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	B7	Roof Special	1	1	I45104188 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 8 15:51:51 2021 Page 1
ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-rDCDKGwHt4vTZJImjXp0HqCJVm0UPOoX4sq83MzcxI6

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
04/06/2021

Scale: 3/16"=1'

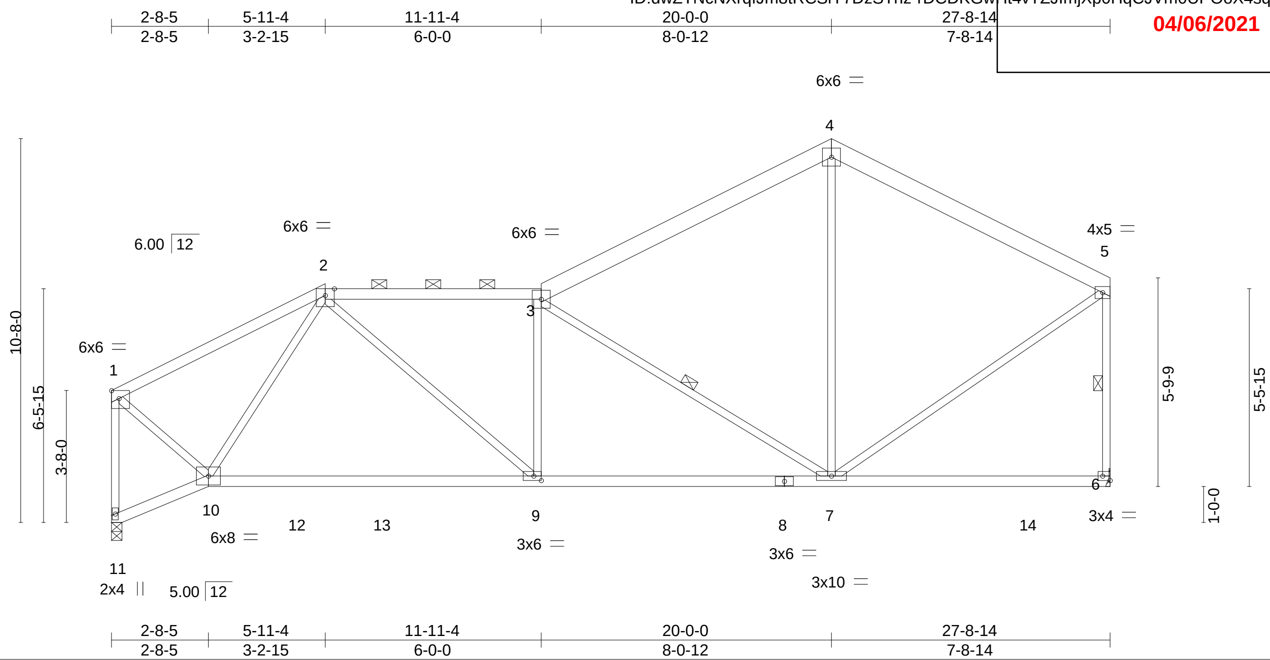


Plate Offsets (X,Y)-- [1:Edge,0-2-11], [6:Edge,0-1-8], [9:0-2-8,0-1-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.59	Vert(LL)	-0.29	9-10	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.87	Vert(CT)	-0.50	9-10	>654	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.95	Horz(CT)	0.06	6	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.04	9	>999	240	Weight: 126 lb	FT = 10%

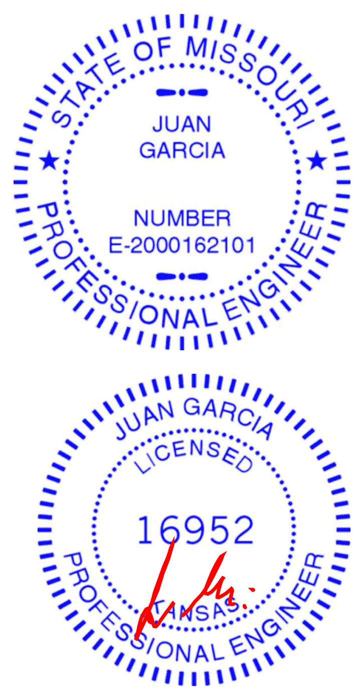
LUMBER-
TOP CHORD 2x4 SPF No.2 *Except*
3-4,4-5: 2x6 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2

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

REACTIONS. (size) 11=0-3-8, 6=Mechanical
Max Horz 11=236(LC 5)
Max Uplift 11=-35(LC 8), 6=-7(LC 8)
Max Grav 11=1302(LC 2), 6=1314(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-992/42, 2-3=-1741/71, 3-4=-1009/72, 4-5=-978/96, 1-11=-1309/48, 5-6=-1174/48
BOT CHORD 9-10=-119/1146, 7-9=-34/1744
WEBS 2-10=-641/69, 2-9=0/835, 3-9=-316/84, 3-7=-1113/98, 4-7=0/392, 1-10=0/1103, 5-7=0/983

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Refer to girder(s) for truss to truss connections.
7) Bearing at joint(s) 11 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 100 lb uplift at joint(s) 11, 6.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



March 9,2021

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	B8	Roof Special	1	1	Job Reference (optional)

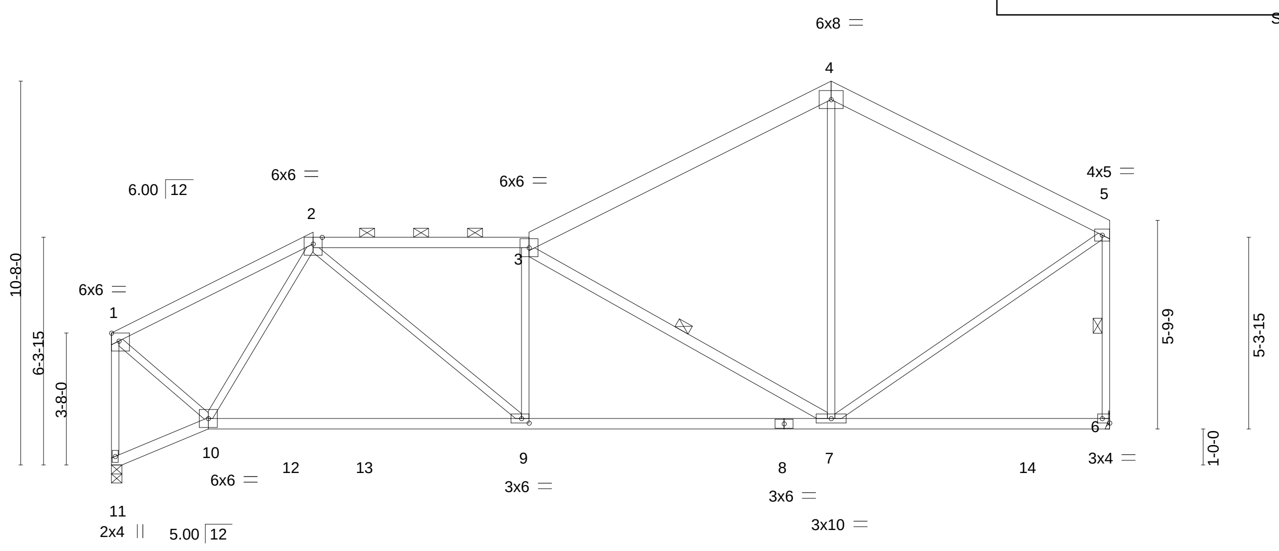
I45104189

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 8 15:51:52 2021 Page 1

ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-KPmbYbxweO1KATtyHEKFp2lU89Mq8x3hJWZicozcxI5

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
04/06/2021

Scale: 3/16"=1'



2-8-5	5-7-4	11-7-4	20-0-0	27-8-14
2-8-5	2-10-15	6-0-0	8-4-12	7-8-14

Plate Offsets (X,Y)-- [1:Edge,0-2-11], [6:Edge,0-1-8], [9:0-2-8,0-1-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.59	Vert(LL)	-0.24	9-10	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.86	Vert(CT)	-0.42	9-10	>783	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.57	Horz(CT)	0.06	6	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.04	9	>999	240	Weight: 129 lb	FT = 10%

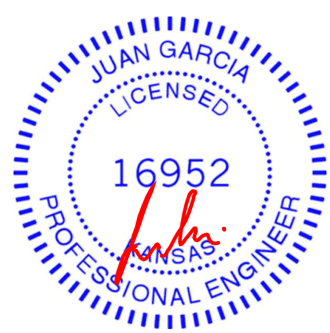
LUMBER-
TOP CHORD 2x4 SPF No.2 *Except*
3-4,4-5: 2x6 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except*
3-7: 2x4 SPF No.2

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

REACTIONS. (size) 11=0-3-8, 6=Mechanical
Max Horz 11=236(LC 5)
Max Uplift 11=-35(LC 8), 6=-7(LC 8)
Max Grav 11=1299(LC 2), 6=1312(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-986/42, 2-3=-1781/70, 3-4=-1015/71, 4-5=-978/95, 1-11=-1299/49, 5-6=-1175/47
BOT CHORD 9-10=-123/1135, 7-9=-39/1785
WEBS 2-10=-645/68, 2-9=0/890, 3-9=-347/88, 3-7=-1135/101, 4-7=0/382, 1-10=0/1105, 5-7=0/986

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Refer to girder(s) for truss to truss connections.
7) Bearing at joint(s) 11 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 100 lb uplift at joint(s) 11, 6.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



March 9,2021

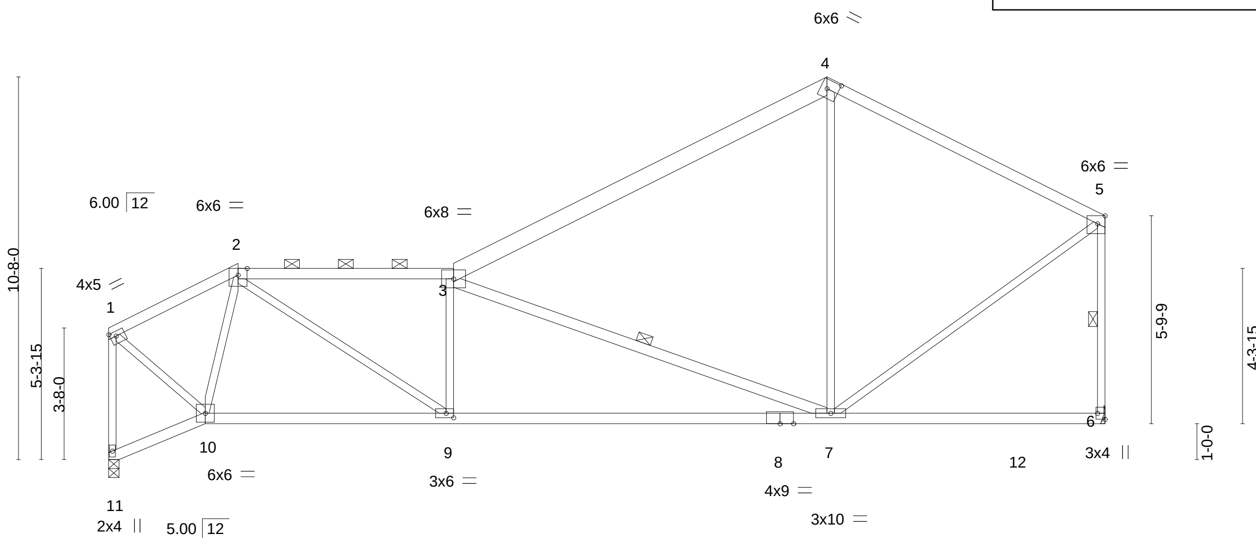
Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	B9	Roof Special	1	1	I45104190 Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
04/06/2021

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 8 15:01:53 2021 Page 1
ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-obKzlxyYPi9BodS9rysUMFIZ5ZhdtKfqYAJF8EzcxI4

2-8-5 | 3-7-4 | 9-7-4 | 20-0-0 | 27-8-14
2-8-5 | 0-10-15 | 6-0-0 | 10-4-12 | 7-8-14

Scale: 3/16"=1'



2-8-5 | 3-7-4 | 9-7-4 | 20-0-0 | 27-8-14
2-8-5 | 0-10-15 | 6-0-0 | 10-4-12 | 7-8-14

Plate Offsets (X,Y)-- [1:0-2-0,0-1-8], [4:0-3-14,0-3-0], [5:0-2-8,Edge], [6:Edge,0-2-8], [9:0-2-8,0-1-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.97	Vert(LL)	-0.25	7-9	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.95	Vert(CT)	-0.53	7-9	>620	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.80	Horz(CT)	0.07	6	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.06	9	>999	240	Weight: 124 lb	FT = 10%

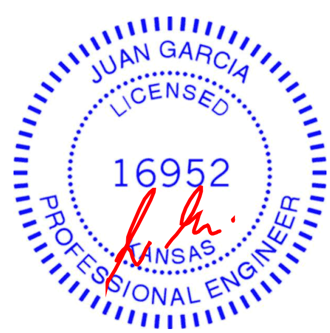
LUMBER-
TOP CHORD 2x4 SPF No.2 *Except*
3-4: 2x6 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except*
6-8: 2x4 SPF 2100F 1.8E
WEBS 2x3 SPF No.2 *Except*
3-7: 2x4 SPF No.2

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

REACTIONS. (size) 11=0-3-8, 6=Mechanical
Max Horz 11=238(LC 5)
Max Uplift 11=-34(LC 8), 6=-7(LC 8)
Max Grav 11=1275(LC 2), 6=1308(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-952/43, 2-3=-2052/65, 3-4=-1044/57, 4-5=-997/91, 1-11=-1241/57, 5-6=-1185/41
BOT CHORD 9-10=-155/1006, 7-9=-64/2062
WEBS 2-10=-667/56, 2-9=0/1326, 3-9=-533/113, 3-7=-1343/125, 4-7=0/348, 1-10=-27/1119, 5-7=0/1000

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Refer to girder(s) for truss to truss connections.
7) Bearing at joint(s) 11 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 100 lb uplift at joint(s) 11, 6.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



March 9,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	B10	Roof Special	1	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
I45104191
04/06/2021

Wheeler Lumber, Waverly, KS - 66871,

8.430 s Feb 12 2021 MiTek Industries, Inc. Wed Mar 3 10:43:13 2021 Page 1
ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-4gjBfXqGlducb5hEFrg8y9twLXKHXpZMEcujnpzcxIE

Scale: 3/16"=1'

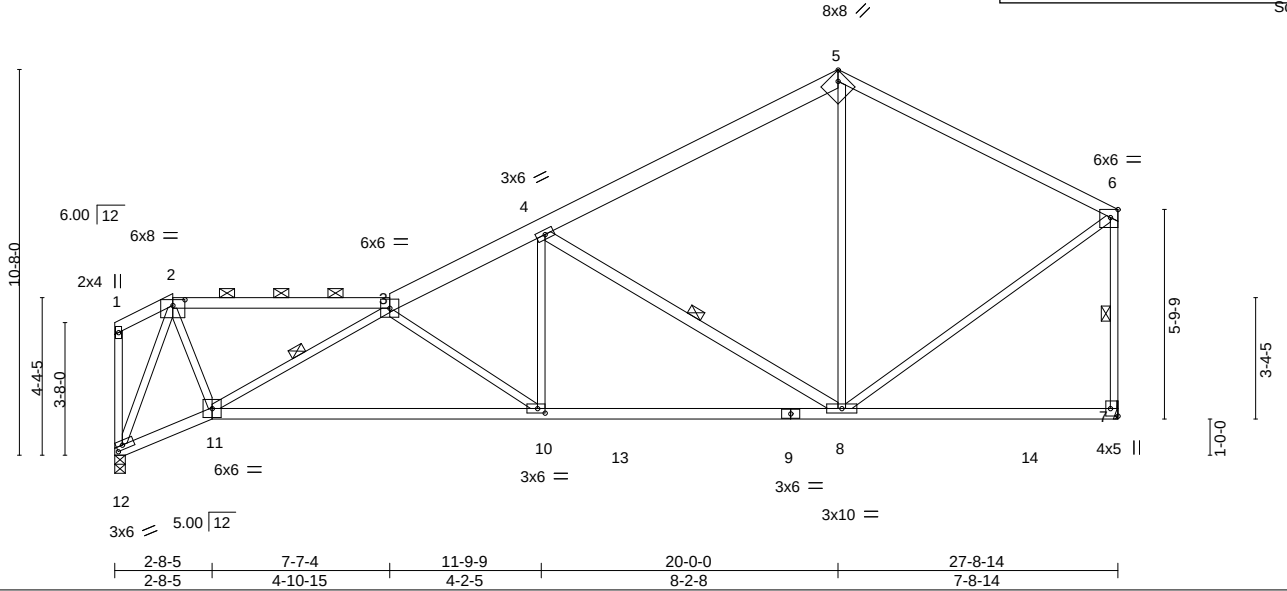


Plate Offsets (X,Y)-- [2:0-4-0,0-1-15], [5:0-2-11,Edge], [6:0-2-8,Edge], [7:Edge,0-2-8], [10:0-2-8,0-1-8], [12:0-2-1,0-1-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.73	Vert(LL)	-0.18	10-11	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.76	Vert(CT)	-0.38	10-11	>875	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.78	Horz(CT)	0.08	7	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.05	10	>999	240	Weight: 127 lb	FT = 10%

LUMBER-

TOP CHORD 2x4 SPF No.2 *Except*
3-5: 2x6 SPF No.2, 5-6: 2x4 SPF 2100F 1.8E
BOT CHORD 2x4 SPF No.2 *Except*
9-11: 2x4 SPF 2100F 1.8E
WEBS 2x3 SPF No.2 *Except*
4-8: 2x4 SPF No.2

BRACING-

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

REACTIONS. (size) 12=0-3-8, 7=Mechanical
Max Horz 12=238(LC 5)
Max Uplift 12=-34(LC 8), 7=-7(LC 8)
Max Grav 12=1275(LC 2), 7=1308(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-977/26, 3-4=-2001/62, 4-5=-999/75, 5-6=-959/95, 6-7=-1174/47
BOT CHORD 11-12=-206/691, 10-11=-114/2240, 8-10=-50/1790
WEBS 2-11=0/1306, 3-11=-1503/76, 4-8=-1150/119, 5-8=0/399, 2-12=-1588/72, 6-8=0/979, 3-10=-622/79, 4-10=0/674

NOTES-

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
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 100 lb uplift at joint(s) 12, 7.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

STATE OF MISSOURI
JUAN GARCIA
NUMBER E-2000162101
PROFESSIONAL ENGINEER

JUAN GARCIA LICENSED
16952
KANSAS
PROFESSIONAL ENGINEER

March 9,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	B11	Roof Special	3	1	Job Reference (optional)

I45104192

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Feb 12 2021 MiTek Industries, Inc. Wed Mar 3 08:31:44 2021 Page 1
ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-ZsHassruWx0TDEGQpZBNVMQ4oxggGCLVTGdGKGzcxID

04/06/2021

Scale = 1:64.8

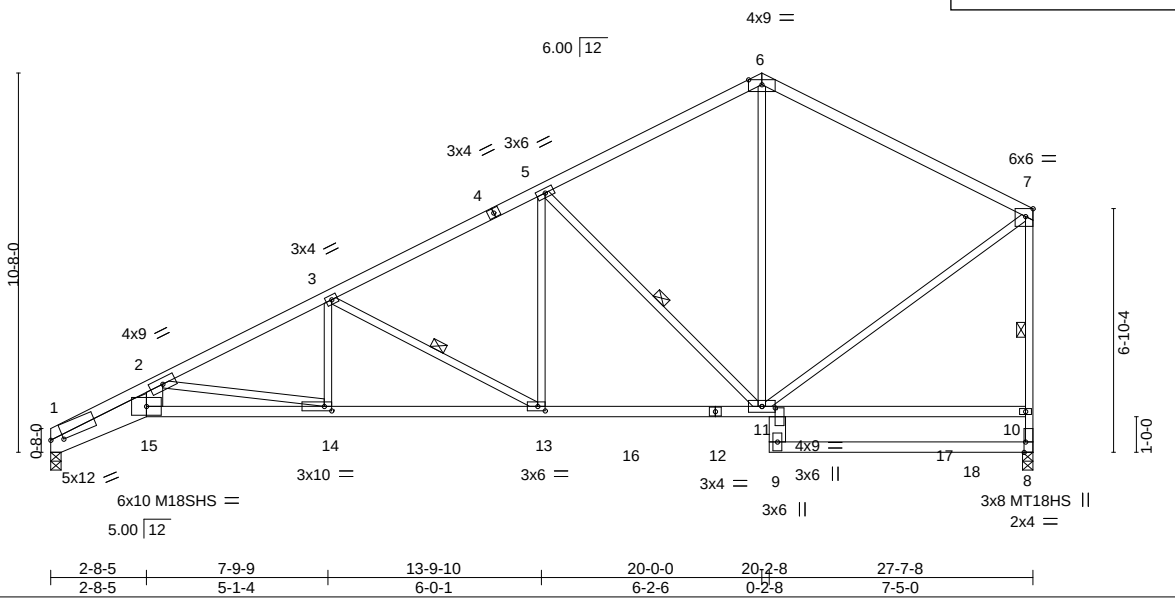


Plate Offsets (X,Y)-- [1:0-4-3,0-1-5], [7:0-2-8,Edge], [8:0-3-8,Edge], [11:0-0-8,0-4-8], [13:0-2-8,0-1-8], [14:0-2-8,0-1-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.81	Vert(LL)	-0.25	14-15	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.69	Vert(CT)	-0.44	14-15	>747	240	M18SHS	197/144
BCLL	0.0 *	Rep Stress Incr	YES	WB	1.00	Horz(CT)	0.22	8	n/a	n/a	MT18HS	197/144
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.19	14-15	>999	240	Weight: 127 lb	FT = 10%

LUMBER-

TOP CHORD 2x4 SPF No.2 *Except*
6-7: 2x4 SPF 2100F 1.8E
BOT CHORD 2x4 SPF No.2 *Except*
1-15: 2x8 SP DSS, 12-15: 2x4 SPF 2100F 1.8E, 9-11: 2x6 SPF No.2
WEBS 2x3 SPF No.2 *Except*
2-15: 2x6 SPF No.2

BRACING-

TOP CHORD Structural wood sheathing directly applied or 2-1-10 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 8-3-6 oc bracing.
WEBS 1 Row at midpt 3-13, 5-11, 7-8

REACTIONS. (size) 1=0-3-8, 8=0-3-8
Max Horz 1=321(LC 7)
Max Uplift 1=-176(LC 8), 8=-152(LC 8)
Max Grav 1=1300(LC 2), 8=1449(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-5408/987, 2-3=-2615/399, 3-5=-1760/281, 5-6=-957/199, 6-7=-968/220, 8-10=-1299/193, 7-10=-1224/195
BOT CHORD 1-15=-1066/4952, 14-15=-898/4059, 13-14=-433/2357, 11-13=-208/1539
WEBS 2-15=-337/1923, 2-14=-1725/471, 3-14=-8/478, 3-13=-930/255, 5-13=-40/690, 5-11=-1003/282, 7-11=-107/1005, 6-11=-47/459

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) gable end 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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Bearing at joint(s) 1 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 100 lb uplift at joint(s) except (jt=lb) 1=176, 8=152.
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.

STATE OF MISSOURI
JUAN GARCIA
NUMBER E-2000162101
PROFESSIONAL ENGINEER

JUAN GARCIA
LICENSED
16952
KANSAS
PROFESSIONAL ENGINEER

March 9,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	B12	Roof Special	1	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
J45104193
04/06/2021

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Feb 12 2021 MiTek Industries, Inc. Wed Mar 3 10:08:14 2021 Page 1
ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-13ry4CsXHE8KrOqcNGic1ayFrL0I?f9fiwNqsizcxIC

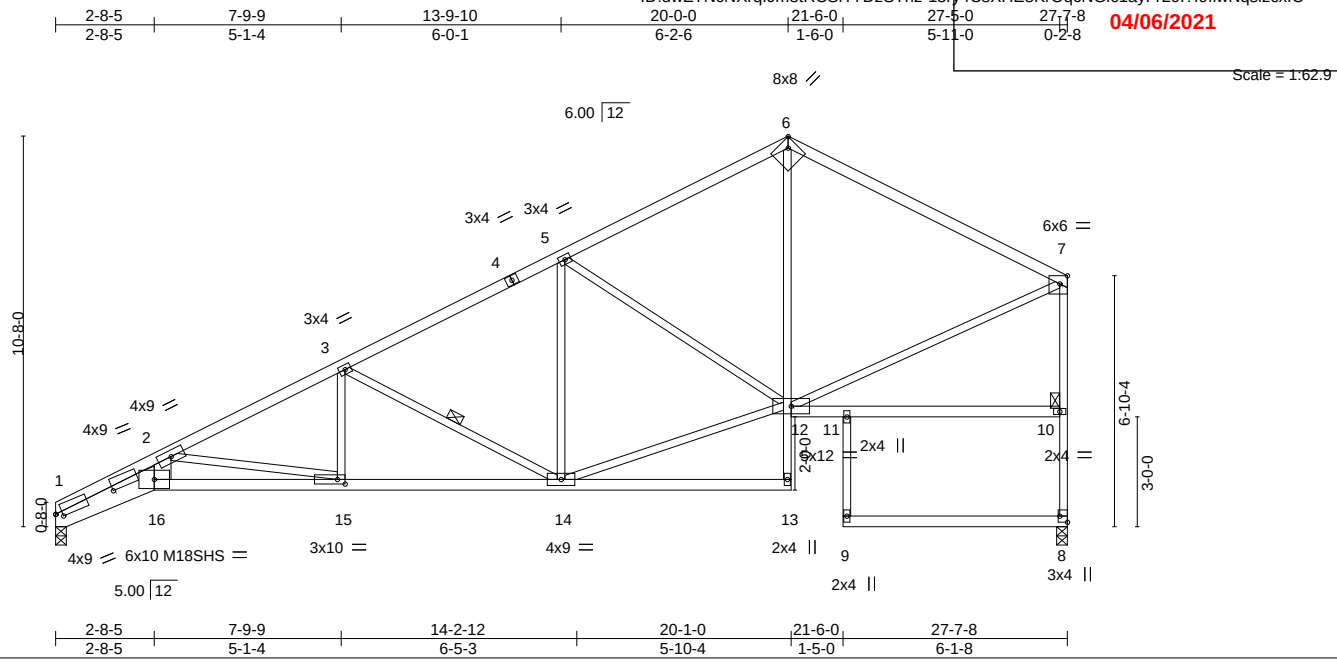


Plate Offsets (X,Y)-- [1:1-8-6,0-0-2], [1:0-2-3,0-1-8], [6:0-2-11,Edge], [7:0-2-8,Edge], [8:Edge,0-2-8], [15:0-2-8,0-1-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.79	Vert(LL)	-0.22	15-16	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.66	Vert(CT)	-0.41	15-16	>805	240	M18SHS	197/144
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.96	Horz(CT)	0.22	8	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.19	15-16	>999	240	Weight: 130 lb	FT = 10%

LUMBER-
TOP CHORD 2x4 SPF No.2 *Except*
6-7: 2x4 SPF 2100F 1.8E
BOT CHORD 2x4 SPF No.2 *Except*
1-16: 2x8 SP DSS, 13-16: 2x4 SPF 2100F 1.8E
6-13,9-11: 2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except*
2-16: 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 6-0-0 oc bracing.
WEBS 1 Row at midpt 3-14, 7-8

REACTIONS. (size) 1=0-3-8, 8=0-3-8
Max Horz 1=321(LC 7)
Max Uplift 1=-176(LC 8), 8=-152(LC 8)
Max Grav 1=1232(LC 1), 8=1232(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-5119/986, 2-3=-2469/399, 3-5=-1649/280, 5-6=-1150/214, 6-7=-1167/230, 8-10=-1171/183, 7-10=-1153/186
BOT CHORD 1-16=-1065/4588, 15-16=-898/3783, 14-15=-433/2179, 6-12=-56/512
WEBS 2-16=-337/1733, 2-15=-1625/471, 3-15=-9/398, 3-14=-896/256, 12-14=-209/1447, 5-12=-597/232, 7-12=-124/1003

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) gable end 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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Bearing at joint(s) 1 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 100 lb uplift at joint(s) except (jt=lb) 1=176, 8=152.
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.

March 9,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	C1	Roof Special	1	1	Job Reference (optional)

I45104194

Wheeler Lumber, Waverly, KS - 66871,

8.430 s Feb 12 2021 MiTek Industries, Inc. Wed Mar 3 15:41:15 2021 Page 1
ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-GouMzhzA9?H2Qn1LOfNjvTqorz83co0_mq2oghzcxI3

Scale = 1:62.2

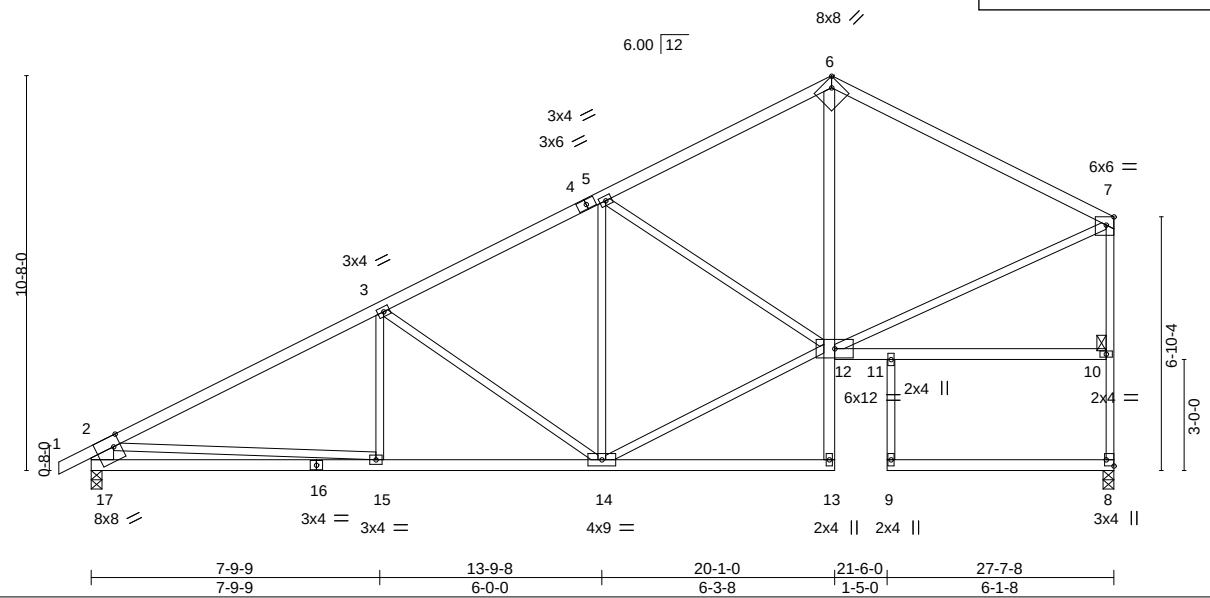


Plate Offsets (X,Y)-- [6:0-2-11,Edge], [7:0-2-8,Edge], [8:Edge,0-2-8], [17:0-2-4,Edge]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.71	Vert(LL)	-0.09	15-17	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.49	Vert(CT)	-0.19	15-17	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.73	Horz(CT)	-0.10	8	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.05	14-15	>999	240	Weight: 133 lb	FT = 10%

LUMBER-

TOP CHORD	2x4 SPF No.2 *Except*
	6-7: 2x4 SPF 2100F 1.8E
BOT CHORD	2x4 SPF No.2 *Except*
	9-11: 2x3 SPF No.2
WEBS	2x3 SPF No.2 *Except*
	2-17: 2x8 SP DSS

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 3-5-1 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 9-0-13 oc bracing.
WEBS	1 Row at midpt 7-8

REACTIONS. (size) 17=0-3-8, 8=0-3-8
Max Horz 17=332(LC 5)
Max Uplift 17=-201(LC 8), 8=-151(LC 8)
Max Grav 17=1309(LC 1), 8=1223(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

TOP CHORD	2-3=-1946/273, 3-5=-1420/251, 5-6=-1143/213, 6-7=-1162/229, 2-17=-1234/245, 8-10=-1162/183, 7-10=-1146/184
BOT CHORD	15-17=-414/786, 14-15=-332/1629, 6-12=-53/506
WEBS	3-14=-548/189, 12-14=-193/1302, 5-12=-367/195, 7-12=-123/998, 2-15=0/844

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) gable end 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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 17=201, 8=151.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

March 9,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	C2	Roof Special	1	1	I45104195 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 8 15:51:55 2021 Page 1
ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-k_SkAdzowJPv1xbXyNuyRgNvaNSFLGf7?UoMC7zcxI2

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
04/06/2021

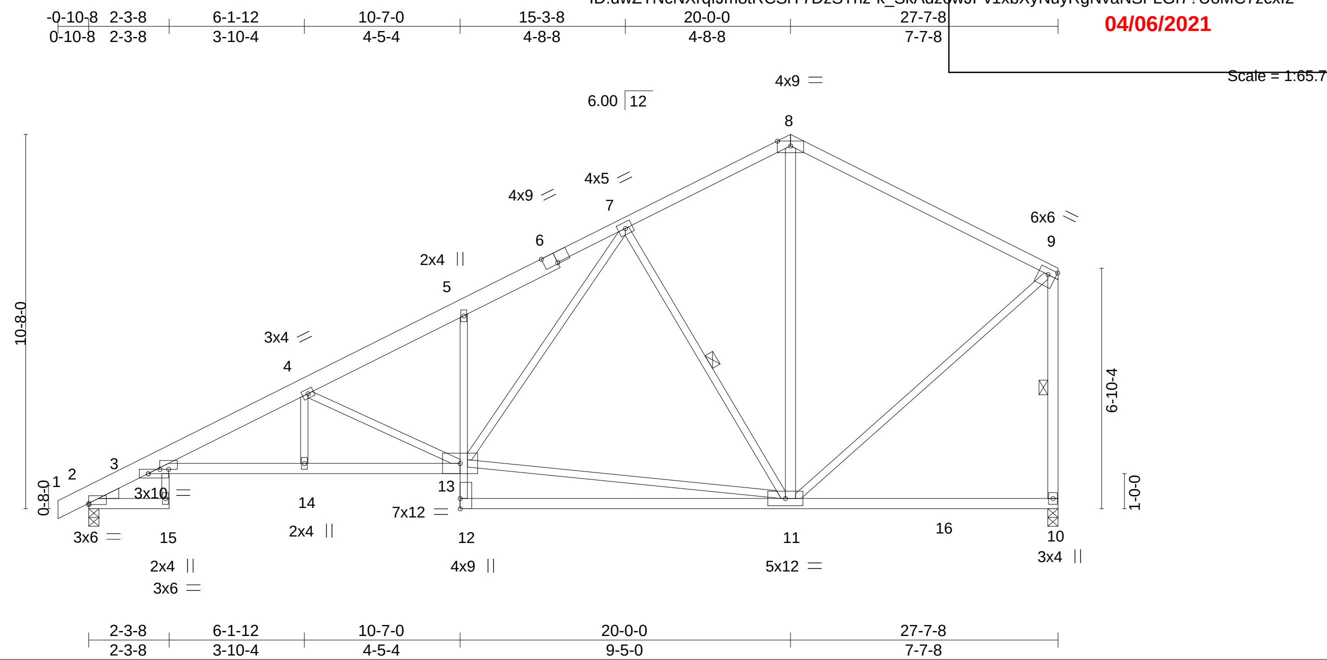


Plate Offsets (X,Y)-- [2:0-0-0,0-0-7], [3:0-7-0,0-1-8], [3:0-4-0,0-1-8], [6:0-4-8,Edge], [9:0-2-12,0-2-0]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.97	Vert(LL)	-0.25	11-12	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.62	Vert(CT)	-0.53	11-12	>623	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.70	Horz(CT)	0.25	10	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.18	15	>999	240	Weight: 147 lb	FT = 10%

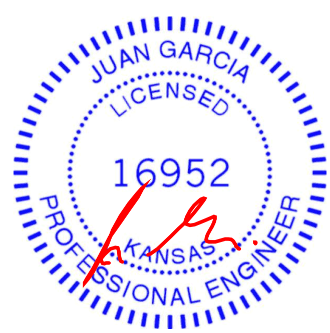
LUMBER-
TOP CHORD 2x4 SPF No.2 *Except*
1-6: 2x6 SP DSS
BOT CHORD 2x4 SPF No.2 *Except*
3-13: 2x4 SPF 2100F 1.8E, 5-12: 2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except*
8-11,9-10: 2x4 SPF No.2
WEDGE
Left: 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 2-15.
WEBS 1 Row at midpt 7-11, 9-10

REACTIONS. (size) 2=0-3-8, 10=0-3-8
Max Horz 2=327(LC 5)
Max Uplift 2=-192(LC 8), 10=-152(LC 8)
Max Grav 2=1346(LC 2), 10=1309(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-865/33, 3-4=-2944/461, 4-5=-2075/341, 5-7=-2016/437, 7-8=-853/209,
8-9=-890/220, 9-10=-1169/189
BOT CHORD 3-14=-558/2797, 13-14=-558/2797
WEBS 4-13=-1119/283, 11-13=-177/970, 7-13=-270/1162, 7-11=-848/306, 8-11=-72/428,
9-11=-88/923

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) gable end 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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=192, 10=152.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



March 9,2021

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	C3	Roof Special	1	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI

I45104196

Wheeler Lumber, Waverly, KS - 66871,

8.430 s Feb 12 2021 MiTek Industries, Inc. Wed Mar 3 10:03:15 2021 Page 1
ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-CA06Oz_QhdXmf5AjW4PB_uw5xnpK4kDGE8XvlZzcxI1

04/06/2021

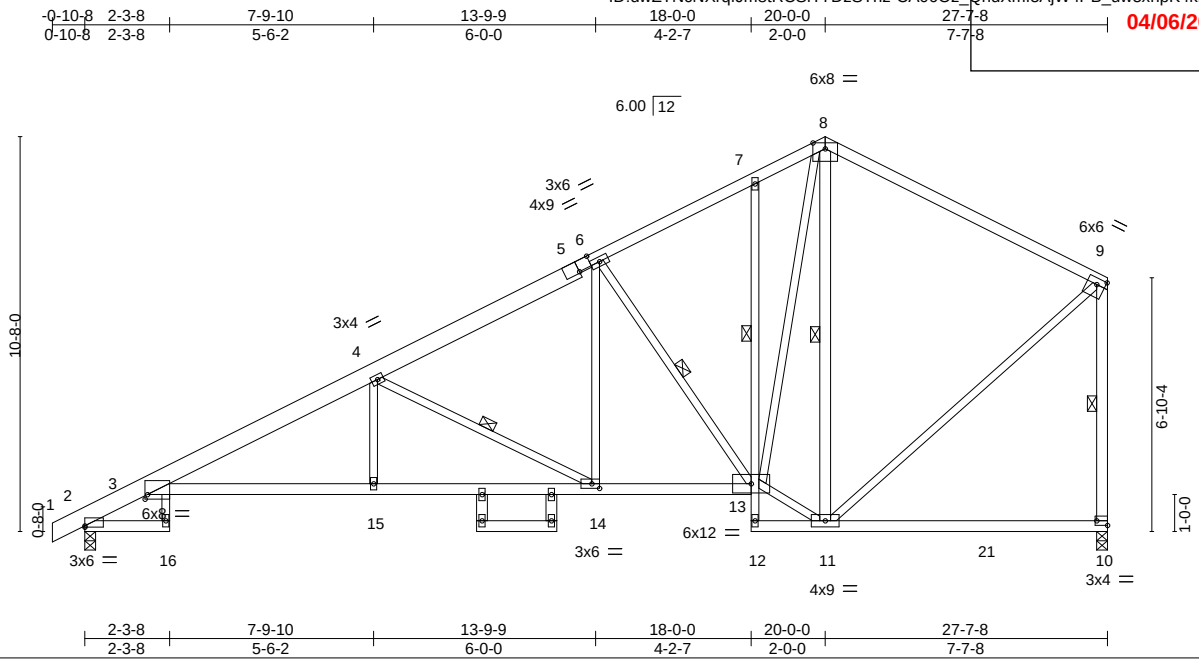


Plate Offsets (X,Y)-- [2:0-0-0,0-0-7], [3:0-0-13,0-1-8], [5:0-4-5,Edge], [9:0-2-12,0-2-0], [10:Edge,0-1-8], [14:0-2-8,0-1-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.93	Vert(LL)	-0.27	3-15	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.57	Vert(CT)	-0.48	3-15	>681	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.62	Horz(CT)	0.31	10	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.22	16	>999	240	Weight: 154 lb	FT = 10%

LUMBER-
TOP CHORD 2x4 SPF No.2 *Except*
1-5: 2x6 SP DSS
BOT CHORD 2x4 SPF No.2 *Except*
3-13: 2x4 SPF 2100F 1.8E, 7-12: 2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except*
8-11,9-10,17-19,18-20: 2x4 SPF No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing. Except:
1 Row at midpt 7-13
WEBS 1 Row at midpt 4-14, 6-13, 8-11, 9-10

REACTIONS. (size) 2=0-3-8, 10=0-3-8
Max Horz 2=327(LC 5)
Max Uplift 2=-192(LC 8), 10=-152(LC 8)
Max Grav 2=1346(LC 2), 10=1309(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-865/33, 3-4=-2641/402, 4-6=-1699/285, 6-7=-1105/240, 7-8=-1024/295, 8-9=-881/224, 9-10=-1164/196
BOT CHORD 3-15=-478/2466, 14-15=-477/2466, 13-14=-198/1445
WEBS 4-15=0/285, 4-14=-1155/316, 6-14=-80/721, 6-13=-839/234, 11-13=-63/811, 8-13=-292/1170, 8-11=-750/158, 9-11=-94/914

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) gable end 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 2x4 MT20 unless otherwise indicated.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=192, 10=152.
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.

STATE OF MISSOURI
JUAN GARCIA
NUMBER E-2000162101
PROFESSIONAL ENGINEER

JUAN GARCIA
LICENSED
16952
KANSAS
PROFESSIONAL ENGINEER

March 9,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	C4	Roof Special	2	1	Job Reference (optional)

I45104197

Scale = 1:64.8

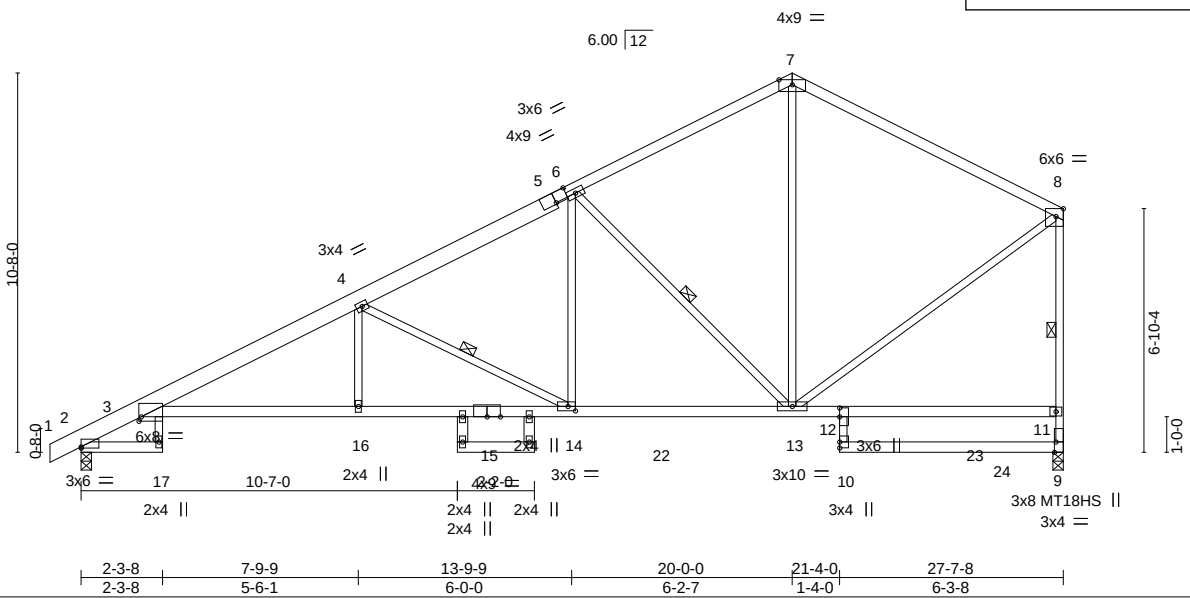


Plate Offsets (X,Y)-- [2:0-0-0,0-0-7], [3:0-0-13,0-1-8], [5:0-4-4,Edge], [8:0-2-8,Edge], [9:0-3-8,Edge], [12:0-3-0,0-0-0], [14:0-2-8,0-1-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.76	Vert(LL)	-0.28	3-16	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.79	Vert(CT)	-0.49	3-16	>668	240	MT18HS	197/144
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.69	Horz(CT)	0.30	9	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.22	17	>999	240	Weight: 140 lb	FT = 10%

LUMBER-

TOP CHORD 2x4 SPF No.2 *Except*
7-8: 2x4 SPF 2100F 1.8E, 1-5: 2x6 SP DSS
BOT CHORD 2x4 SPF No.2 *Except*
3-15: 2x4 SPF 2100F 1.8E, 10-12: 2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except*
18-20,19-21: 2x4 SPF No.2

BRACING-

TOP CHORD Structural wood sheathing directly applied or 2-11-6 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 2-17.
8-7-0 oc bracing: 14-16
WEBS 1 Row at midpt 4-14, 6-13, 8-9

REACTIONS. (size) 2=0-3-8, 9=0-3-8
Max Horz 2=326(LC 5)
Max Uplift 2=-192(LC 8), 9=-152(LC 8)
Max Grav 2=1376(LC 2), 9=1438(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-882/33, 3-4=-2713/399, 4-6=-1780/290, 6-7=-992/207, 7-8=-986/226, 9-11=-1297/190, 8-11=-1208/197
BOT CHORD 3-16=-474/2532, 14-16=-473/2531, 13-14=-207/1523
WEBS 4-16=0/280, 4-14=-1140/301, 6-14=-65/750, 6-13=-963/279, 7-13=-50/476, 8-13=-110/1005

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) gable end 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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=192, 9=152.
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.

March 9,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	C5	Roof Special	1	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
I45104198
04/06/2021

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 8 10:58:31 2021 Page 1
ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-8Z7sof0gDEnUuOK6dVRf3J?UDaQhYayZhS00pSzcxI?

Scale = 1:65.7

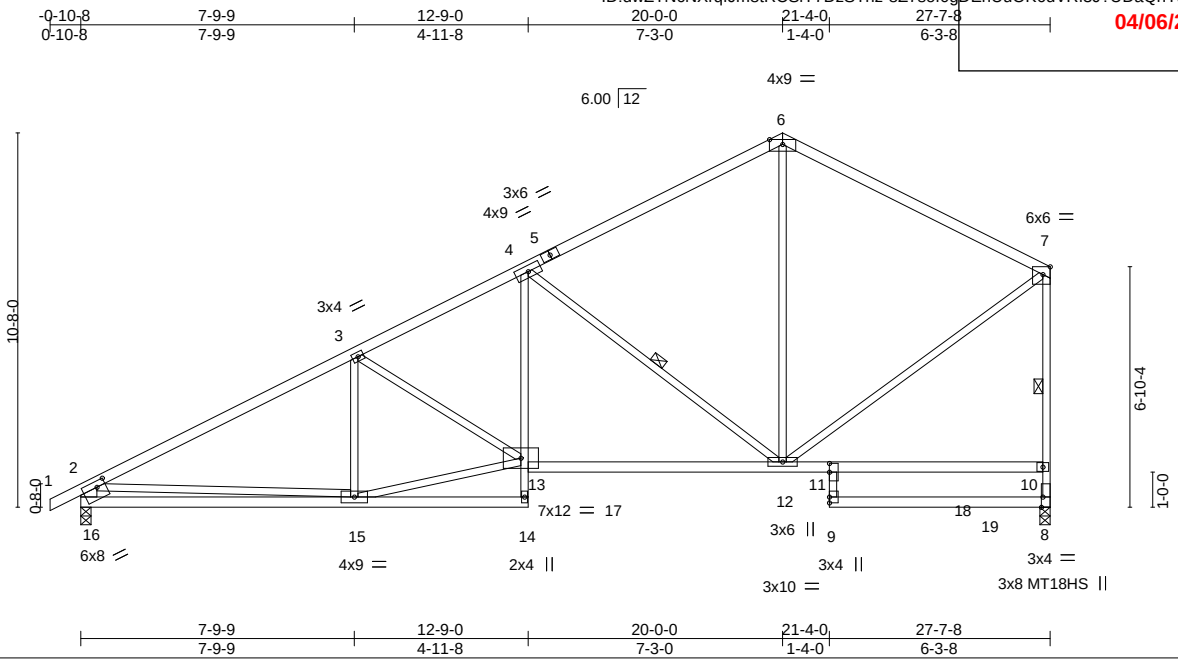


Plate Offsets (X,Y)-- [7:0-2-8,Edge], [8:0-3-8,Edge], [11:0-3-0,0-0-0], [16:0-3-0,0-2-0]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.75	Vert(LL)	-0.15	12-13	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.77	Vert(CT)	-0.28	12-13	>999	240	MT18HS	197/144
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.86	Horz(CT)	0.07	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.07	13	>999	240	Weight: 126 lb	FT = 10%

LUMBER-
TOP CHORD 2x4 SPF No.2 *Except*
6-7: 2x4 SPF 2100F 1.8E
BOT CHORD 2x4 SPF No.2 *Except*
4-14,9-11: 2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except*
2-16: 2x6 SP DSS

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-3-5 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
8-8-9 oc bracing: 15-16
6-0-0 oc bracing: 14-15.
WEBS 1 Row at midpt 4-12, 7-8

REACTIONS. (size) 16=0-3-8, 8=0-3-8
Max Horz 16=332(LC 5)
Max Uplift 16=-200(LC 8), 8=-152(LC 8)
Max Grav 16=1359(LC 2), 8=1431(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2057/270, 3-4=-1909/320, 4-6=-1013/197, 6-7=-987/225, 2-16=-1232/244, 8-10=-1292/190, 7-10=-1207/195
BOT CHORD 15-16=-451/948, 4-13=-65/716, 12-13=-262/1708
WEBS 3-15=-298/150, 13-15=-304/1813, 4-12=-1078/316, 6-12=-26/447, 2-15=0/867, 7-12=-111/1008

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) gable end 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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 16=200, 8=152.
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.

STATE OF MISSOURI
JUAN GARCIA
NUMBER E-2000162101
PROFESSIONAL ENGINEER

JUAN GARCIA
LICENSED
16952
KANSAS
PROFESSIONAL ENGINEER

March 9,2021

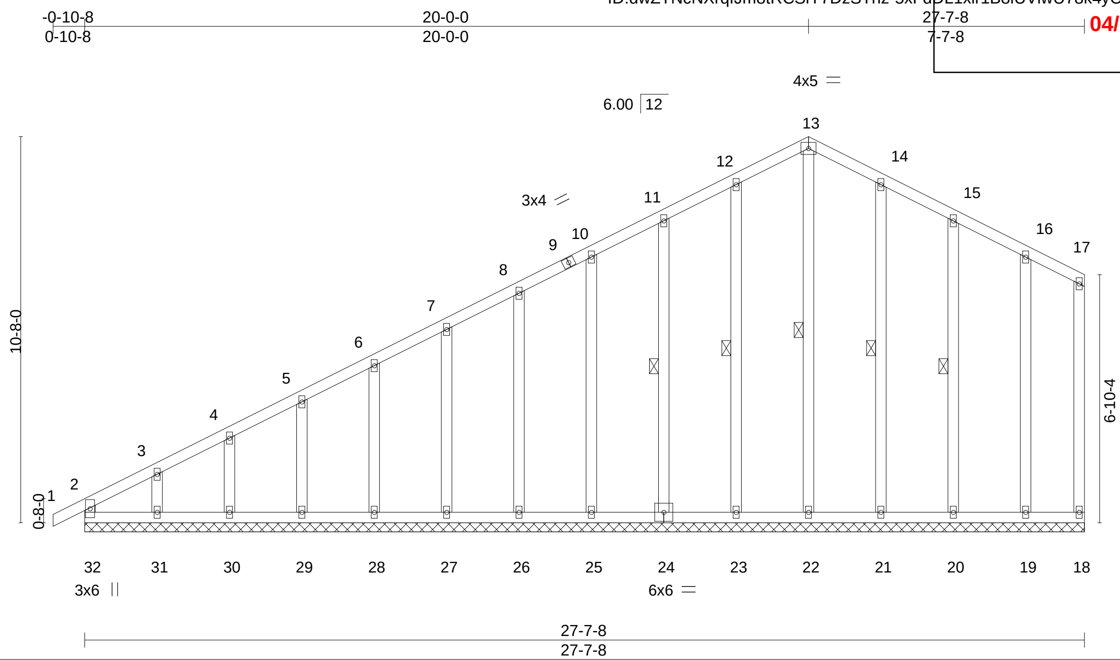
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
04/06/2021

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	C6	Common Supported Gable	1	1	I45104199 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 8 15:52:00 2021 Page 1
ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-5xFdDL1xlr1B8iUVlwU78k4yCOHu0fos9lV7tKzcxHz



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.21	Vert(LL)	-0.00	1	n/r	120	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.08	Vert(CT)	-0.00	1	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.13	Horz(CT)	-0.00	18	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-R							Weight: 167 lb	FT = 10%

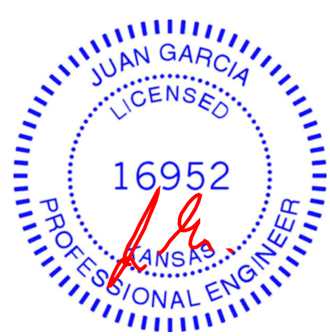
LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2
OTHERS 2x4 SPF No.2

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 13-22, 12-23, 11-24, 14-21, 15-20

REACTIONS. All bearings 27-7-8.
(lb) - Max Horz 32=332(LC 5)
Max Uplift All uplift 100 lb or less at joint(s) 32, 18, 22, 23, 24, 25, 26, 27, 28, 29, 30, 21, 20, 19 except 31=-140(LC 8)
Max Grav All reactions 250 lb or less at joint(s) 32, 18, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 21, 20, 19

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-299/102

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) gable end 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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 32, 18, 22, 23, 24, 25, 26, 27, 28, 29, 30, 21, 20, 19 except (jt=lb) 31=140.
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.



March 9,2021

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	D1	Common Supported Gable	1	1	I45104200 Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
04/06/2021

Wheeler Lumber, Waverly, KS - 66871,

8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 8 15:52:01 2021 Page 1

ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-Z8p?Rg2ZW992ls3hJd?Mhxd92oenl7W0NPFgPnzcxHy

Scale = 1:41.7

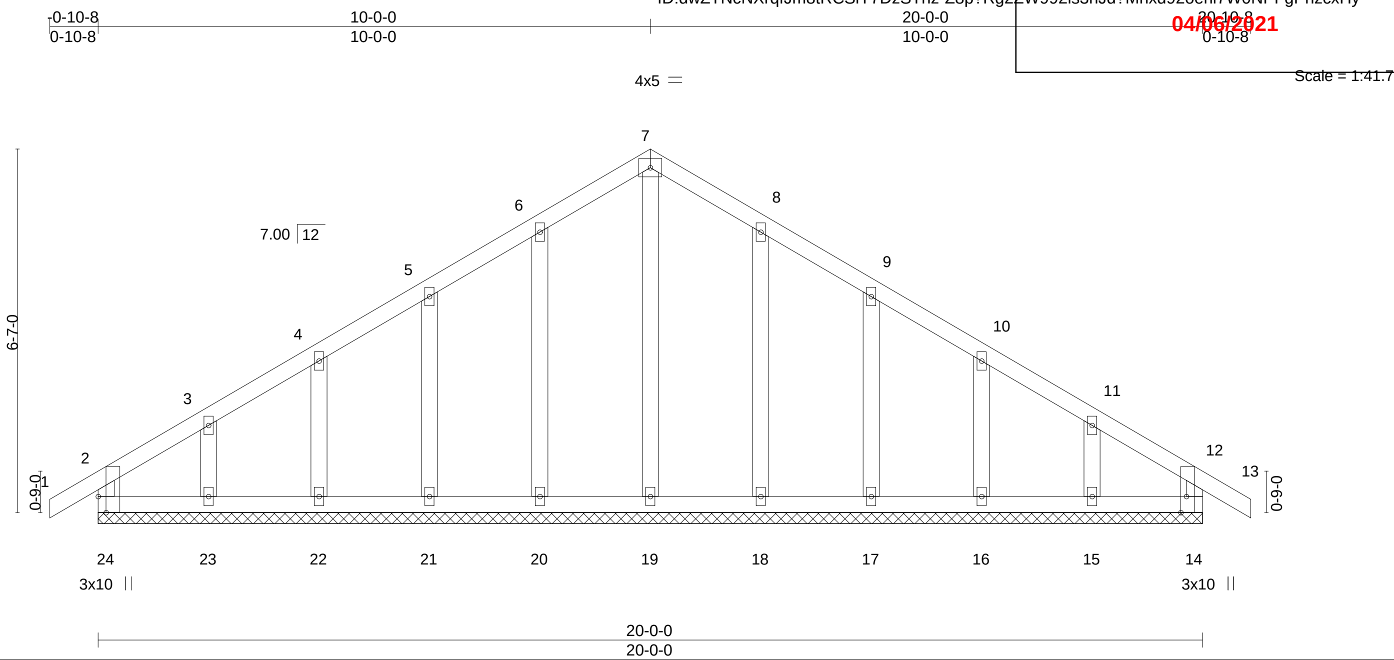


Plate Offsets (X,Y)-- [14:0-3-8,Edge], [24:0-3-8,Edge]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	-0.00	13	n/r	120	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	-0.00	13	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.10	Horz(CT)	0.00	14	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-R							Weight: 88 lb	FT = 10%

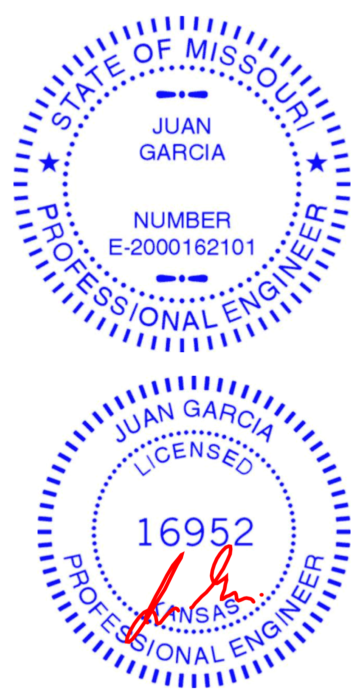
LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2
OTHERS 2x4 SPF No.2

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. All bearings 20-0-0.
(lb) - Max Horz 24=-186(LC 6)
Max Uplift All uplift 100 lb or less at joint(s) 24, 14, 20, 21, 22, 23, 18, 17, 16, 15
Max Grav All reactions 250 lb or less at joint(s) 24, 14, 19, 20, 21, 22, 23, 18, 17, 16, 15

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

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) gable end 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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 24, 14, 20, 21, 22, 23, 18, 17, 16, 15.
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.



March 9,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	D2	Common	5	1	Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

8.430 s Feb 12 2021 MiTek Industries, Inc. Wed Mar 31 08:27:02 2021 Page 1
ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-1KNNe03BHSHvN0etsLWbD99AxBp6UX?9c3_DxDzcxHx

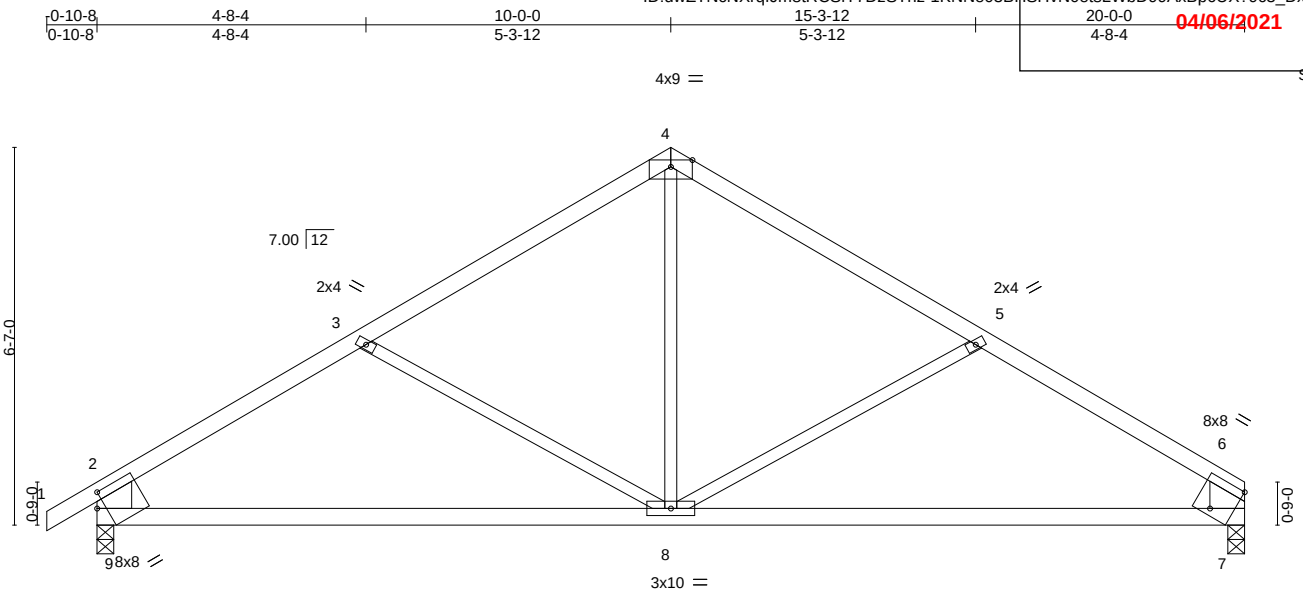


Plate Offsets (X,Y)-- [6:Edge,0-6-10], [9:0-1-11,0-2-15]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.77	Vert(LL)	-0.17	8-9	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.74	Vert(CT)	-0.36	8-9	>649	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.28	Horz(CT)	0.03	7	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.07	8	>999	240	Weight: 68 lb	FT = 10%

LUMBER-

TOP CHORD	2x4 SPF No.2
BOT CHORD	2x4 SPF No.2
WEBS	2x3 SPF No.2 *Except* 2-9,6-7: 2x8 SP DSS

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 3-7-5 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 9=0-3-8, 7=0-3-8
Max Horz 9=183(LC 5)
Max Uplift 9=-130(LC 8), 7=-103(LC 9)
Max Grav 9=958(LC 1), 7=870(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

TOP CHORD	2-3=-1177/186, 3-4=-911/140, 4-5=-911/140, 5-6=-1188/189, 2-9=-854/178, 6-7=-762/149
BOT CHORD	8-9=-185/920, 7-8=-111/931
WEBS	4-8=-4/472, 5-8=-292/215, 3-8=-273/210

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) gable end 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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 9=130, 7=103.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

March 9,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	D3	GABLE	1	1	Job Reference (optional)

I45104202

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
04/06/2021

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 8 15:52:03 2021 Page 1

ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-VWxlsM3p2mPm?9D4Q21qmMiLNb9RD?4IrjknUfzcxHw

Scale = 1:28.6

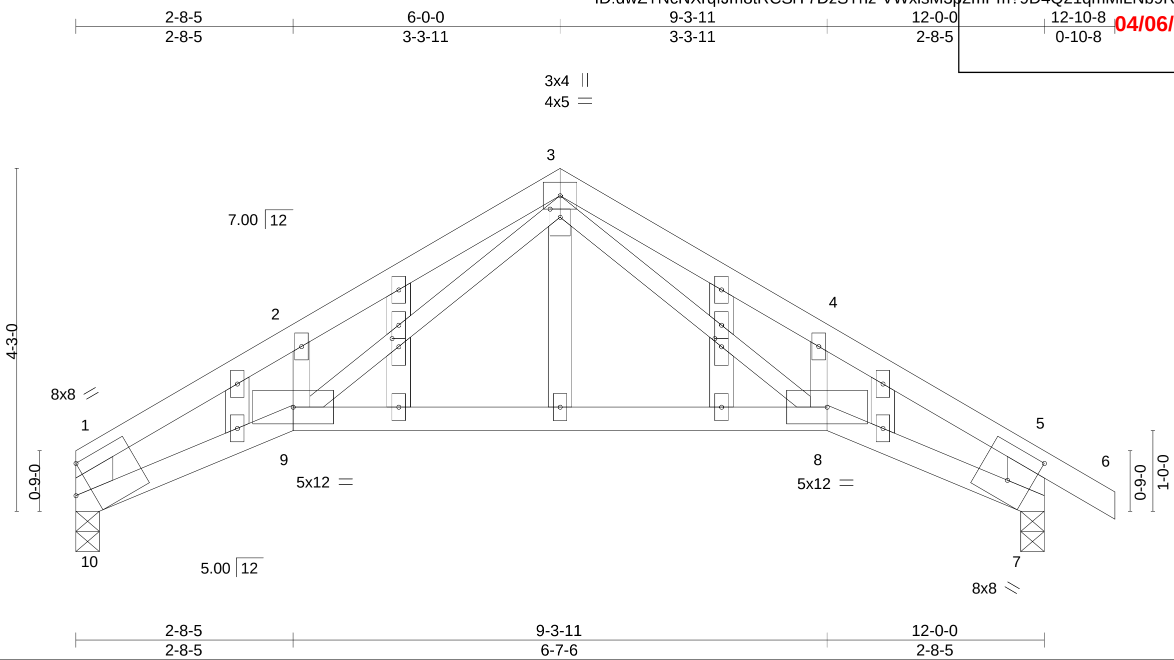


Plate Offsets (X,Y)-- [1:Edge,0-4-2], [3:0-1-4,0-1-8], [7:0-3-8,0-4-15], [12:0-1-4,0-1-0], [19:0-1-4,0-1-0]

LOADING (psf)		SPACING-		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.72	Vert(LL)	-0.12	8-9	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.67	Vert(CT)	-0.29	8-9	>475	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.16	Horz(CT)	0.14	7	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014	2-0-0	Matrix-S		Wind(LL)	0.08	8-9	>999	240	Weight: 49 lb	FT = 10%

LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except*
1-10,5-7: 2x6 SPF No.2
OTHERS 2x4 SPF No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 4-1-14 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 10=0-3-8, 7=0-3-8
Max Horz 10=-121(LC 4)
Max Uplift 10=-60(LC 8), 7=-86(LC 9)
Max Grav 10=516(LC 1), 7=600(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-1094/129, 2-3=-976/224, 3-4=-969/175, 4-5=-1111/75, 1-10=-733/100, 5-7=-847/94
BOT CHORD 9-10=-117/927, 8-9=-13/494, 7-8=-15/886
WEBS 3-8=-113/466, 3-9=-146/525

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) gable end 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 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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
8) Bearing at joint(s) 10, 7 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 100 lb uplift at joint(s) 10, 7.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

STATE OF MISSOURI
JUAN GARCIA
NUMBER E-2000162101
PROFESSIONAL ENGINEER

JUAN GARCIA
LICENSED
16952
KANSAS
PROFESSIONAL ENGINEER

March 9,2021

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	D4	GABLE	1	1	Job Reference (optional) I45104203

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 8 15:52:05 2021 Page 1
ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-Rv2WG253aNgUETMSYT3IrnnjePpghjqbl1DuYYzcxHu

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
04/06/2021

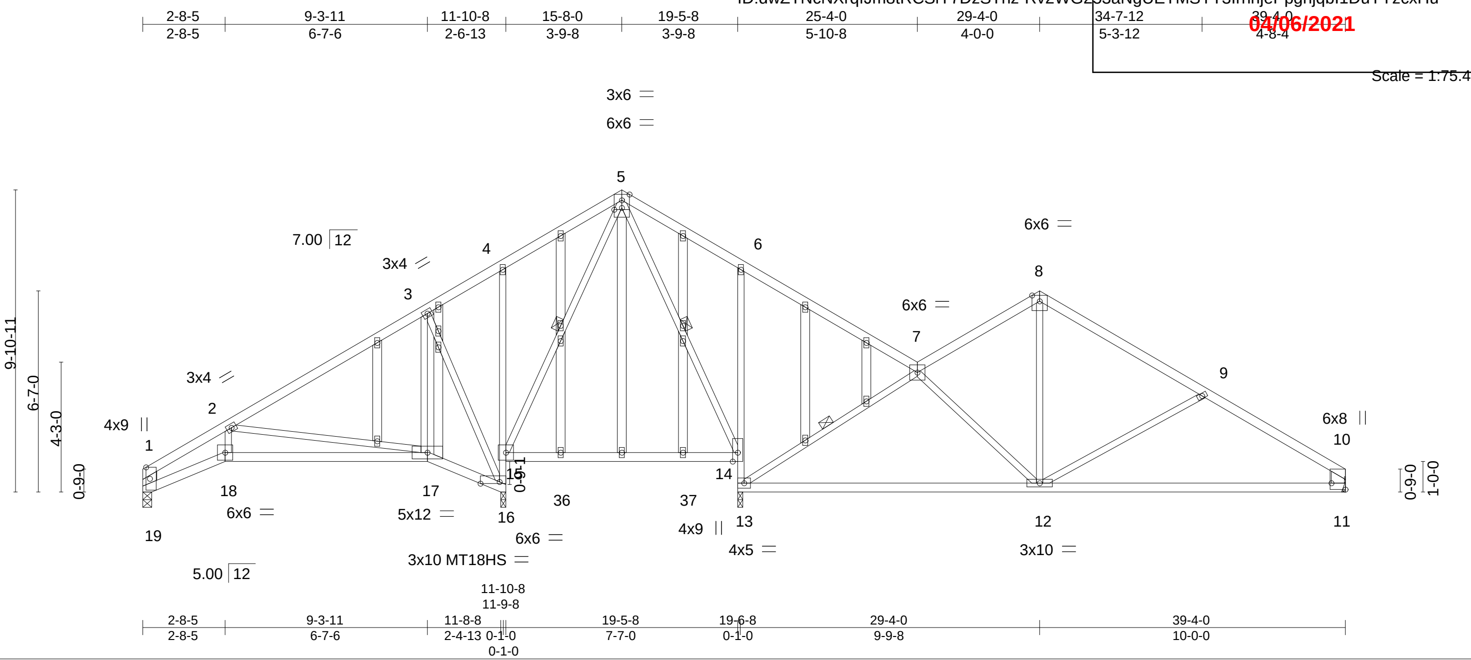


Plate Offsets (X,Y)-- [1:0-4-8,Edge], [5:0-3-0,0-0-11], [10:Edge,0-5-8], [16:0-7-8,Edge]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.54	Vert(LL)	-0.23	12-13	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.81	Vert(CT)	-0.48	12-13	>485	240	MT18HS	197/144
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.91	Horz(CT)	-0.09	13	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.10	12-13	>999	240	Weight: 203 lb	FT = 10%

LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except*
4-16,6-13: 2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except*
1-19: 2x6 SPF No.2, 10-11: 2x6 SP DSS
OTHERS 2x4 SPF No.2

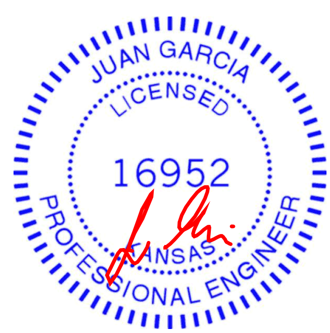
BRACING-
TOP CHORD Structural wood sheathing directly applied or 4-7-12 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 4-2-11 oc bracing.
WEBS 1 Row at midpt 5-15, 5-14, 7-13

REACTIONS. All bearings 0-2-0 except (jt=length) 13=0-2-4 (input: 0-2-0), 16=0-2-4 (input: 0-2-0), 19=0-3-8, 11=Mechanical.
(lb) - Max Horz 19=-257(LC 6)
Max Uplift All uplift 100 lb or less at joint(s) except 19=-115(LC 9), 13=-246(LC 9), 11=-176(LC 9), 16=-210(LC 8)
Max Grav All reactions 250 lb or less at joint(s) except 19=399(LC 16), 13=1426(LC 16), 11=943(LC 16), 16=1445(LC 15)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-841/264, 2-3=-178/334, 3-4=-93/515, 4-5=-58/557, 5-6=-69/359, 6-7=-17/326, 7-8=-948/257, 8-9=-965/244, 9-10=-1239/313, 1-19=-520/156, 10-11=-779/221
BOT CHORD 18-19=-359/903, 17-18=-341/812, 15-16=-832/43, 13-14=-655/121, 6-14=-416/240, 12-13=-181/748, 11-12=-211/968
WEBS 2-18=-35/408, 2-17=-877/313, 3-17=-25/379, 3-16=-692/226, 5-15=-531/31, 7-13=-1137/313, 8-12=-103/563, 9-12=-297/201

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) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Provide adequate drainage to prevent water ponding.
5) All plates are MT20 plates unless otherwise indicated.
6) All plates are 2x4 MT20 unless otherwise indicated.
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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
10) WARNING: Required bearing size at joint(s) 13, 16 greater than input bearing size.
11) Refer to girder(s) for truss to truss connections.
12) Bearing at joint(s) 19, 16 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.

Continued on page 2



March 9,2021

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	D4	GABLE	1	1	J45104203

Job Reference (optional)

NOTES-

13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 115 lb uplift at joint 19, 246 lb uplift at joint 13, 176 lb uplift at joint 11 and 210 lb uplift at joint 16.
14) 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.

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	D5	Roof Special	4	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
04/06/2021

I45104204

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 8 10:43:27 2021 Page 1
ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-v5cuUO6iLhoLsdxe5BbXO?Krrp7SQA5lXhyR4_zcxHt

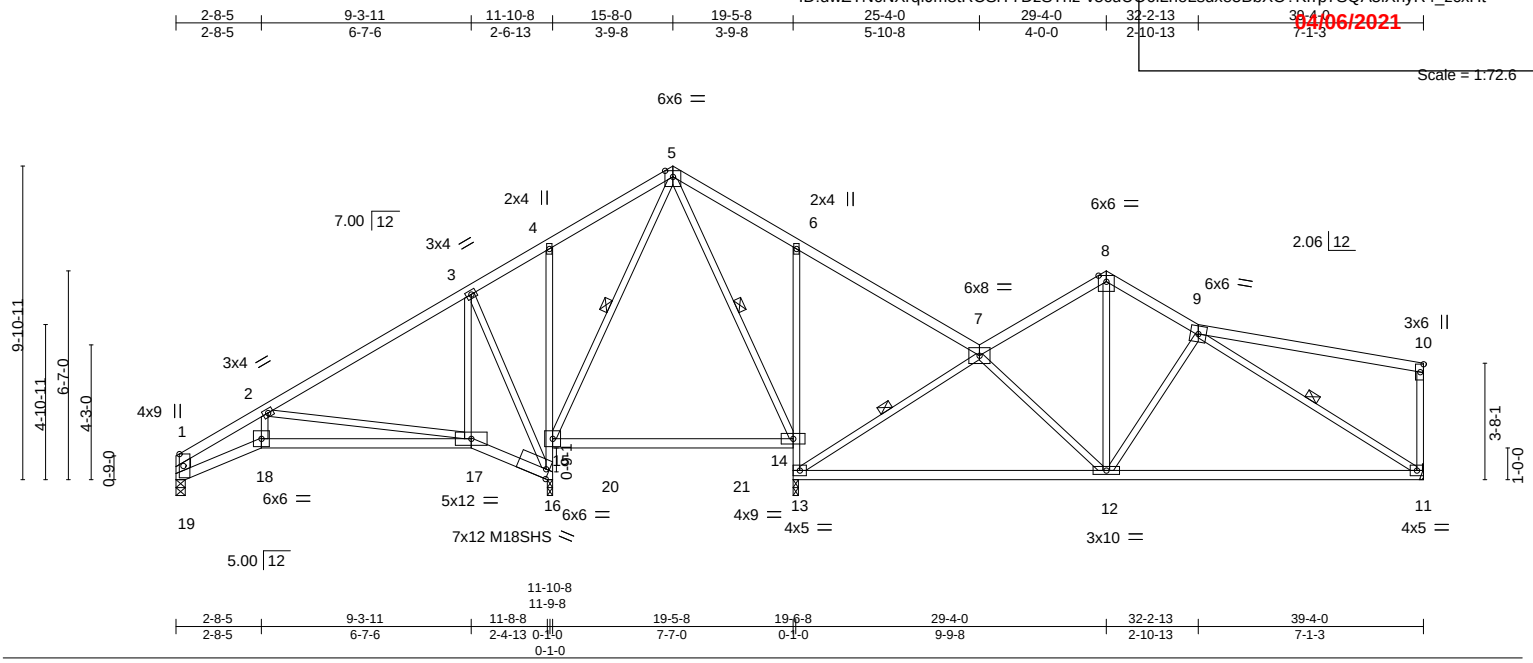


Plate Offsets (X,Y)-- [1:0-4-8,Edge], [16:0-1-4,Edge]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.71	Vert(LL)	-0.22	11-12	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.90	Vert(CT)	-0.45	11-12	>530	240	M18SHS	197/144
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.91	Horz(CT)	0.08	16	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.09	17-18	>999	240	Weight: 167 lb	FT = 10%

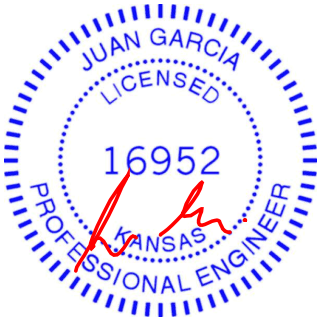
LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except*
4-16,6-13: 2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except*
1-19: 2x6 SPF No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-11-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 4-2-13 oc bracing.
WEBS 1 Row at midpt 5-15, 5-14, 7-13, 9-11

REACTIONS. All bearings 0-2-0 except (jt=length) 13=0-2-1 (input: 0-2-0), 16=0-2-5 (input: 0-2-0), 19=0-3-8, 11=Mechanical.
(lb) - Max Horz 19=-255(LC 6)
Max Uplift All uplift 100 lb or less at joint(s) 19 except 13=-253(LC 9), 11=-151(LC 9), 16=-223(LC 8)
Max Grav All reactions 250 lb or less at joint(s) except 19=395(LC 16), 13=1314(LC 16), 11=854(LC 24), 16=1474(LC 15)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-845/261, 2-3=-168/330, 3-4=-82/510, 4-5=-48/536, 5-6=-103/252, 6-7=-49/266, 7-8=-918/154, 8-9=-904/170, 1-19=-522/154
BOT CHORD 18-19=-367/904, 17-18=-347/812, 15-16=-861/55, 13-14=-573/163, 6-14=-414/239, 12-13=-172/778, 11-12=-185/823
WEBS 2-18=-38/408, 2-17=-876/318, 3-17=-26/379, 3-16=-692/227, 5-15=-561/4, 7-13=-1100/247, 8-12=-72/645, 9-11=-930/187, 9-12=-305/163

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end 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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) WARNING: Required bearing size at joint(s) 13, 16 greater than input bearing size.
8) Refer to girder(s) for truss to truss connections.
9) Bearing at joint(s) 19, 16 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 100 lb uplift at joint(s) 19 except (jt=lb) 13=253, 11=151, 16=223.
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.



March 9,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	D6	ROOF SPECIAL GIRDER	1	2	Job Reference (optional)

I45104205

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 01 13:52:07 2021 Page 1
ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-NIAGhk7K6?wCUnWrfu6mwCt0XCVV9clumLi_dQzcxHs

04/06/2021

Scale = 1:58.1

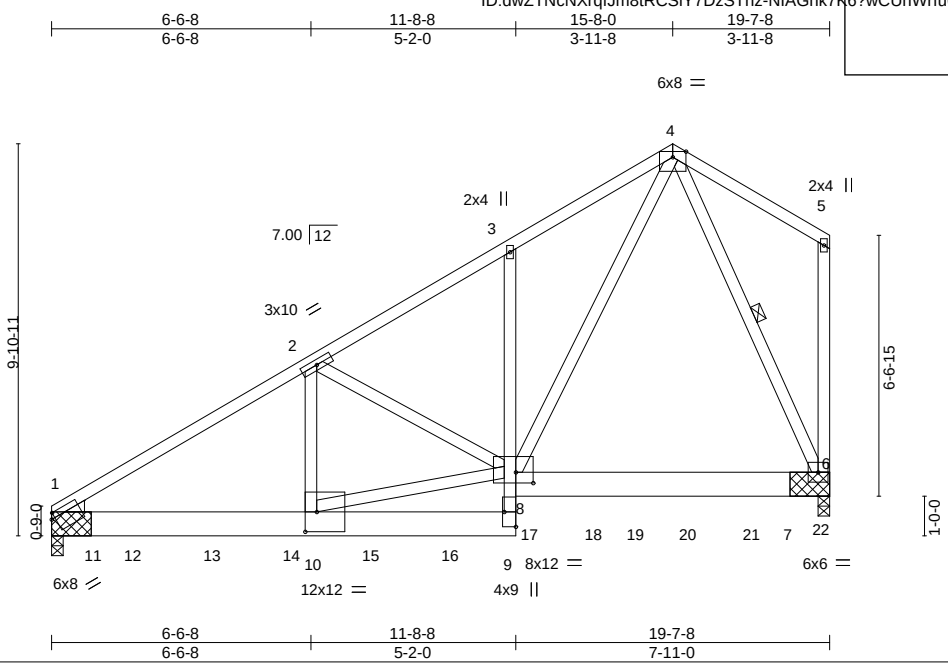


Plate Offsets (X,Y)-- [1:0-1-2,0-1-11], [8:0-5-4,0-3-4], [9:Edge,0-3-8], [10:0-3-8,0-6-0]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.71	Vert(LL)	-0.22	6-8	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.79	Vert(CT)	-0.38	6-8	>616	240		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.98	Horz(CT)	0.05	6	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.10	6-8	>999	240	Weight: 300 lb	FT = 10%

LUMBER-

TOP CHORD 2x4 SPF 2100F 1.8E *Except*
4-5: 2x4 SPF No.2
BOT CHORD 2x8 SP DSS *Except*
3-9: 2x4 SPF No.2, 6-8: 2x8 SP 2400F 2.0E
WEBS 2x4 SPF No.2
WEDGE
Left: 2x4 SP No.3

BRACING-

TOP CHORD Structural wood sheathing directly applied or 4-10-2 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 9-10.
WEBS 1 Row at midpt 4-6

REACTIONS. (size) 1=(0-3-8 + bearing block) (req. 0-5-0), 6=(0-3-8 + bearing block) (req. 0-5-3)
Max Horz 1=328(LC 26)
Max Uplift 1=-429(LC 8), 6=-273(LC 8)
Max Grav 1=6386(LC 2), 6=6649(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-9131/460, 2-3=-6352/311, 3-4=-6363/430
BOT CHORD 1-10=-502/7638, 8-9=0/979, 3-8=-315/191, 6-8=-134/1962
WEBS 2-10=-188/2776, 8-10=-451/7957, 2-8=-2627/319, 4-8=-449/7992, 4-6=-4596/235

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 0-7-0 oc.
Bottom chords connected as follows: 2x8 - 2 rows staggered at 0-5-0 oc, 2x4 - 1 row at 0-9-0 oc.
Webs 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) 2x8 SP DSS bearing block 12" long at jt. 1 attached to each face with 4 rows of 10d (0.131"x3") nails spaced 3" o.c. 16 Total fasteners per block. Bearing is assumed to be SPF No.2.
4) 2x8 SP 2400F 2.0E bearing block 12" long at jt. 6 attached to each face with 4 rows of 10d (0.131"x3") nails spaced 3" o.c. 16 Total fasteners per block. Bearing is assumed to be SPF No.2.
5) Unbalanced roof live loads have been considered for this design.
6) 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) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 1=429, 6=273.
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.

March 9,2021

Continued on page 2

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	D6	ROOF SPECIAL GIRDER	1	2	Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 01 08:27:07 2021 Page 2
ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-NIAGhk7K6?wCUnWrfu6mwCt0XCVV9cIumLi_dQzcxHs

NOTES-

11) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1281 lb down and 167 lb up at 2-0-0, 1256 lb down and 163 lb up at 4-0-0, 1255 lb down and 27 lb up at 6-0-0, 1260 lb down and 27 lb up at 8-0-0, 1219 lb down and 25 lb up at 10-0-0, 1279 lb down and 27 lb up at 12-0-0, 1267 lb down and 27 lb up at 14-0-0, and 1258 lb down and 27 lb up at 16-0-0, and 1283 lb down and 27 lb up at 18-0-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (plf)
   Vert: 1-4=-70, 4-5=-70, 1-9=-20, 6-8=-20
   Concentrated Loads (lb)
   Vert: 12=-1217(B) 13=-1220(B) 14=-1217(B) 15=-1217(B) 16=-1219(B) 17=-1219(B) 19=-1219(B) 20=-1219(B) 22=-1219(B)

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
04/06/2021

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	D8	Roof Special	1	1	I45104206 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 8 15:52:08 2021 Page 1

ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-sUkev47ysI235x51Dcd?TQPBQcqUu8L2_?RY9tzcxHr

Scale = 1:45.6

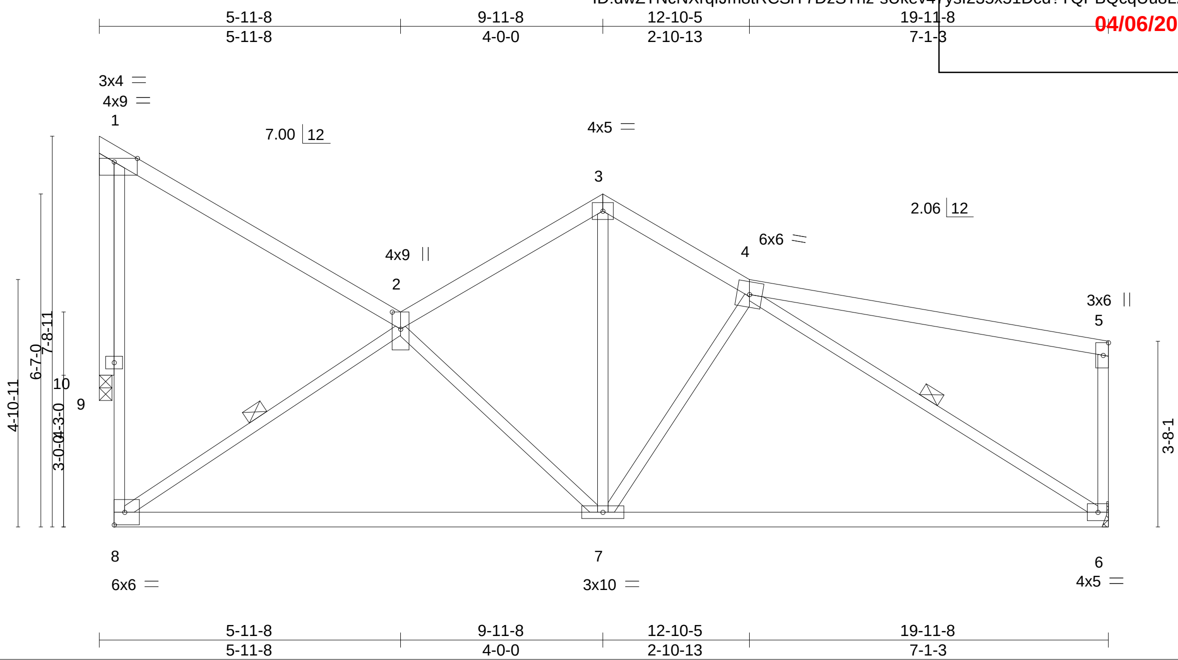


Plate Offsets (X,Y)-- [1:0-5-8,Edge], [2:0-4-1,0-2-0]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.77	Vert(LL)	-0.23	6-7	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.87	Vert(CT)	-0.46	6-7	>513	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.67	Horz(CT)	0.41	6	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.08	7-8	>999	240	Weight: 87 lb	FT = 10%

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

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

REACTIONS. (size) 6=Mechanical, 10=0-3-0
Max Horz 10=-210(LC 4)
Max Uplift 6=-140(LC 9), 10=-187(LC 9)
Max Grav 6=888(LC 1), 10=864(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 8-9=-89/706, 1-9=-89/706, 2-3=-929/135, 3-4=-920/151
BOT CHORD 7-8=-131/931, 6-7=-168/895
WEBS 2-8=-1080/240, 2-7=-277/71, 3-7=-53/668, 4-6=-1015/168, 4-7=-300/165, 1-10=-866/188

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) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Provide adequate drainage to prevent water ponding.
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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
5) Refer to girder(s) for truss to truss connections.
6) Bearing at joint(s) 10 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 100 lb uplift at joint(s) except (jt=lb) 6=140, 10=187.
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.

STATE OF MISSOURI
JUAN GARCIA
NUMBER E-2000162101
PROFESSIONAL ENGINEER

JUAN GARCIA
LICENSED
16952
KANSAS
PROFESSIONAL ENGINEER

March 9,2021

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	E1	Common Supported Gable	1	1	I45104207 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 8 15:52:09 2021 Page 1

ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-KgI16P8adcAwj4gDnJ8E0dyXK0NmdlQBDfB5hJzcxHq

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
04/06/2021

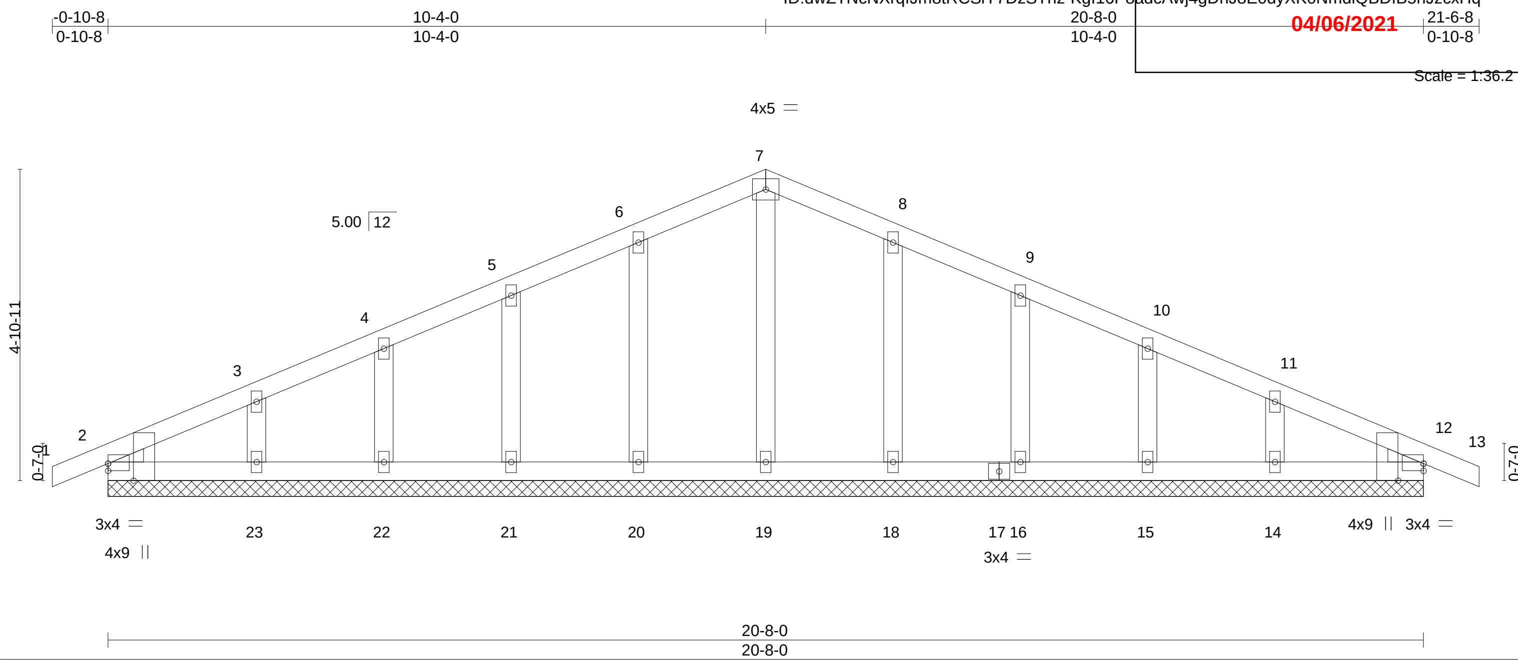


Plate Offsets (X,Y)-- [2:Edge,0-1-6], [2:0-3-3,Edge], [12:Edge,0-1-6], [12:0-3-3,Edge]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.05	Vert(LL)	-0.00	12	n/r	120	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	0.00	12	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	12	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S							Weight: 78 lb	FT = 10%

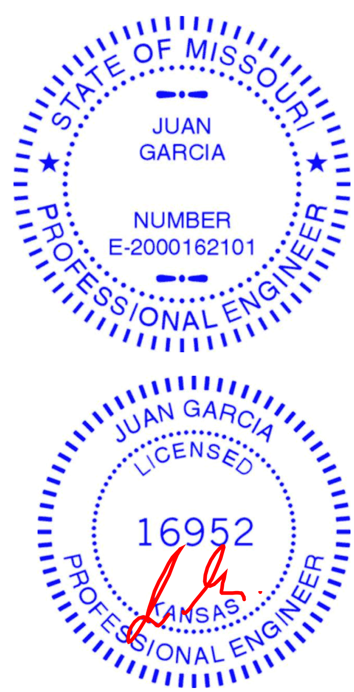
LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
OTHERS 2x4 SPF No.2
WEDGE
Left: 2x3 SPF No.2 , Right: 2x3 SPF No.2

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. All bearings 20-8-0.
(lb) - Max Horz 2=-82(LC 13)
Max Uplift All uplift 100 lb or less at joint(s) 2, 20, 21, 22, 23, 18, 16, 15, 14, 12
Max Grav All reactions 250 lb or less at joint(s) 2, 19, 20, 21, 22, 23, 18, 16, 15, 14, 12

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

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) gable end 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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 20, 21, 22, 23, 18, 16, 15, 14, 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.



March 9,2021

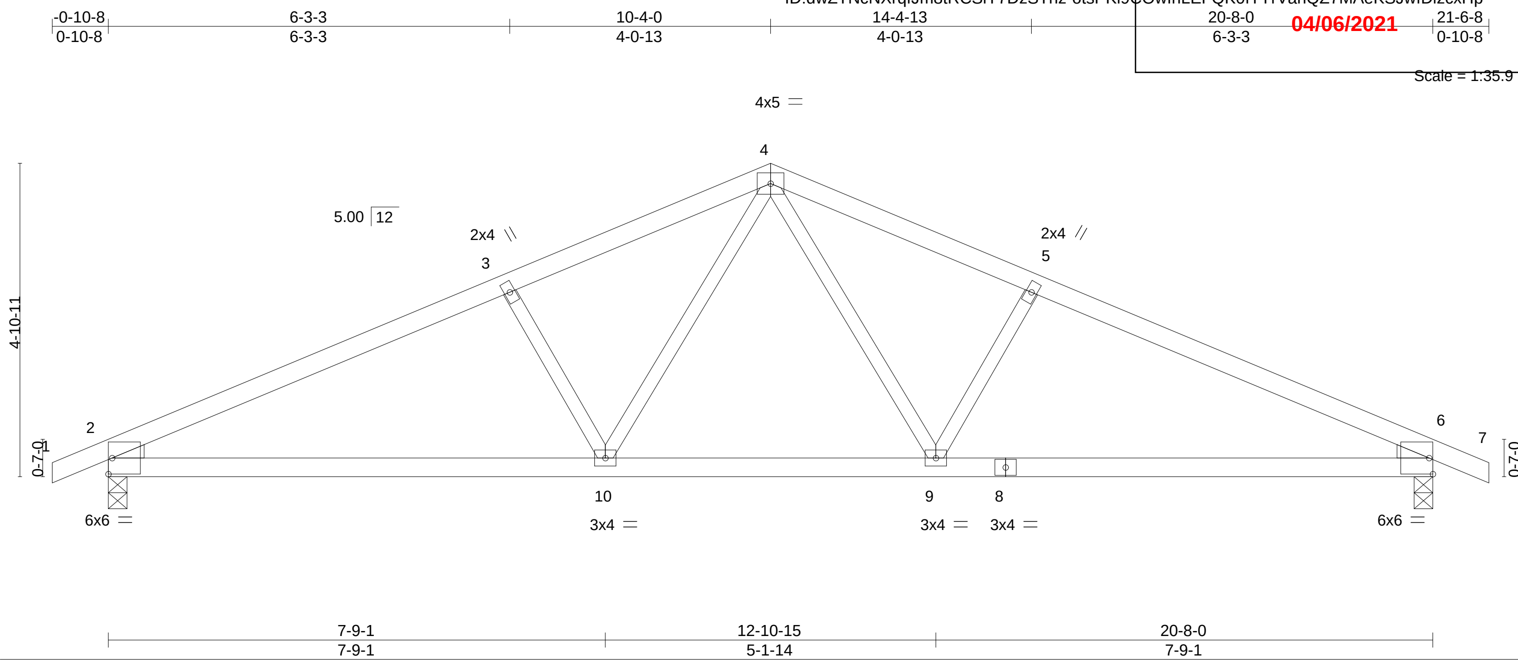
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	E2	Common	4	1	Job Reference (optional)

I45104208

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 8 15:52:10 2021 Page 1
ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-otsPKl9COwInLEFQK0fTYrVanQZ7MAeKSJwfDlzcxHp

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
04/06/2021



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.52	Vert(LL)	-0.11	6-9	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.60	Vert(CT)	-0.25	6-9	>977	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.17	Horz(CT)	0.04	6	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.06	2-10	>999	240	Weight: 65 lb	FT = 10%

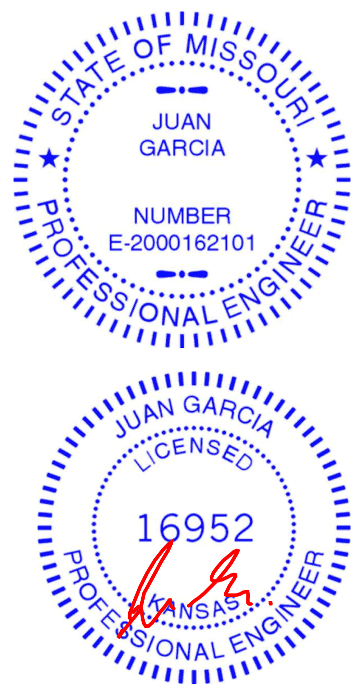
LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2
WEDGE
Left: 2x3 SPF No.2 , Right: 2x3 SPF No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-8-13 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 2=0-3-8, 6=0-3-8
Max Horz 2=-82(LC 9)
Max Uplift 2=-141(LC 8), 6=-141(LC 9)
Max Grav 2=988(LC 1), 6=988(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1643/210, 3-4=-1437/214, 4-5=-1437/214, 5-6=-1643/211
BOT CHORD 2-10=-199/1413, 9-10=-56/1021, 6-9=-117/1413
WEBS 4-9=-107/507, 5-9=-339/190, 4-10=-107/507, 3-10=-339/190

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) gable end 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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=141, 6=141.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



March 9,2021

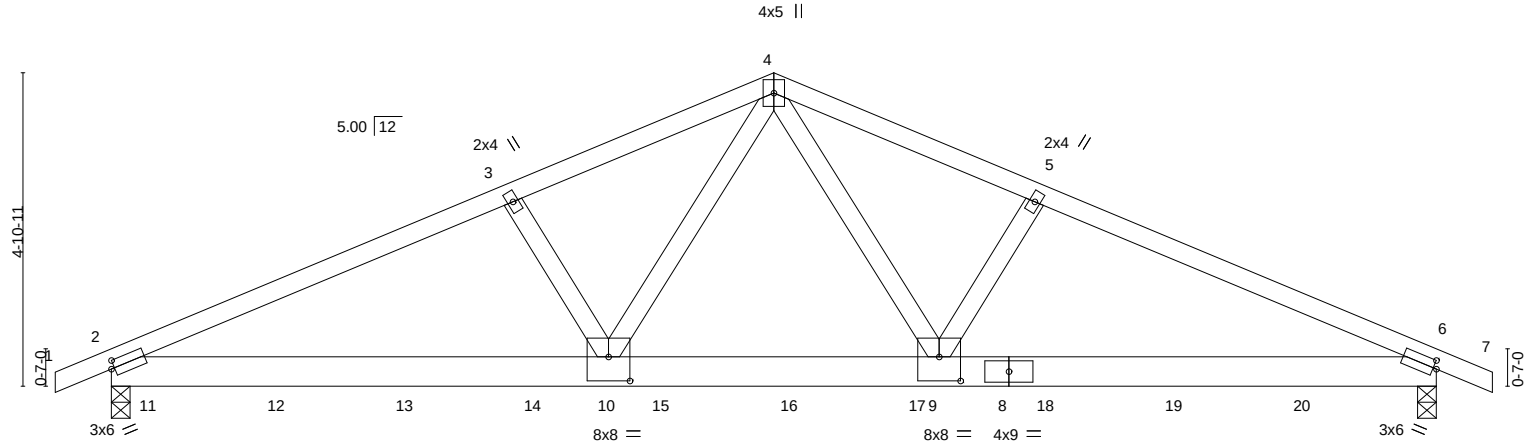
Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	E3	COMMON GIRDER	1	3	Job Reference (optional)

I45104209

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 8 11:08:21 2021 Page 1
ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-G3QnX5Aq9DQeyOqcukAi521kcqws5b?UhzgCmBzcxHo

0-10-8	6-3-3	10-4-0	14-4-13	20-8-0	21-6-8
0-10-8	6-3-3	4-0-13	4-0-13	6-3-3	0-10-8

Scale = 1:35.9



7-9-1	12-10-15	20-8-0
7-9-1	5-1-14	7-9-1

Plate Offsets (X,Y)-- [2:0-0-10,0-1-8], [6:0-0-10,0-1-8], [9:0-4-0,0-4-8], [10:0-4-0,0-4-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.58	Vert(LL)	-0.14	6-9	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.57	Vert(CT)	-0.26	6-9	>949	240		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.29	Horz(CT)	0.04	6	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.11	2-10	>999	240	Weight: 282 lb	FT = 10%

LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x6 SP 2400F 2.0E
WEBS 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) 2=0-3-8, 6=0-3-8
Max Horz 2=-49(LC 28)
Max Uplift 2=-849(LC 8), 6=-647(LC 9)
Max Grav 2=5446(LC 1), 6=4872(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-8457/1312, 3-4=-8286/1323, 4-5=-8330/1215, 5-6=-8500/1204
BOT CHORD 2-10=-1188/7646, 9-10=-817/5846, 6-9=-1039/7684
WEBS 4-9=-470/3594, 4-10=-670/3569

NOTES-
1) 3-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-7-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-5-0 oc.
Webs 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); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=849, 6=647.
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) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 873 lb down and 154 lb up at 0-7-4, 834 lb down and 171 lb up at 2-7-4, 834 lb down and 171 lb up at 4-7-4, 834 lb down and 171 lb up at 6-7-4, 834 lb down and 171 lb up at 8-7-4, 812 lb down and 196 lb up at 10-7-4, 850 lb down and 123 lb up at 12-7-4, 850 lb down and 123 lb up at 14-7-4, and 850 lb down and 123 lb up at 16-7-4, and 850 lb down and 123 lb up at 18-7-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

March 9,2021

Continued on page 2

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	E3	COMMON GIRDER	1	3	Job Reference (optional)

J45104209

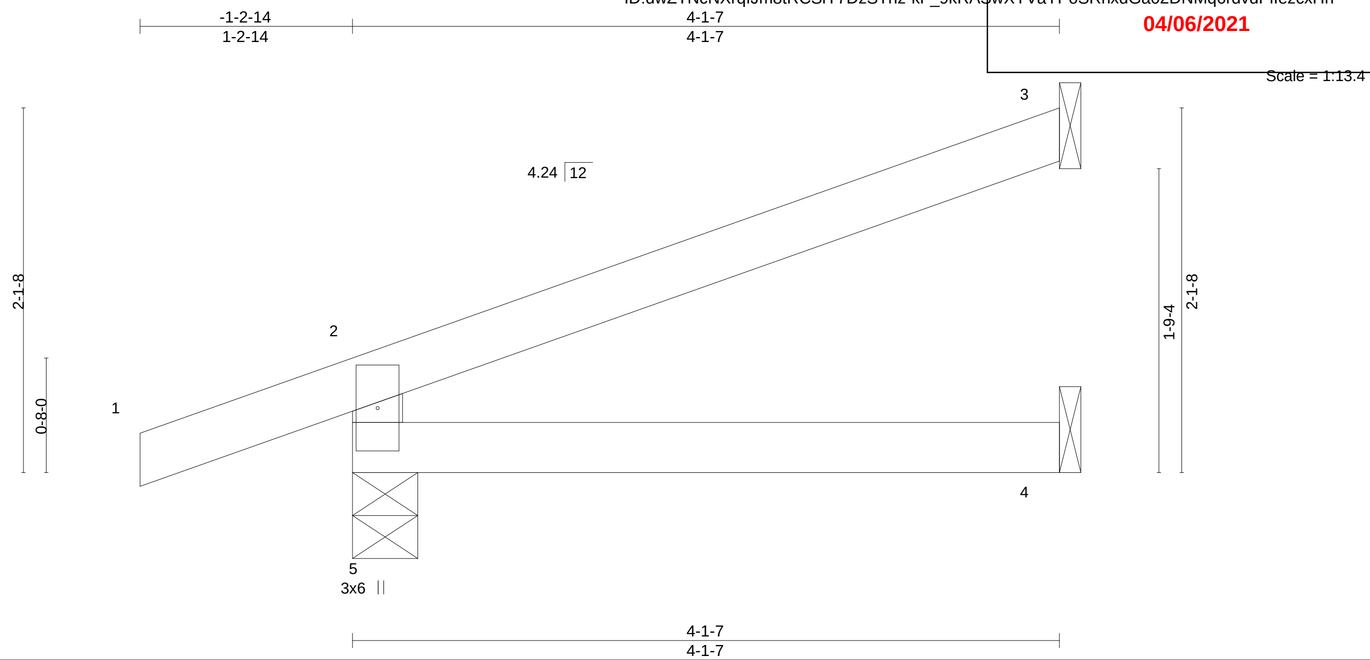
LOAD CASE(S) Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (plf)
   Vert: 1-4=-70, 4-7=-70, 2-6=-20
   Concentrated Loads (lb)
   Vert: 11=-873(F) 12=-819(F) 13=-819(F) 14=-819(F) 15=-819(F) 16=-793(F) 17=-850(F) 18=-850(F) 19=-850(F) 20=-850(F)

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
04/06/2021

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	J1	Diagonal Hip Girder	2	1	I45104210 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 8 15:52:12 2021 Page 1
ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-kF_9kRASwXYVaYPoSRhxdGa02DNMq6rdvdPIlezcxHn



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.15	Vert(LL)	-0.01	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.10	Vert(CT)	-0.02	4-5	>999	240		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.00	Horz(CT)	-0.01	3	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-R		Wind(LL)	0.01	4-5	>999	240	Weight: 11 lb	FT = 10%

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

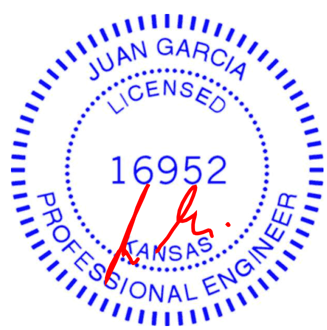
BRACING-
TOP CHORD Structural wood sheathing directly applied or 4-1-7 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 5=0-4-9, 3=Mechanical, 4=Mechanical
Max Horz 5=81(LC 12)
Max Uplift 5=-91(LC 6), 3=-51(LC 12)
Max Grav 5=144(LC 1), 3=80(LC 1), 4=60(LC 3)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

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) gable end 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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 30 lb down and 11 lb up at -1-2-14, and 30 lb down and 11 lb up at -1-2-14 on top chord. The design/selection of such connection device(s) is the responsibility of others.
8) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

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



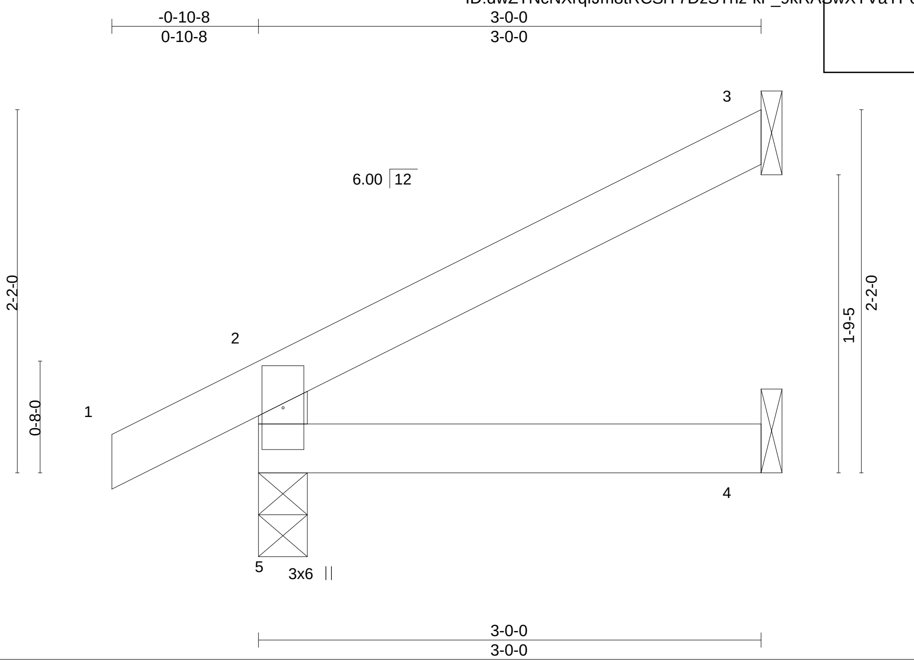
March 9,2021

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN	
210322	J2	Jack-Open	5	1	Job Reference (optional)	I45104211

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 8 15:52:12 2021 Page 1

ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-kF_9kRASwXYVaYPoSRhxdGa1sDO?q6rdvdPllezcxHn

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
04/06/2021



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

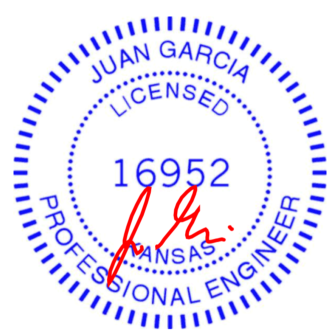
LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2

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

REACTIONS. (size) 5=0-3-8, 3=Mechanical, 4=Mechanical
Max Horz 5=69(LC 8)
Max Uplift 5=-27(LC 8), 3=-49(LC 8)
Max Grav 5=210(LC 1), 3=82(LC 1), 4=52(LC 3)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

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) gable end 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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



March 9,2021

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	J3	Jack-Open Girder	1	1	Job Reference (optional)

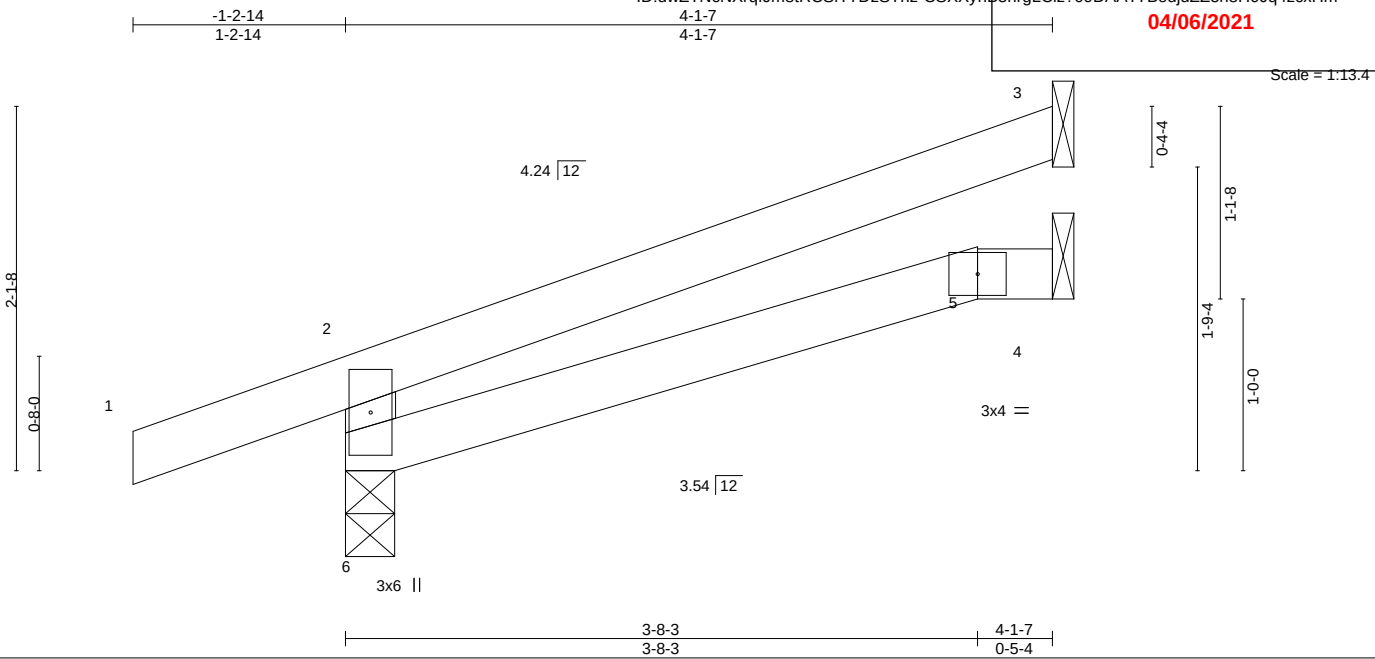
RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI

J45104212

Wheeler Lumber, Waverly, KS - 66871,

8.430 s Feb 12 2021 MiTek Industries, Inc. Wed Mar 3 08:21:13 2021 Page 1
ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-CSXXynB5hrgLCiz?09DAAT7BodjdZZ5n8H9Jq4zcxHm

04/06/2021



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.15	Vert(LL)	-0.01	5-6	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.10	Vert(CT)	-0.02	5-6	>999	240		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.00	Horz(CT)	-0.01	3	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-R		Wind(LL)	0.01	5-6	>999	240	Weight: 12 lb	FT = 10%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied or 4-1-7 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS. (size) 6=0-3-7, 3=Mechanical, 4=Mechanical
Max Horz 6=80(LC 12)
Max Uplift 6=-90(LC 6), 3=-51(LC 12)
Max Grav 6=144(LC 1), 3=80(LC 1), 4=60(LC 3)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

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) gable end 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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Bearing at joint(s) 6 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 6, 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.
8) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 30 lb down and 11 lb up at -1-2-14, and 30 lb down and 11 lb up at -1-2-14 on top chord. The design/selection of such connection device(s) is the responsibility of others.
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
Concentrated Loads (lb)
Vert: 1=-46(F=-23, B=-23)
Trapezoidal Loads (plf)
Vert: 1=0(F=35, B=35)-to-2=-24(F=23, B=23), 2=-3(F=34, B=34)-to-3=-72(F=-1, B=-1), 6=0(F=10, B=10)-to-5=-19(F=1, B=1), 5=-19(F=1, B=1)-to-4=-21(F=-0, B=-0)

STATE OF MISSOURI
JUAN GARCIA
NUMBER E-2000162101
PROFESSIONAL ENGINEER

JUAN GARCIA
LICENSED
16952
KANSAS
PROFESSIONAL ENGINEER

March 9,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

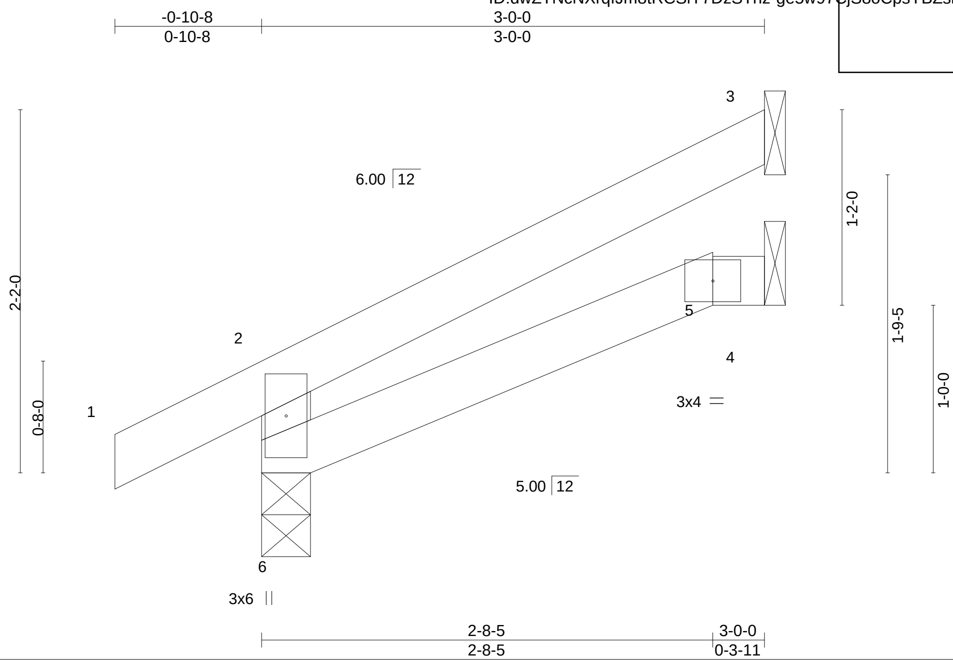
RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
04/06/2021

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	J4	Jack-Open	5	1	I45104213 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 8 15:52:14 2021 Page 1

ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-ge5w97CjS8oCpsYBZskPjhfNL14UI0LwNxusMWzcxHl

Scale = 1:13.7



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.10	Vert(LL)	-0.00	5-6	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	-0.01	5-6	>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	5-6	>999	240	Weight: 9 lb	FT = 10%

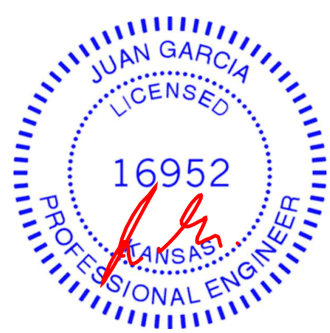
LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2

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

REACTIONS. (size) 6=0-3-8, 3=Mechanical, 4=Mechanical
Max Horz 6=68(LC 8)
Max Uplift 6=-26(LC 8), 3=-50(LC 8)
Max Grav 6=210(LC 1), 3=83(LC 1), 4=52(LC 3)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

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) gable end 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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Bearing at joint(s) 6 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 6, 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.



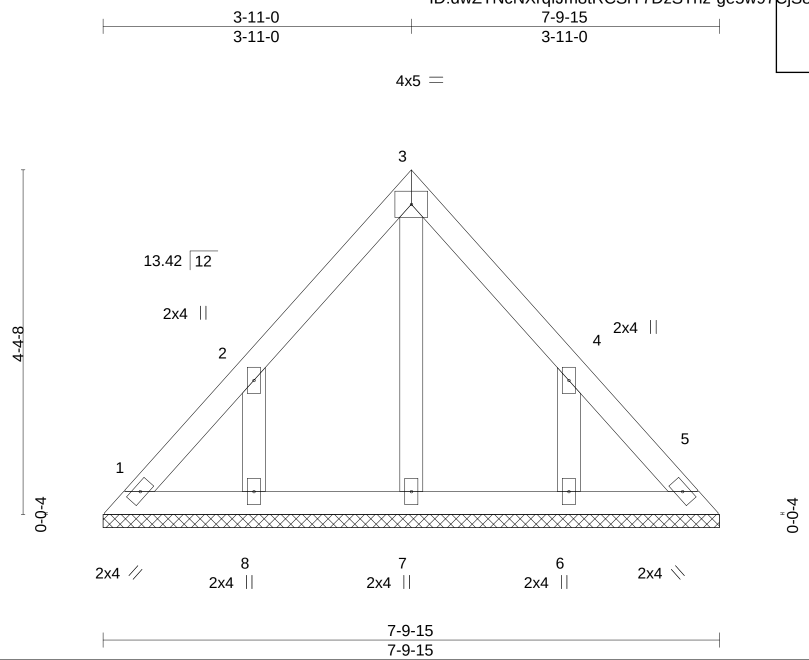
March 9,2021

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	LAY1	GABLE	1	1	I45104214 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 8 15:52:14 2021 Page 1
ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-ge5w97CjS8oCpsYBZskPjhfO0145I0swNxusMWzcxHl

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
04/06/2021

Scale = 1:29.3



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	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	0.02	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	5	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-P							Weight: 29 lb	FT = 10%

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

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

REACTIONS. All bearings 7-9-15.
(lb) - Max Horz 1=-108(LC 4)
Max Uplift All uplift 100 lb or less at joint(s) 1, 5 except 8=-154(LC 8), 6=-154(LC 9)
Max Grav All reactions 250 lb or less at joint(s) 1, 5, 7, 8, 6

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

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) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Gable requires continuous bottom chord bearing.
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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 5 except (jt=lb) 8=154, 6=154.
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.

STATE OF MISSOURI
JUAN GARCIA
NUMBER E-2000162101
PROFESSIONAL ENGINEER

JUAN GARCIA
LICENSED
16952
KANSAS
PROFESSIONAL ENGINEER

March 9,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	LAY2	GABLE	1	1	Job Reference (optional)

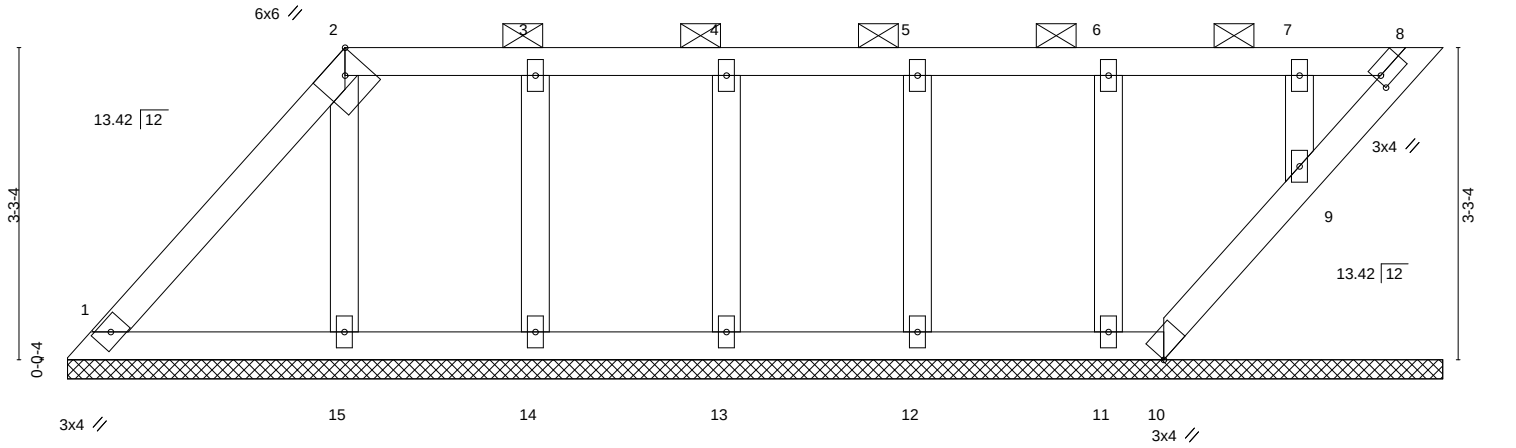
J45104215

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
04/06/2021

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 01 11:32:15 2021 Page 1
ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-8qfINTDLDSw3R?7N7aFeFuCYJRQ?1T93bbePvzzcxHk

2-11-1
2-11-1
14-5-0
11-5-15

Scale: 1/2"=1'



0-0-4
0-0-4
11-5-15
11-5-12
14-5-0
2-11-1

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

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.03	Horz(CT)	-0.00	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 52 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, except 2-0-0 oc purlins (6-0-0 max.): 2-8.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. All bearings 14-4-12.
(lb) - Max Horz 1=121(LC 8)
Max Uplift All uplift 100 lb or less at joint(s) 8, 10, 15, 14, 13, 12, 11, 9
Max Grav All reactions 250 lb or less at joint(s) 1, 8, 10, 15, 14, 13, 12, 11, 9

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

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) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 8, 10, 15, 14, 13, 12, 11, 9.
8) Non Standard bearing condition. Review required.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

March 9,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
04/06/2021

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	LAY3	GABLE	1	1	I45104216 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 8 15:52:16 2021 Page 1
ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-d0DgapEz_m2w39iahHmto6ljvql6mvsDqFNzRPzcxHj

Scale = 1:56.0

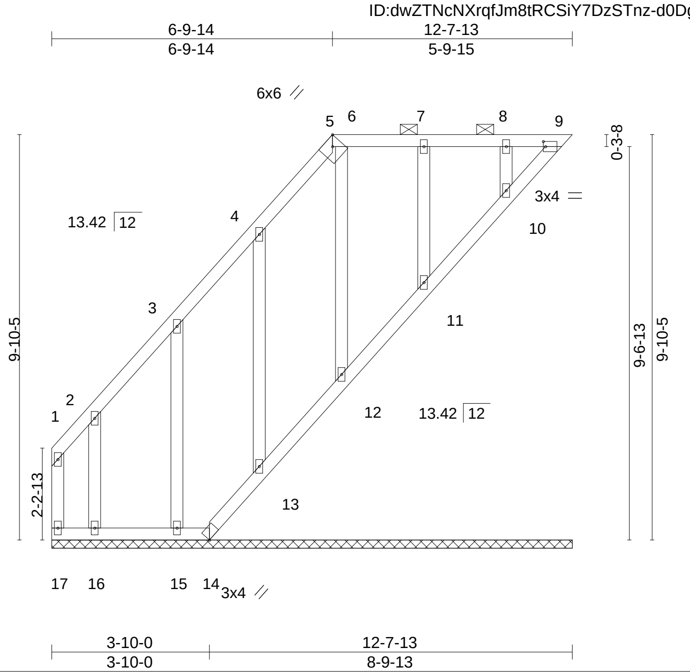


Plate Offsets (X,Y)-- [5:0-2-10,Edge], [9:0-0-10,0-1-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.09	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.13	Horz(CT)	-0.01	9	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S							Weight: 67 lb	FT = 10%

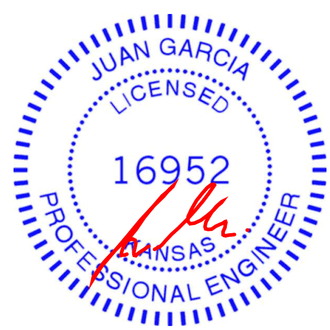
LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2
OTHERS 2x4 SPF No.2

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

REACTIONS. All bearings 12-7-13.
(lb) - Max Horz 17=281(LC 8)
Max Uplift All uplift 100 lb or less at joint(s) 17, 12, 11, 10 except 9=-280(LC 8), 14=-136(LC 6), 16=-197(LC 8), 15=-139(LC 8), 13=-136(LC 8)
Max Grav All reactions 250 lb or less at joint(s) 17, 9, 16, 15, 13, 12, 11, 10 except 14=306(LC 8)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 4-5=-186/337, 5-6=-129/261, 6-7=-129/261, 7-8=-129/261, 8-9=-129/263
BOT CHORD 16-17=-263/127, 15-16=-263/127, 14-15=-263/127, 13-14=-407/208, 12-13=-403/207, 11-12=-403/206, 10-11=-404/206, 9-10=-401/196

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) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 17, 12, 11, 10 except (jt=lb) 9=280, 14=136, 16=197, 15=139, 13=136.
9) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 9, 13, 12, 11, 10.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



March 9,2021

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	LAY4	GABLE	1	1	I45104217 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,   8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 8 15:52:17 2021 Page 1
ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-5Dn2o9Ebl3AngJHmF_H6KJHvME5iVN6M3v7WzrcxHi

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
04/06/2021

Scale = 1:33.3

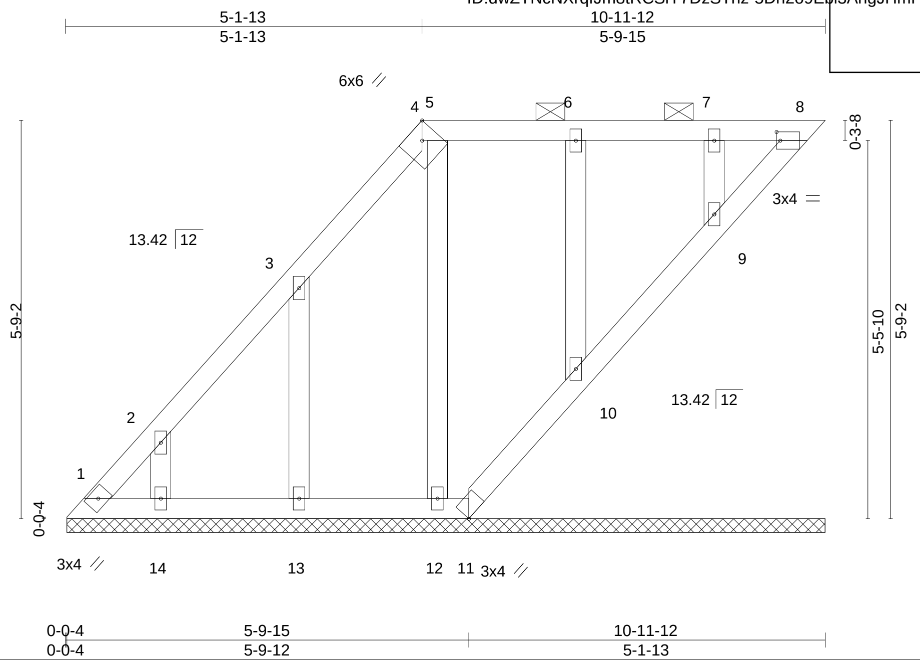


Plate Offsets (X,Y)-- [4:0-2-10,Edge], [8:0-0-10,0-1-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.05	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.06	Horz(CT)	-0.00	8	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S							Weight: 46 lb	FT = 10%

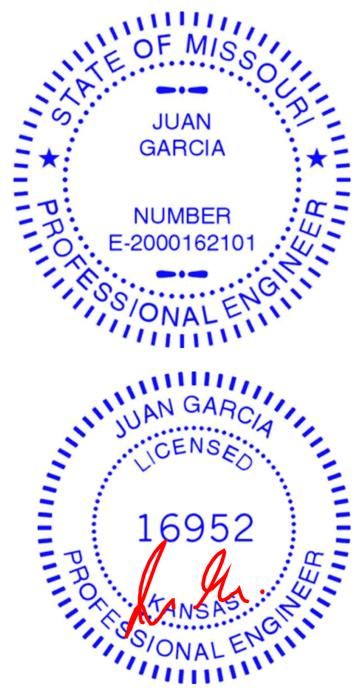
LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
OTHERS 2x4 SPF No.2

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

REACTIONS. All bearings 10-11-8.
(lb) - Max Horz 1=225(LC 8)
Max Uplift All uplift 100 lb or less at joint(s) 1, 8, 11, 12, 10, 9 except 14=-117(LC 8), 13=-142(LC 8)
Max Grav All reactions 250 lb or less at joint(s) 1, 8, 11, 14, 13, 12, 10, 9

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

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) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 8, 11, 12, 10, 9 except (jt=lb) 14=117, 13=142.
9) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 8, 10, 9.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



March 9,2021

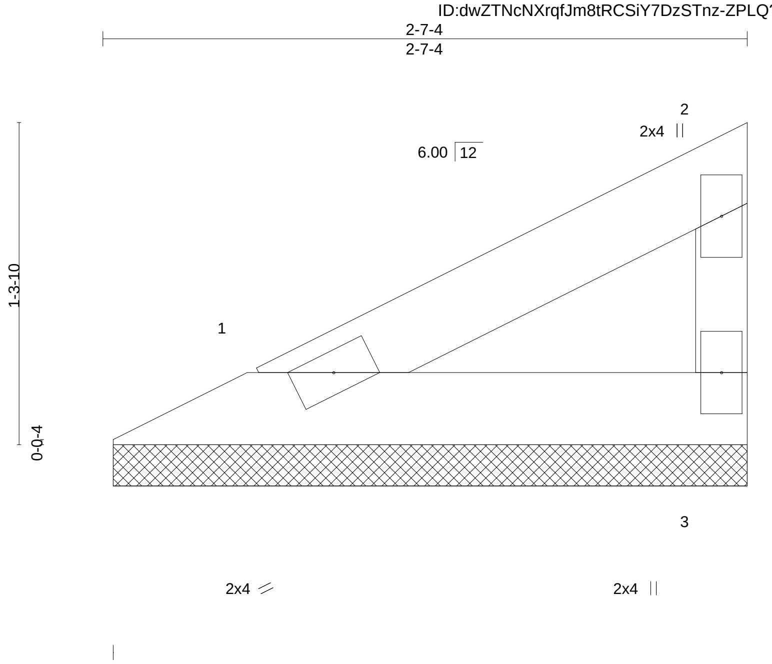
Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	V1	Valley	1	1	Job Reference (optional) I45104218

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 8 15:52:18 2021 Page 1

ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-ZPLQ?UFDWNIeITsyoioLtXq4zeRvEqKWIZs4VHzcxHh

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
04/06/2021

Scale = 1:9.3



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	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(CT)	n/a	-	n/a	999		
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-P							Weight: 6 lb	FT = 10%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied or 2-7-4 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 1=2-6-12, 3=2-6-12
Max Horz 1=39(LC 5)
Max Uplift 1=-11(LC 8), 3=-21(LC 8)
Max Grav 1=84(LC 1), 3=84(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

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) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Gable requires continuous bottom chord bearing.
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

STATE OF MISSOURI
JUAN GARCIA
NUMBER E-2000162101
PROFESSIONAL ENGINEER

JUAN GARCIA
LICENSED
16952
KANSAS
PROFESSIONAL ENGINEER

March 9,2021

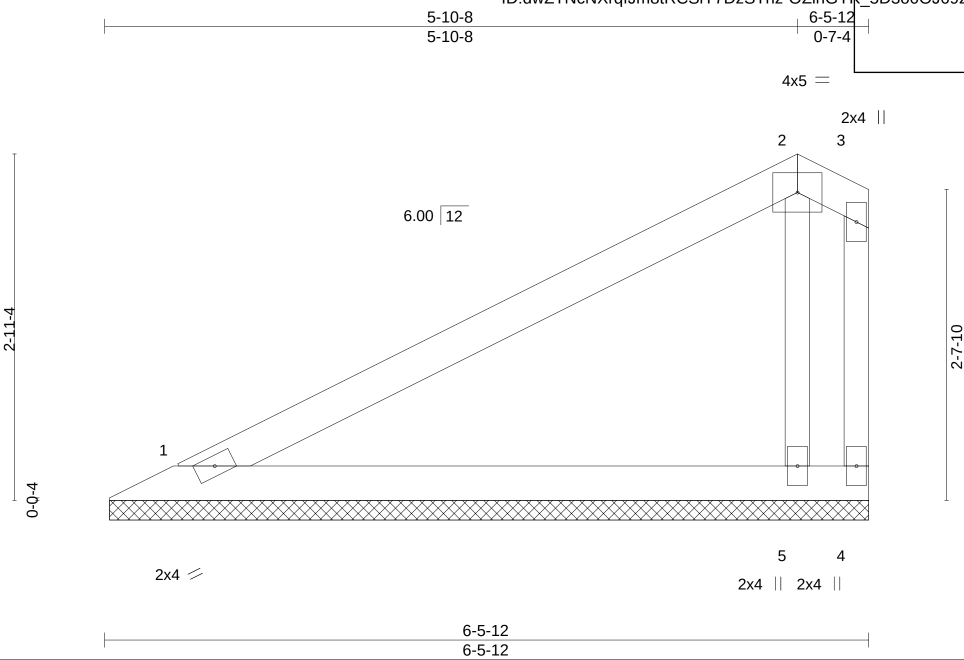
RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
04/06/2021

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	V2	Valley	1	1	I45104219 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 8 15:52:24 2021 Page 1

ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-OZihGYK_5D3o0OJ69zvl7o4zz3RVeX5OgUJOjxcxHb

Scale = 1:19.5



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.54	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.21	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.05	Horz(CT)	-0.00	4	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-P							Weight: 19 lb	FT = 10%

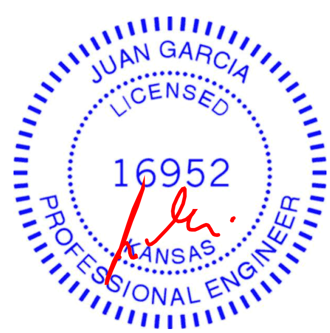
LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2
OTHERS 2x3 SPF No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 6-5-12 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 1=6-5-4, 4=6-5-4, 5=6-5-4
Max Horz 1=102(LC 5)
Max Uplift 1=-39(LC 8), 4=-236(LC 3)
Max Grav 1=224(LC 1), 5=448(LC 3)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

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) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Gable requires continuous bottom chord bearing.
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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1 except (jt=lb) 4=236.
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.



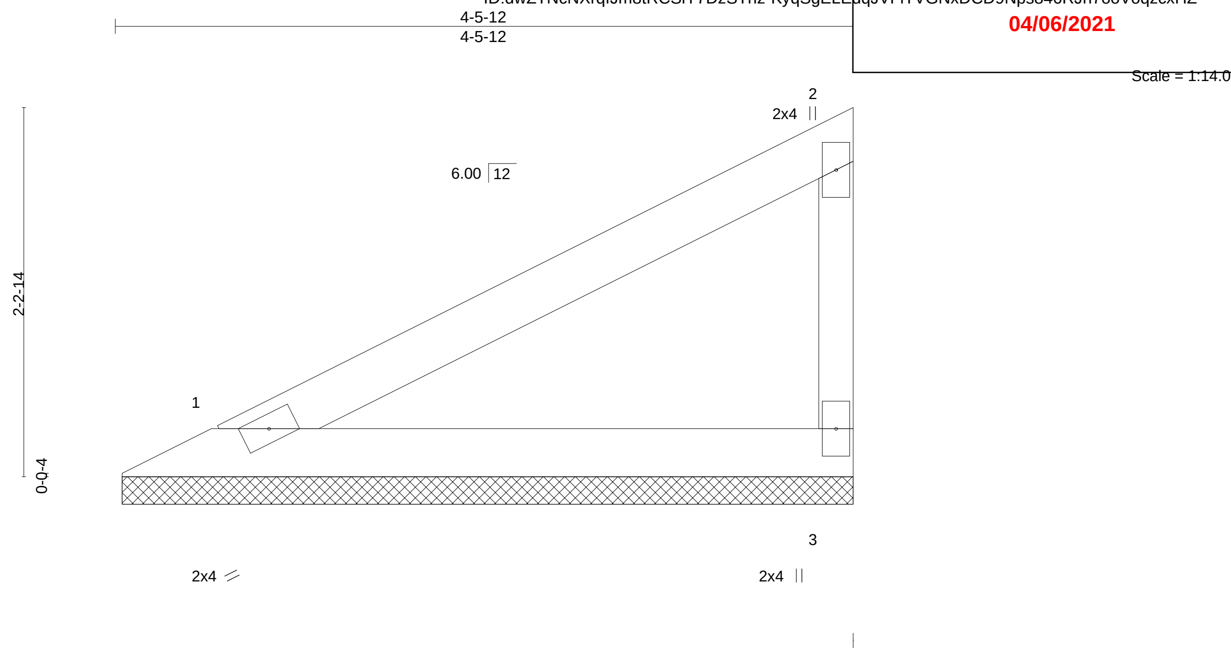
March 9,2021

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
04/06/2021

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	V3	Valley	1	1	I45104220 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 8 13:52:26 2021 Page 1

ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-KyqSgELEdqJVFiTVGNxDCD9Nps846RJh7ooVoqzcxHZ



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.26	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.14	Vert(CT)	n/a	-	n/a	999		
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-P							Weight: 11 lb	FT = 10%

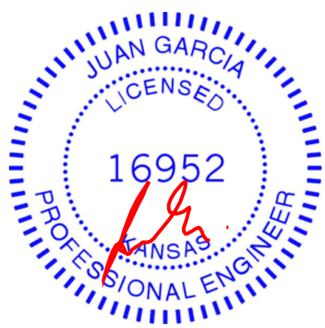
LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 4-5-12 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 1=4-5-4, 3=4-5-4
Max Horz 1=78(LC 5)
Max Uplift 1=-22(LC 8), 3=-41(LC 8)
Max Grav 1=169(LC 1), 3=169(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

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) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Gable requires continuous bottom chord bearing.
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



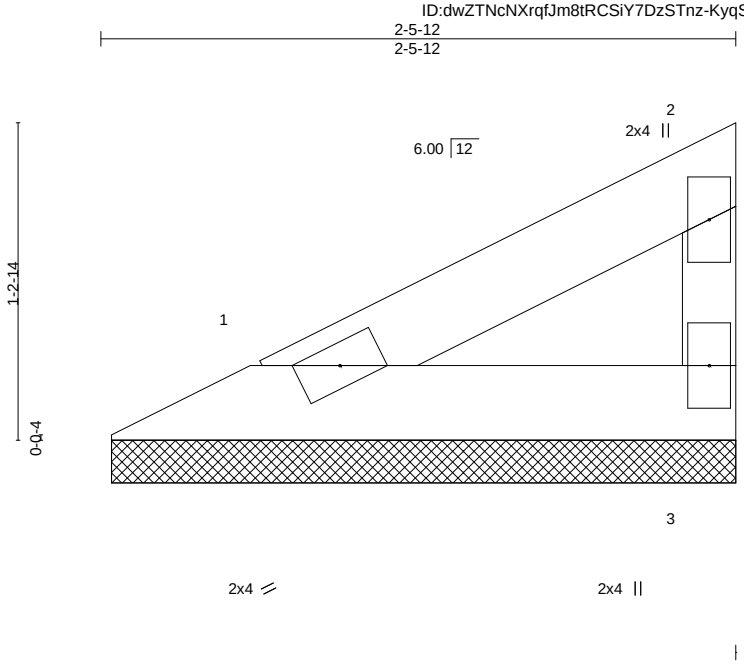
March 9,2021

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	V4	Valley	1	1	

Job Reference (optional) I45104221

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
04/06/2021

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Feb 12 2021 MiTek Industries, Inc. Wed Mar 31 12:20:03 2021 Page 1
ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-KyqSgELEdqJVFiTVGNxDCD9R4sAr6RJh7ooVoqzcxHZ



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.05	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	n/a	999		
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-P							Weight: 6 lb	FT = 10%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied or 2-5-12 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 1=2-5-4, 3=2-5-4
Max Horz 1=37(LC 5)
Max Uplift 1=-10(LC 8), 3=-19(LC 8)
Max Grav 1=79(LC 1), 3=79(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

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) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Gable requires continuous bottom chord bearing.
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

March 9,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

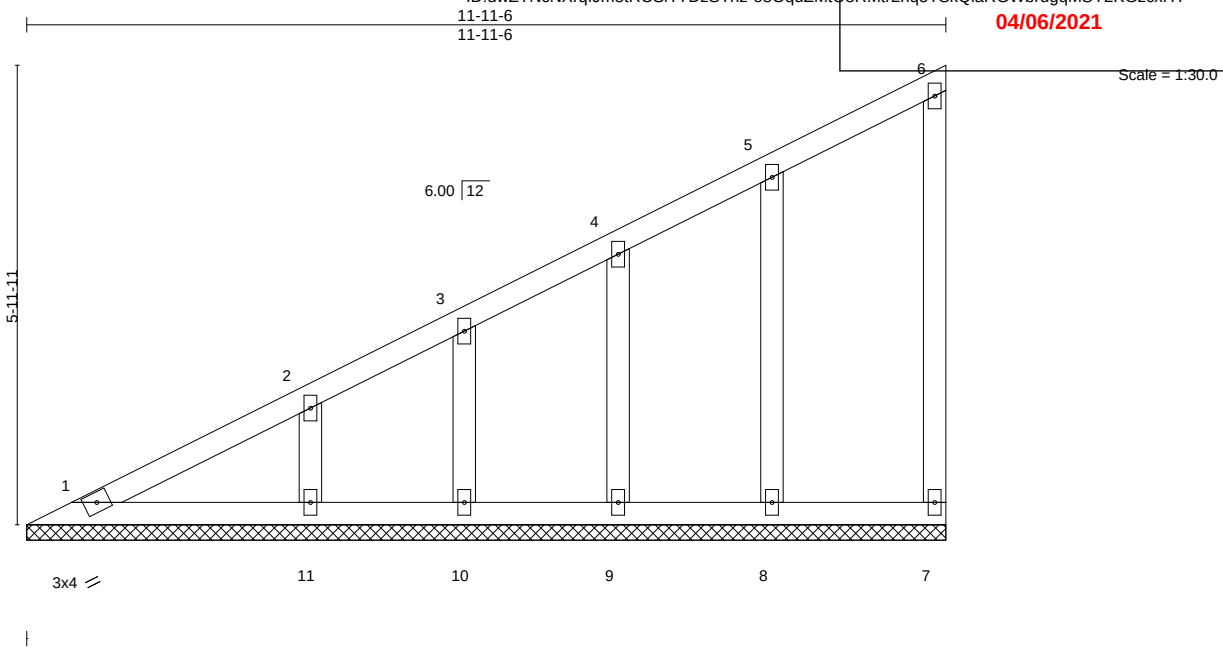
Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	V4A	GABLE	1	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI

J45104222

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 01 09:32:27 2021 Page 1
ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-o8OquZMtO8RMtr2hq5TSkQiaRGWbrugqMSY2KGzcxHY

04/06/2021



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.14	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.06	Horz(CT)	-0.00	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 47 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. All bearings 11-11-6.
(lb) - Max Horz 1=233(LC 5)
Max Uplift All uplift 100 lb or less at joint(s) 7, 11, 10, 9, 8
Max Grav All reactions 250 lb or less at joint(s) 1, 7, 10, 9, 8 except 11=283(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

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) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) 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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 7, 11, 10, 9, 8.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

STATE OF MISSOURI
JUAN GARCIA
NUMBER E-2000162101
PROFESSIONAL ENGINEER

JUAN GARCIA LICENSED
16952
KANSAS
PROFESSIONAL ENGINEER

March 9,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	V5	Valley	1	1	

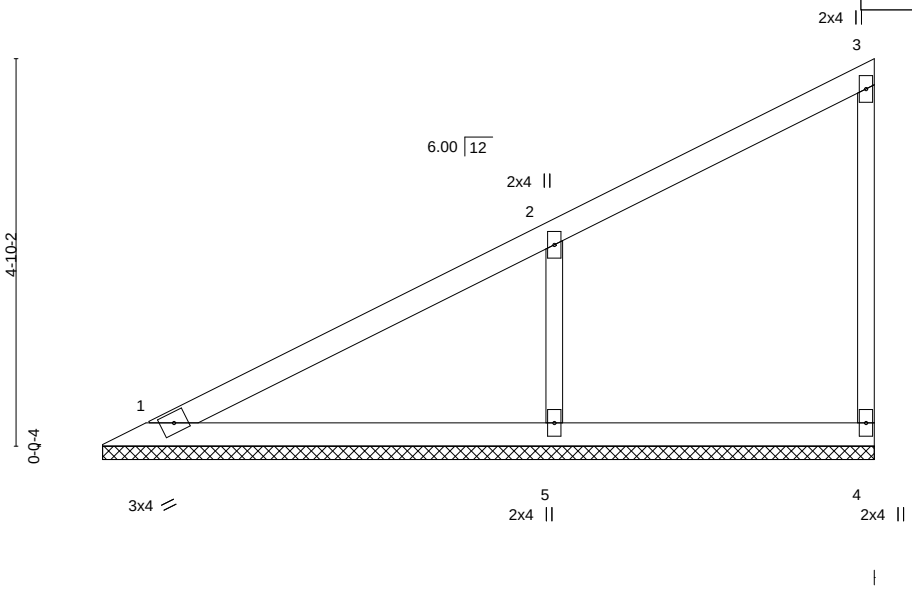
Job Reference (optional) I45104223

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 01 08:22:28 2021 Page 1
ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-GKxC5vNV9SZDV?dtOo_hHeEiFgq1aKU_b6HbsizcxHX

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
04/06/2021

9-8-4
9-8-4

Scale = 1:28.8



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.33	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.17	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.09	Horz(CT)	-0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 28 lb	FT = 10%

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

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

REACTIONS. (size) 1=9-7-12, 4=9-7-12, 5=9-7-12
Max Horz 1=187(LC 5)
Max Uplift 4=-28(LC 5), 5=-152(LC 8)
Max Grav 1=183(LC 1), 4=117(LC 1), 5=506(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 2-5=-383/203

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) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Gable requires continuous bottom chord bearing.
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4 except (jt=lb) 5=152.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

STATE OF MISSOURI
JUAN GARCIA
NUMBER E-2000162101
PROFESSIONAL ENGINEER

JUAN GARCIA
LICENSED
16952
KANSAS
PROFESSIONAL ENGINEER

March 9,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	V6	Valley	1	1	

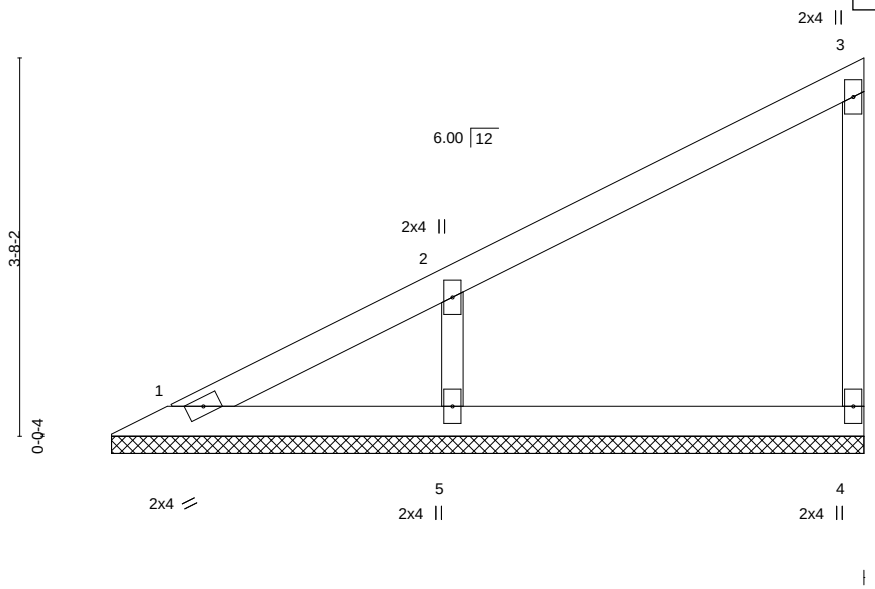
Job Reference (optional) I45104224

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 01 08:22:28 2021 Page 1
ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-GKxC5vNV9SZDV?dtOo_hHeEkJgr8aL__b6HbsizcxHX

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
04/06/2021

7-4-4
7-4-4

Scale = 1:22.4



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	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	0.10	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.05	Horz(CT)	-0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 20 lb	FT = 10%

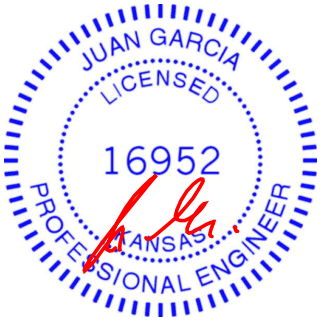
LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2
OTHERS 2x3 SPF No.2

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

REACTIONS. (size) 1=7-3-12, 4=7-3-12, 5=7-3-12
Max Horz 1=138(LC 5)
Max Uplift 4=-26(LC 8), 5=-115(LC 8)
Max Grav 1=87(LC 16), 4=141(LC 1), 5=382(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 2-5=-297/165

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) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Gable requires continuous bottom chord bearing.
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4 except (jt=lb) 5=115.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



March 9,2021

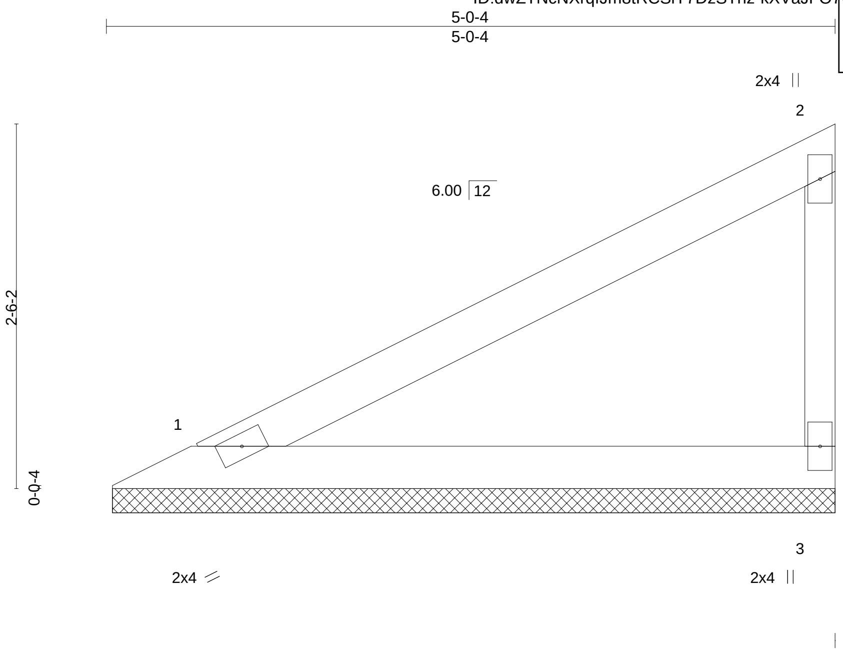
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	V7	Valley	1	1	I45104225 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 8 15:52:29 2021 Page 1

ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-kXVaJFO7wlh469C3yWVwprntg491Jo37pm19O9zcxHW

Scale: 3/4"=1'



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.35	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.19	Vert(CT)	n/a	-	n/a	999		
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-P							Weight: 13 lb	FT = 10%

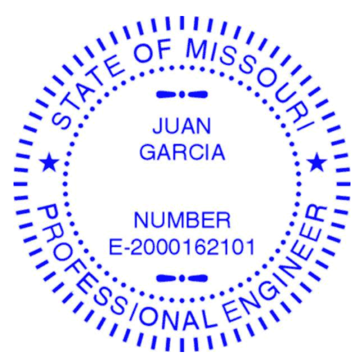
LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2

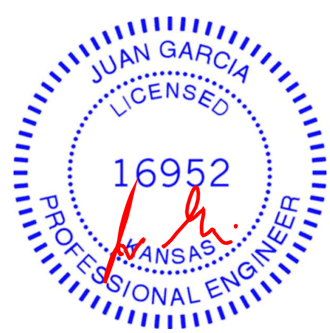
BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-0-4 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 1=4-11-12, 3=4-11-12
Max Horz 1=89(LC 7)
Max Uplift 1=-25(LC 8), 3=-47(LC 8)
Max Grav 1=193(LC 1), 3=193(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

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) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Gable requires continuous bottom chord bearing.
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.





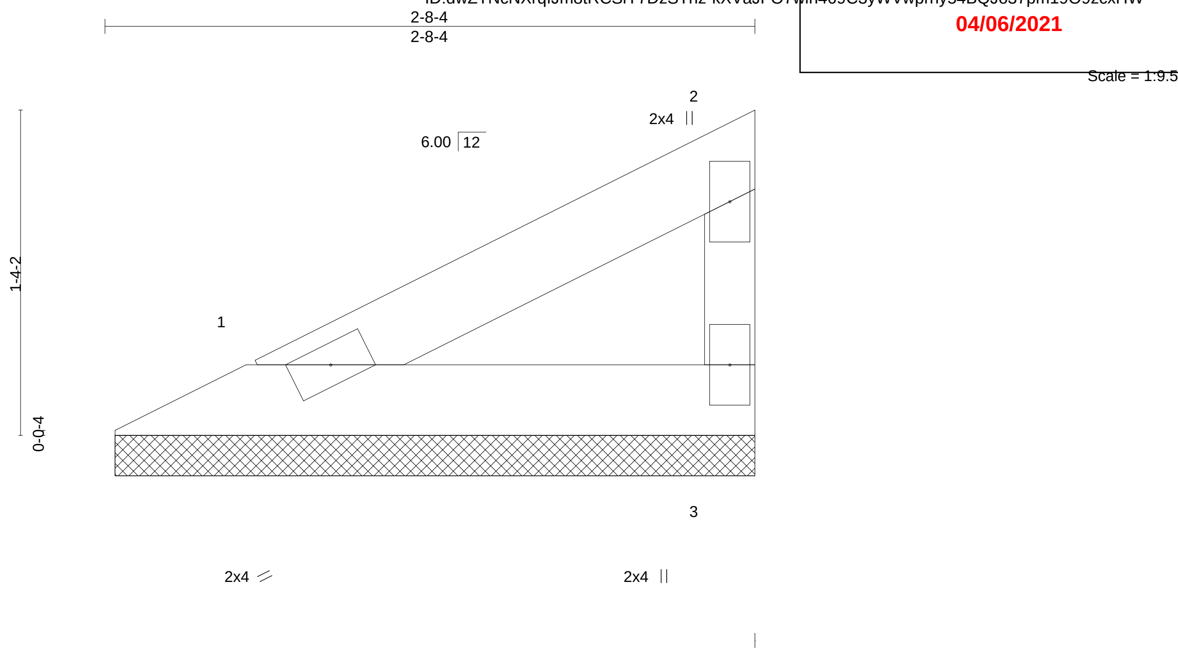
March 9,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
04/06/2021

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	V8	Valley	1	1	I45104226 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 8 15:52:29 2021 Page 1
ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-kXVaJFO7wlh469C3yWVwprny54BQJo37pm19O9zcxHW



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	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(CT)	n/a	-	n/a	999		
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-P							Weight: 6 lb	FT = 10%

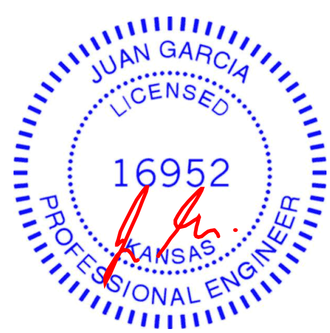
LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 2-8-4 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 1=2-7-12, 3=2-7-12
Max Horz 1=41(LC 5)
Max Uplift 1=-11(LC 8), 3=-22(LC 8)
Max Grav 1=88(LC 1), 3=88(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

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) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Gable requires continuous bottom chord bearing.
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



March 9,2021

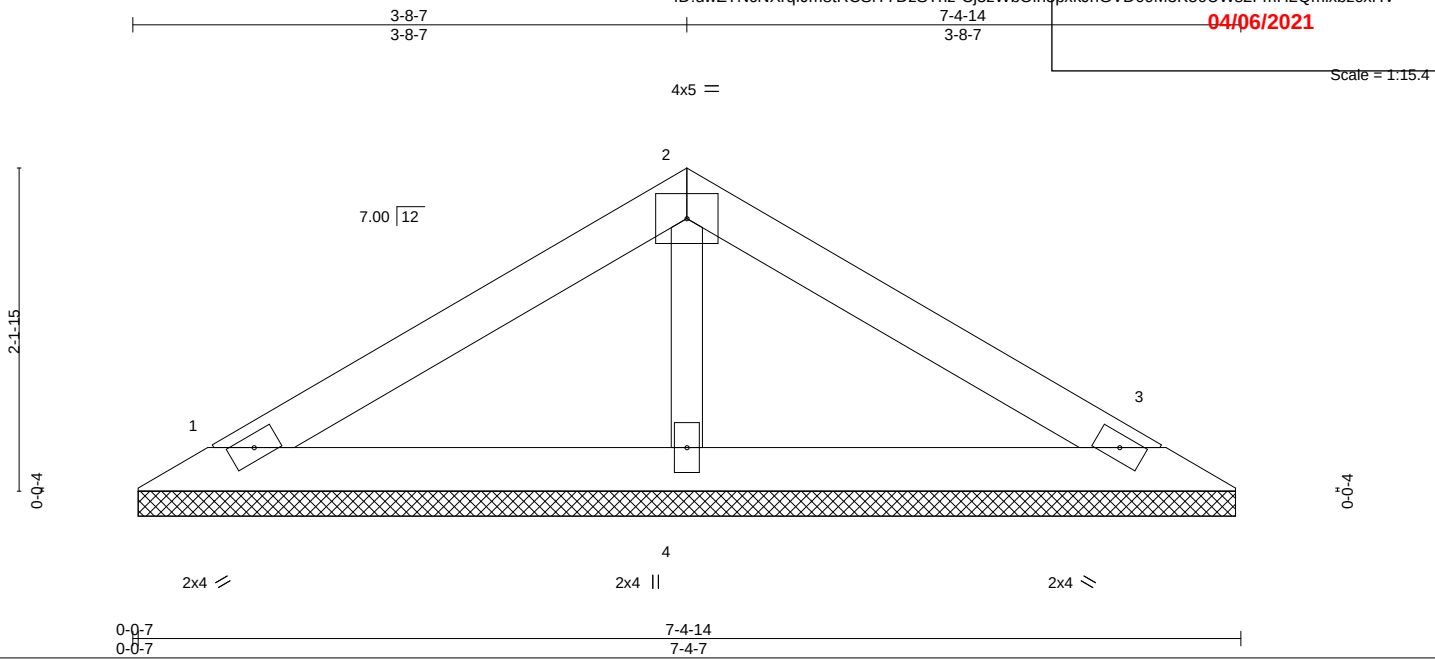
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	V9	Valley	1	1	

Job Reference (optional) I45104227

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
04/06/2021

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Feb 12 2021 MiTek Industries, Inc. Wed Mar 3 10:23:30 2021 Page 1
ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-Cj3zWbOlh3pxkJnGVD09M3K50UWs2FmH2QmixbzcxHV



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.18	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.09	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 18 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=7-4-0, 3=7-4-0, 4=7-4-0
Max Horz 1=-48(LC 6)
Max Uplift 1=-35(LC 8), 3=-41(LC 9)
Max Grav 1=154(LC 1), 3=154(LC 1), 4=261(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

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) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Gable requires continuous bottom chord bearing.
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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 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.

March 9,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	V10	Valley	1	1	Job Reference (optional)

I45104228

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
04/06/2021

Wheeler Lumber, Waverly, KS - 66871,

8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 8 15:52:18 2021 Page 1
ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-ZPLQ?UFDWNIeITsyoioLtXq4LeQ3EqKWIZs4VHzcxHh

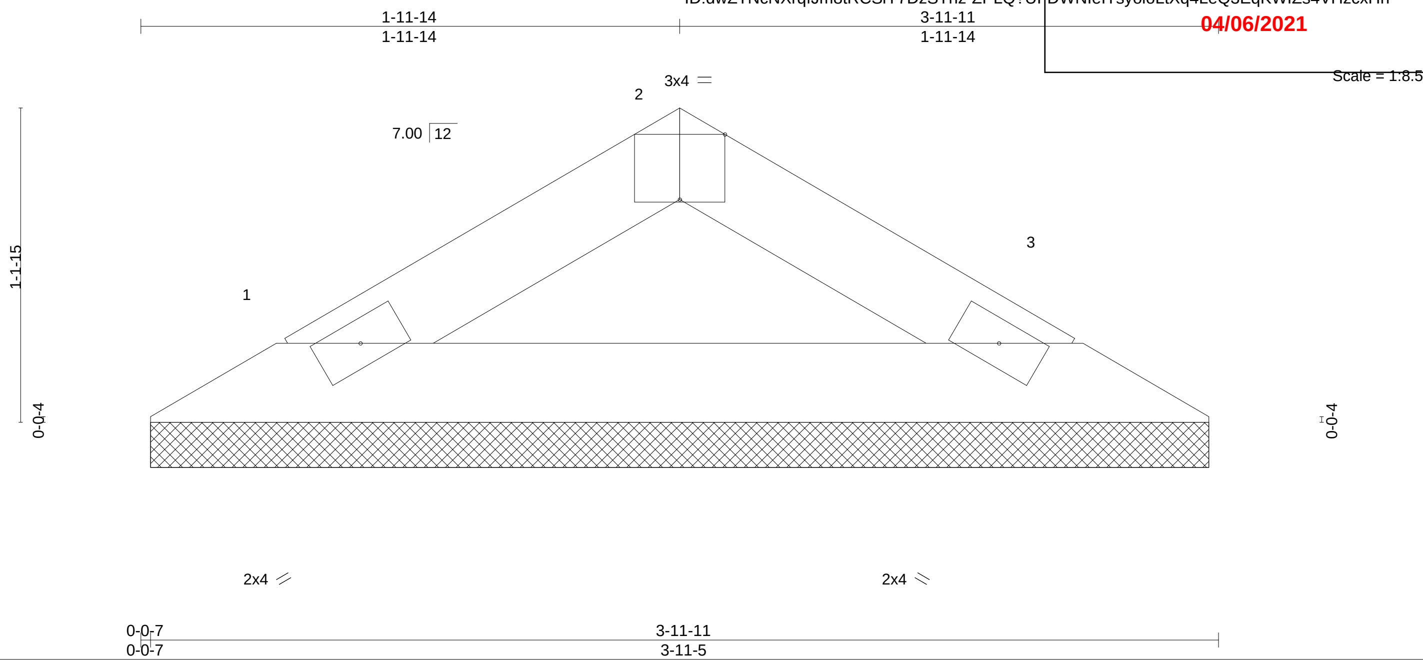


Plate Offsets (X,Y)-- [2:0-2-0,Edge]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.03	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.08	Vert(CT)	n/a	-	n/a	999		
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-P							Weight: 8 lb	FT = 10%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-11-11 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 1=3-10-14, 3=3-10-14
Max Horz 1=-22(LC 4)
Max Uplift 1=-16(LC 8), 3=-16(LC 9)
Max Grav 1=130(LC 1), 3=130(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

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) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Gable requires continuous bottom chord bearing.
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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 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.

STATE OF MISSOURI
JUAN GARCIA
NUMBER E-2000162101
PROFESSIONAL ENGINEER

JUAN GARCIA
LICENSED
16952
KANSAS
PROFESSIONAL ENGINEER

March 9,2021

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	V11	Valley	1	1	I45104229 Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
04/06/2021

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 8 15:52:19 2021 Page 1

ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-1bvoCqGrHhRVwdR8MPJaQkN7V2jfzHafWDcd2kczxHg

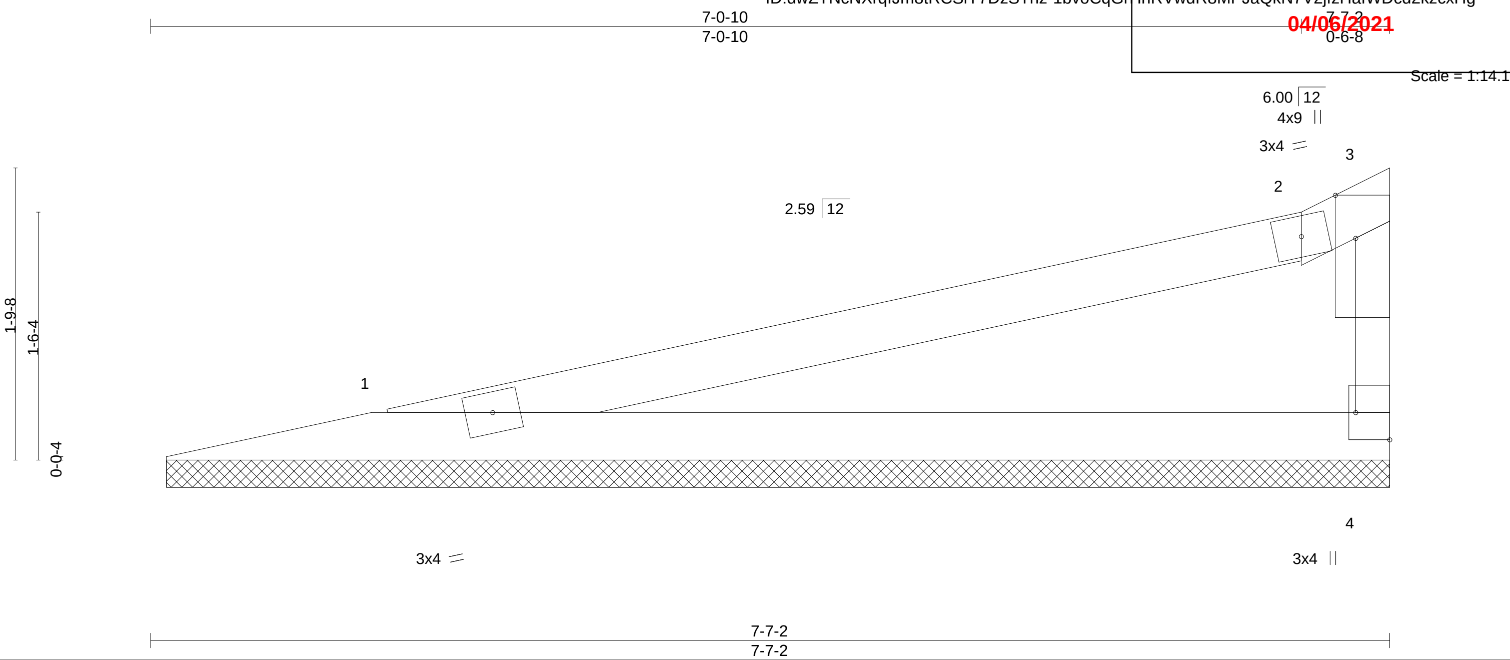


Plate Offsets (X,Y)-- [3:0-3-3,Edge], [4:Edge,0-2-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.52	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.32	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-R							Weight: 17 lb	FT = 10%

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

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

REACTIONS. (size) 1=7-6-0, 4=7-6-0
Max Horz 1=60(LC 5)
Max Uplift 1=-48(LC 4), 4=-54(LC 8)
Max Grav 1=272(LC 1), 4=272(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

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) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Gable requires continuous bottom chord bearing.
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 4.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

STATE OF MISSOURI
JUAN GARCIA
NUMBER E-2000162101
PROFESSIONAL ENGINEER

JUAN GARCIA
LICENSED
16952
KANSAS
PROFESSIONAL ENGINEER

March 9,2021

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	V12	Valley	1	1	Job Reference (optional)

I45104230

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
04/06/2021

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 8 15:52:19 2021 Page 1

ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-1bvoCqGrHhRVwdR8MPJaQkN2E2fTzHafWDcd2kzcxHg

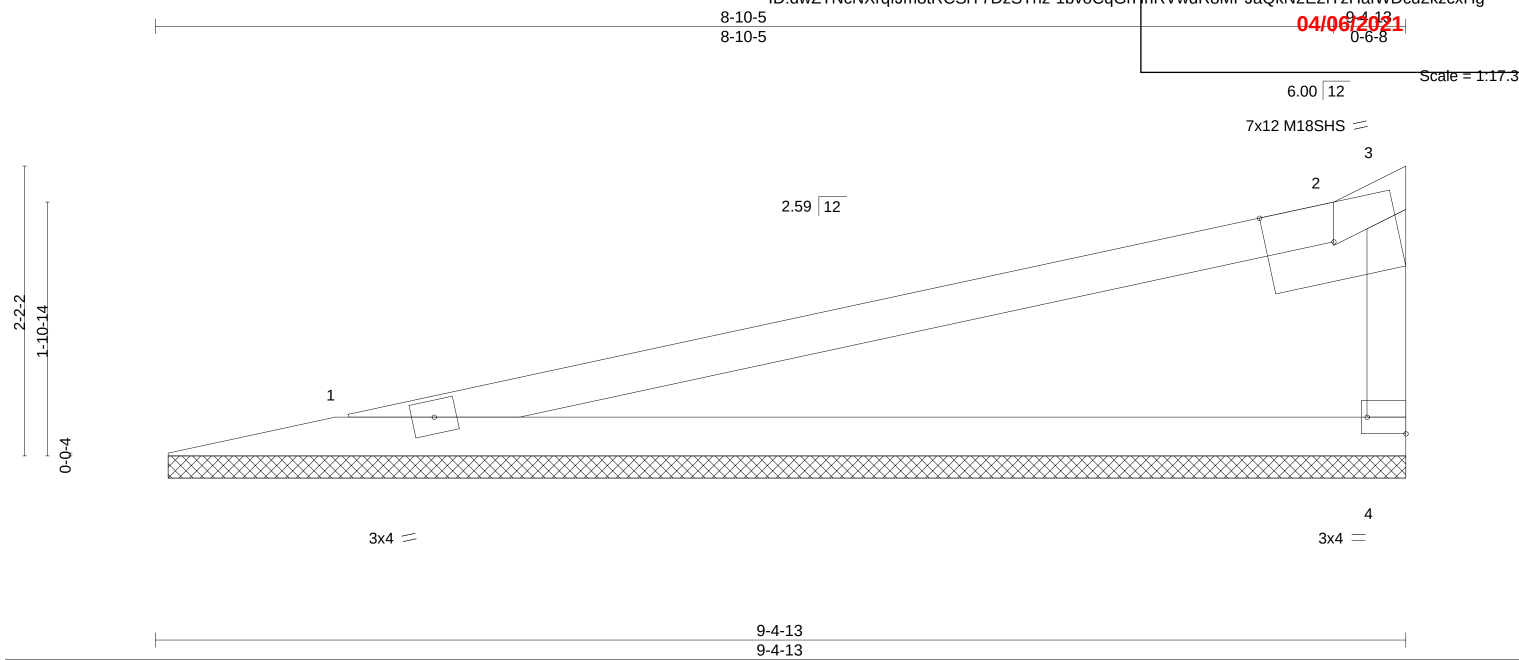


Plate Offsets (X,Y)-- [2:0-6-2,Edge], [4:Edge,0-1-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.86	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.52	Vert(CT)	n/a	-	n/a	999	M18SHS	197/144
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-R							Weight: 22 lb	FT = 10%

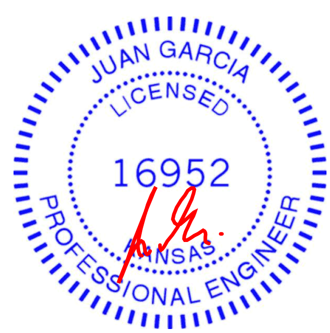
LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2

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

REACTIONS. (size) 1=9-3-10, 4=9-3-10
Max Horz 1=76(LC 5)
Max Uplift 1=-62(LC 4), 4=-70(LC 8)
Max Grav 1=351(LC 1), 4=351(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-269/43

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) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) All plates are MT20 plates unless otherwise indicated.
3) Gable requires continuous bottom chord bearing.
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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 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.



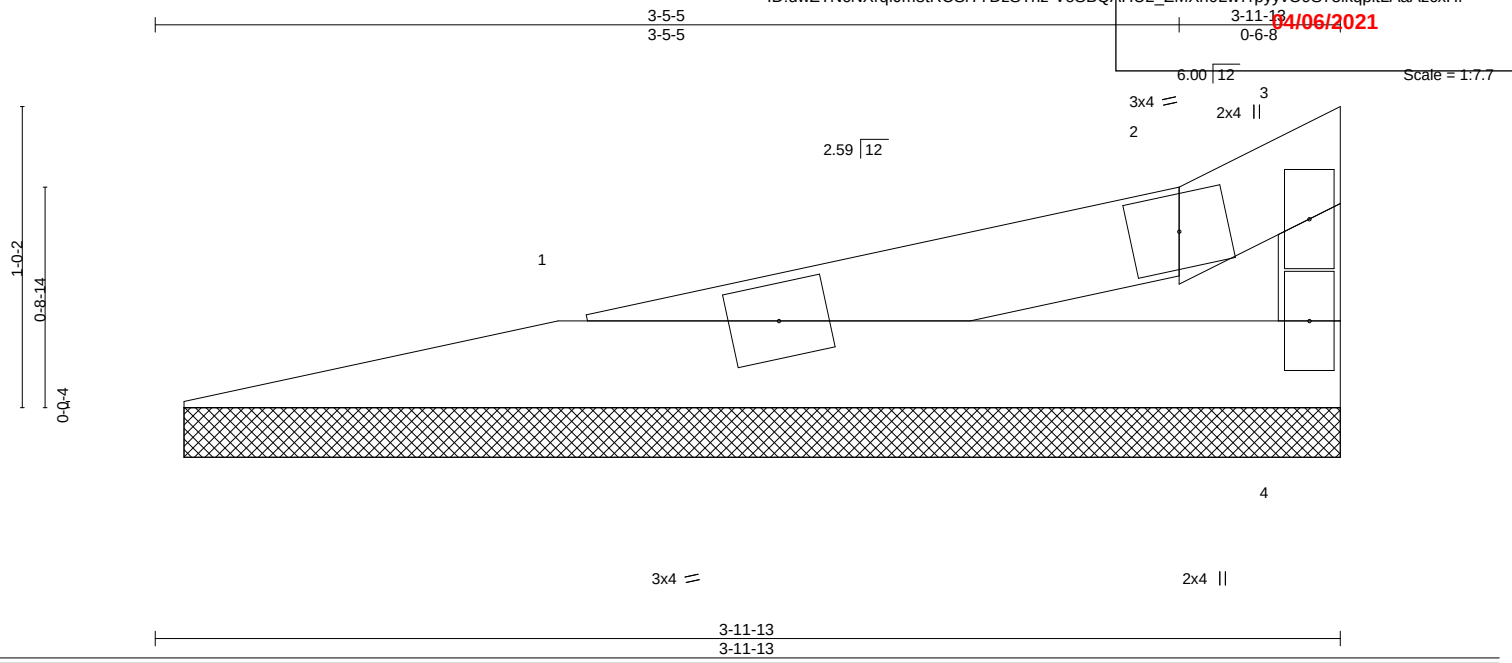
March 9,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	V13	Valley	1	1	

Job Reference (optional) I45104231

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 01 08:32:20 2021 Page 1
ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-VoSBQAHU2_ZMXn0Lw7rpyyvO9S75ikqpltLAaAzcxHf



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-R							Weight: 8 lb	FT = 10%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-11-13 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 1=3-10-10, 4=3-10-10
Max Horz 1=27(LC 5)
Max Uplift 1=-19(LC 4), 4=-22(LC 8)
Max Grav 1=109(LC 1), 4=109(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

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) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Gable requires continuous bottom chord bearing.
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 4.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

March 9,2021

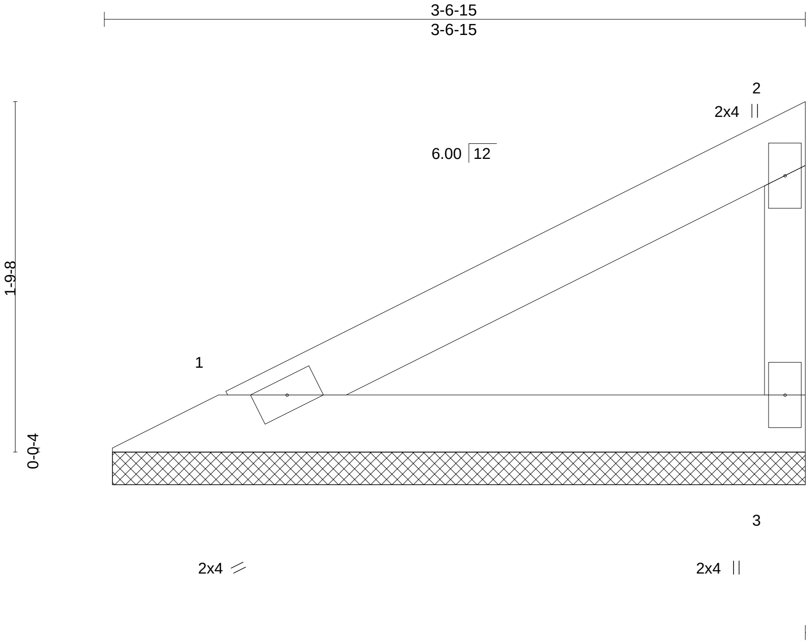
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	V14	Valley	1	1	Job Reference (optional)

I45104232

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 8 15:52:21 2021 Page 1

ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-z_0ZdWH6pIhD9wbXUqM2V9SYurSuRA4y_X5k6czcxHe



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.14	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.08	Vert(CT)	n/a	-	n/a	999		
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-P							Weight: 9 lb	FT = 10%

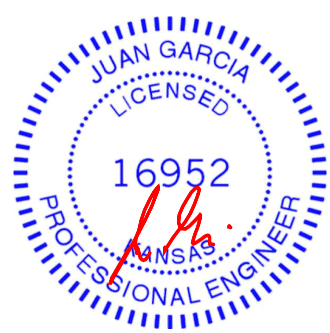
LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-6-15 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 1=3-6-7, 3=3-6-7
Max Horz 1=59(LC 5)
Max Uplift 1=-16(LC 8), 3=-31(LC 8)
Max Grav 1=128(LC 1), 3=128(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

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) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Gable requires continuous bottom chord bearing.
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



March 9,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
04/06/2021

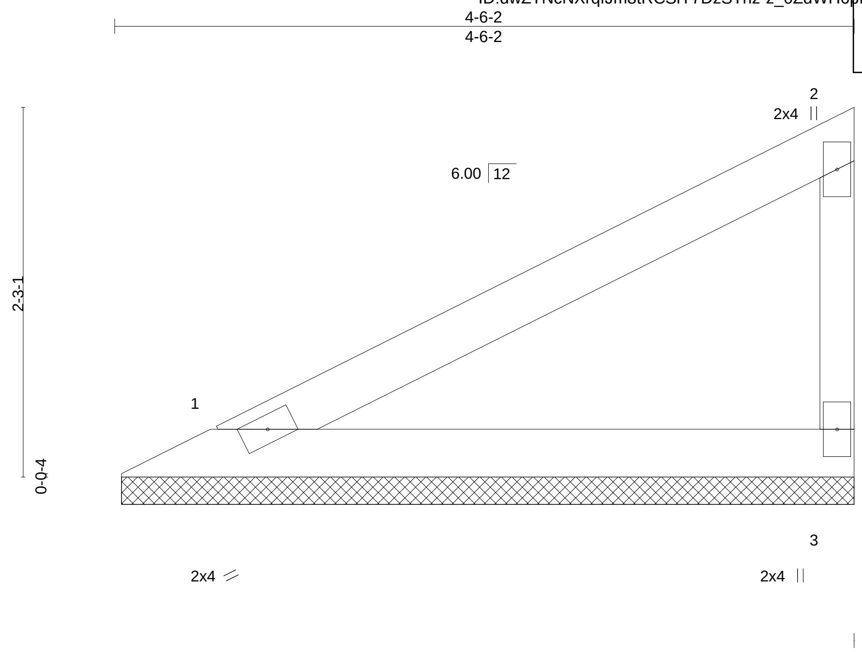
Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	V15	Valley	1	1	I45104233 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 8 15:32:21 2021 Page 1

ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-z_0ZdWH6pIhD9wbXUqM2V9SW?rRsRA4y_X5k6czcxHe

Scale = 1:14.1



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.26	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.14	Vert(CT)	n/a	-	n/a	999		
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-P							Weight: 11 lb	FT = 10%

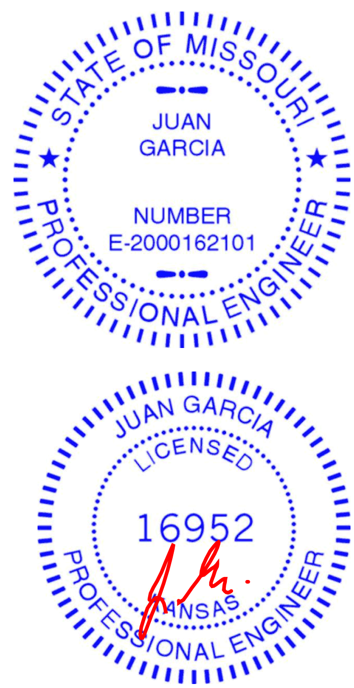
LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 4-6-2 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 1=4-5-10, 3=4-5-10
Max Horz 1=79(LC 5)
Max Uplift 1=-22(LC 8), 3=-42(LC 8)
Max Grav 1=170(LC 1), 3=170(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

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) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Gable requires continuous bottom chord bearing.
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



March 9,2021

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	V16	Valley	1	1	

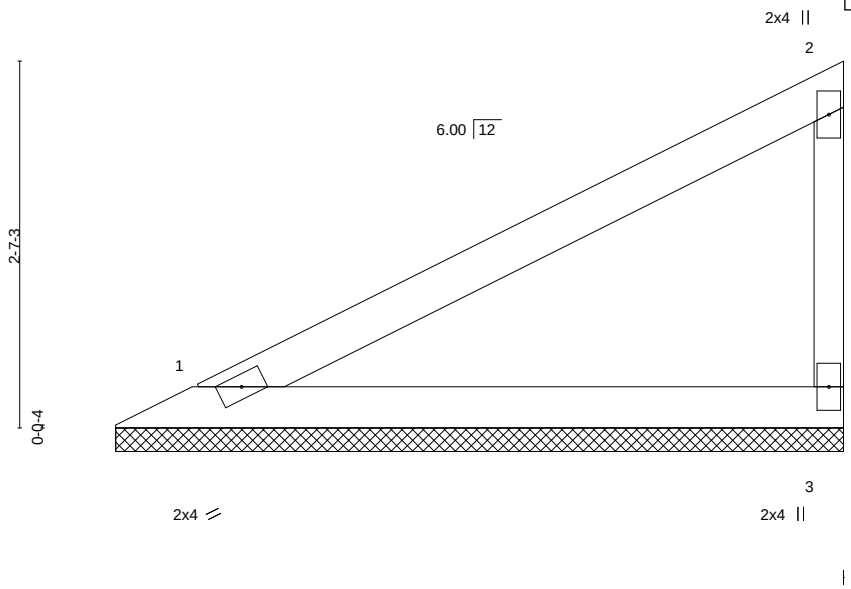
Job Reference (optional) I45104234

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 01 12:27:03 2021 Page 1
ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-RAaxrsIkZcp4n4Aj1YtH1N_gxFl7AdK5CAqHe3zcxHd

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
04/06/2021

5-2-6
5-2-6

Scale = 1:16.3



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.38	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.20	Vert(CT)	n/a	-	n/a	999		
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-P							Weight: 13 lb	FT = 10%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-2-6 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 1=5-1-14, 3=5-1-14
Max Horz 1=93(LC 5)
Max Uplift 1=-26(LC 8), 3=-49(LC 8)
Max Grav 1=201(LC 1), 3=201(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

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) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Gable requires continuous bottom chord bearing.
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

STATE OF MISSOURI
JUAN GARCIA
NUMBER E-2000162101
PROFESSIONAL ENGINEER

JUAN GARCIA
LICENSED
16952
KANSAS
PROFESSIONAL ENGINEER

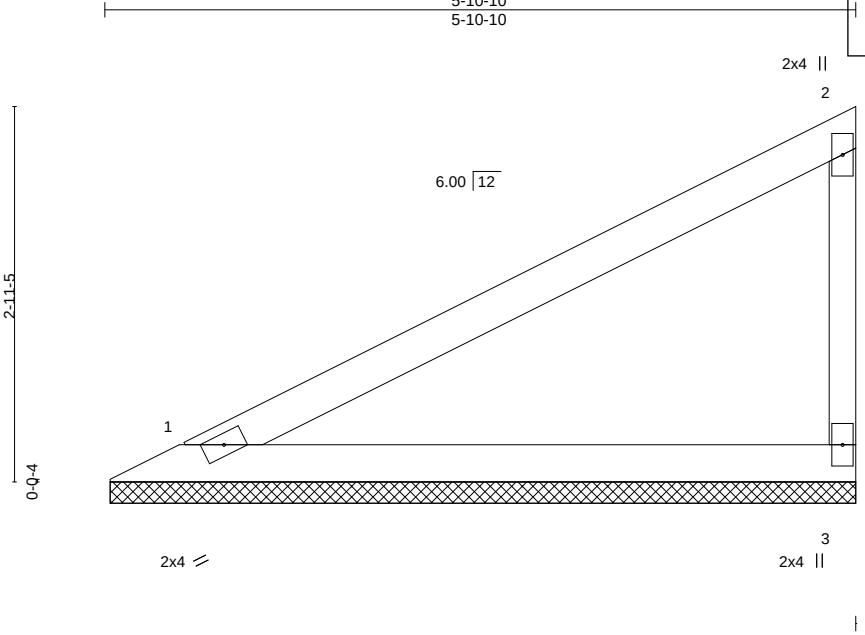
March 9,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	V17	Valley	1	1	

Job Reference (optional) I45104235

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Feb 12 2021 MiTek Industries, Inc. Wed Mar 31 12:27:03 2021 Page 1
ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-RAaxrskZcp4n4Aj1YtH1N_dnFkzAdK5CAqHe3zcxHd



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.52	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.28	Vert(CT)	n/a	-	n/a	999		
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-P							Weight: 15 lb	FT = 10%

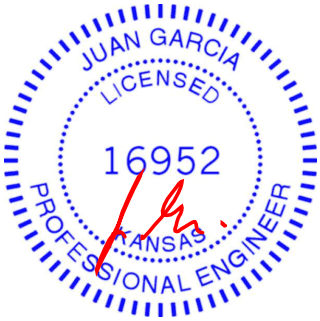
LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2

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

REACTIONS. (size) 1=5-10-2, 3=5-10-2
Max Horz 1=107(LC 5)
Max Uplift 1=-30(LC 8), 3=-57(LC 8)
Max Grav 1=232(LC 1), 3=232(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

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) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Gable requires continuous bottom chord bearing.
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



March 9,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

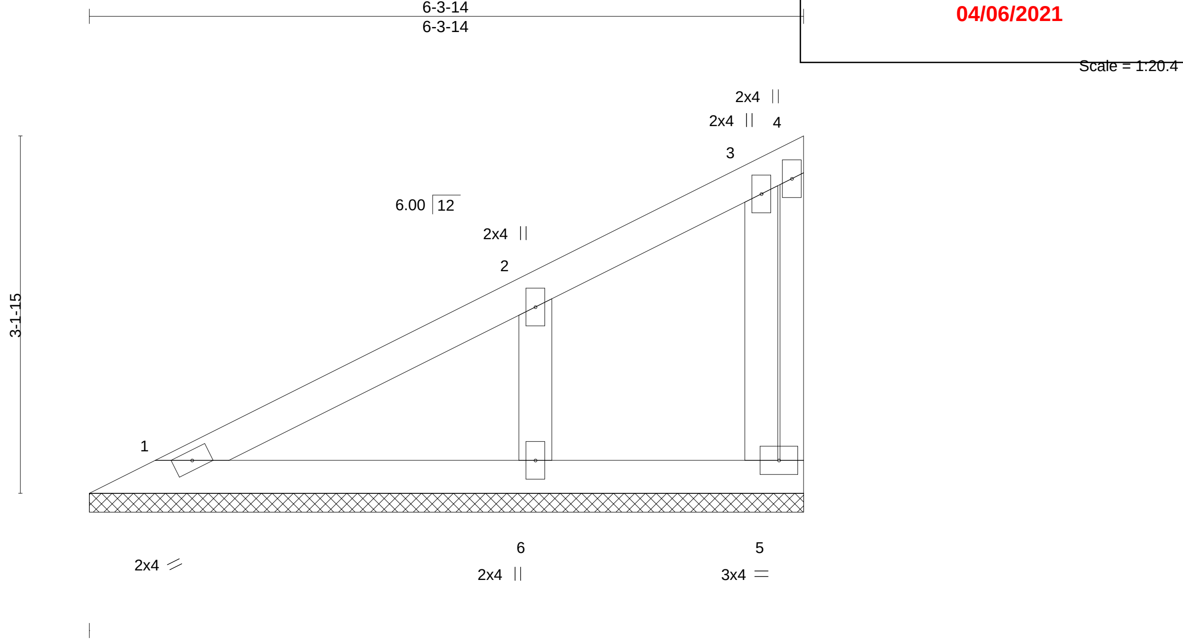
Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	V18	GABLE	1	1	I45104236 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 8 15:52:23 2021 Page 1

ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-vN8J2CJMKvxxOEkwbFOWaaXuJf7Rv44FRqarBVzcxHc

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
04/06/2021

Scale = 1:20.4



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.15	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.03	Horz(CT)	-0.00	5	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-P							Weight: 21 lb	FT = 10%

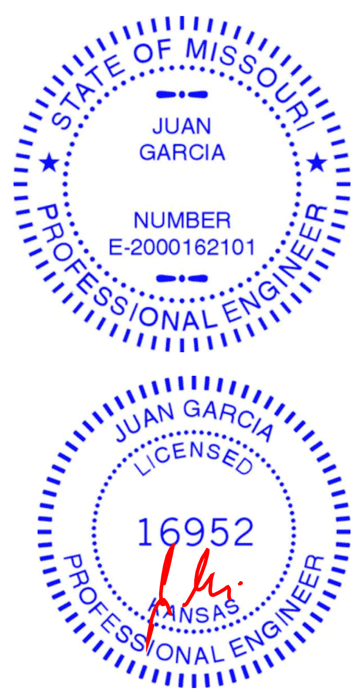
LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2
OTHERS 2x4 SPF No.2

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) 1=6-3-14, 5=6-3-14, 6=6-3-14
Max Horz 1=117(LC 5)
Max Uplift 5=-23(LC 5), 6=-94(LC 8)
Max Grav 1=122(LC 1), 5=62(LC 1), 6=316(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

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) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 2-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 6.
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.



March 9,2021

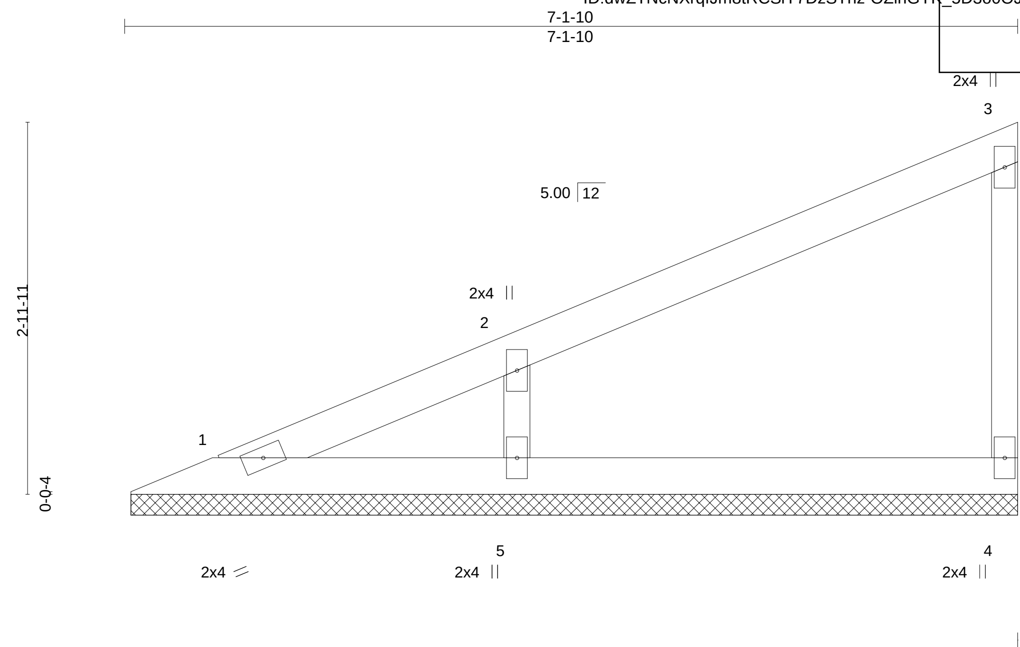
Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	V19	Valley	1	1	I45104237 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 8 15:52:24 2021 Page 1

ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-OZihGYK_5D3o0OJ69zvl7o43S3TDeX0OgUJOjxzcxHb

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
04/06/2021

Scale = 1:18.4



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	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	0.10	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.05	Horz(CT)	-0.00	4	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-P							Weight: 18 lb	FT = 10%

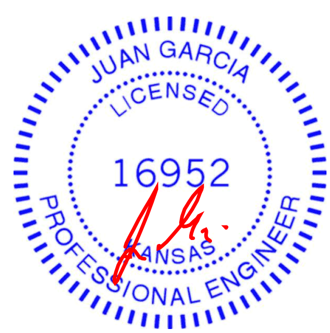
LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2
OTHERS 2x3 SPF No.2

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

REACTIONS. (size) 1=7-1-0, 4=7-1-0, 5=7-1-0
Max Horz 1=115(LC 5)
Max Uplift 4=-27(LC 8), 5=-98(LC 8)
Max Grav 1=62(LC 16), 4=142(LC 1), 5=370(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 2-5=-288/148

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) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Gable requires continuous bottom chord bearing.
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4, 5.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



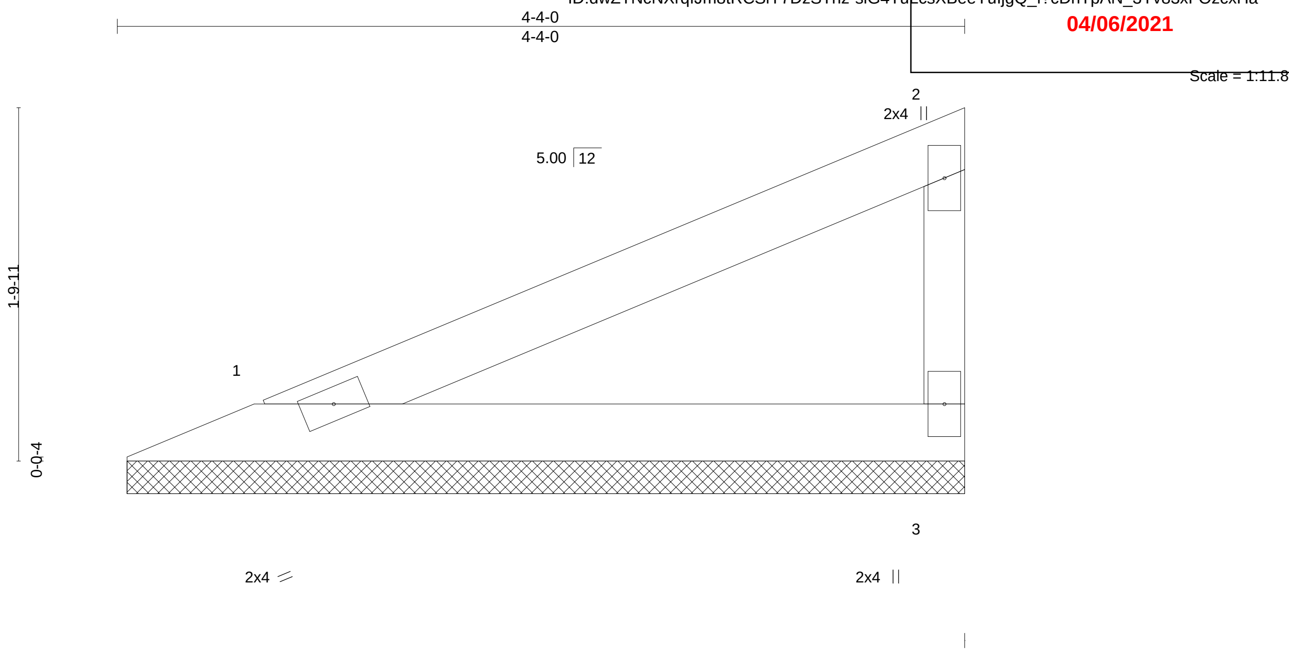
March 9,2021

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
04/06/2021

Job	Truss	Truss Type	Qty	Ply	Lot 89 MN
210322	V20	Valley	1	1	I45104238 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871, 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 8 15:52:25 2021 Page 1

ID:dwZTNcNXrqfJm8tRCSiY7DzSTnz-slG4TuLcsXBeeYuljgQ_f?cDhTpAN_3Yv83xFOzcxHa



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	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	0.12	Vert(CT)	n/a	-	n/a	999		
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-P							Weight: 10 lb	FT = 10%

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

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

REACTIONS. (size) 1=4-3-6, 3=4-3-6
Max Horz 1=64(LC 5)
Max Uplift 1=-23(LC 8), 3=-36(LC 8)
Max Grav 1=156(LC 1), 3=156(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

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) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Gable requires continuous bottom chord bearing.
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

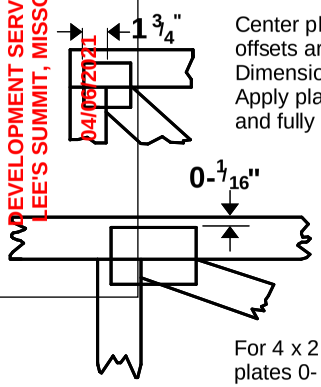
March 9,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
04/06/2021

Symbols

PLATE LOCATION AND ORIENTATION



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

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

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

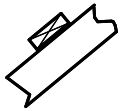
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

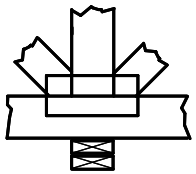
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



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

BEARING

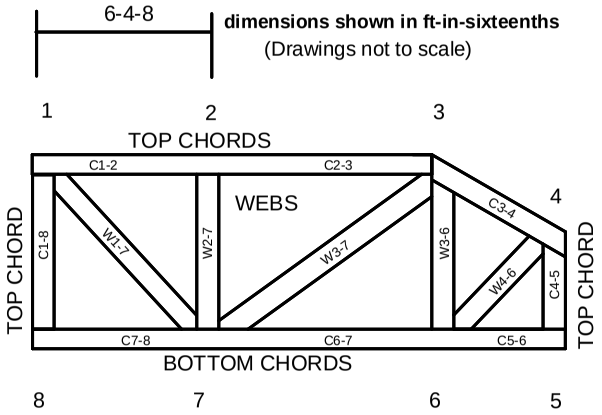


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



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

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

PRODUCT CODE APPROVALS

ICC-ES Reports:

ESR-1311, ESR-1352, ESR1988
ER-3907, ESR-2362, ESR-1397, ESR-3282

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

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

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

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TPI 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.