RE: 2820534
Summit/#10 Osage

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

Site Information:

Customer: Project Name: 2820534
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 64 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	I45804333	A1	6/18/2021	21	I45804353	A22	6/18/2021
2	I45804334	A3	6/18/2021	22	I45804354	A23	6/18/2021
3	I45804335	A4	6/18/2021	23	I45804355	A24	6/18/2021
4	I45804336	A5	6/18/2021	24	I45804356	A25	6/18/2021
5	I45804337	A6	6/18/2021	25	I45804357	A26	6/18/2021
6	I45804338	A7	6/18/2021	26	I45804358	A27	6/18/2021
7	I45804339	A8	6/18/2021	27	I45804359	A28	6/18/2021
8	I45804340	A9	6/18/2021	28	I45804360	B1	6/18/2021
9	I45804341	A10	6/18/2021	29	I45804361	B2	6/18/2021
10	I45804342	A11	6/18/2021	30	I45804362	B3	6/18/2021
11	I45804343	A12	6/18/2021	31	I45804363	B4	6/18/2021
12	I45804344	A13	6/18/2021	32	I45804364	B5	6/18/2021
13	I45804345	A14	6/18/2021	33	I45804365	CJ1	6/18/2021
14	I45804346	A15	6/18/2021	34	I45804366	CJ2	6/18/2021
15	I45804347	A16	6/18/2021	35	I45804367	J1	6/18/2021
16	I45804348	A17	6/18/2021	36	I45804368	J2	6/18/2021
17	I45804349	A18	6/18/2021	37	I45804369	J3	6/18/2021
18	I45804350	A19	6/18/2021	38	I45804370	J4	6/18/2021
19	I45804351	A20	6/18/2021	39	I45804371	J5	6/18/2021
20	I45804352	A21	6/18/2021	40	I45804372	J6	6/18/2021

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

Truss Design Engineer's Name: Johnson, Andrew

My license renewal date for the state of Missouri is December 31, 2021.

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.

June 18, 2021

Johnson, Andrew

RE: 2820534 - Summit/#10 Osage

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

Site Information:

Project Customer: Project Name: 2820534
Lot/Block: Subdivision:
Address:
City, County: State:

No.	Seal#	Truss Name	Date
41	I45804373	LG1	6/18/2021
42	I45804374	LG2	6/18/2021
43	I45804375	LG3	6/18/2021
44	I45804376	M1	6/18/2021
45	I45804377	M2	6/18/2021
46	I45804378	M3	6/18/2021
47	I45804379	M4	6/18/2021
48	I45804380	M5	6/18/2021
49	I45804381	M6	6/18/2021
50	I45804382	V1	6/18/2021
51	I45804383	V2	6/18/2021
52	I45804384	V3	6/18/2021
53	I45804385	V4	6/18/2021
54	I45804386	V5	6/18/2021
55	I45804387	V6	6/18/2021
56	I45804388	V7	6/18/2021
57	I45804389	V9	6/18/2021
58	I45804390	V10	6/18/2021
59	I45804391	V11	6/18/2021
60	I45804392	V12	6/18/2021
61	I45804393	V13	6/18/2021
62	I45804394	V15	6/18/2021
63	I45804395	V16	6/18/2021
64	I45804396	V17	6/18/2021

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage	I45904233
2820534	A1	GABLE	2	1	Job Reference (optional)	

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:16:32 2021 Page 1
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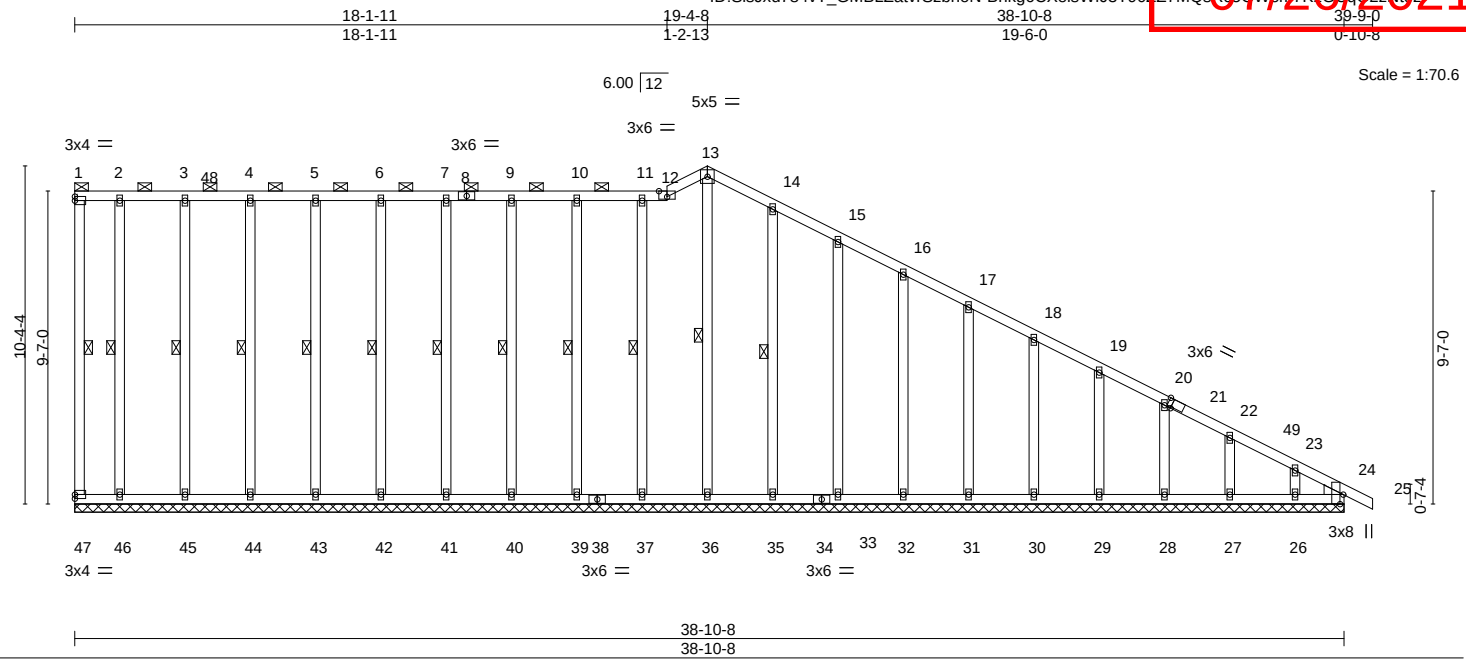

Plate Offsets (X,Y)-- [12:0-3-0,Edge], [21:0-1-9,Edge], [24:0-3-8,Edge]

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	0.43	Vert(LL)	-0.00	25	n/r	120	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.23	Vert(CT)	-0.00	25	n/r	120		
BCLL	0.0	Rep Stress Incr	YES	WB	0.16	Horz(CT)	0.02	24	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S							Weight: 257 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2
OTHERS 2x4 SPF No.2
WEDGE
Right: 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.): 1-12.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 1-47, 13-36, 11-37, 10-39, 9-40, 7-41, 6-42, 5-43, 4-44, 3-45, 2-46, 14-35

REACTIONS. All bearings 38-10-8.
(lb) - Max Horz 47=-315(LC 10)
Max Uplift All uplift 100 lb or less at joint(s) 47, 36, 37, 39, 40, 41, 42, 43, 44, 45, 46, 35, 33, 32, 31, 30, 29, 28, 27, 26, 24
Max Grav All reactions 250 lb or less at joint(s) 47, 36, 37, 39, 40, 41, 42, 43, 44, 45, 46, 35, 33, 32, 31, 30, 29, 28, 27, 26, 24

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 17-18=-281/179, 18-19=-331/196, 19-20=-382/214, 20-22=-432/231, 22-23=-484/250, 23-24=-580/289
BOT CHORD 46-47=-240/502, 45-46=-240/502, 44-45=-240/502, 43-44=-240/502, 42-43=-240/502, 41-42=-240/502, 40-41=-240/502, 39-40=-240/502, 37-39=-240/502, 36-37=-240/502, 35-36=-240/502, 33-35=-240/502, 32-33=-240/502, 31-32=-240/502, 30-31=-240/502, 29-30=-240/502, 28-29=-240/502, 27-28=-240/502, 26-27=-240/502, 24-26=-240/502

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=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Corner(3E) 0-1-12 to 4-0-6, Exterior(2N) 4-0-6 to 19-4-8, Corner(3R) 19-4-8 to 23-4-8, Exterior(2N) 23-4-8 to 39-9-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Provide adequate drainage to prevent water ponding.
5) All plates are 2x4 MT20 unless otherwise indicated.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 2-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 47, 36, 37, 39, 40, 41, 42, 43, 44, 45, 46, 35, 33, 32, 31, 30, 29, 28, 27, 26, 24.
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.

STATE OF MISSOURI
ANDREW THOMAS JOHNSON
NUMBER PE-2017018993
PROFESSIONAL ENGINEER
April 23,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage
2820534	A3	ROOF SPECIAL	1	1	I45904334 Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:17:07 2021 Page 1
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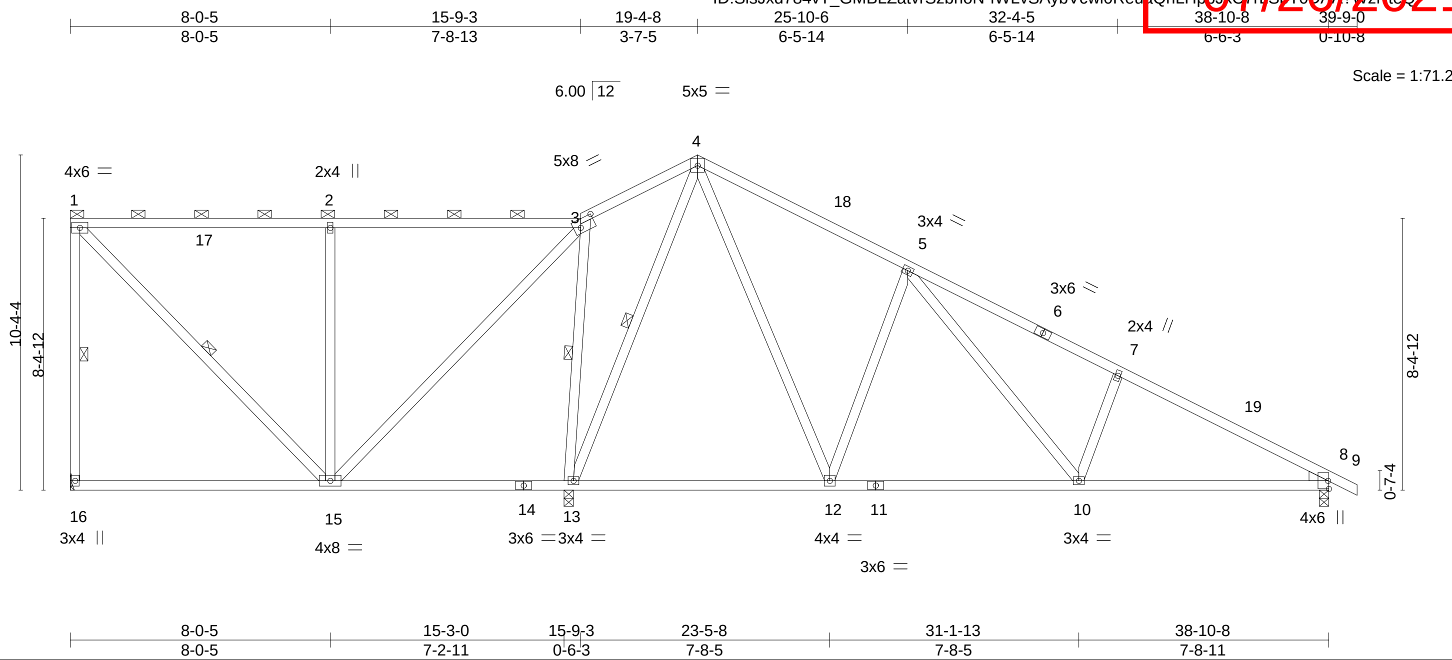

Plate Offsets (X,Y)-- [3:0-5-8,0-3-0]

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	0.89	Vert(LL)	-0.11	15-16	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.54	Vert(CT)	-0.22	15-16	>846	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.75	Horz(CT)	0.02	8	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S							Weight: 191 lb	FT = 20%

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

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

REACTIONS. (size) 16=Mechanical, 13=0-3-8, 8=0-3-8
Max Horz 16=-363(LC 8)
Max Uplift 16=-206(LC 8), 13=-259(LC 13), 8=-205(LC 13)
Max Grav 16=535(LC 25), 13=2164(LC 1), 8=959(LC 26)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-16=-464/228, 3-4=0/571, 4-5=-531/262, 5-7=-1245/362, 7-8=-1407/294
BOT CHORD 15-16=-200/354, 13-15=-496/320, 10-12=0/616, 8-10=-168/1147
WEBS 1-15=-196/329, 2-15=-641/274, 3-15=-156/926, 4-13=-1304/216, 4-12=-261/908, 5-12=-730/329, 5-10=-194/665, 7-10=-371/227, 3-13=-813/282

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=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-1-12 to 4-0-6, Interior(1) 4-0-6 to 19-4-8, Exterior(2R) 19-4-8 to 23-3-2, Interior(1) 23-3-2 to 39-9-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 16=206, 13=259, 8=205.
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.

April 23,2021

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage	I45904335
2820534	A4	Roof Special	1	1	Job Reference (optional)	

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:17:08 2021 Page 1
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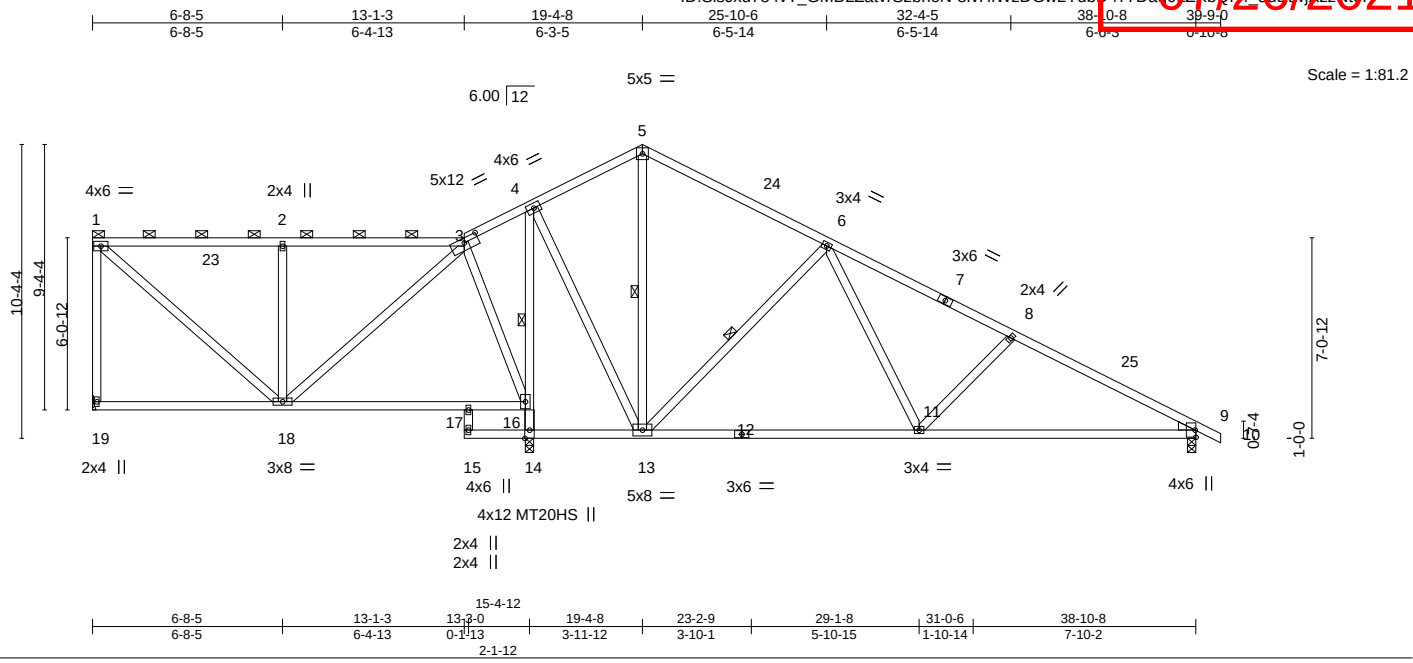

Plate Offsets (X,Y)-- [3:0-6-0,0-1-14]

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)	-0.16	11-13	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.72	Vert(CT)	-0.34	11-13	>827	180	MT20HS	148/108
BCLL	0.0	Rep Stress Incr	YES	WB	0.41	Horz(CT)	0.03	14	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-AS							Weight: 190 lb	FT = 20%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 1-3.
BOT CHORD Rigid ceiling directly applied. Except: 4-1-0 oc bracing: 4-14
WEBS 1 Row at midpt 5-13, 6-13

REACTIONS. (size) 19=Mechanical, 14=0-3-8, 9=0-3-8
Max Horz 19=-307(LC 8)
Max Uplift 19=-243(LC 8), 14=-180(LC 12), 9=-283(LC 13)
Max Grav 19=589(LC 25), 14=1954(LC 1), 9=1035(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-19=-531/257, 1-2=-403/200, 2-3=-405/201, 3-4=0/398, 4-5=-288/348, 5-6=-346/319, 6-8=-1229/442, 8-9=-1532/471
BOT CHORD 18-19=-149/287, 14-16=-1870/229, 4-16=-1300/88, 13-14=-250/85, 11-13=-133/772, 9-11=-322/1295
WEBS 1-18=-274/504, 2-18=-517/220, 3-16=-587/177, 3-18=0/537, 4-13=-12/1009, 6-13=-819/313, 6-11=-83/569, 8-11=-412/222

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-1-12 to 4-0-6, Interior(1) 4-0-6 to 19-4-8, Exterior(2R) 19-4-8 to 23-3-2, Interior(1) 23-3-2 to 39-9-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are 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) 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) 19=243, 14=180, 9=283.
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) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

April 23,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage
2820534	A5	ROOF SPECIAL	1	1	I45904336 Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:17:09 2021 Page 1

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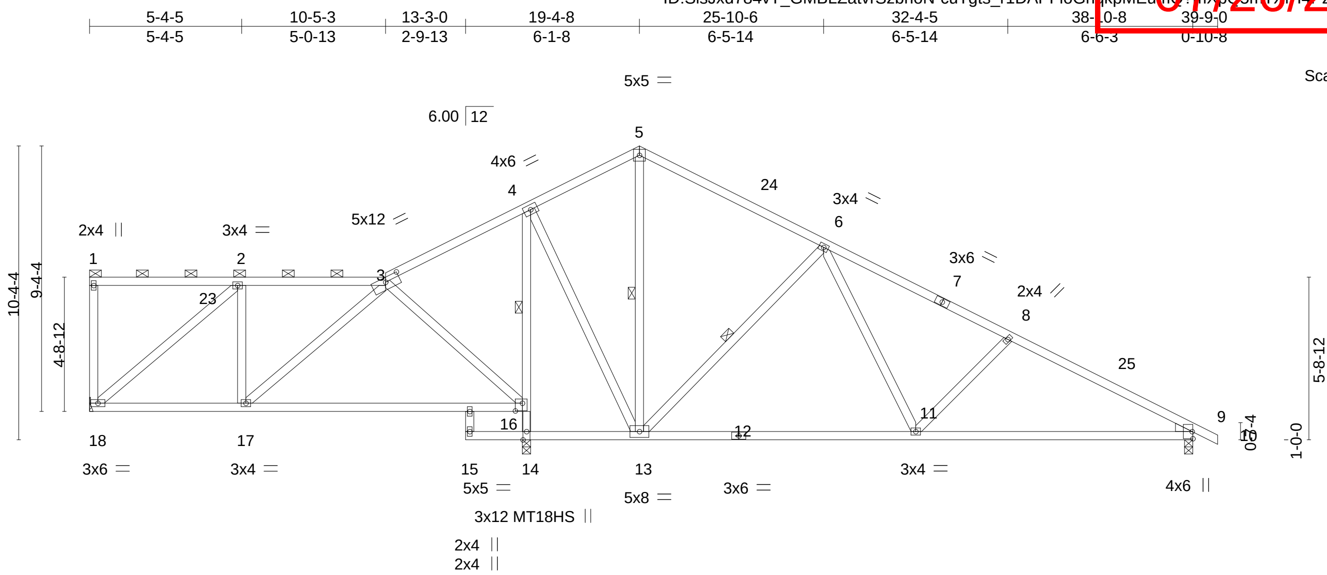

Plate Offsets (X,Y)-- [3:0-6-0,0-1-14], [16:0-3-0,0-3-4]

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	0.43	Vert(LL)	-0.22	16-17	>837	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.72	Vert(CT)	-0.43	16-17	>421	180	MT18HS	197/144
BCLL	0.0	Rep Stress Incr	YES	WB	0.49	Horz(CT)	0.03	14	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-AS							Weight: 183 lb	FT = 20%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 1-3.
BOT CHORD Rigid ceiling directly applied. Except:
1 Row at midpt 4-16
3-11-0 oc bracing: 14-16
WEBS 1 Row at midpt 5-13, 6-13

REACTIONS. (size) 18=Mechanical, 14=0-3-8, 9=0-3-8
Max Horz 18=-268(LC 8)
Max Uplift 18=-224(LC 8), 14=-172(LC 12), 9=-290(LC 13)
Max Grav 18=584(LC 25), 14=2001(LC 1), 9=1032(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-484/191, 3-4=0/449, 4-5=-290/366, 5-6=-340/335, 6-8=-1222/457, 8-9=-1525/487
BOT CHORD 17-18=-83/482, 16-17=-135/274, 14-16=-1957/203, 4-16=-1445/123, 13-14=-287/61, 11-13=-147/767, 9-11=-335/1289
WEBS 2-18=-610/257, 3-17=0/400, 3-16=-613/196, 6-13=-820/313, 6-11=-82/569, 8-11=-412/221, 4-13=0/1001

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=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-1-12 to 4-0-6, Interior(1) 4-0-6 to 19-4-8, Exterior(2R) 19-4-8 to 23-3-2, Interior(1) 23-3-2 to 39-9-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are 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) 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) 18=224, 14=172, 9=290.
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) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

April 23,2021

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
07/26/2021

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage
2820534	A6	ROOF SPECIAL	1	1	I45904337 Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:17:11 2021 Page 1
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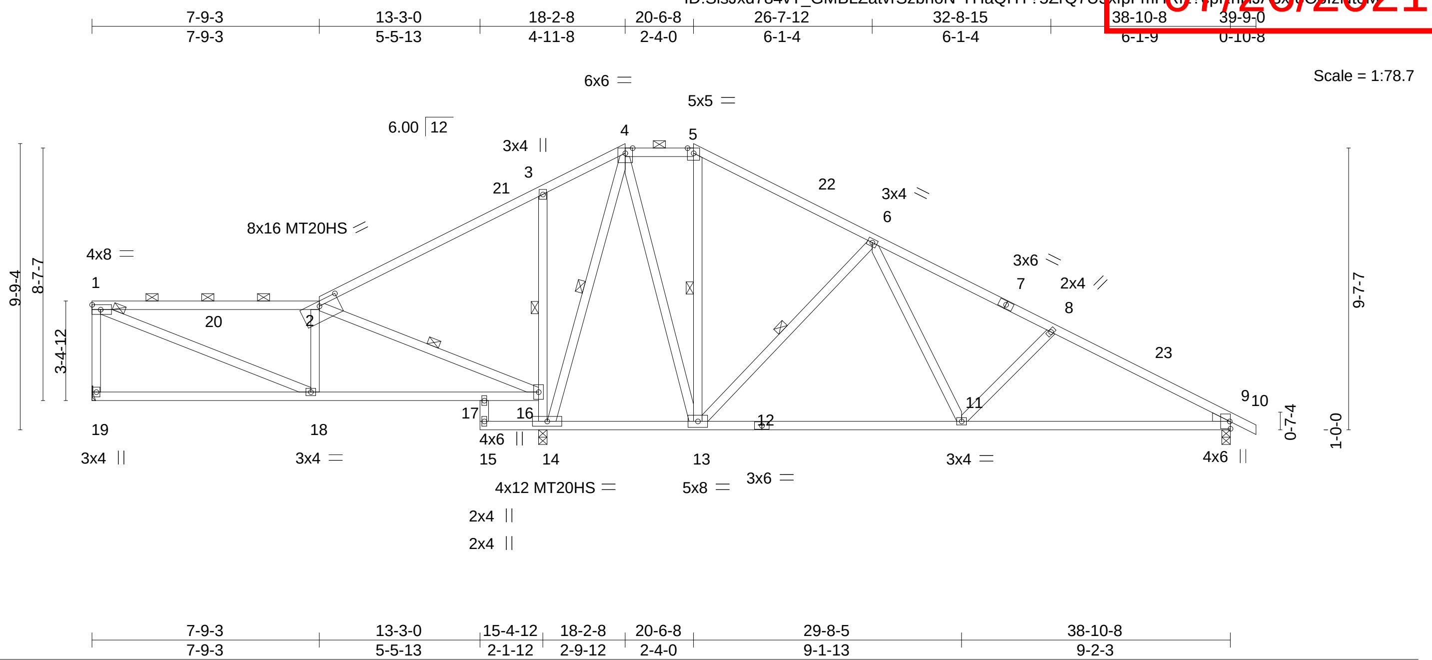

Plate Offsets (X,Y)-- [2:0-8-0,0-1-14]

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)	-0.16	9-11	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.73	Vert(CT)	-0.34	9-11	>819	180	MT20HS	148/108
BCLL	0.0	Rep Stress Incr	YES	WB	0.52	Horz(CT)	0.03	14	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S							Weight: 185 lb	FT = 20%

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

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

REACTIONS. (size) 19=Mechanical, 14=0-3-8, 9=0-3-8
Max Horz 19=-223(LC 8)
Max Uplift 19=-162(LC 8), 14=-248(LC 12), 9=-269(LC 13)
Max Grav 19=522(LC 25), 14=2068(LC 1), 9=1023(LC 26)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-19=-451/185, 1-2=-521/207, 2-3=0/530, 3-4=0/453, 4-5=-286/311, 5-6=-421/301, 6-8=-1232/413, 8-9=-1509/437
BOT CHORD 17-18=-136/521, 16-17=-136/521, 14-16=-902/354, 3-16=-510/273, 11-13=-118/796, 9-11=-298/1260
WEBS 1-18=-207/484, 2-16=-873/224, 6-13=-756/287, 6-11=-80/527, 8-11=-357/211, 4-13=-152/954, 4-14=-1146/27

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=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-1-12 to 4-0-6, Interior(1) 4-0-6 to 18-2-8, Exterior(2E) 18-2-8 to 20-6-8, Exterior(2R) 20-6-8 to 24-5-2, Interior(1) 24-5-2 to 39-9-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are 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) 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) 19=162, 14=248, 9=269.
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
ANDREW THOMAS JOHNSON
NUMBER PE-2017018993
PROFESSIONAL ENGINEER

April 23,2021

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage
2820534	A7	Roof Special	1	1	I45904338 Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:17:12 2021 Page 1
ID:SlsJxd784vT_GMBLZatvrSzbhoN-0T8oVu0kK8Y_6CWrMzHW_sWjDpi0mtD9Yuxgkz\NteL

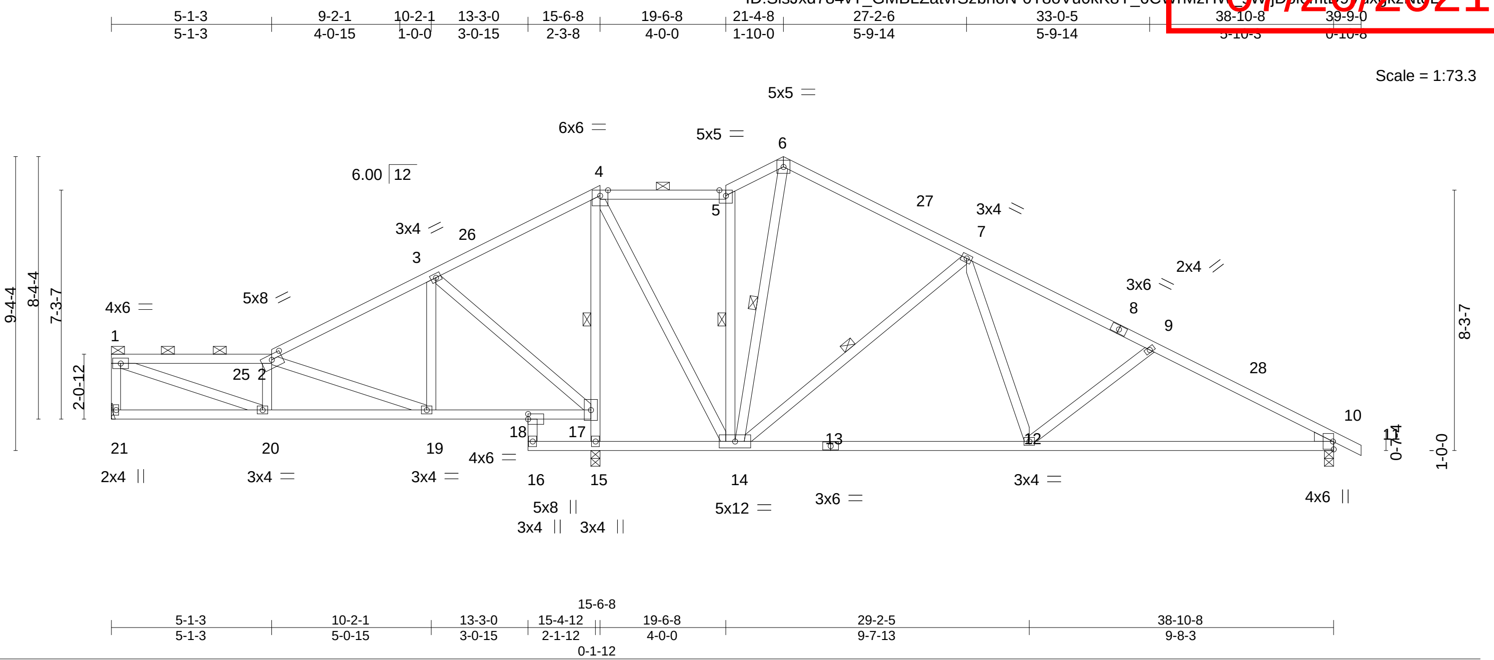

Plate Offsets (X,Y)-- [2:0-4-0,0-1-14], [18:0-0-0,0-2-0]

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	0.36	Vert(LL)	-0.13	12-14	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.69	Vert(CT)	-0.29	12-14	>972	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.55	Horz(CT)	0.03	15	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-AS							Weight: 186 lb	FT = 20%

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

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

REACTIONS. (size) 21=Mechanical, 15=0-3-8, 10=0-3-8
Max Horz 21=-192(LC 13)
Max Uplift 21=-117(LC 12), 15=-322(LC 12), 10=-249(LC 13)
Max Grav 21=516(LC 25), 15=2098(LC 1), 10=988(LC 26)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-21=-466/134, 1-2=-845/190, 2-3=-286/153, 3-4=0/531, 4-5=-186/260, 5-6=-207/290, 6-7=-317/242, 7-9=-1137/356, 9-10=-1458/410
BOT CHORD 19-20=-232/857, 17-18=-135/436, 15-16=-311/125, 14-15=-369/156, 12-14=-99/797, 10-12=-274/1237
WEBS 1-20=-197/813, 15-17=-1976/332, 4-17=-1530/208, 4-14=-162/1126, 7-14=-787/280, 7-12=-48/510, 9-12=-384/205, 3-19=0/324, 2-19=-709/185, 3-17=-670/213

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=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-1-12 to 4-0-6, Interior(1) 4-0-6 to 15-6-8, Exterior(2E) 15-6-8 to 19-6-8, Interior(1) 19-6-8 to 21-4-8, Exterior(2R) 21-4-8 to 25-3-2, Interior(1) 25-3-2 to 39-9-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 21=117, 15=322, 10=249.
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) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

April 23,2021

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
07/26/2021

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage
2820534	A8	ROOF SPECIAL	1	1	I45904339 Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:17:14 2021 Page 1
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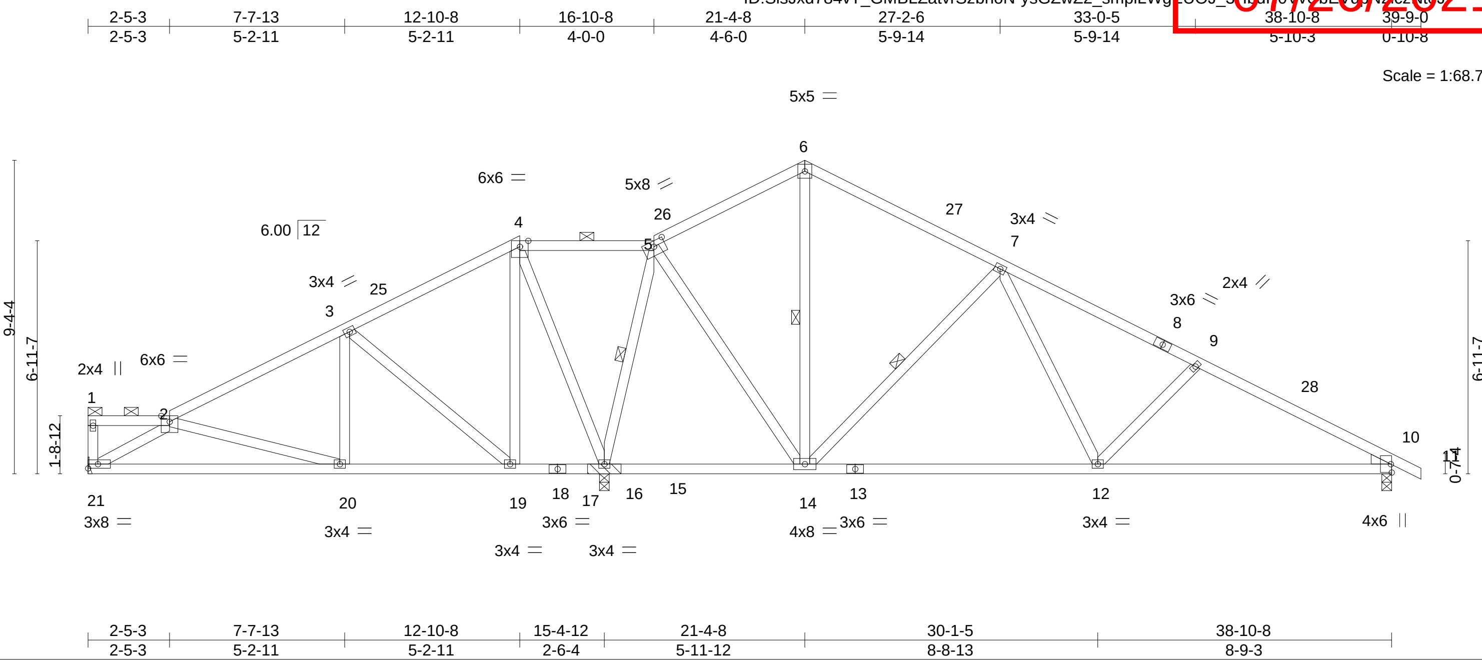

Plate Offsets (X,Y)-- [5:0-4-0,0-1-14]

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)	-0.10	12-14	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.58	Vert(CT)	-0.22	12-14	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.88	Horz(CT)	0.02	10	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-AS							Weight: 181 lb	FT = 20%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 1-2, 4-5.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 5-16, 6-14, 7-14

REACTIONS. (size) 21=Mechanical, 16=0-3-8, 10=0-3-8
Max Horz 21=-171(LC 17)
Max Uplift 21=-78(LC 12), 16=-380(LC 12), 10=-205(LC 13)
Max Grav 21=484(LC 25), 16=2246(LC 1), 10=929(LC 26)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-442/146, 3-4=-24/450, 4-5=-51/693, 6-7=-297/175, 7-9=-1079/289, 9-10=-1346/317
BOT CHORD 20-21=-215/593, 19-20=-106/328, 16-19=-350/264, 14-16=-421/235, 12-14=-19/678, 10-12=-193/1136
WEBS 2-20=-306/141, 3-20=0/323, 3-19=-627/203, 4-19=-103/442, 4-16=-976/245, 5-16=-1266/255, 5-14=-106/1043, 7-14=-732/284, 7-12=-81/498, 9-12=-365/202, 2-21=-643/175

NOTES-
1) 2x4 SPF No.2 bearing block 12" long at jt. 16 attached to front face with 2 rows of 10d (0.131"x3") nails spaced 3" o.c. 8 Total fasteners. Bearing is assumed to be SPF No.2.
2) Unbalanced roof live loads have been considered for this design.
3) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-1-12 to 2-5-3, Interior(1) 2-5-3 to 12-10-8, Exterior(2E) 12-10-8 to 16-10-8, Interior(1) 16-10-8 to 21-4-8, Exterior(2R) 21-4-8 to 25-3-2, Interior(1) 25-3-2 to 39-9-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
4) Provide adequate drainage to prevent water ponding.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
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) 21 except (jt=lb) 16=380, 10=205.
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) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

April 23,2021

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage
2820534	A9	ROOF SPECIAL	2	1	I45904340 Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:17:16 2021 Page 1
ID:SlsJxd784vT_GMBLZatvrSzbhoN-vEOJLF3ENN3QbqqcbpMSBihq0q6dy8vd46s9pyzNte-l

-0-10-8	4-3-12	8-4-0	8-11-0	11-5-8	12-4-0	19-6-0	25-3-14	31-1-13	37-0-0	37-10-8
0-10-8	4-3-12	4-0-4	0-7-0	2-6-8	0-10-8	7-2-0	5-9-14	5-9-14	5-10-3	0-10-8

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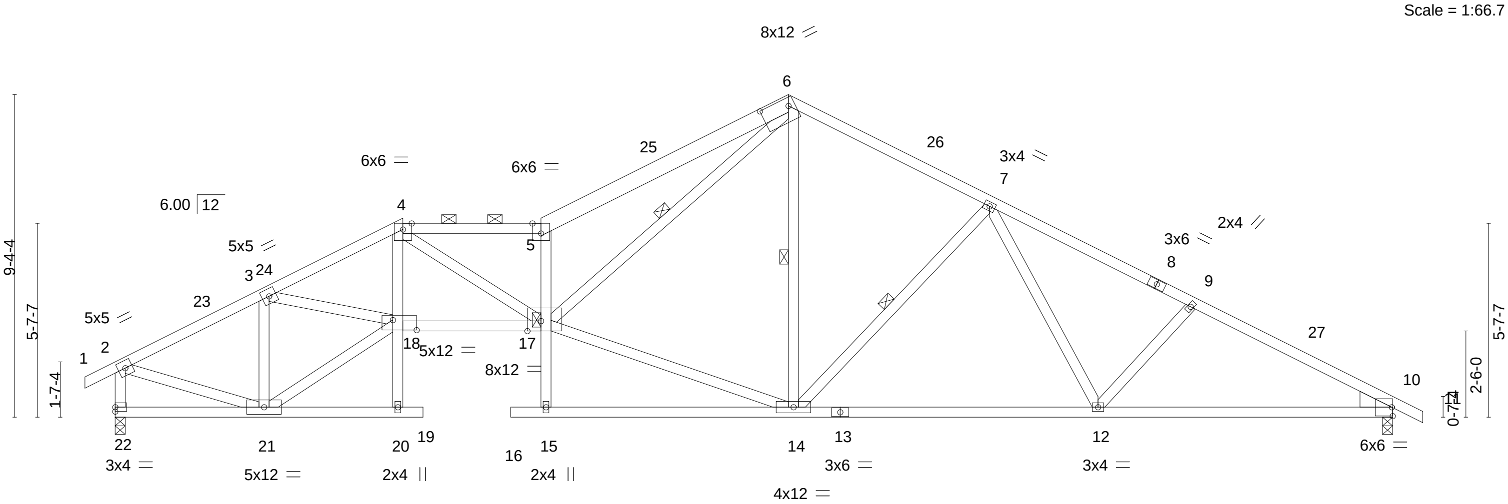

4-3-12	8-11-0	11-5-8	19-6-0	28-5-10	37-0-0
4-3-12	4-7-4	2-6-8	8-0-8	8-11-10	8-6-6

Plate Offsets (X,Y)-- [5:0-3-0,Edge], [6:0-9-12,0-2-12], [10:Edge,0-3-1], [17:0-4-12,Edge], [18:0-8-4,0-3-8]

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	0.91	Vert(LL)	-0.42	16	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.95	Vert(CT)	-0.75	14-15	>587	180		
BCLL	0.0	Rep Stress Incr	YES	WB	1.00	Horz(CT)	0.37	10	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S							Weight: 186 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SPF No.2 *Except*
5-6: 2x6 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2 *Except*
5-15: 2x4 SPF 1650F 1.5E
WEDGE
Right: 2x6 SPF No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins (2-2-0 max.): 4-5.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
2-2-0 oc bracing: 17-18
9-11-10 oc bracing: 10-12.
WEBS 1 Row at midpt 5-15, 6-14, 7-14, 6-17

REACTIONS. (size) 22=0-3-8, 10=0-3-8
Max Horz 22=-159(LC 13)
Max Uplift 22=-298(LC 12), 10=-285(LC 13)
Max Grav 22=1746(LC 1), 10=1732(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2095/366, 3-4=-4335/755, 4-5=-4798/801, 5-6=-5405/990, 6-7=-2025/448, 7-9=-2729/489, 9-10=-2960/489, 2-22=-1700/332
BOT CHORD 17-18=-638/3823, 12-14=-241/2166, 10-12=-345/2521
WEBS 4-18=-159/929, 5-17=-2838/615, 3-21=-1689/362, 4-17=-212/1205, 6-14=-135/257, 9-12=-273/196, 2-21=-252/1827, 7-14=-666/272, 7-12=-83/444, 18-21=-433/2151, 3-18=-284/2080, 14-17=-147/1761, 6-17=-783/4064

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=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-9-14, Interior(1) 2-9-14 to 8-4-0, Exterior(2E) 8-4-0 to 12-4-0, Interior(1) 12-4-0 to 19-6-0, Exterior(2R) 19-6-0 to 23-2-6, Interior(1) 23-2-6 to 37-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 22=298, 10=285.
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) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

STATE OF MISSOURI
ANDREW THOMAS JOHNSON
NUMBER PE-2017018993
PROFESSIONAL ENGINEER

April 23,2021

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
07/26/2021

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage
2820534	A10	Roof Special	2	1	I45904341 Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147,
8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:16:34 2021 Page 1
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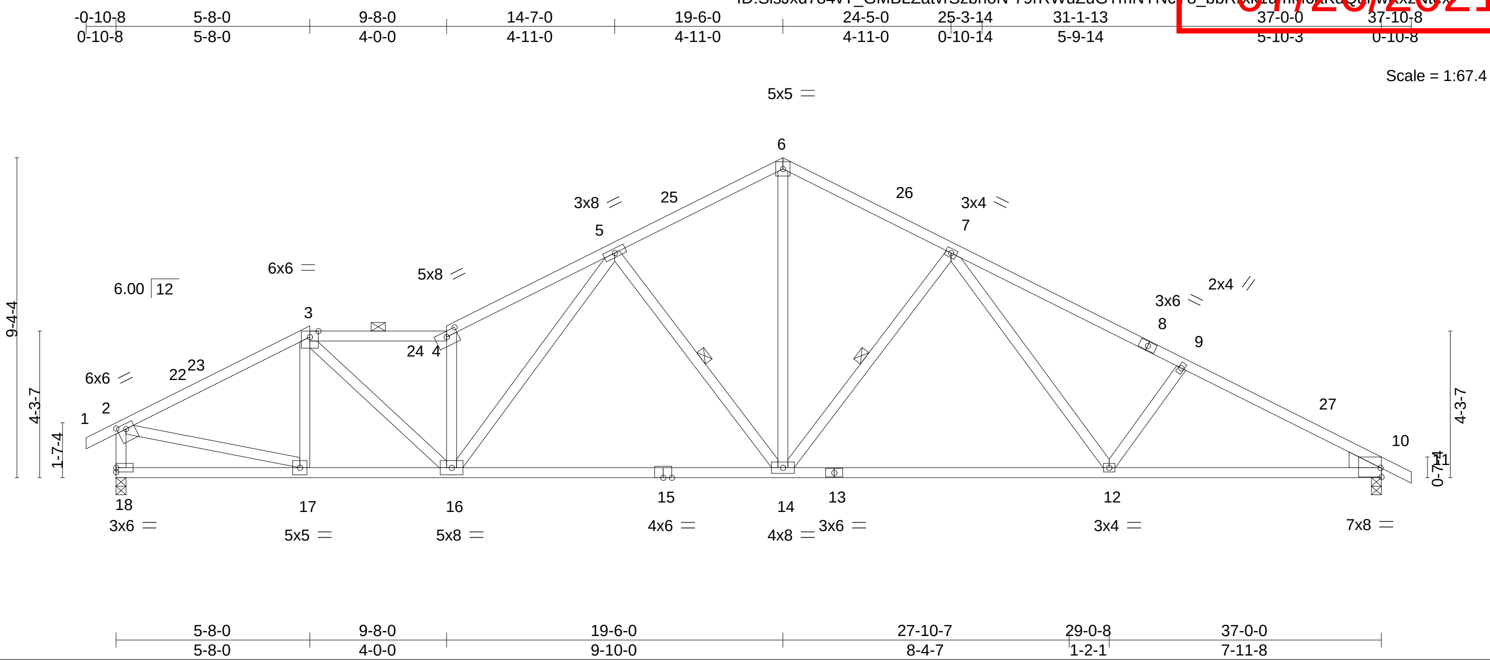

Plate Offsets (X,Y)-- [2:0-3-0,0-1-12], [4:0-4-0,0-1-14], [10:Edge,0-3-4]

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	0.63	Vert(LL)	-0.23	14-16	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.91	Vert(CT)	-0.53	14-16	>832	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.56	Horz(CT)	0.12	10	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-AS							Weight: 165 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2
WEDGE
Right: 2x6 SPF No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (3-2-12 max.): 3-4.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 5-14, 7-14

REACTIONS. (size) 18=0-3-8, 10=0-3-8
Max Horz 18=-162(LC 17)
Max Uplift 18=-308(LC 12), 10=-287(LC 13)
Max Grav 18=1730(LC 1), 10=1719(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2233/398, 3-4=-2946/535, 4-5=-3310/642, 5-6=-1999/439, 6-7=-2006/439, 7-9=-2763/494, 9-10=-2970/486, 2-18=-1665/356
BOT CHORD 16-17=-386/1939, 14-16=-339/2217, 12-14=-229/2104, 10-12=-345/2567
WEBS 3-16=-203/1408, 4-16=-1759/392, 5-16=-259/1135, 5-14=-844/313, 6-14=-263/1418, 7-14=-675/289, 7-12=-124/520, 9-12=-343/215, 3-17=-379/95, 2-17=-255/1816

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=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 5-8-0, Exterior(2R) 5-8-0 to 8-8-0, Interior(1) 8-8-0 to 19-6-0, Exterior(2R) 19-6-0 to 22-6-0, Interior(1) 22-6-0 to 37-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 18=308, 10=287.
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) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

April 23,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage
2820534	A11	Roof Special Girder	2	1	I45904342 Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:18:35 2021 Page 1
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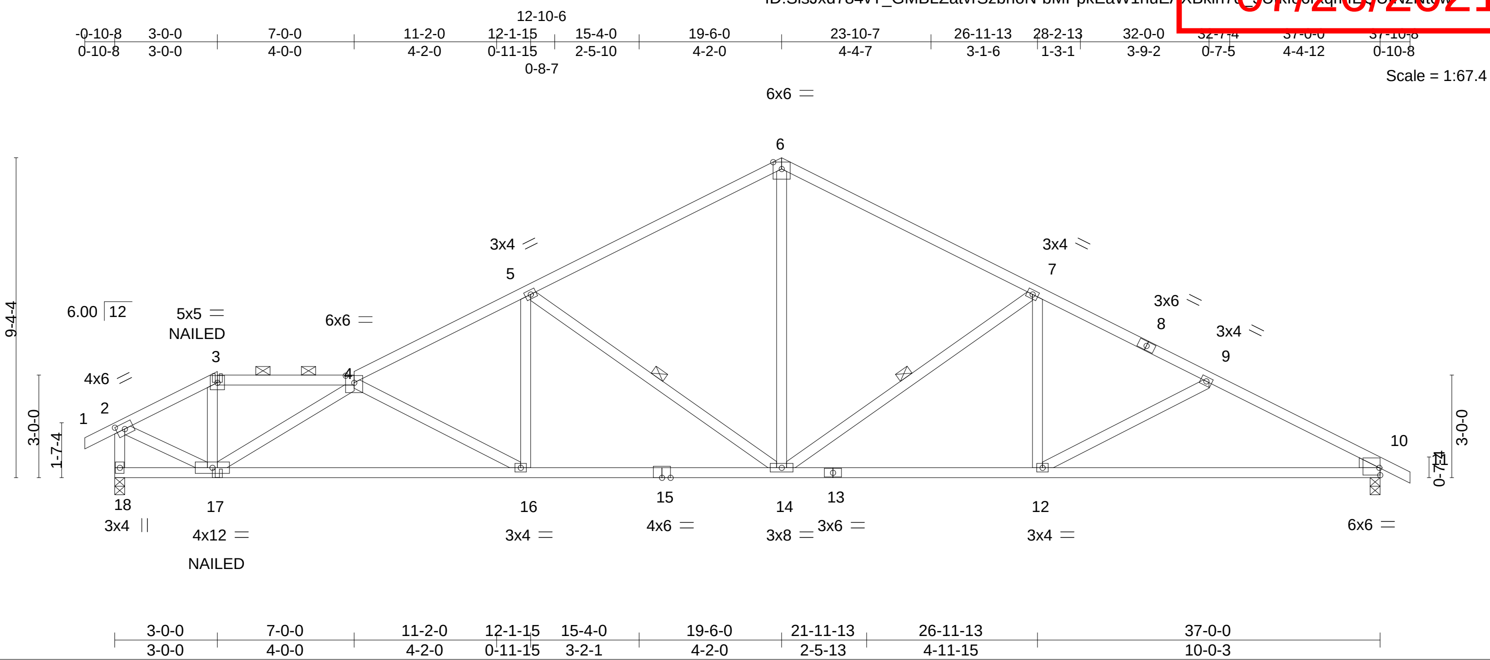


Plate Offsets (X,Y)-- [2:0-2-15,0-2-0], [4:0-3-0,0-2-8], [10:Edge,0-2-9]

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)	-0.21	12-14	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.81	Vert(CT)	-0.42	16-17	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.93	Horz(CT)	0.14	10	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-MS							Weight: 159 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SPF No.2 *Except*
4-6,6-8: 2x4 SPF 1650F 1.5E
BOT CHORD 2x4 SPF 1650F 1.5E *Except*
13-15: 2x4 SPF No.2
WEBS 2x4 SPF No.2
WEDGE
Right: 2x4 SPF No.2

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

REACTIONS. (size) 18=0-3-8, 10=0-3-8
Max Horz 18=-162(LC 13)
Max Uplift 18=-326(LC 8), 10=-291(LC 9)
Max Grav 18=1729(LC 1), 10=1719(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1813/316, 3-4=-1566/304, 4-5=-2944/497, 5-6=-2039/382, 6-7=-2039/389, 7-9=-2661/442, 9-10=-2933/497, 2-18=-1737/314
BOT CHORD 16-17=-656/3331, 14-16=-438/2588, 12-14=-228/2348, 10-12=-354/2533
WEBS 6-14=-178/1220, 5-14=-1073/337, 7-14=-811/286, 7-12=0/381, 5-16=-45/589, 4-16=-847/248, 3-17=-41/523, 2-17=-255/1767, 4-17=-2116/374

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=4.2psf; 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 18=326, 10=291.
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) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
8) "NAILED" indicates 2-12d (0.148"x3.25") toe-nails per NDS guidlines.
9) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-2=-70, 2-3=-70, 3-4=-70, 4-6=-70, 6-11=-70, 18-19=-20

April 23,2021

Continued on page 2

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage	I45804342
2820534	A11	Roof Special Girder	2	1	Job Reference (optional)	

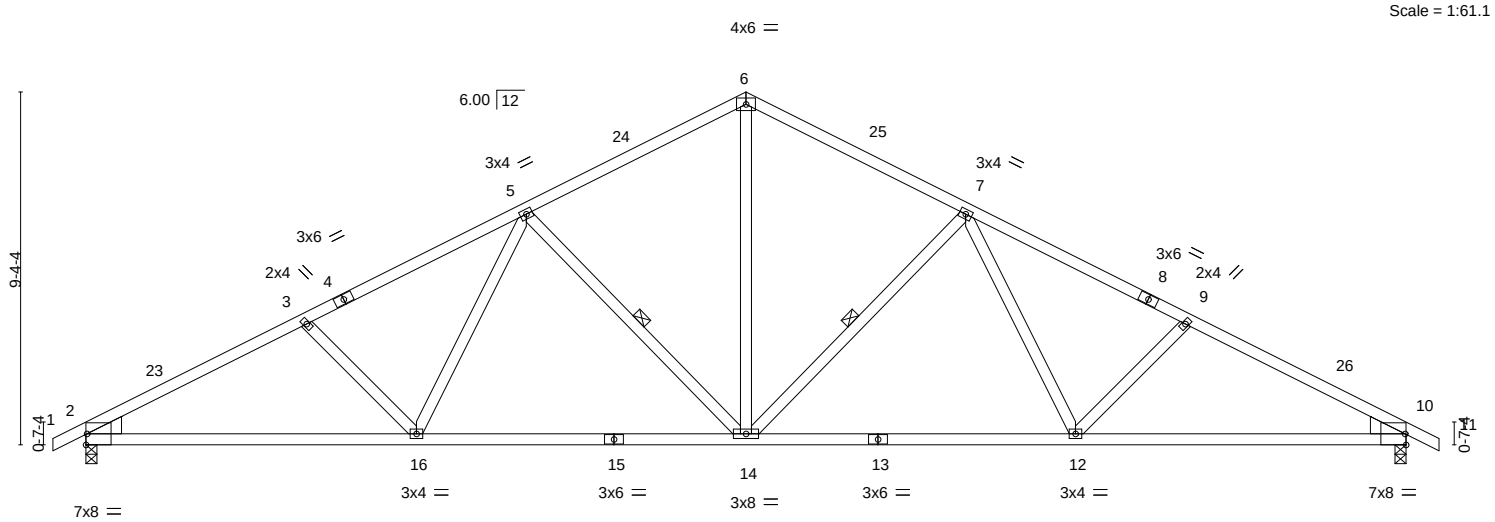
LOAD CASE(S) Standard
Concentrated Loads (lb)
Vert: 17=1(B)

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage	I45904343
2820534	A12	Common	6	1	Job Reference (optional)	

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:16:37 2021 Page 1
ID:SlsJxd784vT_GMBLZatvrSzbhoN-YkXZ9wbnZO8yPq7p69I3UZGc6n7J2J36YaxGzNtu

-0-10-8	5-10-3	11-8-2	17-6-0	23-3-14	29-1-13	35-0-0	35-10-8
0-10-8	5-10-3	5-9-14	5-9-14	5-9-14	5-9-14	5-10-3	0-10-8

Scale = 1:61.1



8-9-3	17-6-0	26-2-13	35-0-0
8-9-3	8-8-13	8-8-13	8-9-3

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	0.57	Vert(LL)	-0.19	12-14	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.84	Vert(CT)	-0.40	12-14	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.29	Horz(CT)	0.13	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS							Weight: 143 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2
WEDGE
Left: 2x6 SPF No.2 , Right: 2x6 SPF No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 7-14, 5-14

REACTIONS. (size) 2=0-3-8, 10=0-3-8
Max Horz 2=162(LC 12)
Max Uplift 2=-280(LC 12), 10=-280(LC 13)
Max Grav 2=1636(LC 1), 10=1636(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2778/469, 3-5=-2530/444, 5-6=-1834/397, 6-7=-1834/397, 7-9=-2530/444, 9-10=-2778/469
BOT CHORD 2-16=-488/2395, 14-16=-323/2019, 12-14=-208/2019, 10-12=-327/2395
WEBS 6-14=-197/1178, 7-14=-701/281, 7-12=-73/433, 9-12=-316/194, 5-14=-701/280, 5-16=-73/433, 3-16=-316/194

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=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 17-6-0, Exterior(2R) 17-6-0 to 20-6-0, Interior(1) 20-6-0 to 35-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=280, 10=280.
5) 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.
6) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

April 23,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage	I45904344
2820534	A13	GABLE	4	1	Job Reference (optional)	

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:16:39 2021 Page 1
ID:SlsJxd784vT_GMBLZatvrSzbhoN-U7fKabd15?Ogf8YVxXBm8vejYvhnwgMaxOh28zNtes

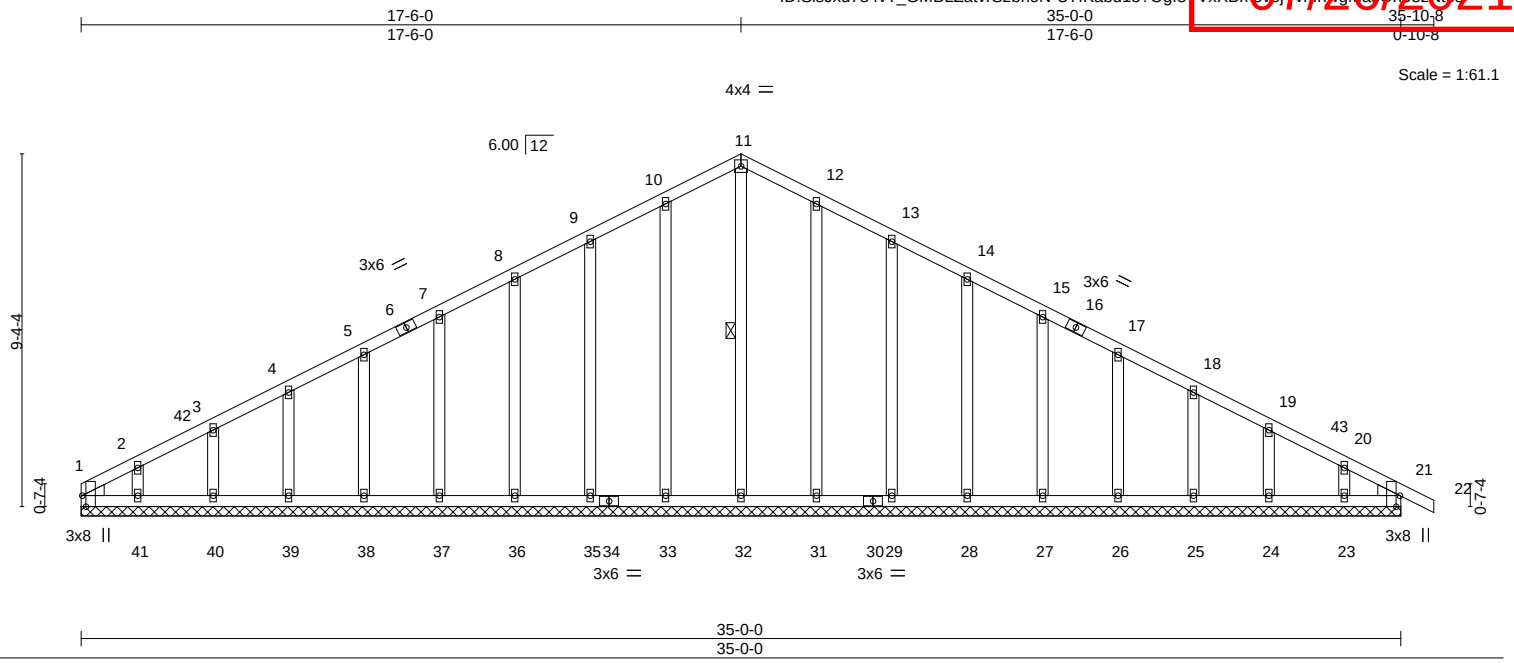


Plate Offsets (X,Y)-- [1:0-3-8,Edge], [21:0-3-8,Edge]

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	22	n/r	120	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	-0.00	22	n/r	120		
BCLL	0.0	Rep Stress Incr	YES	WB	0.17	Horz(CT)	0.01	21	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S							Weight: 176 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
OTHERS 2x4 SPF No.2
WEDGE
Left: 2x4 SPF No.2 , Right: 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.
WEBS 1 Row at midpt 11-32

REACTIONS. All bearings 35-0-0.
(lb) - Max Horz 1=-164(LC 13)
Max Uplift All uplift 100 lb or less at joint(s) 1, 33, 35, 36, 37, 38, 39, 40, 41, 31, 29, 28, 27, 26, 25, 24, 23, 21
Max Grav All reactions 250 lb or less at joint(s) 1, 32, 33, 35, 36, 37, 38, 39, 40, 41, 31, 29, 28, 27, 26, 25, 24, 23, 21

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 10-11=-111/295, 11-12=-111/295

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=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) 0-0-0 to 3-0-0, Exterior(2N) 3-0-0 to 17-6-0, Corner(3R) 17-6-0 to 20-6-0, Exterior(2N) 20-6-0 to 35-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 33, 35, 36, 37, 38, 39, 40, 41, 31, 29, 28, 27, 26, 25, 24, 23, 21.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

April 23,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage
2820534	A14	Roof Special	2	1	I45904345 Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:16:41 2021 Page 1
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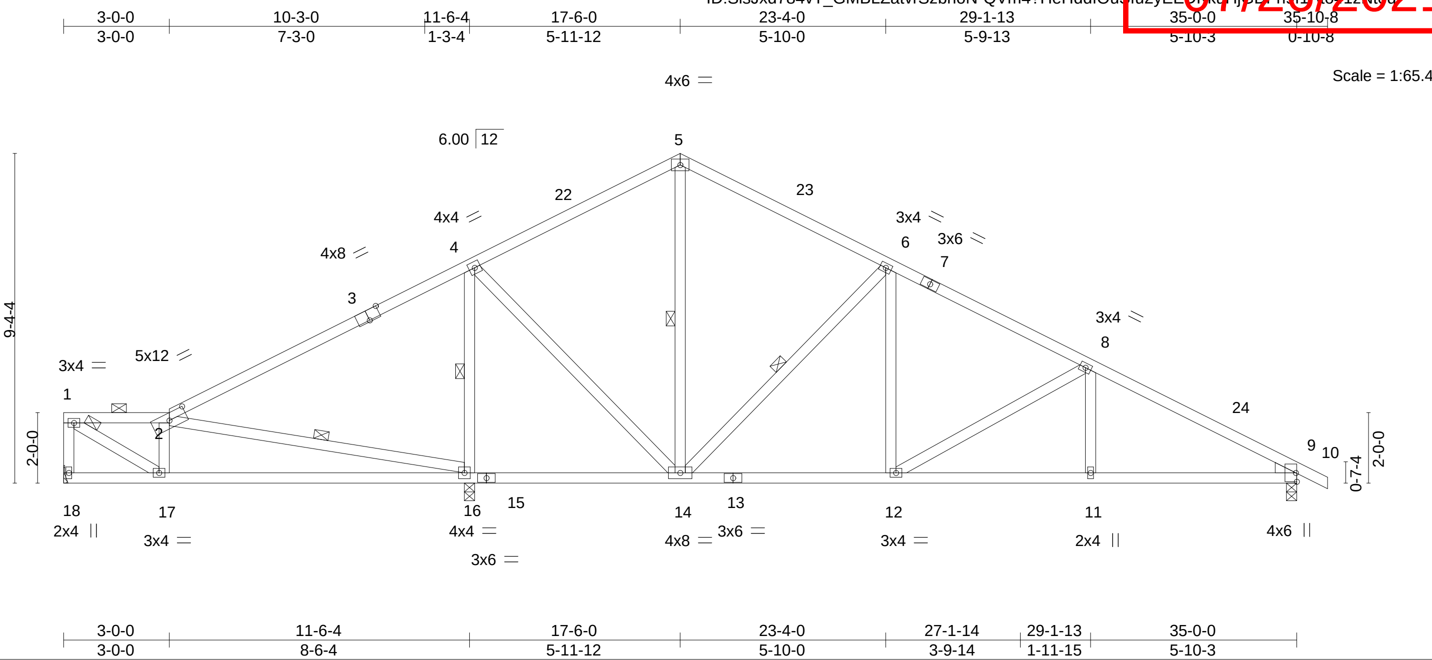

Plate Offsets (X,Y)-- [2:0-6-0,0-2-6], [3:0-4-0,Edge]

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	0.76	Vert(LL)	-0.11	16-17	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.45	Vert(CT)	-0.22	16-17	>610	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.36	Horz(CT)	0.03	9	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-AS							Weight: 155 lb	FT = 20%

LUMBER-

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

Right: 2x4 SPF No.2

BRACING-

TOP CHORD	Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 1-2.
BOT CHORD	Rigid ceiling directly applied.
WEBS	1 Row at midpt 5-14, 4-16, 6-14, 2-16

REACTIONS. (size) 18=Mechanical, 9=0-3-8, 16=0-3-8
Max Horz 18=-172(LC 17)
Max Uplift 18=-59(LC 12), 9=-216(LC 13), 16=-298(LC 12)
Max Grav 18=331(LC 25), 9=987(LC 1), 16=1972(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-18=-339/49, 1-2=-487/73, 2-4=-88/618, 4-5=-430/227, 5-6=-416/200, 6-8=-997/269, 8-9=-1479/325
BOT CHORD 16-17=-172/501, 14-16=-423/225, 12-14=-37/818, 11-12=-200/1247, 9-11=-200/1247
WEBS 4-16=-1648/315, 4-14=-104/1002, 6-12=-41/410, 6-14=-771/269, 8-12=-494/187, 1-17=-105/592, 2-16=-795/231

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-1-12 to 3-0-0, Interior(1) 3-0-0 to 17-6-0, Exterior(2R) 17-6-0 to 20-6-0, Interior(1) 20-6-0 to 35-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 18 except (jt=lb) 9=216, 16=298.
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) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

April 23,2021

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
07/26/2021

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage
2820534	A15	Roof Special	2	1	I45904346 Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:16:42 2021 Page 1
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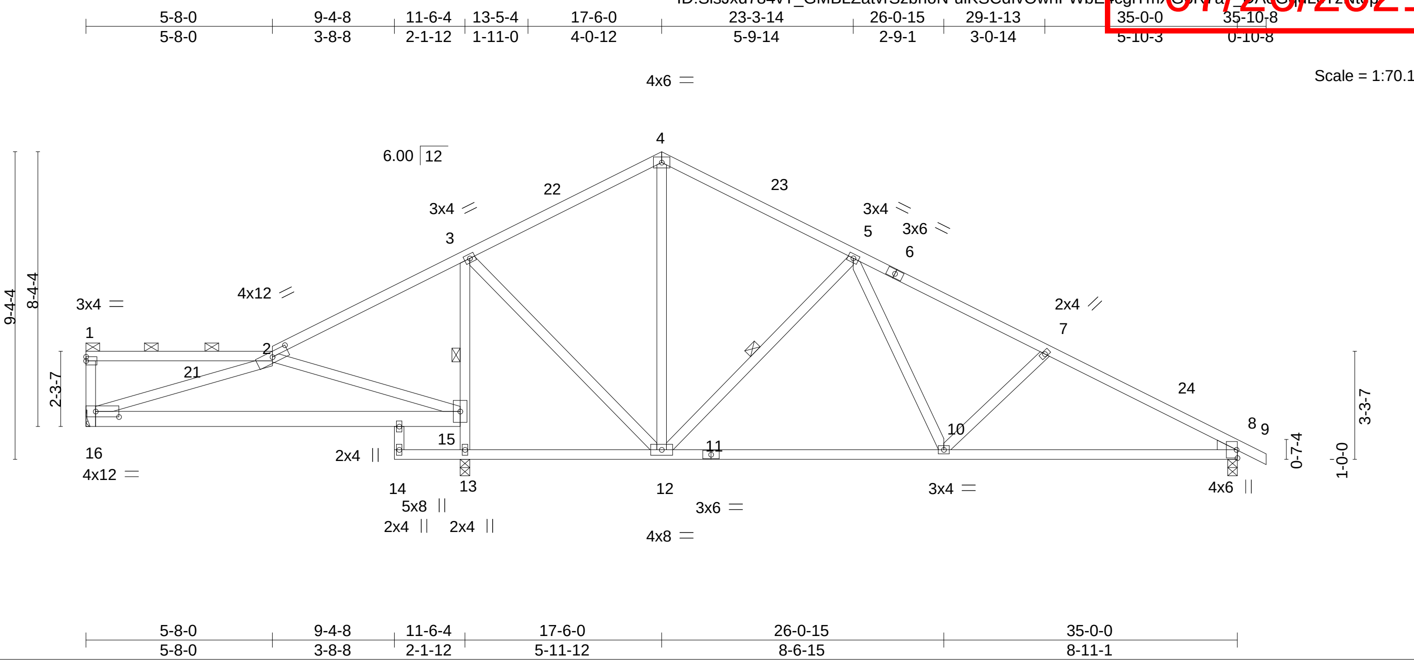

Plate Offsets (X,Y)-- [2:0-6-0,0-1-14], [16:0-8-8,0-2-0]

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	0.54	Vert(LL)	-0.19	15-16	>725	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.61	Vert(CT)	-0.38	15-16	>364	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.44	Horz(CT)	-0.03	13	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-AS							Weight: 159 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except*
15-16: 2x6 SPF No.2
WEBS 2x4 SPF No.2
WEDGE
Right: 2x4 SPF No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 1-2.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 3-13, 5-12

REACTIONS. (size) 8=0-3-8, 13=0-3-8, 16=Mechanical
Max Horz 16=-194(LC 13)
Max Uplift 8=-263(LC 13), 13=-231(LC 12), 16=-133(LC 8)
Max Grav 8=1090(LC 1), 13=1696(LC 1), 16=467(LC 25)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-56/301, 3-4=-649/325, 4-5=-644/302, 5-7=-1396/406, 7-8=-1669/437
BOT CHORD 15-16=-224/560, 10-12=-130/981, 8-10=-298/1421
WEBS 2-15=-643/261, 2-16=-433/360, 13-15=-1602/271, 3-15=-1298/230, 3-12=0/788, 5-12=-727/279, 5-10=-69/483, 7-10=-354/197

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior(1) 3-1-12 to 17-6-0, Exterior(2R) 17-6-0 to 20-6-0 , Interior(1) 20-6-0 to 35-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 8=263, 13=231, 16=133.
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) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
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
ANDREW THOMAS JOHNSON
NUMBER PE-2017018993
PROFESSIONAL ENGINEER

April 23,2021

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage
2820534	A16	Roof Special	2	1	I45904347 Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:16:43 2021 Page 1

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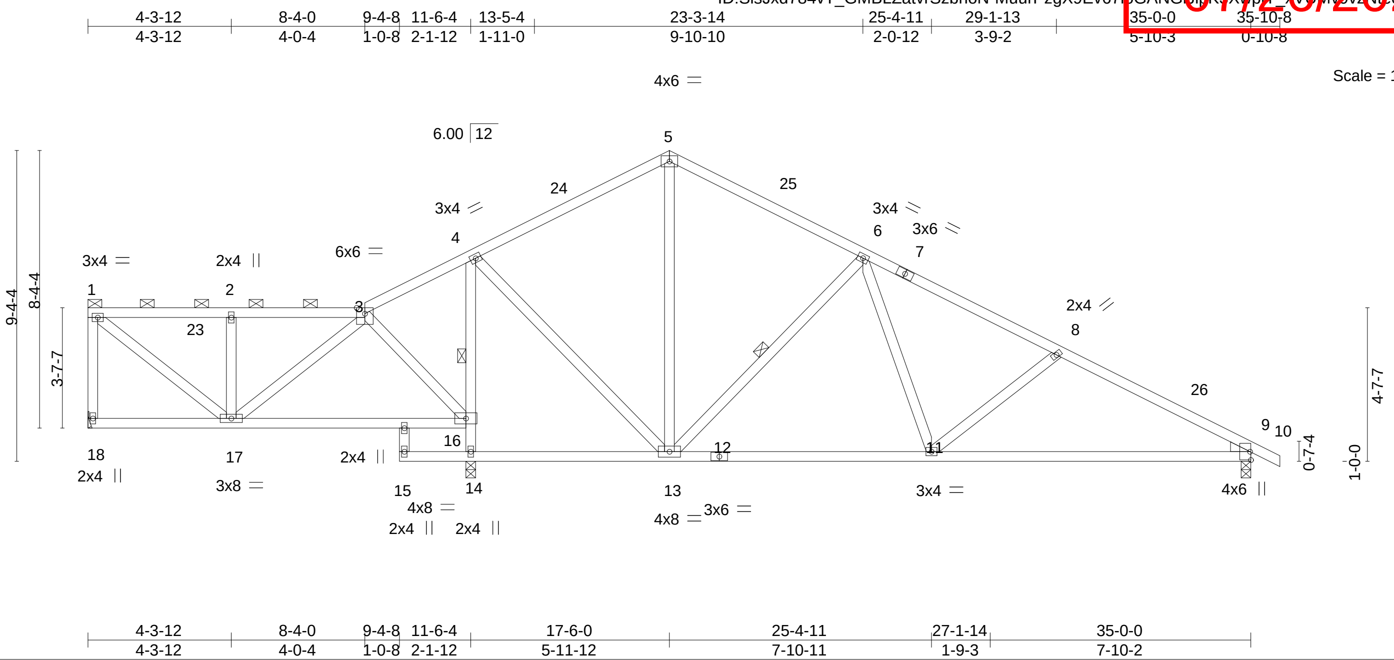

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.36	Vert(LL)	-0.13	11-22	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.63	Vert(CT)	-0.27	11-22	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.92	Horz(CT)	-0.03	14	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-AS							Weight: 159 lb	FT = 20%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 1-3.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 4-14, 6-13

REACTIONS. (size) 18=Mechanical, 9=0-3-8, 14=0-3-8
Max Horz 18=-224(LC 8)
Max Uplift 18=-174(LC 8), 9=-265(LC 13), 14=-205(LC 12)
Max Grav 18=476(LC 25), 9=1093(LC 1), 14=1685(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-18=-454/178, 1-2=-425/145, 2-3=-427/147, 3-4=-51/281, 4-5=-649/328, 5-6=-650/306, 6-8=-1353/393, 8-9=-1668/444
BOT CHORD 11-13=-130/993, 9-11=-304/1423
WEBS 14-16=-1588/246, 4-16=-1224/189, 3-16=-419/111, 4-13=0/793, 2-17=-332/140, 1-17=-204/523, 3-17=0/296, 6-13=-738/274, 6-11=-54/470, 8-11=-376/202

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=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior(1) 3-1-12 to 17-6-0, Exterior(2R) 17-6-0 to 20-6-0 , Interior(1) 20-6-0 to 35-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 18=174, 9=265, 14=205.
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) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

April 23,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage
2820534	A17	Roof Special	2	1	I45904348 Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:16:45 2021 Page 1
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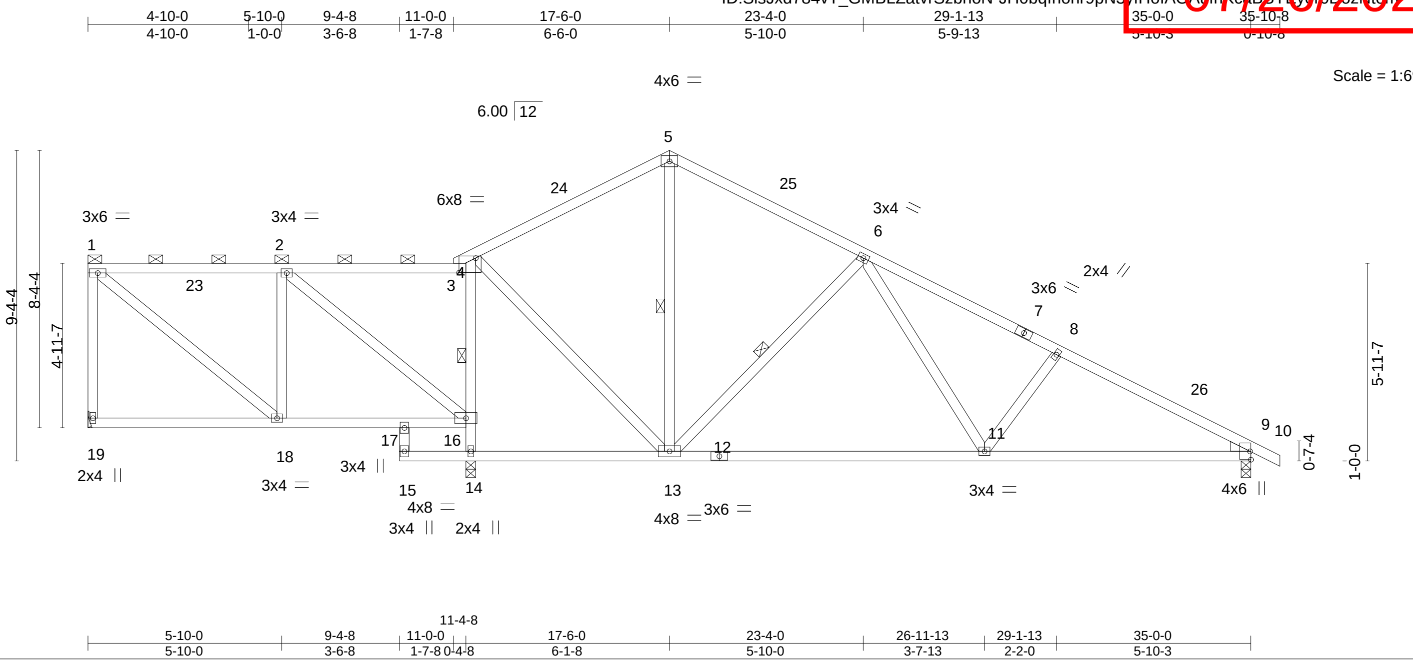

Plate Offsets (X,Y)-- [3:0-6-0,0-5-4]

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	0.41	Vert(LL)	-0.17	11-13	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.61	Vert(CT)	-0.35	11-13	>798	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.91	Horz(CT)	0.02	14	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-AS							Weight: 162 lb	FT = 20%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 1-4.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 5-13, 4-14, 6-13

REACTIONS. (size) 19=Mechanical, 9=0-3-8, 14=0-3-8
Max Horz 19=-252(LC 8)
Max Uplift 19=-153(LC 8), 9=-242(LC 13), 14=-213(LC 12)
Max Grav 19=430(LC 25), 9=1059(LC 1), 14=1750(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-19=-372/166, 1-2=-264/130, 2-3=0/252, 3-4=-12/291, 4-5=-579/277, 5-6=-583/254, 6-8=-1409/388, 8-9=-1622/386
BOT CHORD 17-18=-24/286, 16-17=-26/374, 11-13=-93/917, 9-11=-255/1377
WEBS 14-16=-1631/246, 4-16=-1272/232, 4-13=-37/904, 6-13=-714/286, 6-11=-97/519, 8-11=-335/194, 1-18=-159/307, 2-16=-542/52

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior(1) 3-1-12 to 17-6-0, Exterior(2R) 17-6-0 to 20-6-0 , Interior(1) 20-6-0 to 35-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 19=153, 9=242, 14=213.
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) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
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
ANDREW THOMAS JOHNSON
NUMBER PE-2017018993
PROFESSIONAL ENGINEER

April 23,2021

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage	I45904349
2820534	A18	Roof Special	2	1	Job Reference (optional)	

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:16:47 2021 Page 1
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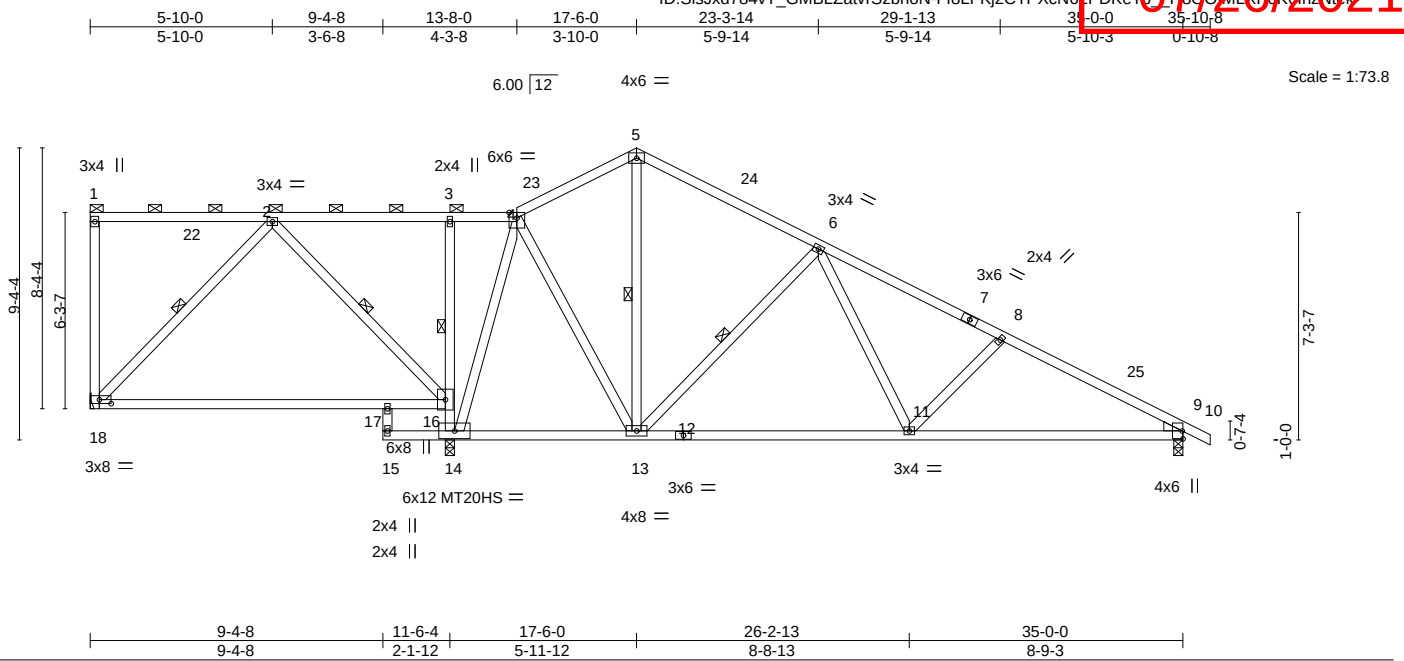


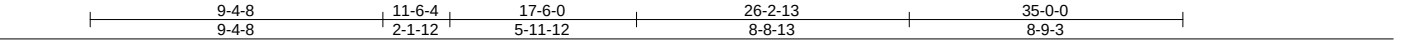


Plate Offsets (X,Y)-- [18:0-4-8,0-1-8]

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	0.47	Vert(LL)	-0.29	17-18	>465	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.66	Vert(CT)	-0.57	17-18	>239	180	MT20HS	148/108
BCLL	0.0	Rep Stress Incr	YES	WB	0.96	Horz(CT)	0.03	14	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-AS							Weight: 168 lb	FT = 20%

LUMBER-

TOP CHORD	2x4 SPF No.2
BOT CHORD	2x4 SPF No.2
WEBS	2x4 SPF No.2
OTHERS	2x4 SPF No.2
WEDGE	
Right: 2x4 SPF No.2	

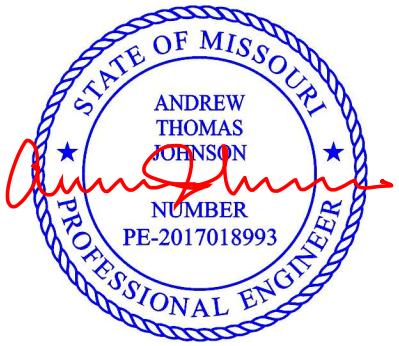
BRACING-

TOP CHORD	Structural wood sheathing directly applied, except 2-0-0 oc purlins (6-0-0 max.): 1-4.
BOT CHORD	Rigid ceiling directly applied. Except: 6-0-0 oc bracing: 3-14
WEBS	1 Row at midpt 2-18, 2-16, 5-13, 6-13

REACTIONS. (size) 14=0-3-8, 9=0-3-8, 18=Mechanical
Max Horz 18=-300(LC 8)
Max Uplift 14=-92(LC 12), 9=-281(LC 13), 18=-266(LC 8)
Max Grav 14=1872(LC 1), 9=1019(LC 1), 18=355(LC 25)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=0/406, 3-4=0/418, 4-5=-447/366, 5-6=-493/341, 6-8=-1264/445, 8-9=-1529/470
BOT CHORD 14-16=-716/99, 3-16=-305/139, 11-13=-164/848, 9-11=-328/1297
WEBS 2-18=-131/351, 2-16=-547/0, 6-13=-728/278, 6-11=-69/502, 8-11=-357/195, 4-14=-1031/120, 4-13=0/753

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=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior(1) 3-1-12 to 17-6-0, Exterior(2R) 17-6-0 to 20-6-0 , Interior(1) 20-6-0 to 35-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are MT20 plates unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) 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) 14 except (jt=lb) 9=281, 18=266.
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) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



April 23,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
07/26/2021

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage
2820534	A19	Common	2	1	I45904350 Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:16:48 2021 Page 1

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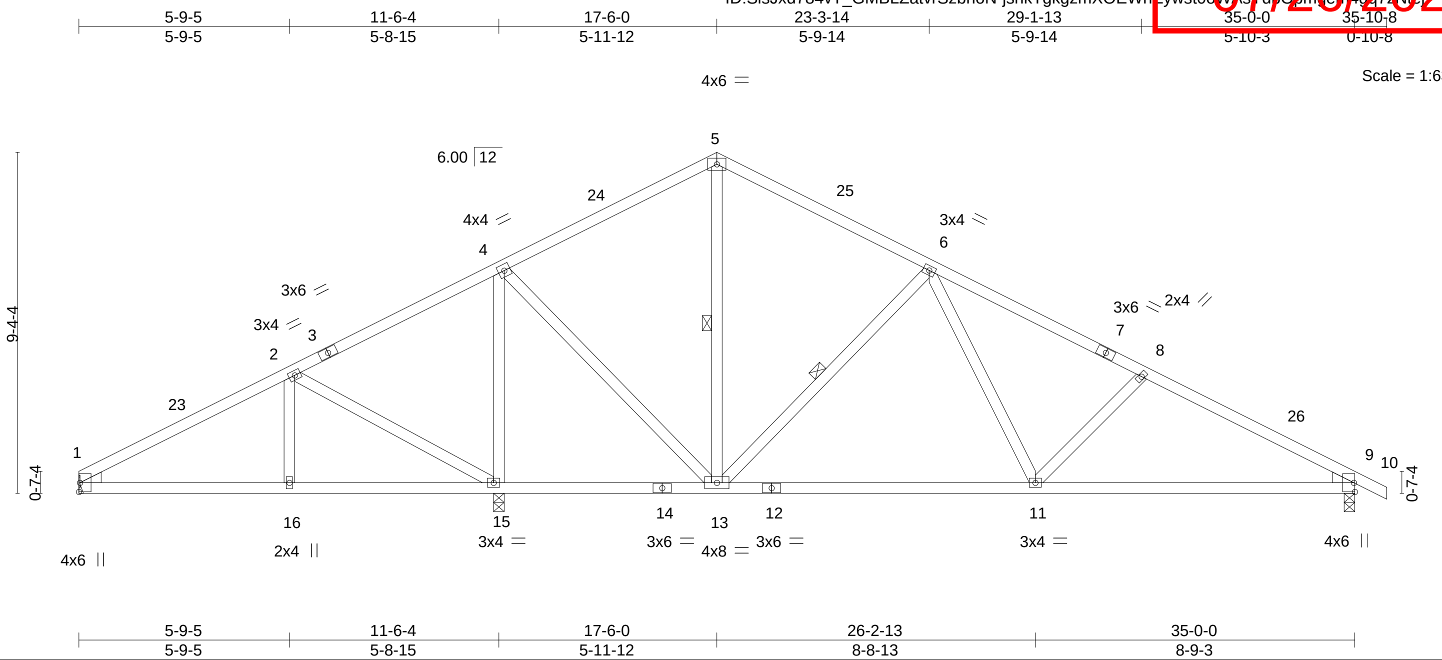

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.42	Vert(LL)	-0.11	11-13	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.59	Vert(CT)	-0.24	11-13	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.95	Horz(CT)	0.03	9	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-AS							Weight: 145 lb	FT = 20%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 5-13, 6-13

REACTIONS. (size) 1=Mechanical, 15=0-3-8, 9=0-3-8
Max Horz 1=-170(LC 13)
Max Uplift 1=-67(LC 12), 15=-287(LC 12), 9=-217(LC 13)
Max Grav 1=407(LC 25), 15=1869(LC 1), 9=1022(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-462/97, 2-4=-33/461, 4-5=-500/224, 5-6=-498/209, 6-8=-1269/315, 8-9=-1534/342
BOT CHORD 1-16=-139/354, 15-16=-139/354, 13-15=-332/223, 11-13=-44/851, 9-11=-215/1302
WEBS 2-15=-611/210, 4-15=-1469/248, 4-13=-102/982, 6-13=-728/282, 6-11=-79/493, 8-11=-357/201

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=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior(1) 3-0-0 to 17-6-0, Exterior(2R) 17-6-0 to 20-6-0, Interior(1) 20-6-0 to 35-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) 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) 1 except (jt=lb) 15=287, 9=217.
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) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

STATE OF MISSOURI
ANDREW THOMAS JOHNSON
NUMBER PE-2017018993
PROFESSIONAL ENGINEER

April 23,2021

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage
2820534	A20	HIP	2	1	I45904351 Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:16:50 2021 Page 1
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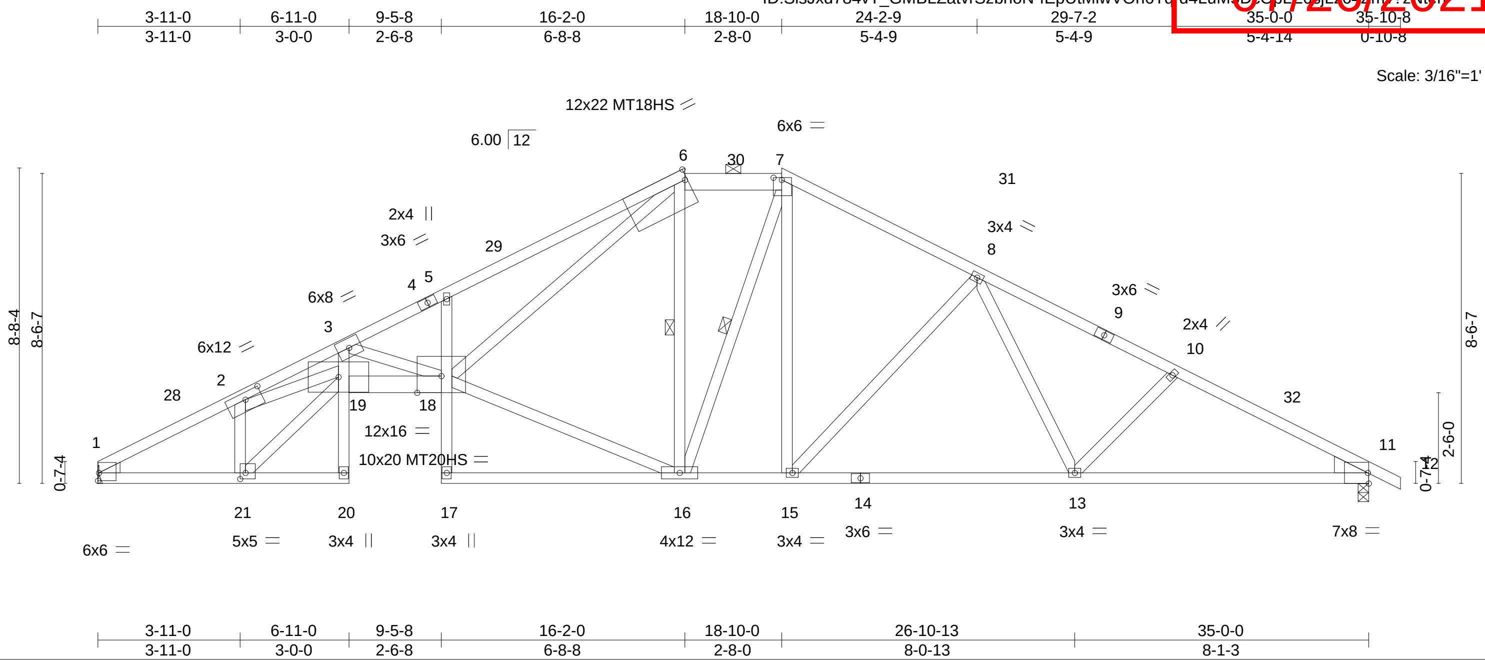

Plate Offsets (X,Y)-- [1:Edge,0-2-9], [2:0-5-8,0-2-4], [6:0-0-12,Edge], [7:0-2-12,0-0-12], [21:0-1-12,0-2-0]

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	0.90	Vert(LL)	-0.51	18	>817	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.92	Vert(CT)	-0.92	18	>457	180	MT20HS	148/108
BCLL	0.0	Rep Stress Incr	YES	WB	0.94	Horz(CT)	0.52	11	n/a	n/a	MT18HS	197/144
BCDL	10.0	Code IRC2018/TPI2014		Matrix-MS							Weight: 181 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SPF No.2 *Except*
4-6: 2x4 SP 2400F 2.0E, 6-7: 2x6 SPF No.2, 1-4: 2x4 SPF 1650F 1.5E
BOT CHORD 2x4 SPF No.2 *Except*
1-20: 2x4 SPF 1650F 1.5E, 18-19: 2x6 SPF 2100F 1.8E
WEBS 2x4 SPF No.2 *Except*
2-19: 2x4 SPF 1650F 1.5E
WEDGE
Left: 2x4 SPF No.2 , Right: 2x6 SPF No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 1-6-7 oc purlins, except
2-0-0 oc purlins (5-6-13 max.): 6-7.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 1 Row at midpt 6-16, 7-16

REACTIONS. (size) 1=Mechanical, 11=0-3-8
Max Horz 1=-156(LC 13)
Max Uplift 1=-263(LC 12), 11=-283(LC 13)
Max Grav 1=1574(LC 1), 11=1637(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-2743/460, 2-3=-8218/1483, 3-5=-4903/856, 5-6=-4937/993, 6-7=-1674/405,
7-8=-1958/412, 8-10=-2571/455, 10-11=-2791/477
BOT CHORD 1-21=-490/2377, 3-19=-476/2561, 18-19=-1326/7313, 5-18=-393/230, 15-16=-137/1667,
13-15=-242/2086, 11-13=-338/2409
WEBS 3-18=-3125/622, 16-18=-175/1683, 6-18=-764/3554, 6-16=-630/217, 7-15=-139/575,
8-15=-619/251, 8-13=-61/393, 10-13=-272/176, 2-21=-2010/445, 19-21=-586/2816,
2-19=-876/5049

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=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-0-0 to 3-6-0, Interior(1) 3-6-0 to 16-2-0, Exterior(2E) 16-2-0 to 18-10-0, Exterior(2R) 18-10-0 to 23-9-6, Interior(1) 23-9-6 to 35-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are MT20 plates unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) 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) 1=263, 11=283.
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.

April 23,2021

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
07/26/2021

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage
2820534	A21	HIP	2	1	I45904352 Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:10:51 2021 Page 1
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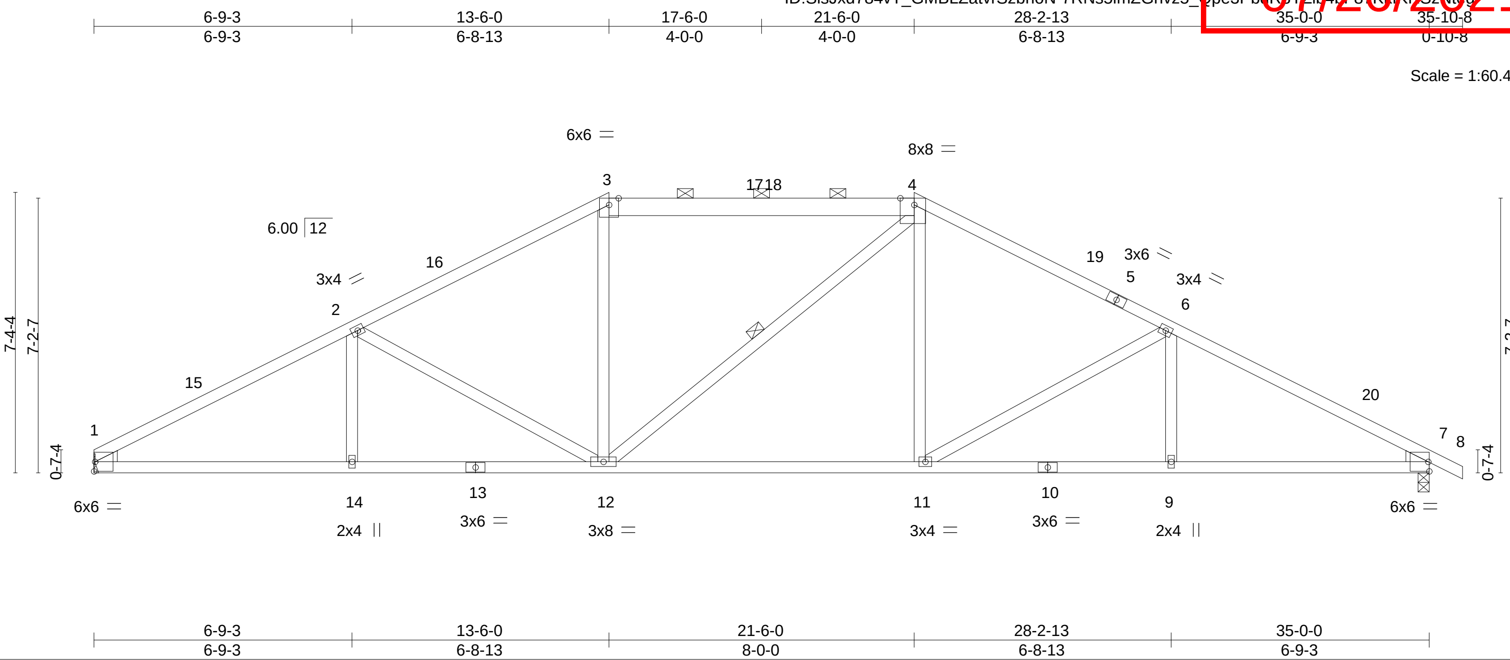

Plate Offsets (X,Y)-- [4:0-4-6,Edge]

LOADING (psf)		SPACING-		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.96	Vert(LL)	-0.15	11-12	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.86	Vert(CT)	-0.35	11-12	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.59	Horz(CT)	0.13	7	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S							Weight: 143 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SPF No.2 *Except*
3-4: 2x6 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2
WEDGE
Left: 2x4 SPF No.2 , Right: 2x4 SPF No.2

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

REACTIONS. (size) 1=Mechanical, 7=0-3-8
Max Horz 1=-127(LC 17)
Max Uplift 1=-268(LC 12), 7=-287(LC 13)
Max Grav 1=1565(LC 1), 7=1638(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-2818/475, 2-3=-2228/418, 3-4=-1895/414, 4-6=-2221/415, 6-7=-2811/460
BOT CHORD 1-14=-453/2408, 12-14=-453/2408, 11-12=-176/1888, 9-11=-313/2371, 7-9=-313/2371
WEBS 2-14=0/278, 2-12=-594/245, 3-12=-42/479, 4-11=-51/474, 6-11=-562/239, 6-9=0/274

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=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-0-12 to 3-0-12, Interior(1) 3-0-12 to 13-6-0, Exterior(2R) 13-6-0 to 17-8-15, Interior(1) 17-8-15 to 21-6-0, Exterior(2R) 21-6-0 to 25-8-15, Interior(1) 25-8-15 to 35-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 1=268, 7=287.
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.

April 23,2021

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage	I45904353
2820534	A22	Hip	2	1	Job Reference (optional)	

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:16:53 2021 Page 1
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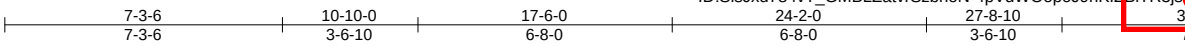

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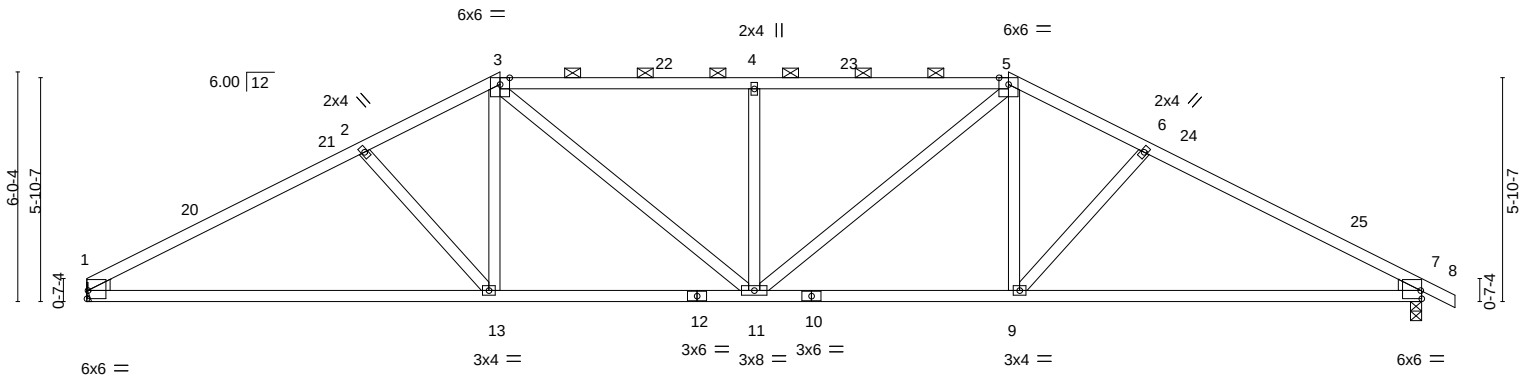


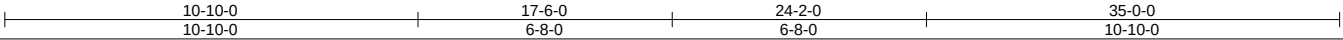


Plate Offsets (X,Y)-- [1:Edge,0-2-9], [7:Edge,0-2-9]

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	0.64	Vert(LL)	-0.22	13-16	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.85	Vert(CT)	-0.48	13-16	>872	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.31	Horz(CT)	0.12	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS							Weight: 134 lb	FT = 20%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied, except 2-0-0 oc purlins (2-11-1 max.): 3-5.
BOT CHORD Rigid ceiling directly applied.

REACTIONS. (size) 1=Mechanical, 7=0-3-8
Max Horz 1=-108(LC 13)
Max Uplift 1=-272(LC 12), 7=-292(LC 13)
Max Grav 1=1574(LC 1), 7=1637(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-2711/481, 2-3=-2431/450, 3-4=-2534/485, 4-5=-2534/485, 5-6=-2427/449, 6-7=-2707/479
BOT CHORD 1-13=-418/2325, 11-13=-295/2131, 9-11=-218/2128, 7-9=-316/2319
WEBS 2-13=-287/182, 3-13=-63/431, 3-11=-183/655, 4-11=-567/223, 5-11=-183/657, 5-9=-62/430, 6-9=-282/181

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=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior(1) 3-0-0 to 10-10-0, Exterior(2R) 10-10-0 to 15-0-15 , Interior(1) 15-0-15 to 24-2-0, Exterior(2R) 24-2-0 to 28-4-15, Interior(1) 28-4-15 to 35-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 1=272, 7=292.
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) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

April 23,2021

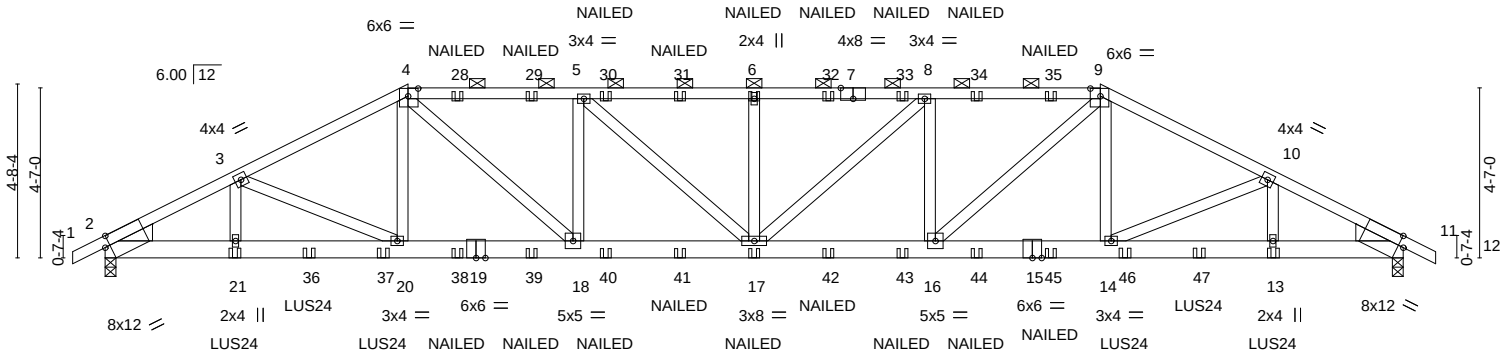
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage	I45904354
2820534	A23	Hip Girder	2	1	Job Reference (optional)	

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:16:55 2021 Page 1
ID:SlsJxd784vT_GMBLZatvrSzbhoN-0CcNx4p3KwPPZbatuUXdHJFaM0yX46FLGXaDzNtec

-0-10-8	3-7-15	4-1-3	8-2-0	12-9-2	17-6-0	22-2-14	26-10-0	30-10-13	35-0-0	35-10-8
0-10-8	3-7-15	0-5-4	4-0-13	4-7-2	4-8-14	4-8-14	4-7-2	4-0-13	4-1-3	0-10-8

Scale = 1:62.1



3-7-15	4-1-3	8-2-0	12-9-2	17-6-0	22-2-14	26-10-0	30-10-13	35-0-0
3-7-15	0-5-4	4-0-13	4-7-2	4-8-14	4-8-14	4-7-2	4-0-13	4-1-3

Plate Offsets (X,Y)-- [2:0-1-11,0-3-7], [4:0-3-4,0-2-8], [7:0-4-0,Edge], [9:0-3-4,0-2-8], [10:0-0-0,0-0-0], [11:0-1-11,0-3-7]

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	0.90	Vert(LL)	0.40	17	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.61	Vert(CT)	-0.68	17	>615	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.52	Horz(CT)	0.13	11	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-MS							Weight: 185 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SPF 1650F 1.5E
BOT CHORD 2x6 SP 2400F 2.0E *Except*
15-19: 2x6 SPF 2100F 1.8E
WEBS 2x4 SPF No.2
WEDGE
Left: 2x6 SP No.2 , Right: 2x6 SP No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 2-5-1 oc purlins, except 2-0-0 oc purlins (2-2-10 max.): 4-9.
BOT CHORD Rigid ceiling directly applied or 6-8-8 oc bracing.

REACTIONS. (size) 2=0-3-8, 11=0-3-8
Max Horz 2=-78(LC 34)
Max Uplift 2=-1067(LC 8), 11=-1067(LC 9)
Max Grav 2=3132(LC 1), 11=3132(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-5656/1960, 3-4=-5364/1939, 4-5=-6056/2275, 5-6=-6493/2396, 6-8=-6493/2396, 8-9=-6056/2275, 9-10=-5364/1939, 10-11=-5656/1961
BOT CHORD 2-21=-1764/4995, 20-21=-1764/4995, 18-20=-1671/4748, 17-18=-2174/6054, 16-17=-2133/6054, 14-16=-1592/4748, 13-14=-1687/4995, 11-13=-1687/4995
WEBS 3-20=-253/190, 4-20=-216/779, 4-18=-792/1859, 5-18=-1030/497, 5-17=-293/654, 6-17=-505/273, 8-17=-294/654, 8-16=-1030/497, 9-16=-792/1859, 9-14=-215/779, 10-14=-253/191

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=4.2psf; 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=1067, 11=1067.
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) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
8) Use Simpson Strong-Tie LUS24 (4-10d Girder, 2-10d Truss, Single Ply Girder) or equivalent spaced at 20-0-0 oc max. starting at 3-6-0 from the left end to 31-6-0 to connect truss(es) to front face of bottom chord.
9) Fill all nail holes where hanger is in contact with lumber.
10) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.
11) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

April 23,2021

LOAD CASE(S) Standard

Continued on page 2

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
07/26/2021

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage
2820534	A23	Hip Girder	2	1	I45804354 Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:16:56 2021 Page 2
ID:SlsJxd784vT_GMBLZatvrSzbhoN-UOAl8Pqh5EXFBlImQc?mKUsQKmMBGXMsU?056fzNteb

LOAD CASE(S) Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (plf)
      Vert: 1-4=-70, 4-9=-70, 9-12=-70, 22-25=-20
   Concentrated Loads (lb)
      Vert: 17=-79(F) 6=-79(F) 13=-316(F) 21=-316(F) 28=-79(F) 29=-79(F) 30=-79(F) 31=-79(F) 32=-79(F) 33=-79(F) 34=-79(F) 35=-79(F) 36=-233(F) 37=-233(F) 38=-79(F) 39=-79(F) 40=-79(F) 41=-79(F) 42=-79(F) 43=-79(F) 44=-79(F) 45=-79(F) 46=-233(F) 47=-233(F)

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage
2820534	A24	Common	1	1	I45904355 Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:18:57 2021 Page 1
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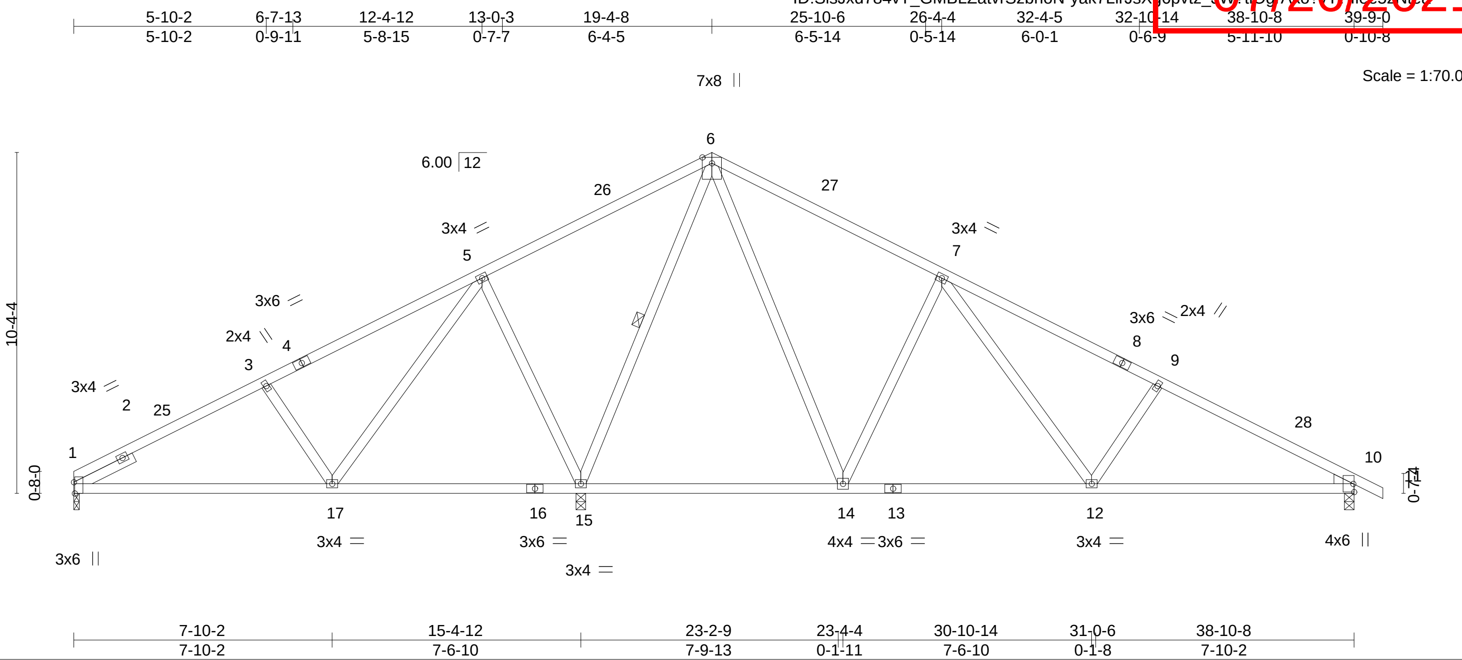

Plate Offsets (X,Y)-- [1:0-4-1,Edge]

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	0.53	Vert(LL)	-0.06	14-15	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.46	Vert(CT)	-0.14	12-24	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.79	Horz(CT)	0.02	10	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-AS							Weight: 164 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2
WEDGE
Right: 2x4 SPF No.2
SLIDER Left 2x4 SPF No.2 -t 2-0-0

BRACING-
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 6-15

REACTIONS. (size) 1=0-2-0, 15=0-3-8, 10=0-3-8
Max Horz 1=-189(LC 13)
Max Uplift 1=-84(LC 12), 15=-337(LC 12), 10=-213(LC 13)
Max Grav 1=528(LC 25), 15=2176(LC 1), 10=970(LC 26)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-3=-601/114, 3-5=-462/128, 5-6=0/661, 6-7=-561/273, 7-9=-1228/344, 9-10=-1433/331
BOT CHORD 1-17=-193/537, 15-17=-261/245, 12-14=-15/699, 10-12=-205/1211
WEBS 6-15=-1445/221, 6-14=-247/887, 7-14=-735/325, 5-15=-751/330, 5-17=-150/611, 7-12=-137/560, 3-17=-403/214, 9-12=-371/207

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=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior(1) 3-0-0 to 19-4-8, Exterior(2R) 19-4-8 to 22-4-8, Interior(1) 22-4-8 to 39-9-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 1.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1 except (jt=lb) 15=337, 10=213.
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) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

April 23,2021

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
07/26/2021

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage
2820534	A25	Roof Special	2	1	I45804356 Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:16:58 2021 Page 1
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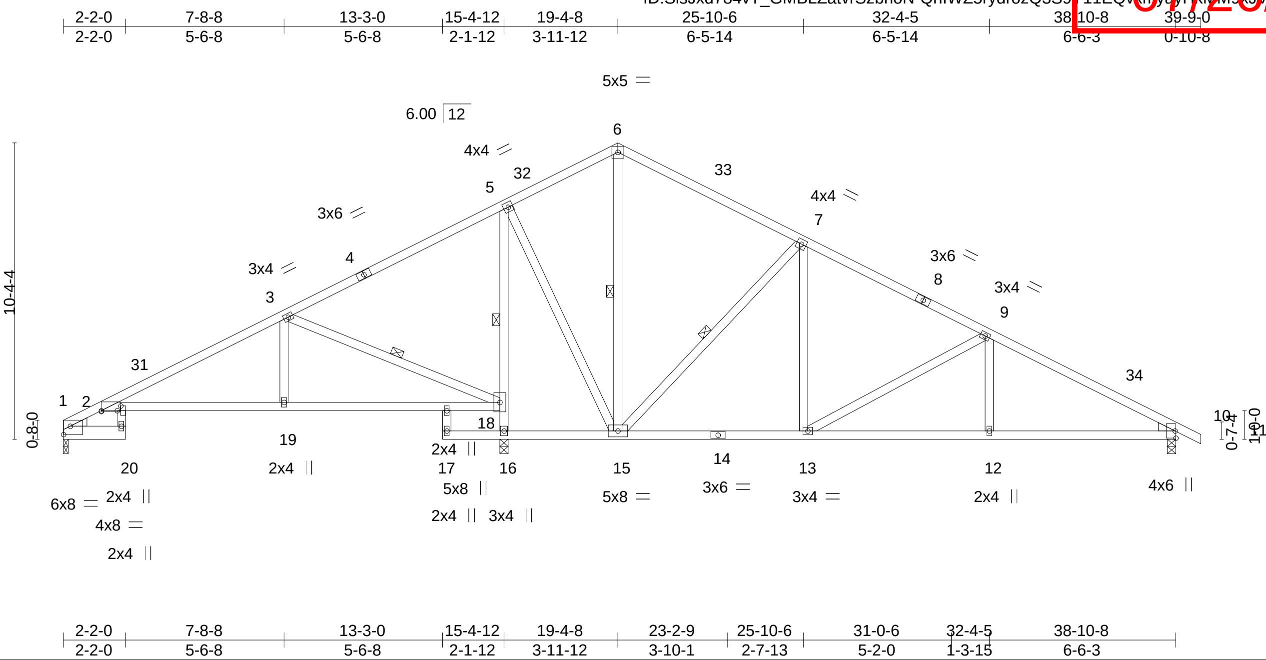

Plate Offsets (X,Y)-- [1:Edge,0-3-8], [2:0-0-0,0-0-5], [2:0-2-0,0-1-8]

LOADING (psf)		SPACING-		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.89	Vert(LL)	0.28	20	>668	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.96	Vert(CT)	-0.47	20	>391	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.81	Horz(CT)	0.07	10	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-AS							Weight: 175 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SPF No.2 *Except*
1-4: 2x4 SPF 1650F 1.5E
BOT CHORD 2x4 SPF No.2 *Except*
1-20: 2x6 SPF No.2
WEBS 2x4 SPF No.2 *Except*
5-16: 2x4 SPF 1650F 1.5E
WEDGE
Left: 2x4 SPF No.2 , Right: 2x4 SPF No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 3-18, 6-15, 5-16, 7-15

REACTIONS. (size) 1=0-2-0, 10=0-3-8, 16=0-3-8
Max Horz 1=-189(LC 13)
Max Uplift 1=-129(LC 13), 10=-292(LC 13), 16=-309(LC 12)
Max Grav 1=545(LC 25), 10=1042(LC 26), 16=2083(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-730/296, 3-5=-63/575, 5-6=-251/376, 6-7=-352/342, 7-9=-997/413,
9-10=-1571/476
BOT CHORD 2-19=-200/639, 18-19=-200/639, 15-16=-300/102, 13-15=-142/806, 12-13=-326/1323,
10-12=-326/1323
WEBS 3-19=0/392, 3-18=-1036/342, 16-18=-1999/343, 5-18=-1548/242, 7-15=-863/297,
7-13=-43/467, 9-13=-595/210, 5-15=-5/984

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=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior(1) 3-0-0 to 19-4-8, Exterior(2R) 19-4-8 to 22-4-8, Interior(1) 22-4-8 to 39-9-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 1.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 1=129, 10=292, 16=309.
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) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

April 23,2021

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage
2820534	A26	Hip	1	1	I45804357 Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:17:01 2021 Page 1
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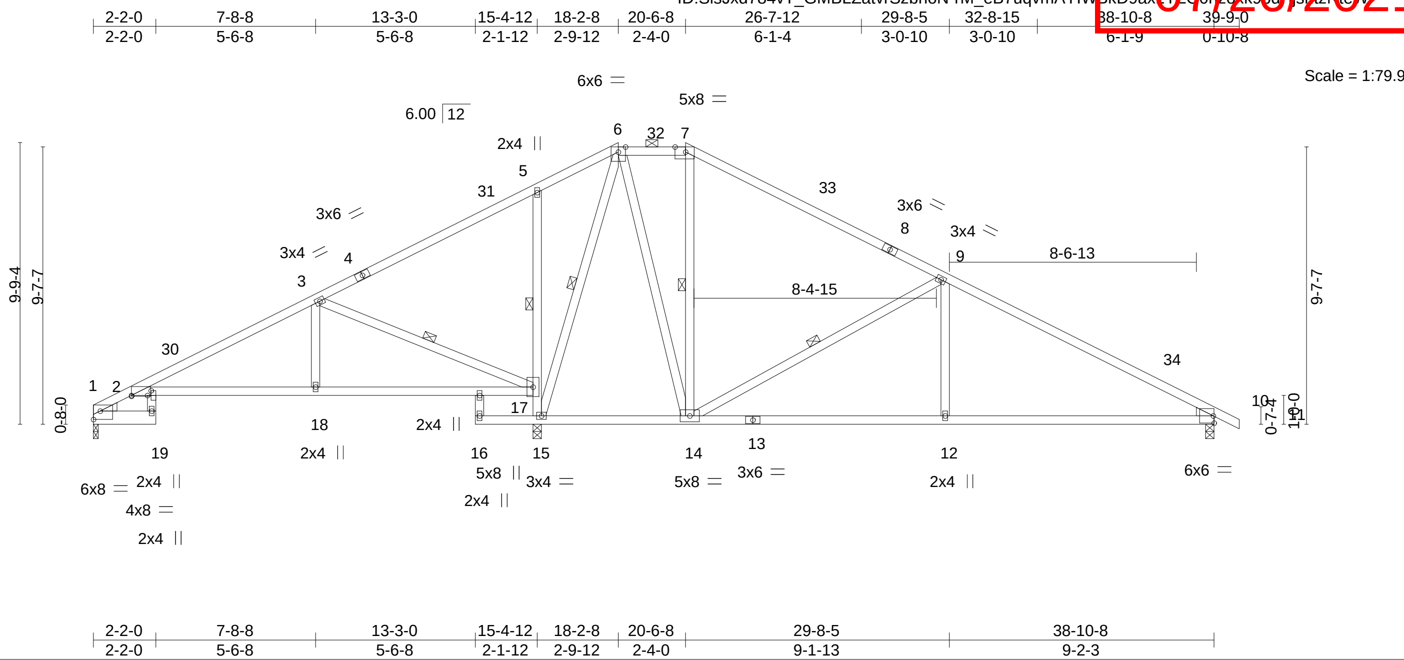

Plate Offsets (X,Y)-- [1:Edge,0-3-8], [2:0-0-0,0-0-5], [2:0-2-0,0-1-8], [7:0-4-6,Edge]

LOADING (psf)		SPACING-		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.90	Vert(LL)	0.28	19	>662	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.97	Vert(CT)	-0.48	19	>387	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.74	Horz(CT)	0.06	15	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-AS							Weight: 172 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SPF No.2 *Except*
1-4: 2x4 SPF 1650F 1.5E
BOT CHORD 2x4 SPF No.2 *Except*
1-19: 2x6 SPF No.2
WEBS 2x4 SPF No.2
WEDGE
Left: 2x4 SPF No.2 , Right: 2x4 SPF No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied, except
2-0-0 oc purlins (6-0-0 max.): 6-7.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 3-17, 7-14, 5-15, 6-15, 9-14

REACTIONS. (size) 1=0-2-0, 10=0-3-8, 15=0-3-8
Max Horz 1=-177(LC 13)
Max Uplift 1=-128(LC 13), 10=-297(LC 13), 15=-300(LC 12)
Max Grav 1=552(LC 25), 10=1058(LC 26), 15=2063(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-748/298, 3-5=-44/549, 5-6=-46/449, 6-7=-378/377, 7-9=-574/351, 9-10=-1493/468
BOT CHORD 2-18=-206/655, 17-18=-206/655, 12-14=-290/1230, 10-12=-290/1230
WEBS 3-18=0/393, 3-17=-1038/342, 7-14=-333/88, 15-17=-938/358, 5-17=-489/256,
6-15=-1081/0, 6-14=-167/985, 9-14=-988/344, 9-12=0/387

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=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior(1) 3-0-0 to 18-2-8, Exterior(2E) 18-2-8 to 20-6-8, Exterior(2R) 20-6-8 to 24-9-7, Interior(1) 24-9-7 to 39-9-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 1.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 1=128, 10=297, 15=300.
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) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
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
ANDREW THOMAS JOHNSON
NUMBER PE-2017018993
PROFESSIONAL ENGINEER

April 23,2021

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage
2820534	A27	Roof Special	1	1	I45904358 Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
07/26/2021

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:17:03 2021 Page 1
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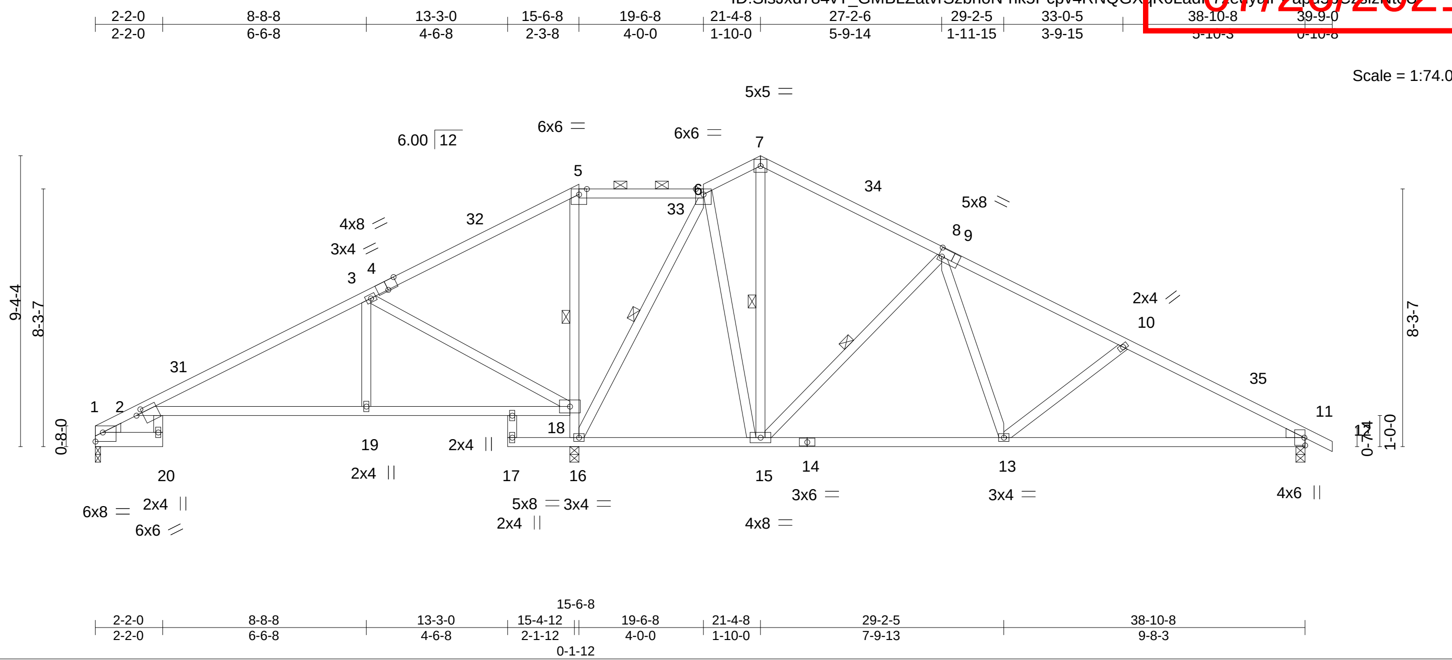

Plate Offsets (X,Y)-- [1:Edge,0-3-8], [2:0-2-7,0-1-8], [4:0-4-0,Edge], [9:0-1-4,0-3-4]

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	0.87	Vert(LL)	0.33	19-27	>567	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.83	Vert(CT)	-0.58	19-27	>318	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.99	Horz(CT)	0.07	11	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-AS							Weight: 175 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SPF No.2 *Except*
1-4: 2x4 SPF 1650F 1.5E
BOT CHORD 2x4 SPF No.2 *Except*
1-20: 2x6 SPF No.2, 2-18: 2x4 SPF 1650F 1.5E
WEBS 2x4 SPF No.2
WEDGE
Left: 2x4 SPF No.2 , Right: 2x4 SPF No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied, except
2-0-0 oc purlins (10-0-0 max.): 5-6.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 5-16, 7-15, 8-15, 6-16

REACTIONS. (size) 1=0-2-0, 16=0-3-8, 11=0-3-8
Max Horz 1=-171(LC 13)
Max Uplift 1=-118(LC 13), 16=-332(LC 12), 11=-285(LC 13)
Max Grav 1=536(LC 25), 16=2103(LC 1), 11=1016(LC 26)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-584/276, 3-5=-41/581, 5-6=0/429, 6-7=-367/376, 7-8=-481/350, 8-10=-1188/433,
10-11=-1509/485
BOT CHORD 2-19=-154/491, 18-19=-154/491, 13-15=-168/849, 11-13=-340/1283
WEBS 3-19=0/381, 3-18=-976/327, 16-18=-1060/294, 5-18=-556/165, 8-15=-742/271,
8-13=-51/476, 10-13=-385/200, 6-15=0/660, 6-16=-1064/146

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=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior(1) 3-0-0 to 15-6-8, Exterior(2R) 15-6-8 to 18-6-8, Interior(1) 18-6-8 to 21-4-8, Exterior(2R) 21-4-8 to 24-4-8, Interior(1) 24-4-8 to 39-9-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 1.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 1=118, 16=332, 11=285.
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) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
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
ANDREW THOMAS JOHNSON
NUMBER PE-2017018993
PROFESSIONAL ENGINEER

April 23,2021

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage
2820534	A28	Roof Special	1	1	I45904359 Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:17:05 2021 Page 1
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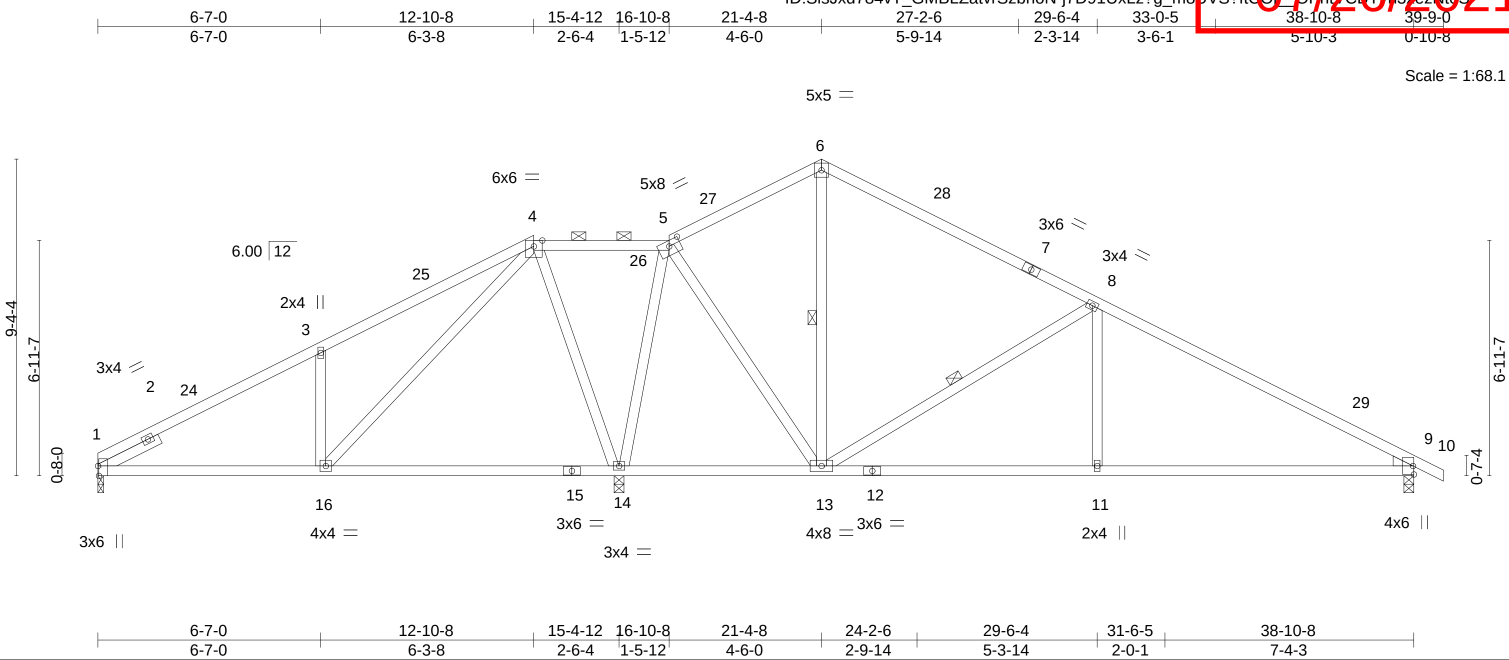

Plate Offsets (X,Y)-- [1:0-3-8,Edge], [5:0-4-0,0-1-14]

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)	0.13	11-23	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.65	Vert(CT)	-0.29	11-23	>975	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.93	Horz(CT)	0.01	1	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-AS							Weight: 162 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2
WEDGE
Right: 2x4 SPF No.2
SLIDER Left 2x4 SPF No.2 -t 2-0-0

BRACING-
TOP CHORD Structural wood sheathing directly applied, except 2-0-0 oc purlins (10-0-0 max.): 4-5.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 6-13, 8-13

REACTIONS. (size) 1=0-2-0, 9=0-3-8, 14=0-3-8
Max Horz 1=-171(LC 13)
Max Uplift 1=-122(LC 12), 9=-239(LC 13), 14=-309(LC 12)
Max Grav 1=560(LC 25), 9=1001(LC 1), 14=2044(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-3=-659/169, 3-4=-755/322, 4-5=0/400, 5-6=-419/275, 6-8=-502/240, 8-9=-1365/347
BOT CHORD 1-16=-216/583, 11-13=-180/1114, 9-11=-180/1114
WEBS 3-16=-475/270, 5-14=-1152/216, 4-14=-817/236, 4-16=-291/899, 5-13=-39/846, 8-13=-939/334, 8-11=0/377

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=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior(1) 3-0-0 to 12-10-8, Exterior(2R) 12-10-8 to 15-10-8 , Interior(1) 15-10-8 to 21-4-8, Exterior(2R) 21-4-8 to 24-4-8, Interior(1) 24-4-8 to 39-9-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 1.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 1=122, 9=239, 14=309.
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) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

April 23,2021

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage	I45904360
2820534	B1	GABLE	2	1	Job Reference (optional)	

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:17:17 2021 Page 1
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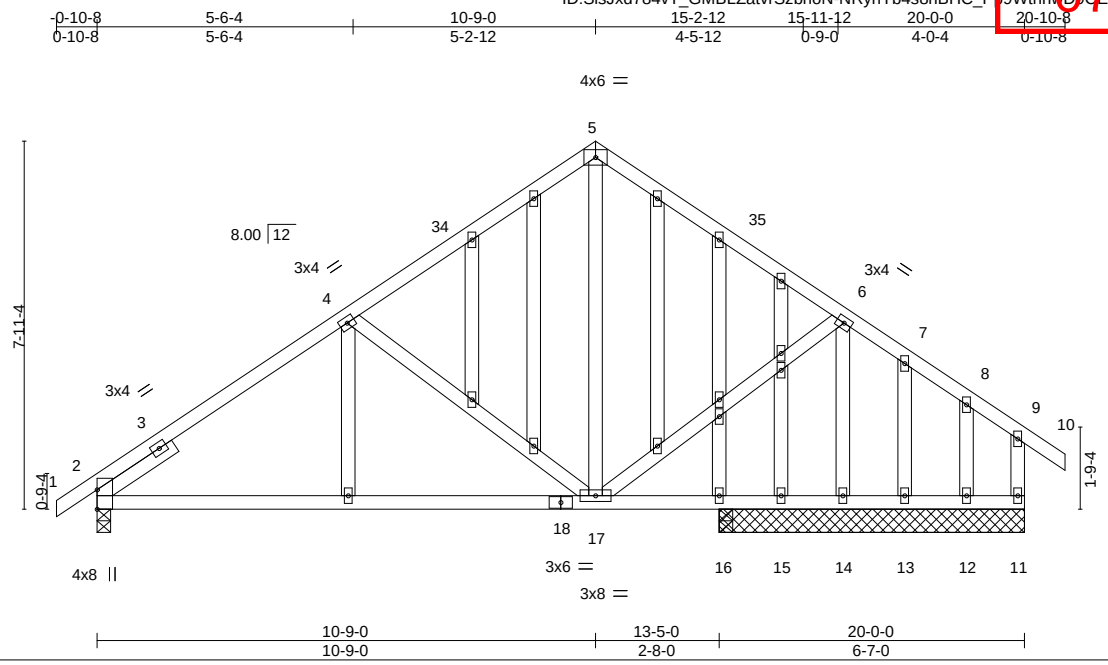

Plate Offsets (X,Y)-- [2:Edge,0-0-0]

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	0.31	Vert(LL)	-0.22	17-32	>732	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.69	Vert(CT)	-0.45	17-32	>361	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.30	Horz(CT)	0.03	2	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-AS							Weight: 122 lb	FT = 20%

LUMBER-

TOP CHORD	2x4 SPF No.2
BOT CHORD	2x4 SPF No.2
WEBS	2x4 SPF No.2
OTHERS	2x4 SPF No.2
SLIDER	Left 2x4 SPF No.2 -t 2-0-0

BRACING-

TOP CHORD	Structural wood sheathing directly applied, except end verticals.
BOT CHORD	Rigid ceiling directly applied.

REACTIONS. All bearings 6-7-0 except (jt=length) 2=0-3-8, 16=0-3-8, 16=0-3-8.
(lb) - Max Horz 2=231(LC 11)
Max Uplift All uplift 100 lb or less at joint(s) 11, 13, 12, 16 except 2=-140(LC 12), 14=-131(LC 13), 16=-155(LC 3)
Max Grav All reactions 250 lb or less at joint(s) 11, 15, 13, 12 except 2=780(LC 1), 14=891(LC 1)

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

TOP CHORD	2-4=-915/185, 4-5=-549/170, 5-6=-545/168
BOT CHORD	2-17=-168/708
WEBS	4-17=-385/230, 5-17=-48/299, 6-17=-20/489, 6-14=-871/142

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=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 10-9-0, Exterior(2R) 10-9-0 to 13-9-0, Interior(1) 13-9-0 to 20-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable studs spaced at 1-4-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 11, 13, 12 except (jt=lb) 2=140, 14=131, 16=155.
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) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

April 23,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
07/26/2021

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage
2820534	B2	ROOF SPECIAL GIRDER	2	2	I45904361 Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:17:19 2021 Page 1
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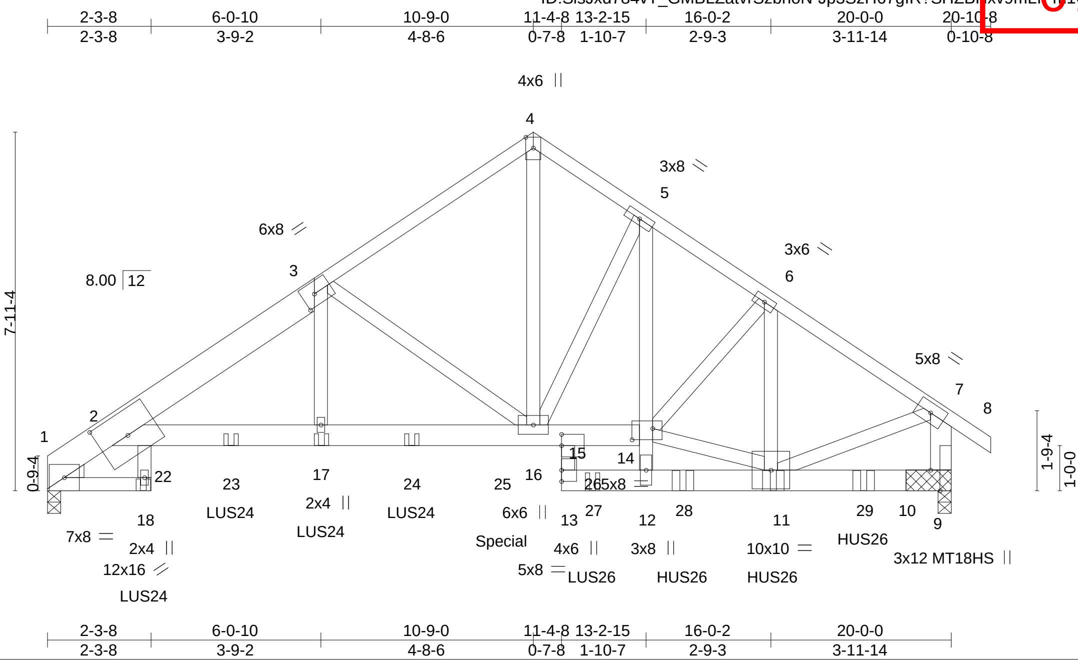

Plate Offsets (X,Y)-- [2:0-8-0,0-6-5], [3:0-3-4,0-3-0], [9:0-5-8,Edge], [14:0-5-8,0-3-0], [15:0-3-0,0-0-0]

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	0.69	Vert(LL)	-0.14	2-17	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.63	Vert(CT)	-0.23	2-17	>999	180	MT18HS	197/144
BCLL	0.0	Rep Stress Incr	NO	WB	0.52	Horz(CT)	0.19	9	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-MS							Weight: 270 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SPF No.2 *Except*
1-3: 2x8 SP 2400F 2.0E
BOT CHORD 2x4 SPF No.2 *Except*
2-14: 2x6 SPF 2100F 1.8E, 9-13: 2x6 SPF No.2
WEBS 2x4 SPF No.2 *Except*
7-9: 2x6 SPF No.2
WEDGE
Left: 2x4 SPF No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-4-7 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 1-18.

REACTIONS. (size) 9=(0-3-8 + bearing block) (req. 0-4-6), 1=0-3-8
Max Horz 1=222(LC 7)
Max Uplift 9=-1169(LC 9), 1=-844(LC 8)
Max Grav 9=5575(LC 1), 1=3225(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-20=-1767/532, 2-3=-5555/1550, 3-4=-3917/1065, 4-5=-3826/1091, 5-6=-4948/1211, 6-7=-5216/1134, 7-9=-4751/1037
BOT CHORD 2-18=-149/623, 2-17=-1390/4896, 16-17=-1413/4961, 15-16=-879/4089, 14-15=-728/3326, 12-13=-157/764, 11-12=-169/818, 9-11=-95/372
WEBS 4-16=-1101/3963, 3-16=-2172/807, 12-14=-110/834, 5-14=-362/2284, 5-16=-2056/396, 6-11=-280/292, 7-11=-869/4230, 11-14=-747/3640, 6-14=-337/97, 3-17=-434/1307

NOTES-
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x8 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-7-0 oc, 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x4 - 1 row at 0-6-0 oc, 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) 2x6 SPF No.2 bearing block 12" long at jt. 9 attached to each face with 3 rows of 10d (0.131"x3") nails spaced 3" o.c. 12 Total fasteners per block. Bearing is assumed to be SPF No.2.
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=4.2psf; 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) All plates are MT20 plates unless otherwise indicated.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 9=1169, 1=844.
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.

Continued on page 2

April 23,2021

NOTES-

10) Use Simpson Strong-Tie LUS24 (4-10d Girder, 2-10d Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 2-1-12 from the left end to 8-0-12 to connect truss(es) to back face of bottom chord.
11) Use Simpson Strong-Tie LUS26 (4-10d Girder, 3-10d Truss, Single Ply Girder) or equivalent at 12-0-12 from the left end to connect truss(es) to back face of bottom chord.
12) Use Simpson Strong-Tie HUS26 (14-10d Girder, 6-10d Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 14-0-12 from the left end to 18-0-12 to connect truss(es) to back face of bottom chord.
13) Fill all nail holes where hanger is in contact with lumber.
14) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 335 lb down and 286 lb up at 10-0-12 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: 1-2=-70, 2-4=-70, 4-7=-70, 7-8=-70, 18-19=-20, 2-15=-20, 9-13=-20
   Concentrated Loads (lb)
      Vert: 18=-311(B) 11=-1545(B) 17=-456(B) 23=-447(B) 24=-343(B) 25=-335(B) 26=-387(B) 28=-1554(B) 29=-1554(B)

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage
2820534	B3	COMMON SUPPORTED GAB	3	1	I45904362 Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:17:21 2021 Page 1
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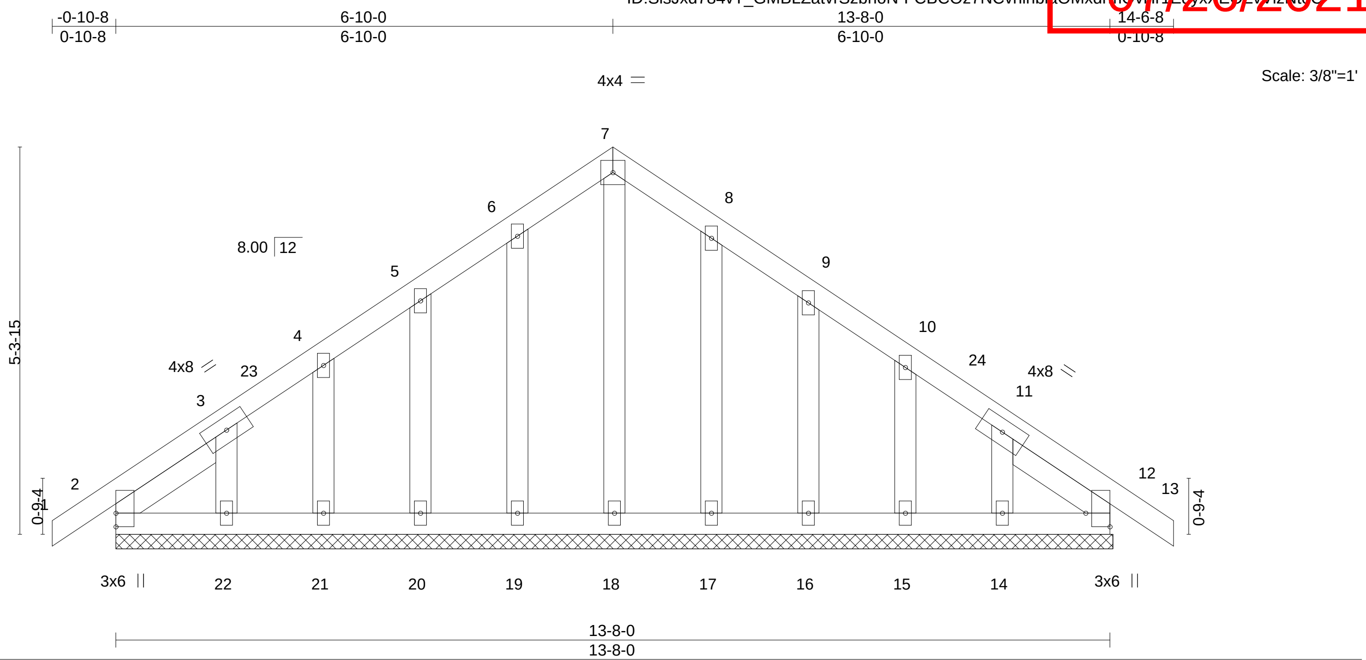

Plate Offsets (X,Y)-- [12:Edge,0-4-0]

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	0.05	Vert(LL)	-0.00	12	n/r	120	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	-0.00	13	n/r	120		
BCLL	0.0	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	12	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S							Weight: 70 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
OTHERS 2x4 SPF No.2
SLIDER Left 2x4 SPF No.2 -t 1-8-11, Right 2x4 SPF No.2 -t 1-8-1

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 13-8-8.
(lb) - Max Horz 2=-134(LC 10)
Max Uplift All uplift 100 lb or less at joint(s) 2, 12, 19, 20, 21, 22, 17, 16, 15, 14
Max Grav All reactions 250 lb or less at joint(s) 2, 12, 18, 19, 20, 21, 22, 17, 16, 15, 14

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=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-10-8 to 2-1-8, Exterior(2N) 2-1-8 to 6-10-0, Corner(3R) 6-10-0 to 9-10-0, Exterior(2N) 9-10-0 to 14-6-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 1-4-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 12, 19, 20, 21, 22, 17, 16, 15, 14.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

STATE OF MISSOURI
ANDREW THOMAS JOHNSON
NUMBER PE-2017018993
PROFESSIONAL ENGINEER

April 23,2021

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
07/26/2021

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage
2820534	B4	GABLE	1	1	I45804363 Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:17:22 2021 Page 1

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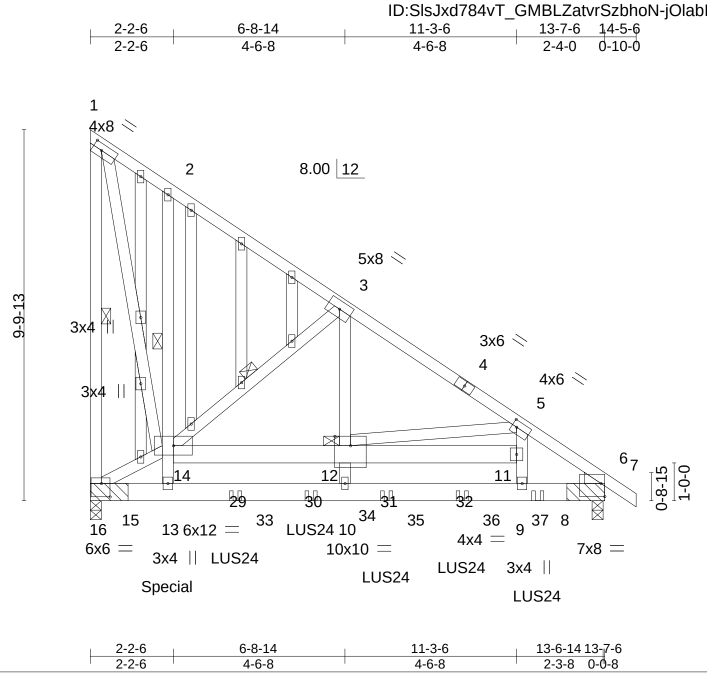

Plate Offsets (X,Y)-- [1:0-2-14,0-2-0], [5:0-1-8,0-2-0], [6:Edge,0-4-2], [12:0-5-0,0-3-0], [16:0-2-12,0-4-4]

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	0.45	Vert(LL)	-0.06	11-12	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.76	Vert(CT)	-0.11	11-12	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.58	Horz(CT)	-0.03	16	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-MS							Weight: 135 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x6 SPF No.2 *Except*
2-13,5-9: 2x4 SPF No.2
WEBS 2x4 SPF No.2
OTHERS 2x4 SPF No.2
WEDGE
Right: 2x4 SPF No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-3-9 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 8-9-12 oc bracing. Except: 6-0-0 oc bracing: 13-14, 2-14
WEBS 1 Row at midpt 1-16, 3-14
JOINTS 1 Brace at Jt(s): 12

REACTIONS. (size) 16=(0-3-8 + bearing block) (req. 0-3-10), 6=(0-3-8 + bearing block) (req. 0-3-9)
Max Horz 6=-377(LC 6)
Max Uplift 16=-774(LC 9), 6=-505(LC 9)
Max Grav 16=2325(LC 1), 6=2285(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-16=-1081/421, 1-2=-390/202, 2-3=-464/230, 3-5=-2189/551, 5-6=-2869/639
BOT CHORD 2-14=-287/127, 12-14=-687/196, 5-11=-60/399, 13-16=-624/2160, 10-13=-703/2440, 9-10=-703/2440, 6-9=-674/2324
WEBS 14-16=-2436/811, 1-14=-494/1252, 3-14=-1899/629, 3-12=-488/1835, 5-12=-862/237

NOTES-
1) 2x6 SPF No.2 bearing block 12" long at jt. 16 attached to front face with 3 rows of 10d (0.131"x3") nails spaced 3" o.c. 12 Total fasteners. Bearing is assumed to be SPF No.2.
2) 2x6 SPF No.2 bearing block 12" long at jt. 6 attached to front face with 3 rows of 10d (0.131"x3") nails spaced 3" o.c. 12 Total fasteners. Bearing is assumed to be SPF No.2.
3) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; 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
4) 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.
5) All plates are 2x4 MT20 unless otherwise indicated.
6) Gable studs spaced at 1-4-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 16=774, 6=505.
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) Use Simpson Strong-Tie LUS24 (4-SD9112 Girder, 2-SD9212 Truss, Single Ply Girder) or equivalent at 3-10-2 from the left end to connect truss(es) to back face of bottom chord.
11) Use Simpson Strong-Tie LUS24 (4-10d Girder, 2-10d Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 5-10-2 from the left end to 11-10-2 to connect truss(es) to back face of bottom chord.
12) Fill all nail holes where hanger is in contact with lumber.

STATE OF MISSOURI
ANDREW THOMAS JOHNSON
NUMBER PE-2017018993
PROFESSIONAL ENGINEER

April 23,2021

Continued on page 2

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage
2820534	B4	GABLE	1	1	I45904363 Job Reference (optional)

NOTES-

13) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 537 lb down and 217 lb up at 2-0-10 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

14) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (plf)

Vert: 1-7=-70, 11-14=-20, 13-16=-20, 9-13=-20, 9-26=-20

Concentrated Loads (lb)

Vert: 14=-537(B) 29=-569(B) 30=-564(B) 31=-532(B) 32=-490(B) 37=-460(B)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
07/26/2021

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage
2820534	B5	GABLE	1	1	I45804364 Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:17:24 2021 Page 1
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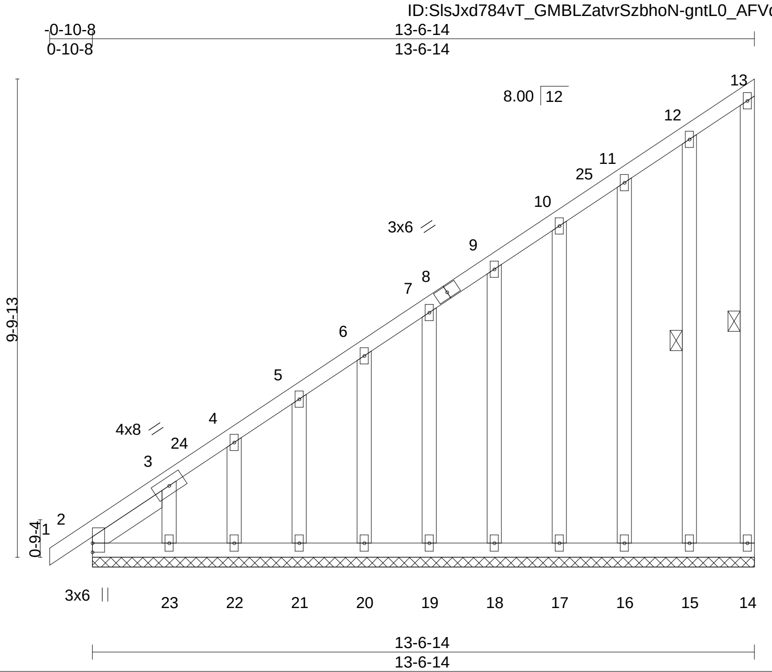

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.05	Vert(LL)	0.00	1	n/r	120	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.01	Vert(CT)	-0.00	1	n/r	120		
BCLL	0.0	Rep Stress Incr	YES	WB	0.10	Horz(CT)	-0.00	14	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S							Weight: 98 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2
OTHERS 2x4 SPF No.2
SLIDER Left 2x4 SPF No.2 -t 1-9-7

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 13-14, 12-15

REACTIONS. All bearings 13-6-14.
(lb) - Max Horz 2=388(LC 12)
Max Uplift All uplift 100 lb or less at joint(s) 14, 2, 15, 16, 17, 18, 19, 20, 21, 22 except 23=-160(LC 12)
Max Grav All reactions 250 lb or less at joint(s) 14, 15, 16, 17, 18, 19, 20, 21, 22, 23 except 2=297(LC 12)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-642/311, 3-4=-490/231, 4-5=-433/204, 5-6=-379/178, 6-7=-324/151, 7-9=-269/124

NOTES-
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-10-8 to 2-1-8, Exterior(2N) 2-1-8 to 13-5-2 zone; cantilever left and right exposed ; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; 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 1-4-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 14, 2, 15, 16, 17, 18, 19, 20, 21, 22 except (jt=lb) 23=160.
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
ANDREW THOMAS JOHNSON
NUMBER PE-2017018993
PROFESSIONAL ENGINEER

April 23,2021

RELEASE FOR CONSTRUCTION
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LEE'S SUMMIT, MISSOURI
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Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage
2820534	CJ1	Jack-Closed Girder	4	1	I45804365 Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:17:25 2021 Page 1
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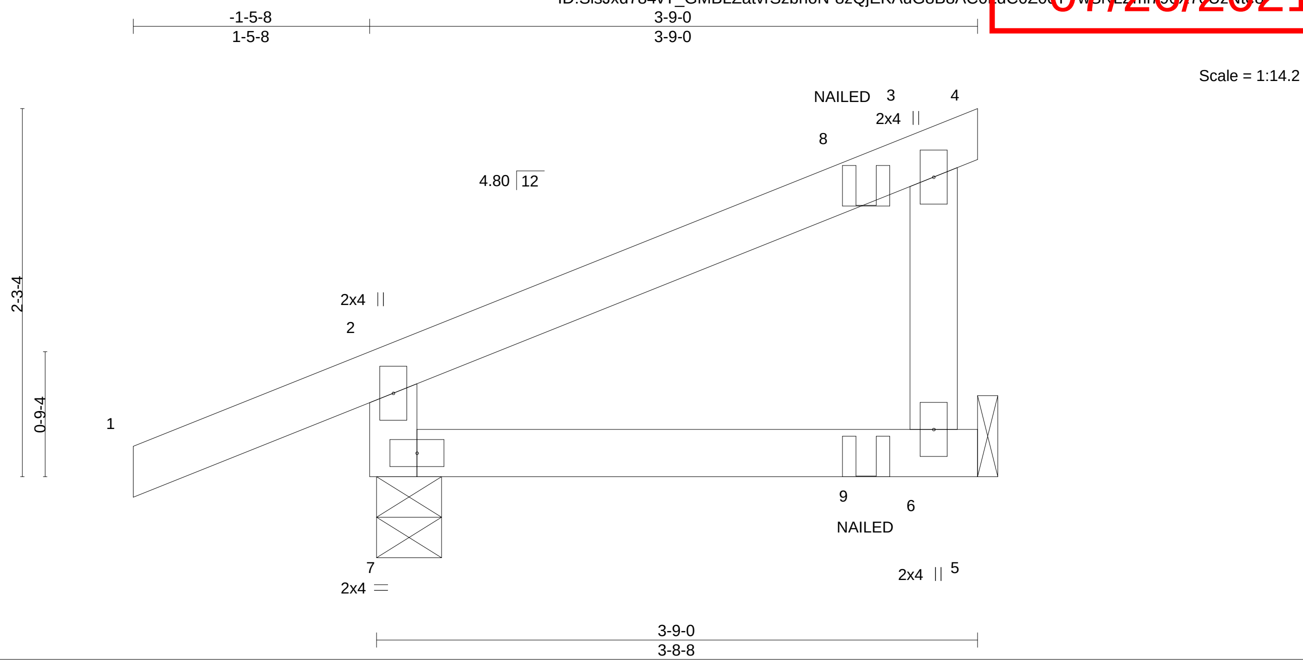

LOADING (psf)		SPACING-		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.20	Vert(LL)	-0.00	6-7	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.08	Vert(CT)	-0.01	6-7	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.00	Horz(CT)	-0.00	6	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-MR							Weight: 13 lb	FT = 20%

Spacing: 2-0-0

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 3-9-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 7=0-4-13, 6=Mechanical
Max Horz 7=95(LC 5)
Max Uplift 7=-86(LC 4), 6=-65(LC 5)
Max Grav 7=291(LC 1), 6=146(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-7=-256/99

NOTES-
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; 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) Refer to girder(s) for truss to truss connections.
4) Bearing at joint(s) 7 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 7, 6.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) "NAILED" indicates 2-12d (0.148"x3.25") toe-nails per NDS guidlines.
8) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-2=-70, 2-3=-70, 3-4=-20, 5-7=-20
Concentrated Loads (lb)
Vert: 8=-1(B) 9=-13(B)

April 23,2021

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage
2820534	CJ2	Jack-Open	2	1	Job Reference (optional)

I45804366

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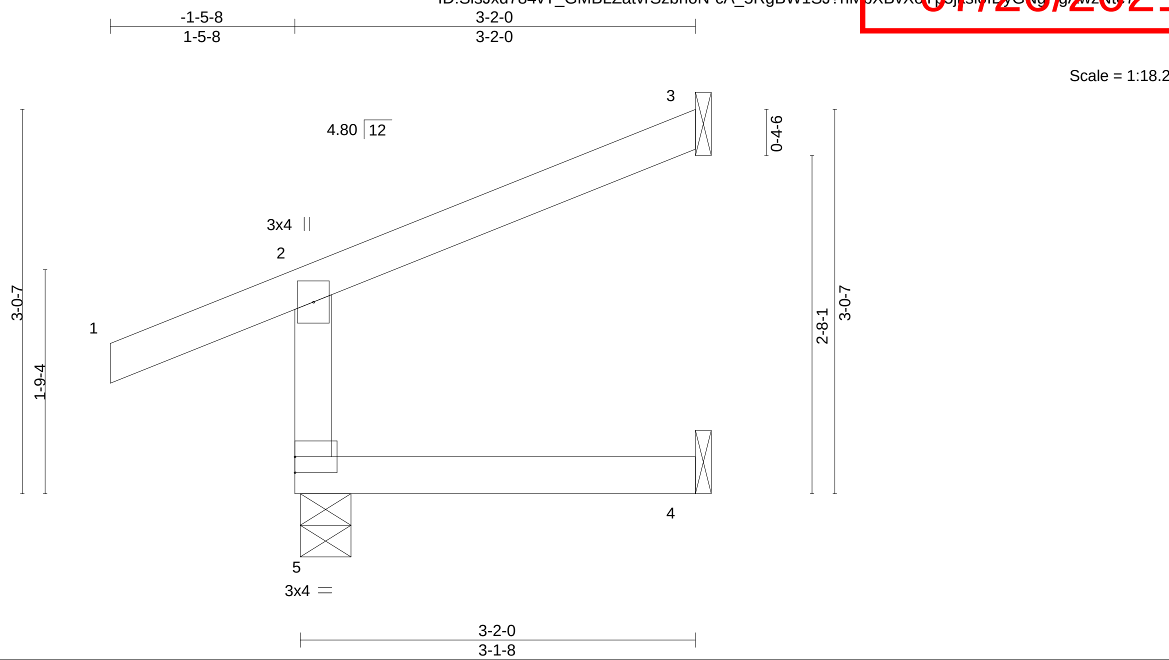

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.19	Vert(LL)	0.01	4-5	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.19	Vert(CT)	-0.01	4-5	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.04	3	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-MR							Weight: 11 lb	FT = 20%

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 3-2-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 5=0-4-13, 3=Mechanical, 4=Mechanical
Max Horz 5=79(LC 9)
Max Uplift 5=-55(LC 8), 3=-54(LC 12), 4=-6(LC 9)
Max Grav 5=276(LC 1), 3=77(LC 1), 4=55(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=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) -1-5-8 to 2-9-7, Exterior(2R) 2-9-7 to 3-1-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Refer to girder(s) for truss to truss connections.
4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 3, 4.
5) 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
ANDREW THOMAS JOHNSON
NUMBER PE-2017018993
PROFESSIONAL ENGINEER

April 23,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage	I45904257
2820534	J1	Jack-Open	18	1	Job Reference (optional)	

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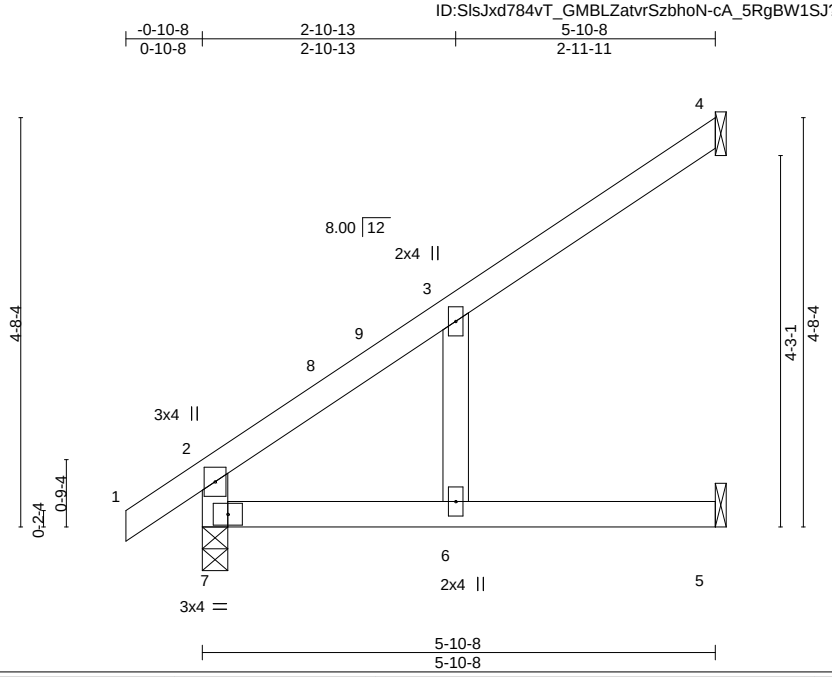

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.31	Vert(LL)	0.11	6	>603	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.42	Vert(CT)	-0.14	6	>494	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.04	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS							Weight: 19 lb	FT = 20%

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, except end verticals.
BOT CHORD Rigid ceiling directly applied.

REACTIONS. (size) 4=Mechanical, 5=Mechanical, 7=0-3-8
Max Horz 7=170(LC 12)
Max Uplift 4=-91(LC 12), 5=-31(LC 12), 7=-17(LC 12)
Max Grav 4=158(LC 19), 5=105(LC 19), 7=333(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=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 5-9-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Refer to girder(s) for truss to truss connections.
4) Bearing at joint(s) 7 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4, 5, 7.
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) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

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MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage
2820534	J2	Half Hip	4	1	I45804368 Job Reference (optional)

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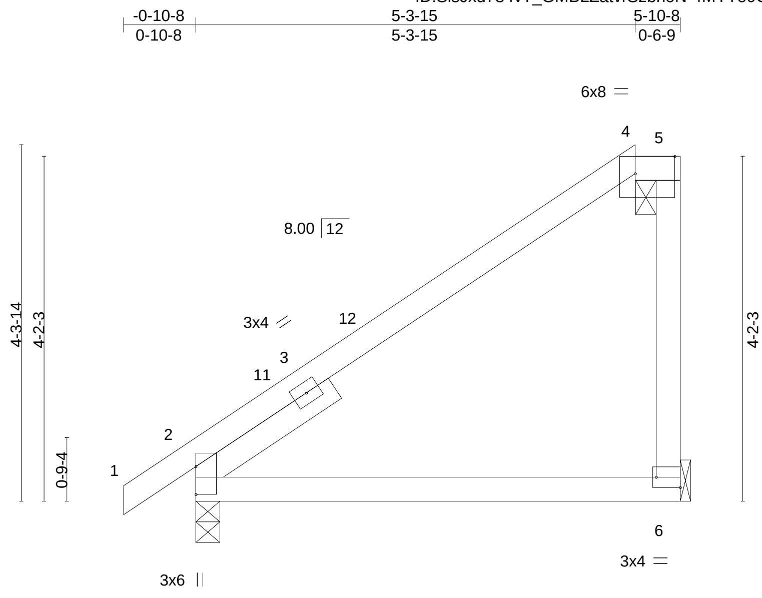

Plate Offsets (X,Y)-- [4:0-5-12,Edge], [6:Edge,0-1-8]

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	0.37	Vert(LL)	0.03	6-9	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.29	Vert(CT)	-0.05	6-9	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.02	2	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-AS							Weight: 22 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2
SLIDER Left 2x4 SPF No.2 -t 2-0-0

BRACING-
TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins: 4-5.
BOT CHORD Rigid ceiling directly applied.

REACTIONS. (size) 6=Mechanical, 2=0-3-8
Max Horz 2=159(LC 11)
Max Uplift 6=-78(LC 12), 2=-52(LC 12)
Max Grav 6=262(LC 19), 2=324(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=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 5-3-15, Exterior(2E) 5-3-15 to 5-8-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 6, 2.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

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Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage
2820534	J3	Half Hip	4	1	I45904369 Job Reference (optional)

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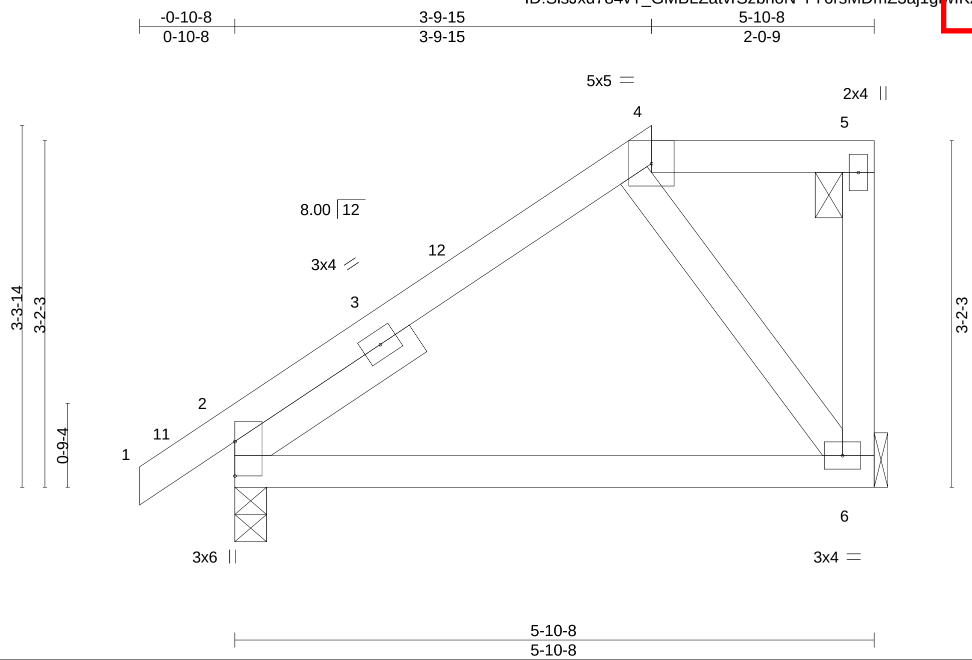

Plate Offsets (X,Y)-- [4:0-0-0,0-0-0]

LOADING (psf)		SPACING-		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.21	Vert(LL)	-0.03	6-9	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.24	Vert(CT)	-0.07	6-9	>931	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.01	2	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-AS							Weight: 25 lb	FT = 20%

SPACING- 2-0-0

LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2
SLIDER Left 2x4 SPF No.2 -t 2-0-0

BRACING-
TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins: 4-5.
BOT CHORD Rigid ceiling directly applied.

REACTIONS. (size) 2=0-3-8, 6=Mechanical
Max Horz 2=119(LC 11)
Max Uplift 2=-59(LC 12), 6=-64(LC 9)
Max Grav 2=324(LC 1), 6=253(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-4=-350/72

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=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 3-9-15, Exterior(2E) 3-9-15 to 5-8-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 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) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
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
ANDREW THOMAS JOHNSON
NUMBER PE-2017018993
PROFESSIONAL ENGINEER

April 23,2021

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage
2820534	J4	Half Hip Girder	4	1	I45804370 Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:17:29 2021 Page 1
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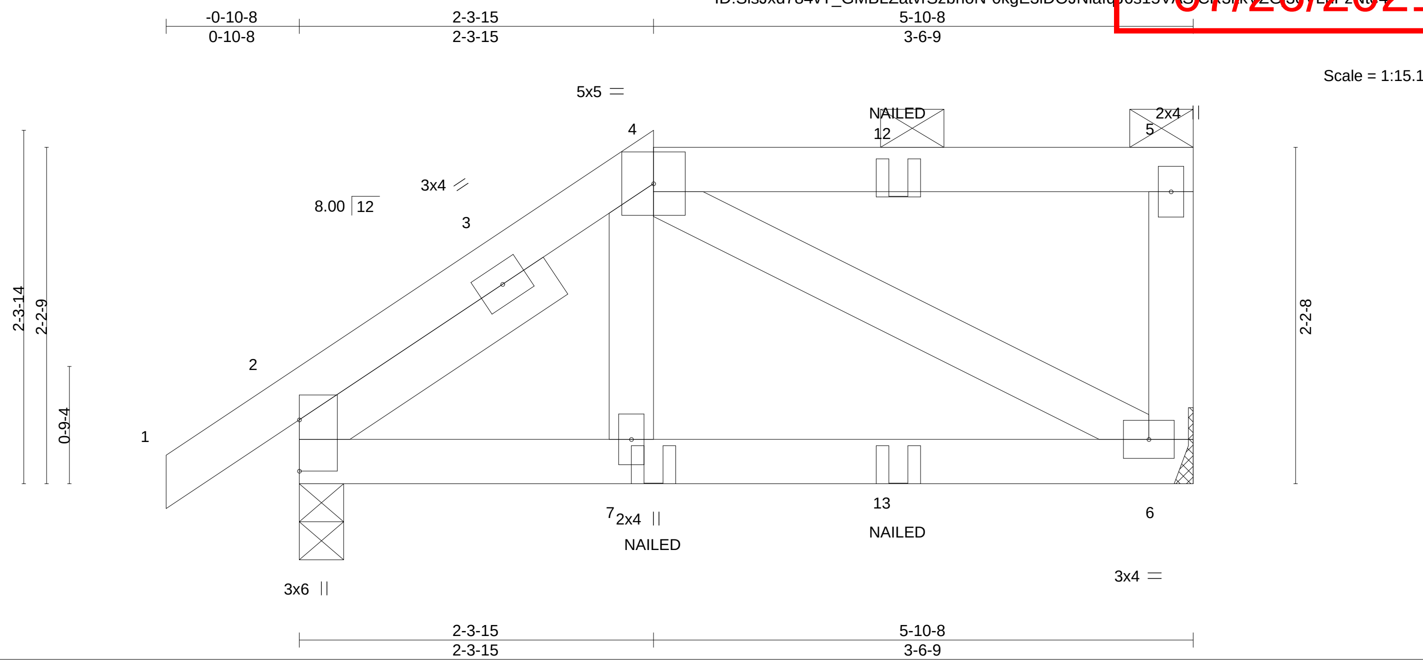

LOADING (psf)		SPACING-		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.29	Vert(LL)	-0.01	6-7	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.18	Vert(CT)	-0.02	6-7	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.09	Horz(CT)	0.00	6	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-MP							Weight: 26 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2
SLIDER Left 2x4 SPF No.2 -t 2-0-0

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

REACTIONS. (size) 2=0-3-8, 6=Mechanical
Max Horz 2=81(LC 7)
Max Uplift 2=-119(LC 8), 6=-115(LC 5)
Max Grav 2=416(LC 1), 6=336(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-4=-373/124
BOT CHORD 2-7=-128/296, 6-7=-124/282
WEBS 4-6=-325/125

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=4.2psf; 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) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=119, 6=115.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
9) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.
10) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-4=-70, 4-5=-70, 6-8=-20
Concentrated Loads (lb)
Vert: 7=-121(B) 12=-27(B) 13=-27(B)

STATE OF MISSOURI
ANDREW THOMAS JOHNSON
NUMBER PE-2017018993
PROFESSIONAL ENGINEER

April 23,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage	I45904371
2820534	J5	Jack-Open	4	1	Job Reference (optional)	

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:17:30 2021 Page 1
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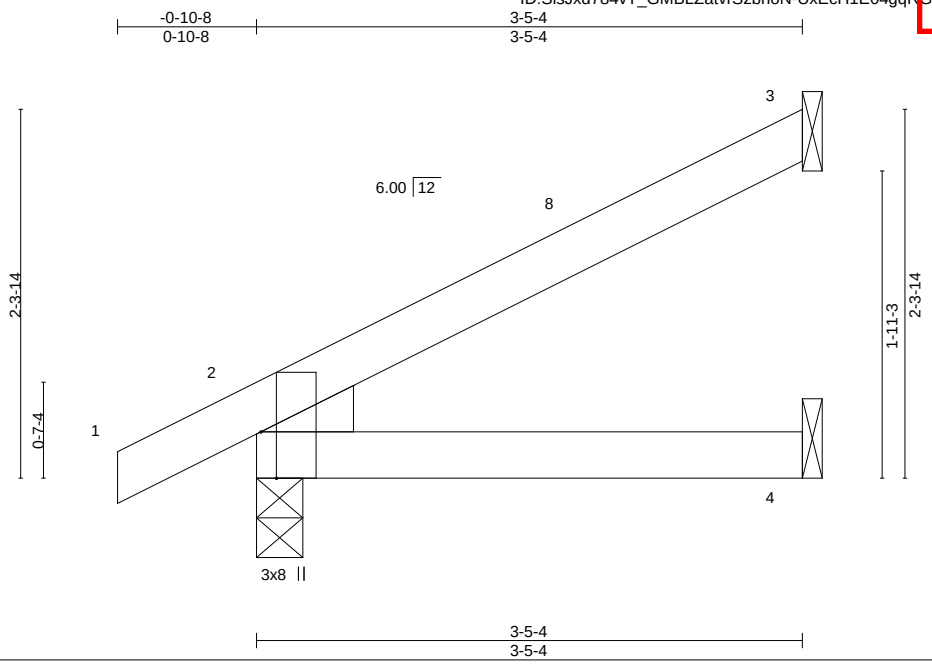

Plate Offsets (X,Y)-- [2:0-3-8,Edge]

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	0.14	Vert(LL)	-0.01	4-7	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.11	Vert(CT)	-0.01	4-7	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-MP							Weight: 10 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEDGE
Left: 2x4 SPF No.2

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

REACTIONS. (size) 3=Mechanical, 2=0-3-8, 4=Mechanical
Max Horz 2=84(LC 12)
Max Uplift 3=-52(LC 12), 2=-34(LC 12), 4=-3(LC 12)
Max Grav 3=97(LC 1), 2=221(LC 1), 4=61(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=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 3-4-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Refer to girder(s) for truss to truss connections.
4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 2, 4.
5) 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
ANDREW THOMAS JOHNSON
NUMBER PE-2017018993
PROFESSIONAL ENGINEER

April 23,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage	I45804372
2820534	J6	Jack-Open	4	1	Job Reference (optional)	

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:17:31 2021 Page 1
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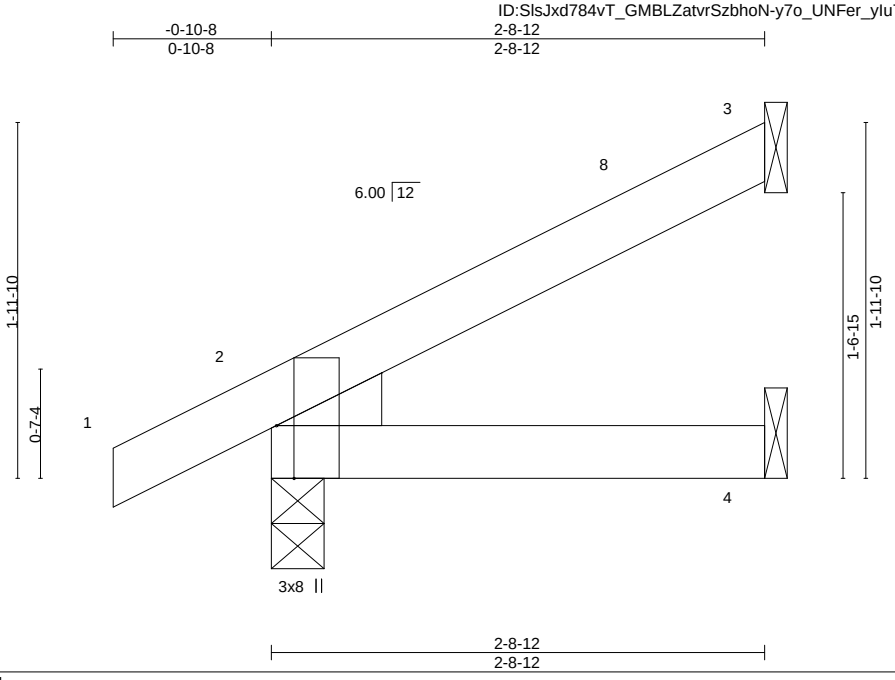

Plate Offsets (X,Y)-- [2:0-3-8,Edge]

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	7	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	-0.01	4-7	>999	180		
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-MP							Weight: 9 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEDGE
Left: 2x4 SPF No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 2-8-12 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 3=Mechanical, 2=0-3-8, 4=Mechanical
Max Horz 2=70(LC 12)
Max Uplift 3=-40(LC 12), 2=-30(LC 12), 4=-4(LC 12)
Max Grav 3=74(LC 1), 2=191(LC 1), 4=47(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=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 2-8-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Refer to girder(s) for truss to truss connections.
4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 2, 4.
5) 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.

April 23,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage	I45904373
2820534	LG1	GABLE	2	1	Job Reference (optional)	

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:17:32 2021 Page 1
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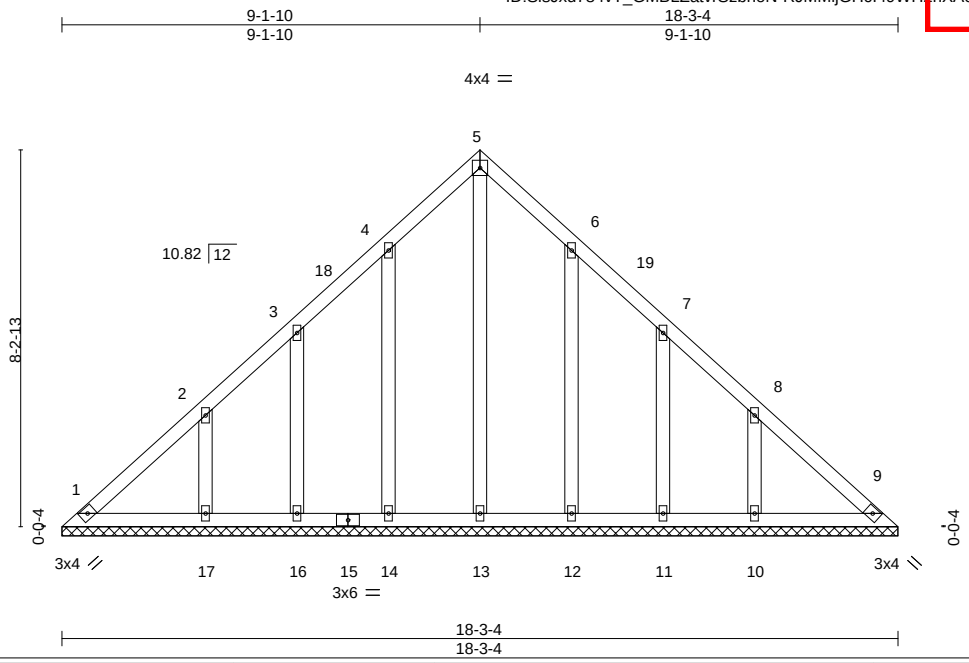

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.09	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.18	Horz(CT)	0.01	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 84 lb	FT = 20%

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 18-3-4.
(lb) - Max Horz 1=-206(LC 8)
Max Uplift All uplift 100 lb or less at joint(s) 1, 9, 16, 11 except 14=-112(LC 12), 17=-153(LC 12), 12=-110(LC 13), 10=-153(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 1, 9, 13, 14, 16, 12, 11 except 17=280(LC 19), 10=279(LC 20)

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=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-4-9 to 3-1-10, Interior(1) 3-1-10 to 9-1-10, Exterior(2R) 9-1-10 to 12-1-10 , Interior(1) 12-1-10 to 17-10-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) All plates are 2x4 MT20 unless otherwise indicated.
4) Gable requires continuous bottom chord bearing.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 9, 16, 11 except (jt=lb) 14=112, 17=153, 12=110, 10=153.
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.

April 23,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
07/26/2021

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage
2820534	LG2	GABLE	1	1	I45904374 Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:17:33 2021 Page 1
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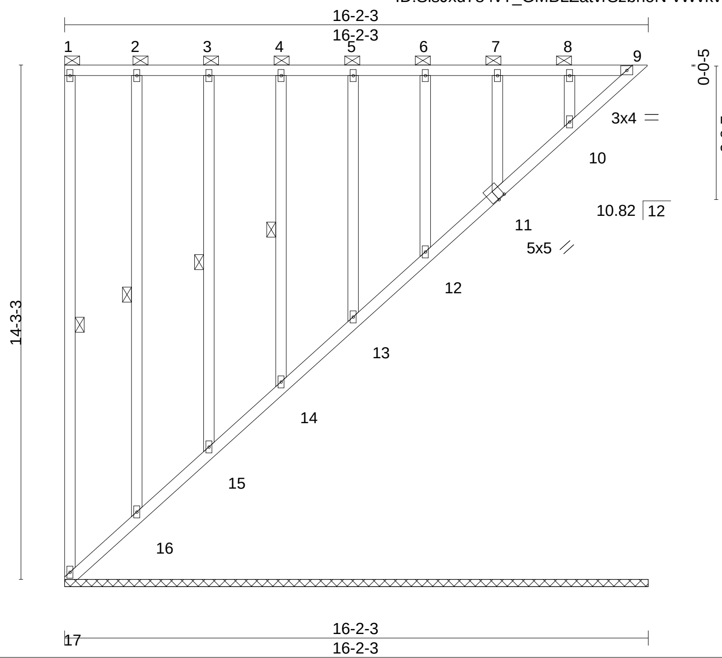

Plate Offsets (X,Y)-- [11:0-2-8,0-0-4]

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	0.05	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	0.12	Horz(CT)	0.00	10	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S							Weight: 113 lb	FT = 20%

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 2-0-0 oc purlins (6-0-0 max.): 1-9, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 1-17, 2-16, 3-15, 4-14

REACTIONS. All bearings 16-2-3.
(lb) - Max Uplift All uplift 100 lb or less at joint(s) 17, 9, 11, 16, 15, 14, 13, 12, 10
Max Grav All reactions 250 lb or less at joint(s) 17, 9, 11, 16, 15, 14, 13, 12, 10

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=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) zone; cantilever left and right exposed ; end vertical right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Provide adequate drainage to prevent water ponding.
3) All plates are 2x4 MT20 unless otherwise indicated.
4) Gable requires continuous bottom chord bearing.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) Bearing at joint(s) 17, 9, 11, 16, 15, 14, 13, 12, 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) 17, 9, 11, 16, 15, 14, 13, 12, 10.
8) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 9, 11, 16, 15, 14, 13, 12, 10.
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
ANDREW THOMAS JOHNSON
NUMBER PE-2017018993
PROFESSIONAL ENGINEER

April 23,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
07/26/2021

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage
2820534	LG3	GABLE	2	1	I45904375 Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:17:34 2021 Page 1
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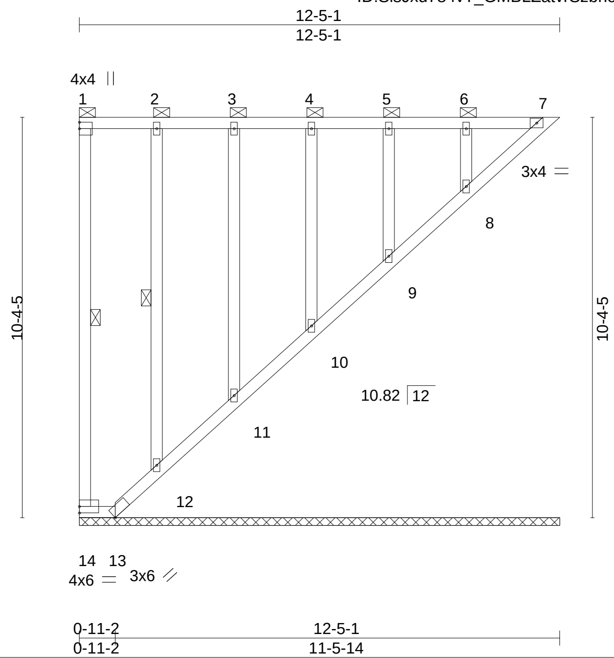

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.60	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.27	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.01	7	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S							Weight: 73 lb	FT = 20%

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 2-0-0 oc purlins (6-0-0 max.): 1-7, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 1-14, 2-12

REACTIONS. All bearings 12-5-1.
(lb) - Max Horz 14=-286(LC 10)
Max Uplift All uplift 100 lb or less at joint(s) 13, 11, 10, 9, 8 except 14=-134(LC 10), 7=-113(LC 9), 12=-113(LC 8)
Max Grav All reactions 250 lb or less at joint(s) 14, 7, 13, 12, 11, 10, 9, 8

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
BOT CHORD 11-12=-259/246, 10-11=-257/243, 9-10=-258/243, 8-9=-258/244, 7-8=-256/238

NOTES-
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Provide adequate drainage to prevent water ponding.
3) All plates are 2x4 MT20 unless otherwise indicated.
4) Gable requires continuous bottom chord bearing.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 13, 11, 10, 9, 8 except (jt=lb) 14=134, 7=113, 12=113.
7) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 7, 12, 11, 10, 9, 8.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

STATE OF MISSOURI
ANDREW THOMAS JOHNSON
NUMBER PE-2017018993
PROFESSIONAL ENGINEER

April 23,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
07/26/2021

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage
2820534	M1	GABLE	1	1	I45804376 Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:17:35 2021 Page 1

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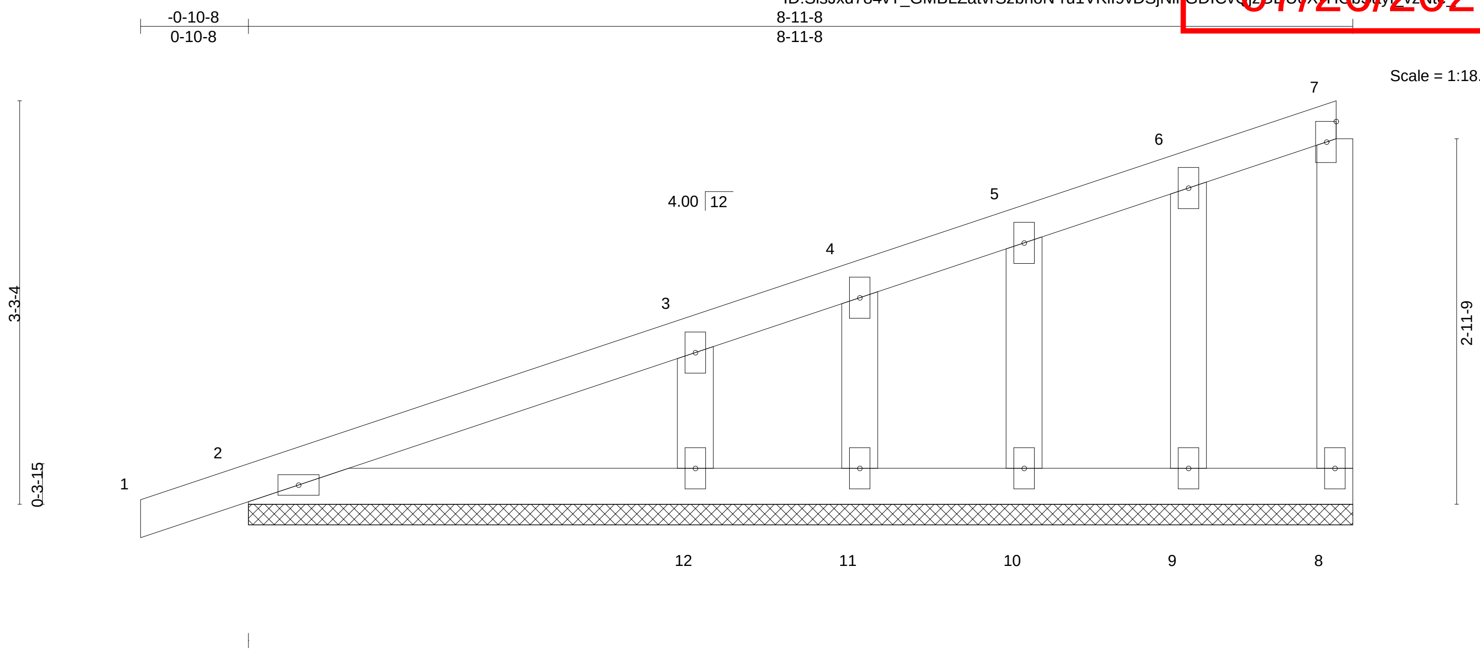

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.15	Vert(LL)	-0.00	1	n/r	120	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.09	Vert(CT)	0.00	1	n/r	120		
BCLL	0.0	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	8	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-P							Weight: 33 lb	FT = 20%

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 8-11-8.
(lb) - Max Horz 2=137(LC 9)
Max Uplift All uplift 100 lb or less at joint(s) 8, 2, 9, 10, 11, 12
Max Grav All reactions 250 lb or less at joint(s) 8, 2, 9, 10, 11 except 12=328(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-257/126
WEBS 3-12=-249/294

NOTES-
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-10-8 to 2-1-8, Exterior(2N) 2-1-8 to 8-9-5 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) 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 1-4-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 8, 2, 9, 10, 11, 12.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

STATE OF MISSOURI
ANDREW THOMAS JOHNSON
NUMBER PE-2017018993
PROFESSIONAL ENGINEER

April 23,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
07/26/2021

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage
2820534	M2	Monopitch	3	1	I45804377 Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:17:36 2021 Page 1
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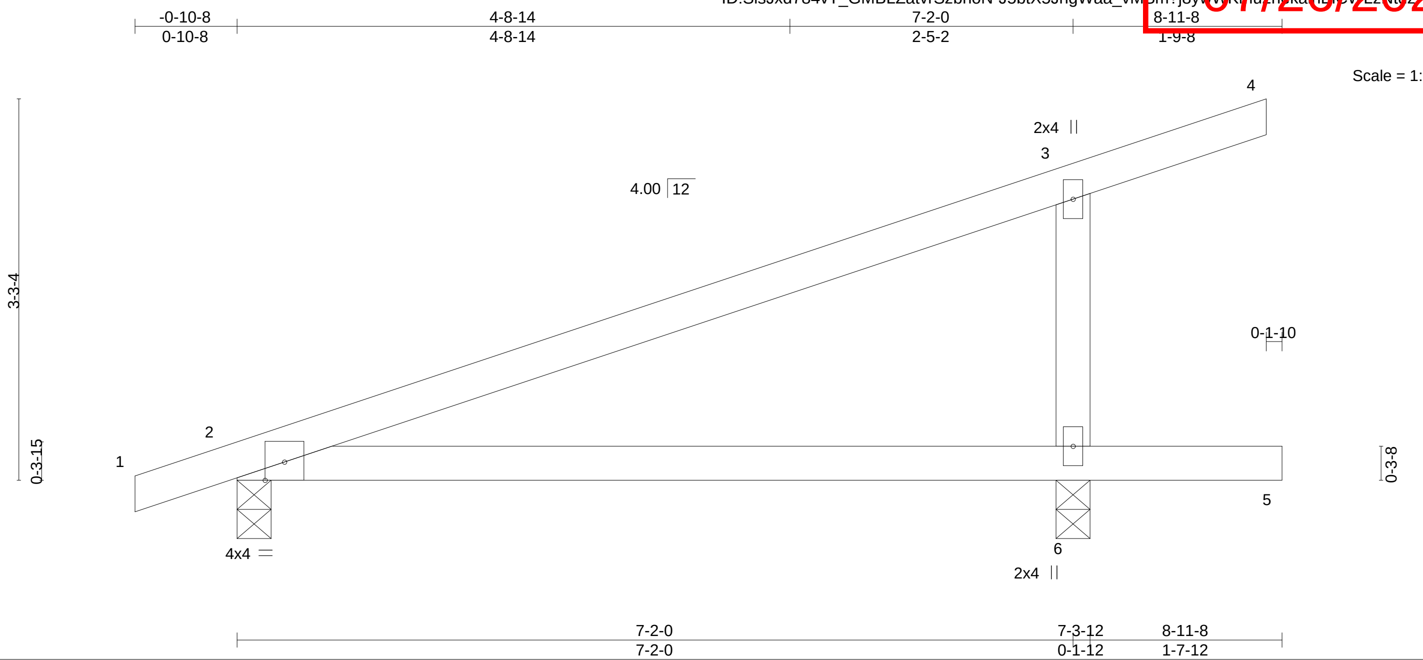

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.61	Vert(LL)	-0.12	6-9	>733	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.48	Vert(CT)	-0.24	6-9	>360	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	2	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-AS							Weight: 24 lb	FT = 20%

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.
BOT CHORD Rigid ceiling directly applied.

REACTIONS. (size) 2=0-3-8, 6=0-3-8
Max Horz 2=133(LC 8)
Max Uplift 2=-86(LC 8), 6=-121(LC 12)
Max Grav 2=370(LC 1), 6=488(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 3-6=-356/306

NOTES-
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 8-9-14 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2 except (jt=lb) 6=121.
4) 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.
5) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

April 23,2021

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage	I45904378
2820534	M3	Monopitch	24	1	Job Reference (optional)	

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:17:36 2021 Page 1
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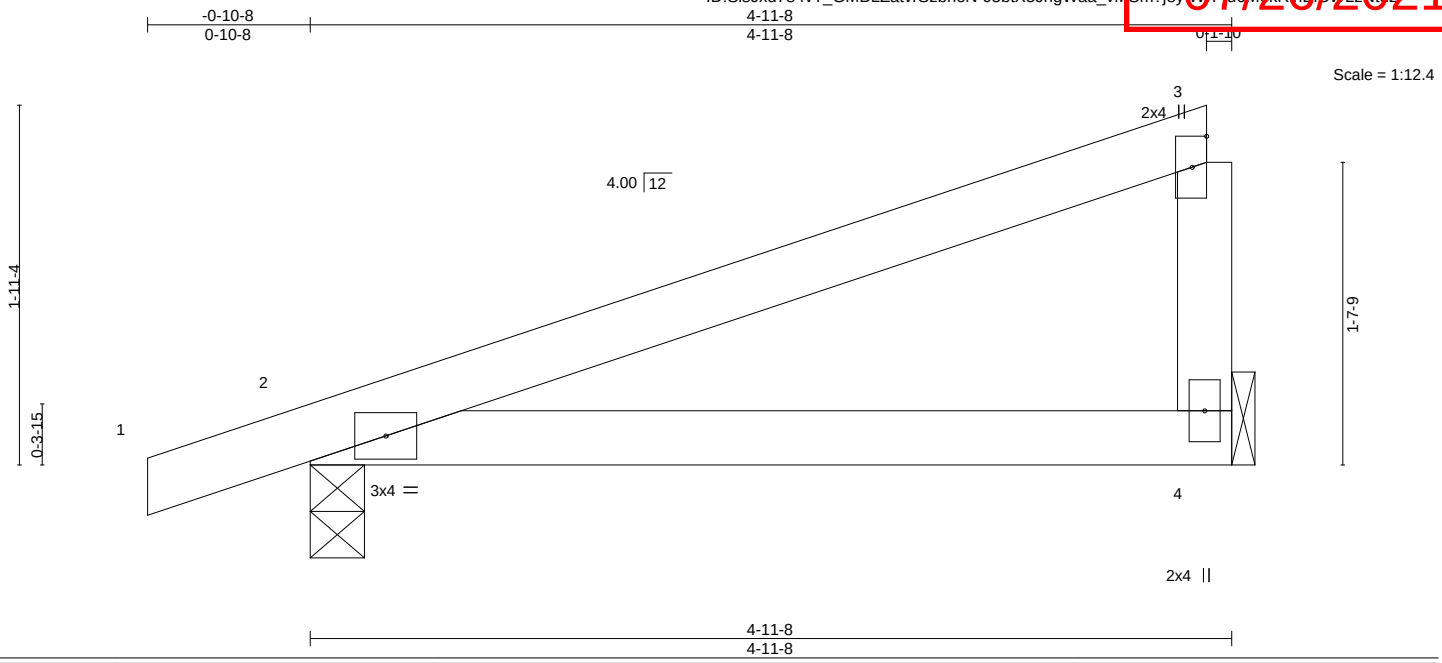

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.29	Vert(LL)	-0.03	4-7	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.24	Vert(CT)	-0.06	4-7	>988	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS							Weight: 14 lb	FT = 20%

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, except end verticals.
BOT CHORD Rigid ceiling directly applied.

REACTIONS. (size) 4=Mechanical, 2=0-3-8
Max Horz 2=79(LC 11)
Max Uplift 4=-53(LC 12), 2=-85(LC 8)
Max Grav 4=211(LC 1), 2=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=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 4-9-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Refer to girder(s) for truss to truss connections.
4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4, 2.
5) 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.
6) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

April 23,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage	I45904379
2820534	M4	GABLE	4	1	Job Reference (optional)	

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:17:37 2021 Page 1
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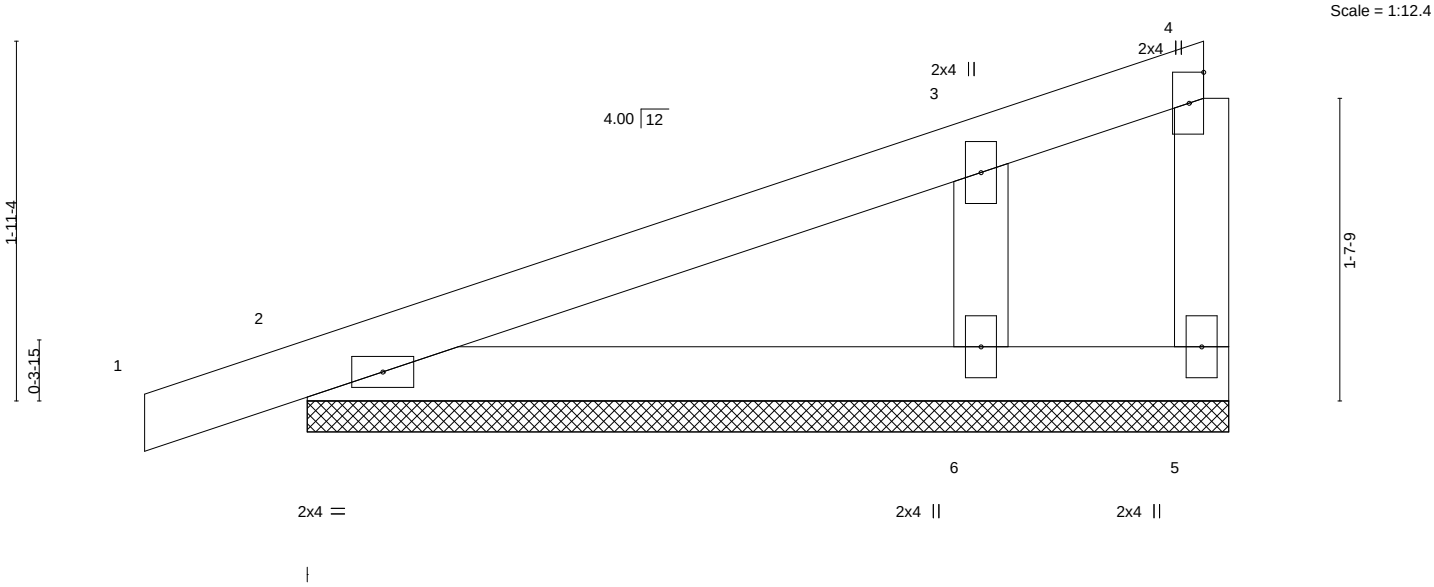

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.15	Vert(LL)	-0.00	1	n/r	120	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.09	Vert(CT)	0.00	1	n/r	120		
BCLL	0.0	Rep Stress Incr	YES	WB	0.07	Horz(CT)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 15 lb	FT = 20%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied or 4-11-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS. (size) 5=4-11-8, 2=4-11-8, 6=4-11-8
Max Horz 2=78(LC 9)
Max Uplift 5=-37(LC 1), 2=-64(LC 8), 6=-89(LC 12)
Max Grav 5=15(LC 12), 2=203(LC 1), 6=326(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 3-6=-249/372

NOTES-
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-10-8 to 2-1-8, Exterior(2N) 2-1-8 to 4-9-5 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) 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 1-4-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 2, 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.

April 23,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage
2820534	M5	GABLE	3	1	I45904380 Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:17:38 2021 Page 1
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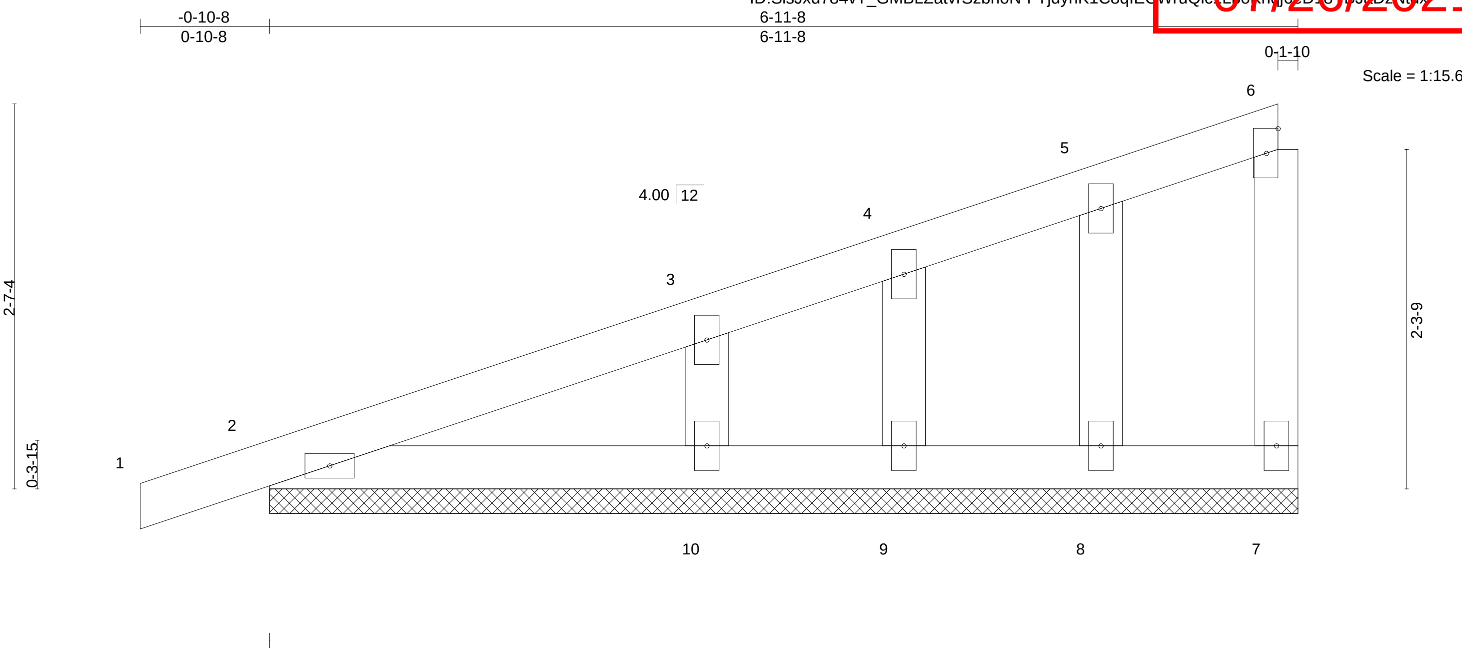

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.09	Vert(LL)	-0.00	1	n/r	120	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	0.00	1	n/r	120		
BCLL	0.0	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	7	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-P							Weight: 24 lb	FT = 20%

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 6-11-8.
(lb) - Max Horz 2=108(LC 9)
Max Uplift All uplift 100 lb or less at joint(s) 7, 2, 8, 9, 10
Max Grav All reactions 250 lb or less at joint(s) 7, 2, 8, 9 except 10=252(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 3-10=-191/258

NOTES-
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-10-8 to 2-1-8, Exterior(2N) 2-1-8 to 6-9-5 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) 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 1-4-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 7, 2, 8, 9, 10.
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.

April 23,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage	I45904281
2820534	M6	Monopitch	9	1	Job Reference (optional)	

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:17:39 2021 Page 1
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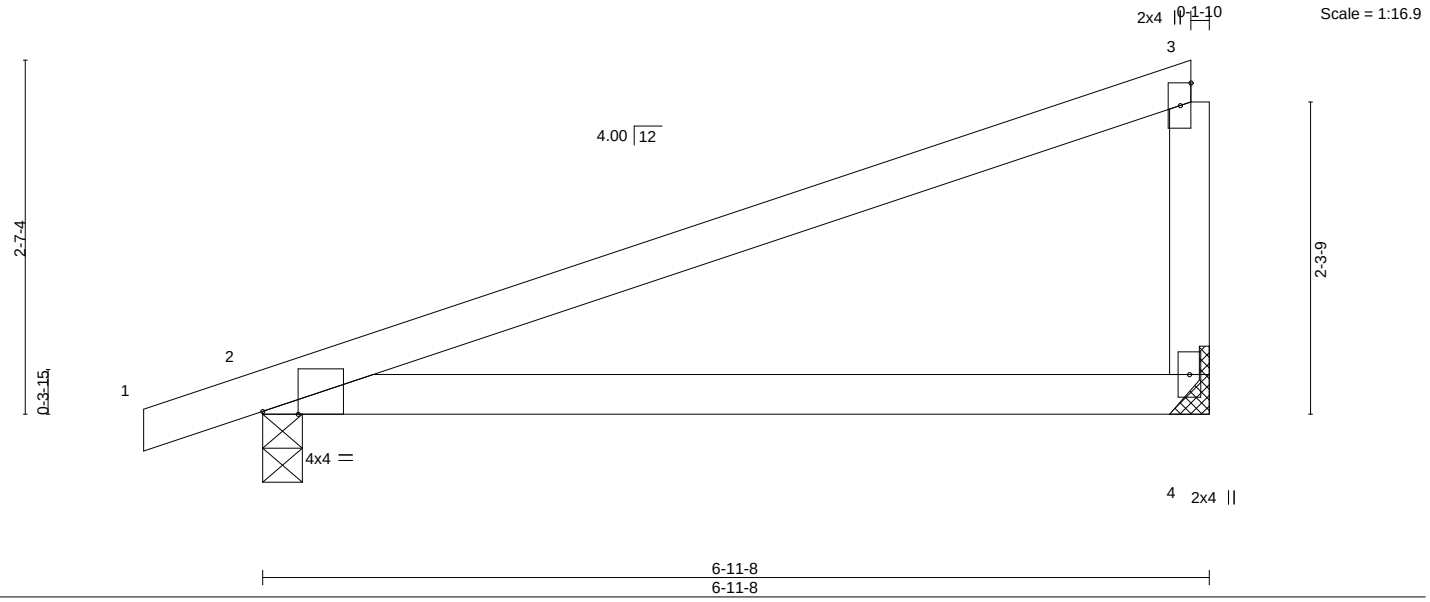


Plate Offsets (X,Y)-- [2:0-3-2,Edge]

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	0.62	Vert(LL)	0.12	4-7	>663	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.48	Vert(CT)	-0.23	4-7	>361	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-AS							Weight: 20 lb	FT = 20%

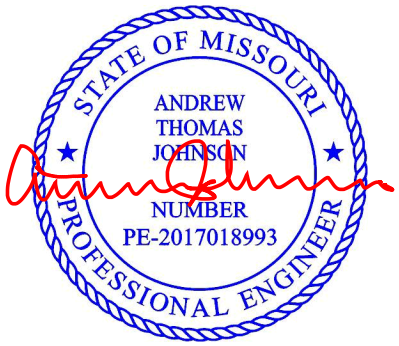
LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD Rigid ceiling directly applied.

REACTIONS. (size) 4=Mechanical, 2=0-3-8
Max Horz 2=108(LC 11)
Max Uplift 4=-76(LC 12), 2=-102(LC 8)
Max Grav 4=303(LC 1), 2=372(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=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 6-9-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Refer to girder(s) for truss to truss connections.
4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4 except (jt=lb) 2=102.
5) 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.
6) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.



April 23,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
07/26/2021

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage
2820534	V1	Valley	1	1	I45904382 Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:17:40 2021 Page 1
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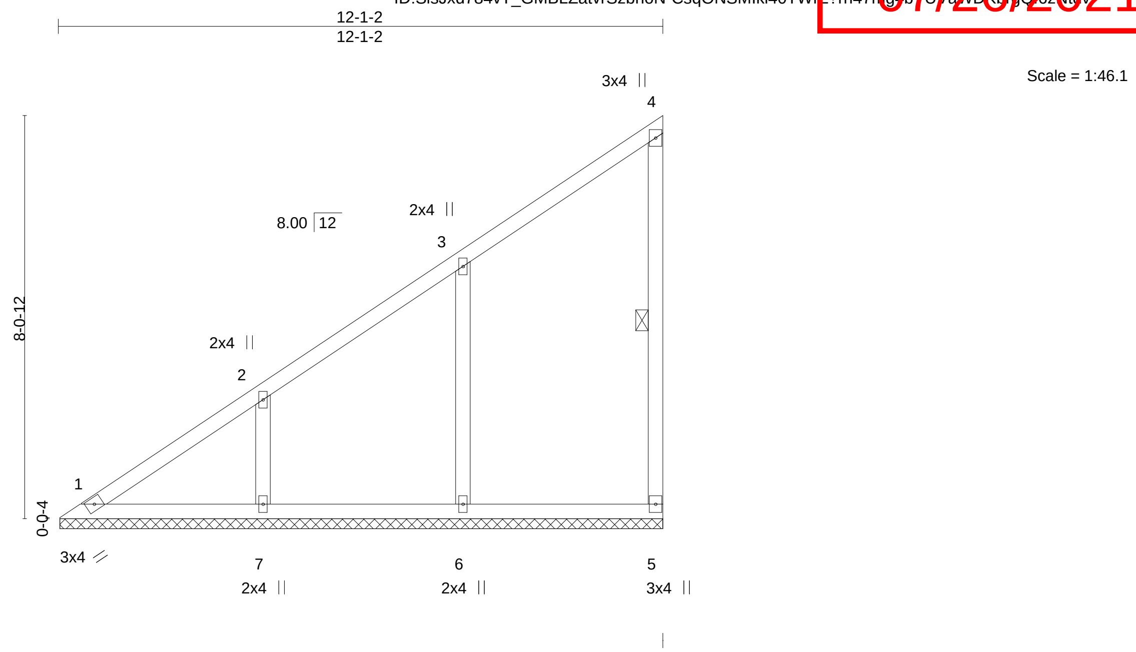

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.36	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.16	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.14	Horz(CT)	-0.00	5	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S							Weight: 46 lb	FT = 20%

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 4-5

REACTIONS. All bearings 12-0-12.
(lb) - Max Horz 1=304(LC 9)
Max Uplift All uplift 100 lb or less at joint(s) 1, 5 except 6=-164(LC 12), 7=-161(LC 12)
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 6=396(LC 19), 7=392(LC 19)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-448/348, 2-3=-317/265
WEBS 3-6=-321/232, 2-7=-298/207

NOTES-
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-5-12 to 3-5-12, Interior(1) 3-5-12 to 11-11-6 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 5 except (jt=lb) 6=164, 7=161.
5) 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.

April 23,2021

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage	I45904283
2820534	V2	Valley	1	1	Job Reference (optional)	

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:17:46 2021 Page 1
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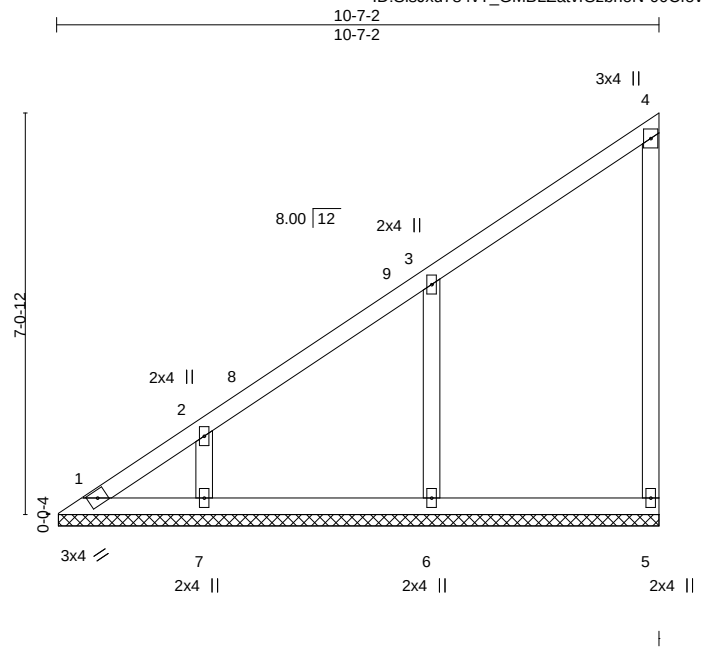

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.29	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.13	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.09	Horz(CT)	-0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 39 lb	FT = 20%

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 10-6-12.
(lb) - Max Horz 1=265(LC 9)
Max Uplift All uplift 100 lb or less at joint(s) 1, 5 except 6=-122(LC 12), 7=-137(LC 12)
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 6=412(LC 19), 7=315(LC 19)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-404/272, 2-3=-319/228
WEBS 3-6=-330/240

NOTES-
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-5-12 to 3-5-12, Interior(1) 3-5-12 to 10-5-6 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 5 except (jt=lb) 6=122, 7=137.
5) 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
ANDREW THOMAS JOHNSON
NUMBER PE-2017018993
PROFESSIONAL ENGINEER

April 23,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage	I45904284
2820534	V3	Valley	1	1	Job Reference (optional)	

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:17:47 2021 Page 1
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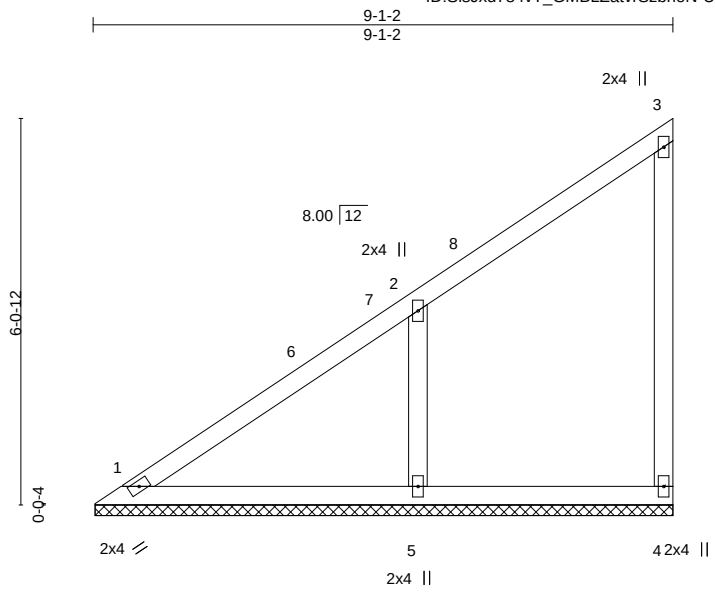

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.28	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.15	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.07	Horz(CT)	-0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 32 lb	FT = 20%

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

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

REACTIONS. (size) 1=9-0-12, 4=9-0-12, 5=9-0-12
Max Horz 1=225(LC 9)
Max Uplift 1=-6(LC 8), 4=-50(LC 9), 5=-179(LC 12)
Max Grav 1=192(LC 20), 4=143(LC 19), 5=489(LC 19)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-333/236
WEBS 2-5=-377/276

NOTES-
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-5-12 to 3-5-12, Interior(1) 3-5-12 to 8-11-6 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 4 except (jt=lb) 5=179.
5) 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.

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Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage	I45904385
2820534	V4	Valley	1	1	Job Reference (optional)	

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:17:48 2021 Page 1
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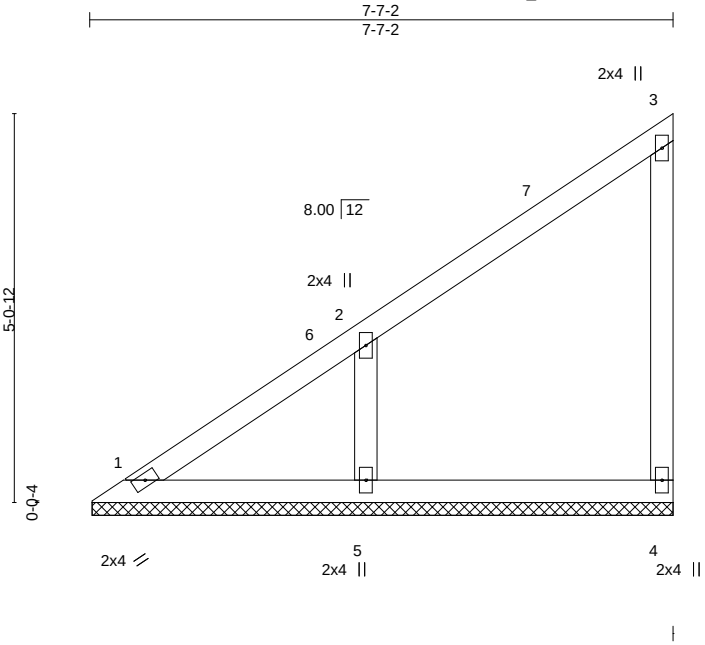

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.21	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.10	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.05	Horz(CT)	-0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 26 lb	FT = 20%

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

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

REACTIONS. (size) 1=7-6-12, 4=7-6-12, 5=7-6-12
Max Horz 1=185(LC 9)
Max Uplift 1=-16(LC 8), 4=-46(LC 9), 5=-162(LC 12)
Max Grav 1=128(LC 20), 4=154(LC 19), 5=410(LC 19)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-313/216
WEBS 2-5=-322/259

NOTES-
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-5-12 to 3-7-2, Interior(1) 3-7-2 to 7-5-6 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 4 except (jt=lb) 5=162.
5) 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.

April 23,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
07/26/2021

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage
2820534	V5	Valley	1	1	I45804386 Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:17:49 2021 Page 1
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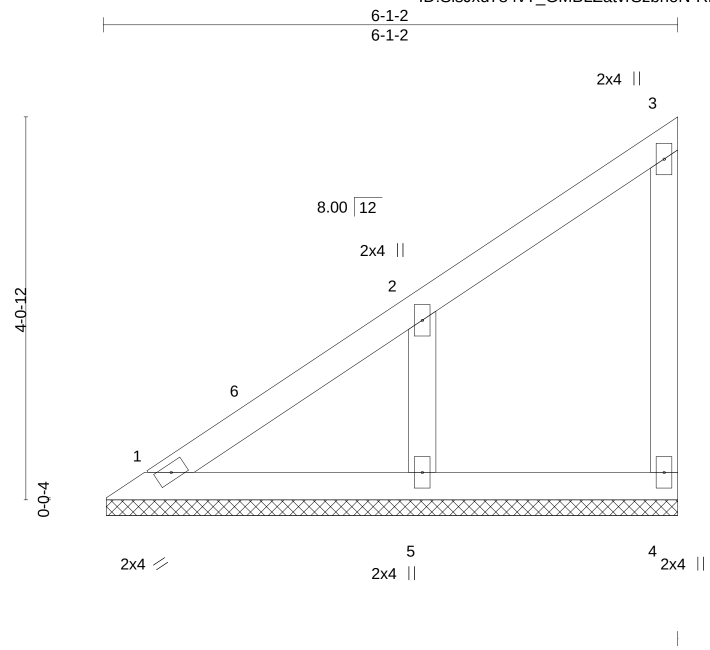

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.13	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-P							Weight: 20 lb	FT = 20%

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

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

REACTIONS. (size) 1=6-0-12, 4=6-0-12, 5=6-0-12
Max Horz 1=145(LC 9)
Max Uplift 1=-6(LC 8), 4=-32(LC 9), 5=-131(LC 12)
Max Grav 1=120(LC 20), 4=95(LC 19), 5=320(LC 19)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-255/175
WEBS 2-5=-251/230

NOTES-
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-5-12 to 3-4-10, Interior(1) 3-4-10 to 5-11-6 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 4 except (jt=lb) 5=131.
5) 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.

April 23,2021

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
07/26/2021

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage
2820534	V6	Valley	1	1	I45804387 Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:17:49 2021 Page 1
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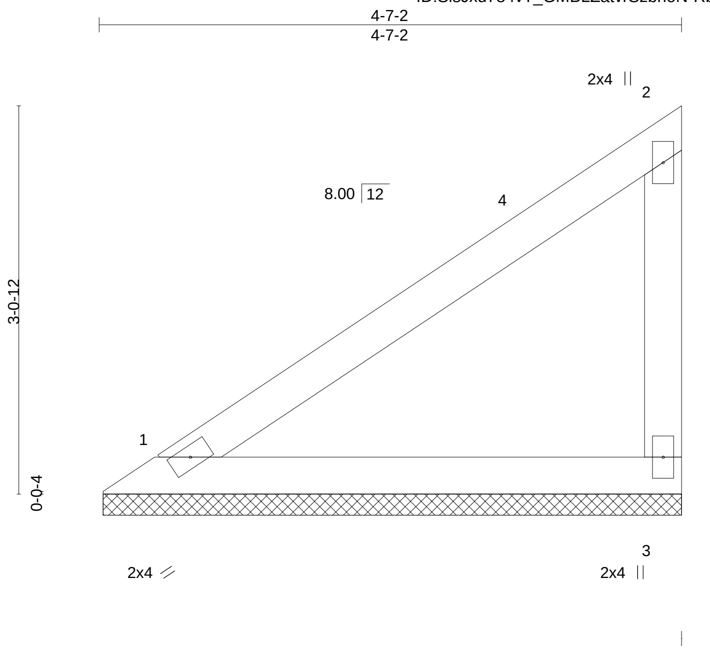

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.30	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.16	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-P							Weight: 14 lb	FT = 20%

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

REACTIONS. (size) 1=4-6-12, 3=4-6-12
Max Horz 1=105(LC 9)
Max Uplift 1=-22(LC 12), 3=-59(LC 12)
Max Grav 1=179(LC 1), 3=192(LC 19)

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=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-5-12 to 3-5-12, Interior(1) 3-5-12 to 4-5-6 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
5) 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.

April 23,2021

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
07/26/2021

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage
2820534	V7	Valley	1	1	I45904388 Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:17:50 2021 Page 1

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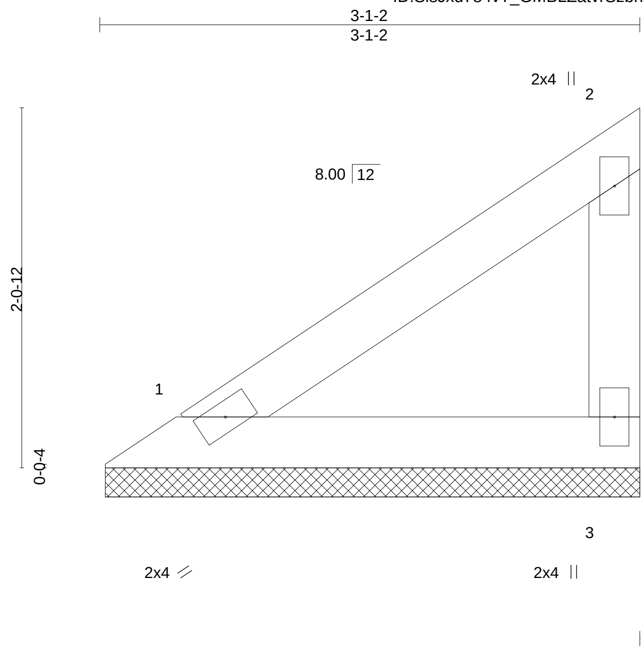

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.11	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-P							Weight: 9 lb	FT = 20%

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 3-1-2 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 1=3-0-12, 3=3-0-12
Max Horz 1=66(LC 9)
Max Uplift 1=-14(LC 12), 3=-37(LC 12)
Max Grav 1=111(LC 1), 3=119(LC 19)

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=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
5) 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.

April 23,2021

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage	I45904389
2820534	V9	Valley	2	1	Job Reference (optional)	

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:17:51 2021 Page 1
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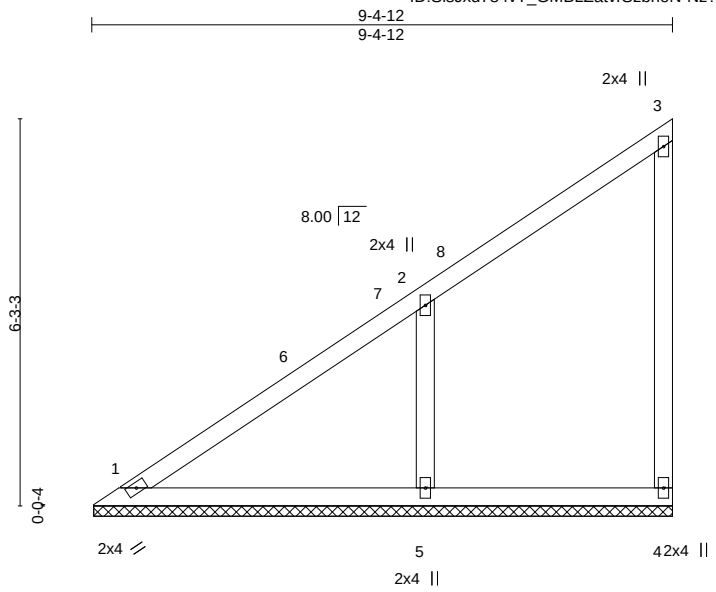

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.31	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.16	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.08	Horz(CT)	-0.00	4	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S							Weight: 33 lb	FT = 20%

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

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

REACTIONS. (size) 1=9-4-6, 4=9-4-6, 5=9-4-6
Max Horz 1=233(LC 9)
Max Uplift 1=-4(LC 8), 4=-50(LC 9), 5=-183(LC 12)
Max Grav 1=203(LC 20), 4=138(LC 19), 5=511(LC 19)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-339/242
WEBS 2-5=-393/281

NOTES-
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-5-12 to 3-5-12, Interior(1) 3-5-12 to 9-3-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 4 except (jt=lb) 5=183.
5) 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
ANDREW THOMAS JOHNSON
NUMBER PE-2017018993
PROFESSIONAL ENGINEER

April 23,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
07/26/2021

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage
2820534	V10	Valley	2	1	I45804390 Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:17:40 2021 Page 1
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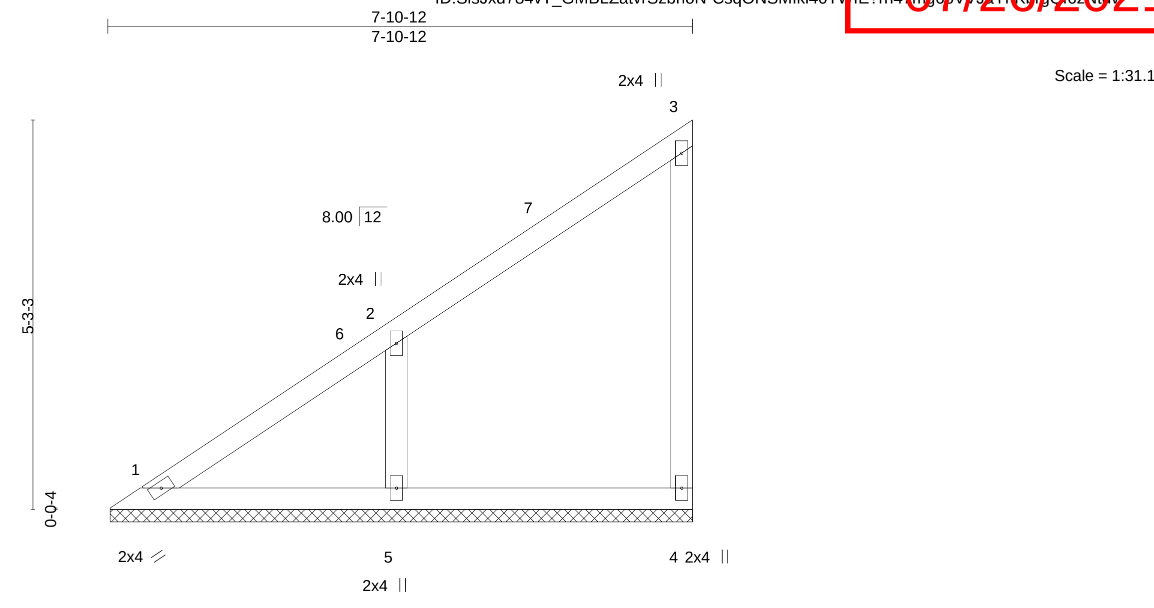

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.22	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.11	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.05	Horz(CT)	-0.00	4	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-P							Weight: 27 lb	FT = 20%

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

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

REACTIONS. (size) 1=7-10-6, 4=7-10-6, 5=7-10-6
Max Horz 1=193(LC 9)
Max Uplift 1=-14(LC 8), 4=-46(LC 9), 5=-165(LC 12)
Max Grav 1=142(LC 20), 4=152(LC 19), 5=425(LC 19)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-318/221
WEBS 2-5=-334/262

NOTES-
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-5-12 to 3-5-12, Interior(1) 3-5-12 to 7-9-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 4 except (jt=lb) 5=165.
5) 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.

April 23,2021

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
07/26/2021

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage
2820534	V11	Valley	2	1	I45804391 Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:17:41 2021 Page 1
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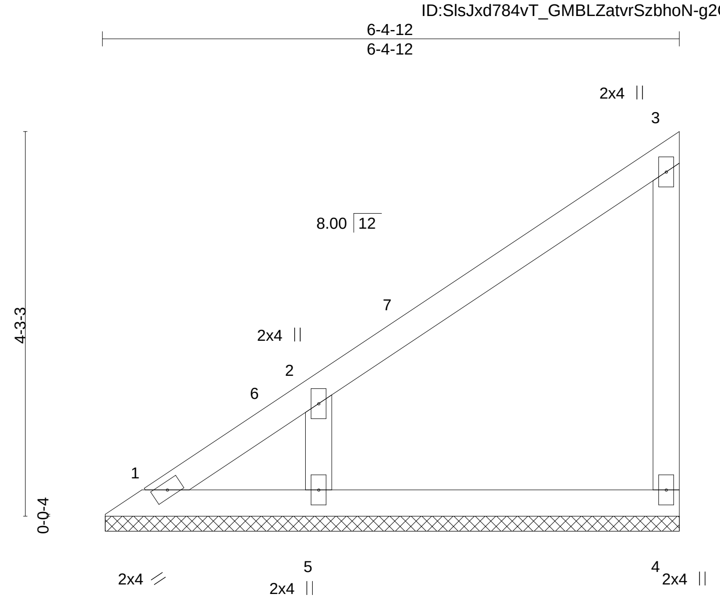

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.18	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.10	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-P							Weight: 21 lb	FT = 20%

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

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

REACTIONS. (size) 1=6-4-6, 4=6-4-6, 5=6-4-6
Max Horz 1=153(LC 9)
Max Uplift 1=-36(LC 10), 4=-42(LC 9), 5=-153(LC 12)
Max Grav 1=78(LC 9), 4=156(LC 19), 5=371(LC 19)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-300/200
WEBS 2-5=-291/259

NOTES-
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-5-12 to 3-5-12, Interior(1) 3-5-12 to 6-3-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 4 except (jt=lb) 5=153.
5) 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.

April 23,2021

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage
2820534	V12	Valley	2	1	I45804392 Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:17:42 2021 Page 1
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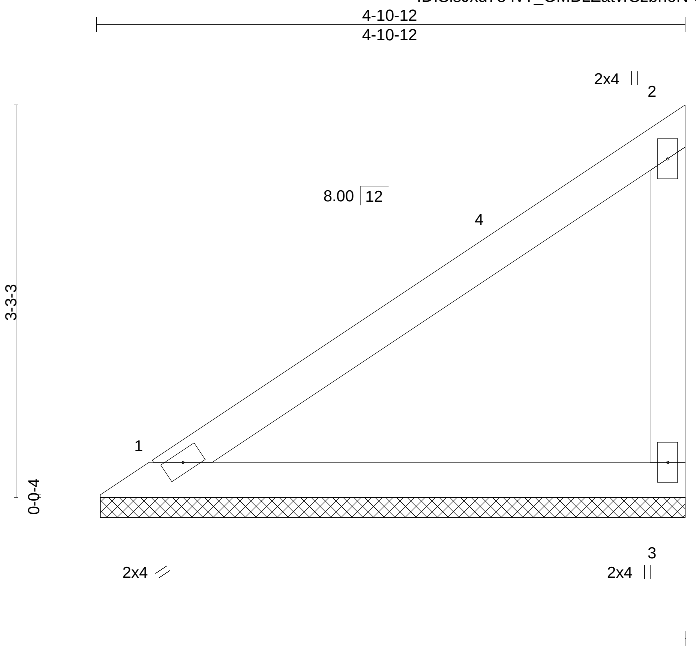

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.35	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.19	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-P							Weight: 15 lb	FT = 20%

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 4-10-12 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 1=4-10-6, 3=4-10-6
Max Horz 1=113(LC 9)
Max Uplift 1=-24(LC 12), 3=-63(LC 12)
Max Grav 1=192(LC 1), 3=206(LC 19)

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=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-5-12 to 3-5-12, Interior(1) 3-5-12 to 4-9-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
5) 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.

April 23,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage
2820534	V13	Valley	2	1	I45804393 Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:17:42 2021 Page 1

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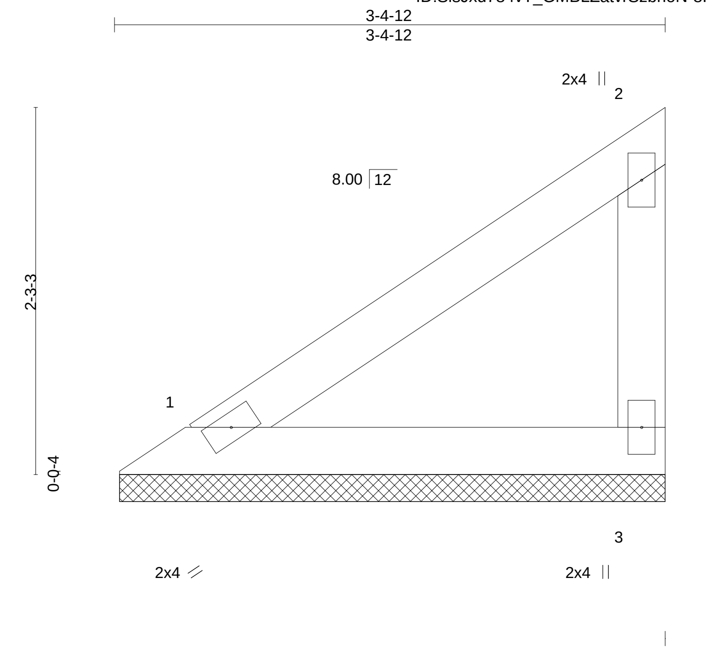

LOADING (psf)		**SPACING-**	2-0-0	**CSI.**		**DEFL.**	in	(loc)	l/defl	L/d	**PLATES**	**GRIP**
TCLL	25.0	Plate Grip DOL	1.15	TC	0.14	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-P							Weight: 10 lb	FT = 20%

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 3-4-12 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 1=3-4-6, 3=3-4-6
Max Horz 1=74(LC 9)
Max Uplift 1=-15(LC 12), 3=-41(LC 12)
Max Grav 1=125(LC 1), 3=134(LC 19)

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=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
5) 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.

April 23,2021

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage	I45904294
2820534	V15	Valley	2	1	Job Reference (optional)	

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:17:44 2021 Page 1
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8-1-15 16-3-14
8-1-15 8-1-15

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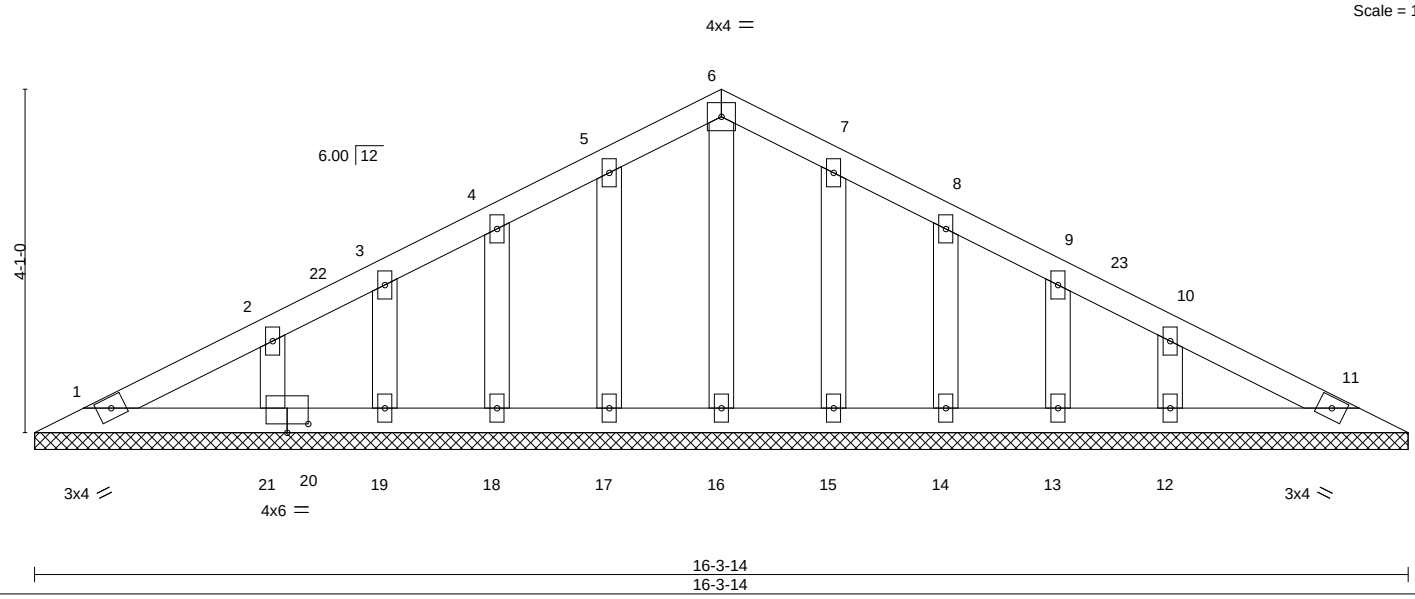

16-3-14
16-3-14

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

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	0.05	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	0.03	Horz(CT)	0.00	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 59 lb	FT = 20%

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 16-3-14.
(lb) - Max Horz 1=66(LC 12)
Max Uplift All uplift 100 lb or less at joint(s) 1, 17, 18, 19, 21, 15, 14, 13, 12
Max Grav All reactions 250 lb or less at joint(s) 1, 11, 16, 17, 18, 19, 21, 15, 14, 13, 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=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) 0-7-7 to 3-7-7, Exterior(2N) 3-7-7 to 8-1-15, Corner(3R) 8-1-15 to 11-1-15, Exterior(2N) 11-1-15 to 15-8-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable studs spaced at 1-4-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 17, 18, 19, 21, 15, 14, 13, 12.
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.

April 23,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage	I45904395
2820534	V16	Valley	2	1	Job Reference (optional)	

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:17:45 2021 Page 1
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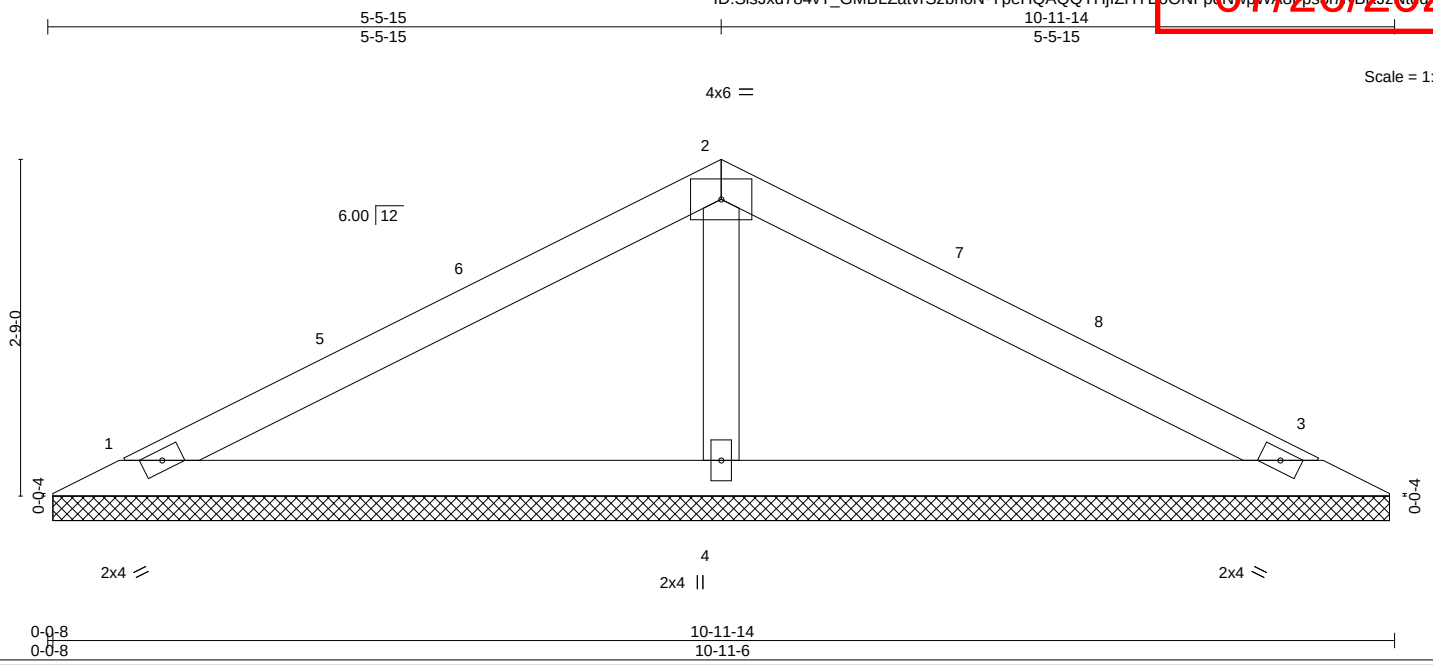

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.33	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.20	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 27 lb	FT = 20%

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

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

REACTIONS. (size) 1=10-10-14, 3=10-10-14, 4=10-10-14
Max Horz 1=43(LC 12)
Max Uplift 1=-47(LC 12), 3=-55(LC 13), 4=-51(LC 12)
Max Grav 1=202(LC 25), 3=202(LC 26), 4=477(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 2-4=-330/192

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-7-9 to 3-7-9, Interior(1) 3-7-9 to 5-5-15, Exterior(2R) 5-5-15 to 8-5-15, Interior(1) 8-5-15 to 10-4-5 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3, 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.

April 23,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
07/26/2021

Job	Truss	Truss Type	Qty	Ply	Summit/#10 Osage
2820534	V17	Valley	2	1	I45804396 Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Mar 22 2021 MiTek Industries, Inc. Fri Apr 23 09:17:45 2021 Page 1
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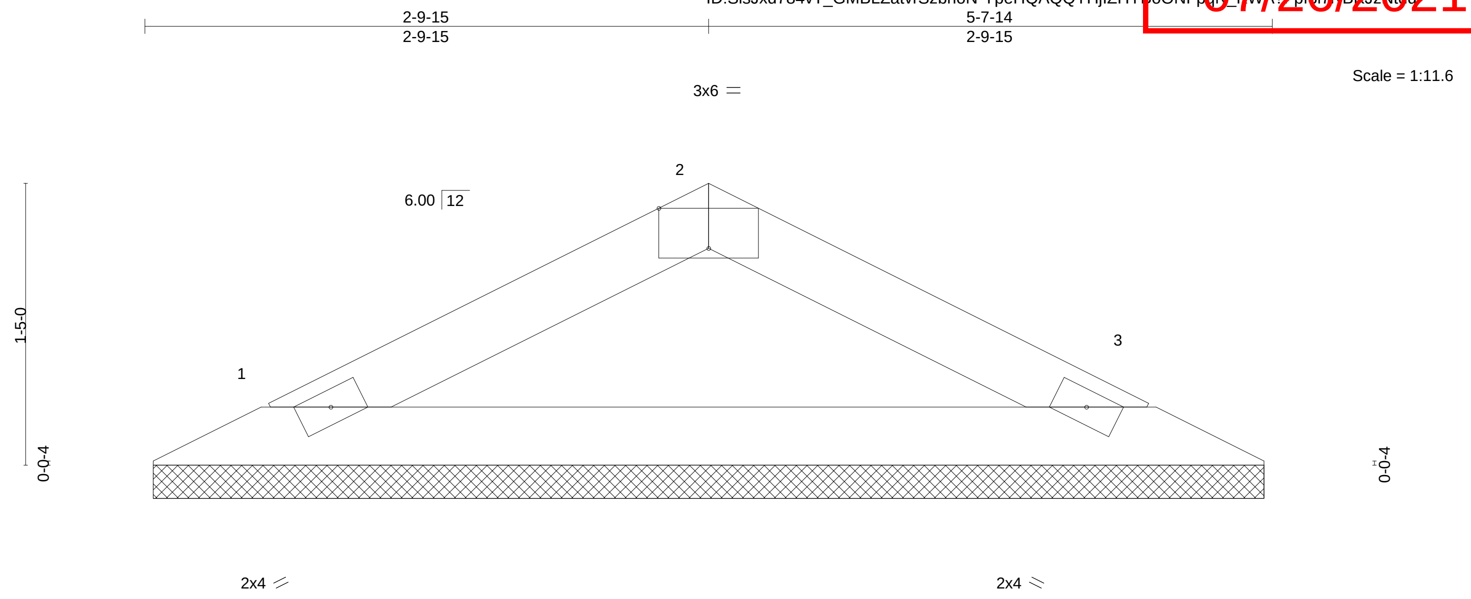


Plate Offsets (X,Y)-- [2:0-3-0,Edge]

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	0.11	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	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-P							Weight: 12 lb	FT = 20%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-7-14 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 1=5-6-14, 3=5-6-14
Max Horz 1=19(LC 16)
Max Uplift 1=-33(LC 12), 3=-33(LC 13)
Max Grav 1=198(LC 1), 3=198(LC 1)

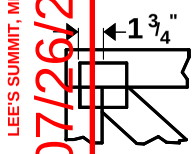
FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

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=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 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) 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.

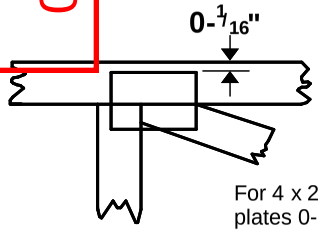
April 23,2021

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.

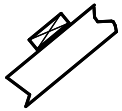
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

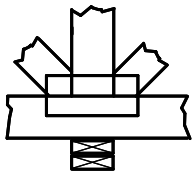
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

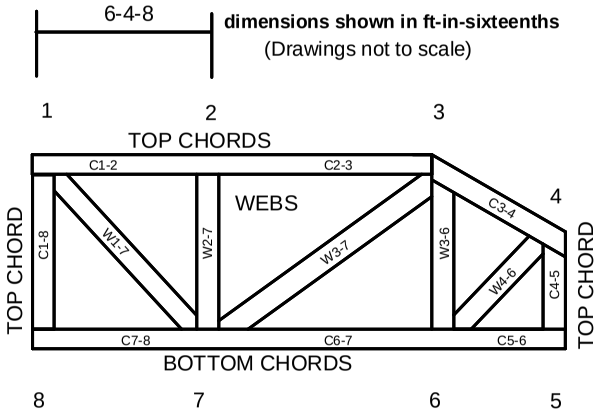


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

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.