

MiTek USA, Inc.

MiTek USA, Inc.
400 Sunrise Avenue, Suite 270
Roseville, CA 95661
Telephone 916-755-3571

Re: 1930952
Trank

The truss drawing(s) referenced below have been prepared by MiTek USA, Inc. under my direct supervision based on the parameters provided by Timber Roots MTD-Dolores, CO.

Pages or sheets covered by this seal: R61573046 thru R61573055

My license renewal date for the state of Colorado is October 31, 2021.



March 17, 2020

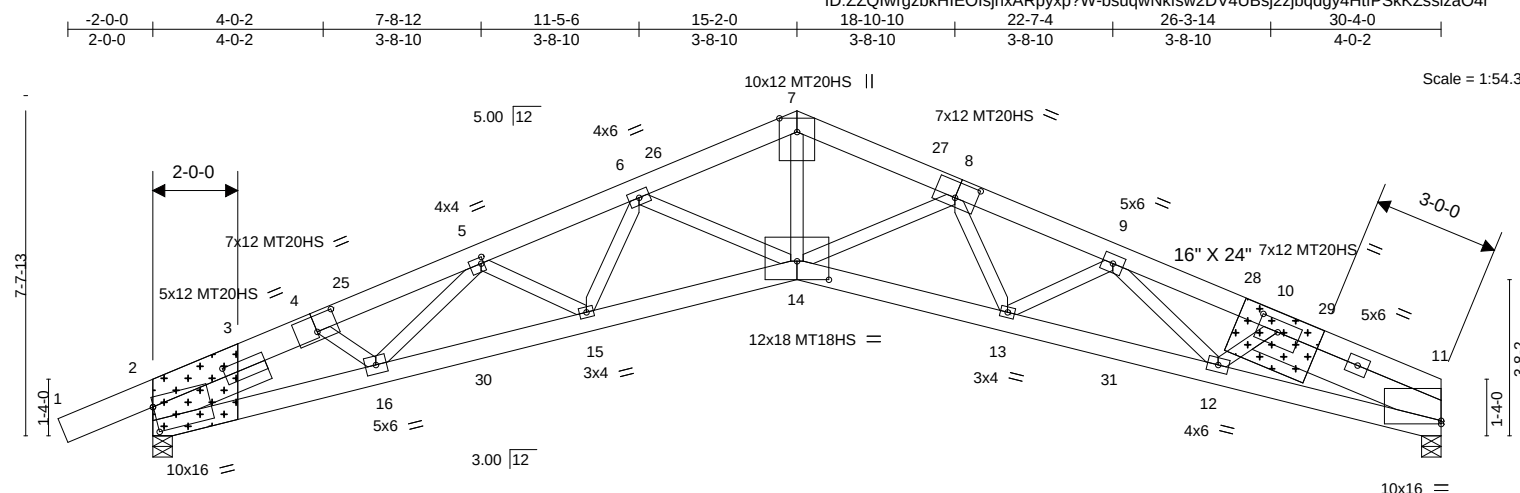
Dyer, Cecil

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

Job	Truss	Truss Type	Qty	Ply	Trunk	R61573046
1930952	T01_REF	SCISSORS	11	1		

BFS, Grand Junction, Co 81501

8.240 e Feb 7 2020 MiTek Industries, Inc. Mon Mar 16 08:33:28 2020 Page 1
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REPAIR: MODIFY LOADS AS SHOWN IN NOTES.

ATTACH 1/2" PLYWOOD OR OSB GUSSET (15/32" RATED SHEATHING 32/16 EXP 1) TO EACH FACE OF TRUSS WITH (0.131" X 2.5" MIN.) NAILS PER THE FOLLOWING NAIL SCHEDULE: 2 X 3'S - 2 ROWS, 2 X 4'S - 3 ROWS, 2 X 6'S AND LARGER - 4 ROWS: SPACED @ 4" O.C. NAILS TO BE DRIVEN FROM BOTH FACES. STAGGER SPACING FROM FRONT TO BACK FACE FOR A NET 2" O.C. SPACING IN EACH COVERED TRUSS MEMBER. USE 2" MEMBER END DISTANCE.

	5-3-0	10-2-8	15-2-0	20-1-8	25-1-0	30-4-0		
	5-3-0	4-11-8	4-11-8	4-11-8	4-11-8	5-3-0		
Plate Offsets (X,Y)--	[2:1-10-5,0-2-8],	[2:0-0-2,0-7-4],	[4:0-6-0,0-4-8],	[5:0-0-12,0-1-12],	[8:0-6-0,0-4-8],	[10:0-5-12,0-3-4],	[11:0-0-0,0-0-15],	[14:0-9-0,0-5-4]

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof) 20.0	Plate Grip DOL 1.00	TC 0.93	Vert(LL) -0.81	14	>451	240	MT20	185/144
Snow (Pf) 100.0	Lumber DOL 1.00	BC 0.96	Vert(CT) -0.97	14	>376	240	MT20HS	139/111
TCDL 10.0	Rep Stress Incr NO	WB 0.94	Horz(CT) 0.62	11	n/a	n/a	MT18HS	185/144
BCLL 0.0 *	Code IRC2018/TPI2014	Matrix-MS					Weight: 184 lb	FT = 20%
BCDL 10.0								

LUMBER-	BRACING-	[PSA]
TOP CHORD 2x6 HF/SPF 1650F 1.5E *Except*	TOP CHORD Structural wood sheathing directly applied or 1-6-15 oc purlins.	
1-4: 2x8 DF 1950F 1.7E	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.	
BOT CHORD 2x6 SPF 2100F 1.8E		
WEBS 2x4 HF/SPF 1650F 1.5E		
SLIDER Left 2x6 HFSPF 1650F 1.5E 2-11-12, Right 2x8 DF 1950F 1.7E 4-9-0		

REACTIONS.	(lb/size)	2=4189/0-5-8 (min. 0-5-4), 11=3691/0-5-8 (min. 0-4-11)
	Max Horz	2=102(LC 16)
	Max Uplift	2=-42(LC 16), 11=-15(LC 17)
	Max Grav	2=4337(LC 23), 11=3849(LC 24)
FORCES.	(lb)	Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD	1-2=0/342, 2-3=-1756/484, 3-4=-8711/86, 4-25=-9069/63, 5-25=-8995/76, 5-6=-10282/52, 6-26=-8804/5, 7-26=-8699/21, 7-27=-8699/27, 8-27=-8811/11, 8-9=-10373/19, 9-28=-9342/34, 10-28=-9452/18, 10-29=-1138/38, 11-29=-1363/30	
BOT CHORD	2-16=-129/7501, 16-30=-88/10017, 15-30=-75/10047, 14-15=-9/9371, 13-14=0/9447, 13-31=0/10133, 12-31=0/10103, 11-12=-10/8174	
WEBS	7-14=0/5767, 8-14=-2119/120, 8-13=-97/740, 9-13=-522/383, 9-12=-1795/19, 10-12=0/959, 6-14=-2045/109, 6-15=-89/772, 5-15=-546/369, 5-16=-2158/26, 4-16=0/1288	

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -2-1-6 to 1-0-10, Interior(1) 1-0-10 to 15-2-0, Exterior(2R) 15-2-0 to 18-2-6, Interior(1) 18-2-6 to 30-4-0 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
 - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.00 Plate DOL=1.00); Pf=100.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
 - Unbalanced snow loads have been considered for this design.
 - This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 100.0 psf on overhangs non-concurrent with other live loads.
 - All plates are MT20 plates unless otherwise indicated.
 - The Fabrication Tolerance at joint 12 = 18%, joint 10 = 17%, joint 15 = 17%, joint 5 = 18%
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
 - Bearing at joint(s) 2, 11 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 42 lb uplift at joint 2 and 15 lb uplift at joint 11.



March 17, 2020

Continued on page 2

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



MiTek USA, Inc.
400 Sunrise Avenue, Suite 270
Roseville, CA 95661

Job	Truss	Truss Type	Qty	Ply	Trunk	R61573046
1930952	T01_REF	SCISSORS	11	1	Job Reference (optional)	

- NOTES-**
- 12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 13) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 45 lb down and 1 lb up at 7-7-0, and 45 lb down and 1 lb up at 15-2-0, and 45 lb down and 1 lb up at 22-9-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

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

Uniform Loads (plf)

Vert: 1-7=-220, 7-11=-220, 14-17=-20, 14-21=-20

Concentrated Loads (lb)

Vert: 14=-45 30=-45 31=-45

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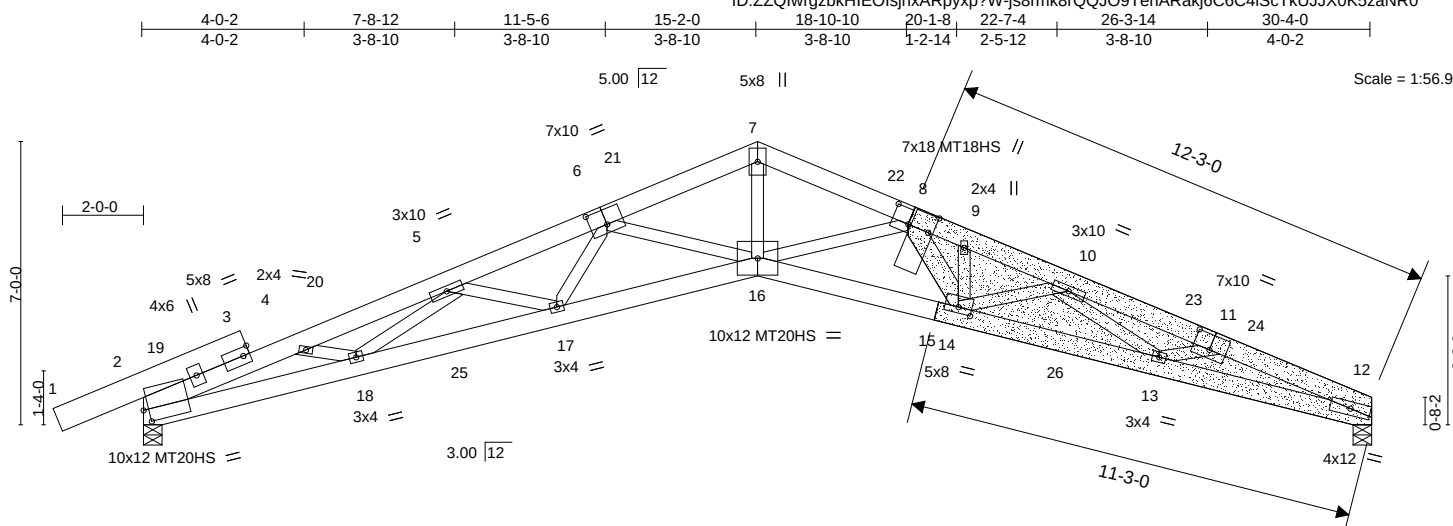


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Job	Truss	Truss Type	Qty	Ply	Trunk	R61573047
1930952	T01GE_R1	SCISSORS	1	2	Job Reference (optional)	

BFS, Grand Junction, Co 81501

8.240 e Feb 7 2020 MiTek Industries, Inc. Mon Mar 16 09:18:05 2020 Page 1
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REPAIR: MODIFY LOADS AS SHOWN IN NOTES.



SHOP FABRICATE SCAB TRUSS (SHOWN AS SHADED AREA ON TRUSS DESIGN DRAWING) USING THE LUMBER AND PLATES INDICATED. ATTACH SCAB TRUSS TO EACH FACE OF EXISTING TRUSS WITH (0.131" X 3") NAILS (INTO ALL ALIGNING MEMBERS) PER THE FOLLOWING NAIL SCHEDULE: 2 x 4's - 2 ROWS, 2 x 6'S AND LARGER - 3 ROWS: SPACED @ 3" O.C. USE 2" MEMBER END DISTANCE.

	5-3-0	10-2-8	15-2-0	20-1-8	25-1-0	30-4-0
	5-3-0	4-11-8	4-11-8	4-11-8	4-11-8	5-3-0
Plate Offsets (X,Y)--	[2:0-1-9,0-3-12], [6:0-5-0,0-4-8], [8:0-5-3,0-1-7], [8:0-1-8,0-0-0], [11:0-5-0,0-4-8], [12:0-0-0,0-0-0], [14:0-4-0,0-1-12]					

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL 1.00	TC	0.93	Vert(LL)	-0.69 16 >518 240	MT20	185/144
Snow (Pf)	100.0	Lumber DOL 1.00	BC	0.84	Vert(CT)	-0.84 16 >431 240	MT20HS	139/108
TCDL	10.0	Rep Stress Incr NO	WB	0.58	Horz(CT)	0.57 12 n/a n/a	MT18HS	185/148
BCLL	0.0 *	Code IRC2018/TP12014	Matrix-S				Weight: 336 lb	FT = 20%
BCDL	10.0							

LUMBER-

TOP CHORD 2x6 HF/SPF 1650F 1.5E *Except*
11-12: 2x6 SPF 2100F 1.8E, 1-3: 2x8 DF 1950F 1.7E
BOT CHORD 2x6 SPF 2100F 1.8E
WEBS 2x4 HF/SPF 1650F 1.5E *Except*
9-14: 2x4 SPF Stud, 8-14: 2x6 HF/SPF 1650F 1.5E

REACTIONS. (lb/size) 2=4175/0-5-8 (min. 0-2-10), 12=3649/0-5-8 (min. 0-2-5)
Max Horz 2=83(LC 16)
Max Uplift 2=46(LC 16), 12=16(LC 17)
Max Grav 2=4333(LC 23), 12=3814(LC 24)

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

TOP CHORD 2-19=-12852/82, 3-19=-12767/85, 3-4=-12482/100, 4-20=-13277/41, 5-20=-13214/53,
5-6=-13166/24, 6-21=-10612/0, 7-21=-10507/0, 7-22=-10506/0, 8-22=-10606/0,
8-9=-12985/0, 9-10=-13234/0, 10-23=-13376/0, 11-23=-13451/0, 11-24=-13066/47,
12-24=-13369/36

BOT CHORD 2-18=-142/11456, 18-25=-87/13680, 17-25=-74/13711, 16-17=0/11875, 15-16=0/11864,
14-15=0/11845, 14-26=0/13645, 13-26=0/13614, 12-13=-14/12005

WEBS 7-16=0/7108, 8-16=-2865/128, 10-14=-1223/105, 10-13=-1182/38, 11-13=0/876,
6-16=-2891/122, 6-17=0/1168, 5-17=-1403/105, 5-18=-1458/59, 4-18=0/1140,
9-14=-264/21, 8-14=-18/1376

NOTES-

- 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, 2x6 - 2 rows staggered at 0-7-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Webs connected as follows: 2x4 - 1 row at 0-9-0 oc, 2x6 - 2 rows staggered at 0-9-0 oc.
- 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.
- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed;
MWFRS (envelope) gable end zone and C-C Exterior(2E) -2-1-6 to 0-11-0, Interior(1) 0-11-0 to 15-2-0, Exterior(2R) 15-2-0 to 18-2-6,
Interior(1) 18-2-6 to 30-1-4 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
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.00 Plate DOL=1.00); Pf=100.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0;
Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 100.0 psf on overhangs non-concurrent with other live loads.
- All plates are MT20 plates unless otherwise indicated.
- N/A

Continued on page 1
30-Minutes on page 1
This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



March 17, 2020



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Job	Truss	Truss Type	Qty	Ply	Trunk	R61573047
1930952	T01GE_R1	SCISSORS	1	2	Job Reference (optional)	

BFS, Grand Junction, Co 81501

8.240 e Feb 7 2020 MiTek Industries, Inc. Mon Mar 16 09:18:05 2020 Page 2
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NOTES-

- 11) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 12) Bearing at joint(s) 2, 12 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 46 lb uplift at joint 2 and 16 lb uplift at joint 12.
- 14) Following joints to be plated by qualified designer: Joint(s) 8, not plated.
- 15) 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.
- 16) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 45 lb down and 1 lb up at 7-7-0, and 45 lb down and 1 lb up at 15-2-0, and 45 lb down and 1 lb up at 22-9-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

- 1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
 - Uniform Loads (plf)
 - Vert: 1-7=-220, 7-12=-220, 2-16=-20, 12-16=-20
 - Concentrated Loads (lb)
 - Vert: 16=-45 25=-45 26=-45

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.

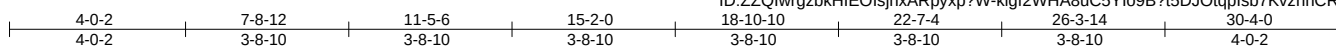
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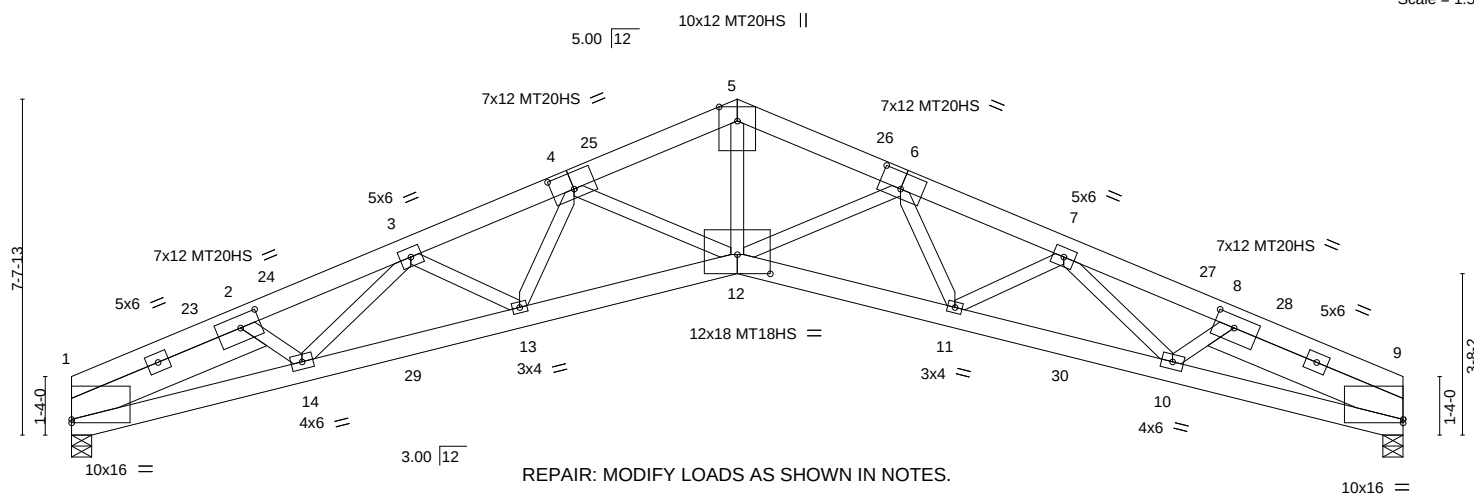
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8.240 e Feb 7 2020 MiTek Industries, Inc. Mon Mar 16 09:49:57 2020 Page 1
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Scale = 1:52.5



REPAIR: MODIFY LOADS AS SHOWN IN NOTES.

NO REPAIR REQUIRED.

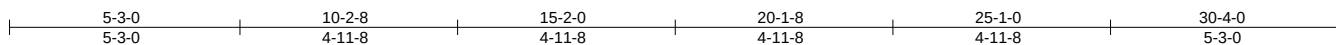


Plate Offsets (X,Y)-- [1:Edge,0-0-15], [2:0-5-8,0-3-4], [4:0-6-0,0-4-8], [6:0-6-0,0-4-8], [8:0-5-8,0-3-4], [9:0-0-0,0-0-15], [12:0-9-0,0-5-4]

LUMBER-
TOP CHORD 2x6 HF/SPF 1650F 1.5E
BOT CHORD 2x6 SPF 2100F 1.8E
WEBS 2x4 HF/SPF 1650F 1.5E
SLIDER Left 2x8 DF 1950F 1.7E 4-9-0, Right 2x8 DF 1950F 1.7E 4-9-0

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 2-1-6 oc purlins.	[PSA]
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.	

REACTIONS.

(lb/size) 1=3708/0-5-8 (min. 0-4-11), 9=3708/0-5-8 (min. 0-4-11)
 Max Horz 1=-78(LC 21)
 Max Uplift 1=-15(LC 16), 9=-15(LC 17)
 Max Grav 1=3855(LC 22), 9=3855(LC 23)

FORCES.

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

TOP CHORD	1-23=-1364/37, 2-23=-1139/44, 2-24=-9469/75, 3-24=-9359/89, 3-4=-10397/55, 4-25=-8886/5, 5-25=-8775/21, 5-26=-8775/28, 6-26=-8886/12, 6-7=-10397/20, 7-27=-9359/33, 8-27=-9469/18, 8-28=-1139/37, 9-28=-1364/30
BOT CHORD	1-14=-136/8188, 14-29=-92/10123, 13-29=-79/10154, 12-13=-15/9512, 11-12=0/9512, 11-30=0/10154, 10-30=0/10123, 9-10=-10/8188
WEBS	5-12=0/5823, 6-12=-2118/120, 6-11=-103/738, 7-11=-518/391, 7-10=-1802/19, 8-10=0/968, 4-12=-2118/111, 4-13=-103/738, 3-13=-518/391, 3-14=-1802/14, 2-14=0/968

NOTES-

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDD=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-0-0 to 3-0-6, Interior(1) 3-0-6 to 15-2-0, Exterior(2R) 15-2-0 to 18-2-6, Interior(1) 18-2-6 to 30-4-0 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) TCDL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.00 Plate DOL=1.00); Pf=100.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) All plates are MT20 plates unless otherwise indicated.
- 6) The Fabrication Tolerance at joint 10 = 18%, joint 14 = 18%
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 9) Bearing at joint(s) 1, 9 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 15 lb uplift at joint 1 and 15 lb uplift at joint 9.
- 11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



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Continued on page 2



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Job	Truss	Truss Type	Qty	Ply	Trunk	R61573049
1930952	T02_REF	SCISSORS	1	1	Job Reference (optional)	

BFS, Grand Junction, Co 81501

8.240 e Feb 7 2020 MiTek Industries, Inc. Mon Mar 16 09:49:57 2020 Page 2
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NOTES-

- 12) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 45 lb down and 1 lb up at 7-7-0, and 45 lb down and 1 lb up at 15-2-0, and 45 lb down and 1 lb up at 22-9-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

- 1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (plf)

Vert: 1-5=-220, 5-9=-220, 12-15=-20, 12-19=-20

Concentrated Loads (lb)

Vert: 12=-45 29=-45 30=-45

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.

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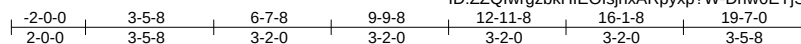


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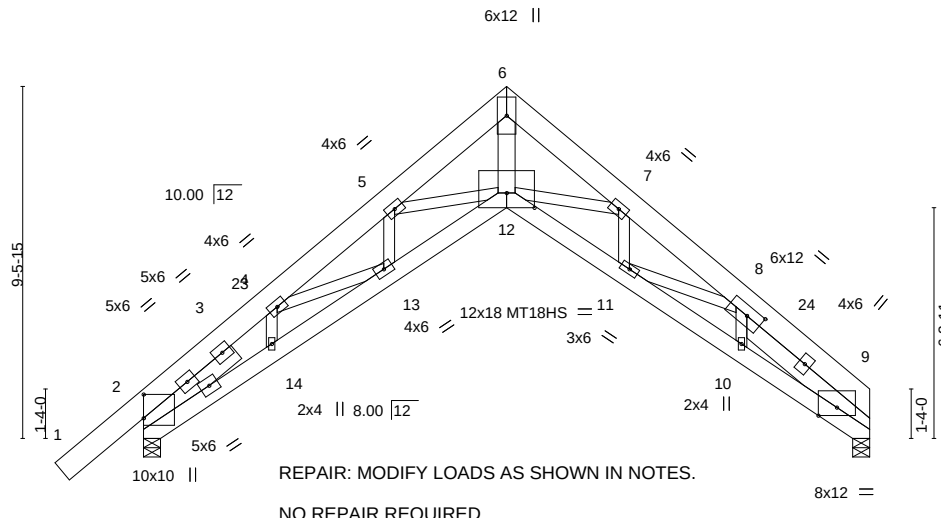
Job	Truss	Truss Type	Qty	Ply	Trunk	R61573050
1930952	T03_REF	SCISSORS	1	1		

BFS, Grand Junction, Co 81501

8.240 s Feb 7 2020 MiTek Industries, Inc. Mon Mar 16 09:51:57 2020 Page 1
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Scale = 1:62.1



REPAIR: MODIFY LOADS AS SHOWN IN NOTES.

NO REPAIR REQUIRED.

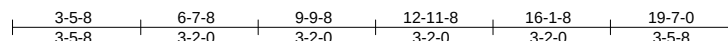


Plate Offsets (X,Y)-- [2:0-7-11,0-0-0], [8:0-5-4,0-3-0], [12:0-9-0,0-4-12]

LOADING (psf)	SPACING-	CSL	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof) 20.0	Plate Grip DOL 1.00	TC 0.52	Vert(LL)	-0.41	12	>579	240	MT20	185/148
Snow (Pf) 100.0	Lumber DOL 1.00	BC 0.98	Vert(CT)	-0.49	12	>481	240	MT18HS	185/148
TCDL 10.0	Rep Stress Incr NO	WB 0.75	Horz(CT)	0.72	9	n/a	n/a		
BCLL 0.0 *	Code IRC2018/TPI2014	Matrix-MS							
BCDL 10.0								Weight: 163 lb	FT = 20%

LUMBER-

TOP CHORD 2x8 DF 1950F 1.7E
BOT CHORD 2x6 HF/SPF 1650F 1.5E
WEBS 2x4 HF/SPF 1650F 1.5E *Except*
6-12: 2x6 HF/SPF 1650F 1.5E
SLIDER Left 2x6 HFSPF 1650F 1.5E 3-3-2, Right 2x6 HFSPF 1650F 1.5E 4-6-1

BRACING-

TOP CHORD Structural wood sheathing directly applied or 3-2-15 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 2-14.

REACTIONS. (lb/size) 2=3349/0-5-8 (min. 0-4-11), 9=2723/0-5-8 (min. 0-3-15)
Max Horz 2=201(LC 13)
Max Uplift 2=-22(LC 16)
Max Grav 2=3760(LC 23), 9=3154(LC 24)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=0/688, 2-3=-3786/323, 3-23=-6753/106, 4-23=-6444/116, 4-5=-8282/76, 5-6=-6619/0,
6-7=-6693/0, 7-8=-8484/0, 8-24=-4161/37, 9-24=-4430/24
BOT CHORD 2-14=-167/5164, 13-14=-175/5641, 12-13=-50/7449, 11-12=0/7559, 10-11=0/6549,
9-10=0/6147
WEBS 6-12=0/7239, 7-12=-1428/232, 7-11=-342/79, 8-11=0/1205, 8-10=-579/26,
5-12=-1416/235, 5-13=-482/40, 4-13=0/1695, 4-14=-792/38

NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -2-2-5 to 0-9-11, Interior(1) 0-9-11 to 9-9-8, Exterior(2R) 9-9-8 to 12-11-8, Interior(1) 12-11-8 to 19-7-0 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
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.00 Plate DOL=1.00); Pf=100.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 100.0 psf on overhangs non-concurrent with other live loads.
- All plates are MT20 plates unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- Bearing at joint(s) 2, 9 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 22 lb uplift at joint 2.
- 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.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 25 lb down and 0 lb up at 9-9-8 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.



March 17, 2020

Continued on page 2

LOAD CASE(S) Standard

WARNING: Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



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Job	Truss	Truss Type	Qty	Ply	Trunk	R61573050
1930952	T03_REF	SCISSORS	1	1	Job Reference (optional)	

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-257, 6-9=-257, 12-15=-23, 12-19=-23
Concentrated Loads (lb)
Vert: 12=-25

 **WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**

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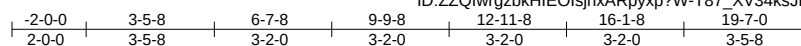
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Roseville, CA 95661

Job	Truss	Truss Type	Qty	Ply	Trunk	R61573051
1930952	T03A_REF	SCISSORS	14	1		

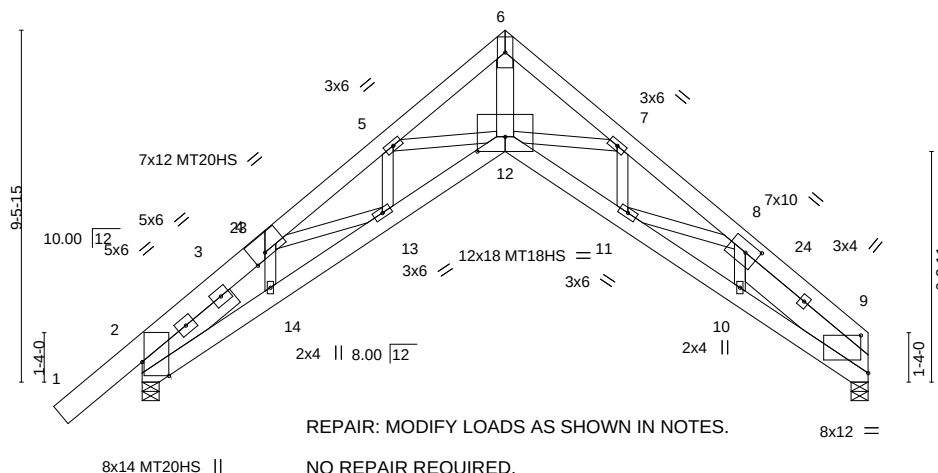
BFS, Grand Junction, Co 81501

Job Reference (optional)

8.240 s Feb 7 2020 MiTek Industries, Inc. Mon Mar 16 09:53:48 2020 Page 1
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Scale = 1:62.2



REPAIR: MODIFY LOADS AS SHOWN IN NOTES.

NO REPAIR REQUIRED.

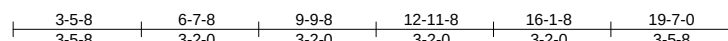


Plate Offsets (X,Y)-- [2:0-4-8,Edge], [4:0-4-8,Edge], [8:0-4-4,0-3-4], [9:0-2-6,1-0-4], [12:0-9-0,0-4-12]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.60	in (loc) l/defl L/d	MT20 185/148	
Snow (Pf) 100.0	Plate Grip DOL 1.00	BC 0.84	Vert(LL) -0.39 12 >609 240	MT20HS 139/111	
TCDL 10.0	Lumber DOL 1.00	WB 0.63	Vert(CT) -0.46 12 >506 240	MT18HS 185/148	
BCLL 0.0 *	Rep Stress Incr NO	Matrix-MS	Horz(CT) 0.66 9 n/a n/a	Weight: 148 lb	FT = 20%
BCDL 10.0	Code IRC2018/TPI2014				

LUMBER-
TOP CHORD 2x6 HF/SPF 1650F 1.5E *Except*
1-4: 2x8 DF 1950F 1.7E
BOT CHORD 2x6 HF/SPF 1650F 1.5E
WEBS 2x4 HF/SPF 1650F 1.5E *Except*
6-12: 2x6 HF/SPF 1650F 1.5E
SLIDER Left 2x6 HFSPF 1650F 1.5E 3-3-2, Right 2x8 DF 1950F 1.7E 4-7-8

BRACING-
TOP CHORD Structural wood sheathing directly applied or 2-9-8 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (lb/size) 2=2872/0-5-8 (min. 0-4-0), 9=2335/0-5-8 (min. 0-3-6)
Max Horz 2=174(LC 13)
Max Uplift 2=-18(LC 16)
Max Grav 2=3225(LC 23), 9=2705(LC 24)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=0/590, 2-3=-3252/279, 3-23=-5892/95, 4-23=-5645/105, 4-5=-7016/70, 5-6=-5602/0,
6-7=-5664/0, 7-8=-7144/0, 8-24=-2866/50, 9-24=-2992/40
BOT CHORD 2-14=-152/4506, 13-14=-157/4845, 12-13=-47/6234, 11-12=0/6328, 10-11=0/5606,
9-10=0/5321
WEBS 6-12=0/6108, 7-12=-1252/190, 7-11=-295/71, 8-11=-1/955, 8-10=-409/21,
5-12=-1241/158, 5-13=-393/45, 4-13=0/1351, 4-14=-650/35

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -2-2-5 to 0-9-11, Interior(1) 0-9-11 to 9-9-8, Exterior(2R) 9-9-8 to 12-11-8, Interior(1) 12-11-8 to 19-7-0 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
 - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.00 Plate DOL=1.00); Pf=100.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
 - Unbalanced snow loads have been considered for this design.
 - This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 100.0 psf on overhangs non-concurrent with other live loads.
 - All plates are MT20 plates unless otherwise indicated.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
 - Bearing at joint(s) 2, 9 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 18 lb uplift at joint 2.
 - 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.
 - Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 25 lb down and 0 lb up at 9-9-8



March 17, 2020

Continued on page 2. The design/selection of such connection device(s) is the responsibility of others.

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Roseville, CA 95661

Job	Truss	Truss Type	Qty	Ply	Trunk	R61573051
1930952	T03A_REF	SCISSORS	14	1	Job Reference (optional)	

BFS, Grand Junction, Co 81501

8.240 s Feb 7 2020 MiTek Industries, Inc. Mon Mar 16 09:53:48 2020 Page 2
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LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-220, 12-15=-20, 12-19=-20, 6-9=-220
Concentrated Loads (lb)
Vert: 12=-25

 **WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**

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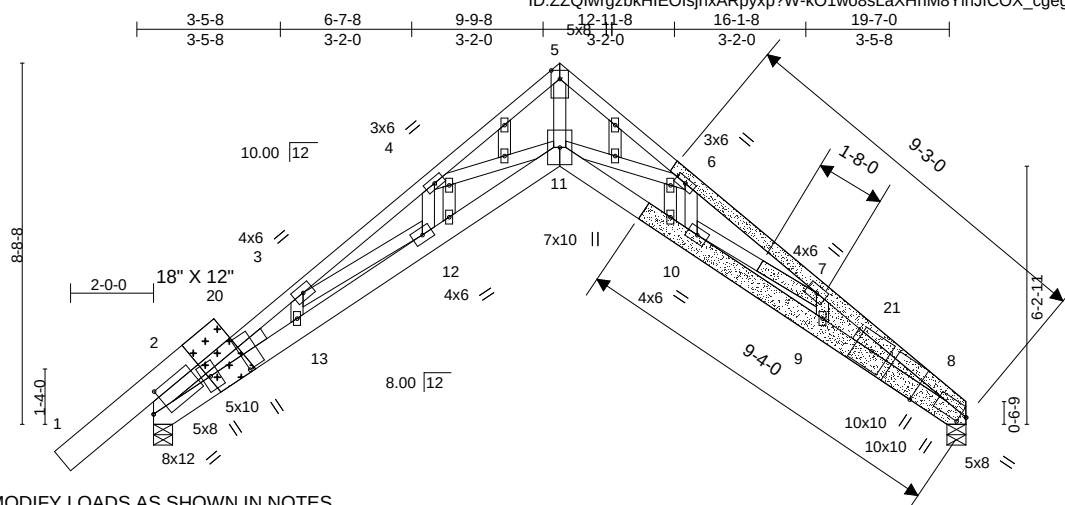
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Job	Truss	Truss Type	Qty	Ply	Trunk	R61573052
1930952	T03GE_R1	GABLE	1	2		

BFS, Grand Junction, Co 81501

Job Reference (optional)

8.240 s Feb 7 2020 MiTek Industries, Inc. Mon Mar 16 09:57:38 2020 Page 1
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REPAIR: MODIFY LOADS AS SHOWN IN NOTES.



SHOP FABRICATE SCAB TRUSS (SHOWN AS SHADED AREA ON TRUSS DESIGN DRAWING) USING THE LUMBER AND PLATES INDICATED. ATTACH SCAB TRUSS TO EACH FACE OF EXISTING TRUSS WITH (0.131" X 3") NAILS (INTO ALL ALIGNING MEMBERS) PER THE FOLLOWING NAIL SCHEDULE: 2 X 4'S - 2 ROWS, 2 X 6'S AND LARGER - 3 ROWS: SPACED @ 3" O.C. USE 2" MEMBER END DISTANCE.



ATTACH 1/2" PLYWOOD OR OSB GUSSET (15/32" RATED SHEATHING 32/16 EXP 1) TO EACH FACE OF TRUSS WITH (0.131" X 2.5" MIN.) NAILS PER THE FOLLOWING NAIL SCHEDULE: 2 X 3'S - 2 ROWS, 2 X 4'S - 3 ROWS, 2 X 6'S AND LARGER - 4 ROWS: SPACED @ 4" O.C. NAILS TO BE DRIVEN FROM BOTH FACES. STAGGER SPACING FROM FRONT TO BACK FACE FOR A NET 2" O.C. SPACING IN EACH COVERED TRUSS MEMBER. USE 2" MEMBER END DISTANCE.

	3-5-8	6-7-8	9-9-8	12-11-8	16-1-8	19-7-0
Plate Offsets (X,Y)--	[2:0-4-5,0-4-15], [2:0-4-12,2-6-6], [8:0-1-11,0-2-7], [8:0-4-12,Edge]					

LOADING (psf)		SPACING-		2-0-0		CSI.		DEFL.				in (loc)		l/defl		L/d		PLATES		GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.97	Vert(LL)	-0.43	10-11	>511	240	MT20	185/144									
Snow (Pf)	100.0	Lumber DOL	1.00	BC	0.74	Vert(CT)	-0.50	10-11	>432	240											
TCDL	10.0	Rep Stress Incr	NO	WB	0.59	Horz(CT)	0.73	8	n/a	n/a											
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-S														Weight: 240 lb	FT = 20%		
BCDL	10.0																				

LUMBER-

TOP CHORD 2x4 HF/SPF 1650F 1.5E *Except*

1-2: 2x8 DF 1950F 1.7E

BOT CHORD 2x6 HF/SPF 1650F 1.5E

WEBS 2x4 HF/SPF 1650F 1.5E

OTHERS 2x4 HF/SPF 1650F 1.5E

WEDGE

Left: 2x4 SPF Stud, Right: 2x4 SPF Stud

REACTIONS. (lb/size) 2=3014/0-5-8 (min. 0-2-2), 8=2114/0-5-8 (min. 0-1-9)

Max Horz 2=169(LC 15)

Max Uplift 2=-40(LC 16)

Max Grav 2=3399(LC 23), 8=2559(LC 24)

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

TOP CHORD 1-2=0/635, 2-20=-5517/2089, 3-20=-5320/2119, 3-4=-7465/304, 4-5=-6270/0, 5-6=-6625/0, 6-7=-9200/0, 7-21=-8643/0, 8-21=-8982/0

BOT CHORD 2-13=-2363/3841, 12-13=-1928/4278, 11-12=-261/6695, 10-11=0/8286, 9-10=0/7679, 8-9=0/7406

WEBS 5-11=0/7301, 6-11=-2131/240, 7-10=-49/993, 7-9=-436/34, 4-11=-1252/382, 4-12=-518/28, 3-12=0/2263, 3-13=-741/85

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.

Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.

Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.

2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.

3) Unbalanced roof live loads have been considered for this design.

4) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -2-2-5 to 0-9-11, Interior(1) 0-9-11 to 9-9-8, Exterior(2R) 9-9-8 to 12-11-8, Interior(1) 12-11-8 to 19-4-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

5) 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.

6) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.00 Plate DOL=1.00); PF=100.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10

7) Unbalanced snow loads have been considered for this design.

8) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 100.0 psf on overhangs non-concurrent with other live loads.

9) All plates are 2x4 MT20 unless otherwise indicated.

30" max ply spacing at 1-4-0 oc.

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.

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March 17, 2020



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Roseville, CA 95661

Job	Truss	Truss Type	Qty	Ply	Trunk	R61573052
1930952	T03GE_R1	GABLE	1	2	Job Reference (optional)	

BFS, Grand Junction, Co 81501

8.240 s Feb 7 2020 MiTek Industries, Inc. Mon Mar 16 09:57:38 2020 Page 2
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NOTES-

- 11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 12) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 13) Bearing at joint(s) 2, 8 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 14) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 40 lb uplift at joint 2.
- 15) 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.
- 16) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 25 lb down and 0 lb up at 9-9-8 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

- 1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
 - Uniform Loads (plf)
 - Vert: 1-5=-220, 5-8=-220, 2-11=-20, 8-11=-20
 - Concentrated Loads (lb)
 - Vert: 11=-25

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.

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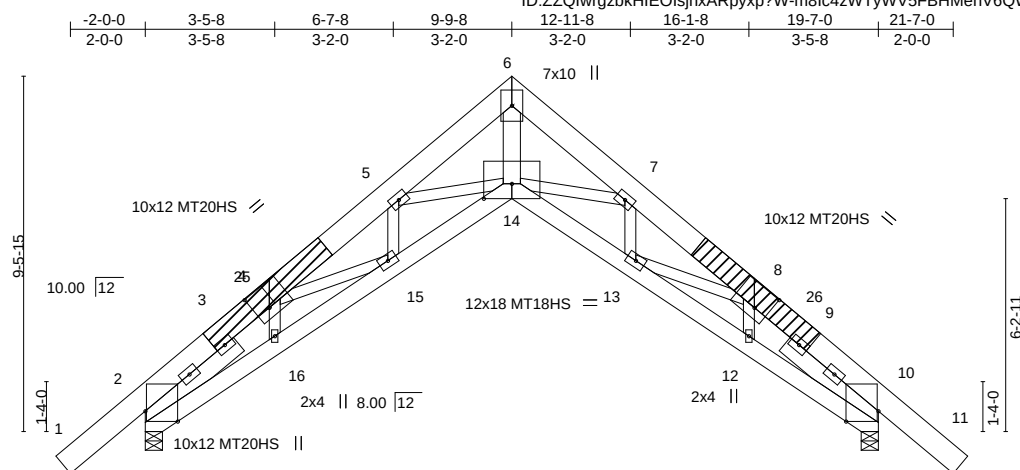
MiTek USA, Inc.
400 Sunrise Avenue, Suite 270
Roseville, CA 95661

Job	Truss	Truss Type	Qty	Ply	Trunk	R61573053
1930952	T04_REF	SCISSORS	1	1		

BFS, Grand Junction, Co 81501

Job Reference (optional)

8.240 e Feb 7 2020 MiTek Industries, Inc. Mon Mar 16 10:09:34 2020 Page 1



REPAIR: MODIFY LOADS AS SHOWN IN NOTES.

APPLY 2 X 8 X 4' DF 1950F 1.7E SCAB TO ONE FACE OF TRUSS CENTERED ON SPLICE. ATTACH WITH (0.131" X 3") NAILS PER THE FOLLOWING NAIL SCHEDULE: 2 X 3'S - 1 ROW, 2 X 4'S - 2 ROWS, 2 X 6'S AND LARGER - 3 ROWS: SPACED @ 2" O.C. USE 2" MEMBER END DISTANCE.

3-5-8	6-7-8	9-9-8	12-11-8	16-1-8	19-7-0
3-5-8	3-2-0	3-2-0	3-2-0	3-2-0	3-5-8

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

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-4-0	TC 0.53	in (loc) l/defl L/d	MT20	185/148
Snow (Pf) 100.0	Plate Grip DOL 1.00	BC 0.94	Vert(LL) -0.40 14 >586 240	MT20HS	139/111
TCDL 10.0	Lumber DOL 1.00	WB 0.73	Vert(CT) -0.48 14 >486 240	MT18HS	185/148
BCLL 0.0 *	Rep Stress Incr NO	Matrix-MS	Horz(CT) 0.71 10 n/a n/a	Weight: 171 lb	FT = 20%
BCDL 10.0	Code IRC2018/TPI2014				

LUMBER-
TOP CHORD 2x8 DF 1950F 1.7E
BOT CHORD 2x6 HF/SPF 1650F 1.5E
WEBS 2x4 HF/SPF 1650F 1.5E *Except*
6-14: 2x6 HF/SPF 1650F 1.5E
SLIDER Left 2x6 HFSPF 1650F 1.5E 3-3-2, Right 2x6 HFSPF 1650F 1.5E 3-3-2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-2-12 oc purlins. [PSA]
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS. (lb/size) 2=3317/0-5-8 (min. 0-4-11), 10=3317/0-5-8 (min. 0-4-11)
Max Horz 2=214(LC 15)
Max Uplift 2=-22(LC 16), 10=-22(LC 17)
Max Grav 2=3748(LC 23), 10=3748(LC 24)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=0/688, 2-3=-3743/420, 3-25=-6731/62, 4-25=-6457/73, 4-5=-8269/8, 5-6=-6567/0,
6-7=-6567/0, 7-8=-8269/0, 8-26=-6457/0, 9-26=-6731/0, 9-10=-3743/420, 10-11=0/688
BOT CHORD 2-16=-150/5144, 15-16=-107/5497, 14-15=0/7415, 13-14=0/7415, 12-13=-86/5497,
10-12=-150/5144
WEBS 6-14=0/7091, 7-14=-1432/250, 7-13=-468/47, 8-13=0/1774, 8-12=-675/19,
5-14=-1432/212, 5-15=-468/42, 4-15=0/1774, 4-16=-675/33

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -2-2-5 to 0-9-11, Interior(1) 0-9-11 to 9-9-8, Exterior(2R) 9-9-8 to 12-11-8, Interior(1) 12-11-8 to 21-9-5 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
 - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.00 Plate DOL=1.00); Pf=100.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
 - Unbalanced snow loads have been considered for this design.
 - This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 100.0 psf on overhangs non-concurrent with other live loads.
 - All plates are MT20 plates unless otherwise indicated.
 - All plates are 4x6 MT20 unless otherwise indicated.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
 - Bearing at joint(s) 2, 10 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 22 lb uplift at joint 2 and 22 lb uplift at joint 10.
 - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



March 17, 2020

Continued on page 2

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



MiTek USA, Inc.
400 Sunrise Avenue, Suite 270
Roseville, CA 95661

Job	Truss	Truss Type	Qty	Ply	Trunk	R61573053
1930952	T04_REF	SCISSORS	1	1	Job Reference (optional)	

BFS, Grand Junction, Co 81501

8.240 e Feb 7 2020 MiTek Industries, Inc. Mon Mar 16 10:09:34 2020 Page 2
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NOTES-
13) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 25 lb down and 0 lb up at 9-9-8 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-257, 6-11=-257, 14-17=-23, 14-21=-23
Concentrated Loads (lb)
Vert: 14=-25

 WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.

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MiTek USA, Inc.
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Roseville, CA 95661

Job	Truss	Truss Type	Qty	Ply	Trunk	R61573054
1930952	T04A_REF	Scissor	3	1		

BFS, Grand Junction, Co 81501

Job Reference (optional)

8.240 s Feb 7 2020 MiTek Industries, Inc. Mon Mar 16 10:14:39 2020 Page 1

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-2-0-0	3-5-8	6-7-8	9-9-8	12-11-8	16-1-8	19-7-0	21-7-0
2-0-0	3-5-8	3-2-0	3-2-0	3-2-0	3-2-0	3-5-8	2-0-0

5x10 ||

Scale = 1:62.2

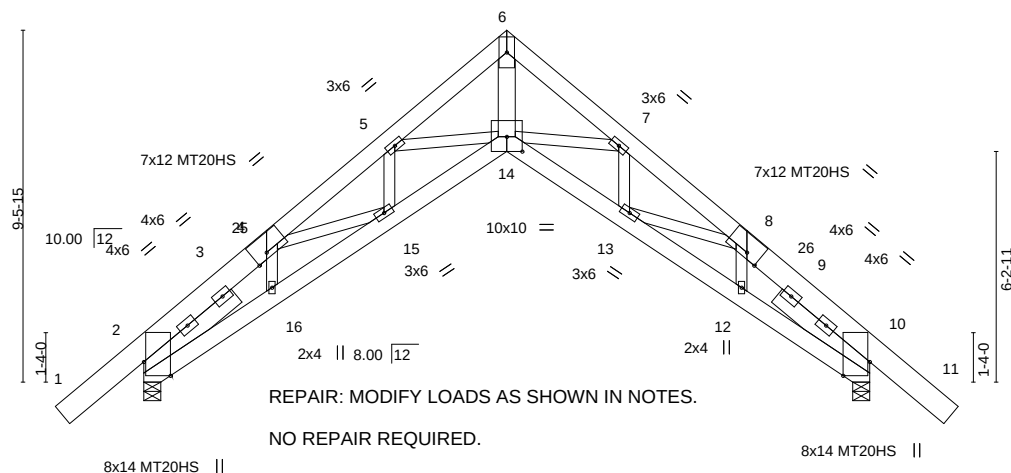


Plate Offsets (X,Y)--	2:0-4-8,Edge], [4:0-4-8,Edge], [8:0-4-8,Edge], [10:0-5-0,0-4-12]
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LOADING (psf)	SPACING-	CSL	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.60	in (loc) l/defl L/d	MT20	185/148
Snow (Pf) 100.0	Plate Grip DOL 1.00	BC 0.83	Vert(LL) -0.38 14 >616 240	MT20HS	139/111
TCDL 10.0	Lumber DOL 1.00	WB 0.62	Vert(CT) -0.46 14 >511 240		
BCLL 0.0 *	Rep Stress Incr NO	Matrix-MS	Horz(CT) 0.66 10 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014			Weight: 154 lb	FT = 20%

LUMBER-	
TOP CHORD	2x8 DF 1950F 1.7E *Except* 4-6,6-8: 2x6 HF/SPF 1650F 1.5E
BOT CHORD	2x6 HF/SPF 1650F 1.5E
WEBS	2x4 HF/SPF 1650F 1.5E *Except* 6-14: 2x6 HF/SPF 1650F 1.5E
SLIDER	Left 2x6 HFSPF 1650F 1.5E 3-3-2, Right 2x6 HFSPF 1650F 1.5E 3-3-2

BRACING-	
TOP CHORD	Structural wood sheathing directly applied or 2-9-10 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS.	(lb/size) 2=2845/0-5-8 (min. 0-4-0), 10=2845/0-5-8 (min. 0-4-0)
	Max Horz 2=185(LC 15)
	Max Uplift 2=-18(LC 16), 10=-18(LC 17)
	Max Grav 2=3215(LC 23), 10=3215(LC 24)

FORCES.	(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD	1-2=0/590, 2-3=-3236/357, 3-25=-5865/54, 4-25=-5619/65, 4-5=-6978/10, 5-6=-5555/0, 6-7=-5555/0, 7-8=-6978/0, 8-26=-5619/0, 9-26=-5865/0, 9-10=-3237/357, 10-11=0/590
BOT CHORD	2-16=-100/4485, 15-16=-95/4823, 14-15=0/6200, 13-14=0/6200, 12-13=-34/4823, 10-12=-100/4485
WEBS	6-14=0/5975, 7-14=-1250/203, 7-13=-380/50, 8-13=0/1321, 8-12=-647/15, 5-14=-1250/165, 5-15=-380/46, 4-15=0/1321, 4-16=-647/29

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -2-2-5 to 0-9-11, Interior(1) 0-9-11 to 9-9-8, Exterior(2R) 9-9-8 to 12-11-8, Interior(1) 12-11-8 to 21-9-5 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
 - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.00 Plate DOL=1.00); Pf=100.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
 - Unbalanced snow loads have been considered for this design.
 - This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 100.0 psf on overhangs non-concurrent with other live loads.
 - All plates are MT20 plates unless otherwise indicated.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
 - Bearing at joint(s) 2, 10 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 18 lb uplift at joint 2 and 18 lb uplift at joint 10.
 - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



March 17, 2020

Continued on page 2

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MiTek USA, Inc.
400 Sunrise Avenue, Suite 270
Roseville, CA 95661

Job	Truss	Truss Type	Qty	Ply	Trunk	R61573054
1930952	T04A_REF	Scissor	3	1	Job Reference (optional)	

BFS, Grand Junction, Co 81501

8.240 s Feb 7 2020 MiTek Industries, Inc. Mon Mar 16 10:14:39 2020 Page 2

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NOTES-

12) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 25 lb down and 0 lb up at 9-9-8 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

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

Uniform Loads (plf)

Vert: 1-6=-220, 6-11=-220, 14-17=-20, 14-21=-20

Concentrated Loads (lb)

Vert: 14=-25

 **WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**

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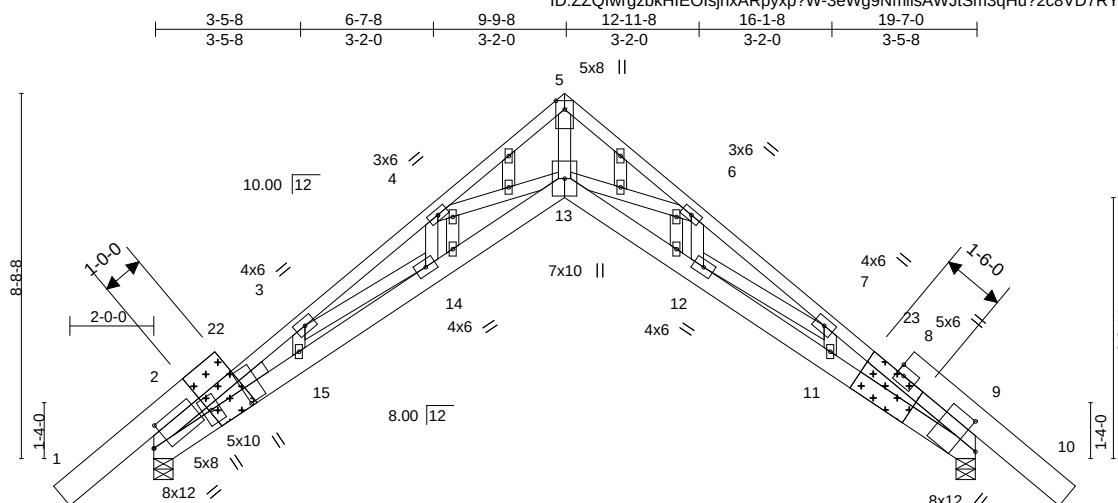
MiTek USA, Inc.
400 Sunrise Avenue, Suite 270
Roseville, CA 95661

Job	Truss	Truss Type	Qty	Ply	Trunk	R61573055
1930952	T04GE_R1	GABLE	1	2	Job Reference (optional)	

BFS, Grand Junction, Co 81501

8.240 s Feb 7 2020 MiTek Industries, Inc. Mon Mar 16 10:16:48 2020 Page 1

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Scale = 1:54.9

REPAIR: MODIFY LOADS AS SHOWN IN NOTES.

ATTACH 1/2" PLYWOOD OR OSB GUSSET (15/32" RATED SHEATHING 32/16 EXP 1) TO EACH FACE OF TRUSS WITH (0.131" X 2.5" MIN.) NAILS PER THE FOLLOWING NAIL SCHEDULE: 2 X 3'S - 2 ROWS, 2 X 4'S - 3 ROWS, 2 X 6'S AND LARGER - 4 ROWS: SPACED @ 4" O.C. NAILS TO BE DRIVEN FROM BOTH FACES. STAGGER SPACING FROM FRONT TO BACK FACE FOR A NET 2" O.C. SPACING IN EACH COVERED TRUSS MEMBER. USE 2" MEMBER END DISTANCE.

Plate Offsets (X,Y)--	[2:0-4-5,0-4-15], [2:0-4-12,2-6-6], [9:0-6-11,0-5-9]
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LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	Plate Grip DOL 1.00	TC 0.97	in (loc) l/defl L/d	MT20	185/144
Snow (Pf) 100.0	Lumber DOL 1.00	BC 0.92	Vert(LL) -0.38 12-13 >577 240		
TCDL 10.0	Rep Stress Incr NO	WB 0.57	Vert(CT) -0.45 12-13 >485 240		
BCLL 0.0 *	Code IRC2018/TPI2014	Matrix-S	Horz(CT) 0.60 9 n/a n/a		
BCDL 10.0				Weight: 268 lb	FT = 20%

LUMBER-

TOP CHORD 2x4 HF/SPF 1650F 1.5E *Except*
1-2,8-10: 2x8 DF 1950F 1.7E
BOT CHORD 2x6 HF/SPF 1650F 1.5E
WEBS 2x4 HF/SPF 1650F 1.5E
OTHERS 2x4 HF/SPF 1650F 1.5E
WEDGE
Left: 2x4 SPF Stud, Right: 2x4 SPF Stud

BRACING-

TOP CHORD Structural wood sheathing directly applied or 4-7-5 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS. (lb/size) 2=2978/0-5-8 (min. 0-2-2), 9=2683/0-5-8 (min. 0-1-15)
Max Horz 2=173(LC 15)
Max Uplift 2=-39(LC 16), 9=-31(LC 17)
Max Grav 2=3386(LC 23), 9=3128(LC 24)

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

TOP CHORD 1-2=0/635, 2-22=-5478/2294, 3-22=-5281/2323, 3-4=-7405/610, 4-5=-6085/148,
5-6=-6436/147, 6-7=-8871/145, 7-23=-7795/492, 8-23=-7868/472, 8-9=-8079/474,
9-10=0/567
BOT CHORD 2-15=-2524/3811, 14-15=-2094/4246, 13-14=-542/6641, 12-13=-101/7906,
11-12=-670/7461, 9-11=-636/6736
WEBS 5-13=-215/7057, 6-13=-1944/241, 7-12=-30/798, 7-11=-1414/114, 4-13=-1257/333,
4-14=-506/22, 3-14=0/2207, 3-15=-731/83

NOTES-

- 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.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
- 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.
- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed;
MWFRS (envelope) gable end zone and C-C Exterior(2E) -2-2-5 to 0-9-11, Interior(1) 0-9-11 to 9-9-8, Exterior(2R) 9-9-8 to 12-11-8,
Interior(1) 12-11-8 to 21-9-5 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
- 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.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.00 Plate DOL=1.00); Pf=100.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 100.0 psf on overhangs non-concurrent with other live loads.

Continued on page 2 MT20 unless otherwise indicated.



March 17, 2020

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MiTek USA, Inc.
400 Sunrise Avenue, Suite 270
Roseville, CA 95661

Job 1930952	Truss T04GE_R1	Truss Type GABLE	Qty 1	Ply 2	Trunk R61573055
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BFS, Grand Junction, Co 81501

8.240 s Feb 7 2020 MiTek Industries, Inc. Mon Mar 16 10:16:48 2020 Page 2
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NOTES-

- 10) Gable studs spaced at 1-4-0 oc.
- 11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 12) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 13) Bearing at joint(s) 2, 9 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 14) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 39 lb uplift at joint 2 and 31 lb uplift at joint 9.
- 15) 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.
- 16) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 25 lb down and 0 lb up at 9-9-8 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

- 1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
 - Uniform Loads (plf)
 - Vert: 1-5=-220, 5-10=-220, 2-13=-20, 9-13=-20
 - Concentrated Loads (lb)
 - Vert: 13=-25

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.

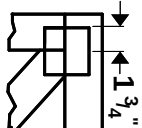
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



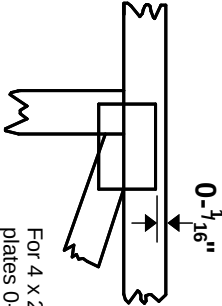
MiTek USA, Inc.
400 Sunrise Avenue, Suite 270
Roseville, CA 95661

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- $\frac{1}{16}$ " from outside edge of truss.

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

*** Plate location details available in MITek 2012 software or upon request.**

PLATE SIZE

4 X 4

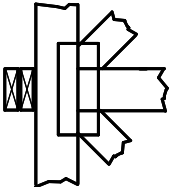
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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



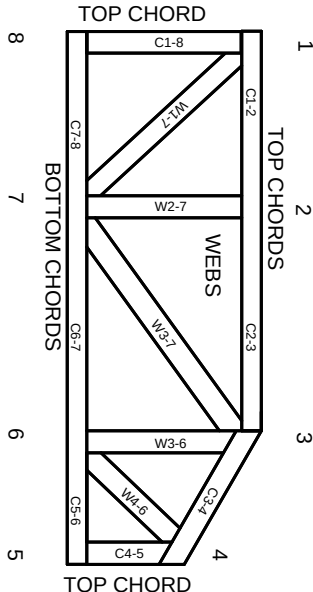
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI.1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

Numbering System

6-4-8 dimensions shown in ft-in-sixteenths (Drawings not to scale)



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.

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MITek Engineering Reference Sheet: MII-7473 rev. 10/03/2015



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.