MiTek®

MiTek, Inc.
400 Sunrise Ave., Suite 270
Roseville, CA 95661
916.755.3571

Re: 21747
RICHEY CONSTRUCTION

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

Pages or sheets covered by this seal: R80053714 thru R80053733

My license renewal date for the state of Colorado is October 31, 2025.

December 28,2023

Zhao, Xiaoming

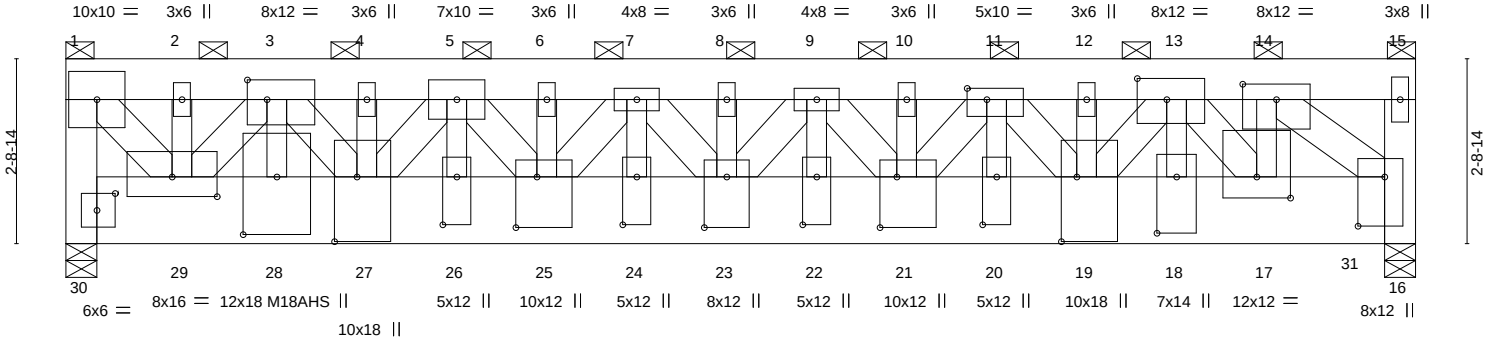
IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which 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	RICHEY CONSTRUCTION
21747	K1G	ROOF SPECIAL GIRDER	1	4	R80053714
					Job Reference (optional)

Alpine Truss, Montrose, CO - 81401, 8.730 s Dec 14 2023 MiTek Industries, Inc. Thu Dec 28 12:43:22 2023 Page 1
ID:aBpZahnUiyRNoLvjlpC85azHZfq-TCkF1PCZ?AqZ3PqOLyRylFsF_8wLEKoqnCqXChy4R0p

1-8-10	3-1-8	4-5-8	5-9-8	7-1-8	8-5-8	9-9-8	11-1-8	12-5-8	13-9-8	15-1-8	16-5-8	17-9-8	19-1-8	20-0-0
1-8-10	1-4-14	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	0-10-8

Scale = 1:34.1



1-8-10	3-1-8	4-5-8	5-9-8	7-1-8	8-5-8	9-9-8	11-1-8	12-5-8	13-9-8	15-1-8	16-5-8	17-9-8	19-1-8	20-0-0
1-8-10	1-4-14	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	0-10-8

Plate Offsets (X,Y)-- [3:0-3-8,0-3-8], [11:0-3-8,0-2-0], [13:0-5-4,0-3-12], [14:0-6-0,0-2-12], [16:0-8-12,0-4-12], [17:0-6-0,0-3-12], [18:0-10-0,0-3-8], [19:0-11-8,0-2-12], [20:0-8-8,0-2-8], [21:0-9-0,0-3-0], [22:0-8-8,0-2-8], [23:0-9-0,0-4-0], [24:0-8-8,0-2-8], [25:0-9-0,0-3-12], [26:0-8-8,0-2-8], [27:0-11-8,0-4-0], [28:0-10-4,0-6-0], [29:0-8-0,0-3-8], [30:0-3-4,0-3-0]

LOADING (psf)		SPACING-	1-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	123.0	Plate Grip DOL	1.00	TC	0.50	Vert(LL)	-0.31	23	>746	360	MT20	118/123
(Roof Snow=123.0)		Lumber DOL	1.00	BC	0.76	Vert(CT)	-0.36	23	>652	240	M18AHS	90/86
TCDL	40.0	Rep Stress Incr	NO	WB	0.86	Horz(CT)	0.07	16	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-SH		Wind(LL)	0.03	23	>999	240	Weight: 908 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 1 1/2" x 7 1/4" 2.0E Microllam® LVL
BOT CHORD 1 1/2" x 11 7/8" 2.0E Microllam® LVL
WEBS 2x6 SPF 1650F 1.5E *Except*
3-28,5-26,9-22,11-20,7-24,13-18,4-27,6-25,8-23,10-21,12-19,14-17
,2-29: 2x4 SPF 1650F 1.5E

BRACING-
TOP CHORD 2-0-0 oc purlins (6-0-0 max.): 1-15, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 30=0-5-8, 16=0-5-8
Max Horz 30=-26(LC 22)
Max Uplift 30=-514(LC 4), 16=-561(LC 5)
Max Grav 30=23703(LC 1), 16=25670(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-30=-19556/428, 1-2=-15446/340, 2-3=-15446/340, 3-4=-42007/917, 4-5=-42007/917, 5-6=-55539/1212, 6-7=-55539/1212, 7-8=-60297/1315, 8-9=-60297/1315, 9-10=-56211/1227, 10-11=-56211/1227, 11-12=-43332/949, 12-13=-43332/949, 13-14=-20557/455, 14-15=-1259/35
BOT CHORD 29-30=-45/1204, 28-29=-679/30436, 27-28=-679/30436, 26-27=-1102/49884, 25-26=-1102/49884, 24-25=-1302/59095, 23-24=-1302/59095, 22-23=-1308/59429, 21-22=-1308/59429, 20-21=-1121/50935, 19-20=-1121/50935, 18-19=-710/32160, 17-18=-710/32160, 16-17=-456/20557
WEBS 3-28=-71/3412, 5-26=-35/1733, 9-22=-41/2010, 11-20=-35/1720, 7-24=-41/2006, 13-18=-83/3963, 3-27=-444/20448, 4-27=-56/1100, 5-27=-13921/309, 5-25=-217/9993, 6-25=-52/1089, 7-25=-6284/143, 7-23=-45/2123, 8-23=-50/1131, 9-23=-37/1548, 9-21=-5686/128, 10-21=-47/1187, 12-19=-297/11, 13-17=-20505/450, 14-17=-338/15836, 14-16=-27040/592, 11-19=-13435/297, 11-21=-202/9324, 1-29=-508/23406, 3-29=-25564/562, 13-19=-429/19743

NOTES-
1)
2) PLY-TO-PLY CONNECTION REQUIRES THAT AN APPROVED FACE MOUNT HANGER (SPECIFIED BY OTHERS) IS REQUIRED FOR LOADS REPORTED IN NOTES. FACE MOUNT HANGER SHALL BE ATTACHED WITH A MINIMUM OF 0.148"x 3" NAILS PER HANGER MANUFACTURER SPECIFICATIONS.

December 28,2023

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NOTES-

3) 4-ply truss to be connected together with 10d (0.131"x3") nails as follows:
   Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 1 1/2" x 7 1/4" - 2 rows staggered at 0-9-0 oc.
   Bottom chords connected as follows: 1 1/2"x11 7/8" - 6 rows staggered at 0-4-0 oc.
   Webs connected as follows: 2x4 - 2 rows staggered at 0-4-0 oc, Except member 5-26 2x4 - 2 rows staggered at 0-4-0 oc, member 9-22 2x4 - 2 rows staggered at 0-4-0 oc, member 11-20 2x4 - 2 rows staggered at 0-4-0 oc, member 7-24 2x4 - 2 rows staggered at 0-4-0 oc, member 13-18 2x4 - 2 rows staggered at 0-4-0 oc, member 4-27 2x4 - 2 rows staggered at 0-4-0 oc, member 25-6 2x4 - 2 rows staggered at 0-4-0 oc, member 8-23 2x4 - 2 rows staggered at 0-4-0 oc, member 21-10 2x4 - 2 rows staggered at 0-4-0 oc, member 12-19 2x4 - 2 rows staggered at 0-4-0 oc, member 17-14 2x4 - 2 rows staggered at 0-4-0 oc, member 2-29 2x4 - 1 row at 0-9-0 oc, 2x6 - 2 rows staggered at 0-9-0 oc, Except member 13-17 2x6 - 2 rows staggered at 0-7-0 oc, member 14-16 2x6 - 2 rows staggered at 0-7-0 oc, member 3-29 2x6 - 2 rows staggered at 0-7-0 oc.
   Attach BC w/ 1/2" diam. bolts (ASTM A-307) in the center of the member w/washers at 4-0-0 oc.
4) 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.
5) 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; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
6) TCLL: ASCE 7-16; Pf=123.0 psf (Lum DOL=1.00 Plate DOL=1.00); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
7) Provide adequate drainage to prevent water ponding.
8) All plates are MT20 plates unless otherwise indicated.
9) The Fabrication Tolerance at joint 28 = 16%
10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
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) 30, 16 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 100 lb uplift at joint(s) except (jt=lb) 30=514, 16=561.
14) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
15) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
16) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 158 lb down and 51 lb up at 3-0-12, 7110 lb down and 118 lb up at 3-1-8, 67 lb down and 25 lb up at 4-4-12, 3160 lb down and 52 lb up at 4-4-12, 67 lb down and 25 lb up at 5-8-12, 3160 lb down and 52 lb up at 5-8-12, 67 lb down and 25 lb up at 7-0-12, 3160 lb down and 52 lb up at 7-0-12, 67 lb down and 25 lb up at 8-4-12, 3160 lb down and 52 lb up at 8-4-12, 67 lb down and 25 lb up at 9-8-12, 3160 lb down and 52 lb up at 9-8-12, 67 lb down and 25 lb up at 11-0-12, 3160 lb down and 52 lb up at 11-0-12, 67 lb down and 25 lb up at 12-4-12, 3160 lb down and 52 lb up at 12-4-12, 67 lb down and 25 lb up at 13-8-12, 3160 lb down and 52 lb up at 13-8-12, 67 lb down and 25 lb up at 15-0-12, 3160 lb down and 52 lb up at 15-0-12, 67 lb down and 25 lb up at 16-4-12, 3160 lb down and 52 lb up at 16-4-12, 67 lb down and 25 lb up at 17-8-12, 3160 lb down and 52 lb up at 17-8-12, and 67 lb down and 25 lb up at 19-0-12, and 3160 lb down and 52 lb up at 19-0-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

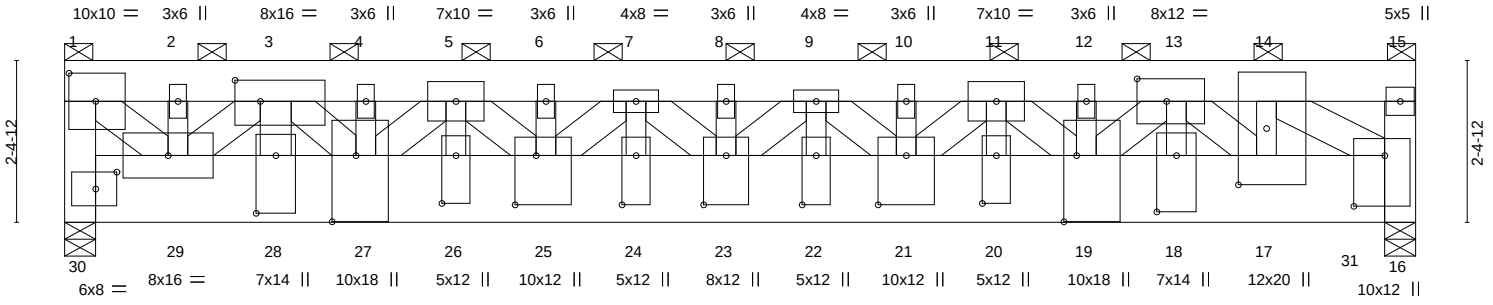
1) Dead + Snow (balanced): Lumber Increase=1.00, Plate Increase=1.00
   Uniform Loads (plf)
      Vert: 1-15=-163, 16-30=-10
   Concentrated Loads (lb)
      Vert: 28=-7268(F=-158, B=-7110) 26=-3227(F=-67, B=-3160) 22=-3227(F=-67, B=-3160) 20=-3227(F=-67, B=-3160) 24=-3227(F=-67, B=-3160) 18=-3227(F=-67, B=-3160) 27=-3227(F=-67, B=-3160) 25=-3227(F=-67, B=-3160) 23=-3227(F=-67, B=-3160) 19=-3227(F=-67, B=-3160) 17=-3227(F=-67, B=-3160) 21=-3227(F=-67, B=-3160) 31=-3227(F=-67, B=-3160)

Job	Truss	Truss Type	Qty	Ply	RICHEY CONSTRUCTION
21747	B1G	ROOF SPECIAL GIRDER	1	4	R80053715
					Job Reference (optional)

Alpine Truss, Montrose, CO - 81401, 8.730 s Dec 14 2023 MiTek Industries, Inc. Thu Dec 28 12:43:03 2023 Page 1
ID:aBpZahnUiyRNoLvjlpC85azHZfq-XY442vzeTKRFHUtkkTbVTFZxMUOIlkl1Plj02Iy4R16

1-8-2	3-1-8	4-5-8	5-9-8	7-1-8	8-5-8	9-9-8	11-1-8	12-5-8	13-9-8	15-1-8	16-5-8	17-9-8	19-1-8	20-0-0
1-8-2	1-5-6	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	0-10-8

Scale = 1:34.1



1-8-2	3-1-8	4-5-8	5-9-8	7-1-8	8-5-8	9-9-8	11-1-8	12-5-8	13-9-8	15-1-8	16-5-8	17-9-8	19-1-8	20-0-0
1-8-2	1-5-6	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	0-10-8

Plate Offsets (X,Y)-- [1:0-4-12,0-5-0], [3:0-4-8,0-3-12], [13:0-5-4,0-4-0], [16:0-9-0,0-5-8], [17:0-10-0,0-5-0], [18:0-10-0,0-3-8], [19:0-11-12,0-2-4], [20:0-8-8,0-2-8], [21:0-8-12,0-5-0], [22:0-8-12,0-2-8], [23:0-8-12,0-4-0], [24:0-8-12,0-2-8], [25:0-8-12,0-3-12], [26:0-8-8,0-2-8], [27:0-11-12,0-4-4], [28:0-10-4,0-3-8], [30:0-3-12,0-3-0]

LOADING (psf)		**SPACING-**	2-0-0	**CSI.**		**DEFL.**	in	(loc)	l/defl	L/d	**PLATES**	**GRIP**
TCLL	123.0	Plate Grip DOL	1.00	TC	0.71	Vert(LL)	-0.43	23	>545	360	MT20	118/123
(Roof Snow=123.0)		Lumber DOL	1.00	BC	0.96	Vert(CT)	-0.49	23	>477	240		
TCDL	25.0	Rep Stress Incr	NO	WB	0.88	Horz(CT)	0.08	16	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-SH		Wind(LL)	0.04	23	>999	240	Weight: 861 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 1 1/2" x 7 1/4" 2.0E Microllam® LVL
BOT CHORD 1 1/2" x 11 7/8" 2.0E Microllam® LVL
WEBS 2x6 SPF 1650F 1.5E *Except*
5-26,9-22,11-20,7-24,13-18,4-27,6-25,8-23,10-21,12-19,14-17,2-29:
2x4 SPF 1650F 1.5E

BRACING-
TOP CHORD 2-0-0 oc purlins (5-11-7 max.): 1-15, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 30=0-5-8, 16=0-5-8
Max Horz 30=43(LC 23)
Max Uplift 30=-527(LC 4), 16=-592(LC 5)
Max Grav 30=23933(LC 1), 16=26708(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-30=-19228/430, 1-2=-17929/403, 2-3=-17929/403, 3-4=-49930/1107, 4-5=-49930/1107, 5-6=-67004/1482, 6-7=-67004/1482, 7-8=-73137/1616, 8-9=-73137/1616, 9-10=-68391/1514, 10-11=-68391/1514, 11-12=-52797/1172, 12-13=-52797/1172, 13-14=-24841/560, 14-15=-1953/55, 15-16=-818/28
BOT CHORD 29-30=-68/1686, 28-29=-835/36584, 27-28=-835/36584, 26-27=-1356/60246, 25-26=-1356/60246, 24-25=-1613/71984, 23-24=-1613/71984, 22-23=-1626/72684, 21-22=-1626/72684, 20-21=-1397/62422, 19-20=-1397/62422, 18-19=-893/39720, 17-18=-893/39720, 16-17=-561/24841
WEBS 3-28=-80/4064, 5-26=-45/2349, 9-22=-51/2626, 11-20=-44/2298, 7-24=-51/2609, 13-18=-89/4374, 3-27=-457/20839, 4-27=-103/1033, 5-27=-16108/365, 5-25=-228/10551, 6-25=-79/1355, 7-25=-7777/181, 7-23=-35/1800, 8-23=-73/1412, 9-23=-68/772, 9-21=-6704/156, 10-21=-72/1429, 13-17=-23233/519, 14-17=-343/16234, 14-16=-29424/653, 11-19=-15029/339, 11-21=-203/9321, 1-29=-533/24199, 3-29=-27793/623, 13-19=-447/20420

NOTES-
1) PLY-TO-PLY CONNECTION REQUIRES THAT AN APPROVED FACE MOUNT HANGER (SPECIFIED BY OTHERS) IS REQUIRED FOR LOADS REPORTED IN NOTES. FACE MOUNT HANGER SHALL BE ATTACHED WITH A MINIMUM OF 0.148"x 3" NAILS PER HANGER MANUFACTURER SPECIFICATIONS.
2)

December 28,2023

Continued on page 2

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916.755.3571 / MiTek-US.com

NOTES-

3) 4-ply truss to be connected together with 10d (0.131"x3") nails as follows:
   Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 1 1/2" x 7 1/4" - 2 rows staggered at 0-9-0 oc.
   Bottom chords connected as follows: 1 1/2"x11 7/8" - 6 rows staggered at 0-4-0 oc.
   Webs connected as follows: 2x6 - 3 rows staggered at 0-4-0 oc, Except member 27-3 2x6 - 2 rows staggered at 0-9-0 oc, member 5-27 2x6 - 2 rows staggered at 0-9-0 oc, member 5-25 2x6 - 2 rows staggered at 0-9-0 oc, member 7-25 2x6 - 2 rows staggered at 0-9-0 oc, member 23-7 2x6 - 2 rows staggered at 0-9-0 oc, member 9-23 2x6 - 2 rows staggered at 0-9-0 oc, member 9-21 2x6 - 2 rows staggered at 0-9-0 oc, member 13-17 2x6 - 2 rows staggered at 0-7-0 oc, member 14-16 2x6 - 2 rows staggered at 0-7-0 oc, member 19-11 2x6 - 2 rows staggered at 0-9-0 oc, member 11-21 2x6 - 2 rows staggered at 0-9-0 oc, member 29-1 2x6 - 2 rows staggered at 0-9-0 oc, member 3-29 2x6 - 2 rows staggered at 0-7-0 oc, member 13-19 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 2 rows staggered at 0-4-0 oc, Except member 2-29 2x4 - 1 row at 0-9-0 oc.
   Attach TC w/ 1/2" diam. bolts (ASTM A-307) in the center of the member w/washers at 4-0-0 oc.
   Attach BC w/ 1/2" diam. bolts (ASTM A-307) in the center of the member w/washers at 4-0-0 oc.
4) 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.
5) 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; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
6) TCLL: ASCE 7-16; Pf=123.0 psf (Lum DOL=1.00 Plate DOL=1.00); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
7) Provide adequate drainage to prevent water ponding.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
10) Bearing at joint(s) 30, 16 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 30=527, 16=592.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
14) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 149 lb down and 44 lb up at 3-0-12, 5891 lb down and 111 lb up at 3-1-8, 60 lb down and 21 lb up at 4-4-12, 3142 lb down and 59 lb up at 4-4-12, 60 lb down and 21 lb up at 5-8-12, 3142 lb down and 59 lb up at 5-8-12, 60 lb down and 21 lb up at 7-0-12, 3142 lb down and 59 lb up at 7-0-12, 60 lb down and 21 lb up at 8-4-12, 3142 lb down and 59 lb up at 8-4-12, 60 lb down and 21 lb up at 9-8-12, 3142 lb down and 59 lb up at 9-8-12, 60 lb down and 21 lb up at 11-0-12, 3142 lb down and 59 lb up at 11-0-12, 60 lb down and 21 lb up at 12-4-12, 3142 lb down and 59 lb up at 12-4-12, 60 lb down and 21 lb up at 13-8-12, 3142 lb down and 59 lb up at 13-8-12, 60 lb down and 21 lb up at 15-0-12, 3142 lb down and 59 lb up at 15-0-12, 60 lb down and 21 lb up at 16-4-12, 3142 lb down and 59 lb up at 16-4-12, 60 lb down and 21 lb up at 17-8-12, 3142 lb down and 59 lb up at 17-8-12, and 60 lb down and 21 lb up at 19-0-12, and 3142 lb down and 59 lb up at 19-0-12 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=1.00, Plate Increase=1.00
   Uniform Loads (plf)
      Vert: 1-15=-296, 16-30=-20
   Concentrated Loads (lb)
      Vert: 28=-6040(F=-5891, B=-149) 26=-3202(F=-3142, B=-60) 22=-3202(F=-3142, B=-60) 20=-3202(F=-3142, B=-60) 24=-3202(F=-3142, B=-60) 18=-3202(F=-3142, B=-60) 27=-3202(F=-3142, B=-60) 25=-3202(F=-3142, B=-60) 23=-3202(F=-3142, B=-60) 19=-3202(F=-3142, B=-60) 17=-3202(F=-3142, B=-60) 21=-3202(F=-3142, B=-60) 31=-3202(F=-3142, B=-60)

Job	Truss	Truss Type	Qty	Ply	RICHEY CONSTRUCTION
21747	G4E	GABLE	1	1	R80053716
					Job Reference (optional)

Alpine Truss, Montrose, CO - 81401, 8.730 s Dec 14 2023 MiTek Industries, Inc. Thu Dec 28 12:43:18 2023 Page 1
ID:aBpZahnUiyRNoLvjlpC85azHZfq-aRUIB292xxK7aoXd66M0aPhaPXjfJdCFsasJ2wy4R0t

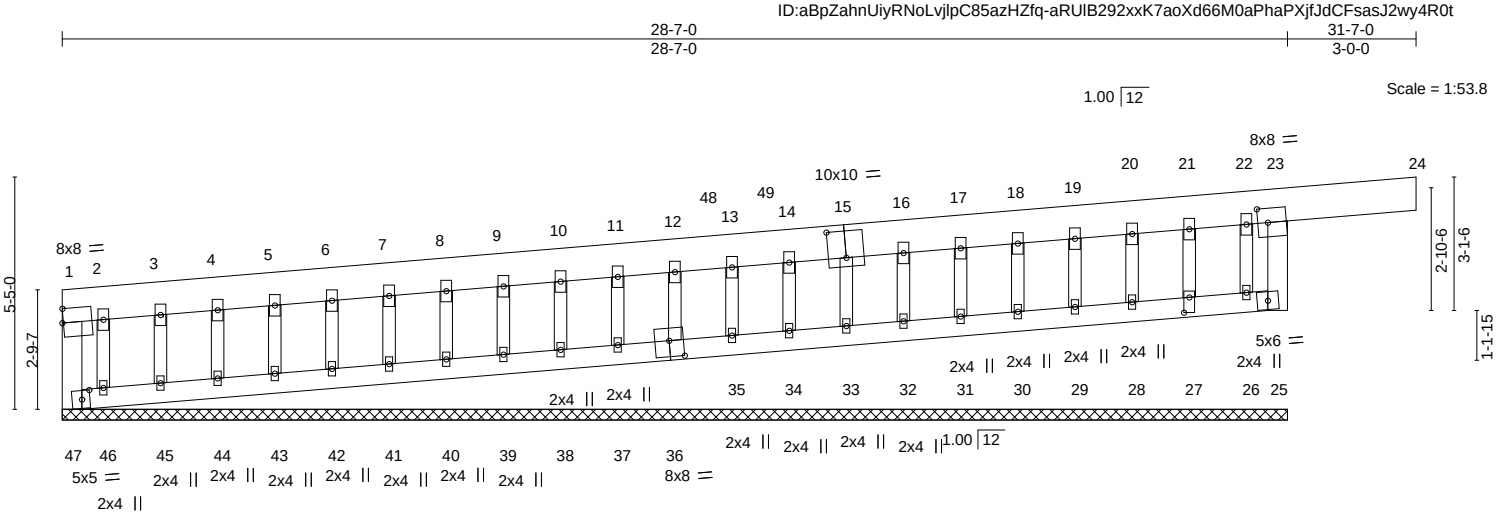

Plate Offsets (X,Y)-- [15:0-5-0,0-7-8], [23:0-2-13,0-4-0], [27:0-4-4,0-1-8], [36:0-4-0,0-4-8], [47:0-2-4,0-2-8]

LOADING (psf)		SPACING-	1-4-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	123.0	Plate Grip DOL	1.00	TC	0.40	Vert(LL)	-0.01	24	n/r	180	MT20	169/123
(Roof Snow=123.0)		Lumber DOL	1.00	BC	0.04	Vert(CT)	-0.01	24	n/r	80		
TCDL	10.0	Rep Stress Incr	YES	WB	0.39	Horz(CT)	-0.00	25	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	24	n/r	120	Weight: 204 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x10 DF SS
BOT CHORD 2x6 SPF 1650F 1.5E
OTHERS 2x4 WW Stud *Except*
1-47,23-25: 2x6 SPF 1650F 1.5E

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

REACTIONS. All bearings 28-7-0.
(lb) - Max Horz 47=70(LC 11)
Max Uplift All uplift 100 lb or less at joint(s) 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 35, 34, 33, 32, 31, 30, 29 except 47=-101(LC 20), 25=-116(LC 11), 28=-130(LC 20), 27=-483(LC 20), 26=-347(LC 20)
Max Grav All reactions 250 lb or less at joint(s) 47, 28, 27, 26 except 25=2132(LC 20), 36=278(LC 21), 37=323(LC 21), 38=311(LC 21), 39=307(LC 21), 40=307(LC 21), 41=307(LC 21), 42=309(LC 21), 43=315(LC 21), 44=329(LC 21), 45=307(LC 21), 46=250(LC 21), 35=324(LC 21), 34=303(LC 21), 33=315(LC 21), 32=305(LC 21), 31=314(LC 21), 30=325(LC 21), 29=319(LC 21)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 23-25=-2101/158
WEBS 12-36=-261/20, 11-37=-306/50, 10-38=-293/31, 9-39=-289/27, 8-40=-289/27, 7-41=-290/27, 6-42=-291/27, 5-43=-297/28, 4-44=-309/35, 3-45=-296/49, 13-35=-305/48, 14-34=-286/25, 15-33=-297/38, 16-32=-288/25, 17-31=-296/28, 18-30=-308/30, 19-29=-301/29, 21-27=-22/505, 22-26=-21/326

NOTES-
1) 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 Corner(3) 0-2-12 to 15-2-12, Exterior(2) 15-2-12 to 16-7-0, Corner(3) 16-7-0 to 31-7-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
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) TCLL: ASCE 7-16; Pf=123.0 psf (Lum DOL=1.00 Plate DOL=1.00); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 123.0 psf on overhangs non-concurrent with other live loads.
6) All plates are 3x6 MT20 unless otherwise indicated.
7) Gable requires continuous bottom chord bearing.
8) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
9) Gable studs spaced at 1-4-0 oc.
10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
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.

Continued on page 2

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NOTES-

12) Bearing at joint(s) 47, 25, 35, 34, 33, 32, 31, 30, 29, 28, 27, 26 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 100 lb uplift at joint(s) 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 35, 34, 33, 32, 31, 30, 29 except (jt=lb) 47=101, 25=116, 28=130, 27=483, 26=347.
14) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 25, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 35, 34, 33, 32, 31, 30, 29, 28, 27, 26.
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.

Job	Truss	Truss Type	Qty	Ply	RICHEY CONSTRUCTION
21747	A4E	GABLE	1	1	R80053717
					Job Reference (optional)

Alpine Truss, Montrose, CO - 81401, 8.730 s Dec 14 2023 MiTek Industries, Inc. Thu Dec 28 12:42:59 2023 Page 1
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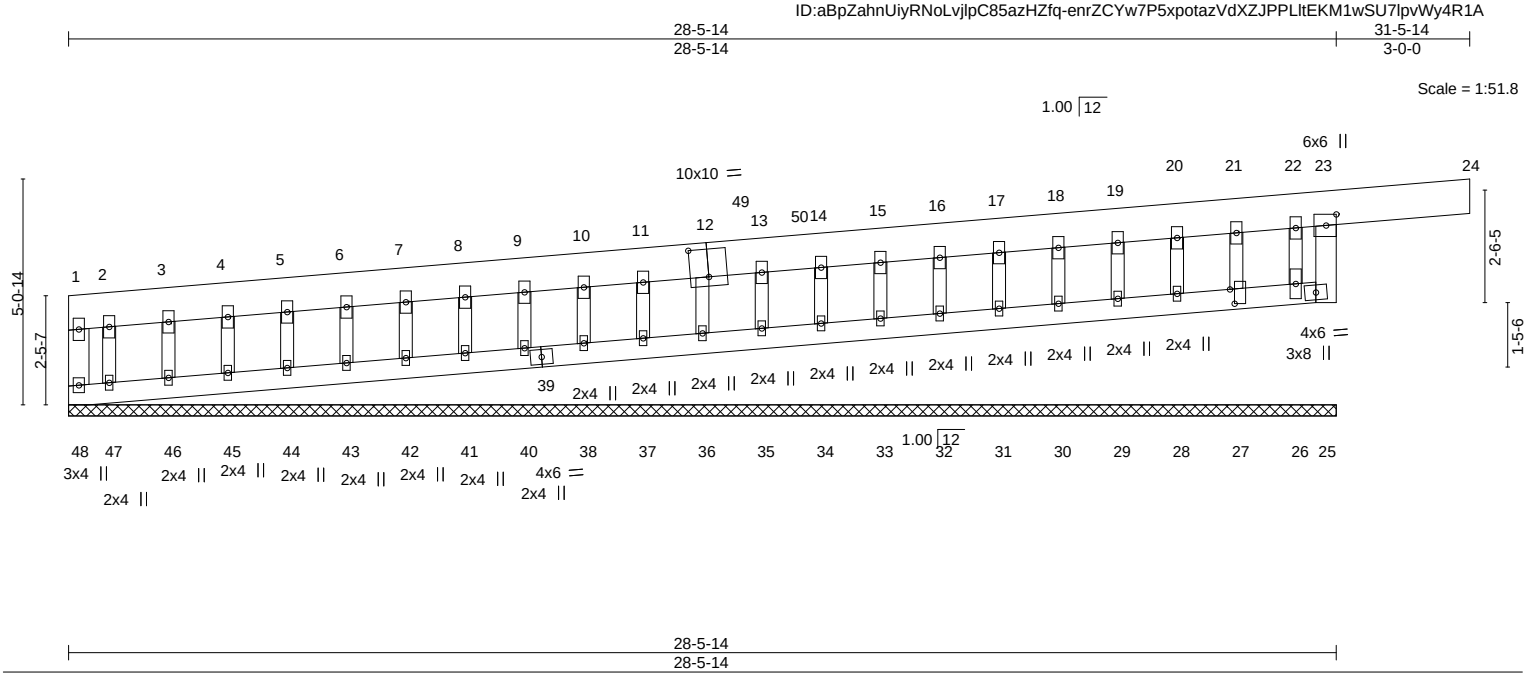

Plate Offsets (X,Y)-- [12:0-5-0,0-7-8], [23:0-3-0,0-2-12], [27:0-3-14,0-1-4]

LOADING (psf)		SPACING-	1-4-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	123.0	Plate Grip DOL	1.00	TC	0.43	Vert(LL)	-0.01	24	n/r	180	MT20	169/123
(Roof Snow=123.0)		Lumber DOL	1.00	BC	0.03	Vert(CT)	-0.01	24	n/r	80		
TCDL	10.0	Rep Stress Incr	YES	WB	0.43	Horz(CT)	-0.00	25	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	24	n/r	120	Weight: 180 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x10 HF SS
BOT CHORD 2x6 SPF 2100F 1.8E
WEBS 2x6 SPF 1650F 1.5E
OTHERS 2x4 WW Stud

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

REACTIONS. All bearings 28-5-14.
(lb) - Max Horz 48=64(LC 11)
Max Uplift All uplift 100 lb or less at joint(s) 36, 37, 38, 40, 41, 42, 43, 44, 45, 46, 47, 35, 34, 33, 32, 31, 30, 29, 28 except 48=-131(LC 20), 25=-111(LC 11), 27=-529(LC 20), 26=-477(LC 20)
Max Grav All reactions 250 lb or less at joint(s) 48, 28, 27, 26 except 25=2262(LC 20), 36=272(LC 21), 37=335(LC 21), 38=312(LC 21), 40=306(LC 21), 41=307(LC 21), 42=307(LC 21), 43=308(LC 21), 44=312(LC 21), 45=328(LC 21), 46=313(LC 21), 47=272(LC 21), 35=320(LC 21), 34=307(LC 21), 33=306(LC 21), 32=307(LC 21), 31=311(LC 21), 30=323(LC 21), 29=329(LC 21)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 23-25=-2215/158
WEBS 12-36=-256/26, 11-37=-318/46, 10-38=-294/29, 9-40=-289/27, 8-41=-289/27, 7-42=-290/27, 6-43=-290/27, 5-44=-295/28, 4-45=-308/33, 3-46=-304/47, 13-35=-302/45, 14-34=-289/28, 15-33=-288/27, 16-32=-289/27, 17-31=-293/28, 18-30=-305/29, 19-29=-311/30, 21-27=-24/553, 22-26=-26/437

NOTES-
1) 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 Corner(3) 0-2-12 to 15-2-12, Exterior(2) 15-2-12 to 16-5-14, Corner(3) 16-5-14 to 31-5-14 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
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) TCLL: ASCE 7-16; Pf=123.0 psf (Lum DOL=1.00 Plate DOL=1.00); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 123.0 psf on overhangs non-concurrent with other live loads.
6) All plates are 3x6 MT20 unless otherwise indicated.
7) Gable requires continuous bottom chord bearing.
8) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
9) Gable studs spaced at 1-4-0 oc.
10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
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.

Continued on page 2

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NOTES-

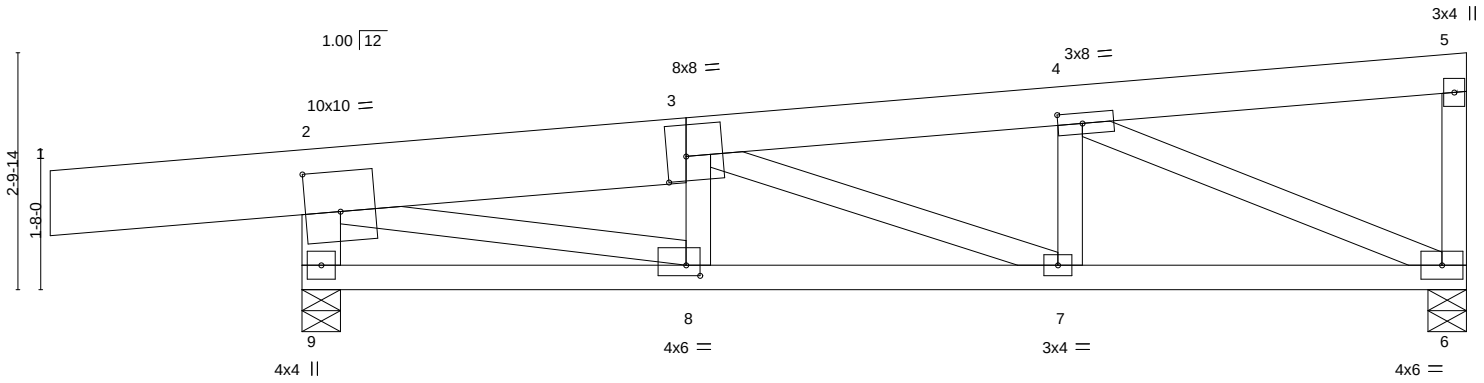
12) Bearing at joint(s) 25, 36, 37, 38, 35, 34, 33, 32, 31, 30, 29, 28, 27, 26 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 36, 37, 38, 40, 41, 42, 43, 44, 45, 46, 47, 35, 34, 33, 32, 31, 30, 29, 28 except (jt=lb) 48=131, 25=111, 27=529, 26=477.
14) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 25, 36, 37, 38, 40, 41, 42, 43, 44, 45, 46, 47, 35, 34, 33, 32, 31, 30, 29, 28, 27, 26.
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.

Job	Truss	Truss Type	Qty	Ply	RICHEY CONSTRUCTION
21747	F2	Monopitch	19	1	R80053718
					Job Reference (optional)

Alpine Truss, Montrose, CO - 81401, 8.730 s Dec 14 2023 MiTek Industries, Inc. Thu Dec 28 12:43:10 2023 Page 1
ID:aBpZahnUiyRNoLvjlpC85azHZfq-pv?jWJ31pUKGcZw4eRD8GjMDLItpRx730KwunOy4R1?

-3-0-0 4-8-11 9-1-13 13-10-8
3-0-0 4-8-11 4-5-3 4-8-11

Scale = 1:27.5



4-8-11 9-1-13 13-10-8
4-8-11 4-5-3 4-8-11

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

LOADING (psf)		SPACING-	1-4-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	123.0	Plate Grip DOL	1.00	TC	0.41	Vert(LL)	-0.11	7-8	>999	360	MT20	169/123
(Roof Snow=123.0)		Lumber DOL	1.00	BC	0.48	Vert(CT)	-0.12	7-8	>999	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.72	Horz(CT)	0.03	6	n/a	n/a		
BCLL	0.0 *	Code IRC2018/TPI2014		Matrix-SH		Wind(LL)	0.02	7-8	>999	240	Weight: 80 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x10 DF SS *Except*
3-5: 2x6 SPF 1650F 1.5E
BOT CHORD 2x4 SPF 1650F 1.5E
WEBS 2x4 WW Stud *Except*
4-6,2-8: 2x4 SPF 1650F 1.5E, 2-9: 2x6 SPF 1650F 1.5E

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

REACTIONS. (size) 6=0-5-8, 9=0-5-8
Max Horz 9=47(LC 13)
Max Uplift 6=-19(LC 14), 9=-83(LC 10)
Max Grav 6=1426(LC 21), 9=2266(LC 21)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2465/383, 3-4=-2276/234, 5-6=-403/59, 2-9=-2221/258
BOT CHORD 8-9=-365/157, 7-8=-402/2331, 6-7=-258/2234
WEBS 3-8=-530/96, 3-7=-102/416, 4-6=-2408/264, 2-8=-226/2294

NOTES-
1) 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 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=1.33 plate grip DOL=1.33
2) TCLL: ASCE 7-16; Pf=123.0 psf (Lum DOL=1.00 Plate DOL=1.00); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 123.0 psf on overhangs non-concurrent with other live loads.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 6, 9.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

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Job	Truss	Truss Type	Qty	Ply	RICHEY CONSTRUCTION
21747	D3E	GABLE	1	1	R80053719
					Job Reference (optional)

Alpine Truss, Montrose, CO - 81401, 8.730 s Dec 14 2023 MiTek Industries, Inc. Thu Dec 28 12:43:08 2023 Page 1
ID:aBpZahnUiyRNoLvjlpC85azHZfq-tWtz5d1nIs4YNFmiX0BgAIGuoVIFz8xnZ0RnjVy4R11

-3-0-0 13-10-8
3-0-0 13-10-8

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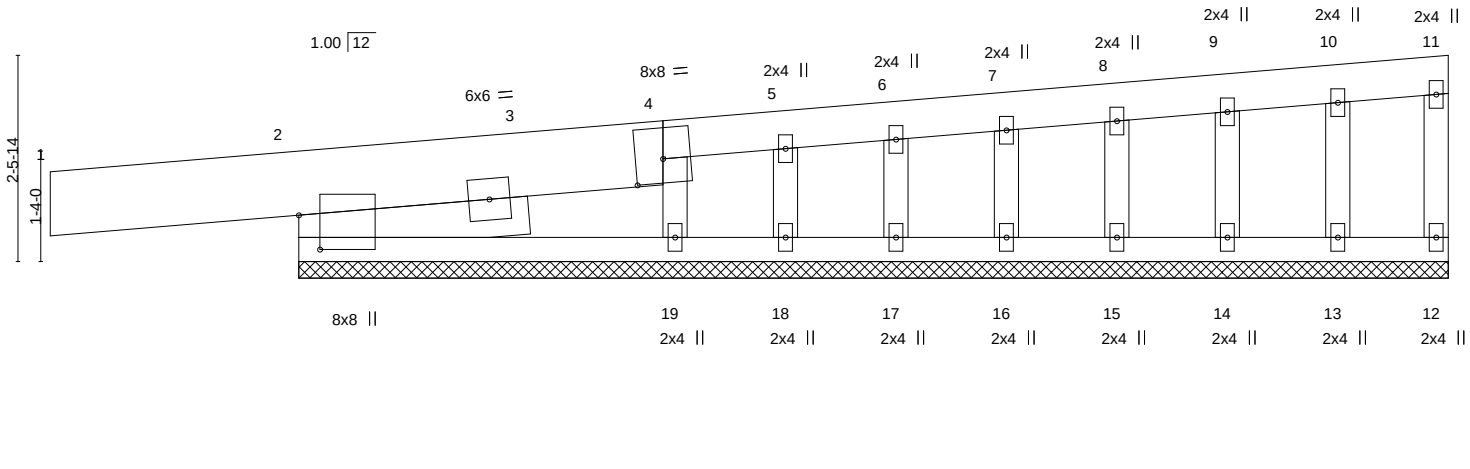

13-10-8 13-10-8

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

LOADING (psf)		SPACING-	1-4-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	123.0	Plate Grip DOL	1.00	TC	0.35	Vert(LL)	-0.00	1	n/r	180	MT20	169/123
(Roof Snow=123.0)		Lumber DOL	1.00	BC	0.10	Vert(CT)	-0.00	1	n/r	80		
TCDL	10.0	Rep Stress Incr	YES	WB	0.31	Horz(CT)	-0.00	12	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-SH		Wind(LL)	0.00	1	n/r	120	Weight: 75 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x10 DF SS *Except*
4-11: 2x6 SPF 1650F 1.5E
BOT CHORD 2x4 SPF 1650F 1.5E
WEBS 2x4 WW Stud
OTHERS 2x4 WW Stud
SLIDER Left 2x6 SPF 1650F 1.5E 2-9-8

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

REACTIONS. All bearings 13-10-8.
(lb) - Max Horz 2=35(LC 11)
Max Uplift All uplift 100 lb or less at joint(s) 12, 2, 13, 14, 15, 16, 17, 18 except 19=-375(LC 20)
Max Grav All reactions 250 lb or less at joint(s) 12 except 2=1446(LC 20), 13=288(LC 21), 14=307(LC 21), 15=298(LC 21), 16=296(LC 21), 17=297(LC 21), 18=302(LC 21), 19=452(LC 21)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-4=-283/24
WEBS 10-13=-269/42, 9-14=-289/43, 8-15=-280/42, 7-16=-279/41, 6-17=-275/41, 5-18=-298/44, 4-19=-409/404

NOTES-
1) 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 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=1.33 plate grip DOL=1.33
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) TCLL: ASCE 7-16; Pf=123.0 psf (Lum DOL=1.00 Plate DOL=1.00); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 123.0 psf on overhangs non-concurrent with other live loads.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 1-4-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 12, 2, 13, 14, 15, 16, 17, 18 except (jt=lb) 19=375.
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.

December 28,2023

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Job	Truss	Truss Type	Qty	Ply	RICHEY CONSTRUCTION
21747	A1G	ROOF SPECIAL	1	2	R80053720
					Job Reference (optional)

Alpine Truss, Montrose, CO - 81401, 8.730 s Dec 14 2023 MiTek Industries, Inc. Thu Dec 28 12:42:54 2023 Page 1
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3-9-6	7-3-4	9-5-5	10-9-1	14-2-15	17-8-13	18-7-1	21-2-11	24-8-8	28-0-6
3-9-6	3-5-14	2-2-1	1-3-13	3-5-14	3-5-14	0-10-5	2-7-9	3-5-14	3-3-14

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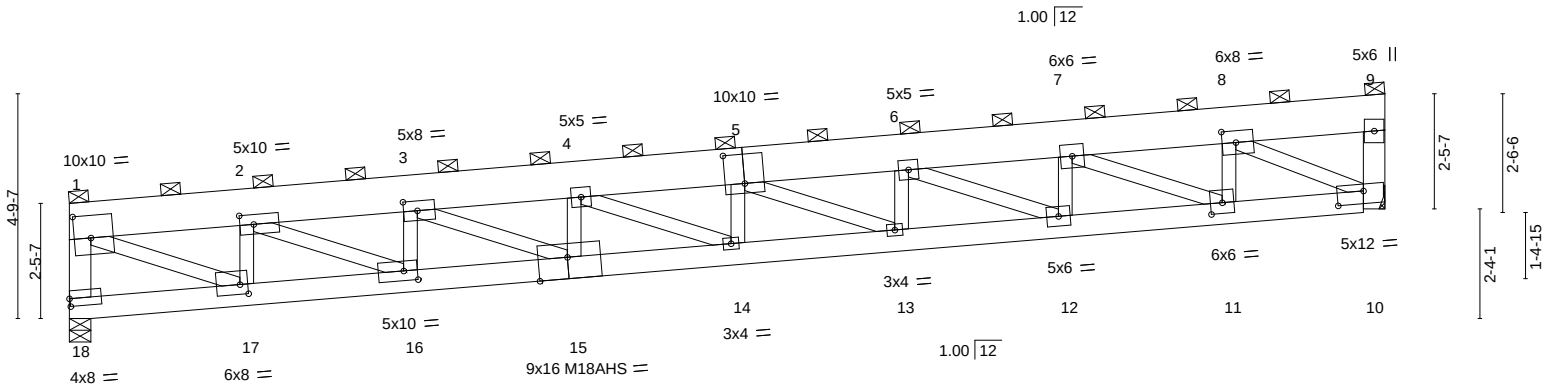

3-9-6	7-3-4	9-5-5	10-9-1	14-2-15	17-8-13	18-7-1	21-2-11	24-8-8	28-0-6
3-9-6	3-5-14	2-2-1	1-3-13	3-5-14	3-5-14	0-10-5	2-7-9	3-5-14	3-3-14

Plate Offsets (X,Y)-- [1:0-4-4,0-5-12], [2:0-3-8,0-2-8], [3:0-3-8,0-2-8], [5:0-5-0,0-7-8], [8:0-3-8,0-3-0], [10:0-6-12,0-3-4], [11:0-3-0,0-2-12], [15:0-7-8,Edge], [16:0-3-8,0-2-8], [17:0-2-0,0-2-8], [18:0-0-3,0-2-0]

LOADING (psf)		**SPACING-**	2-6-0	**CSI.**		**DEFL.**	in	(loc)	l/defl	L/d	**PLATES**	**GRIP**
TCLL	123.0	Plate Grip DOL	1.00	TC	0.59	Vert(LL)	-0.66	14	>498	360	MT20	185/144
(Roof Snow=123.0)		Lumber DOL	1.00	BC	0.95	Vert(CT)	-0.75	14	>440	240	M18AHS	142/136
TCDL	10.0	Rep Stress Incr	NO	WB	0.90	Horz(CT)	0.15	10	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-SH		Wind(LL)	0.07	14	>999	240	Weight: 364 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x10 HF SS
BOT CHORD 2x6 SPF 2100F 1.8E
WEBS 2x4 SPF 1650F 1.5E *Except*
1-18,9-10: 2x6 SPF 1650F 1.5E

BRACING-
TOP CHORD 2-0-0 oc purlins (4-0-11 max.), except end verticals
(Switched from sheeted: Spacing > 2-0-0).
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 18=0-5-8, 10=Mechanical
Max Horz 18=110(LC 11)
Max Uplift 18=-77(LC 10), 10=-86(LC 14)
Max Grav 18=5916(LC 20), 10=5916(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-18=-5742/342, 1-2=-9422/545, 2-3=-15985/911, 3-4=-19821/1122, 4-5=-20949/1181, 5-6=-19438/1104, 6-7=-15251/875, 7-8=-8523/501, 8-9=-465/54, 9-10=-799/66
BOT CHORD 17-18=-230/523, 16-17=-705/9336, 15-16=-1056/15930, 14-15=-1251/19772, 13-14=-1295/20933, 12-13=-1185/19400, 11-12=-926/15215, 10-11=-525/8513
WEBS 1-17=-537/9597, 8-10=-9057/536, 2-17=-4711/328, 2-16=-398/7219, 3-16=-3425/244, 3-15=-229/4202, 4-15=-1994/166, 4-14=-59/1236, 5-14=-521/81, 5-13=-1692/122, 6-13=-7/910, 6-12=-4579/283, 7-12=-87/2340, 7-11=-7350/440, 8-11=-151/3517

NOTES-
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x10 - 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, Except member 2-17 2x4 - 1 row at 0-7-0 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) 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 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=1.33 plate grip DOL=1.33
4) TCLL: ASCE 7-16; Pf=123.0 psf (Lum DOL=1.00 Plate DOL=1.00); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
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) * 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) Refer to girder(s) for truss to truss connections.
10) Bearing at joint(s) 18 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
11) Provide metal plate or equivalent at bearing(s) 10 to support reaction shown.
12) This truss requires mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 18, 10.

Continued on page 2

COLORADO LICENSED XIAOMING ZHAO PE.0051661 PROFESSIONAL ENGINEER

December 28,2023

MiTek®
400 Sunrise Ave., Suite 270
Roseville, CA 95661
916.755.3571 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	RICHEY CONSTRUCTION
21747	A1G	ROOF SPECIAL	1	2	R80053720 Job Reference (optional)

NOTES-

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

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Job	Truss	Truss Type	Qty	Ply	RICHEY CONSTRUCTION
21747	A2	Roof Special	12	1	R80053721
					Job Reference (optional)

Alpine Truss, Montrose, CO - 81401, 8.730 s Dec 14 2023 MiTek Industries, Inc. Thu Dec 28 12:42:55 2023 Page 1
ID:aBpZahnUiyRNoLvjlpC85azHZfq-m0b2MAtdLtROJFGCGnSd9ZEdNGfNQ5esZVnblly4R1E

3-9-6	7-3-4	9-5-5	10-9-1	14-2-15	17-8-13	18-7-1	21-2-11	24-8-8	28-0-6
3-9-6	3-5-14	2-2-1	1-3-13	3-5-14	3-5-14	0-10-5	2-7-9	3-5-14	3-3-14

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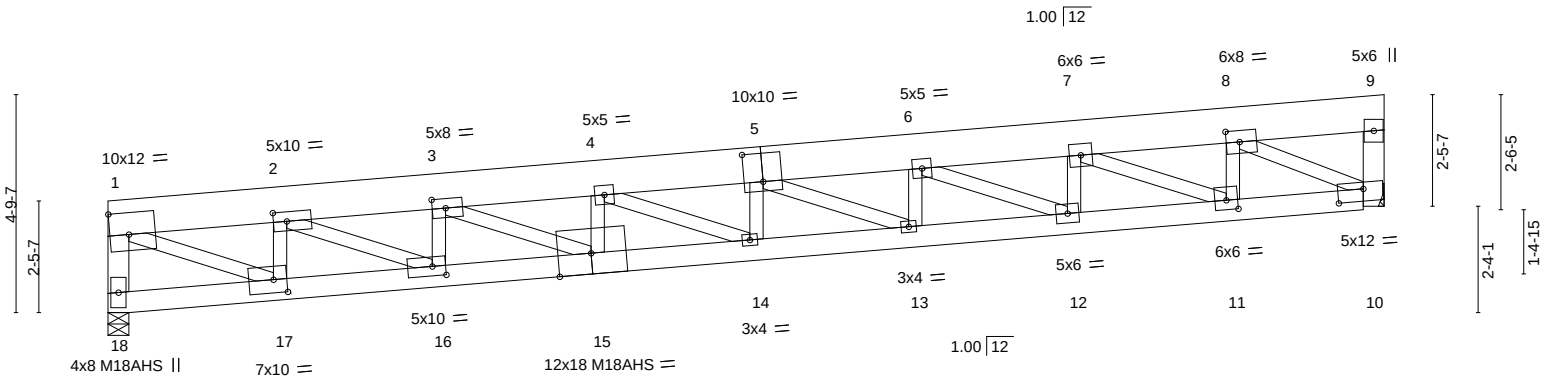

3-9-6	7-3-4	9-5-5	10-9-1	14-2-15	17-8-13	18-7-1	21-2-11	24-8-8	28-0-6
3-9-6	3-5-14	2-2-1	1-3-13	3-5-14	3-5-14	0-10-5	2-7-9	3-5-14	3-3-14

Plate Offsets (X,Y)-- [1:0-5-0,0-5-12], [2:0-3-8,0-2-8], [3:0-3-8,0-2-8], [5:0-5-0,0-7-8], [8:0-3-8,0-3-0], [10:0-6-12,0-3-4], [11:0-3-0,0-2-8], [15:0-8-12,Edge], [16:0-3-8,0-2-8], [17:0-3-8,0-3-8]

LOADING (psf)		**SPACING-**	1-4-0	**CSI.**		**DEFL.**	in	(loc)	l/defl	L/d	**PLATES**	**GRIP**
TCLL	123.0	Plate Grip DOL	1.00	TC	0.52	Vert(LL)	-0.71	14	>466	360	MT20	185/144
(Roof Snow=123.0)		Lumber DOL	1.00	BC	0.93	Vert(CT)	-0.80	14	>412	240	M18AHS	142/136
TCDL	10.0	Rep Stress Incr	YES	WB	0.96	Horz(CT)	0.16	10	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-SH		Wind(LL)	0.07	14	>999	240	Weight: 182 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x10 HF SS
BOT CHORD 2x6 SPF 2100F 1.8E
WEBS 2x4 SPF 1650F 1.5E *Except*
1-18,9-10: 2x6 SPF 1650F 1.5E

BRACING-
TOP CHORD Structural wood sheathing directly applied or 2-5-15 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 2-2-0 oc bracing: 13-14.

REACTIONS. (size) 18=0-5-8, 10=Mechanical
Max Horz 18=59(LC 11)
Max Uplift 18=-41(LC 10), 10=-46(LC 14)
Max Grav 18=3155(LC 20), 10=3155(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-18=-3062/183, 1-2=-5029/291, 2-3=-8533/486, 3-4=-10580/599, 4-5=-11182/630, 5-6=-10376/590, 6-7=-8141/467, 7-8=-4549/268, 9-10=-426/35
BOT CHORD 17-18=-123/280, 16-17=-376/4983, 15-16=-563/8503, 14-15=-668/10554, 13-14=-691/11174, 12-13=-632/10355, 11-12=-494/8121, 10-11=-280/4544
WEBS 1-17=-287/5121, 8-10=-4833/286, 2-17=-2512/175, 2-16=-213/3853, 3-16=-1826/130, 3-15=-122/2243, 4-15=-1063/89, 4-14=-31/660, 5-14=-278/43, 5-13=-903/65, 6-13=-4/485, 6-12=-2444/151, 7-12=-47/1248, 7-11=-3923/235, 8-11=-80/1875

NOTES-
1) 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 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=1.33 plate grip DOL=1.33
2) TCLL: ASCE 7-16; Pf=123.0 psf (Lum DOL=1.00 Plate DOL=1.00); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) All plates are MT20 plates unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
7) Refer to girder(s) for truss to truss connections.
8) Bearing at joint(s) 18 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 18, 10.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

December 28,2023

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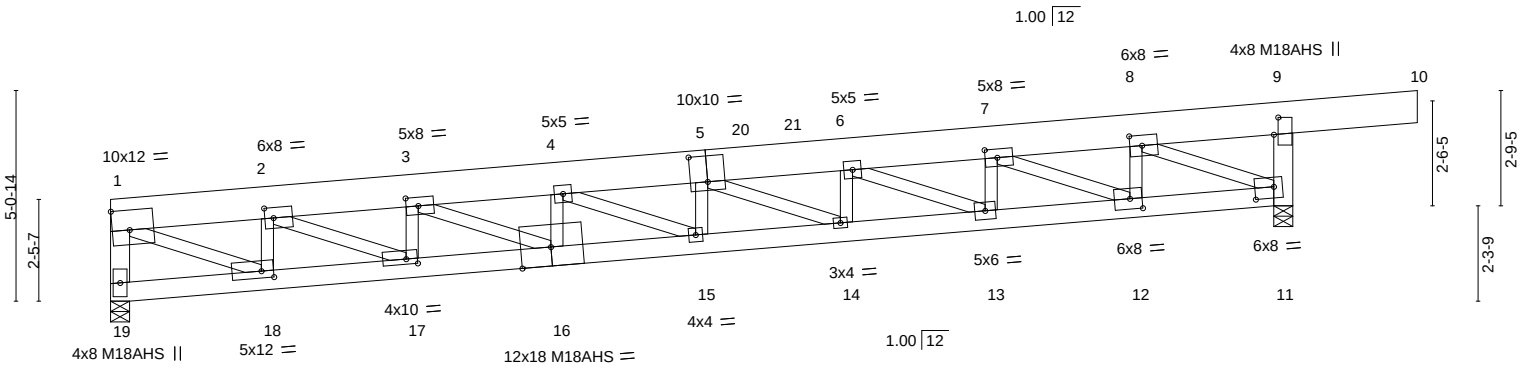
Job	Truss	Truss Type	Qty	Ply	RICHEY CONSTRUCTION
21747	A3	Monopitch	7	1	R80053722
					Job Reference (optional)

Alpine Truss, Montrose, CO - 81401, 8.730 s Dec 14 2023 MiTek Industries, Inc. Thu Dec 28 12:42:57 2023 Page 1
ID:aBpZahnUiyRNoLvjlpC85azHZfq-iPjonsvttUh6ZZQaNCU5E_Jzg3Kbu_w91pGiqey4R1C

3-9-6	7-3-4	10-9-1	14-2-15	17-8-13	21-2-11	24-8-8	28-5-14	31-5-14
3-9-6	3-5-14	3-5-14	3-5-14	3-5-14	3-5-14	3-5-14	3-9-6	3-0-0

Scale = 1:55.5



3-9-6	7-3-4	10-9-1	14-2-15	17-8-13	21-2-11	24-8-8	28-5-14
3-9-6	3-5-14	3-5-14	3-5-14	3-5-14	3-5-14	3-5-14	3-9-6

Plate Offsets (X,Y)-- [1:0-5-0,0-5-12], [2:0-2-8,0-3-0], [3:0-3-8,0-2-8], [5:0-5-0,0-7-8], [7:0-3-8,0-2-8], [8:0-3-8,0-3-0], [9:0-5-0,0-1-4], [11:0-5-8,0-3-4], [12:0-3-8,0-3-0], [16:0-8-12,Edge], [17:0-3-4,0-1-8], [18:0-3-8,0-2-0]

LOADING (psf)		**SPACING-**	1-4-0	**CSI.**		**DEFL.**	in	(loc)	l/defl	L/d	**PLATES**	**GRIP**
TCLL	123.0	Plate Grip DOL	1.00	TC	0.54	Vert(LL)	-0.74	15	>452	360	MT20	185/144
(Roof Snow=123.0)		Lumber DOL	1.00	BC	0.94	Vert(CT)	-0.84	15	>399	240	M18AHS	142/136
TCDL	10.0	Rep Stress Incr	YES	WB	0.97	Horz(CT)	0.17	11	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-SH		Wind(LL)	0.07	15	>999	240	Weight: 194 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x10 HF SS
BOT CHORD 2x6 SPF 2100F 1.8E
WEBS 2x4 SPF 1650F 1.5E *Except*
1-19,9-11: 2x6 SPF 1650F 1.5E

BRACING-
TOP CHORD Structural wood sheathing directly applied or 2-5-6 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
2-2-0 oc bracing: 14-15
6-0-0 oc bracing: 11-12.

REACTIONS. (size) 19=0-5-8, 11=0-5-8
Max Horz 19=64(LC 11)
Max Uplift 19=-40(LC 10), 11=-76(LC 14)
Max Grav 19=3200(LC 21), 11=3985(LC 21)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-19=-3106/178, 1-2=-5104/282, 2-3=-8666/470, 3-4=-10757/577, 4-5=-11388/610, 5-6=-10594/569, 6-7=-8373/453, 7-8=-4632/271, 9-11=-1604/125
BOT CHORD 18-19=-129/284, 17-18=-375/5057, 16-17=-555/8636, 15-16=-653/10730, 14-15=-672/11380, 13-14=-613/10573, 12-13=-480/8354, 11-12=-277/4619
WEBS 1-18=-279/5197, 2-18=-2550/171, 2-17=-206/3918, 3-17=-1858/127, 3-16=-117/2290, 4-16=-1087/86, 4-15=-34/691, 5-15=-295/62, 5-14=-890/65, 6-14=-4/482, 6-13=-2428/146, 7-13=-44/1236, 7-12=-4094/240, 8-12=-83/1978, 8-11=-4849/266

NOTES-
1) 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 Corner(3) 0-2-12 to 15-2-12, Exterior(2) 15-2-12 to 16-5-14, Corner(3) 16-5-14 to 31-5-14 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
2) TCLL: ASCE 7-16; Pf=123.0 psf (Lum DOL=1.00 Plate DOL=1.00); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 123.0 psf on overhangs non-concurrent with other live loads.
5) All plates are MT20 plates unless otherwise indicated.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
8) Bearing at joint(s) 19, 11 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 19, 11.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

December 28,2023

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Job	Truss	Truss Type	Qty	Ply	RICHEY CONSTRUCTION
21747	D1G	MONOPITCH	1	2	R80053723
					Job Reference (optional)

Alpine Truss, Montrose, CO - 81401, 8.730 s Dec 14 2023 MiTek Industries, Inc. Thu Dec 28 12:43:06 2023 Page 1
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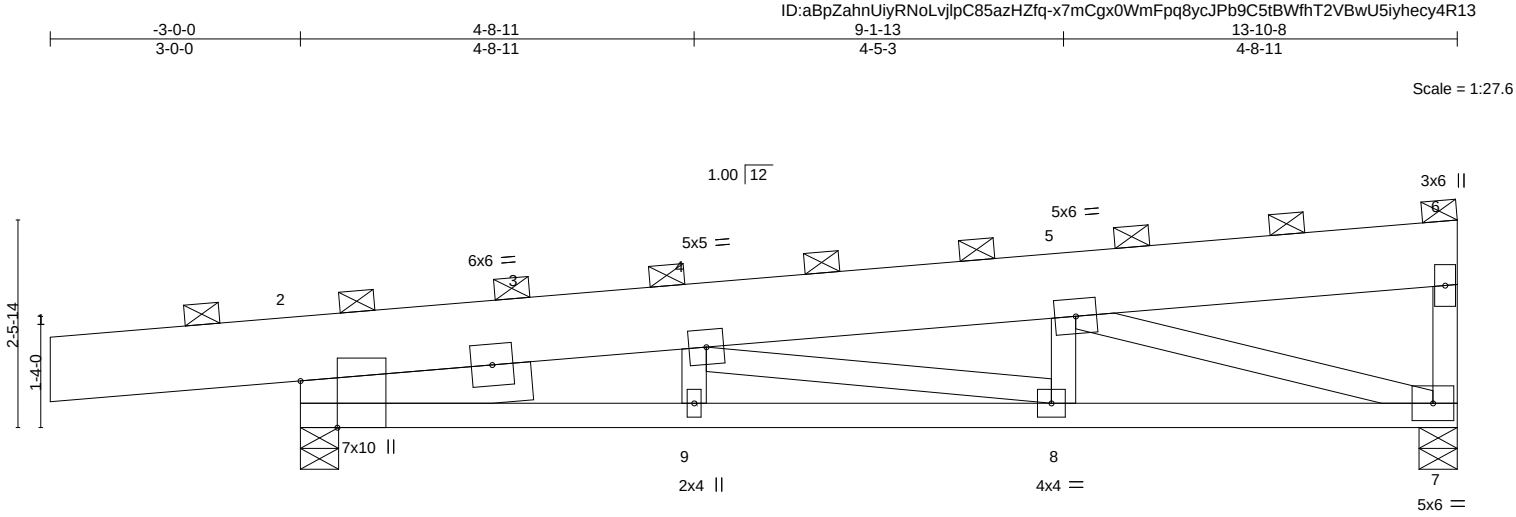

Plate Offsets (X,Y)-- [2:0-6-11,Edge]

LOADING (psf)		SPACING-	3-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	123.0	Plate Grip DOL	1.00	TC	0.45	Vert(LL)	-0.16	8-9	>999	360	MT20	169/123
(Roof Snow=123.0)		Lumber DOL	1.00	BC	0.66	Vert(CT)	-0.19	8-9	>873	240		
TCDL	10.0	Rep Stress Incr	NO	WB	0.47	Horz(CT)	0.06	7	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-SH		Wind(LL)	0.02	8-9	>999	240	Weight: 188 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x10 DF SS
BOT CHORD 2x4 SPF 1650F 1.5E
WEBS 2x4 WW Stud *Except*
5-7: 2x4 SPF 1650F 1.5E
SLIDER Left 2x6 SPF 1650F 1.5E 2-9-8

BRACING-
TOP CHORD 2-0-0 oc purlins (6-0-0 max.), except end verticals
(Switched from sheeted: Spacing > 2-0-0).
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS. (size) 7=0-5-8, 2=0-5-8
Max Horz 2=72(LC 13)
Max Uplift 7=-45(LC 14), 2=-177(LC 10)
Max Grav 7=3293(LC 21), 2=5019(LC 21)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-416/0, 2-4=-6563/710, 4-5=-5950/608, 6-7=-1222/165
BOT CHORD 2-9=-751/5697, 8-9=-751/5697, 7-8=-645/5895
WEBS 4-9=0/258, 4-8=-50/780, 5-8=-62/294, 5-7=-6124/651

NOTES-
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x10 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) 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 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=1.33 plate grip DOL=1.33
4) TCLL: ASCE 7-16; Pf=123.0 psf (Lum DOL=1.00 Plate DOL=1.00); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 123.0 psf on overhangs non-concurrent with other live loads.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 7 except (jt=lb) 2=177.
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.

December 28,2023

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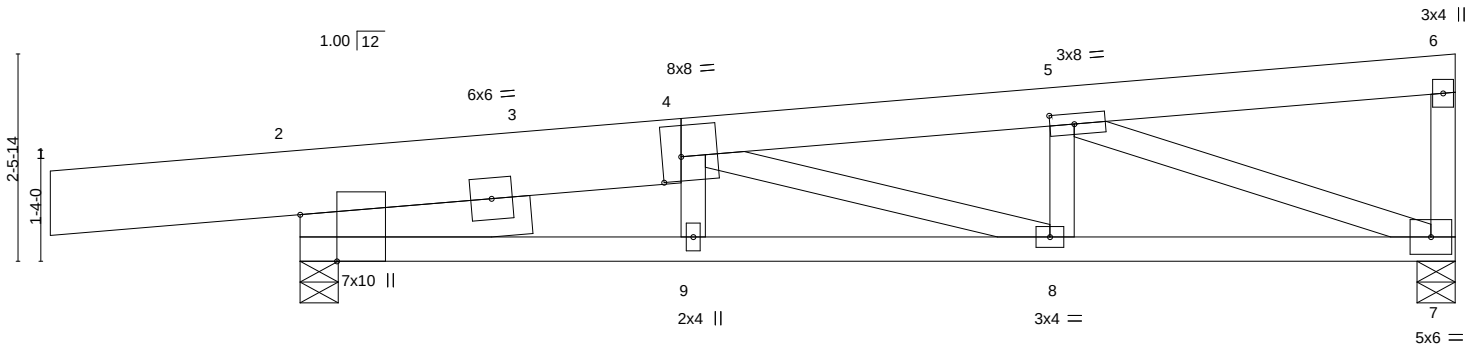
Job	Truss	Truss Type	Qty	Ply	RICHEY CONSTRUCTION
21747	D2	Monopitch	19	1	R80053724
					Job Reference (optional)

Alpine Truss, Montrose, CO - 81401, 8.730 s Dec 14 2023 MiTek Industries, Inc. Thu Dec 28 12:43:07 2023 Page 1
ID:aBpZahnUiyRNoLvjlpC85azHZfq-PKKauH09XZyhl5BVzIgRe5kid5pcEZfdKMhEB3y4R12

-3-0-0	4-8-11	9-1-13	13-10-8
3-0-0	4-8-11	4-5-3	4-8-11

Scale = 1:27.7



4-8-11	9-1-13	13-10-8
4-8-11	4-5-3	4-8-11

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

LOADING (psf)		**SPACING-**	1-4-0	**CSI.**		**DEFL.**	in	(loc)	l/defl	L/d	**PLATES**	**GRIP**
TCLL	123.0	Plate Grip DOL	1.00	TC	0.44	Vert(LL)	-0.17	8-9	>970	360	MT20	169/123
(Roof Snow=123.0)		Lumber DOL	1.00	BC	0.64	Vert(CT)	-0.20	8-9	>840	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.83	Horz(CT)	0.06	7	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-SH		Wind(LL)	0.02	8-9	>999	240	Weight: 78 lb	FT = 20%
BCDL	10.0											

LUMBER-

TOP CHORD	2x10 DF SS *Except*
	4-6: 2x6 SPF 1650F 1.5E
BOT CHORD	2x4 SPF 1650F 1.5E
WEBS	2x4 WW Stud *Except*
	5-7: 2x4 SPF 1650F 1.5E
SLIDER	Left 2x6 SPF 1650F 1.5E 2-9-8

BRACING-

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

REACTIONS. (size) 7=0-5-8, 2=0-5-8
Max Horz 2=35(LC 13)
Max Uplift 7=-20(LC 14), 2=-79(LC 10)
Max Grav 7=1464(LC 21), 2=2231(LC 21)

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

TOP CHORD	2-4=-3374/312, 4-5=-2805/287, 6-7=-404/59
BOT CHORD	2-9=-341/3025, 8-9=-336/3028, 7-8=-306/2766
WEBS	4-8=-272/379, 5-7=-2900/310

NOTES-

1) 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 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=1.33 plate grip DOL=1.33
2) TCLL: ASCE 7-16; Pf=123.0 psf (Lum DOL=1.00 Plate DOL=1.00); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 123.0 psf on overhangs non-concurrent with other live loads.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 7, 2.
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.

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Job	Truss	Truss Type	Qty	Ply	RICHEY CONSTRUCTION
21747	G1G	ROOF SPECIAL	1	2	R80053725
					Job Reference (optional)

Alpine Truss, Montrose, CO - 81401, 8.730 s Dec 14 2023 MiTek Industries, Inc. Thu Dec 28 12:43:13 2023 Page 1
ID:aBpZahnUiyRNoLvjlpC85azHZfq-EUhs8K5v6PiqT0efJZnrtM_hoWnreDiWil8YNiy4R0y

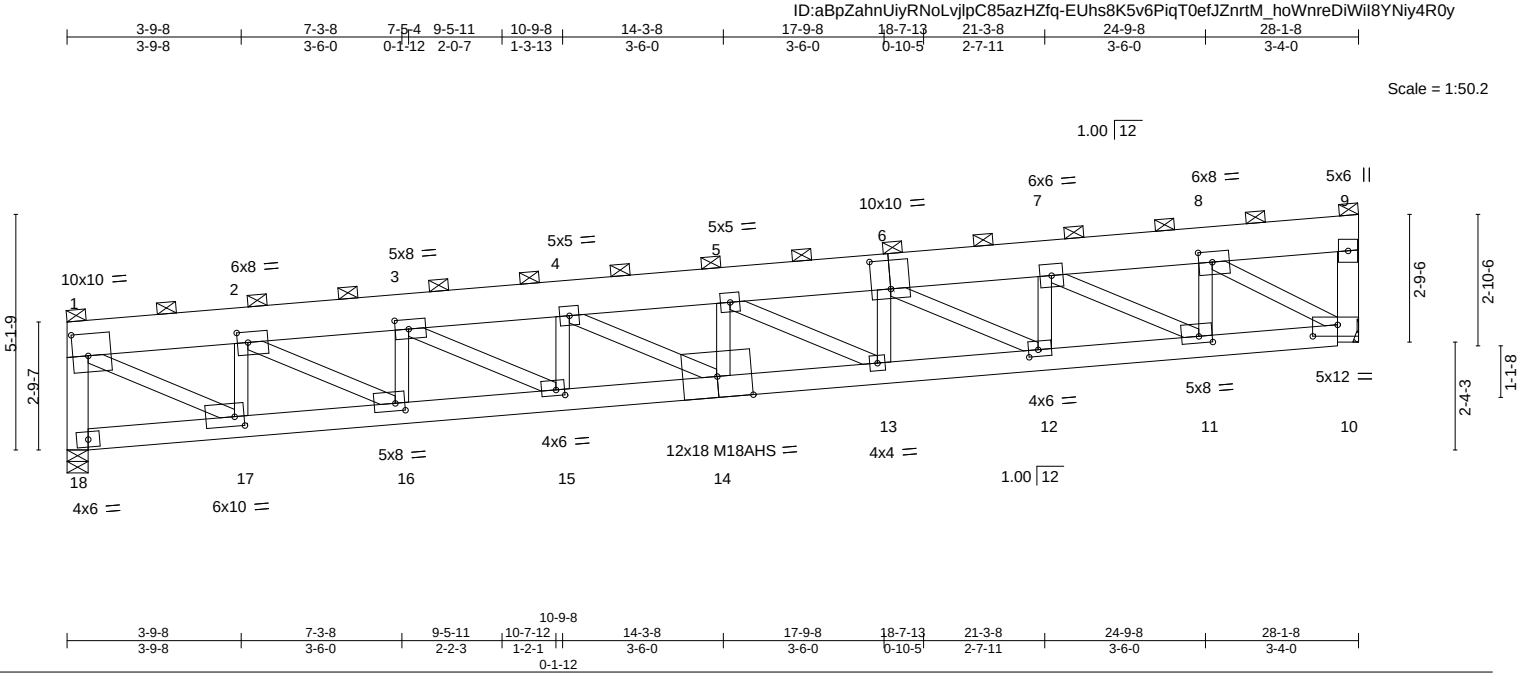

Plate Offsets (X,Y)-- [1:0-4-0,0-5-12], [2:0-2-12,0-2-12], [3:0-3-8,0-2-8], [6:0-5-0,0-7-8], [8:0-3-8,0-2-12], [10:0-6-8,0-3-0], [11:0-3-8,0-1-12], [12:0-2-8,0-1-12], [15:0-2-4,0-1-8], [16:0-2-8,0-2-0], [17:0-2-8,0-2-8]

LOADING (psf)		**SPACING-**	3-0-0	**CSI.**		**DEFL.**	in	(loc)	l/defl	L/d	**PLATES**	**GRIP**
TCLL	123.0	Plate Grip DOL	1.00	TC	0.59	Vert(LL)	-0.61	14	>545	360	MT20	185/144
(Roof Snow=123.0)		Lumber DOL	1.00	BC	0.97	Vert(CT)	-0.69	14	>481	240	M18AHS	142/136
TCDL	10.0	Rep Stress Incr	NO	WB	0.98	Horz(CT)	0.16	10	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-SH		Wind(LL)	0.06	14	>999	240	Weight: 375 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x10 HF SS
BOT CHORD 2x6 SPF 2100F 1.8E
WEBS 2x4 SPF 1650F 1.5E *Except*
1-18,9-10: 2x6 SPF 1650F 1.5E

BRACING-
TOP CHORD 2-0-0 oc purlins (4-0-0 max.), except end verticals
(Switched from sheeted: Spacing > 2-0-0).
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 18=0-5-8, 10=Mechanical
Max Horz 18=145(LC 11)
Max Uplift 18=-93(LC 10), 10=-103(LC 14)
Max Grav 18=7125(LC 20), 10=7125(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-18=-6944/412, 1-2=-9838/576, 2-3=-16635/951, 3-4=-20608/1166, 4-5=-21793/1225, 5-6=-20217/1146, 6-7=-15848/912, 7-8=-8882/530, 8-9=-395/63, 9-10=-858/73
BOT CHORD 17-18=-283/424, 16-17=-778/9745, 15-16=-1134/16573, 14-15=-1330/20550, 13-14=-1372/21776, 12-13=-1249/20108, 11-12=-977/15801, 10-11=-559/8864
WEBS 1-17=-588/10526, 2-17=-5803/401, 2-16=-426/7759, 3-16=-4170/296, 3-15=-245/4517, 4-15=-2414/198, 4-14=-65/1364, 5-14=-684/101, 5-13=-1830/140, 6-13=-12/1119, 6-12=-4938/312, 7-12=-115/2907, 7-11=-7897/476, 8-11=-187/4307, 8-10=-9991/595

NOTES-
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x10 - 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, Except member 2-17 2x4 - 1 row at 0-7-0 oc, member 8-10 2x4 - 1 row at 0-7-0 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) 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 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=1.33 plate grip DOL=1.33
4) TCLL: ASCE 7-16; Pf=123.0 psf (Lum DOL=1.00 Plate DOL=1.00); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) All plates are MT20 plates unless otherwise indicated.
7) The Fabrication Tolerance at joint 14 = 16%
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
10) Refer to girder(s) for truss to truss connections.
11) Bearing at joint(s) 18 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.

Continued on page 2

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NOTES-

12) Provide metal plate or equivalent at bearing(s) 10 to support reaction shown.
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 18 except (jt=lb) 10=103.
14) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
15) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

Job	Truss	Truss Type	Qty	Ply	RICHEY CONSTRUCTION
21747	G2	ROOF SPECIAL	12	1	R80053726
					Job Reference (optional)

Alpine Truss, Montrose, CO - 81401, 8.730 s Dec 14 2023 MiTek Industries, Inc. Thu Dec 28 12:43:14 2023 Page 1
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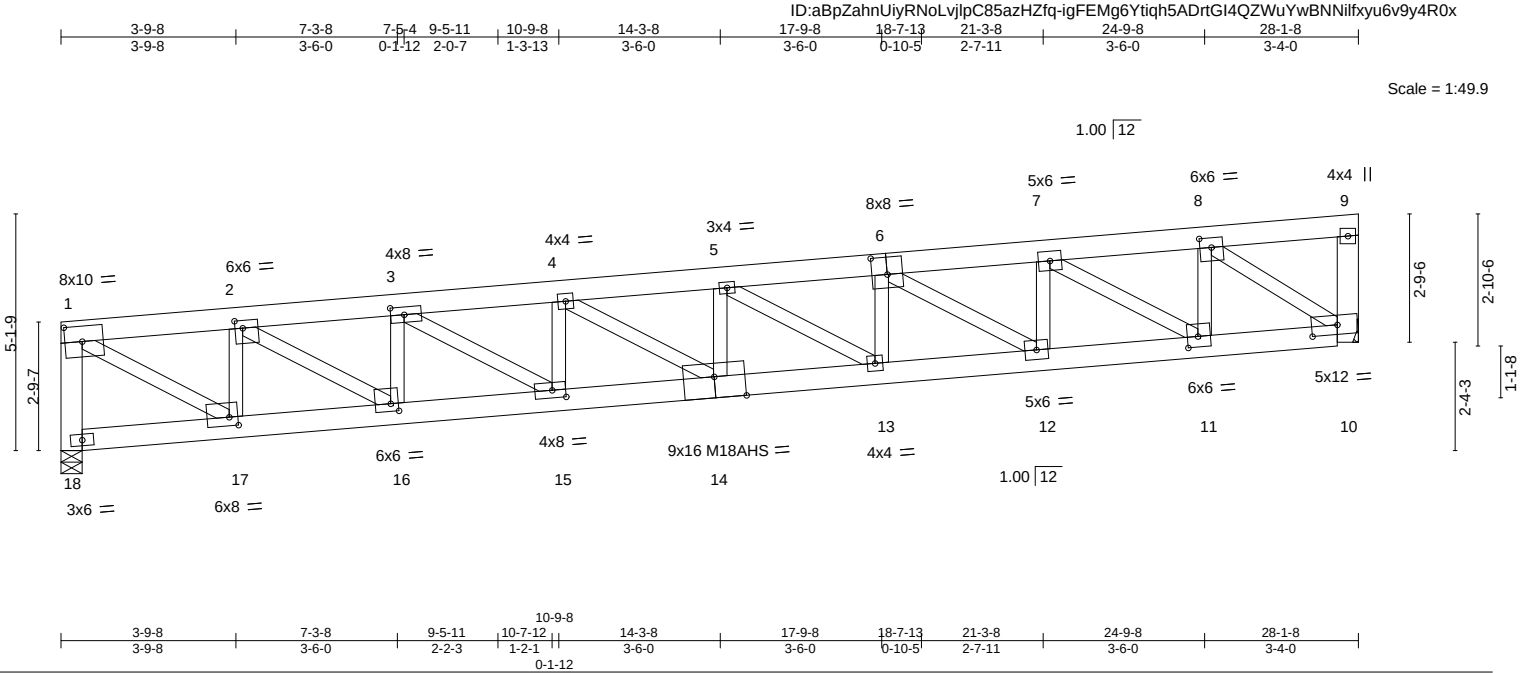

Plate Offsets (X,Y)-- [1:0-4-8,0-4-0], [2:0-2-0,0-2-0], [3:0-3-8,0-2-0], [6:0-4-0,0-4-8], [8:0-3-0,0-2-8], [10:0-6-11,0-2-8], [11:0-2-12,0-2-12], [14:0-8-0,Edge], [15:0-3-8,0-2-0], [16:0-2-0,0-2-0], [17:0-2-4,0-2-4]

LOADING (psf)		**SPACING-**	1-4-0	**CSI.**		**DEFL.**	in	(loc)	l/defl	L/d	**PLATES**	**GRIP**
TCLL	123.0	Plate Grip DOL	1.00	TC	0.46	Vert(LL)	-0.57	14	>584	360	MT20	197/144
(Roof Snow=123.0)		Lumber DOL	1.00	BC	0.76	Vert(CT)	-0.64	14	>516	240	M18AHS	142/136
TCDL	10.0	Rep Stress Incr	YES	WB	0.87	Horz(CT)	0.14	10	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-SH		Wind(LL)	0.06	14	>999	240	Weight: 156 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x6 SPF 2100F 1.8E
BOT CHORD 2x6 SPF 2100F 1.8E
WEBS 2x4 SPF 1650F 1.5E *Except*
1-18,9-10: 2x6 SPF 1650F 1.5E

BRACING-
TOP CHORD Structural wood sheathing directly applied or 2-9-4 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 18=0-5-8, 10=Mechanical
Max Horz 18=67(LC 11)
Max Uplift 18=-42(LC 10), 10=-46(LC 14)
Max Grav 18=3167(LC 20), 10=3167(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-18=-3085/183, 1-2=-4212/250, 2-3=-7085/407, 3-4=-8765/497, 4-5=-9260/521, 5-6=-8594/488, 6-7=-6765/390, 7-8=-3761/226, 9-10=-319/30
BOT CHORD 16-17=-342/4180, 15-16=-490/7053, 14-15=-572/8734, 13-14=-589/9252, 12-13=-536/8549, 11-12=-420/6737, 10-11=-238/3740
WEBS 1-17=-258/4648, 2-17=-2688/184, 2-16=-183/3329, 3-16=-1881/133, 3-15=-106/1946, 4-15=-1094/89, 4-14=-28/588, 5-14=-310/45, 5-13=-789/62, 6-13=-7/505, 6-12=-2118/135, 7-12=-53/1303, 7-11=-3478/211, 8-11=-89/1999, 8-10=-4352/259

NOTES-
1) 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 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=1.33 plate grip DOL=1.33
2) TCLL: ASCE 7-16; Pf=123.0 psf (Lum DOL=1.00 Plate DOL=1.00); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) All plates are MT20 plates unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
7) Refer to girder(s) for truss to truss connections.
8) Bearing at joint(s) 18 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
9) Provide metal plate or equivalent at bearing(s) 10 to support reaction shown.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 18, 10.
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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Job	Truss	Truss Type	Qty	Ply	RICHEY CONSTRUCTION
21747	G3	MONOPITCH	7	1	R80053727
					Job Reference (optional)

Alpine Truss, Montrose, CO - 81401, 8.730 s Dec 14 2023 MiTek Industries, Inc. Thu Dec 28 12:43:15 2023 Page 1
ID:aBpZahnUiyRNoLvjlpC85azHZfq-AspcZ06Ae0yYjKo2R_pJyn33tJWP69noAcdfSby4R0w

3-9-8	7-3-8	10-9-8	14-3-8	17-9-8	21-3-8	24-9-8	28-7-0	31-7-0
3-9-8	3-6-0	3-6-0	3-6-0	3-6-0	3-6-0	3-6-0	3-9-8	3-0-0

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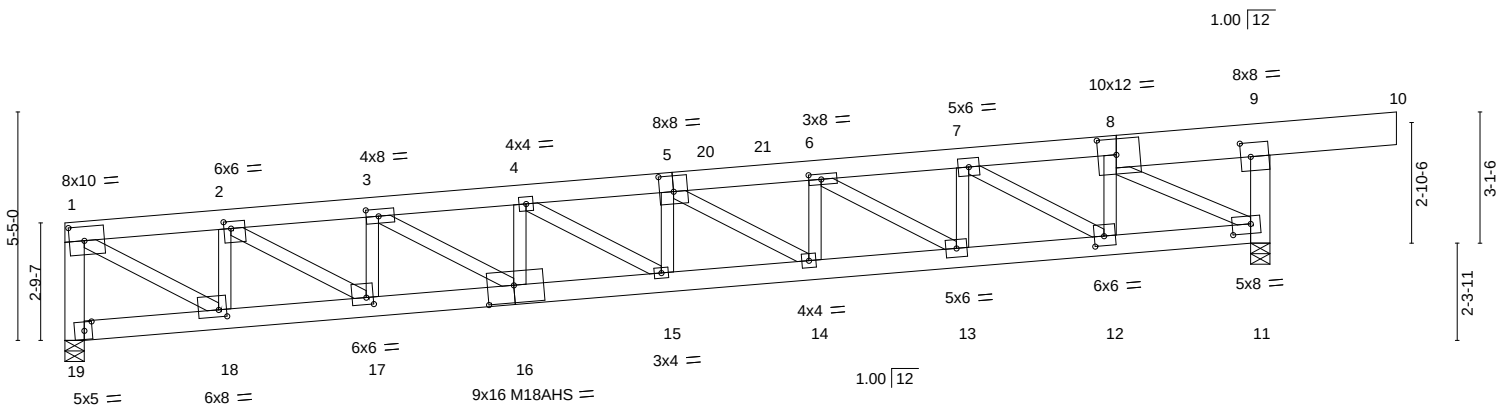

3-9-8	7-3-8	10-9-8	14-3-8	17-9-8	21-3-8	24-9-8	28-1-12	28-7-0
3-9-8	3-6-0	3-6-0	3-6-0	3-6-0	3-6-0	3-6-0	3-4-4	0-5-4

Plate Offsets (X,Y)-- [1:0-4-4,0-4-0], [2:0-2-0,0-2-0], [3:0-3-8,0-2-0], [5:0-4-0,0-4-8], [6:0-3-8,0-1-8], [8:0-5-4,0-4-8], [9:0-2-13,0-4-0], [11:0-5-4,0-2-12], [12:0-2-12,0-2-12], [16:0-7-8,0-5-0], [17:0-2-0,0-2-0], [18:0-2-4,0-2-0], [19:0-2-4,0-2-8]

LOADING (psf)		**SPACING-**	1-4-0	**CSI.**		**DEFL.**	in	(loc)	l/defl	L/d	**PLATES**	**GRIP**
TCLL	123.0	Plate Grip DOL	1.00	TC	0.49	Vert(LL)	-0.59	15	>568	360	MT20	197/144
(Roof Snow=123.0)		Lumber DOL	1.00	BC	0.78	Vert(CT)	-0.67	15	>502	240	M18AHS	142/136
TCDL	10.0	Rep Stress Incr	YES	WB	0.88	Horz(CT)	0.14	11	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-SH		Wind(LL)	0.06	15	>999	240	Weight: 175 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x6 SPF 2100F 1.8E *Except* 8-10: 2x10 DF SS
BOT CHORD 2x6 SPF 2100F 1.8E
WEBS 2x4 SPF 1650F 1.5E
OTHERS 2x6 SPF 1650F 1.5E

BRACING-
TOP CHORD Structural wood sheathing directly applied or 2-8-6 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 11-12.

REACTIONS. (size) 19=0-5-8, 11=0-5-8
Max Horz 19=70(LC 11)
Max Uplift 19=-40(LC 10), 11=-75(LC 14)
Max Grav 19=3212(LC 21), 11=3997(LC 21)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-19=-3130/178, 1-2=-4275/243, 2-3=-7194/395, 3-4=-8917/482, 4-5=-9432/503, 5-6=-8777/472, 6-7=-6967/380, 7-8=-3982/220, 9-11=-1598/116
BOT CHORD 17-18=-336/4242, 16-17=-479/7162, 15-16=-558/8887, 14-15=-570/9417, 13-14=-519/8755, 12-13=-409/6946, 11-12=-225/3842
WEBS 1-18=-251/4717, 2-18=-2729/180, 2-17=-177/3383, 3-17=-1912/130, 3-16=-102/1997, 4-16=-1123/88, 4-15=-29/595, 5-15=-303/63, 5-14=-776/60, 6-14=-7/502, 6-13=-2094/128, 7-13=-47/1266, 7-12=-3453/207, 8-12=-87/2017, 8-11=-4325/241

NOTES-
1) 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 Corner(3) 0-2-12 to 15-2-12, Exterior(2) 15-2-12 to 16-7-0, Corner(3) 16-7-0 to 31-7-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
2) TCLL: ASCE 7-16; Pf=123.0 psf (Lum DOL=1.00 Plate DOL=1.00); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 123.0 psf on overhangs non-concurrent with other live loads.
5) All plates are MT20 plates unless otherwise indicated.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
8) Bearing at joint(s) 19, 11 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 19, 11.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

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Job	Truss	Truss Type	Qty	Ply	RICHEY CONSTRUCTION
21747	F1G	Monopitch	1	2	R80053728
					Job Reference (optional)

Alpine Truss, Montrose, CO - 81401, 8.730 s Dec 14 2023 MiTek Industries, Inc. Thu Dec 28 12:43:09 2023 Page 1
ID:aBpZahnUiyRNoLvjlpC85azHZfq-LiRLIz2P2ACP?PLu4jivjWp5ovciiVPwngALFxy4R10

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3-0-0 4-8-11 4-5-3 4-8-11

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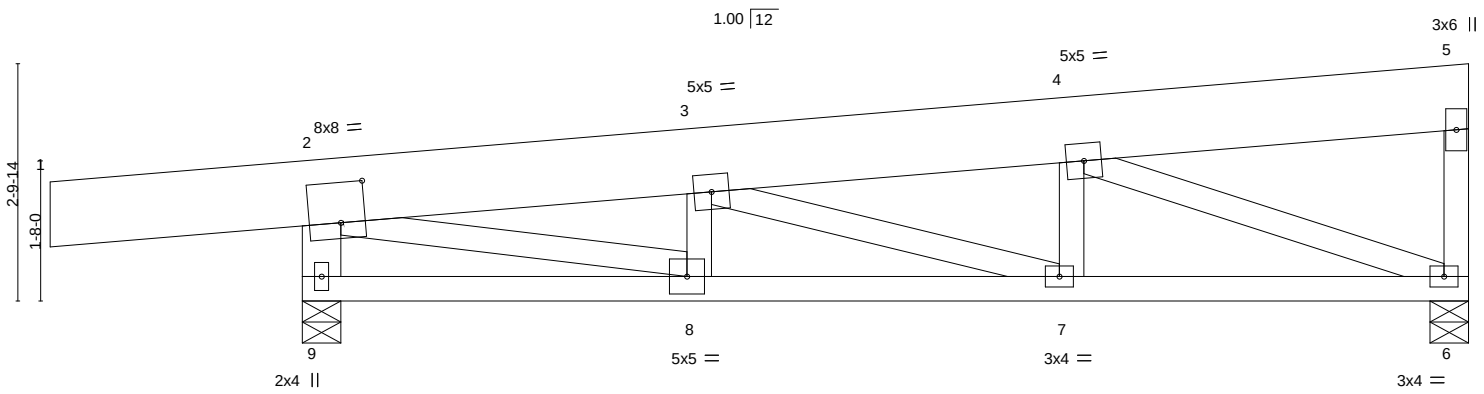

4-8-11 9-1-13 13-10-8
4-8-11 4-5-3 4-8-11

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

LOADING (psf)		SPACING-	1-4-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	123.0	Plate Grip DOL	1.00	TC	0.21	Vert(LL)	-0.06	7-8	>999	360	MT20	169/123
(Roof Snow=123.0)		Lumber DOL	1.00	BC	0.22	Vert(CT)	-0.07	7-8	>999	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.68	Horz(CT)	0.02	6	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-SH		Wind(LL)	0.01	7-8	>999	240	Weight: 189 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x10 DF SS
BOT CHORD 2x4 SPF 1650F 1.5E
WEBS 2x4 WW Stud *Except*
2-9: 2x6 SPF 1650F 1.5E

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

REACTIONS. (size) 6=0-5-8, 9=0-5-8
Max Horz 9=44(LC 11)
Max Uplift 6=-19(LC 14), 9=-83(LC 10)
Max Grav 6=1426(LC 21), 9=2266(LC 21)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2096/414, 3-4=-2110/217, 5-6=-539/73, 2-9=-2219/259
BOT CHORD 8-9=-374/300, 7-8=-437/2012, 6-7=-238/2081
WEBS 3-8=-398/87, 3-7=-36/420, 4-6=-2212/241, 2-8=-173/1768

NOTES-
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x10 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc, 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) 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 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=1.33 plate grip DOL=1.33
4) TCLL: ASCE 7-16; Pf=123.0 psf (Lum DOL=1.00 Plate DOL=1.00); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 123.0 psf on overhangs non-concurrent with other live loads.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 6, 9.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

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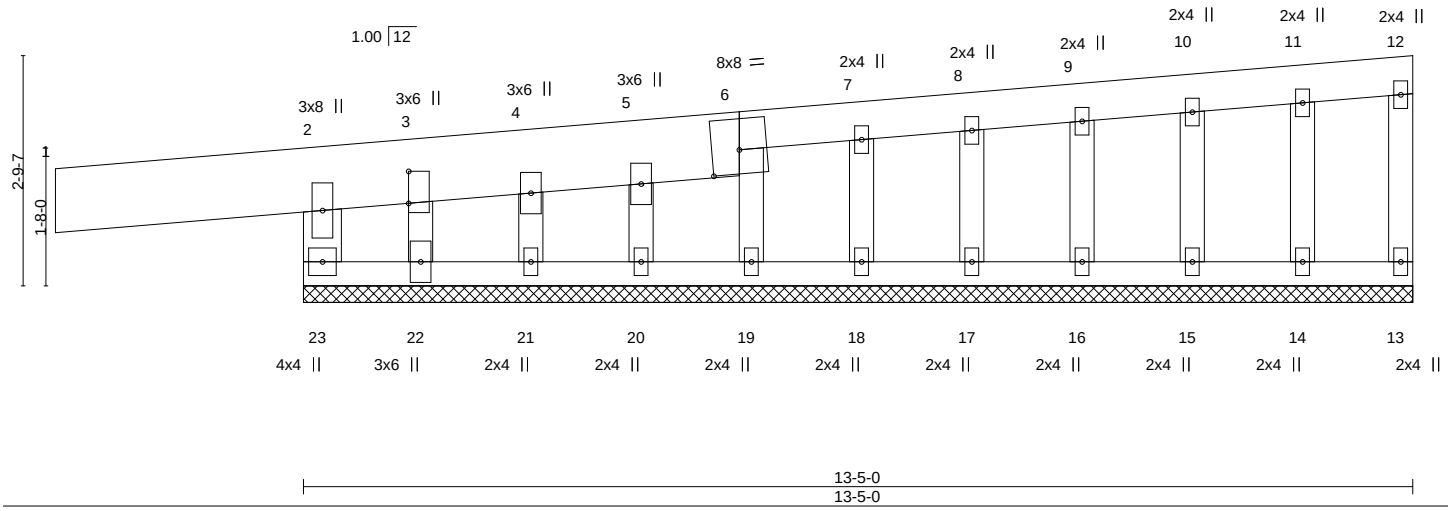
Job	Truss	Truss Type	Qty	Ply	RICHEY CONSTRUCTION
21747	F3E	Monopitch Supported Gable	1	1	R80053729
					Job Reference (optional)

Alpine Truss, Montrose, CO - 81401, 8.730 s Dec 14 2023 MiTek Industries, Inc. Thu Dec 28 12:43:11 2023 Page 1
ID:aBpZahnUiyRNoLvjlpC85azHZfq-I5Z5je3fanS7EjVHC8kNoxuO5iJOAOSDF_fRKqy4R1_

-3-0-0 13-5-0
3-0-0 13-5-0

Scale = 1:27.9



13-5-0
13-5-0

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

LOADING (psf)		SPACING-	1-4-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	123.0	Plate Grip DOL	1.00	TC	0.41	Vert(LL)	-0.01	1	n/r	180	MT20	169/123
(Roof Snow=123.0)		Lumber DOL	1.00	BC	0.08	Vert(CT)	-0.01	1	n/r	80		
TCDL	10.0	Rep Stress Incr	YES	WB	0.65	Horz(CT)	0.00	13	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	1	n/r	120	Weight: 76 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x6 SPF 1650F 1.5E *Except*
1-6: 2x10 DF SS
BOT CHORD 2x4 SPF 1650F 1.5E
WEBS 2x6 SPF 1650F 1.5E *Except*
12-13: 2x4 SPF 1650F 1.5E
OTHERS 2x4 WW Stud

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

REACTIONS. All bearings 13-5-0.
(lb) - Max Horz 23=46(LC 11)
Max Uplift All uplift 100 lb or less at joint(s) 13, 14, 15, 16, 17, 18, 19, 20 except 23=-112(LC 10), 21=-304(LC 20), 22=-879(LC 20)
Max Grav All reactions 250 lb or less at joint(s) 13, 21, 22 except 23=2332(LC 20), 14=297(LC 21), 15=308(LC 21), 16=297(LC 21), 17=291(LC 21), 18=336(LC 21), 19=278(LC 21), 20=320(LC 21)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-23=-2278/185
WEBS 11-14=-269/39, 10-15=-293/44, 9-16=-279/42, 8-17=-274/43, 7-18=-318/44, 6-19=-260/61, 5-20=-305/40, 4-21=-65/335, 3-22=-42/839

NOTES-
1) 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 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=1.33 plate grip DOL=1.33
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) TCLL: ASCE 7-16; Pf=123.0 psf (Lum DOL=1.00 Plate DOL=1.00); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 123.0 psf on overhangs non-concurrent with other live loads.
6) Gable requires continuous bottom chord bearing.
7) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
8) Gable studs spaced at 1-4-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * 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.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 13, 14, 15, 16, 17, 18, 19, 20 except (jt=lb) 23=112, 21=304, 22=879.
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.

December 28,2023

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Job	Truss	Truss Type	Qty	Ply	RICHEY CONSTRUCTION
21747	C1G	ROOF SPECIAL	1	1	R80053730
					Job Reference (optional)

Alpine Truss, Montrose, CO - 81401, 8.730 s Dec 14 2023 MiTek Industries, Inc. Thu Dec 28 12:43:05 2023 Page 1
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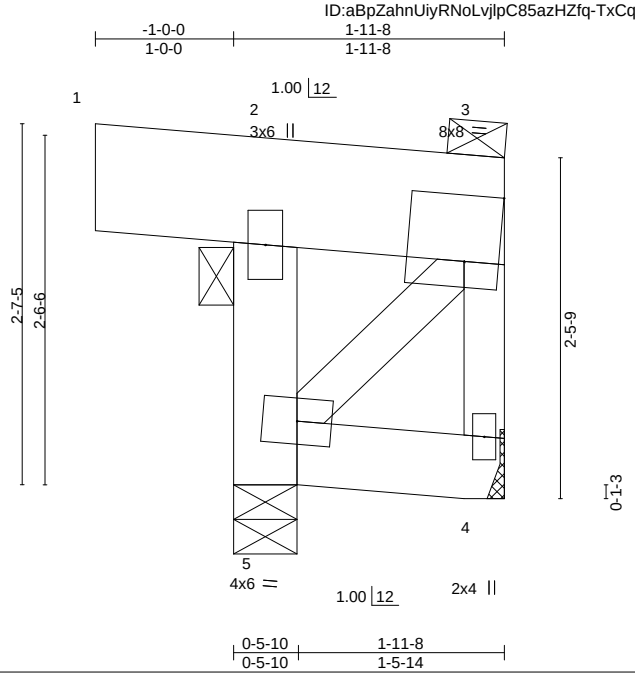

Scale = 1:16.7

Plate Offsets (X,Y)-- [3:Edge,0-5-12]

LOADING (psf)		SPACING-	3-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	123.0	Plate Grip DOL	1.00	TC	0.17	Vert(LL)	-0.00	5	>999	360	MT20	169/123
(Roof Snow=123.0)		Lumber DOL	1.00	BC	0.01	Vert(CT)	-0.00	5	>999	240		
TCDL	10.0	Rep Stress Incr	NO	WB	0.09	Horz(CT)	0.00	4	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-P		Wind(LL)	-0.00	5	>999	240	Weight: 18 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x10 HF SS
BOT CHORD 2x6 SPF 1650F 1.5E
WEBS 2x6 SPF 1650F 1.5E *Except*
3-4: 2x4 SPF 1650F 1.5E, 3-5: 2x4 WW Stud

BRACING-
TOP CHORD 2-0-0 oc purlins, except end verticals
(Switched from sheeted: Spacing > 2-0-0).
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 4=Mechanical, 5=0-5-8
Max Horz 5=-88(LC 10)
Max Uplift 4=-319(LC 20), 5=-111(LC 10)
Max Grav 4=166(LC 22), 5=1358(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-5=-1334/327, 3-4=-142/343

NOTES-
1) 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 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=1.33 plate grip DOL=1.33
2) TCLL: ASCE 7-16; Pf=123.0 psf (Lum DOL=1.00 Plate DOL=1.00); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 123.0 psf on overhangs non-concurrent with other live loads.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
7) Refer to girder(s) for truss to truss connections.
8) Bearing at joint(s) 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 4=319, 5=111.
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.

December 28,2023

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Job	Truss	Truss Type	Qty	Ply	RICHEY CONSTRUCTION
21747	C1	ROOF SPECIAL	12	1	R80053731
					Job Reference (optional)

Alpine Truss, Montrose, CO - 81401, 8.730 s Dec 14 2023 MiTek Industries, Inc. Thu Dec 28 12:43:04 2023 Page 1
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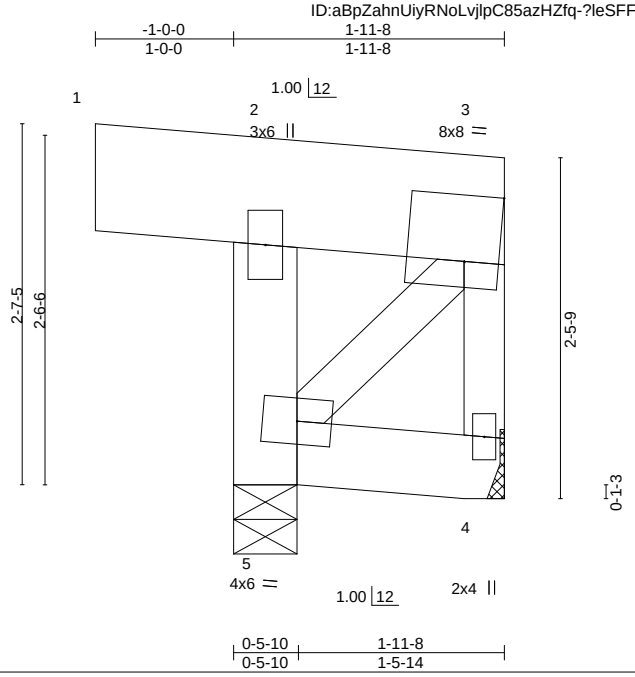

Scale = 1:16.7

Plate Offsets (X,Y)-- [3:Edge,0-5-12]

LOADING (psf)		SPACING-	1-4-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	123.0	Plate Grip DOL	1.00	TC	0.06	Vert(LL)	-0.00	5	>999	360	MT20	169/123
(Roof Snow=123.0)		Lumber DOL	1.00	BC	0.00	Vert(CT)	-0.00	5	>999	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	4	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-P		Wind(LL)	-0.00	5	>999	240	Weight: 18 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x10 HF SS
BOT CHORD 2x6 SPF 1650F 1.5E
WEBS 2x6 SPF 1650F 1.5E *Except*
3-4: 2x4 SPF 1650F 1.5E, 3-5: 2x4 WW Stud

BRACING-
TOP CHORD Structural wood sheathing directly applied or 1-11-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 4=Mechanical, 5=0-5-8
Max Horz 5=-39(LC 10)
Max Uplift 4=-142(LC 20), 5=-49(LC 10)
Max Grav 4=74(LC 22), 5=604(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-5=-593/145

NOTES-
1) 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 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=1.33 plate grip DOL=1.33
2) TCLL: ASCE 7-16; Pf=123.0 psf (Lum DOL=1.00 Plate DOL=1.00); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 123.0 psf on overhangs non-concurrent with other live loads.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
7) Refer to girder(s) for truss to truss connections.
8) Bearing at joint(s) 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5 except (jt=lb) 4=142.
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.

December 28,2023

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Job	Truss	Truss Type	Qty	Ply	RICHEY CONSTRUCTION
21747	L1G	ROOF SPECIAL	1	1	R80053732
					Job Reference (optional)

Alpine Truss, Montrose, CO - 81401, 8.730 s Dec 14 2023 MiTek Industries, Inc. Thu Dec 28 12:43:24 2023 Page 1
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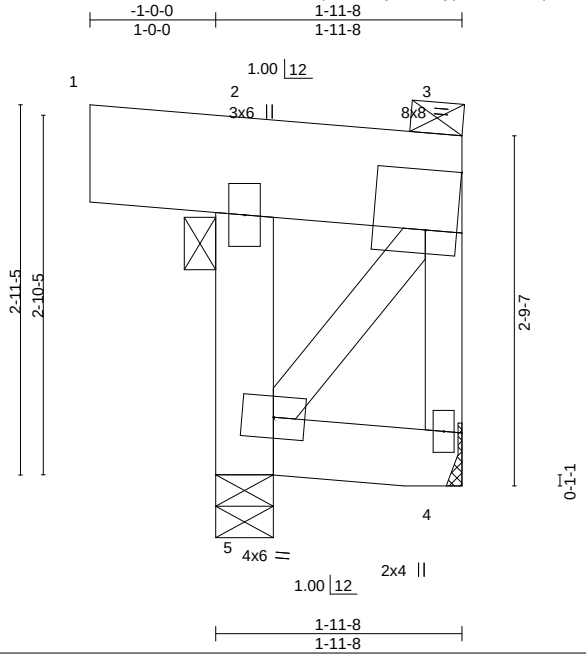

Scale = 1:18.3

Plate Offsets (X,Y)-- [3:Edge,0-5-12]

LOADING (psf)		SPACING-	3-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	123.0	Plate Grip DOL	1.00	TC	0.26	Vert(LL)	-0.00	5	>999	360	MT20	169/123
(Roof Snow=123.0)		Lumber DOL	1.00	BC	0.01	Vert(CT)	-0.00	5	>999	240		
TCDL	10.0	Rep Stress Incr	NO	WB	0.12	Horz(CT)	0.00	4	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-P		Wind(LL)	0.00	5	>999	240	Weight: 19 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x10 HF SS
BOT CHORD 2x6 SPF 1650F 1.5E
WEBS 2x4 WW Stud *Except*
2-5: 2x6 SPF 1650F 1.5E

BRACING-
TOP CHORD 2-0-0 oc purlins, except end verticals
(Switched from sheeted: Spacing > 2-0-0).
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 4=Mechanical, 5=0-5-8
Max Horz 5=-101(LC 10)
Max Uplift 4=-319(LC 20), 5=-130(LC 10)
Max Grav 4=166(LC 22), 5=1358(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-5=-1334/328, 3-4=-142/343

NOTES-
1) 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 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=1.33 plate grip DOL=1.33
2) TCLL: ASCE 7-16; Pf=123.0 psf (Lum DOL=1.00 Plate DOL=1.00); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 123.0 psf on overhangs non-concurrent with other live loads.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
7) Refer to girder(s) for truss to truss connections.
8) Bearing at joint(s) 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 4=319, 5=130.
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.

December 28,2023

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Job	Truss	Truss Type	Qty	Ply	RICHEY CONSTRUCTION
21747	L1	ROOF SPECIAL	12	1	R80053733
					Job Reference (optional)

Alpine Truss, Montrose, CO - 81401, 8.730 s Dec 14 2023 MiTek Industries, Inc. Thu Dec 28 12:43:23 2023 Page 1
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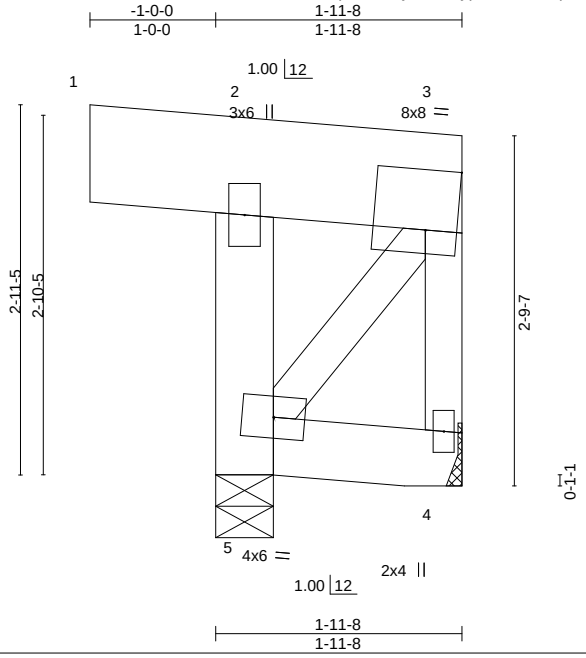

Scale = 1:18.3

Plate Offsets (X,Y)-- [3:Edge,0-5-12]

LOADING (psf)		SPACING-	1-4-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	123.0	Plate Grip DOL	1.00	TC	0.11	Vert(LL)	-0.00	5	>999	360	MT20	169/123
(Roof Snow=123.0)		Lumber DOL	1.00	BC	0.00	Vert(CT)	-0.00	5	>999	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	4	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-P		Wind(LL)	-0.00	5	>999	240	Weight: 19 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x10 HF SS
BOT CHORD 2x6 SPF 1650F 1.5E
WEBS 2x4 WW Stud *Except*
2-5: 2x6 SPF 1650F 1.5E

BRACING-
TOP CHORD Structural wood sheathing directly applied or 1-11-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 4=Mechanical, 5=0-5-8
Max Horz 5=-45(LC 10)
Max Uplift 4=-142(LC 20), 5=-58(LC 10)
Max Grav 4=74(LC 22), 5=604(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-5=-593/146

NOTES-
1) 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 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=1.33 plate grip DOL=1.33
2) TCLL: ASCE 7-16; Pf=123.0 psf (Lum DOL=1.00 Plate DOL=1.00); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 123.0 psf on overhangs non-concurrent with other live loads.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
7) Refer to girder(s) for truss to truss connections.
8) Bearing at joint(s) 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5 except (jt=lb) 4=142.
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.

December 28,2023

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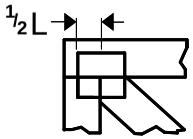
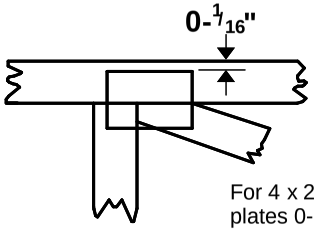
Symbols

PLATE LOCATION AND ORIENTATION



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



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

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

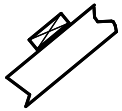
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

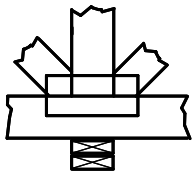
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



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

BEARING

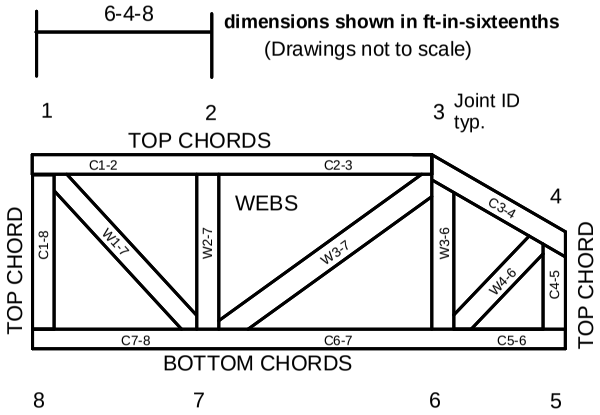


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-22: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



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

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

Product Code Approvals

ICC-ES Reports:

ESR-1988, ESR-2362, ESR-2685, ESR-3282
ESR-4722, ESL-1388

Design General Notes

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

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

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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.