

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

Re: MTR641110F  
MIKE ROACH

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: R83538457 thru R83538468

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



July 26, 2024

---

Zhao, Xiaoming

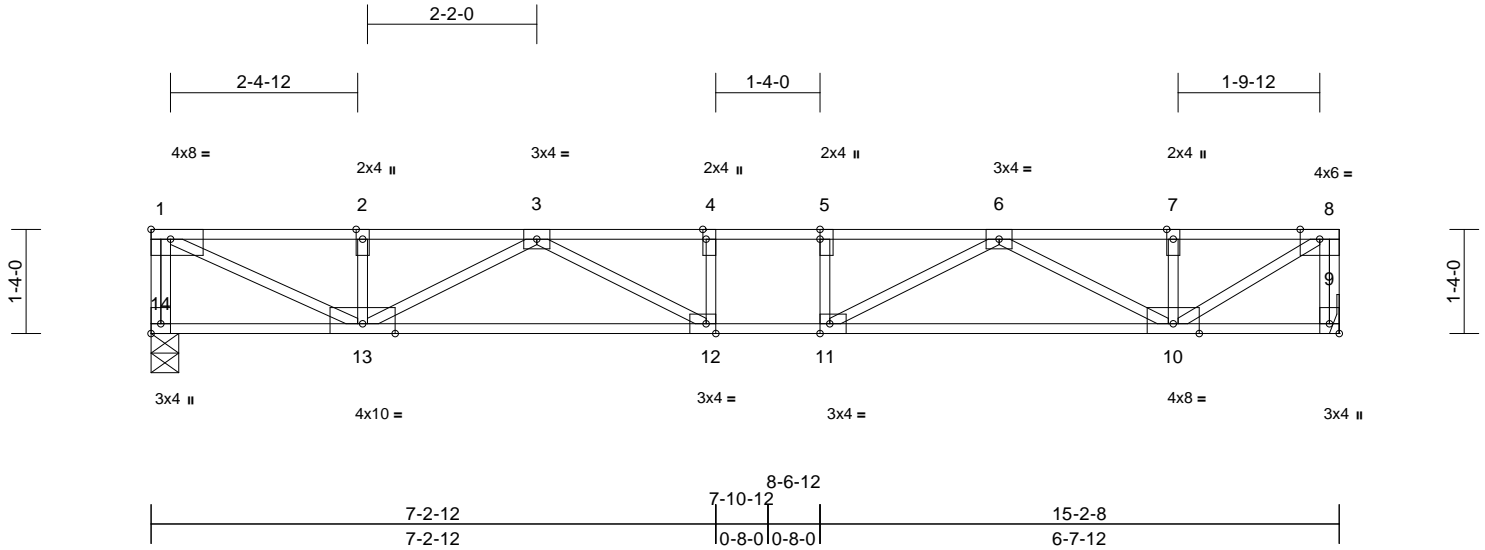
**IMPORTANT NOTE:** The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), 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 MTR641110F	Truss F1	Truss Type Floor	Qty 30	Ply 1	MIKE ROACH Job Reference (optional)	R83538457
-------------------	-------------	---------------------	-----------	----------	--	-----------

Alpine Truss, Montrose, CO - 81401,

Run: 8.73 S Jul 11 2024 Print: 8.730 S Jul 11 2024 MiTek Industries, Inc. Thu Jul 25 10:58:42  
ID:HUBrBB?Ea6JcXUApTRZ21zE?Ep-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrcDoi7J4zJC?f

Page: 1



Scale = 1:29.5

Plate Offsets (X, Y): [1:Edge,0-1-8], [4:0-1-8,Edge], [5:0-1-8,Edge], [9:Edge,0-1-8], [11:0-1-8,Edge], [12:0-1-8,Edge], [14:Edge,0-1-8]

Loading	(psf)	Spacing	1-4-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.24	Vert(LL)	-0.11	12-13	>999	720	MT20	169/123
TCDL	10.0	Lumber DOL	1.00	BC	0.41	Vert(CT)	-0.19	12-13	>959	600		
BCLL	0.0	Rep Stress Incr	YES	WB	0.94	Horz(CT)	0.03	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 57 lb	FT = 0%F, 10%E

**LUMBER**

TOP CHORD 2x4 SPF 1650F 1.5E(flat)  
BOT CHORD 2x4 SPF 1650F 1.5E(flat)  
WEBS 2x4 WW Stud(flat)

**BRACING**

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

**REACTIONS** (size) 9= Mechanical, 14=0-4-4  
Max Grav 9=598 (LC 1), 14=598 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-14=-588/0, 8-9=-592/0, 1-2=-1103/0, 2-3=-1103/0, 3-4=-1853/0, 4-5=-1853/0, 5-6=-1853/0, 6-7=-892/0, 7-8=-892/0

BOT CHORD 13-14=0/0, 12-13=0/1619, 11-12=0/1853, 10-11=0/1507, 9-10=0/0

WEBS 4-12=-119/0, 5-11=-147/0, 3-12=0/403, 3-13=-587/0, 2-13=-180/0, 1-13=0/1218, 6-11=0/495, 6-10=-699/0, 7-10=-157/0, 8-10=0/1042

**NOTES**

- 1) Unbalanced floor live loads have been considered for this design.
- 2) Bearings are assumed to be: Joint 14 SPF 1650F 1.5E .
- 3) Refer to girder(s) for truss to truss connections.
- 4) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 5) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

**LOAD CASE(S)** Standard



July 26, 2024

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcsccomponents.com)

**MiTek®**

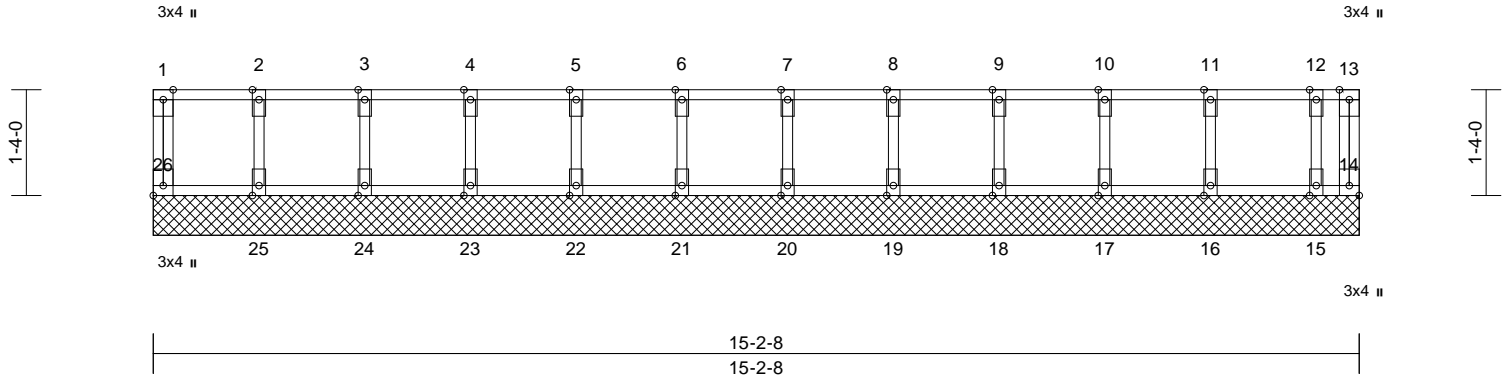
400 Sunrise Ave., Suite 270  
Roseville, CA 95661  
916.755.3571 / MiTek-US.com

Job MTR641110F	Truss F1G	Truss Type Floor Supported Gable	Qty 1	Ply 1	MIKE ROACH Job Reference (optional)	R83538458
-------------------	--------------	-------------------------------------	----------	----------	--	-----------

Alpine Truss, Montrose, CO - 81401,

Run: 8.73 S Jul 11 2024 Print: 8.730 S Jul 11 2024 MiTek Industries, Inc. Thu Jul 25 10:58:42  
ID:6dY7SF4?9y4lFPez5kYzHzE?Ej-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:29.1

Plate Offsets (X, Y): [14:Edge,0-1-8], [26:Edge,0-1-8]

Loading	(psf)	Spacing	1-4-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.04	Vert(LL)	n/a	-	n/a	999	MT20	169/123
TCDL	10.0	Lumber DOL	1.00	BC	0.01	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	0.00	14	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 51 lb	FT = 0%F, 10%E

- LUMBER**
- TOP CHORD 2x4 SPF 1650F 1.5E(flat)
  - BOT CHORD 2x4 SPF 1650F 1.5E(flat)
  - WEBS 2x4 WW Stud(flat)
  - OTHERS 2x4 WW Stud(flat)

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

- REACTIONS (size)**
- 14=15-2-8, 15=15-2-8, 16=15-2-8, 17=15-2-8, 18=15-2-8, 19=15-2-8, 20=15-2-8, 21=15-2-8, 22=15-2-8, 23=15-2-8, 24=15-2-8, 25=15-2-8, 26=15-2-8
  - Max Grav 14=10 (LC 1), 15=73 (LC 1), 16=111 (LC 1), 17=106 (LC 1), 18=107 (LC 1), 19=107 (LC 1), 20=107 (LC 1), 21=107 (LC 1), 22=107 (LC 1), 23=107 (LC 1), 24=107 (LC 1), 25=107 (LC 1), 26=43 (LC 1)

- FORCES (lb) - Maximum Compression/Maximum Tension**
- TOP CHORD 1-26=-36/0, 13-14=-5/0, 1-2=-4/0, 2-3=-4/0, 3-4=-4/0, 4-5=-4/0, 5-6=-4/0, 6-7=-4/0, 7-8=-4/0, 8-9=-4/0, 9-10=-4/0, 10-11=-4/0, 11-12=-4/0, 12-13=-4/0
  - BOT CHORD 25-26=0/4, 24-25=0/4, 23-24=0/4, 22-23=0/4, 21-22=0/4, 20-21=0/4, 19-20=0/4, 18-19=0/4, 17-18=0/4, 16-17=0/4, 15-16=0/4, 14-15=0/4
  - WEBS 2-25=-89/0, 3-24=-89/0, 4-23=-89/0, 5-22=-89/0, 6-21=-89/0, 7-20=-89/0, 8-19=-89/0, 9-18=-89/0, 10-17=-88/0, 11-16=-93/0, 12-15=-65/0

- NOTES**
- All plates are 2x4 MT20 unless otherwise indicated.
  - Gable requires continuous bottom chord bearing.

- Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- Gable studs spaced at 1-4-0 oc.
- All bearings are assumed to be SPF 1650F 1.5E .
- 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.
- Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

**LOAD CASE(S)** Standard



July 26, 2024

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcsccomponents.com)

**MiTek®**

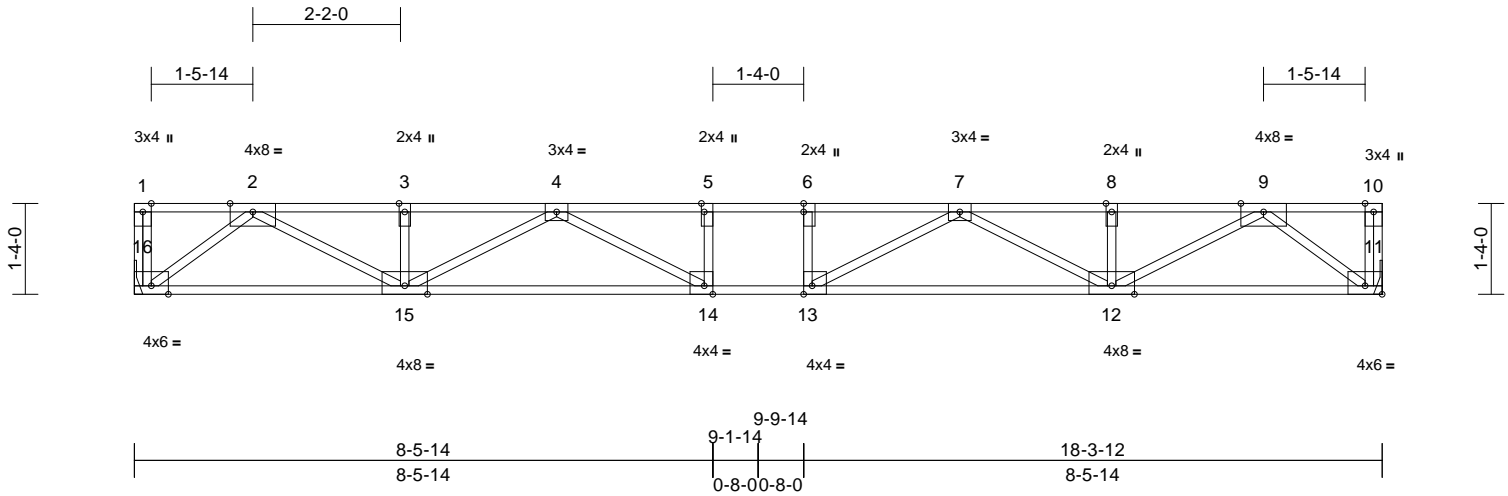
400 Sunrise Ave., Suite 270  
Roseville, CA 95661  
916.755.3571 / MiTek-US.com

Job MTR641110F	Truss F2	Truss Type Floor	Qty 9	Ply 1	MIKE ROACH Job Reference (optional)	R83538459
-------------------	-------------	---------------------	----------	----------	--	-----------

Alpine Truss, Montrose, CO - 81401,

Run: 8.73 S Jul 11 2024 Print: 8.730 S Jul 11 2024 MiTek Industries, Inc. Thu Jul 25 10:58:43  
ID:Fdk2\_wORJ34cZNIghXrRrCzE?e8-RfC?PsB70Hq3NSgPqnL8w3uITXbGKwRCDoi7J4zJC?F

Page: 1



Scale = 1:33.8

Plate Offsets (X, Y): [5:0-1-8,Edge], [6:0-1-8,Edge], [11:Edge,0-1-8], [13:0-1-8,Edge], [14:0-1-8,Edge]

Loading	(psf)	Spacing	1-4-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.21	Vert(LL)	-0.16	13-14	>999	720	MT20	169/123
TCDL	10.0	Lumber DOL	1.00	BC	0.34	Vert(CT)	-0.24	12-13	>922	600		
BCLL	0.0	Rep Stress Incr	YES	WB	0.84	Horz(CT)	0.04	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 68 lb	FT = 0%F, 10%E

**LUMBER**

TOP CHORD 2x4 SPF 2100F 1.8E(flat)  
 BOT CHORD 2x4 SPF 2100F 1.8E(flat)  
 WEBS 2x4 WW Stud(flat)

**BRACING**

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

**REACTIONS** (size) 11= Mechanical, 16= Mechanical  
 Max Grav 11=722 (LC 1), 16=722 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-16=-38/0, 10-11=-38/0, 1-2=0/0,  
 2-3=-1843/0, 3-4=-1843/0, 4-5=-2698/0,  
 5-6=-2698/0, 6-7=-2698/0, 7-8=-1843/0,  
 8-9=-1843/0, 9-10=0/0  
 BOT CHORD 15-16=0/887, 14-15=0/2414, 13-14=0/2698,  
 12-13=0/2414, 11-12=0/887  
 WEBS 5-14=-151/0, 6-13=-151/0, 4-14=0/501,  
 4-15=-650/0, 3-15=-145/0, 2-15=0/1088,  
 2-16=-1108/0, 7-13=0/501, 7-12=-650/0,  
 8-12=-145/0, 9-12=0/1088, 9-11=-1108/0

**NOTES**

- 1) Unbalanced floor live loads have been considered for this design.
- 2) Refer to girder(s) for truss to truss connections.
- 3) 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.
- 4) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

**LOAD CASE(S)** Standard



July 26, 2024

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcsccomponents.com)

**MiTek®**

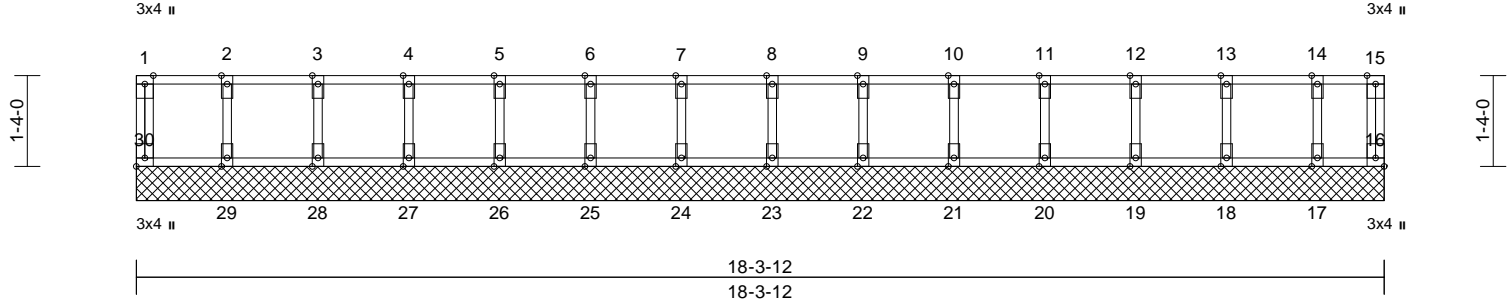
400 Sunrise Ave., Suite 270  
 Roseville, CA 95661  
 916.755.3571 / MiTek-US.com

Job MTR641110F	Truss F2G	Truss Type Floor Supported Gable	Qty 1	Ply 1	MIKE ROACH Job Reference (optional)	R83538460
-------------------	--------------	-------------------------------------	----------	----------	--	-----------

Alpine Truss, Montrose, CO - 81401,

Run: 8.73 S Jul 11 2024 Print: 8.730 S Jul 11 2024 MiTek Industries, Inc. Thu Jul 25 10:58:43  
ID:P\_Tmwe9OW6yIbUgJ?iAc3nzE?Ec-RfC?PsB70Hq3NSgPqnL8w3uITXbGKwRCDoi7J4zJC?i

Page: 1



Scale = 1:33.8

Plate Offsets (X, Y): [16:Edge,0-1-8], [30:Edge,0-1-8]

Loading	(psf)	Spacing	1-4-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.04	Vert(LL)	n/a	-	n/a	999	MT20	169/123
TCDL	10.0	Lumber DOL	1.00	BC	0.01	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	0.00	16	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 60 lb	FT = 0%F, 10%E

LUMBER	WEBS
TOP CHORD 2x4 SPF 1650F 1.5E(flat)	2-29=-89/0, 3-28=-89/0, 4-27=-89/0,
BOT CHORD 2x4 SPF 1650F 1.5E(flat)	5-26=-89/0, 6-25=-89/0, 7-24=-89/0,
WEBS 2x4 WW Stud(flat)	8-23=-89/0, 9-22=-89/0, 10-21=-89/0,
OTHERS 2x4 WW Stud(flat)	11-20=-89/0, 12-19=-88/0, 13-18=-92/0,
	14-17=-75/0

BRACING	NOTES
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.	1) All plates are 2x4 MT20 unless otherwise indicated.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.	2) Gable requires continuous bottom chord bearing.
	3) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
	4) Gable studs spaced at 1-4-0 oc.
	5) All bearings are assumed to be SPF 1650F 1.5E .
	6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
	7) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

REACTIONS (size)	16=18-3-12, 17=18-3-12, 18=18-3-12, 19=18-3-12, 20=18-3-12, 21=18-3-12, 22=18-3-12, 23=18-3-12, 24=18-3-12, 25=18-3-12, 26=18-3-12, 27=18-3-12, 28=18-3-12, 29=18-3-12, 30=18-3-12
Max Grav	16=30 (LC 1), 17=88 (LC 1), 18=111 (LC 1), 19=106 (LC 1), 20=107 (LC 1), 21=107 (LC 1), 22=107 (LC 1), 23=107 (LC 1), 24=107 (LC 1), 25=107 (LC 1), 26=107 (LC 1), 27=107 (LC 1), 28=107 (LC 1), 29=107 (LC 1), 30=43 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-30=-36/0, 15-16=-24/0, 1-2=-4/0, 2-3=-4/0, 3-4=-4/0, 4-5=-4/0, 5-6=-4/0, 6-7=-4/0, 7-8=-4/0, 8-9=-4/0, 9-10=-4/0, 10-11=-4/0, 11-12=-4/0, 12-13=-4/0, 13-14=-4/0, 14-15=-4/0
BOT CHORD 29-30=0/4, 28-29=0/4, 27-28=0/4, 26-27=0/4, 25-26=0/4, 24-25=0/4, 23-24=0/4, 22-23=0/4, 21-22=0/4, 20-21=0/4, 19-20=0/4, 18-19=0/4, 17-18=0/4, 16-17=0/4

LOAD CASE(S) Standard



July 26, 2024

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute ([www.tpinst.org](http://www.tpinst.org)) and **BCSI Building Component Safety Information** available from the Structural Building Component Association ([www.sbcsccomponents.com](http://www.sbcsccomponents.com))

**MiTek®**

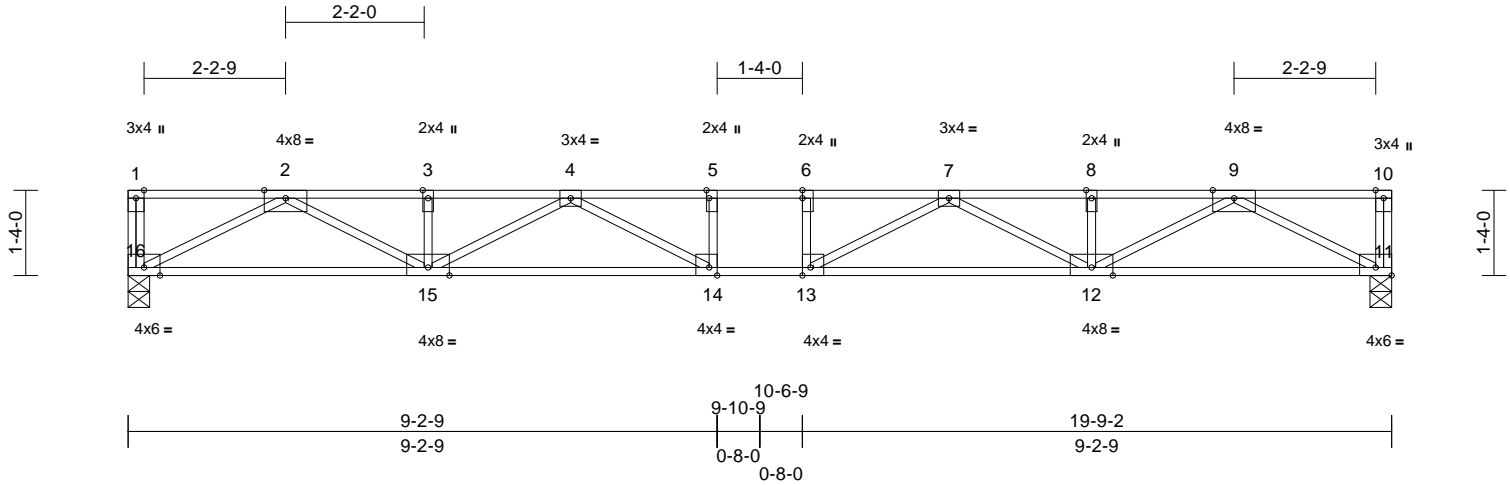
400 Sunrise Ave., Suite 270  
Roseville, CA 95661  
916.755.3571 / MiTek-US.com

Job MTR641110F	Truss F3	Truss Type Floor	Qty 12	Ply 1	MIKE ROACH Job Reference (optional)	R83538461
-------------------	-------------	---------------------	-----------	----------	--	-----------

Alpine Truss, Montrose, CO - 81401,

Run: 8.73 S Jul 11 2024 Print: 8.730 S Jul 11 2024 MiTek Industries, Inc. Thu Jul 25 10:58:43  
ID:EDxkSx3p4rHGTsKXLFVz3NzE?DS-RfC?PsB70Hq3NSgPqnl8w3ulTXbGKWrCDOI7J4zJC?f

Page: 1



Scale = 1:36

Plate Offsets (X, Y): [5:0-1-8,Edge], [6:0-1-8,Edge], [11:Edge,0-1-8], [13:0-1-8,Edge], [14:0-1-8,Edge]

Loading	(psf)	Spacing	1-4-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.30	Vert(LL)	-0.25	13-14	>948	720	MT20	169/123
TCDL	10.0	Lumber DOL	1.00	BC	0.59	Vert(CT)	-0.37	12-13	>633	600		
BCLL	0.0	Rep Stress Incr	YES	WB	0.84	Horz(CT)	0.06	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 73 lb	FT = 0%F, 10%E

**LUMBER**

TOP CHORD 2x4 SPF 1650F 1.5E(flat)  
 BOT CHORD 2x4 SPF 1650F 1.5E(flat)  
 WEBS 2x4 WW Stud(flat)

**BRACING**

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

**REACTIONS** (size) 11=0-4-1, 16=0-4-1  
 Max Grav 11=780 (LC 1), 16=780 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-16=-64/0, 10-11=-64/0, 1-2=0/0,  
 2-3=-2294/0, 3-4=-2294/0, 4-5=-3146/0,  
 5-6=-3146/0, 6-7=-3146/0, 7-8=-2294/0,  
 8-9=-2294/0, 9-10=0/0  
 BOT CHORD 15-16=0/1338, 14-15=0/2865, 13-14=0/3146,  
 12-13=0/2865, 11-12=0/1338  
 WEBS 5-14=-161/0, 6-13=-161/0, 4-14=0/524,  
 4-15=-649/0, 3-15=-139/0, 2-15=0/1087,  
 2-16=-1507/0, 7-13=0/524, 7-12=-649/0,  
 8-12=-139/0, 9-12=0/1087, 9-11=-1507/0

**NOTES**

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All bearings are assumed to be SPF 1650F 1.5E .
- 3) 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.
- 4) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

**LOAD CASE(S)** Standard



July 26, 2024

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcsccomponents.com)

**MiTek®**

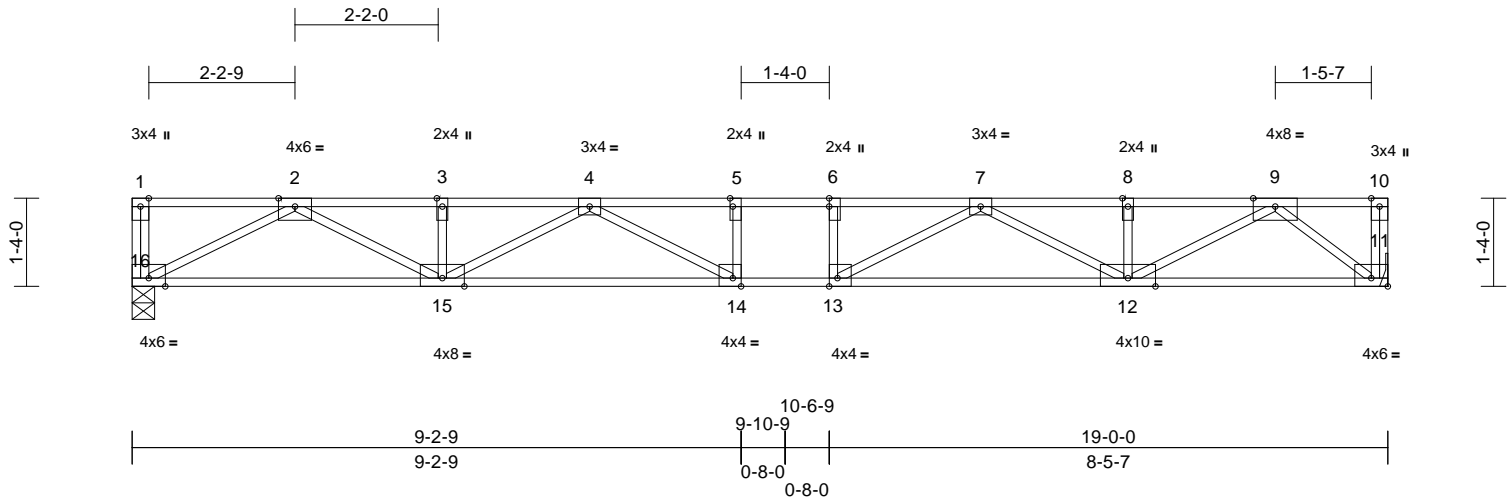
400 Sunrise Ave., Suite 270  
 Roseville, CA 95661  
 916.755.3571 / MiTek-US.com

Job MTR641110F	Truss F4	Truss Type Floor	Qty 9	Ply 1	MIKE ROACH Job Reference (optional)	R83538462
-------------------	-------------	---------------------	----------	----------	--	-----------

Alpine Truss, Montrose, CO - 81401,

Run: 8.73 S Jul 11 2024 Print: 8.730 S Jul 11 2024 MiTek Industries, Inc. Thu Jul 25 10:58:43  
ID:y8YWYMA4kwXrgO5SwLgJTUzE?DI-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:34.9

Plate Offsets (X, Y): [5:0-1-8,Edge], [6:0-1-8,Edge], [11:Edge,0-1-8], [13:0-1-8,Edge], [14:0-1-8,Edge]

Loading	(psf)	Spacing	1-4-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.31	Vert(LL)	-0.22	14-15	>999	720	MT20	169/123
TCDL	10.0	Lumber DOL	1.00	BC	0.57	Vert(CT)	-0.34	14-15	>665	600		
BCLL	0.0	Rep Stress Incr	YES	WB	0.89	Horz(CT)	0.06	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 70 lb	FT = 0%F, 10%E

#### LUMBER

TOP CHORD 2x4 SPF 1650F 1.5E(flat)  
BOT CHORD 2x4 SPF 1650F 1.5E(flat)  
WEBS 2x4 WW Stud(flat)

#### BRACING

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

REACTIONS (size) 11= Mechanical, 16=0-4-1  
Max Grav 11=750 (LC 1), 16=750 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-16=-64/0, 10-11=-37/0, 1-2=0/0,  
2-3=-2181/0, 3-4=-2181/0, 4-5=-2902/0,  
5-6=-2902/0, 6-7=-2902/0, 7-8=-1916/0,  
8-9=-1916/0, 9-10=0/0

BOT CHORD 15-16=0/1281, 14-15=0/2695, 13-14=0/2902,  
12-13=0/2544, 11-12=0/904

WEBS 5-14=-139/0, 6-13=-173/0, 4-14=-40/453,  
4-15=-585/0, 3-15=-136/0, 2-15=0/1023,  
2-16=-1442/0, 7-13=0/572, 7-12=-714/0,  
8-12=-148/0, 9-12=0/1152, 9-11=-1138/0

#### NOTES

- 1) Unbalanced floor live loads have been considered for this design.
- 2) Bearings are assumed to be: Joint 16 SPF 1650F 1.5E .
- 3) Refer to girder(s) for truss to truss connections.
- 4) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 5) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

LOAD CASE(S) Standard



July 26, 2024

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute ([www.tpinst.org](http://www.tpinst.org)) and **BCSI Building Component Safety Information** available from the Structural Building Component Association ([www.sbcsccomponents.com](http://www.sbcsccomponents.com))

**MiTek®**

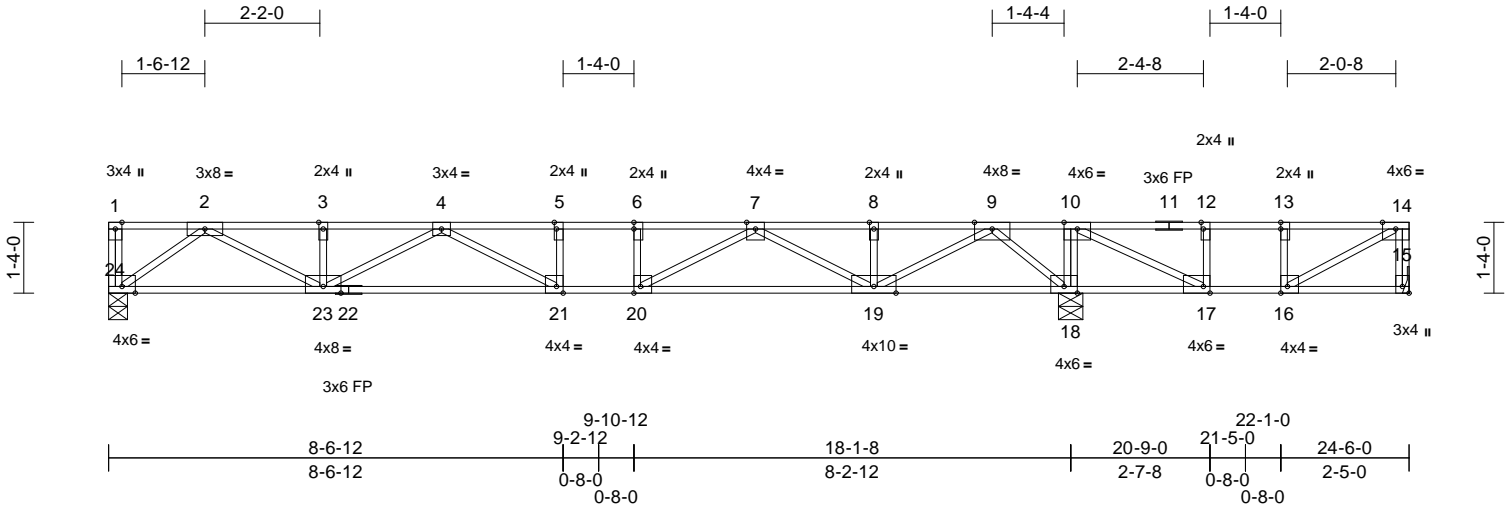
400 Sunrise Ave., Suite 270  
Roseville, CA 95661  
916.755.3571 / MiTek-US.com

Job MTR641110F	Truss F5	Truss Type Floor	Qty 5	Ply 1	MIKE ROACH Job Reference (optional)	R83538463
-------------------	-------------	---------------------	----------	----------	--	-----------

Alpine Truss, Montrose, CO - 81401,

Run: 8.73 S Jul 11 2024 Print: 8.730 S Jul 11 2024 MiTek Industries, Inc. Thu Jul 25 10:58:43  
ID:uoBiXsP?Flw8SJ26YrWmIVzE?D?-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:43.4

Plate Offsets (X, Y): [5:0-1-8,Edge], [6:0-1-8,Edge], [12:0-1-8,Edge], [13:0-1-8,Edge], [15:Edge,0-1-8], [16:0-1-8,Edge], [17:0-1-8,Edge], [20:0-1-8,Edge], [21:0-1-8,Edge]

Loading	(psf)	Spacing	1-4-0	CSI	DEFL	in (loc)	l/defl	L/d	PLATES	GRIP		
TCLL	40.0	Plate Grip DOL	1.00	TC	0.35	Vert(LL)	-0.17	21-23	>999	720	MT20	197/144
TCDL	10.0	Lumber DOL	1.00	BC	0.50	Vert(CT)	-0.27	21-23	>795	600		
BCLL	0.0	Rep Stress Incr	YES	WB	0.96	Horz(CT)	0.04	18	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 91 lb	FT = 0%F, 10%E

**LUMBER**  
TOP CHORD 2x4 SPF 1650F 1.5E(flat)  
BOT CHORD 2x4 SPF 1650F 1.5E(flat)  
WEBS 2x4 WW Stud(flat)

**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) 15= Mechanical, 18=0-5-8, 24=0-4-4  
Max Uplift 15=83 (LC 3)  
Max Grav 15=184 (LC 4), 18=1205 (LC 1), 24=666 (LC 10)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-24=-41/0, 14-15=-162/123, 1-2=0/0, 2-3=-1690/0, 3-4=-1690/0, 4-5=-2278/0, 5-6=-2278/0, 6-7=-2278/0, 7-8=-1155/0, 8-9=-1155/0, 9-10=0/950, 10-12=-165/299, 12-13=-165/299, 13-14=-165/299  
BOT CHORD 23-24=0/846, 21-23=0/2146, 20-21=0/2278, 19-20=0/1841, 18-19=-78/89, 17-18=-950/0, 16-17=-299/165, 15-16=0/0  
WEBS 5-21=-100/5, 6-20=-187/0, 10-18=-476/0, 12-17=-244/0, 13-16=-97/82, 4-21=-79/337, 4-23=-519/0, 3-23=-140/0, 2-23=0/960, 2-24=-1041/0, 7-20=0/617, 7-19=-806/0, 8-19=-155/0, 9-19=0/1240, 9-18=-1147/0, 10-17=0/860, 14-16=-341/188

- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 83 lb uplift at joint 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.
- Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
- CAUTION, Do not erect truss backwards.

**LOAD CASE(S)** Standard

- NOTES**
- Unbalanced floor live loads have been considered for this design.
  - Bearings are assumed to be: Joint 24 SPF 1650F 1.5E, Joint 18 SPF 1650F 1.5E.
  - Refer to girder(s) for truss to truss connections.



July 26, 2024

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcsccomponents.com)

**MiTek®**

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

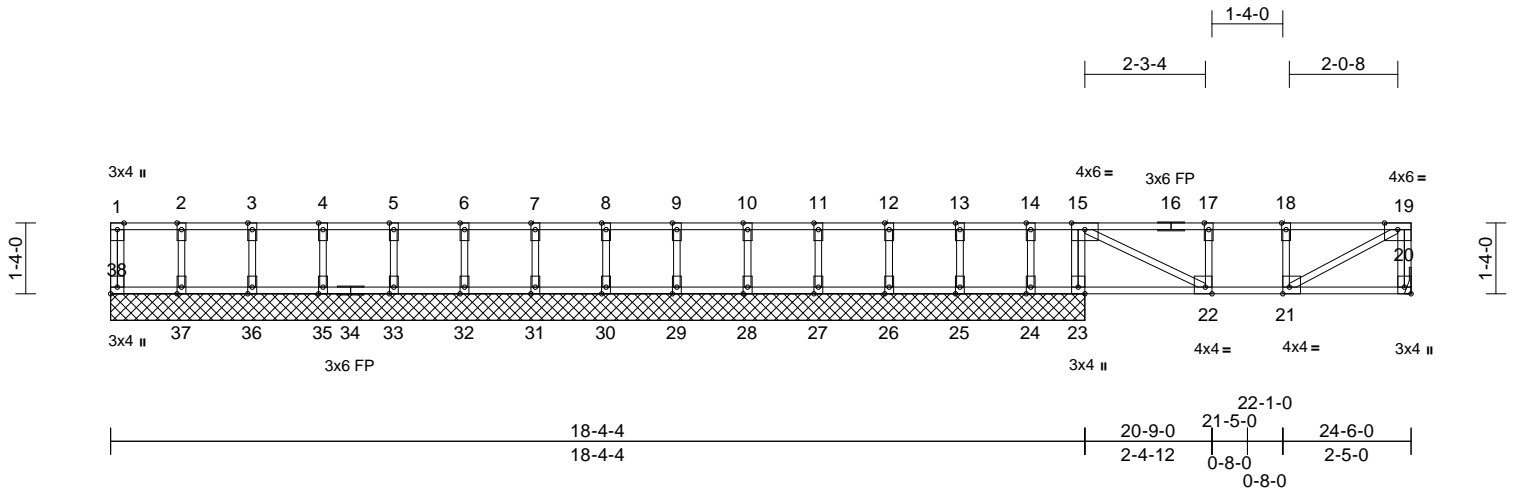


Job MTR641110F	Truss F5G	Truss Type Floor	Qty 1	Ply 1	MIKE ROACH Job Reference (optional)	R83538464
-------------------	--------------	---------------------	----------	----------	--	-----------

Alpine Truss, Montrose, CO - 81401,

Run: 8.73 S Jul 11 2024 Print: 8.730 S Jul 11 2024 MiTek Industries, Inc. Thu Jul 25 10:58:43  
ID:fcC9nPjgMR4by9SvVbTdfmzE?Cc-RfC?PsB70Hq3NSgPqnL8w3uTXbGKwRcDoi7J4zJC?f

Page: 1



Scale = 1:43.4

Plate Offsets (X, Y): [20:Edge,0-1-8], [21:0-1-8,Edge], [22:0-1-8,Edge], [38:Edge,0-1-8]

Loading	(psf)	Spacing	1-4-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.13	Vert(LL)	-0.01	21-22	>999	720	MT20	169/123
TCDL	10.0	Lumber DOL	1.00	BC	0.06	Vert(CT)	-0.01	20-21	>999	600		
BCLL	0.0	Rep Stress Incr	YES	WB	0.26	Horz(CT)	0.00	20	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 83 lb	FT = 0%F, 10%E

LUMBER	
TOP CHORD	2x4 SPF 1650F 1.5E(flat)
BOT CHORD	2x4 SPF 1650F 1.5E(flat)
WEBS	2x4 WW Stud(flat)
OTHERS	2x4 WW Stud(flat)

WEBS	
15-23	=-297/0, 17-22=-124/0, 18-21=-136/0,
15-22	=0/333, 19-21=0/340, 2-37=-95/0,
3-36	=88/0, 4-35=-89/0, 5-33=-89/0,
6-32	=89/0, 7-31=-89/0, 8-30=-89/0,
9-29	=89/0, 10-28=-89/0, 11-27=-89/0,
12-26	=88/0, 13-25=-98/0, 14-24=-70/32

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

**NOTES**

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All plates are 2x4 MT20 unless otherwise indicated.
- 3) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 4) Gable studs spaced at 1-4-0 oc.
- 5) Bearings are assumed to be: Joint 24 SPF 1650F 1.5E .
- 6) Refer to girder(s) for truss to truss connections.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 30 lb uplift at joint 24.
- 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 9) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
- 10) CAUTION, Do not erect truss backwards.

REACTIONS	(size)
20=	Mechanical, 23=18-4-4,
24=	18-4-4, 25=18-4-4, 26=18-4-4,
27=	18-4-4, 28=18-4-4, 29=18-4-4,
30=	18-4-4, 31=18-4-4, 32=18-4-4,
33=	18-4-4, 35=18-4-4, 36=18-4-4,
37=	18-4-4, 38=18-4-4
Max Uplift	24=30 (LC 4)
Max Grav	20=239 (LC 4), 23=334 (LC 1),
	24=76 (LC 3), 25=119 (LC 1),
	26=105 (LC 3), 27=107 (LC 1),
	28=107 (LC 3), 29=107 (LC 1),
	30=107 (LC 3), 31=107 (LC 1),
	32=107 (LC 3), 33=107 (LC 1),
	35=107 (LC 3), 36=105 (LC 1),
	37=114 (LC 3), 38=38 (LC 1)

FORCES	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-38=-31/0, 19-20=-225/0, 1-2=0/0, 2-3=0/0,
	3-4=0/0, 4-5=0/0, 5-6=0/0, 6-7=0/0, 7-8=0/0,
	8-9=0/0, 9-10=0/0, 10-11=0/0, 11-12=0/0,
	12-13=0/0, 13-14=0/0, 14-15=0/0,
	15-17=-299/0, 17-18=-299/0, 18-19=-299/0
BOT CHORD	37-38=0/0, 36-37=0/0, 35-36=0/0, 33-35=0/0,
	32-33=0/0, 31-32=0/0, 30-31=0/0, 29-30=0/0,
	28-29=0/0, 27-28=0/0, 26-27=0/0, 25-26=0/0,
	24-25=0/0, 23-24=0/0, 22-23=0/0,
	21-22=0/299, 20-21=0/0

LOAD CASE(S) Standard



July 26, 2024

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcsccomponents.com)

**MiTek®**

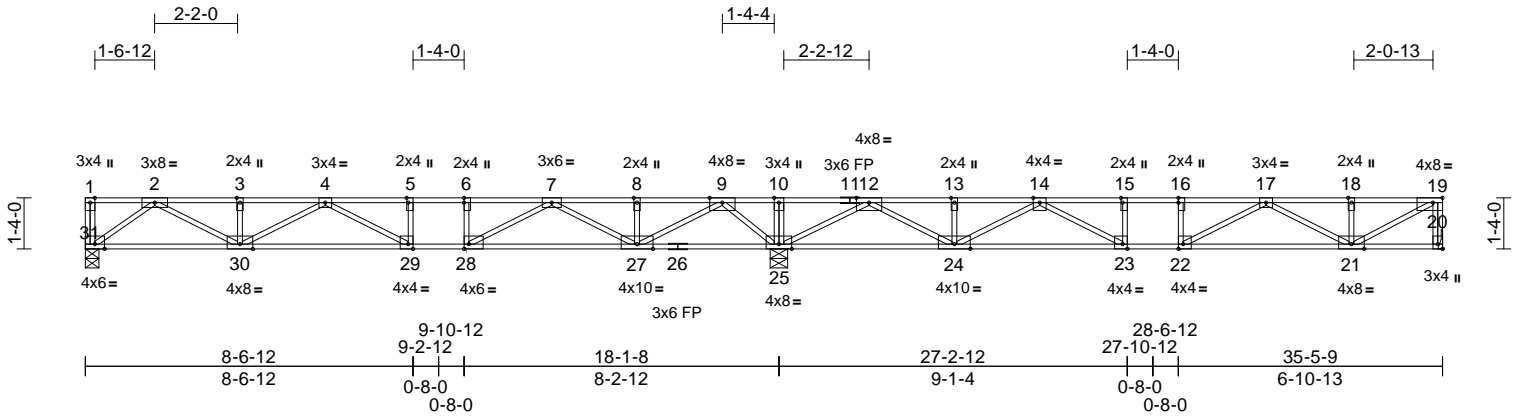
400 Sunrise Ave., Suite 270  
Roseville, CA 95661  
916.755.3571 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	MIKE ROACH	R83538465
MTR641110F	F6	Floor	8	1	Job Reference (optional)	

Alpine Truss, Montrose, CO - 81401,

Run: 8.73 S Jul 11 2024 Print: 8.730 S Jul 11 2024 MiTek Industries, Inc. Thu Jul 25 10:58:43  
 ID:ADMxMMWijAMo5T7jS1\_DnNzE?Rq-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:60.2

Plate Offsets (X, Y): [5:0-1-8,Edge], [6:0-1-8,Edge], [15:0-1-8,Edge], [16:0-1-8,Edge], [19:0-3-0,Edge], [20:Edge,0-1-8], [22:0-1-8,Edge], [23:0-1-8,Edge], [28:0-1-8,Edge], [29:0-1-8,Edge]

Loading	(psf)	Spacing	1-4-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.49	Vert(LL)	-0.17	29-30	>999	720	MT20	197/144
TCDL	10.0	Lumber DOL	1.00	BC	0.50	Vert(CT)	-0.26	29-30	>817	600		
BCLL	0.0	Rep Stress Incr	YES	WB	0.93	Horz(CT)	0.03	20	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 130 lb	FT = 0%F, 10%E

**LUMBER**  
 TOP CHORD 2x4 SPF 1650F 1.5E(flat)  
 BOT CHORD 2x4 SPF 1650F 1.5E(flat)  
 WEBS 2x4 WW Stud(flat) \*Except\* 27-9:2x4 SPF 1650F 1.5E(flat)

**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) 20= Mechanical, 25=0-5-8, 31=0-4-4  
 Max Grav 20=588 (LC 4), 25=1705 (LC 1), 31=624 (LC 3)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-31=-41/0, 19-20=-580/0, 1-2=0/0, 2-3=-1553/0, 3-4=-1553/0, 4-5=-1957/0, 5-6=-1957/0, 6-7=-1957/0, 7-8=-648/520, 8-9=-648/520, 9-10=0/2093, 10-12=0/2096, 12-13=-898/407, 13-14=-898/407, 14-15=-1789/0, 15-16=-1789/0, 16-17=-1789/0, 17-18=-967/0, 18-19=-967/0  
 BOT CHORD 30-31=0/788, 29-30=0/1929, 28-29=0/1957, 27-28=-169/1412, 25-27=-1142/0, 24-25=-876/0, 23-24=-106/1484, 22-23=0/1789, 21-22=0/1519, 20-21=0/0  
 WEBS 5-29=-30/71, 6-28=-254/0, 10-25=-150/0, 15-23=-193/0, 16-22=-111/41, 4-29=-290/113, 4-30=-428/14, 3-30=-137/0, 2-30=0/870, 2-31=-969/0, 7-28=0/832, 7-27=-968/0, 8-27=-169/0, 9-27=0/1401, 9-25=-1222/0, 14-23=0/631, 14-24=-776/0, 13-24=-151/0, 12-24=0/1206, 12-25=-1571/0, 17-22=-90/307, 17-21=-628/0, 18-21=-165/0, 19-21=0/1097

**NOTES**

- Unbalanced floor live loads have been considered for this design.
  - Bearings are assumed to be: Joint 31 SPF 1650F 1.5E, Joint 25 SPF 1650F 1.5E.
  - Refer to girder(s) for truss to truss connections.
  - 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.
  - Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
  - CAUTION, Do not erect truss backwards.
- LOAD CASE(S)** Standard



July 26, 2024

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcsccomponents.com)

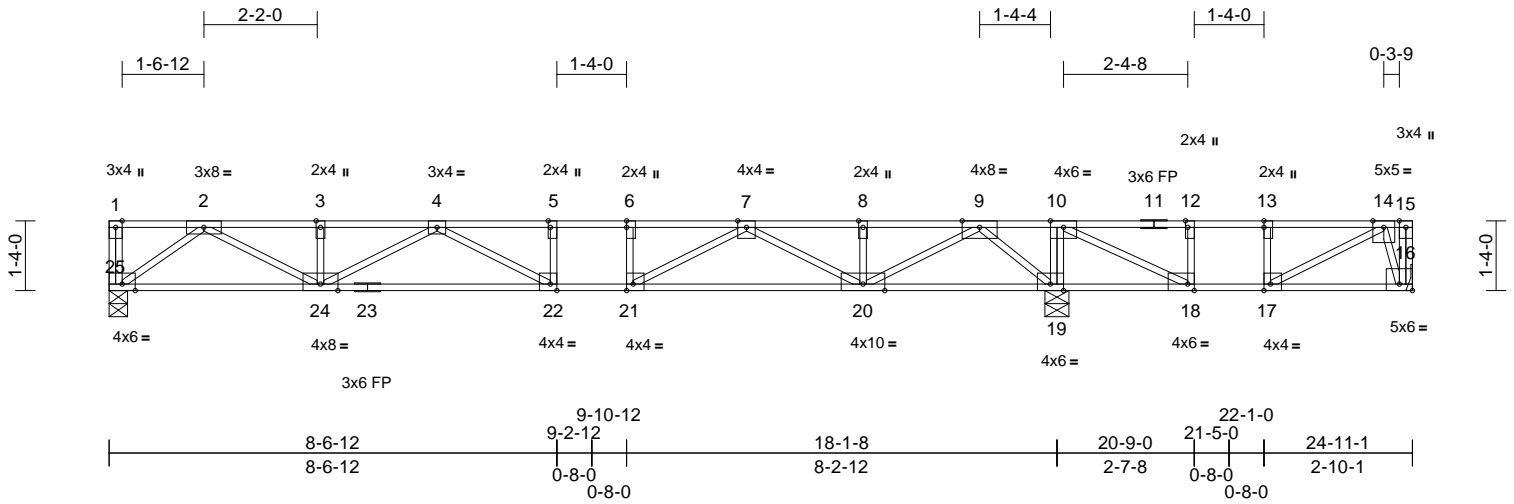
**MiTek®**  
 400 Sunrise Ave., Suite 270  
 Roseville, CA 95661  
 916.755.3571 / MiTek-US.com

Job MTR641110F	Truss F7	Truss Type Floor	Qty 10	Ply 1	MIKE ROACH Job Reference (optional)	R83538466
-------------------	-------------	---------------------	-----------	----------	--	-----------

Alpine Truss, Montrose, CO - 81401,

Run: 8.73 S Jul 11 2024 Print: 8.730 S Jul 11 2024 MiTek Industries, Inc. Thu Jul 25 10:58:43  
ID:QjsKHKRB2T8Se976z0eObqzE?JQ-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCdoi7J4zJC?f

Page: 1



Scale = 1:44.1

Plate Offsets (X, Y): [5:0-1-8,Edge], [6:0-1-8,Edge], [12:0-1-8,Edge], [13:0-1-8,Edge], [16:Edge,0-1-8], [17:0-1-8,Edge], [18:0-1-8,Edge], [21:0-1-8,Edge], [22:0-1-8,Edge]

Loading	(psf)	Spacing	1-4-0	CSI	DEFL	in (loc)	l/defl	L/d	PLATES	GRIP		
TCLL	40.0	Plate Grip DOL	1.00	TC	0.37	Vert(LL)	-0.17	22-24	>999	720	MT20	197/144
TCDL	10.0	Lumber DOL	1.00	BC	0.50	Vert(CT)	-0.27	22-24	>795	600		
BCLL	0.0	Rep Stress Incr	YES	WB	0.96	Horz(CT)	0.04	19	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 93 lb	FT = 0%F, 10%E

**LUMBER**

TOP CHORD 2x4 SPF 1650F 1.5E(flat)  
 BOT CHORD 2x4 SPF 1650F 1.5E(flat)  
 WEBS 2x4 WW Stud(flat)

**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) 16= Mechanical, 19=0-5-8, 25=0-4-4  
 Max Uplift 16=74 (LC 3)  
 Max Grav 16=206 (LC 4), 19=1218 (LC 1), 25=664 (LC 10)

**FORCES**

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-25=-41/0, 15-16=0/120, 1-2=0/0, 2-3=-1683/0, 3-4=-1683/0, 4-5=-2262/0, 5-6=-2262/0, 6-7=-2262/0, 7-8=-1130/0, 8-9=-1130/0, 9-10=0/980, 10-12=-200/332, 12-13=-200/332, 13-14=-200/332, 14-15=0/0  
 BOT CHORD 24-25=0/843, 22-24=0/2135, 21-22=0/2262, 20-21=0/1820, 19-20=-105/61, 18-19=-980/0, 17-18=-332/200, 16-17=-12/90  
 WEBS 5-22=-99/5, 6-21=-187/0, 10-19=-485/0, 12-18=-260/0, 13-17=-62/110, 4-22=-80/333, 4-24=-514/0, 3-24=-140/0, 2-24=0/955, 2-25=-1037/0, 7-21=0/618, 7-20=-810/0, 8-20=-155/0, 9-20=0/1244, 9-19=-1151/0, 10-18=0/891, 14-17=-364/125, 14-16=-272/37

**NOTES**

- 1) Unbalanced floor live loads have been considered for this design.
- 2) Bearings are assumed to be: Joint 25 SPF 1650F 1.5E, Joint 19 SPF 1650F 1.5E.
- 3) Refer to girder(s) for truss to truss connections.

- 4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 74 lb uplift at joint 16.
- 5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 6) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
- 7) CAUTION, Do not erect truss backwards.

**LOAD CASE(S)** Standard



July 26, 2024

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcsccomponents.com)

**MiTek®**

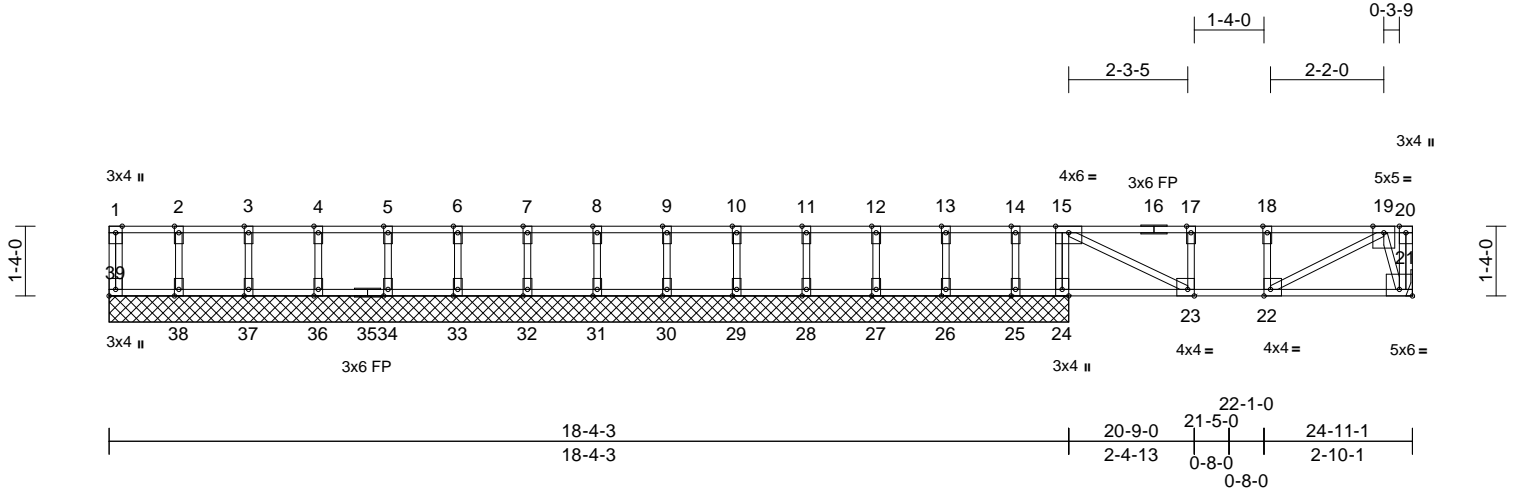
400 Sunrise Ave., Suite 270  
 Roseville, CA 95661  
 916.755.3571 / MiTek-US.com

Job MTR641110F	Truss F7G	Truss Type Floor	Qty 1	Ply 1	MIKE ROACH Job Reference (optional)	R83538467
-------------------	--------------	---------------------	----------	----------	--	-----------

Alpine Truss, Montrose, CO - 81401,

Run: 8.73 S Jul 11 2024 Print: 8.730 S Jul 11 2024 MiTek Industries, Inc. Thu Jul 25 10:58:44  
ID:kfqET2XOoq6AZMVxrog2tczE?AF-RfC?PsB70Hq3NSgPqnL8w3uITxBGKWrCDoi7J4zJC7f

Page: 1



Scale = 1:44.1

Plate Offsets (X, Y): [21:Edge,0-1-8], [22:0-1-8,Edge], [23:0-1-8,Edge], [39:Edge,0-1-8]

Loading	(psf)	Spacing	1-4-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.11	Vert(LL)	-0.01	22	>999	720	MT20	169/123
TCDL	10.0	Lumber DOL	1.00	BC	0.08	Vert(CT)	-0.02	21-22	>999	600		
BCLL	0.0	Rep Stress Incr	YES	WB	0.29	Horz(CT)	0.00	21	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 85 lb	FT = 0%F, 10%E

**LUMBER**  
TOP CHORD 2x4 SPF 1650F 1.5E(flat)  
BOT CHORD 2x4 SPF 1650F 1.5E(flat)  
WEBS 2x4 WW Stud(flat)  
OTHERS 2x4 WW Stud(flat)

**WEBS**  
17-23=-141/0, 18-22=-104/0, 19-22=0/273,  
19-21=-312/0, 15-24=-312/0, 15-23=0/382,  
2-38=95/0, 3-37=88/0, 4-36=89/0,  
5-34=89/0, 6-33=89/0, 7-32=89/0,  
8-31=89/0, 9-30=89/0, 10-29=89/0,  
11-28=89/0, 12-27=88/0, 13-26=97/0,  
14-25=72/28

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

**REACTIONS** (size)  
21= Mechanical, 24=18-4-3,  
25=18-4-3, 26=18-4-3, 27=18-4-3,  
28=18-4-3, 29=18-4-3, 30=18-4-3,  
31=18-4-3, 32=18-4-3, 33=18-4-3,  
34=18-4-3, 36=18-4-3, 37=18-4-3,  
38=18-4-3, 39=18-4-3  
Max Uplift 25=24 (LC 4)  
Max Grav 21=257 (LC 4), 24=344 (LC 1),  
25=79 (LC 3), 26=118 (LC 1),  
27=105 (LC 3), 28=107 (LC 1),  
29=107 (LC 3), 30=107 (LC 1),  
31=107 (LC 3), 32=107 (LC 1),  
33=107 (LC 3), 34=107 (LC 1),  
36=107 (LC 3), 37=105 (LC 1),  
38=114 (LC 3), 39=38 (LC 1)

**NOTES**  
1) Unbalanced floor live loads have been considered for this design.  
2) All plates are 2x4 MT20 unless otherwise indicated.  
3) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).  
4) Gable studs spaced at 1-4-0 oc.  
5) Bearings are assumed to be: Joint 25 SPF 1650F 1.5E .  
6) Refer to girder(s) for truss to truss connections.  
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 24 lb uplift at joint 25.  
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.  
9) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.  
10) CAUTION, Do not erect truss backwards.

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-39=-31/0, 20-21=0/54, 1-2=0/0, 2-3=0/0,  
3-4=0/0, 4-5=0/0, 5-6=0/0, 6-7=0/0, 7-8=0/0,  
8-9=0/0, 9-10=0/0, 10-11=0/0, 11-12=0/0,  
12-13=0/0, 13-14=0/0, 14-15=0/0,  
15-17=-343/0, 17-18=-343/0, 18-19=-343/0,  
19-20=0/0  
BOT CHORD 38-39=0/0, 37-38=0/0, 36-37=0/0, 34-36=0/0,  
33-34=0/0, 32-33=0/0, 31-32=0/0, 30-31=0/0,  
29-30=0/0, 28-29=0/0, 27-28=0/0, 26-27=0/0,  
25-26=0/0, 24-25=0/0, 23-24=0/0,  
22-23=0/343, 21-22=0/103

**LOAD CASE(S)** Standard



July 26, 2024

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcsccomponents.com)

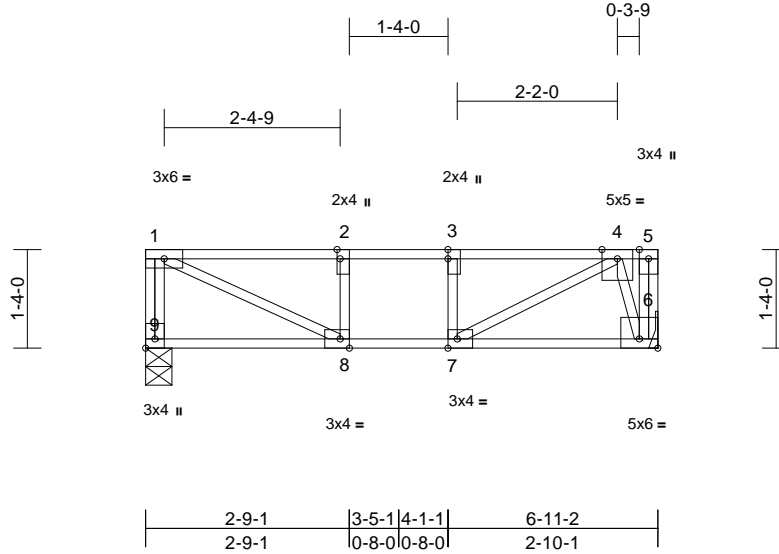
**MiTek®**  
400 Sunrise Ave., Suite 270  
Roseville, CA 95661  
916.755.3571 / MiTek-US.com

Job MTR641110F	Truss F8	Truss Type Floor	Qty 13	Ply 1	MIKE ROACH Job Reference (optional)	R83538468
-------------------	-------------	---------------------	-----------	----------	--	-----------

Alpine Truss, Montrose, CO - 81401,

Run: 8.73 S Jul 11 2024 Print: 8.730 S Jul 11 2024 MiTek Industries, Inc. Thu Jul 25 10:58:44  
ID:ha?r1Lz\_Kue3uuFsyMJULCzE?9h-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:31.2

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

Loading	(psf)	Spacing	1-4-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.20	Vert(LL)	-0.02	8-9	>999	720	MT20	169/123
TCDL	10.0	Lumber DOL	1.00	BC	0.15	Vert(CT)	-0.03	8-9	>999	600		
BCLL	0.0	Rep Stress Incr	YES	WB	0.32	Horz(CT)	0.00	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 28 lb	FT = 0%F, 10%E

**LUMBER**

TOP CHORD 2x4 SPF 1650F 1.5E(flat)  
 BOT CHORD 2x4 SPF 1650F 1.5E(flat)  
 WEBS 2x4 WW Stud(flat)

**BRACING**

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

**REACTIONS** (size) 6= Mechanical, 9=0-4-4  
 Max Grav 6=267 (LC 1), 9=267 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-9=-250/0, 5-6=-7/62, 1-2=-376/0, 2-3=-376/0, 3-4=-376/0, 4-5=0/0  
 BOT CHORD 8-9=0/0, 7-8=0/376, 6-7=0/105  
 WEBS 2-8=-156/0, 3-7=-110/0, 1-8=0/416, 4-7=0/308, 4-6=-319/0

**NOTES**

- 1) Unbalanced floor live loads have been considered for this design.
- 2) Bearings are assumed to be: Joint 9 SPF 1650F 1.5E .
- 3) Refer to girder(s) for truss to truss connections.
- 4) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 5) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

**LOAD CASE(S)** Standard



July 26, 2024

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

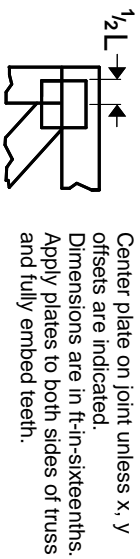
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcsccomponents.com)

**MiTek®**

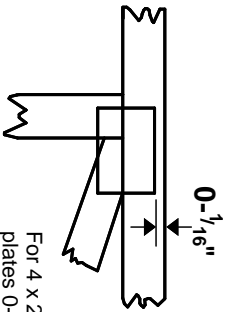
400 Sunrise Ave., Suite 270  
 Roseville, CA 95661  
 916.755.3571 / MiTek-US.com

# 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\"/>



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

\* Plate location details available in MITtek 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

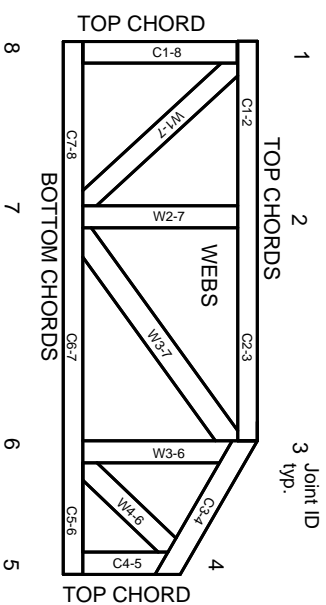


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

## Industry Standards:

ANSI/TFP1: National Design Specification for Metal Plate Connected Wood Truss Construction.  
DSB-22: Design Standard for Bracing, 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-1-1988, ESR-2-362, ESR-2-685, ESR-3-282  
ESR-4-722, ESL-1-388

# 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/TFP 1 section 6.3. These truss designs rely on Lumber values established by others.

© 2023 MITtek® All Rights Reserved

# 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/TFP 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TFP 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/TFP 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.

# MITek®

MITtek Engineering Reference Sheet: Mill-7473 rev. 1/2/2023