REVIEWED FOR DESIGN CRITERIA ONLY
SEE ATTACHED COVER SHEET FOR ALL STAMPS. IT IS THE RESPONSIBILITY OF THE OWNER/APPLICANT TO REVIEW AND ACKNOWLEDGE APPLICABLE STAMPS.

1 BEDROOM
2024 HOME OF MY OWN

BALLARD

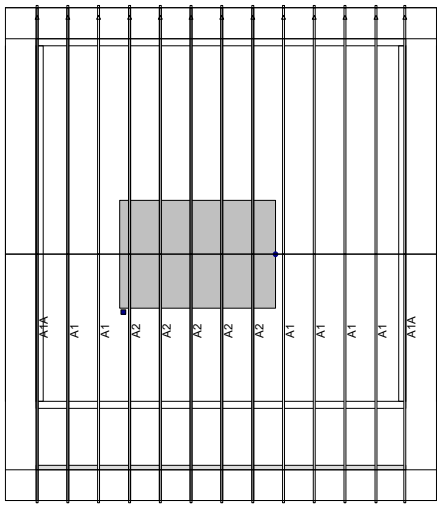
25-3825
25-5131

LAYOUTS
CALCULATIONS

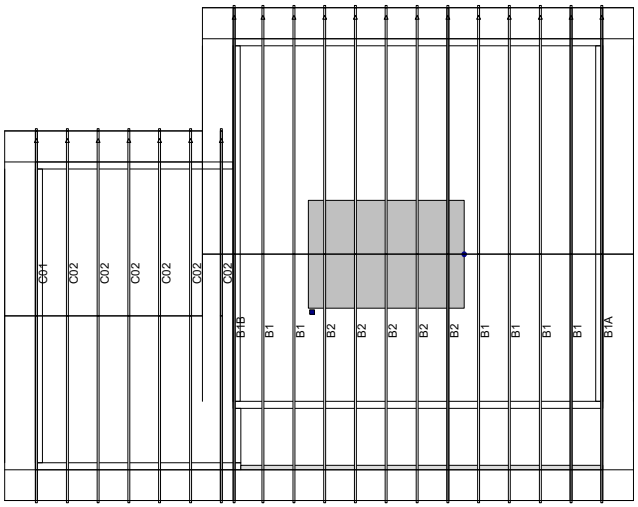
Truss calculations to be on site at the time of frame inspection

Reviewed for
2018 Code Compliance
Yavapai County Building Safety

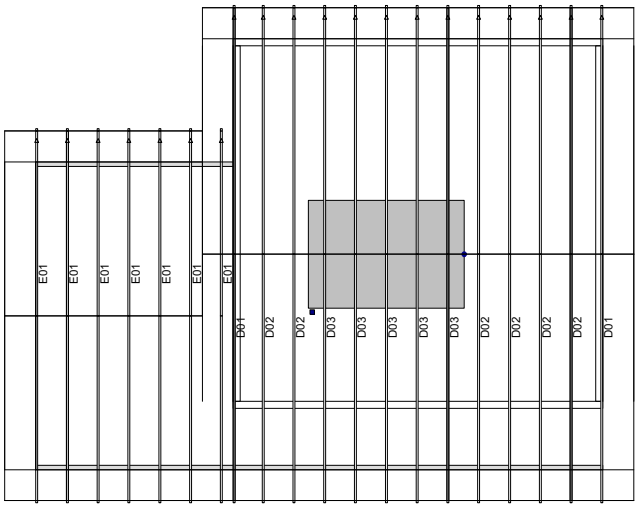
Bedroom 1



Bedroom1 w Garage



Bedroom 1 W Carport



◁ Indicates left end of truss	Drawing is not to scale u.n.o.	Dashed walls indicate a non-bearing wall

BALLARD TRUSS

Client:

Job Name: Home Of My Own 1 /bedroom

Job #: 25-3825

Location: TBD

By signing below, I agree that I have reviewed this layout and the attached truss drawings and found them to be in conformance to my needs for this project, even if it they have deviated from the plans.

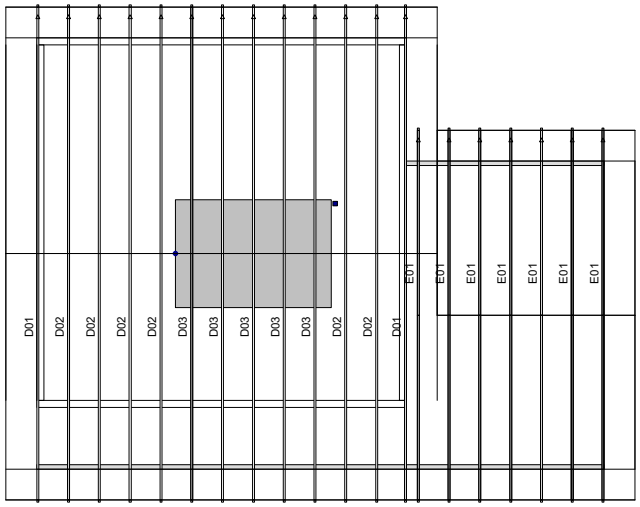
Signed:_____

Date:_____

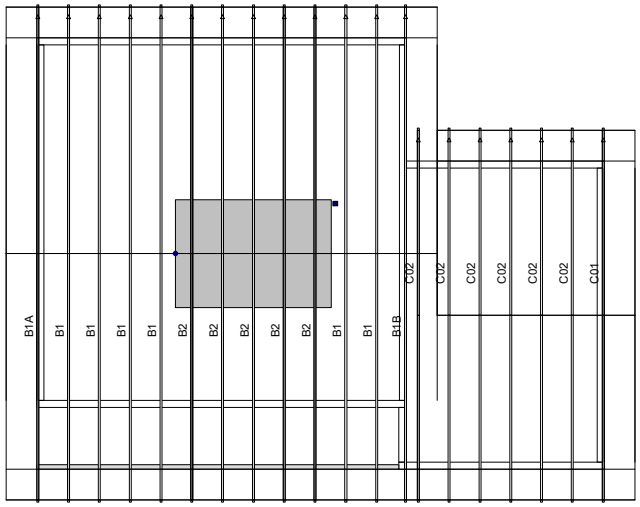
Disclaimer: This Truss Placement Diagram was not created by an engineer, but rather by the Ballard Truss Staff and is purely to be used as an installation guide and does not require a seal. Complete truss engineering and analysis can be found on the Truss Design Drawings which may be sealed by the Truss Designer.

Reviewed for
2018 Code Compliance
Yavapai County Building Safety

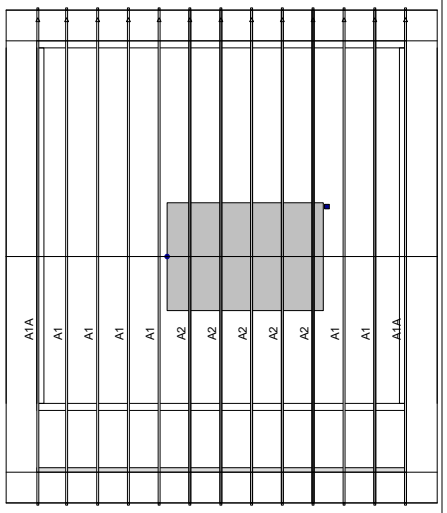
Bedroom 1 W Carport



Bedroom1 w Garage



Bedroom 1



◁ Indicates left end of truss | Drawing is not to scale u.n.o. | Dashed walls indicate a non-bearing wall

BALLARD TRUSS

Client: Client Name

Job Name: Home Of My Own 1 Bed

Job #: Quote #

Location: Site Address, Site Address - City Site Address - State

By signing below, I agree that I have reviewed this layout and the attached truss drawings and found them to be in conformance to my needs for this project, even if it they have deviated from the plans.

Signed:_____

Date:_____

Disclaimer: This Truss Placement Diagram was not created by an engineer, but rather by the Ballard Truss Staff and is purely to be used as an installation guide and does not require a seal. Complete truss engineering and analysis can be found on the Truss Design Drawings which may be sealed by the Truss Designer.

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

Re: 25-3825
Home Of My Own 1 bedroom

The truss drawing(s) referenced below have been prepared by MiTek USA, Inc. under my direct supervision based on the parameters provided by Ballard Truss LLC (Snowflake, AZ).

Pages or sheets covered by this seal: R88655124 thru R88655136

My license renewal date for the state of Arizona is December 31, 2027.

Arizona COA: 11906-0

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

Registered Professional Engineer (Civil)
CERTIFICATE NO.
54161
DAVID
WINN
Date Signed
ARIZONA U.S.A.
EXPIRES: December 31, 2027

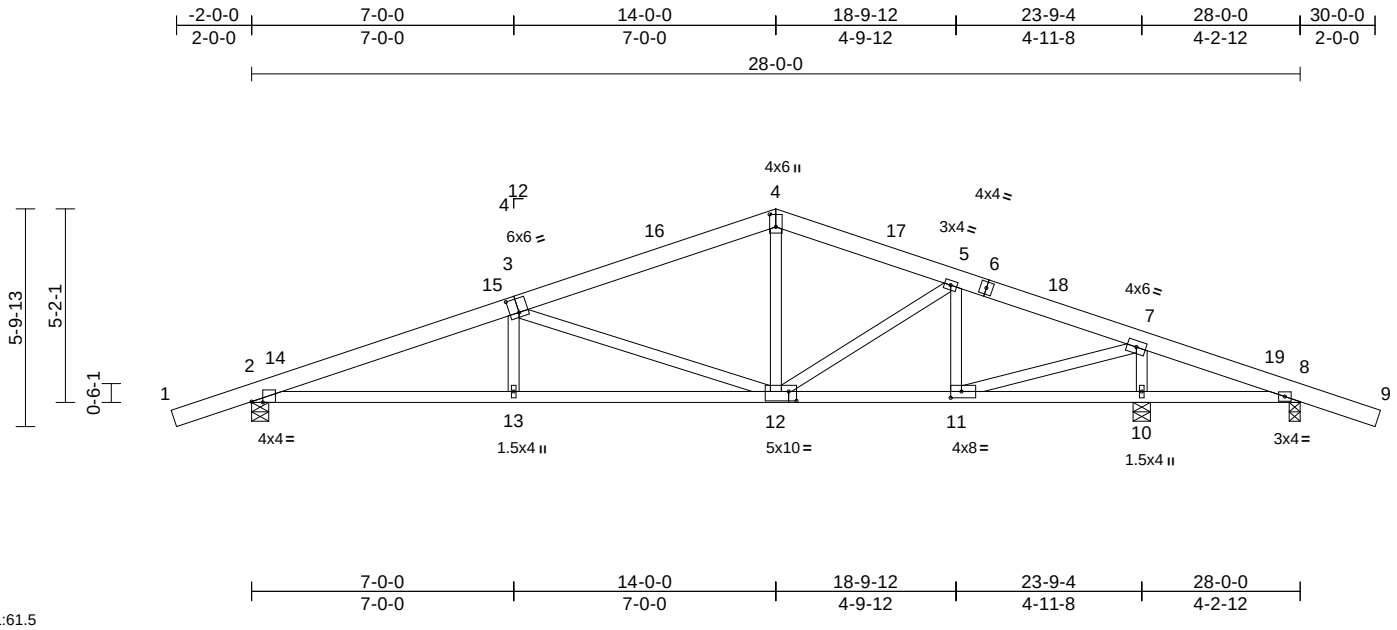
Reviewed for
Design Criteria Only

June 12,2025

Winn, David

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	Home Of My Own 1 bedroom
25-3825	A1	Common	6	1	R88655124 Job Reference (optional)



Scale = 1:61.5

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	30.0	Plate Grip DOL	1.15	TC	0.43	Vert(LL)	-0.11	12-13	>999	240	MT20	185/144
(Roof Snow = 30.0)		Lumber DOL	1.15	BC	0.50	Vert(CT)	-0.24	12-13	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.74	Horz(CT)	0.05	10	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-SH								
BCDL	10.0										Weight: 129 lb	FT = 10%

LUMBER

TOP CHORD 2x6 SPF 1650F 1.5E
BOT CHORD 2x4 SPF 1650F 1.5E
WEBS 2x4 DF Stud or 2x4 HF Stud or 2x4 SPF Stud *Except* 12-3:2x4 SPF 1650F 1.5E

BRACING

TOP CHORD Structural wood sheathing directly applied or 5-2-1 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 8=0-3-8, 10=0-5-8
Max Horiz 2=94 (LC 14)
Max Uplift 2=-403 (LC 10), 8=-153 (LC 11), 10=-344 (LC 11)
Max Grav 2=1393 (LC 21), 8=242 (LC 22), 10=1588 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/45, 2-4=-2598/644, 4-5=-1556/524, 5-7=-1477/455, 7-8=-87/507, 8-9=0/44
BOT CHORD 2-13=-489/2346, 11-13=-492/2341, 10-11=-436/138, 8-10=-436/138
WEBS 7-10=-1592/465, 4-12=-42/398, 3-12=-1096/286, 3-13=0/319, 5-12=-157/300, 5-11=-437/190, 7-11=-410/1807

NOTES

1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Partially Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -2-0-14 to 0-11-2, Interior (1) 0-11-2 to 14-0-0, Exterior(2R) 14-0-0 to 17-0-0, Interior (1) 17-0-0 to 30-0-14 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pf=30.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; 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 16.0 psf or 1.00 times flat roof load of 30.0 psf on overhangs non-concurrent with other live loads.
5) As requested, plates have not been designed to provide for placement tolerances or rough handling and erection conditions. It is the responsibility of the fabricator to increase plate sizes to account for these factors.
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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 403 lb uplift at joint 2, 344 lb uplift at joint 10 and 153 lb uplift at joint 8.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

Reviewed for Design Criteria Only

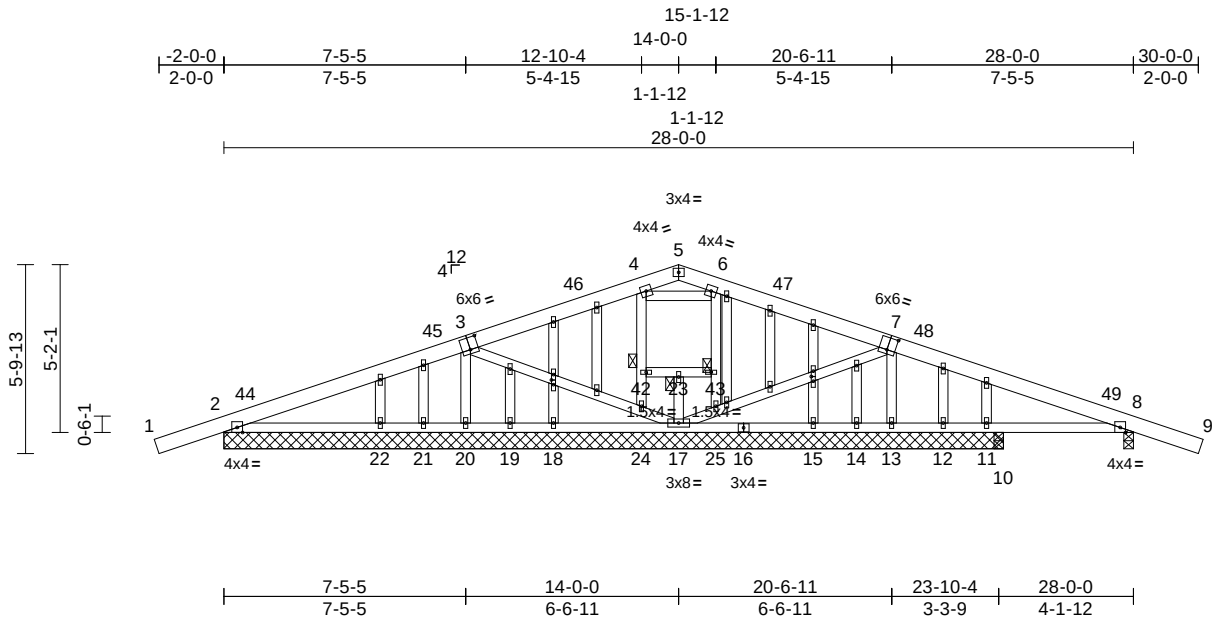
Registered Professional Engineer (Civil)
CERTIFICATE NO. 54161
DAVID WINN
Date Signed
ARIZONA U.S.A.

EXPIRES: December 31, 2027
June 12,2025

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.sbcscomponents.com)

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

Job	Truss	Truss Type	Qty	Ply	Home Of My Own 1 bedroom
25-3825	A1A	Common Supported Gable	2	1	R88655125 Job Reference (optional)



Scale = 1:70.9

Plate Offsets (X, Y): [3:0-3-0,0-4-8], [7:0-3-0,0-4-8], [29:0-1-12,0-0-12], [38:0-1-12,0-0-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	30.0	Plate Grip DOL	1.15	TC	0.31	Vert(LL)	0.02	2-22	>999	240	MT20	185/144
(Roof Snow = 30.0)		Lumber DOL	1.15	BC	0.25	Vert(CT)	-0.04	2-22	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.73	Horz(CT)	0.01	8	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-SH								
BCDL	10.0										Weight: 167 lb	FT = 10%

LUMBER

TOP CHORD	2x6 SPF 1650F 1.5E
BOT CHORD	2x4 SPF 1650F 1.5E
WEBS	2x4 DF Stud or 2x4 HF Stud or 2x4 SPF Stud
OTHERS	2x4 DF Stud or 2x4 HF Stud or 2x4 SPF Stud

BRACING

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
JOINTS	1 Brace at Jt(s): 23, 42, 43

REACTIONS All bearings 24-0-0. except 8=0-3-8, 10=0-3-8
(lb) - Max Horiz 2=-94 (LC 19)
Max Uplift All uplift 100 (lb) or less at joint(s) 10, 14, 21, 22 except 2=-238 (LC 10), 8=-257 (LC 11), 11=-190 (LC 22), 13=-219 (LC 15), 17=-106 (LC 11), 20=-260 (LC 14)
Max Grav All reactions 250 (lb) or less at joint (s) 11, 12, 14, 15, 18, 19, 21, 22 except 2=582 (LC 21), 8=572 (LC 22), 10=294 (LC 22), 13=708 (LC 22), 17=395 (LC 1), 20=743 (LC 21)

FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-44=-324/128, 3-46=-425/249, 4-46=-334/261, 6-47=-334/266, 7-47=-425/255, 8-49=-328/130
WEBS 17-23=-352/154, 3-20=-683/271, 7-13=-670/255, 4-42=-253/100, 6-43=-253/102, 4-6=-537/391

NOTES

1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Partially Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -2-0-14 to 0-11-2, Interior (1) 0-11-2 to 14-0-0, Exterior(2R) 14-0-0 to 17-0-0, Interior (1) 17-0-0 to 30-0-14 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) 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=30.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; 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 16.0 psf or 1.00 times flat roof load of 30.0 psf on overhangs non-concurrent with other live loads.
6) As requested, plates have not been designed to provide for placement tolerances or rough handling and erection conditions. It is the responsibility of the fabricator to increase plate sizes to account for these factors.
7) All plates are 1.5x4 (||) MT20 unless otherwise indicated.
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 3-06-00 tall by 2-00-00 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) 22, 21, 14, 10 except (jt=lb) 2=237, 17=106, 20=259, 13=219, 8=256, 11=189.
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.

LOAD CASE(S) Standard

Reviewed for Design Criteria Only

Registered Professional Engineer (Civil)
CERTIFICATE NO. 54161
DAVID WINN
Date Signed
ARIZONA U.S.A.

EXPIRES: December 31, 2027
June 12,2025

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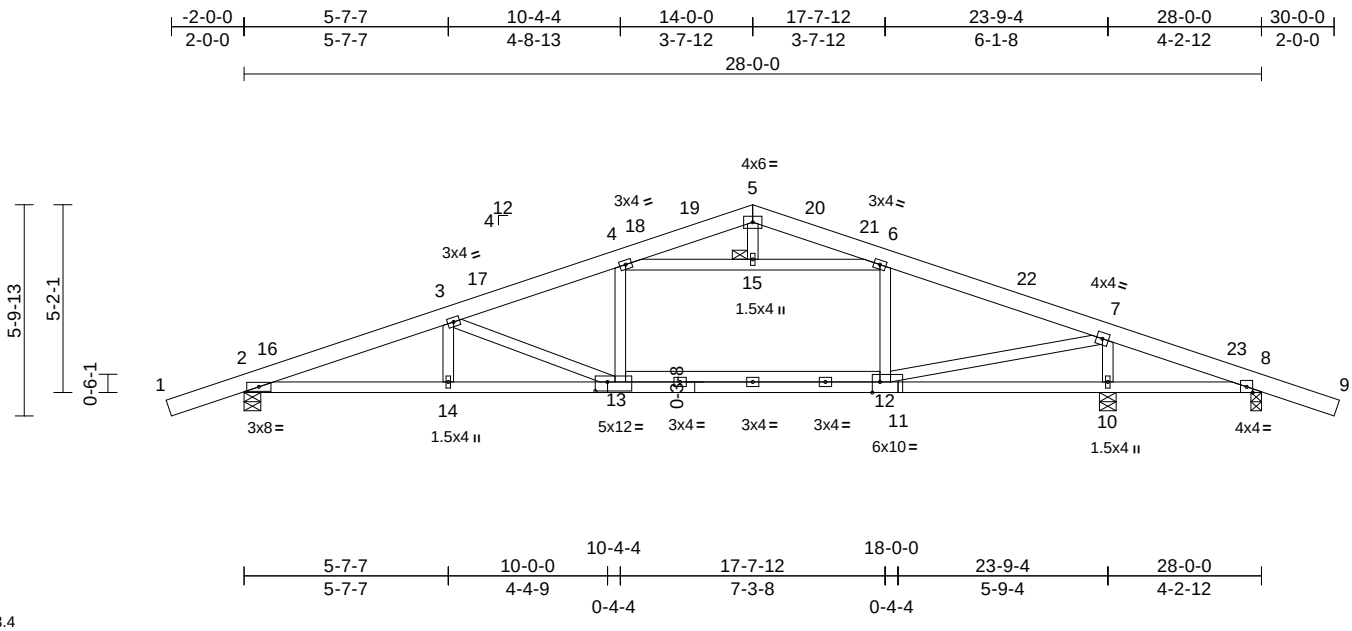
MiTek®
400 Sunrise Ave., Suite 270
Roseville, CA 95661
916.755.3571 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Home Of My Own 1 bedroom
25-3825	A2	Common	5	1	R88655126 Job Reference (optional)



Scale = 1:63.4

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	30.0	Plate Grip DOL	1.15	TC	0.57	Vert(LL)	-0.45	13	>623	240	MT20	197/144
(Roof Snow = 30.0)		Lumber DOL	1.15	BC	0.59	Vert(CT)	-0.69	13	>412	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.65	Horz(CT)	0.12	8	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-SH								
BCDL	10.0										Weight: 137 lb	FT = 10%

LUMBER

TOP CHORD 2x6 SPF 1650F 1.5E
BOT CHORD 2x4 SPF 1650F 1.5E
WEBS 2x4 DF Stud or 2x4 HF Stud or 2x4 SPF Stud *Except* 4-6:2x4 SPF 1650F 1.5E

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-2-11 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
JOINTS 1 Brace at Jt(s): 15

REACTIONS (size) 2=0-5-8, 8=0-3-8, 10=0-5-8
Max Horiz 2=-94 (LC 15)
Max Uplift 2=-338 (LC 10), 8=-179 (LC 14), 10=-277 (LC 15)
Max Grav 2=1667 (LC 21), 8=1052 (LC 21), 10=1401 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/45, 2-3=-3584/526, 3-4=-2820/390, 4-5=-975/82, 5-6=-1089/107, 6-7=-2631/375, 7-8=-2242/383, 8-9=0/44
BOT CHORD 2-14=-445/3298, 12-14=-446/3301, 10-12=-314/2045, 8-10=-314/2045
WEBS 4-13=-62/577, 6-12=-273/100, 3-14=-22/153, 3-13=-819/290, 7-10=-1282/350, 7-12=-97/1515, 4-15=-1597/368, 6-15=-1597/368, 5-15=-41/176

NOTES

1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Partially Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -2-0-14 to 0-11-2, Interior (1) 0-11-2 to 14-0-0, Exterior(2R) 14-0-0 to 17-0-0, Interior (1) 17-0-0 to 30-0-14 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pf=30.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; 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 16.0 psf or 1.00 times flat roof load of 30.0 psf on overhangs non-concurrent with other live loads.
5) 150.0lb AC unit load placed on the top chord, 12-0-0 from left end, supported at two points, 3-0-0 apart.
6) Uninhabitable Mechanical zone exists .
7) As requested, plates have not been designed to provide for placement tolerances or rough handling and erection conditions. It is the responsibility of the fabricator to increase plate sizes to account for these factors.
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 3-06-00 tall by 2-00-00 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 179 lb uplift at joint 8, 277 lb uplift at joint 10 and 338 lb uplift at joint 2.
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.
12) Load case(s) 1 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 2-8=-20, 1-4=-80, 4-5=-90, 5-6=-90, 6-9=-80
Concentrated Loads (lb)
Vert: 19=-75, 20=-75

Reviewed for Design Criteria Only

Registered Professional Engineer (Civil)
CERTIFICATE NO.
54161
DAVID WINN
Date Signed
ARIZONA U.S.A.

EXPIRES: December 31, 2027
June 12,2025

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.
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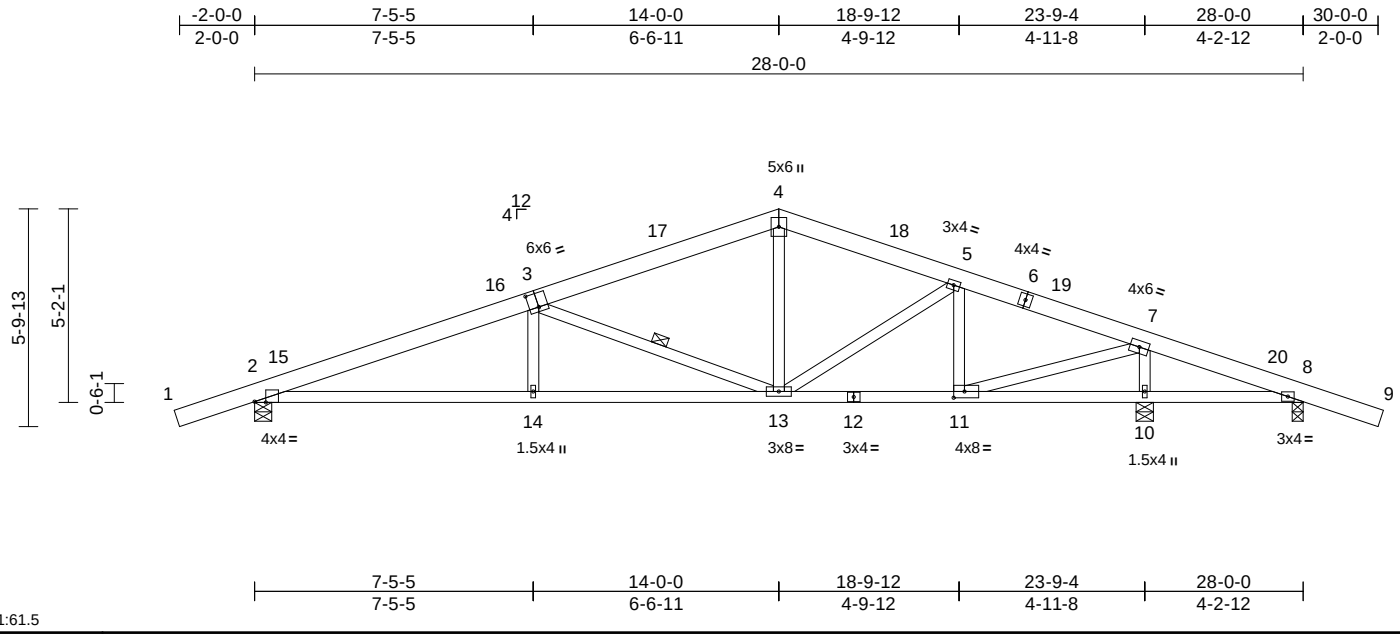
Job	Truss	Truss Type	Qty	Ply	Home Of My Own 1 bedroom
25-3825	B1	Common	6	1	R88655127 Job Reference (optional)



Scale = 1:61.5

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	30.0	Plate Grip DOL	1.15	TC	0.37	Vert(LL)	-0.11	2-14	>999	240	MT20	185/144
(Roof Snow = 30.0)		Lumber DOL	1.15	BC	0.52	Vert(CT)	-0.20	2-14	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.75	Horz(CT)	0.05	10	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-SH								
BCDL	10.0										Weight: 130 lb	FT = 10%

LUMBER
TOP CHORD 2x6 SPF 1650F 1.5E
BOT CHORD 2x4 SPF 1650F 1.5E
WEBS 2x4 DF Stud or 2x4 HF Stud or 2x4 SPF Stud

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 3-13

REACTIONS (size) 2=0-5-8, 8=0-3-8, 10=0-5-8
Max Horiz 2=94 (LC 14)
Max Uplift 2=-402 (LC 10), 8=-148 (LC 11), 10=-350 (LC 11)
Max Grav 2=1392 (LC 21), 8=232 (LC 22), 10=1598 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/45, 2-4=-2538/636, 4-5=-1569/514, 5-7=-1493/469, 7-8=-89/504, 8-9=0/44
BOT CHORD 2-14=-477/2286, 13-14=-479/2282, 11-13=-279/1337, 10-11=-429/138, 8-10=-429/138
WEBS 7-10=-1604/473, 4-13=-61/448, 3-13=-1042/291, 3-14=0/281, 5-13=-182/314, 5-11=-456/184, 7-11=-426/1816

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Partially Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -2-0-14 to 0-11-2, Interior (1) 0-11-2 to 14-0-0, Exterior(2R) 14-0-0 to 17-0-0, Interior (1) 17-0-0 to 30-0-14 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pf=30.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; 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 16.0 psf or 1.00 times flat roof load of 30.0 psf on overhangs non-concurrent with other live loads.
5) As requested, plates have not been designed to provide for placement tolerances or rough handling and erection conditions. It is the responsibility of the fabricator to increase plate sizes to account for these factors.
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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 402 lb uplift at joint 2, 350 lb uplift at joint 10 and 148 lb uplift at joint 8.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

Reviewed for Design Criteria Only

Registered Professional Engineer (Civil)
CERTIFICATE NO. 54161
DAVID WINN
Date Signed
ARIZONA U.S.A.
EXPIRES: December 31, 2027
June 12,2025

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.
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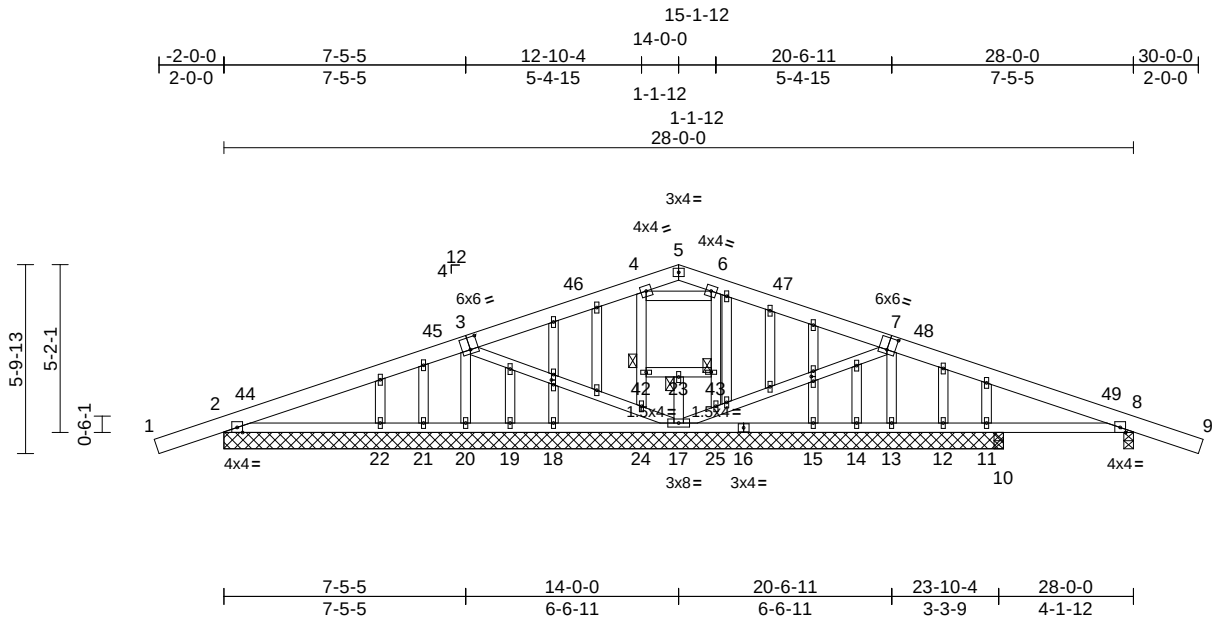
Job	Truss	Truss Type	Qty	Ply	Home Of My Own 1 bedroom
25-3825	B1A	Common Supported Gable	1	1	R88655128 Job Reference (optional)



Scale = 1:70.9

Plate Offsets (X, Y): [3:0-3-0,0-4-8], [7:0-3-0,0-4-8], [29:0-1-12,0-0-12], [38:0-1-12,0-0-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	30.0	Plate Grip DOL	1.15	TC	0.31	Vert(LL)	0.02	2-22	>999	240	MT20	185/144
(Roof Snow = 30.0)		Lumber DOL	1.15	BC	0.25	Vert(CT)	-0.04	2-22	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.73	Horz(CT)	0.01	8	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-SH								
BCDL	10.0										Weight: 167 lb	FT = 10%

LUMBER

TOP CHORD	2x6 SPF 1650F 1.5E
BOT CHORD	2x4 SPF 1650F 1.5E
WEBS	2x4 DF Stud or 2x4 HF Stud or 2x4 SPF Stud
OTHERS	2x4 DF Stud or 2x4 HF Stud or 2x4 SPF Stud

BRACING

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
JOINTS	1 Brace at Jt(s): 23, 42, 43

REACTIONS All bearings 24-0-0. except 8=0-3-8, 10=0-3-8
(lb) - Max Horiz 2=-94 (LC 19)
Max Uplift All uplift 100 (lb) or less at joint(s) 10, 14, 21, 22 except 2=-238 (LC 10), 8=-257 (LC 11), 11=-190 (LC 22), 13=-219 (LC 15), 17=-106 (LC 11), 20=-260 (LC 14)
Max Grav All reactions 250 (lb) or less at joint (s) 11, 12, 14, 15, 18, 19, 21, 22 except 2=582 (LC 21), 8=572 (LC 22), 10=294 (LC 22), 13=708 (LC 22), 17=395 (LC 1), 20=743 (LC 21)

FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-44=-324/128, 3-46=-425/249, 4-46=-334/261, 6-47=-334/266, 7-47=-425/255, 8-49=-328/130
WEBS 17-23=-352/154, 3-20=-683/271, 7-13=-670/255, 4-42=-253/100, 6-43=-253/102, 4-6=-537/391

NOTES

1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Partially Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -2-0-14 to 0-11-2, Interior (1) 0-11-2 to 14-0-0, Exterior(2R) 14-0-0 to 17-0-0, Interior (1) 17-0-0 to 30-0-14 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) 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=30.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; 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 16.0 psf or 1.00 times flat roof load of 30.0 psf on overhangs non-concurrent with other live loads.
6) As requested, plates have not been designed to provide for placement tolerances or rough handling and erection conditions. It is the responsibility of the fabricator to increase plate sizes to account for these factors.
7) All plates are 1.5x4 (||) MT20 unless otherwise indicated.
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 3-06-00 tall by 2-00-00 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) 22, 21, 14, 10 except (jt=lb) 2=237, 17=106, 20=259, 13=219, 11=189, 8=256.
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.

LOAD CASE(S) Standard

Reviewed for Design Criteria Only

Registered Professional Engineer (Civil)
CERTIFICATE NO. 54161
DAVID WINN
Date Signed
ARIZONA U.S.A.

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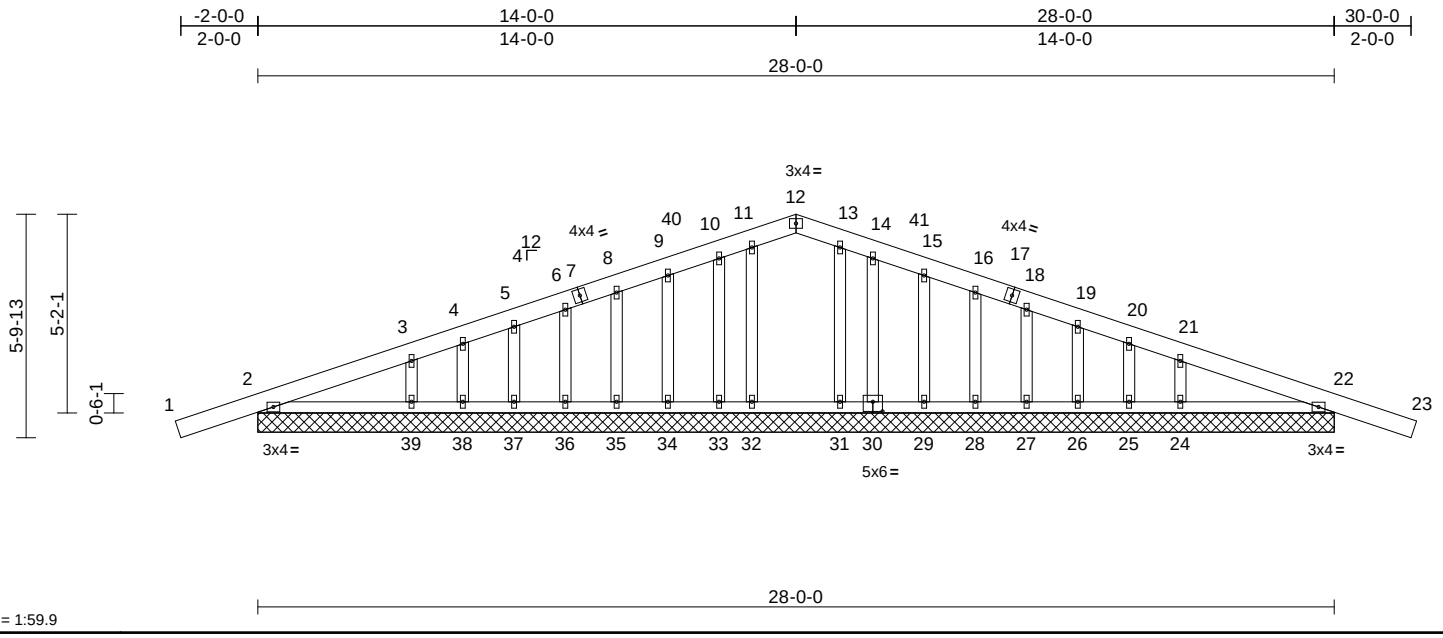
Job	Truss	Truss Type	Qty	Ply	Home Of My Own 1 bedroom
25-3825	B1B	Common Supported Gable	1	1	R88655129 Job Reference (optional)



Scale = 1:59.9

Plate Offsets (X, Y): [30:0-3-0,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	30.0	Plate Grip DOL	1.15	TC	0.10	Vert(LL)	n/a	-	n/a	999	MT20	197/144
(Roof Snow = 30.0)		Lumber DOL	1.15	BC	0.08	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.07	Horz(CT)	0.00	22	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-SH								
BCDL	10.0										Weight: 150 lb	FT = 10%

LUMBER

TOP CHORD 2x6 SPF 1650F 1.5E
BOT CHORD 2x4 SPF 1650F 1.5E
OTHERS 2x4 DF Stud or 2x4 HF Stud or 2x4 SPF Stud

BRACING

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

REACTIONS (size) 2=28-0-0, 22=28-0-0, 24=28-0-0, 25=28-0-0, 26=28-0-0, 27=28-0-0, 28=28-0-0, 29=28-0-0, 30=28-0-0, 31=28-0-0, 32=28-0-0, 33=28-0-0, 34=28-0-0, 35=28-0-0, 36=28-0-0, 37=28-0-0, 38=28-0-0, 39=28-0-0
Max Horiz 2=94 (LC 14)
Max Uplift 2=-146 (LC 10), 22=-161 (LC 11), 24=-108 (LC 15), 25=-44 (LC 11), 26=-42 (LC 15), 27=-50 (LC 11), 28=-47 (LC 15), 29=-52 (LC 11), 30=-49 (LC 15), 33=-46 (LC 10), 34=-50 (LC 10), 35=-47 (LC 14), 36=-50 (LC 10), 37=-42 (LC 14), 38=-44 (LC 10), 39=-109 (LC 14)
Max Grav 2=394 (LC 1), 22=394 (LC 1), 24=303 (LC 1), 25=69 (LC 1), 26=158 (LC 22), 27=187 (LC 22), 28=181 (LC 22), 29=176 (LC 22), 30=137 (LC 22), 31=196 (LC 22), 32=195 (LC 21), 33=139 (LC 21), 34=175 (LC 21), 35=181 (LC 21), 36=187 (LC 21), 37=158 (LC 21), 38=69 (LC 1), 39=303 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/44, 2-3=-105/81, 3-4=-72/92, 4-5=-54/103, 5-6=-61/119, 6-8=-73/136, 8-9=-83/155, 9-10=-93/180, 10-11=-103/200, 11-12=-111/204, 12-13=-111/198, 13-14=-103/190, 14-15=-93/171, 15-16=-83/146, 16-18=-73/122, 18-19=-61/98, 19-20=-52/75, 20-21=-60/57, 21-22=-79/39, 22-23=0/44
BOT CHORD 2-39=-30/86, 38-39=-30/86, 37-38=-30/86, 36-37=-30/86, 35-36=-30/86, 34-35=-30/86, 33-34=-30/86, 32-33=-30/86, 31-32=-30/86, 29-31=-30/86, 28-29=-30/86, 27-28=-30/86, 26-27=-30/86, 25-26=-30/86, 24-25=-30/86, 22-24=-30/86
WEBS 11-32=-156/29, 13-31=-156/25, 3-39=-295/149, 4-38=-61/43, 5-37=-127/61, 6-36=-161/65, 8-35=-155/63, 9-34=-146/78, 10-33=-127/81, 14-30=-127/81, 15-29=-146/79, 16-28=-155/63, 18-27=-161/65, 19-26=-127/61, 20-25=-61/43, 21-24=-295/148

NOTES

1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Partially Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -2-0-14 to 0-11-2, Exterior(2N) 0-11-2 to 14-0-0, Corner(3R) 14-0-0 to 17-0-0, Exterior(2N) 17-0-0 to 30-0-14 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) 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=30.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; 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 16.0 psf or 1.00 times flat roof load of 30.0 psf on overhangs non-concurrent with other live loads.
6) As requested, plates have not been designed to provide for placement tolerances or rough handling and erection conditions. It is the responsibility of the fabricator to increase plate sizes to account for these factors.
7) All plates are 1.5x4 (||) MT20 unless otherwise indicated.
8) Gable requires continuous bottom chord bearing.
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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.

Reviewed for Design Criteria Only

Registered Professional Engineer (Civil)
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ARIZONA U.S.A.

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Continued on page 2

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12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 146 lb uplift at joint 2, 161 lb uplift at joint 22, 109 lb uplift at joint 39, 44 lb uplift at joint 38, 42 lb uplift at joint 37, 50 lb uplift at joint 36, 47 lb uplift at joint 35, 50 lb uplift at joint 34, 46 lb uplift at joint 33, 49 lb uplift at joint 30, 52 lb uplift at joint 29, 47 lb uplift at joint 28, 50 lb uplift at joint 27, 42 lb uplift at joint 26, 44 lb uplift at joint 25 and 108 lb uplift at joint 24.
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.

LOAD CASE(S) Standard

Reviewed for Design Criteria Only

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ARIZONA U.S.A.

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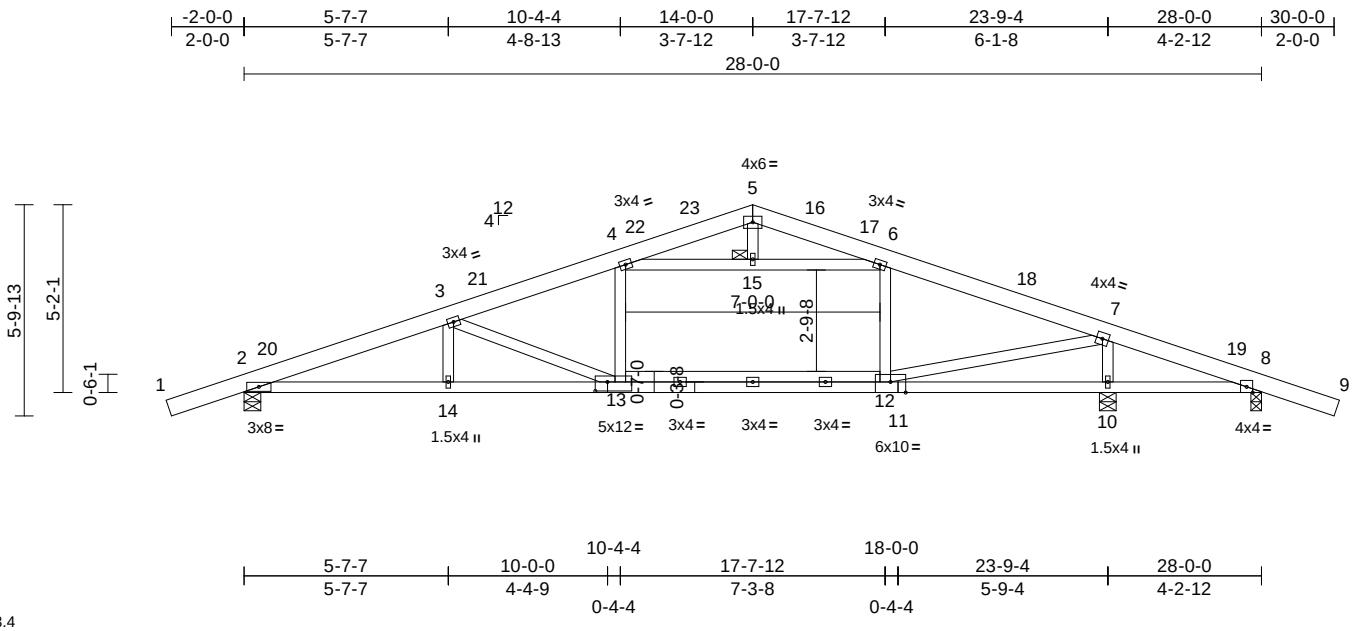
June 12,2025

Job	Truss	Truss Type	Qty	Ply	Home Of My Own 1 bedroom
25-3825	B2	Common	5	1	R88655130 Job Reference (optional)



Scale = 1:63.4

Plate Offsets (X, Y): [12:0-5-0,Edge], [13:0-4-0,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	30.0	Plate Grip DOL	1.15	TC	0.57	Vert(LL)	-0.45	13	>623	240	MT20	185/144
(Roof Snow = 30.0)		Lumber DOL	1.15	BC	0.59	Vert(CT)	-0.69	13	>412	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.65	Horz(CT)	0.12	8	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-SH								
BCDL	10.0										Weight: 137 lb	FT = 10%

LUMBER

TOP CHORD 2x6 SPF 1650F 1.5E
BOT CHORD 2x4 SPF 1650F 1.5E
WEBS 2x4 DF Stud or 2x4 HF Stud or 2x4 SPF Stud *Except* 4-6:2x4 SPF 1650F 1.5E

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-2-11 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
JOINTS 1 Brace at Jt(s): 15

REACTIONS (size) 2=0-5-8, 8=0-3-8, 10=0-5-8
Max Horiz 2=94 (LC 14)
Max Uplift 2=-338 (LC 10), 8=-179 (LC 14), 10=-277 (LC 15)
Max Grav 2=1667 (LC 21), 8=1052 (LC 21), 10=1401 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 5-6=-1088/107, 6-7=-2631/375, 7-8=-2242/383, 8-9=0/44, 1-2=0/45, 2-3=-3584/526, 3-4=-2820/390, 4-5=-975/82
BOT CHORD 2-14=-445/3298, 12-14=-446/3301, 10-12=-314/2045, 8-10=-314/2045
WEBS 4-13=-62/577, 6-12=-273/100, 4-15=-1597/368, 6-15=-1597/368, 7-10=-1282/350, 3-14=-22/153, 5-15=-41/176, 7-12=-97/1515, 3-13=-819/290

NOTES

1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Partially Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -2-0-14 to 0-11-2, Interior (1) 0-11-2 to 14-0-0, Exterior(2R) 14-0-0 to 17-0-0, Interior (1) 17-0-0 to 30-0-14 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pf=30.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; 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 16.0 psf or 1.00 times flat roof load of 30.0 psf on overhangs non-concurrent with other live loads.
5) 150.0lb AC unit load placed on the top chord, 12-0-0 from left end, supported at two points, 3-0-0 apart.
6) Uninhabitable Mechanical zone exists .
7) As requested, plates have not been designed to provide for placement tolerances or rough handling and erection conditions. It is the responsibility of the fabricator to increase plate sizes to account for these factors.
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 3-06-00 tall by 2-00-00 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 338 lb uplift at joint 2, 277 lb uplift at joint 10 and 179 lb uplift at joint 8.
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.
12) Load case(s) 1 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 5-6=-90, 6-9=-80, 2-8=-20, 1-4=-80, 4-5=-90
Concentrated Loads (lb)
Vert: 16=-75, 23=-75

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DAVID WINN
Date Signed
ARIZONA U.S.A.
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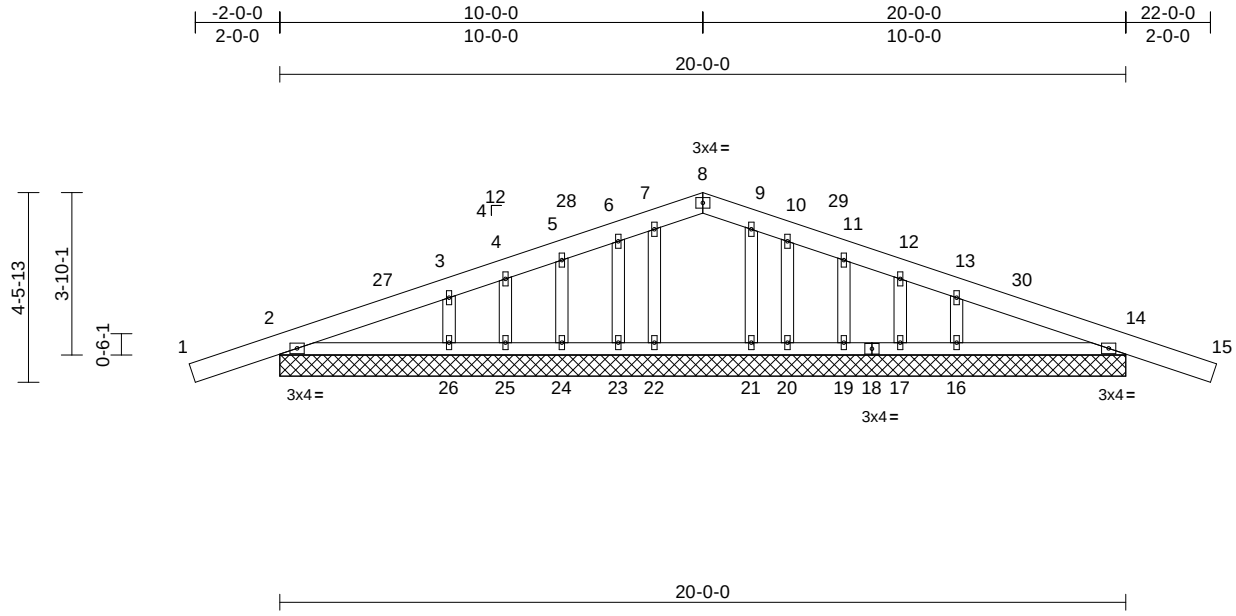
Job	Truss	Truss Type	Qty	Ply	Home Of My Own 1 bedroom
25-3825	C01	Common Supported Gable	1	1	R88655131 Job Reference (optional)



Scale = 1:54.5

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	30.0	Plate Grip DOL	1.15	TC	0.10	Vert(LL)	n/a	-	n/a	999	MT20	197/144
(Roof Snow = 30.0)		Lumber DOL	1.15	BC	0.08	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.07	Horz(CT)	0.00	14	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-SH								
BCDL	10.0										Weight: 95 lb	FT = 10%

LUMBER
TOP CHORD 2x6 SPF 1650F 1.5E
BOT CHORD 2x4 SPF 1650F 1.5E
OTHERS 2x4 DF Stud or 2x4 HF Stud or 2x4 SPF Stud

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

REACTIONS (size) 2=20-0-0, 14=20-0-0, 16=20-0-0, 17=20-0-0, 19=20-0-0, 20=20-0-0, 21=20-0-0, 22=20-0-0, 23=20-0-0, 24=20-0-0, 25=20-0-0, 26=20-0-0
Max Horiz 2=-71 (LC 15)
Max Uplift 2=-156 (LC 10), 14=-168 (LC 11), 16=-108 (LC 15), 17=-43 (LC 11), 19=-45 (LC 15), 20=-54 (LC 11), 22=-3 (LC 14), 23=-49 (LC 10), 24=-45 (LC 14), 25=-44 (LC 10), 26=-108 (LC 14)
Max Grav 2=398 (LC 21), 14=398 (LC 22), 16=376 (LC 22), 17=109 (LC 22), 19=187 (LC 22), 20=130 (LC 22), 21=200 (LC 22), 22=198 (LC 21), 23=135 (LC 21), 24=184 (LC 21), 25=107 (LC 21), 26=379 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/44, 2-3=-90/64, 3-4=-73/91, 4-5=-62/113, 5-6=-71/144, 6-7=-75/169, 7-8=-94/181, 8-9=-94/180, 9-10=-75/168, 10-11=-71/143, 11-12=-62/112, 12-13=-70/90, 13-14=-83/42, 14-15=0/44
BOT CHORD 2-26=-19/68, 25-26=-19/68, 24-25=-19/68, 23-24=-19/68, 22-23=-19/68, 21-22=-19/68, 20-21=-19/68, 19-20=-19/68, 17-19=-19/68, 16-17=-19/68, 14-16=-19/68
WEBS 7-22=-159/38, 9-21=-159/37, 3-26=-313/180, 4-25=-101/53, 5-24=-149/90, 6-23=-124/85, 10-20=-124/85, 11-19=-149/90, 12-17=-101/53, 13-16=-313/180

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Partially Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -2-0-14 to 0-11-2, Exterior(2N) 0-11-2 to 10-0-0, Corner(3R) 10-0-0 to 13-0-0, Exterior(2N) 13-0-0 to 22-0-14 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) 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=30.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; 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 16.0 psf or 1.00 times flat roof load of 30.0 psf on overhangs non-concurrent with other live loads.
6) As requested, plates have not been designed to provide for placement tolerances or rough handling and erection conditions. It is the responsibility of the fabricator to increase plate sizes to account for these factors.
7) All plates are 1.5x4 (||) MT20 unless otherwise indicated.
8) Gable requires continuous bottom chord bearing.
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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 156 lb uplift at joint 2, 3 lb uplift at joint 22, 108 lb uplift at joint 26, 44 lb uplift at joint 25, 45 lb uplift at joint 24, 49 lb uplift at joint 23, 54 lb uplift at joint 20, 45 lb uplift at joint 19, 43 lb uplift at joint 17, 108 lb uplift at joint 16 and 168 lb uplift at joint 14.
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.

LOAD CASE(S) Standard

Reviewed for Design Criteria Only

Registered Professional Engineer (Civil)
CERTIFICATE NO. 54161
DAVID WINN
Date Signed
ARIZONA U.S.A.
EXPIRES: December 31, 2027
June 12,2025

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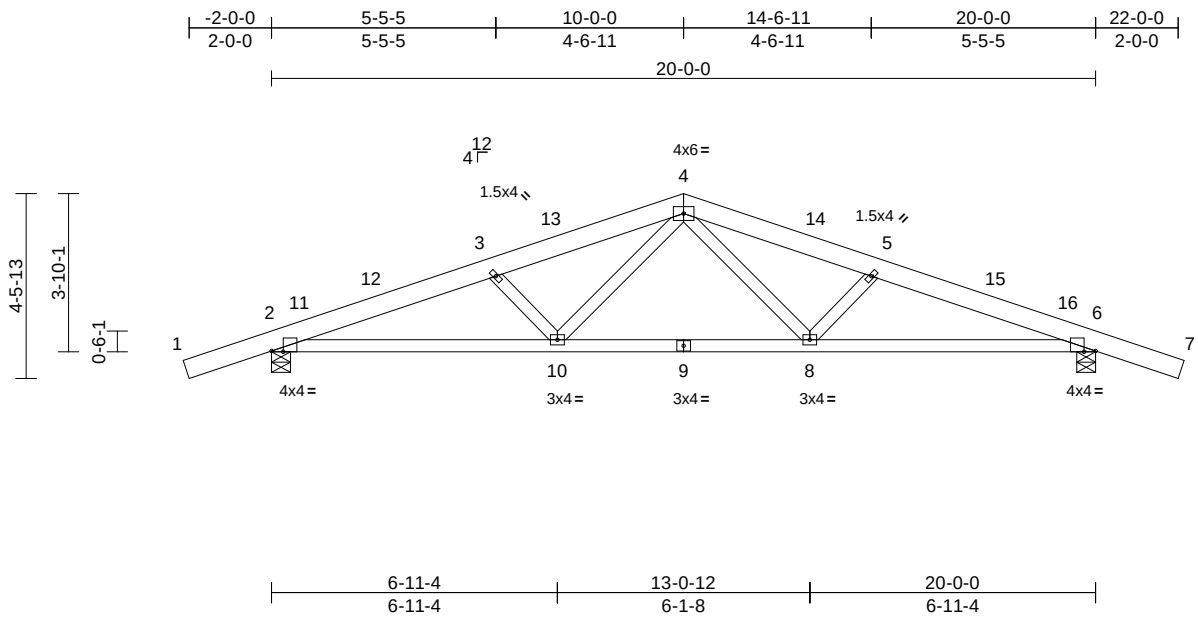
Job	Truss	Truss Type	Qty	Ply	Home Of My Own 1 bedroom
25-3825	C02	Common	6	1	R88655132 Job Reference (optional)



Scale = 1:55.9

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	30.0	Plate Grip DOL	1.15	TC	0.15	Vert(LL)	-0.10	8-10	>999	240	MT20	185/144
(Roof Snow = 30.0)		Lumber DOL	1.15	BC	0.43	Vert(CT)	-0.23	8-10	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.28	Horz(CT)	0.05	6	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-SH								
BCDL	10.0										Weight: 86 lb	FT = 10%

LUMBER
TOP CHORD 2x6 SPF 1650F 1.5E
BOT CHORD 2x4 SPF 1650F 1.5E
WEBS 2x4 DF Stud or 2x4 HF Stud or 2x4 SPF Stud

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-10-13 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 6=0-5-8
Max Horiz 2=-71 (LC 19)
Max Uplift 2=-349 (LC 10), 6=-349 (LC 11)
Max Grav 2=1241 (LC 21), 6=1241 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/45, 2-3=-2274/622, 3-4=-1969/558, 4-5=-1969/558, 5-6=-2274/622, 6-7=0/45
BOT CHORD 2-10=-487/2056, 8-10=-288/1414, 6-8=-505/2056
WEBS 4-10=-114/655, 4-8=-115/655, 3-10=-478/221, 5-8=-478/222

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Partially Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -2-0-14 to 0-11-2, Interior (1) 0-11-2 to 10-0-0, Exterior(2R) 10-0-0 to 13-0-0, Interior (1) 13-0-0 to 22-0-14 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

2) TCLL: ASCE 7-16; Pf=30.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; 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 16.0 psf or 1.00 times flat roof load of 30.0 psf on overhangs non-concurrent with other live loads.
5) As requested, plates have not been designed to provide for placement tolerances or rough handling and erection conditions. It is the responsibility of the fabricator to increase plate sizes to account for these factors.
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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 349 lb uplift at joint 2 and 349 lb uplift at joint 6.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

Reviewed for Design Criteria Only

Registered Professional Engineer (Civil)
CERTIFICATE NO.
54161
DAVID WINN
Date Signed
ARIZONA U.S.A.

EXPIRES: December 31, 2027
June 12,2025

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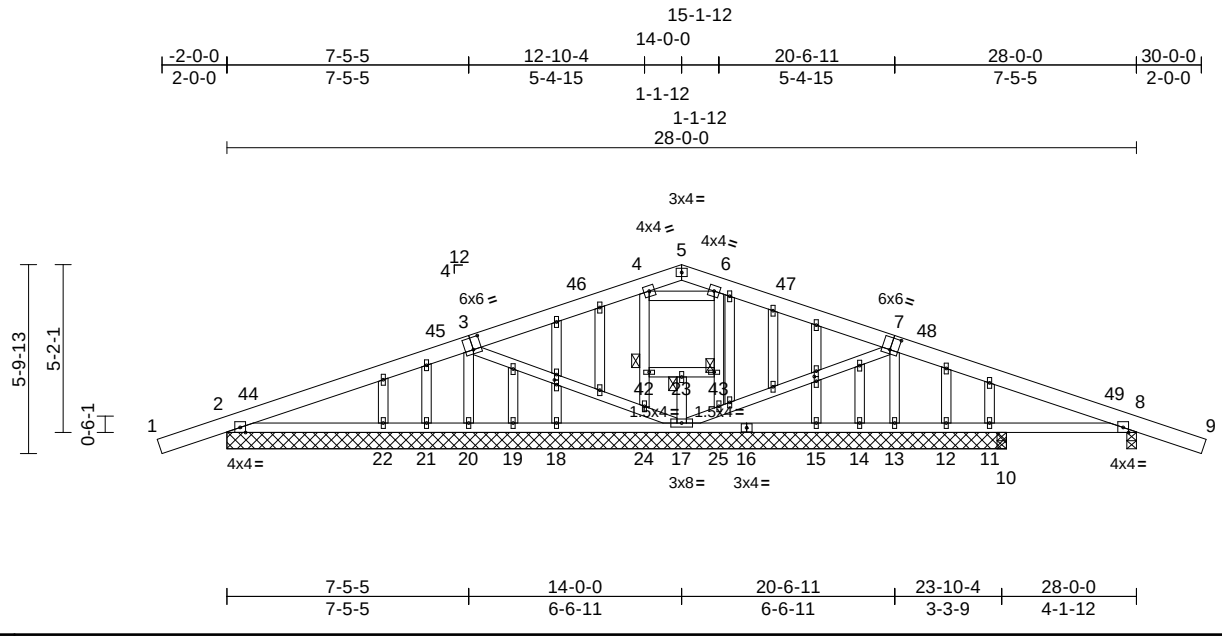
Job	Truss	Truss Type	Qty	Ply	Home Of My Own 1 bedroom
25-3825	D01	Common Supported Gable	2	1	R88655133 Job Reference (optional)



Scale = 1:70.9

Plate Offsets (X, Y): [3:0-3-0,0-4-8], [7:0-3-0,0-4-8], [29:0-1-12,0-0-12], [38:0-1-12,0-0-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	30.0	Plate Grip DOL	1.15	TC	0.31	Vert(LL)	0.02	2-22	>999	240	MT20	185/144
(Roof Snow = 30.0)		Lumber DOL	1.15	BC	0.36	Vert(CT)	-0.04	2-22	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.73	Horz(CT)	0.01	8	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-SH								
BCDL	10.0										Weight: 167 lb	FT = 10%

LUMBER

TOP CHORD	2x6 SPF 1650F 1.5E
BOT CHORD	2x4 SPF 1650F 1.5E
WEBS	2x4 DF Stud or 2x4 HF Stud or 2x4 SPF Stud
OTHERS	2x4 DF Stud or 2x4 HF Stud or 2x4 SPF Stud

BRACING

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
JOINTS	1 Brace at Jt(s): 23, 42, 43

REACTIONS All bearings 24-0-0. except 8=0-3-8, 10=0-3-8
(lb) - Max Horiz 2=-94 (LC 15)
Max Uplift All uplift 100 (lb) or less at joint(s) 10, 14, 21, 22 except 2=-238 (LC 10), 8=-257 (LC 11), 11=-190 (LC 22), 13=-219 (LC 15), 17=-106 (LC 11), 20=-260 (LC 14)
Max Grav All reactions 250 (lb) or less at joint (s) 11, 12, 14, 15, 18, 19, 21, 22 except 2=582 (LC 21), 8=572 (LC 22), 10=294 (LC 22), 13=708 (LC 22), 17=395 (LC 1), 20=742 (LC 21)

FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-44=-324/128, 3-46=-425/249, 4-46=-334/261, 6-47=-334/266, 7-47=-425/255, 8-49=-328/130
WEBS 17-23=-352/154, 3-20=-683/271, 7-13=-670/255, 4-42=-253/100, 6-43=-253/102, 4-6=-537/391

NOTES

1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Partially Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -2-0-14 to 0-11-2, Interior (1) 0-11-2 to 14-0-0, Exterior(2R) 14-0-0 to 17-0-0, Interior (1) 17-0-0 to 30-0-14 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) 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=30.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; 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 16.0 psf or 1.00 times flat roof load of 30.0 psf on overhangs non-concurrent with other live loads.
6) As requested, plates have not been designed to provide for placement tolerances or rough handling and erection conditions. It is the responsibility of the fabricator to increase plate sizes to account for these factors.
7) All plates are 1.5x4 (||) MT20 unless otherwise indicated.
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 3-06-00 tall by 2-00-00 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) 22, 21, 14, 10 except (jt=lb) 2=237, 17=106, 20=259, 13=219, 8=256, 11=189.
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.

LOAD CASE(S) Standard

Reviewed for Design Criteria Only

Registered Professional Engineer (Civil)
CERTIFICATE NO.
54161
DAVID WINN
Date Signed
ARIZONA U.S.A.

EXPIRES: December 31, 2027
June 12,2025

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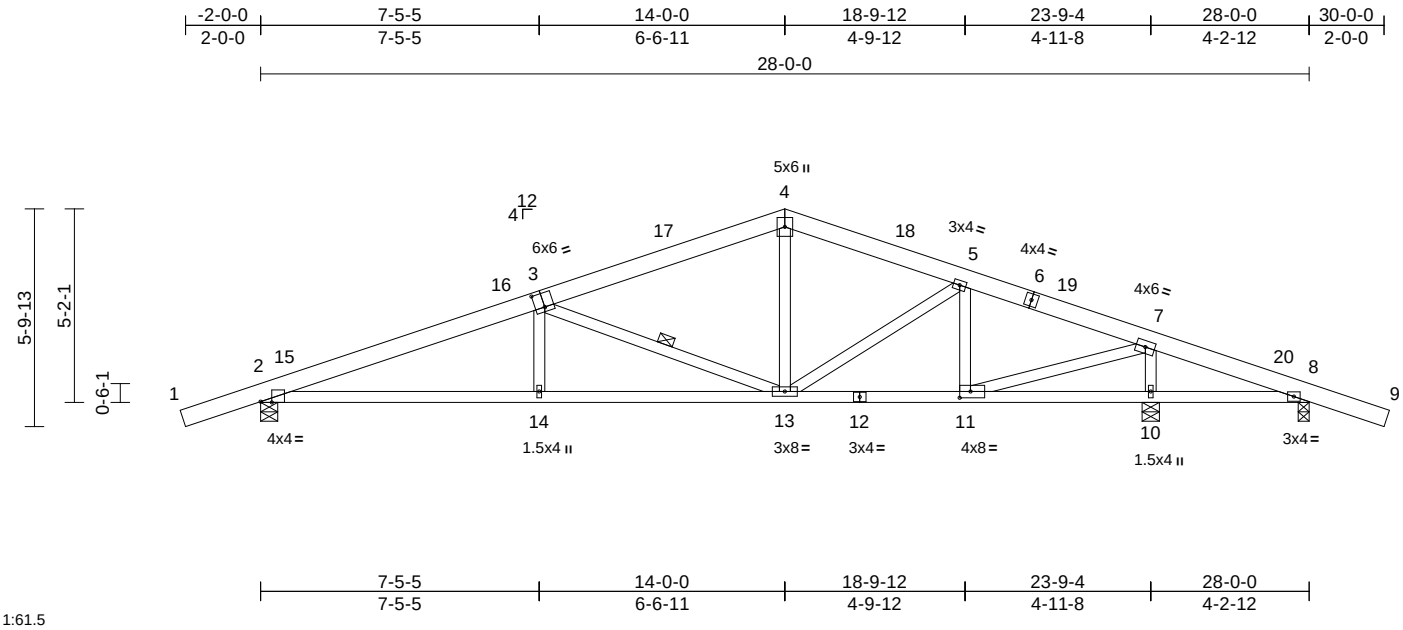
Job	Truss	Truss Type	Qty	Ply	Home Of My Own 1 bedroom
25-3825	D02	Common	6	1	R88655134 Job Reference (optional)



Scale = 1:61.5

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	30.0	Plate Grip DOL	1.15	TC	0.37	Vert(LL)	-0.11	2-14	>999	240	MT20	185/144
(Roof Snow = 30.0)		Lumber DOL	1.15	BC	0.52	Vert(CT)	-0.20	2-14	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.75	Horz(CT)	0.05	10	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-SH								
BCDL	10.0										Weight: 130 lb	FT = 10%

LUMBER
TOP CHORD 2x6 SPF 1650F 1.5E
BOT CHORD 2x4 SPF 1650F 1.5E
WEBS 2x4 DF Stud or 2x4 HF Stud or 2x4 SPF Stud

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 3-13

REACTIONS (size) 2=0-5-8, 8=0-3-8, 10=0-5-8
Max Horiz 2=94 (LC 14)
Max Uplift 2=-402 (LC 10), 8=-148 (LC 11), 10=-350 (LC 11)
Max Grav 2=1392 (LC 21), 8=232 (LC 22), 10=1598 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/45, 2-4=-2538/636, 4-5=-1569/514, 5-7=-1493/469, 7-8=-89/504, 8-9=0/44
BOT CHORD 2-14=-477/2286, 13-14=-479/2282, 11-13=-279/1337, 10-11=-429/138, 8-10=-429/138
WEBS 7-10=-1604/473, 4-13=-61/448, 5-13=-182/314, 5-11=-456/184, 7-11=-426/1816, 3-13=-1042/291, 3-14=0/281

NOTES

1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Partially Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -2-0-14 to 0-11-2, Interior (1) 0-11-2 to 14-0-0, Exterior(2R) 14-0-0 to 17-0-0, Interior (1) 17-0-0 to 30-0-14 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pf=30.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; 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 16.0 psf or 1.00 times flat roof load of 30.0 psf on overhangs non-concurrent with other live loads.
5) As requested, plates have not been designed to provide for placement tolerances or rough handling and erection conditions. It is the responsibility of the fabricator to increase plate sizes to account for these factors.
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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 402 lb uplift at joint 2, 350 lb uplift at joint 10 and 148 lb uplift at joint 8.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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Registered Professional Engineer (Civil)
CERTIFICATE NO.
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DAVID WINN
Date Signed
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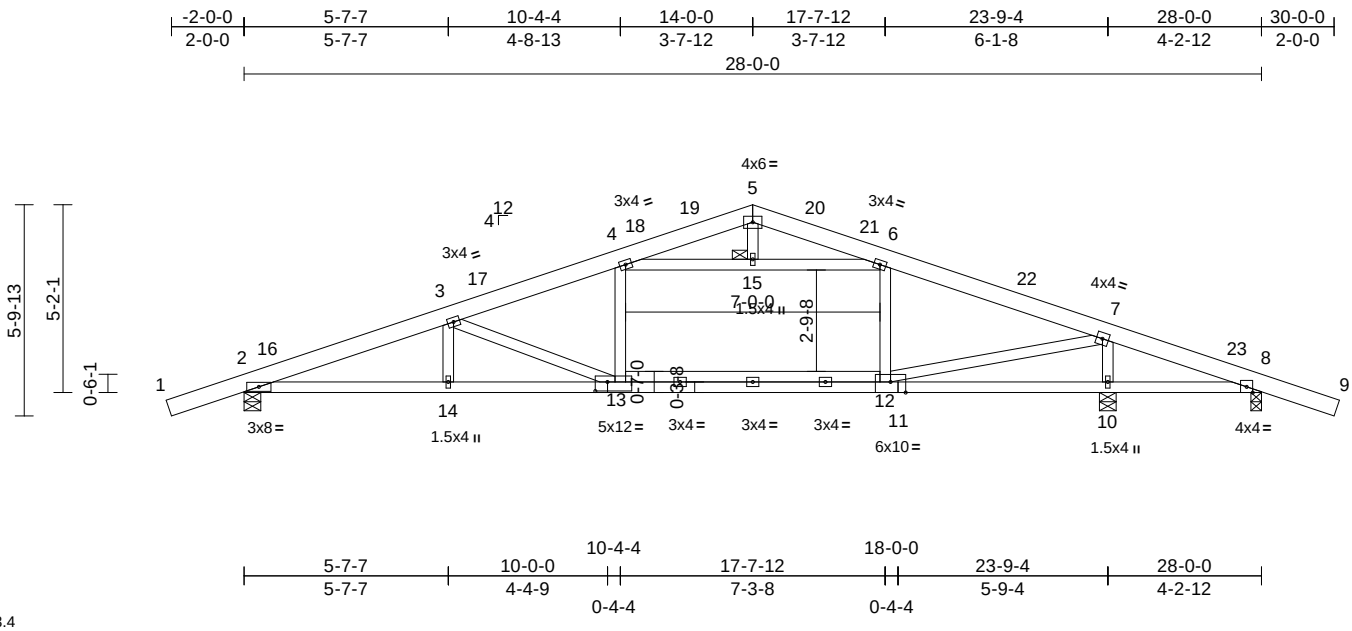
Job	Truss	Truss Type	Qty	Ply	Home Of My Own 1 bedroom
25-3825	D03	Common	5	1	R88655135 Job Reference (optional)



Scale = 1:63.4

Plate Offsets (X, Y): [12:0-5-0,Edge], [13:0-4-0,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	30.0	Plate Grip DOL	1.15	TC	0.57	Vert(LL)	-0.45	13	>623	240	MT20	197/144
(Roof Snow = 30.0)		Lumber DOL	1.15	BC	0.59	Vert(CT)	-0.69	13	>412	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.65	Horz(CT)	0.12	8	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-SH								
BCDL	10.0										Weight: 137 lb	FT = 10%

LUMBER

TOP CHORD 2x6 SPF 1650F 1.5E
BOT CHORD 2x4 SPF 1650F 1.5E
WEBS 2x4 DF Stud or 2x4 HF Stud or 2x4 SPF Stud *Except* 4-6:2x4 SPF 1650F 1.5E

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-2-11 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
JOINTS 1 Brace at Jt(s): 15

REACTIONS (size) 2=0-5-8, 8=0-3-8, 10=0-5-8
Max Horiz 2=-94 (LC 15)
Max Uplift 2=-338 (LC 10), 8=-179 (LC 14), 10=-277 (LC 15)
Max Grav 2=1667 (LC 21), 8=1052 (LC 21), 10=1401 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/45, 2-3=-3584/526, 3-4=-2820/390, 4-5=-975/82, 5-6=-1089/107, 6-7=-2631/375, 7-8=-2242/383, 8-9=0/44
BOT CHORD 2-14=-445/3298, 12-14=-446/3301, 10-12=-314/2045, 8-10=-314/2045
WEBS 4-13=-62/577, 6-12=-273/100, 4-15=-1597/368, 6-15=-1597/368, 7-10=-1282/350, 3-14=-22/153, 5-15=-41/176, 7-12=-97/1515, 3-13=-819/290

NOTES

1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Partially Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -2-0-14 to 0-11-2, Interior (1) 0-11-2 to 14-0-0, Exterior(2R) 14-0-0 to 17-0-0, Interior (1) 17-0-0 to 30-0-14 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pf=30.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; 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 16.0 psf or 1.00 times flat roof load of 30.0 psf on overhangs non-concurrent with other live loads.
5) 150.0lb AC unit load placed on the top chord, 12-0-0 from left end, supported at two points, 3-0-0 apart.
6) Uninhabitable Mechanical zone exists .
7) As requested, plates have not been designed to provide for placement tolerances or rough handling and erection conditions. It is the responsibility of the fabricator to increase plate sizes to account for these factors.
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 3-06-00 tall by 2-00-00 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 338 lb uplift at joint 2, 277 lb uplift at joint 10 and 179 lb uplift at joint 8.
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.
12) Load case(s) 1 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 2-8=-20, 1-4=-80, 4-5=-90, 5-6=-90, 6-9=-80
Concentrated Loads (lb)
Vert: 19=-75, 20=-75

Reviewed for Design Criteria Only

Registered Professional Engineer (Civil)
CERTIFICATE NO. 54161
DAVID WINN
Date Signed
ARIZONA U.S.A.
EXPIRES: December 31, 2027
June 12,2025

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.sbcscomponents.com)

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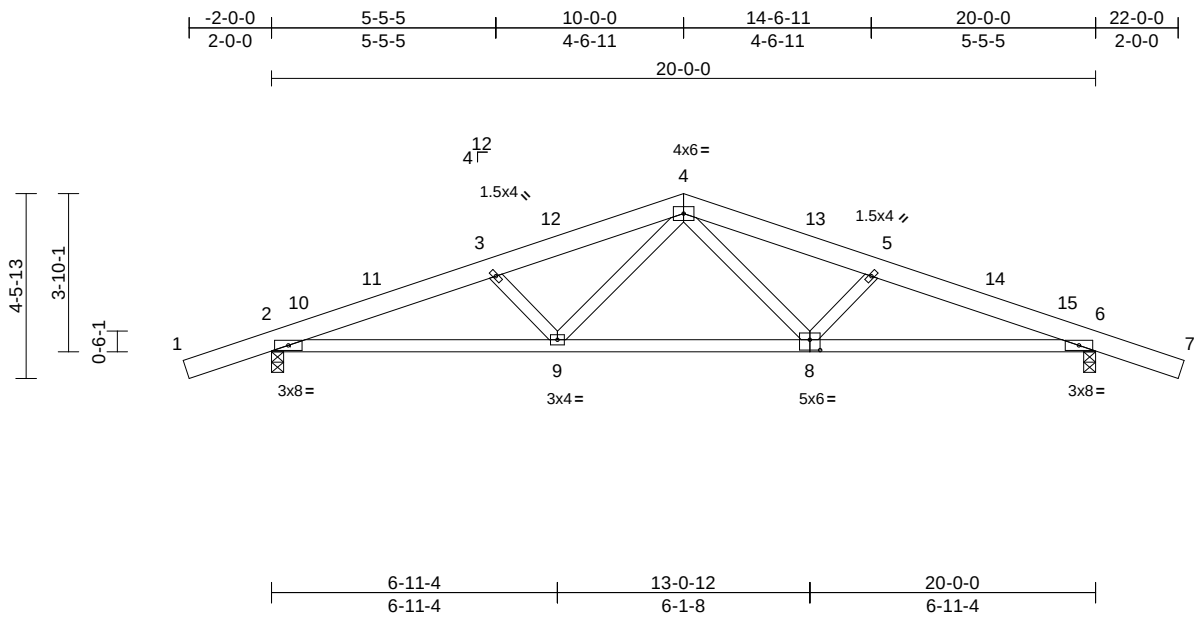
Job	Truss	Truss Type	Qty	Ply	Home Of My Own 1 bedroom
25-3825	E01	Common	7	1	R88655136 Job Reference (optional)



Scale = 1:55.9

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	30.0	Plate Grip DOL	1.15	TC	0.27	Vert(LL)	-0.08	8-9	>999	240	MT20	185/144
(Roof Snow = 30.0)		Lumber DOL	1.15	BC	0.46	Vert(CT)	-0.17	8-9	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.30	Horz(CT)	0.05	6	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-SH								
BCDL	10.0										Weight: 86 lb	FT = 10%

LUMBER
TOP CHORD 2x6 SPF 1650F 1.5E
BOT CHORD 2x4 SPF 1650F 1.5E
WEBS 2x4 DF Stud or 2x4 HF Stud or 2x4 SPF Stud

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-9-13 oc purlins.
BOT CHORD Rigid ceiling directly applied or 9-9-4 oc bracing.

REACTIONS (size) 2=0-3-8, 6=0-3-8
Max Horiz 2=-71 (LC 15)
Max Uplift 2=-347 (LC 10), 6=-347 (LC 11)
Max Grav 2=1240 (LC 21), 6=1240 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/44, 2-3=-2317/637, 3-4=-2004/570, 4-5=-1976/592, 5-6=-2295/656, 6-7=0/44
BOT CHORD 2-9=-502/2102, 6-9=-536/2084
WEBS 3-9=-502/226, 4-9=-108/691, 4-8=-140/651, 5-8=-512/219

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Partially Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -2-0-14 to 0-11-2, Interior (1) 0-11-2 to 10-0-0, Exterior(2R) 10-0-0 to 13-0-0, Interior (1) 13-0-0 to 22-0-14 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

2) TCLL: ASCE 7-16; Pf=30.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; 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 16.0 psf or 1.00 times flat roof load of 30.0 psf on overhangs non-concurrent with other live loads.
5) As requested, plates have not been designed to provide for placement tolerances or rough handling and erection conditions. It is the responsibility of the fabricator to increase plate sizes to account for these factors.
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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 347 lb uplift at joint 2 and 347 lb uplift at joint 6.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

Reviewed for Design Criteria Only

Registered Professional Engineer (Civil)
CERTIFICATE NO. 54161
DAVID WINN
Date Signed
ARIZONA U.S.A.
EXPIRES: December 31, 2027
June 12,2025

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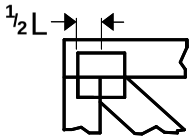
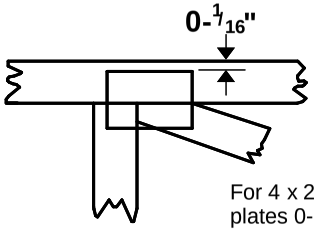
Symbols

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.

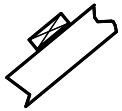
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

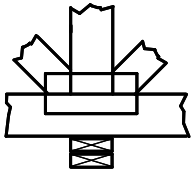
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

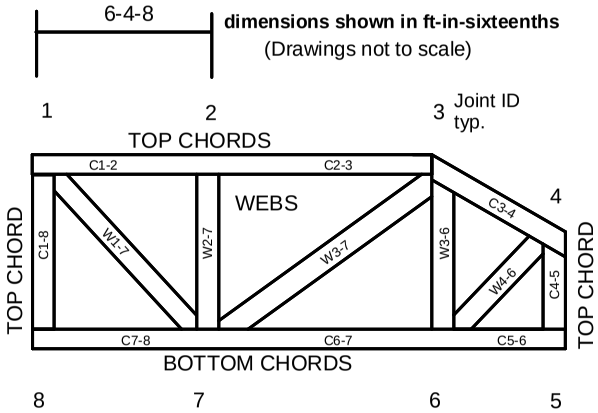


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

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

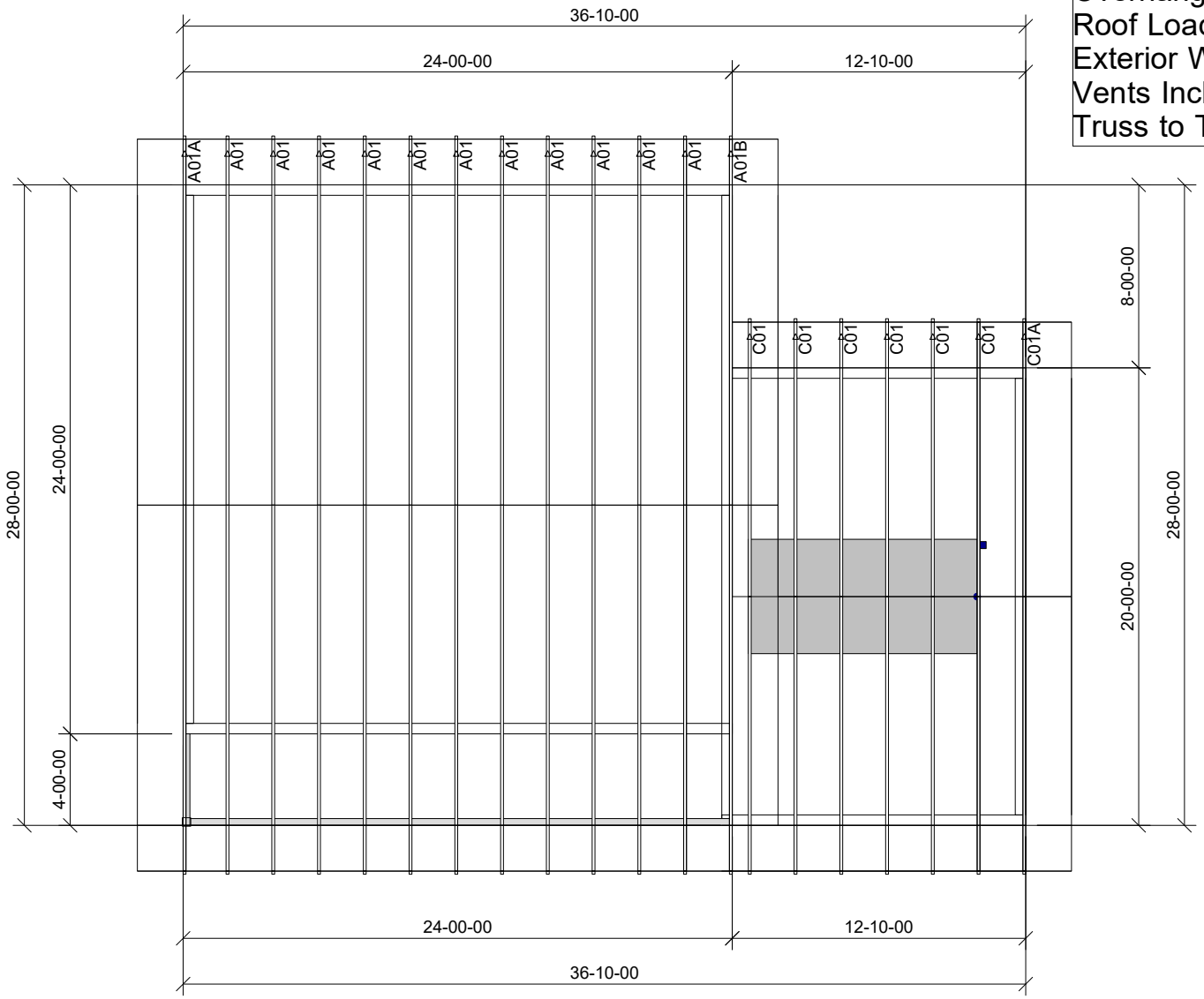
Failure to Follow Could Cause Property Damage or Personal Injury

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.

1bed With Garage & A/C Options

Reviewed for
2018 Code Compliance
Yavapai County Building Safety

Job Notes:
Pitch = 4/12
Top Chord = 2 x 6
Overhang = 24"
Roof Loaded for = Shingle
Exterior Wall Size = 2 x 6
Vents Included = Yes
Truss to Truss Hangers Included = No



◁ Indicates left end of truss | Drawing is not to scale u.n.o. | Dashed walls indicate a non-bearing wall

BALLARD TRUSS

Client: Yavapai County
Job Name: 1 Bed W/Garage
Job #: **25-5131**
Location: ,

By signing below, I agree that I have reviewed this layout and the attached truss drawings and found them to be in conformance to my needs for this project, even if it they have deviated from the plans.

Signed:_____

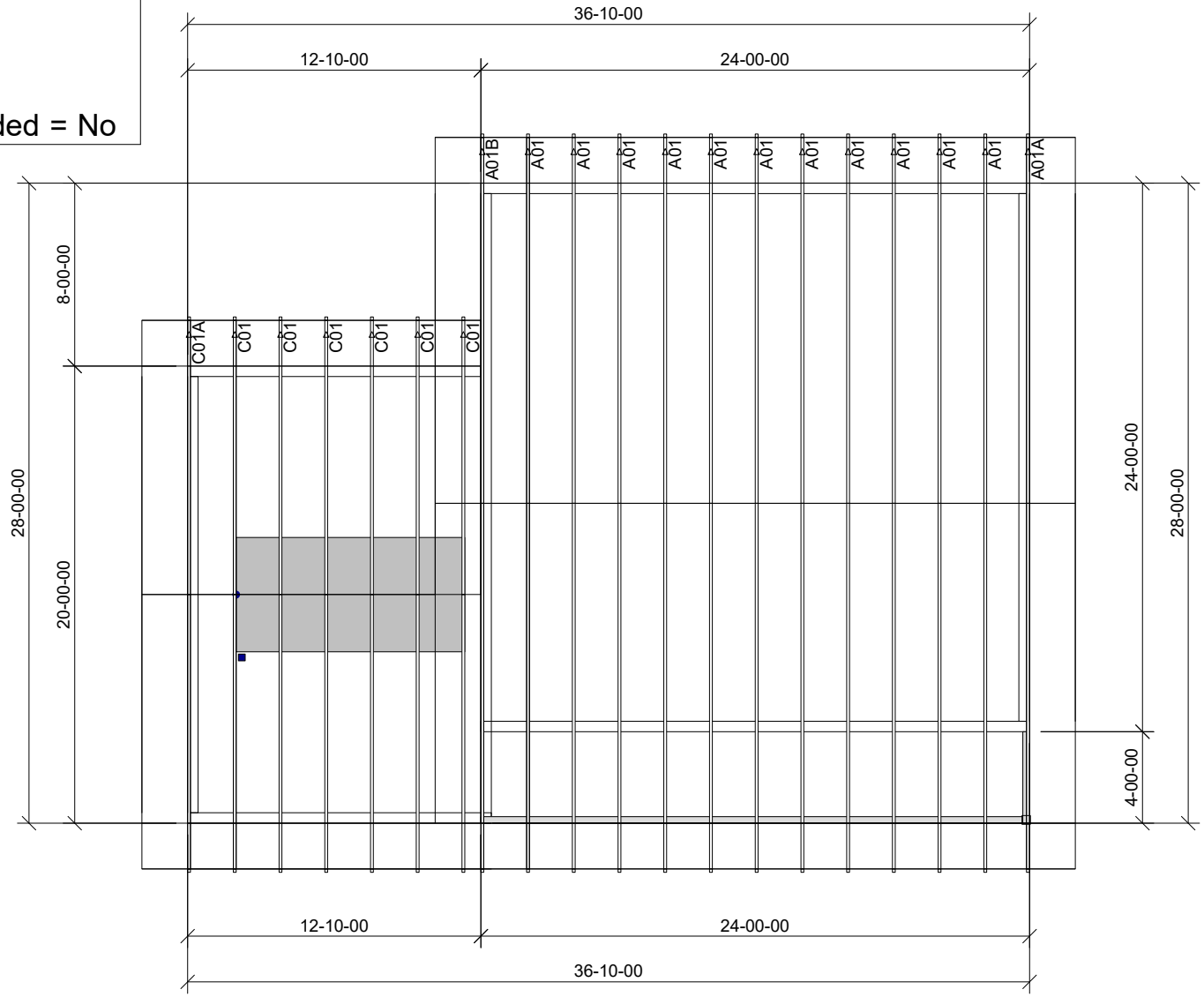
Date:_____

Disclaimer: This Truss Placement Diagram was not created by an engineer, but rather by the Ballard Truss Staff and is purely to be used as an installation guide and does not require a seal. Complete truss engineering and analysis can be found on the Truss Design Drawings which may be sealed by the Truss Designer.

Reviewed for
2018 Code Compliance
Yavapai County Building Safety

Job Notes:
Pitch = 4/12
Top Chord = 2 x 6
Overhang = 24"
Roof Loaded for = Shingle
Exterior Wall Size = 2 x 6
Vents Included = Yes
Truss to Truss Hangers Included = No

1bed With Garage & A/C Options



◁ Indicates left end of truss | Drawing is not to scale u.n.o. | Dashed walls indicate a non-bearing wall

BALLARD TRUSS

Client: Yavapai County
Job Name: 1 Bed W/Garage
Job #: **25-5131**
Location: ,

By signing below, I agree that I have reviewed this layout and the attached truss drawings and found them to be in conformance to my needs for this project, even if it they have deviated from the plans.

Signed:_____

Date:_____

Disclaimer: This Truss Placement Diagram was not created by an engineer, but rather by the Ballard Truss Staff and is purely to be used as an installation guide and does not require a seal. Complete truss engineering and analysis can be found on the Truss Design Drawings which may be sealed by the Truss Designer.

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

Re: 25-5131

The truss drawing(s) referenced below have been prepared by MiTek USA, Inc. under my direct supervision based on the parameters provided by Ballard Truss LLC (Mesa, AZ).

Pages or sheets covered by this seal: R89652572 thru R89652576

My license renewal date for the state of Arizona is December 31, 2027.

Arizona COA: 11906-0

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

Registered Professional Engineer (Civil)
CERTIFICATE NO.
54161
DAVID
WINN
Date Signed
ARIZONA U.S.A.
EXPIRES: December 31, 2027

Reviewed for
Design Criteria Only

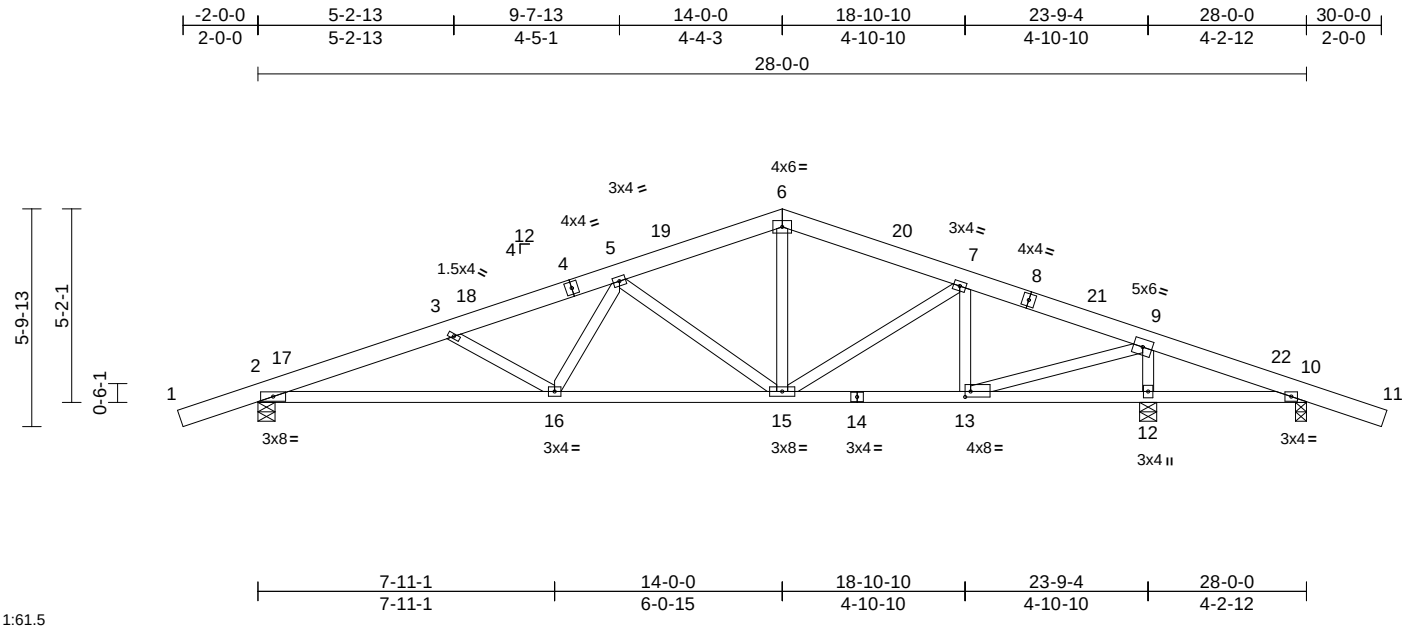
August 13,2025

Winn, David

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	
25-5131	A01	Common	11	1	R89652572 Job Reference (optional)

Ballard Truss LLC (Mesa, AZ), Mesa, AZ - 85210, Run: 8.83 S Jul 24 2025 Print: 8.830 S Jul 24 2025 MiTek Industries, Inc. Mon Aug 11 15:34:21 Page: 1
ID:hywHAnLjVFjkWPb526IFJVzJVLi-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:61.5

Plate Offsets (X, Y): [13:0-1-12,0-1-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.15	TC	0.19	Vert(LL)	-0.13	15-16	>999	240	MT20	244/190
(Roof Snow = 40.0)		Lumber DOL	1.15	BC	0.63	Vert(CT)	-0.21	2-16	>999	180		
TCDL	15.0	Rep Stress Incr	YES	WB	0.95	Horz(CT)	0.07	12	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-SH								
BCDL	10.0										Weight: 152 lb	FT = 10%

LUMBER
TOP CHORD 2x6 SP 2400F 2.0E
BOT CHORD 2x4 SPF 1650F 1.5E
WEBS 2x4 DF Stud or 2x4 HF Stud or 2x4 SPF Stud

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

REACTIONS (size) 2=0-5-8, 10=0-3-8, 12=0-5-8
Max Horiz 2=94 (LC 14)
Max Uplift 2=-402 (LC 10), 10=-150 (LC 11), 12=-347 (LC 11)
Max Grav 2=1839 (LC 21), 10=341 (LC 22), 12=2049 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/61, 2-3=-3550/751, 3-5=-3086/655, 5-6=-1924/503, 6-7=-1923/506, 7-9=-1940/466, 9-10=-92/602, 10-11=0/61
BOT CHORD 2-16=-619/3228, 15-16=-447/2694, 13-15=-278/1743, 12-13=-513/133, 10-12=-513/133
WEBS 6-15=-148/735, 9-12=-1975/467, 3-16=-416/199, 5-16=-20/385, 5-15=-1299/306, 7-13=-580/187, 7-15=-268/356, 9-13=-419/2203

NOTES

1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Partially Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -2-0-14 to 0-11-2, Interior (1) 0-11-2 to 14-0-0, Exterior(2R) 14-0-0 to 17-0-0, Interior (1) 17-0-0 to 30-0-14 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

2) TCLL: ASCE 7-16; Pf=40.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; 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 16.0 psf or 1.00 times flat roof load of 40.0 psf on overhangs non-concurrent with other live loads.
5) As requested, plates have not been designed to provide for placement tolerances or rough handling and erection conditions. It is the responsibility of the fabricator to increase plate sizes to account for these factors.
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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 402 lb uplift at joint 2, 347 lb uplift at joint 12 and 150 lb uplift at joint 10.

9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

Reviewed for Design Criteria Only

Registered Professional Engineer (Civil)
CERTIFICATE NO.
54161
DAVID WINN
Date Signed
ARIZONA U.S.A.

EXPIRES: December 31, 2027
August 13,2025

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.
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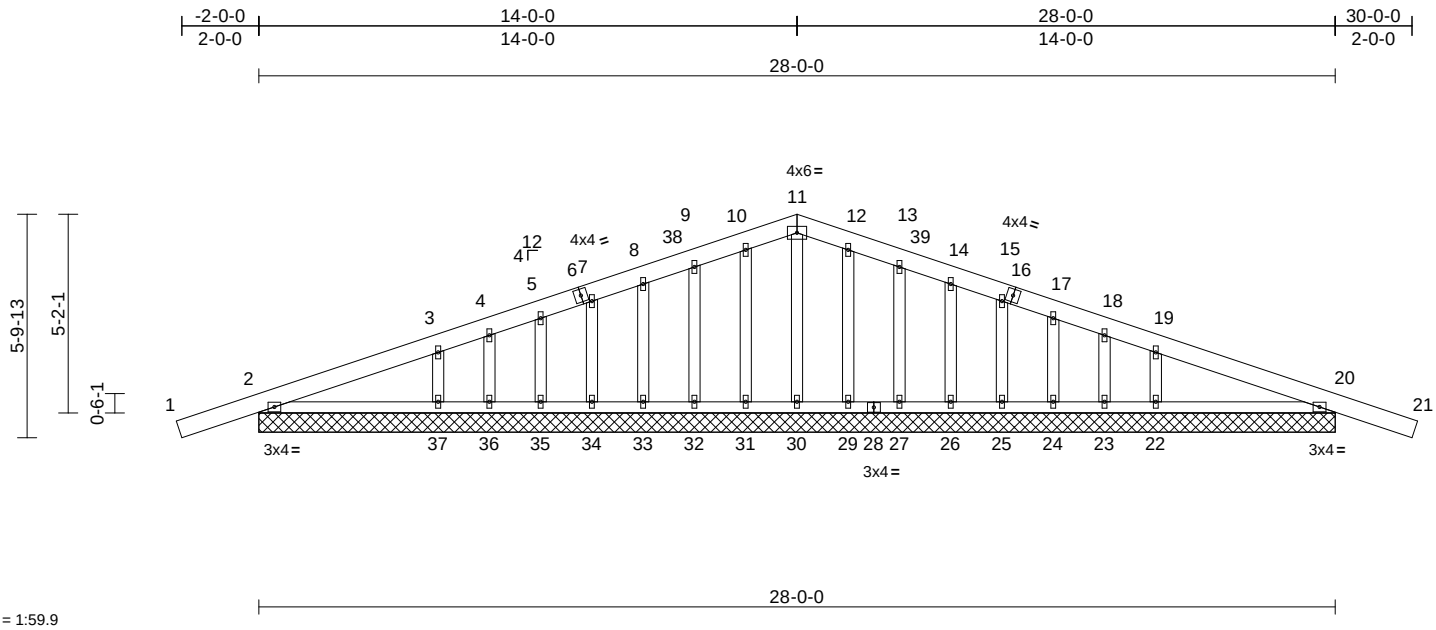
MiTek®
400 Sunrise Ave., Suite 270
Roseville, CA 95661
916.755.3571 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	
25-5131	A01A	Common Supported Gable	1	1	R89652573 Job Reference (optional)



Scale = 1:59.9

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.15	TC	0.09	Vert(LL)	n/a	-	n/a	999	MT20	244/190
(Roof Snow = 40.0)		Lumber DOL	1.15	BC	0.09	Vert(CT)	n/a	-	n/a	999		
TCDL	15.0	Rep Stress Incr	YES	WB	0.09	Horz(CT)	0.00	20	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-SH								
BCDL	10.0										Weight: 168 lb	FT = 10%

LUMBER

TOP CHORD 2x6 SP 2400F 2.0E
BOT CHORD 2x4 SPF 1650F 1.5E
OTHERS 2x4 DF Stud or 2x4 HF Stud or 2x4 SPF Stud

BRACING

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

REACTIONS (size) 2=28-0-0, 20=28-0-0, 22=28-0-0, 23=28-0-0, 24=28-0-0, 25=28-0-0, 26=28-0-0, 27=28-0-0, 29=28-0-0, 30=28-0-0, 31=28-0-0, 32=28-0-0, 33=28-0-0, 34=28-0-0, 35=28-0-0, 36=28-0-0, 37=28-0-0
Max Horiz 2=-94 (LC 15)
Max Uplift 2=-155 (LC 10), 20=-172 (LC 11), 22=-135 (LC 15), 23=-34 (LC 11), 24=-38 (LC 15), 25=-50 (LC 15), 26=-50 (LC 11), 27=-51 (LC 15), 29=-17 (LC 15), 31=-26 (LC 14), 32=-51 (LC 10), 33=-48 (LC 10), 34=-50 (LC 14), 35=-38 (LC 14), 36=-35 (LC 10), 37=-136 (LC 14)
Max Grav 2=548 (LC 1), 20=548 (LC 1), 22=500 (LC 1), 23=75 (LC 22), 24=231 (LC 22), 25=235 (LC 22), 26=229 (LC 22), 27=237 (LC 22), 29=228 (LC 22), 30=157 (LC 1), 31=227 (LC 21), 32=235 (LC 21), 33=231 (LC 21), 34=234 (LC 21), 35=231 (LC 21), 36=75 (LC 21), 37=500 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/61, 2-3=-125/118, 3-4=-90/122, 4-5=-65/131, 5-7=-71/147, 7-8=-83/165, 8-9=-95/185, 9-10=-109/209, 10-11=-118/224, 11-12=-118/218, 12-13=-109/198, 13-14=-95/173, 14-15=-83/149, 15-17=-72/125, 17-18=-64/102, 18-19=-88/88, 19-20=-103/72, 20-21=0/61

BOT CHORD 2-37=-24/67, 36-37=-24/67, 35-36=-24/67, 34-35=-24/67, 33-34=-24/67, 32-33=-24/67, 31-32=-24/67, 30-31=-24/67, 29-30=-24/67, 27-29=-24/67, 26-27=-24/67, 25-26=-24/67, 24-25=-24/67, 23-24=-24/67, 22-23=-24/67, 20-22=-24/67

WEBS 11-30=-132/0, 10-31=-200/69, 9-32=-209/91, 8-33=-203/65, 7-34=-210/65, 5-35=-195/59, 4-36=-82/31, 3-37=-458/182, 12-29=-200/67, 13-27=-209/91, 14-26=-203/66, 15-25=-210/65, 17-24=-195/59, 18-23=-82/30, 19-22=-458/181

NOTES

1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Partially Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -2-0-14 to 0-11-2, Exterior(2N) 0-11-2 to 14-0-0, Corner(3R) 14-0-0 to 17-0-0, Exterior(2N) 17-0-0 to 30-0-14 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) 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=40.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; 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 16.0 psf or 1.00 times flat roof load of 40.0 psf on overhangs non-concurrent with other live loads.
6) As requested, plates have not been designed to provide for placement tolerances or rough handling and erection conditions. It is the responsibility of the fabricator to increase plate sizes to account for these factors.
7) All plates are 1.5x4 (||) MT20 unless otherwise indicated.
8) Gable requires continuous bottom chord bearing.
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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.

Reviewed for Design Criteria Only

Registered Professional Engineer (Civil)
CERTIFICATE NO. 54161
DAVID WINN
Date Signed
ARIZONA U.S.A.

EXPIRES: December 31, 2027
August 13,2025

Continued on page 2

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.sbcscomponents.com)

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12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 155 lb uplift at joint 2, 26 lb uplift at joint 31, 51 lb uplift at joint 32, 48 lb uplift at joint 33, 50 lb uplift at joint 34, 38 lb uplift at joint 35, 35 lb uplift at joint 36, 136 lb uplift at joint 37, 17 lb uplift at joint 29, 51 lb uplift at joint 27, 50 lb uplift at joint 26, 50 lb uplift at joint 25, 38 lb uplift at joint 24, 34 lb uplift at joint 23, 135 lb uplift at joint 22 and 172 lb uplift at joint 20.
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.

LOAD CASE(S) Standard

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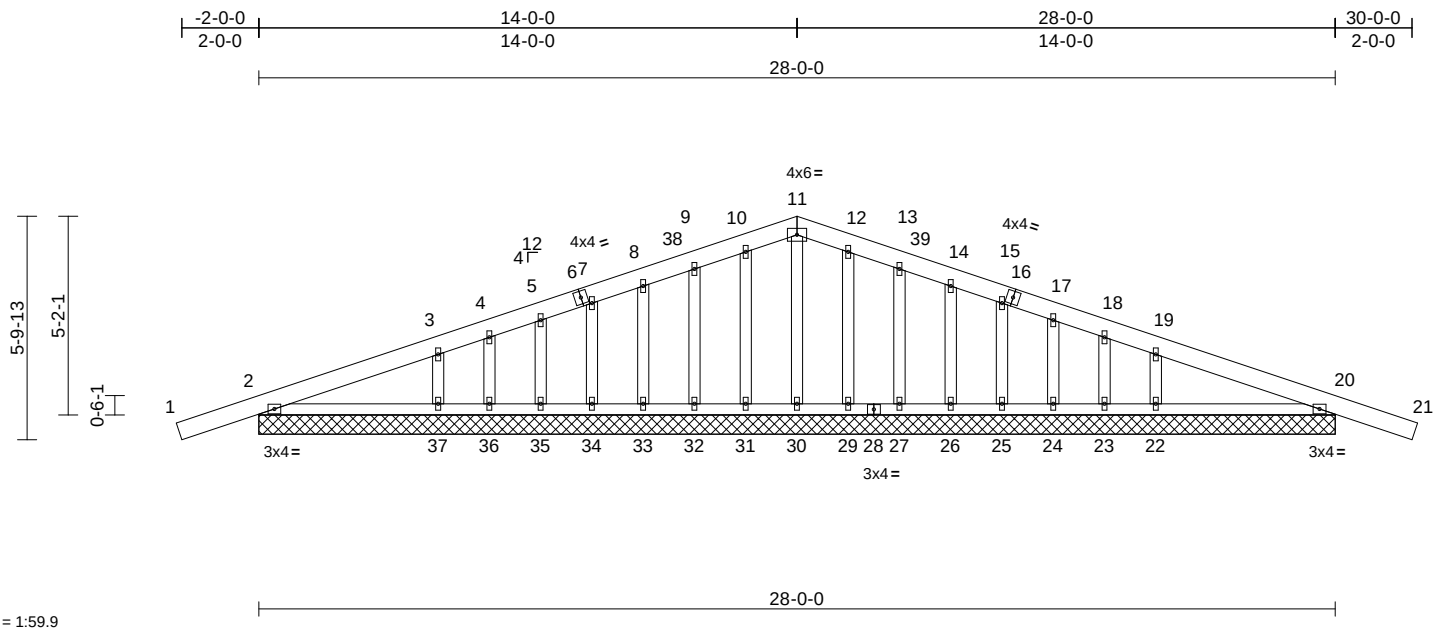
Job	Truss	Truss Type	Qty	Ply	
25-5131	A01B	Common Supported Gable	1	1	R89652574 Job Reference (optional)



Scale = 1:59.9

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.15	TC	0.09	Vert(LL)	n/a	-	n/a	999	MT20	244/190
(Roof Snow = 40.0)		Lumber DOL	1.15	BC	0.09	Vert(CT)	n/a	-	n/a	999		
TCDL	15.0	Rep Stress Incr	YES	WB	0.09	Horz(CT)	0.00	20	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-SH								
BCDL	10.0										Weight: 168 lb	FT = 10%

LUMBER

TOP CHORD 2x6 SP 2400F 2.0E
BOT CHORD 2x4 SPF 1650F 1.5E
OTHERS 2x4 DF Stud or 2x4 HF Stud or 2x4 SPF Stud

BRACING

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

REACTIONS (size) 2=28-0-0, 20=28-0-0, 22=28-0-0, 23=28-0-0, 24=28-0-0, 25=28-0-0, 26=28-0-0, 27=28-0-0, 29=28-0-0, 30=28-0-0, 31=28-0-0, 32=28-0-0, 33=28-0-0, 34=28-0-0, 35=28-0-0, 36=28-0-0, 37=28-0-0
Max Horiz 2=94 (LC 14)
Max Uplift 2=-155 (LC 10), 20=-172 (LC 11), 22=-135 (LC 15), 23=-34 (LC 11), 24=-38 (LC 15), 25=-50 (LC 15), 26=-50 (LC 11), 27=-51 (LC 15), 29=-17 (LC 15), 31=-26 (LC 14), 32=-51 (LC 10), 33=-48 (LC 10), 34=-50 (LC 14), 35=-38 (LC 14), 36=-35 (LC 10), 37=-136 (LC 14)
Max Grav 2=548 (LC 1), 20=548 (LC 1), 22=500 (LC 1), 23=75 (LC 22), 24=231 (LC 22), 25=235 (LC 22), 26=229 (LC 22), 27=237 (LC 22), 29=228 (LC 22), 30=157 (LC 1), 31=227 (LC 21), 32=235 (LC 21), 33=231 (LC 21), 34=234 (LC 21), 35=231 (LC 21), 36=75 (LC 21), 37=500 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/61, 2-3=-125/118, 3-4=-90/122, 4-5=-65/131, 5-7=-71/147, 7-8=-83/165, 8-9=-95/185, 9-10=-109/209, 10-11=-118/224, 11-12=-118/218, 12-13=-109/198, 13-14=-95/173, 14-15=-83/149, 15-17=-72/125, 17-18=-64/102, 18-19=-88/88, 19-20=-103/72, 20-21=0/61

BOT CHORD 2-37=-24/67, 36-37=-24/67, 35-36=-24/67, 34-35=-24/67, 33-34=-24/67, 32-33=-24/67, 31-32=-24/67, 30-31=-24/67, 29-30=-24/67, 27-29=-24/67, 26-27=-24/67, 25-26=-24/67, 24-25=-24/67, 23-24=-24/67, 22-23=-24/67, 20-22=-24/67

WEBS 11-30=-132/0, 10-31=-200/69, 9-32=-209/91, 8-33=-203/65, 7-34=-210/65, 5-35=-195/59, 4-36=-82/31, 3-37=-458/182, 12-29=-200/67, 13-27=-209/91, 14-26=-203/66, 15-25=-210/65, 17-24=-195/59, 18-23=-82/30, 19-22=-458/181

NOTES

1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Partially Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -2-0-14 to 0-11-2, Exterior(2N) 0-11-2 to 14-0-0, Corner(3R) 14-0-0 to 17-0-0, Exterior(2N) 17-0-0 to 30-0-14 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) 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=40.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; 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 16.0 psf or 1.00 times flat roof load of 40.0 psf on overhangs non-concurrent with other live loads.
6) As requested, plates have not been designed to provide for placement tolerances or rough handling and erection conditions. It is the responsibility of the fabricator to increase plate sizes to account for these factors.
7) All plates are 1.5x4 (||) MT20 unless otherwise indicated.
8) Gable requires continuous bottom chord bearing.
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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.

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Continued on page 2

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12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 155 lb uplift at joint 2, 26 lb uplift at joint 31, 51 lb uplift at joint 32, 48 lb uplift at joint 33, 50 lb uplift at joint 34, 38 lb uplift at joint 35, 35 lb uplift at joint 36, 136 lb uplift at joint 37, 17 lb uplift at joint 29, 51 lb uplift at joint 27, 50 lb uplift at joint 26, 50 lb uplift at joint 25, 38 lb uplift at joint 24, 34 lb uplift at joint 23, 135 lb uplift at joint 22 and 172 lb uplift at joint 20.
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.

LOAD CASE(S) Standard

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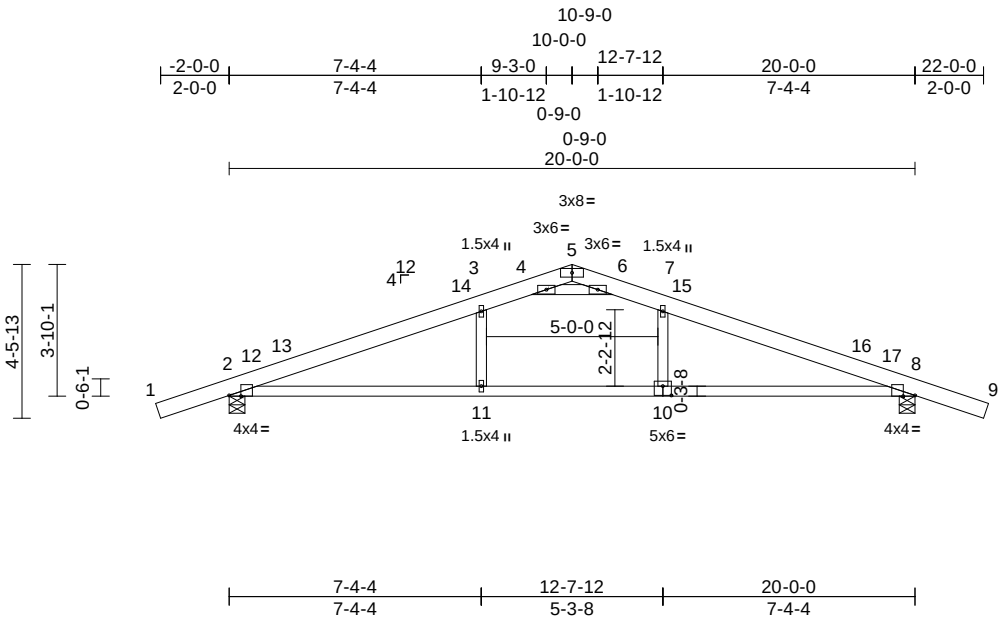
Job	Truss	Truss Type	Qty	Ply	
25-5131	C01	Common	6	1	R89652575 Job Reference (optional)



Scale = 1:67.2

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.15	TC	0.57	Vert(LL)	-0.29	2-11	>804	240	MT20	244/190
(Roof Snow = 40.0)		Lumber DOL	1.15	BC	0.63	Vert(CT)	-0.41	2-11	>568	180		
TCDL	15.0	Rep Stress Incr	YES	WB	0.64	Horz(CT)	0.07	8	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-SH								
BCDL	10.0										Weight: 92 lb	FT = 10%

LUMBER
TOP CHORD 2x6 SP 2400F 2.0E
BOT CHORD 2x4 SPF 1650F 1.5E
WEBS 2x4 DF Stud or 2x4 HF Stud or 2x4 SPF Stud

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-1-1 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 8=0-5-8
Max Horiz 2=-71 (LC 19)
Max Uplift 2=-247 (LC 10), 8=-247 (LC 11)
Max Grav 2=1743 (LC 21), 8=1743 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/61, 2-3=-2667/249, 3-4=-2338/310, 4-5=-103/462, 5-6=-110/442, 6-7=-2346/303, 7-8=-2663/250, 8-9=0/61
BOT CHORD 2-11=-117/2363, 8-11=-117/2363
WEBS 3-11=0/280, 7-10=0/196, 4-6=-2773/382

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Partially Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -2-0-14 to 0-11-2, Interior (1) 0-11-2 to 10-0-0, Exterior(2R) 10-0-0 to 13-0-0, Interior (1) 13-0-0 to 22-0-14 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

2) TCLL: ASCE 7-16; Pf=40.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; 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 16.0 psf or 1.00 times flat roof load of 40.0 psf on overhangs non-concurrent with other live loads.
5) 150.0lb AC unit load placed on the top chord, 8-0-0 from left end, supported at two points, 5-0-0 apart.
6) Uninhabitable Mechanical zone exists .
7) As requested, plates have not been designed to provide for placement tolerances or rough handling and erection conditions. It is the responsibility of the fabricator to increase plate sizes to account for these factors.
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 3-06-00 tall by 2-00-00 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 247 lb uplift at joint 2 and 247 lb uplift at joint 8.
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.
12) Load case(s) 1 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-110, 3-5=-120, 5-7=-120, 7-9=-110, 2-8=-20
Concentrated Loads (lb)
Vert: 3=-75, 7=-75

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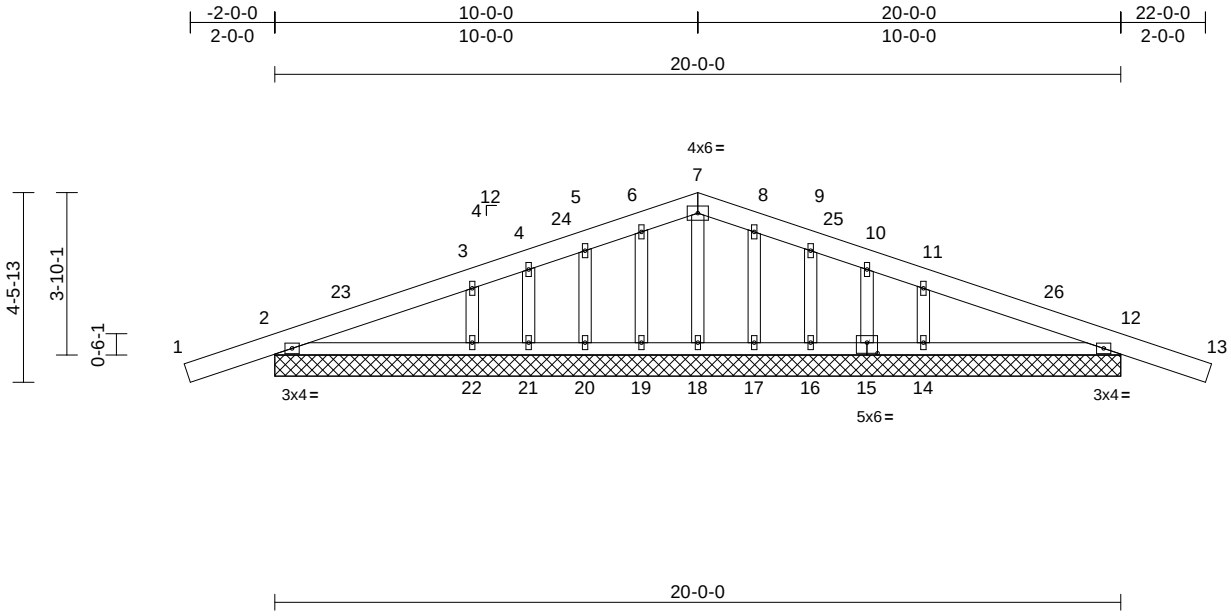
Job	Truss	Truss Type	Qty	Ply	
25-5131	C01A	Common Supported Gable	1	1	R89652576 Job Reference (optional)



Scale = 1:54.5

Plate Offsets (X, Y): [15:0-3-0,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.15	TC	0.09	Vert(LL)	n/a	-	n/a	999	MT20	185/144
(Roof Snow = 40.0)		Lumber DOL	1.15	BC	0.09	Vert(CT)	n/a	-	n/a	999		
TCDL	15.0	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.00	12	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-SH								
BCDL	10.0										Weight: 108 lb	FT = 10%

LUMBER
TOP CHORD 2x6 SP 2400F 2.0E
BOT CHORD 2x4 SPF 1650F 1.5E
OTHERS 2x4 DF Stud or 2x4 HF Stud or 2x4 SPF Stud

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

REACTIONS (size) 2=20-0-0, 12=20-0-0, 14=20-0-0, 15=20-0-0, 16=20-0-0, 17=20-0-0, 18=20-0-0, 19=20-0-0, 20=20-0-0, 21=20-0-0, 22=20-0-0
Max Horiz 2=-71 (LC 15)
Max Uplift 2=-164 (LC 10), 12=-178 (LC 11), 14=-136 (LC 15), 15=-31 (LC 11), 16=-46 (LC 11), 17=-30 (LC 15), 19=-36 (LC 14), 20=-43 (LC 14), 21=-36 (LC 10), 22=-135 (LC 14)
Max Grav 2=572 (LC 21), 12=572 (LC 22), 14=664 (LC 22), 15=71 (LC 22), 16=229 (LC 22), 17=234 (LC 22), 18=159 (LC 1), 19=232 (LC 21), 20=235 (LC 21), 21=61 (LC 21), 22=669 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/61, 2-3=-112/104, 3-4=-96/126, 4-5=-71/144, 5-6=-79/174, 6-7=-88/198, 7-8=-88/196, 8-9=-79/173, 9-10=-71/143, 10-11=-94/125, 11-12=-112/103, 12-13=0/61
BOT CHORD 2-22=-16/54, 21-22=-16/54, 20-21=-16/54, 19-20=-16/54, 18-19=-16/54, 17-18=-16/54, 16-17=-16/54, 14-16=-16/54, 12-14=-16/54
WEBS 7-18=-132/0, 6-19=-208/77, 5-20=-198/94, 4-21=-72/39, 3-22=-577/222, 8-17=-208/77, 9-16=-198/94, 10-15=-72/39, 11-14=-577/222

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Partially Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -2-0-14 to 0-11-2, Exterior(2N) 0-11-2 to 10-0-0, Corner(3R) 10-0-0 to 13-0-0, Exterior(2N) 13-0-0 to 22-0-14 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) 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=40.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; 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 16.0 psf or 1.00 times flat roof load of 40.0 psf on overhangs non-concurrent with other live loads.
6) As requested, plates have not been designed to provide for placement tolerances or rough handling and erection conditions. It is the responsibility of the fabricator to increase plate sizes to account for these factors.
7) All plates are 1.5x4 (||) MT20 unless otherwise indicated.
8) Gable requires continuous bottom chord bearing.
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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 164 lb uplift at joint 2, 36 lb uplift at joint 19, 43 lb uplift at joint 20, 36 lb uplift at joint 21, 135 lb uplift at joint 22, 30 lb uplift at joint 17, 46 lb uplift at joint 16, 31 lb uplift at joint 15, 136 lb uplift at joint 14 and 178 lb uplift at joint 12.
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.

LOAD CASE(S) Standard

Reviewed for Design Criteria Only

Registered Professional Engineer (Civil)
CERTIFICATE NO. 54161
DAVID WINN
Date Signed
ARIZONA U.S.A.
EXPIRES: December 31, 2027
August 13,2025

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.sbcscomponents.com)

MiTek®
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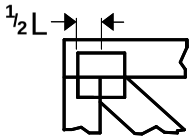
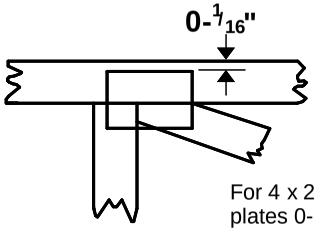
Roseville, CA 95661
916.755.3571 / MiTek-US.com

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" from outside edge of truss.

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

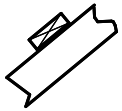
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

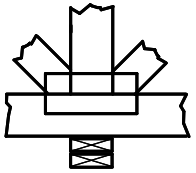
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

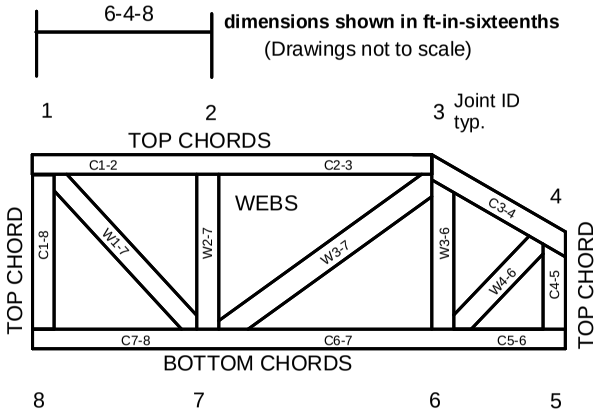


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

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.