

PRCNC20240216 - Revision #4
Village Buildings - Truss Package

TRANSMITTAL FORM



9750 3rd Ave NE, Suite 250, Seattle, WA 98115
Phone: (206) 418-0235 FAX: (206) 418-0237

DATE:	12/18/2024	JOB NO:	24-011
ATTENTION:	Matt Reeves		
RE:	PSE Operational Training Center		

TO: **Zervas Group**
 209 Prospect Street
 Bellingham, WA, 98225

WE ARE SENDING YOU: Attached Under separate cover via _____ the following items:

Shop Drawing Prints Plans Samples
 Copy of Letter Change Order Specifications Copies
 Submittal

COPIES	DATE	NO.	DESCRIPTION
	12/18/2024	24-011-156.1	Wood Truss Submittal

DUE DATE: **12/23/24**

THESE ARE TRANSMITTED as checked below:

- For approval Approved as submitted Resubmit _____ copies for approval
 For your use Approved as noted Submit _____ copies for distribution
 As requested Returned for corrections Return _____ signed contracts
 For review & comment _____
 FOR BIDS DUE RETURN PLANS TO PENNON OFFICE

REMARKS: _____

COPY TO **File** SIGNED **Jacob Pesebre**

KINGWORKS STRUCTURAL ENGINEERS

REVIEWED REJECTED

NO EXCEPTIONS TAKEN
 NOTE MARKINGS & REVISE
 NOTE MARKINGS, REVISE & RESUBMIT

Delegated Design / Deferred Submittal review by KW is limited to the component's conformance with design criteria, concept, and loads imposed on the primary structure. Structural performance of the supplier-designed components is the responsibility of the component's structural engineer. Corrections or comments made on the attached submittal do not relieve the Contractor from compliance with the Contract Documents unless specifically noted otherwise. Contractor is responsible for: confirming and correlating all quantities, dimensions, and elevations; selecting fabrication processes and techniques of construction; coordinating work with that of all other trades; and performing work in a safe and satisfactory manner. Where required to RESUBMIT, Contractor need only resubmit sheets that are affected by the marks or otherwise revised.

Date **12/19/24** By **DL**

SHOP DRAWING / SUBMITTAL REVIEW

This review is for general conformance with the plans and specifications only. Approvals are subject to subcontractor's performance within the confines of the contract documents. Review of dimensions will not serve to relieve the subcontractor of contractual responsibility for any deviations from the contract requirements.

Reviewed Without Comment Reviewed as Noted
 Field Measurement or Templates required prior to fabrication Rejected - Revise & Resubmit

PCCI Project # **24-011** Submittal # **156.1**
 Reviewed By: **Jacob Pesebre** Date: **12/18/2024**

PENNON CONSTRUCTION COMPANY, INC. 14500 Greenwood Ave N Suite A Seattle, WA 98133 P: 206-418-0235 - F: 206-418-0237

TRUSS COMPONENTS

COMPONENT SYSTEMS
ROOF - FLOOR - WALL of Washington, INC

PRCNC20240216 - Revision #4
Village Buildings - Truss Package

Date: 12-5-24

Project: Buildings located at PSE Operation Training Center



TCOW Reference:

Number of shipments to complete delivery of product: 1

Anticipated Schedule

Date*	Action
<u>12-5-24</u>	First Submittal by TCOW
<u>12-11-24</u>	Return of Submittal Reviewed for: Architect – design intent Engineer – design intent GC – dimensional accuracy, delivery sequencing
<u>12-12-24</u>	Revised Submittal by TCOW (if applicable)
<u>12-18-24</u>	Return of Revised Submittal Reviewed for: (if applicable) Engineer – design intent Structural – design intent GC – dimensional accuracy, delivery sequencing
<u>12-18-24</u>	Initiate Production
<u>12-23-24</u>	Product Delivery
_____	Product Delivery (if applicable)
_____	Product Delivery (if applicable)
_____	Product Delivery (if applicable)
_____	Product Delivery (if applicable)

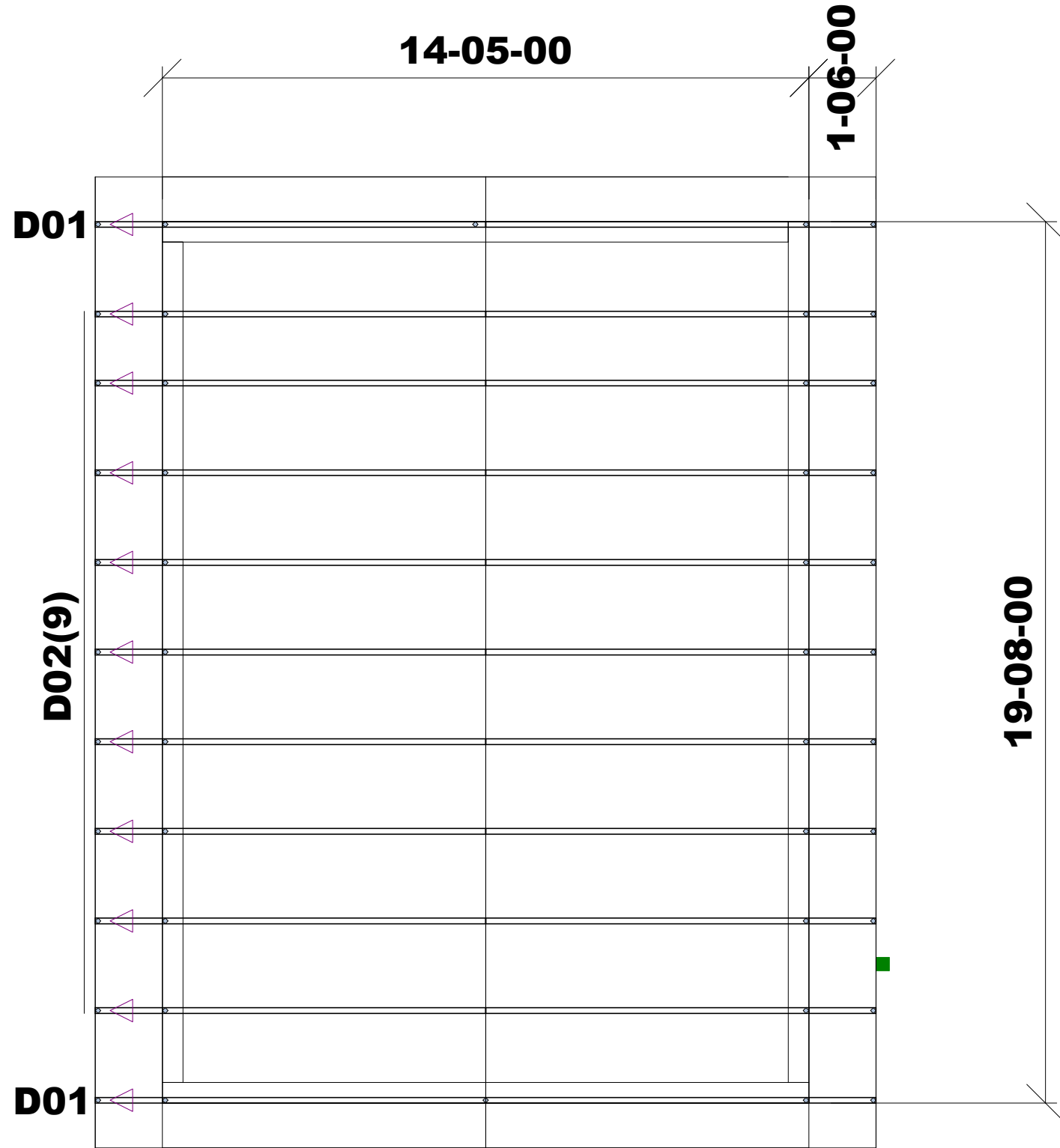
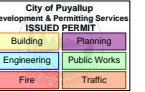
*the date for all following events may need to be adjusted if any date is missed.

ATTENTION:

Any modifications or repairs made to this component package are the responsibility of the building contractor. Written notice from the building contractor of any necessary repairs or modifications must be given to Chad Johnson, General Manager, Truss Components of WA. Engineered drawings must be received by the building contractor prior to any repairs or modifications being performed. ANY REPAIRS OR MODIFICATIONS DONE WITHOUT PRIOR WRITTEN APPROVAL ARE THE SOLE RESPONSIBILITY OF THE BUILDING CONTRACTOR. Repairs or modifications required because of damages caused by Truss Components of WA must first be approved in writing by General Manager at Truss Components of WA. NO BACKCHARGES WILL BE ACCEPTED WITHOUT PRIOR WRITTEN APPROVAL BY THE, GENERAL MANAGER OF TRUSS COMPONENTS OF WA. Every component package is engineered to specification and any alteration may compromise it's strength and void the warranty.

**Compressor Building REV.1
(upsized per updated plans)**

PRCNC20240216 - Revision #4
Village Buildings - Truss Package



Layout approved by: _____ Date: _____

ΔTriangle on layout and red paint on truss indicate left end of stamped truss drawing.



Bid/Job Num.	R2402102
Customer	Pennon Construction Co Inc
Job Name	PSE - OTC - Compressor Roof
Site Address	325 Todd Rd NW
City	Puyallup
Roof Area	437 ft ² Square Feet

Spacing:	2 Feet OC
Loading:	25/15/0/15 110 B
Pitch:	7/12
Eaves:	18"
T-Chord:	2x4



MiTek, Inc.
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200

Re: R2402102
PSE - Operational Training Center

The truss drawing(s) referenced below have been prepared by MiTek USA, Inc. under my direct supervision based on the parameters provided by Truss Components of WA.

Pages or sheets covered by this seal: I70294109 thru I70294110
My license renewal date for the state of Washington is Decmeber 7, 2025.



December 18, 2024

Pace, Adam

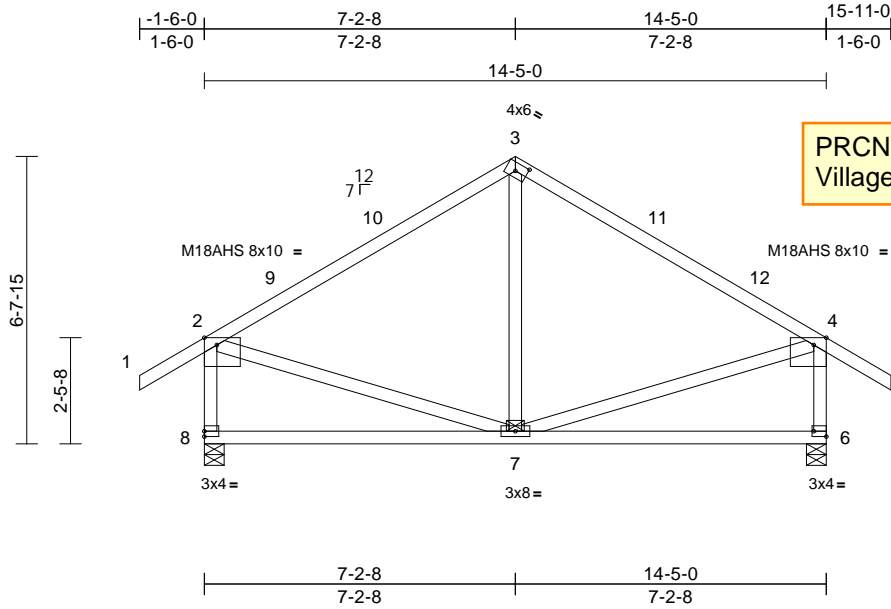
IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which 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 R2402102	Truss D02	Truss Type Common	Qty 9	Ply 1	PSE - Operational Training Center Job Reference (optional)	170294109
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Truss Components of WA, Tumwater, WA - 98512,

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Page: 1



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Village Buildings - Truss Package



Scale = 1:48.1

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (Roof Snow = 25.0)	25.0	Plate Grip DOL	1.15	TC	Vert(LL)	-0.05	6-7	>999	240	MT20	185/148
TCDL	15.0	Lumber DOL	1.15	BC	Vert(CT)	-0.13	6-7	>999	180	M18AHS	145/140
BCLL	0.0*	Rep Stress Incr	YES	WB	Horz(CT)	0.00	6	n/a	n/a		
BCDL	15.0	Code	IBC2018/TPI2014	Matrix-AS							
										Weight: 69 lb	FT = 10%

LUMBER

TOP CHORD 2x4 HF No.2
BOT CHORD 2x4 HF No.2
WEBS 2x4 HF No.2

BRACING

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

REACTIONS

(size) 6=0-5-8, 8=0-5-8
Max Horiz 8=-121 (LC 12)
Max Uplift 6=-34 (LC 15), 8=-34 (LC 14)
Max Grav 6=1014 (LC 22), 8=1014 (LC 21)

FORCES

(lb) - Maximum Compression/Maximum Tension

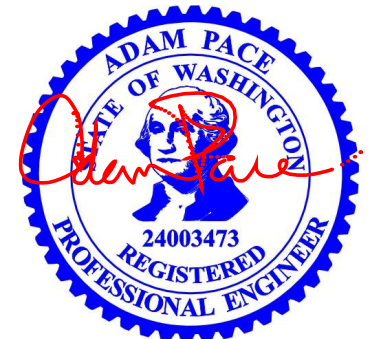
TOP CHORD 1-2=0/66, 2-3=-773/59, 3-4=-773/59,
4-5=0/66, 2-8=-913/107, 4-6=-913/107
BOT CHORD 7-8=-103/202, 6-7=-28/197
WEBS 3-7=-2/220, 2-7=-7/446, 4-7=-8/446

NOTES

- 1) Wind: ASCE 7-16; Vult=110mph (3-second gust) Vasd=87mph; TCDL=3.5psf; BCDL=5.0psf; h=15ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-6-0 to 1-6-0, Interior (1) 1-6-0 to 7-2-8, Exterior(2R) 7-2-8 to 10-2-8, Interior (1) 10-2-8 to 15-11-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCLL: ASCE 7-16; Pf=25.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10; IBC 1607.11.2 minimum roof live load applied where required.
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 17.0 psf or 1.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
- 5) All plates are MT20 plates unless otherwise indicated.

- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 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 34 lb uplift at joint 8 and 34 lb uplift at joint 6.
- 9) This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
- 10) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord.

LOAD CASE(S) Standard



December 18, 2024

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

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

MiTek®

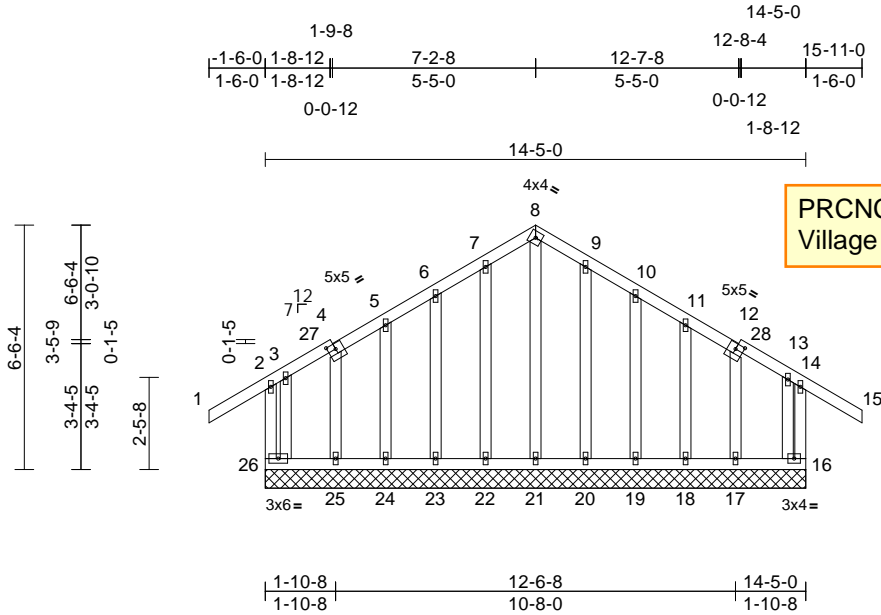
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job R2402102	Truss D01	Truss Type Common Supported Gable	Qty 2	Ply 1	PSE - Operational Training Center Job Reference (optional)	170294110
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Truss Components of WA, Tumwater, WA - 98512,

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Page: 1



Scale = 1:52.2

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (Roof Snow = 25.0)	25.0	Plate Grip DOL	1.15	TC	0.21	Vert(LL)	n/a	-	n/a	999	MT20	185/148
TCDL	15.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.10	Horz(CT)	0.00	16	n/a	n/a		
BCDL	15.0	Code	IBC2018/TPI2014	Matrix-AS								
											Weight: 95 lb	FT = 10%

LUMBER
TOP CHORD 2x4 HF No.2
BOT CHORD 2x4 HF No.2
WEBS 2x4 HF No.2
OTHERS 2x4 HF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals.

REACTIONS (size) 16=14-5-0, 17=14-5-0, 18=14-5-0, 19=14-5-0, 20=14-5-0, 21=14-5-0, 22=14-5-0, 23=14-5-0, 24=14-5-0, 25=14-5-0, 26=14-5-0

Max Horiz 26=119 (LC 12)
Max Uplift 16=61 (LC 11), 17=84 (LC 10), 18=12 (LC 15), 19=23 (LC 15), 20=9 (LC 15), 22=10 (LC 14), 23=23 (LC 14), 24=11 (LC 14), 25=97 (LC 11), 26=76 (LC 10)
Max Grav 16=252 (LC 22), 17=203 (LC 27), 18=215 (LC 22), 19=204 (LC 22), 20=214 (LC 22), 21=164 (LC 22), 22=214 (LC 21), 23=204 (LC 21), 24=215 (LC 21), 25=214 (LC 26), 26=262 (LC 27)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-26=-317/159, 1-2=0/66, 2-3=-92/102, 3-5=-67/71, 5-6=-38/98, 6-7=-55/125, 7-8=-66/143, 8-9=-66/143, 9-10=-55/125, 10-11=-39/97, 11-13=-55/74, 13-14=-90/101, 14-15=0/66, 14-16=-313/157
BOT CHORD 25-26=-69/62, 24-25=-68/62, 23-24=-68/62, 22-23=-68/62, 21-22=-68/62, 20-21=-68/62, 19-20=-68/62, 18-19=-68/62, 17-18=-68/62, 16-17=-66/61

WEBS 13-16=-155/176, 8-21=-124/27, 7-22=-174/26, 6-23=-163/47, 5-24=-180/53, 3-26=-177/199, 9-20=-174/26, 10-19=-163/47, 11-18=-180/51, 4-25=-134/86, 12-17=-123/73

- NOTES**
- 1) Wind: ASCE 7-16; Vult=110mph (3-second gust) Vasd=87mph; TCDL=3.5psf; BCDL=5.0psf; h=15ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -1-6-0 to 1-6-0, Exterior(2N) 1-6-0 to 7-2-8, Corner(3R) 7-2-8 to 10-2-8, Exterior(2N) 10-2-8 to 15-11-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - 2) 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=25.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10; IBC 1607.11.2 minimum roof live load applied where required.
 - 4) Unbalanced snow loads have been considered for this design.
 - 5) This truss has been designed for greater of min roof live load of 17.0 psf or 1.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
 - 6) All plates are 1.5x4 (||) MT20 unless otherwise indicated.
 - 7) Gable requires continuous bottom chord bearing.
 - 8) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
 - 9) Gable studs spaced at 1-4-0 oc.
 - 10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- 11) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 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 76 lb uplift at joint 26, 61 lb uplift at joint 16, 10 lb uplift at joint 22, 23 lb uplift at joint 23, 11 lb uplift at joint 24, 9 lb uplift at joint 20, 23 lb uplift at joint 19, 12 lb uplift at joint 18, 97 lb uplift at joint 25 and 84 lb uplift at joint 17.
- 13) This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
- 14) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord.

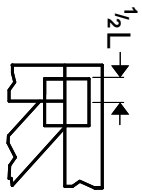
LOAD CASE(S) Standard



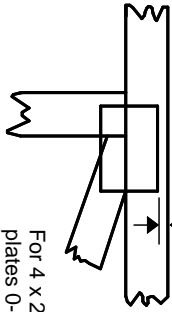
December 18, 2024

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 MITtek software or upon request.

PLATE SIZE

4 X 4

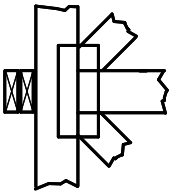
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



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

BEARING

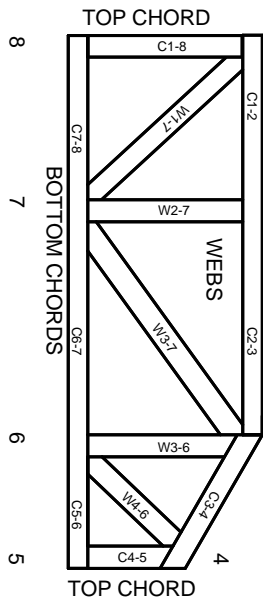
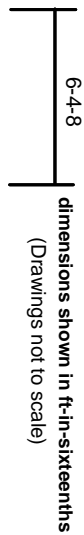


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

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

Design General Notes

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

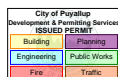
Lumber design values are in accordance with ANSI/TFP 1 section 6.3. These truss designs rely on Lumber values established by others.

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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/TFP 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TFP 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TFP 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.



PRCNC20240216 - Revision #4
Village Buildings - Truss Package

MITek®

MITek Engineering Reference Sheet: MII-7473 rev. 1/2/2023

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Layout approved by: _____ Date: _____

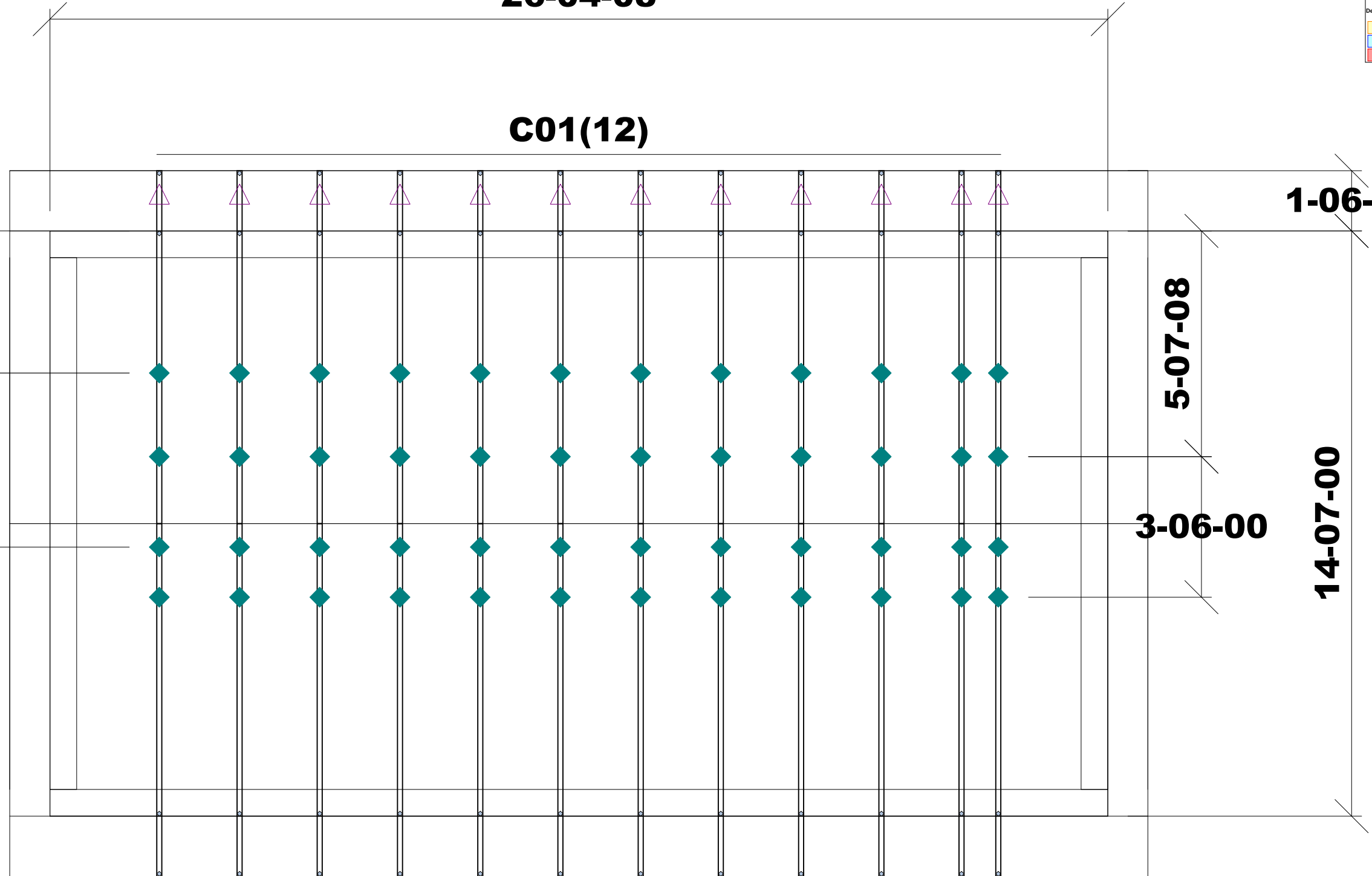
ΔTriangle on layout and red paint on truss indicate left end of stamped truss drawing.

**Control House (unchanged from previous)
(bottom chord designed for mechanical live load)**

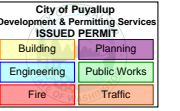
26-04-08

C01(12)

4-04-00 3-06-08



PRCNC20240216 - Revision #4
Village Buildings - Truss Package



Bid/Job Num. R2410190
Customer Pennon Construction Co Inc
Job Name PSE - Operational Training
Site Address Center
City 325 Todd Rd NW
Roof Area Puyallup
526 ft² Square Feet

Spacing: 2 Feet OC
Loading: 25/15/0/15 110 B
Pitch: 4/12
Eaves: 18"
T-Chord: 2x4

MiTek, Inc.
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200

Re: R2410190
PSE - Operational Training Center

The truss drawing(s) referenced below have been prepared by MiTek USA, Inc. under my direct supervision based on the parameters provided by Truss Components of WA.

Pages or sheets covered by this seal: I70053685 thru I70053685

My license renewal date for the state of Washington is December 7, 2025.



December 9, 2024

Pace, Adam

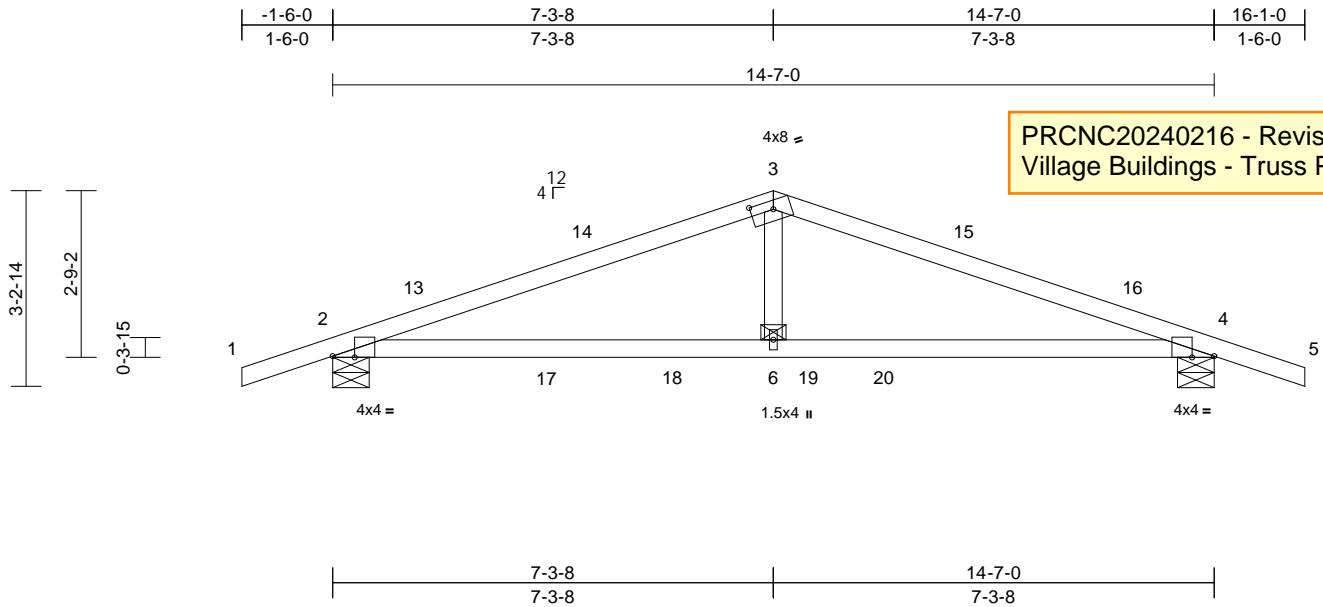
IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which 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 R2410190	Truss C01	Truss Type Common	Qty 12	Ply 1	PSE - Operational Training Center Job Reference (optional)	170053685
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Truss Components of WA, Tumwater, WA - 98512,

Run: 8.83 S Nov 8 2024 Print: 8.830 S Nov 8 2024 MiTek Industries, Inc. Fri Dec 06 16:09:04
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Page: 1



PRCNC20240216 - Revision #4
Village Buildings - Truss Package

City of Puyallup	Professional Engineer
Structural	Professional Engineer
Engineering	Professional Engineer
Fire	Professional Engineer
Traffic	Professional Engineer

Scale = 1:35.3
Plate Offsets (X, Y): [2:0-4-6,Edge], [3:0-4-8,0-1-12], [4:0-4-6,Edge]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (Roof Snow = 25.0)	25.0	Plate Grip DOL	1.15	TC	Vert(LL)	-0.15	6-12	>999	240	MT20	220/195
TCDL	15.0	Lumber DOL	1.15	BC	Vert(CT)	-0.31	6-9	>556	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	Horz(CT)	0.03	4	n/a	n/a		
BCDL	15.0	Code	IBC2018/TPI2014	Matrix-AS						Weight: 48 lb	FT = 10%

LUMBER
TOP CHORD 2x4 DF No.2
BOT CHORD 2x4 DF 1800F 1.6E or 2x4 DF No.1&Btr
WEBS 2x4 HF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied.

REACTIONS (size) 2=0-7-4, 4=0-7-4
Max Horiz 2=-29 (LC 15)
Max Grav 2=1141 (LC 21), 4=1115 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/38, 2-3=-1739/0, 3-4=-1741/0, 4-5=0/38
BOT CHORD 2-6=0/1575, 4-6=0/1575
WEBS 3-6=0/545

- * 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.
- This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
- 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.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 60 lb down at 3-6-8, 25 lb down at 5-7-8, and 60 lb down at 7-10-8, and 25 lb down at 9-1-8 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-80, 3-5=-80, 7-10=-30
Concentrated Loads (lb)
Vert: 17=-60 (F), 18=-25 (F), 19=-60 (F), 20=-25 (F)

- NOTES**
- Wind: ASCE 7-16; Vult=110mph (3-second gust) Vasd=87mph; TCDL=3.5psf; BCDL=5.0psf; h=15ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-6-0 to 1-6-0, Interior (1) 1-6-0 to 7-3-8, Exterior(2R) 7-3-8 to 10-3-8, Interior (1) 10-3-8 to 16-1-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - TCLL: ASCE 7-16; Pf=25.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10; IBC 1607.11.2 minimum roof live load applied where required.
 - Unbalanced snow loads have been considered for this design.
 - This truss has been designed for greater of min roof live load of 20.0 psf or 1.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.



December 9, 2024

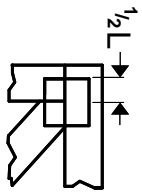
WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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

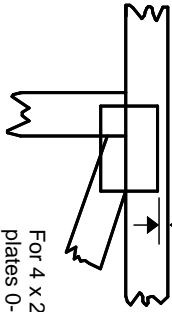
MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

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 MITtek software or upon request.

PLATE SIZE

4 X 4

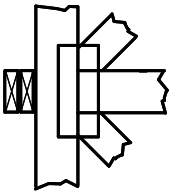
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



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

BEARING

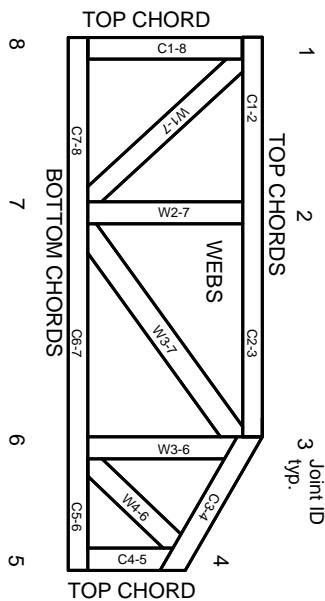


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TFP1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-22: Design Standard for Bracing.
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-1-1988, 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/TFP 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 1 bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TFP 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TFP 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TFP 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.



PRCNC20240216 - Revision #4
Village Buildings - Truss Package

MITek®

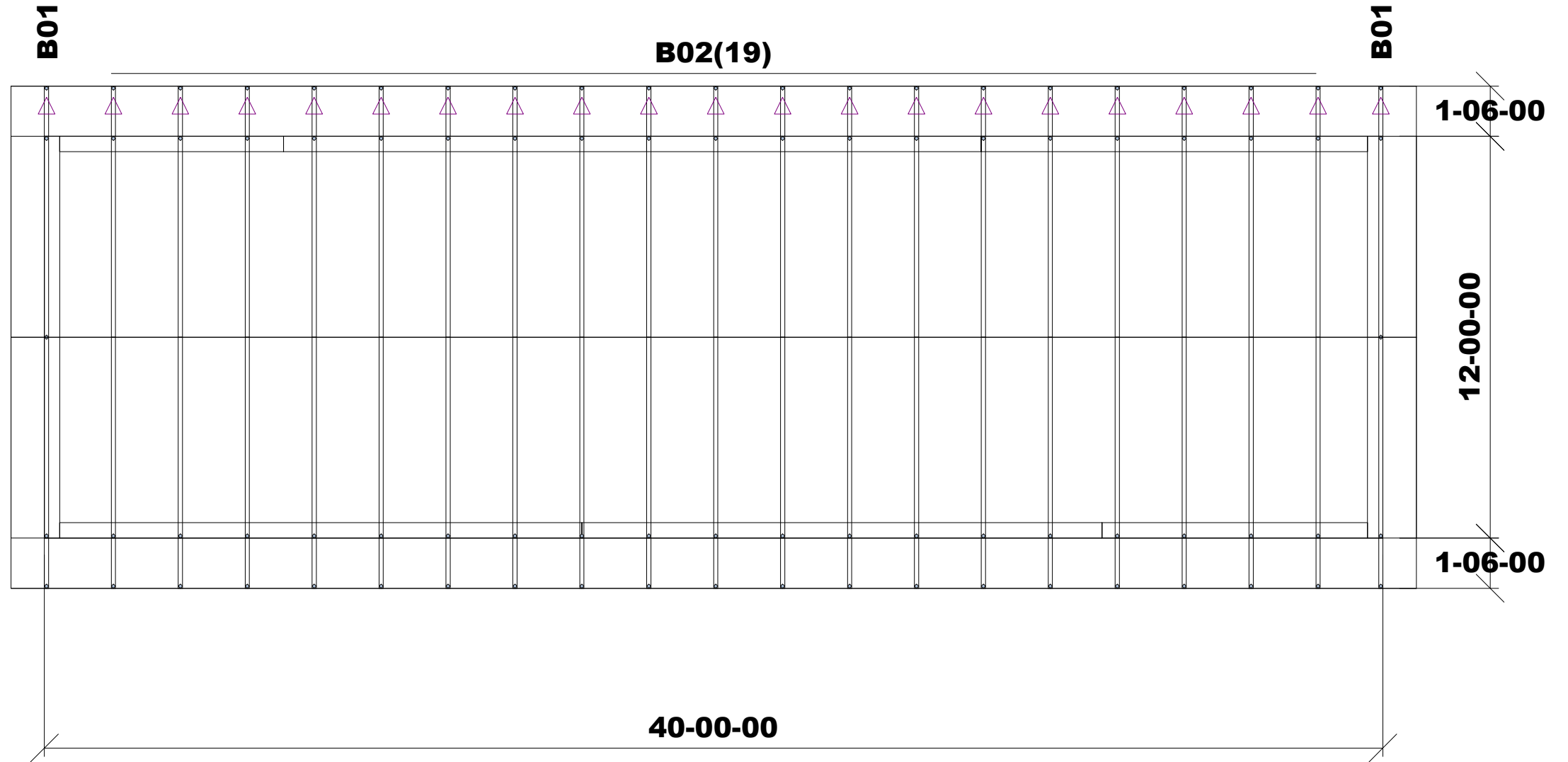
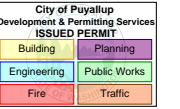
MITtek Engineering Reference Sheet: Mill-7473 rev. 1/2/2023

ATTENTION:

Any modifications or repairs made to this component package are the responsibility of the building contractor. Written notice from the building contractor of any necessary repairs or modifications must be given to Chad Johnson, General Manager, Truss Components of WA. Engineered drawings must be received by the building contractor prior to any repairs or modifications being performed. ANY REPAIRS OR MODIFICATIONS DONE WITHOUT PRIOR WRITTEN APPROVAL ARE THE SOLE RESPONSIBILITY OF THE BUILDING CONTRACTOR. Repairs or modifications required because of damages caused by Truss Components of WA must first be approved in writing by General Manager at Truss Components of WA. NO BACKCHARGES WILL BE ACCEPTED WITHOUT PRIOR WRITTEN APPROVAL BY THE, GENERAL MANAGER OF TRUSS COMPONENTS OF WA. Every component package is engineered to specification and any alteration may compromise it's strength and void the warranty.

**4-Plex Units, Commercial and Residential
(qty: 2) (unchanged from previous)**

PRCNC20240216 - Revision #4
Village Buildings - Truss Package



Layout approved by: _____ Date: _____

ΔTriangle on layout and red paint on truss indicate left end of stamped truss drawing.



Bid/Job Num. R2410191
Customer Pennon Construction Co Inc
Job Name PSE - Operational Training
Site Address Center
City 325 Todd Rd NW
Roof Area Puyallup
704 ft² Square Feet

Spacing: 2 Feet OC
Loading: 25/15/0/15 110 B
Pitch: 6/12
Eaves: 18"
T-Chord: 2x4



MiTek, Inc.
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200

Re: R2410191
PSE - Operational Training Center

The truss drawing(s) referenced below have been prepared by MiTek USA, Inc. under my direct supervision based on the parameters provided by Truss Components of WA.

Pages or sheets covered by this seal: I70028067 thru I70028068
My license renewal date for the state of Washington is Decmeber 7, 2025.



December 6,2024

Pace, Adam

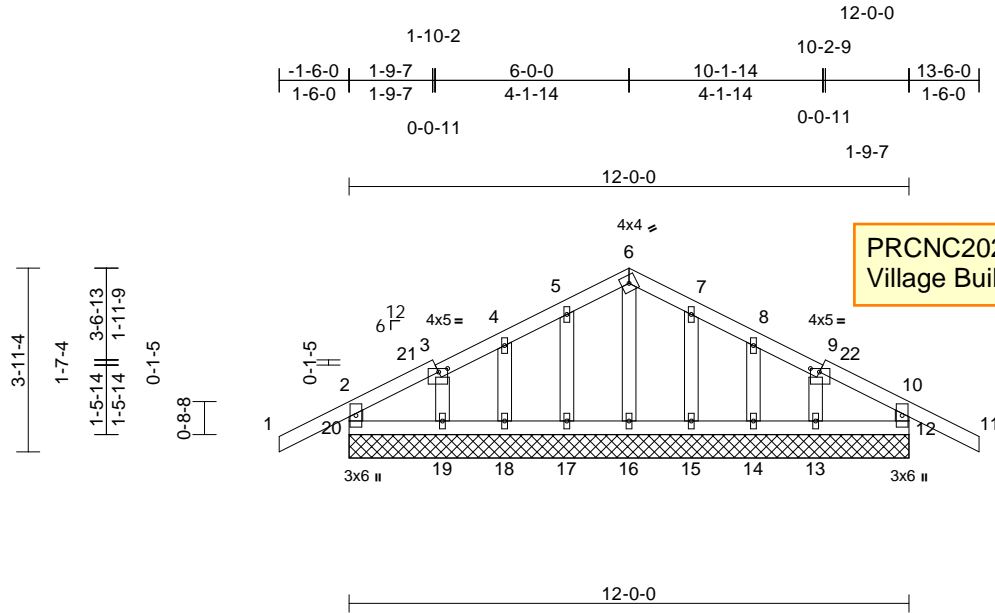
IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which 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 R2410191	Truss B01	Truss Type Common Supported Gable	Qty 4	Ply 1	PSE - Operational Training Center Job Reference (optional)	170028067
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Truss Components of WA, Tumwater, WA - 98512,

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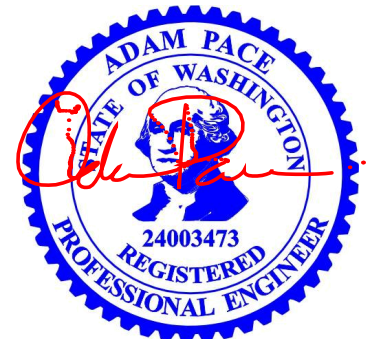
Page: 1



Scale = 1:40.8
Plate Offsets (X, Y): [3:0-2-5,0-0-14], [9:0-2-5,0-0-14]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (Roof Snow = 25.0)	25.0	Plate Grip DOL	1.15	TC	0.21	Vert(LL)	n/a	-	n/a	999	MT20	185/148
TCDL	15.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	12	n/a	n/a		
BCDL	15.0	Code	IBC2018/TPI2014	Matrix-AS								
											Weight: 49 lb	FT = 10%

- LUMBER**
TOP CHORD 2x4 HF No.2
BOT CHORD 2x4 HF No.2
WEBS 2x4 HF No.2
OTHERS 2x4 HF No.2
- BRACING**
TOP CHORD Structural wood sheathing directly applied, except end verticals.
- REACTIONS** (size) 12=12-0-0, 13=12-0-0, 14=12-0-0, 15=12-0-0, 16=12-0-0, 17=12-0-0, 18=12-0-0, 19=12-0-0, 20=12-0-0
Max Horiz 20=36 (LC 12)
Max Uplift 12=36 (LC 15), 14=43 (LC 15), 15=3 (LC 15), 17=3 (LC 14), 18=43 (LC 14), 20=32 (LC 14)
Max Grav 12=362 (LC 22), 13=88 (LC 5), 14=342 (LC 22), 15=153 (LC 22), 16=167 (LC 1), 17=153 (LC 21), 18=342 (LC 21), 19=88 (LC 5), 20=362 (LC 21)
- FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-20=-340/119, 1-2=0/59, 2-4=-93/85, 4-5=-65/82, 5-6=-58/84, 6-7=-59/83, 7-8=-65/82, 8-10=-93/85, 10-11=0/59, 10-12=-340/118
BOT CHORD 19-20=-66/51, 18-19=-66/51, 17-18=-66/51, 16-17=-66/51, 15-16=-66/51, 14-15=-66/51, 13-14=-66/51, 12-13=-66/51
WEBS 6-16=-127/13, 5-17=-111/31, 4-18=-309/95, 7-15=-111/31, 8-14=-309/95
- NOTES**
- 1) Wind: ASCE 7-16; Vult=110mph (3-second gust) Vasd=87mph; TCDL=3.5psf; BCDL=5.0psf; h=15ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -1-6-0 to 1-6-0, Exterior(2N) 1-6-0 to 6-0-0, Corner(3R) 6-0-0 to 9-0-0, Exterior(2N) 9-0-0 to 13-6-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - 2) 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=25.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10; IBC 1607.11.2 minimum roof live load applied where required.
 - 4) Unbalanced snow loads have been considered for this design.
 - 5) This truss has been designed for greater of min roof live load of 18.0 psf or 1.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
 - 6) All plates are 1.5x4 (||) MT20 unless otherwise indicated.
 - 7) Gable requires continuous bottom chord bearing.
 - 8) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
 - 9) Gable studs spaced at 1-4-0 oc.
 - 10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - 11) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 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 32 lb uplift at joint 20, 36 lb uplift at joint 12, 3 lb uplift at joint 17, 43 lb uplift at joint 18, 3 lb uplift at joint 15 and 43 lb uplift at joint 14.
 - 13) This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
 - 14) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord.
- LOAD CASE(S)** Standard



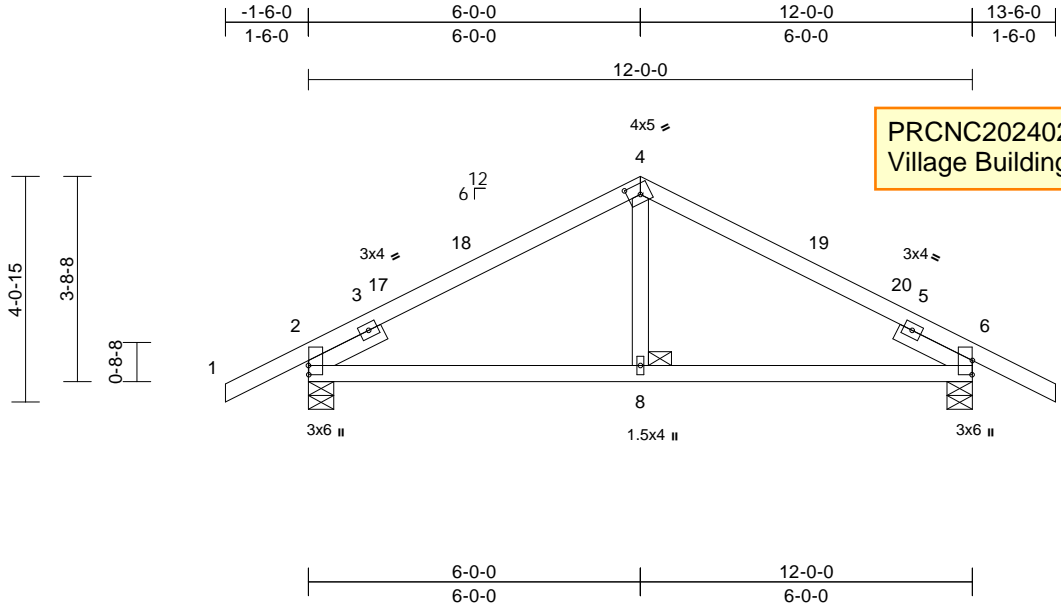
December 6, 2024

Job R2410191	Truss B02	Truss Type Common	Qty 38	Ply 1	PSE - Operational Training Center Job Reference (optional)	170028068
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Truss Components of WA, Tumwater, WA - 98512,

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Page: 1



Scale = 1:37.7

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (Roof Snow = 25.0)	25.0	Plate Grip DOL	1.15	TC	0.56	Vert(LL)	-0.07	8-11	>999	240	MT20	185/148
TCDL	15.0	Lumber DOL	1.15	BC	0.44	Vert(CT)	-0.10	8-11	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.03	2	n/a	n/a		
BCDL	15.0	Code	IBC2018/TPI2014	Matrix-AS								
											Weight: 41 lb	FT = 10%

LUMBER
TOP CHORD 2x4 HF No.2
BOT CHORD 2x4 HF No.2
WEBS 2x4 HF No.2
SLIDER Left 2x4 HF No.2 -- 1-6-0, Right 2x4 HF No.2 -- 1-6-0

BRACING
TOP CHORD Structural wood sheathing directly applied.

REACTIONS (size) 2=0-5-8, 6=0-5-8
Max Horiz 2=-37 (LC 15)
Max Uplift 2=-34 (LC 14), 6=-34 (LC 15)
Max Grav 2=914 (LC 21), 6=914 (LC 22)

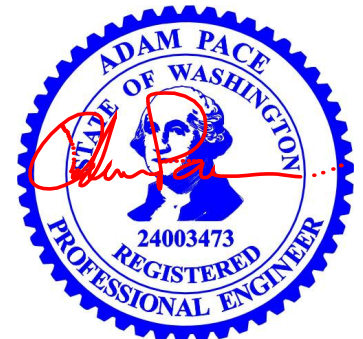
FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/54, 2-4=-838/106, 4-6=-838/106, 6-7=0/54
BOT CHORD 2-8=-68/660, 6-8=-71/660
WEBS 4-8=0/306

NOTES

- 1) Wind: ASCE 7-16; Vult=110mph (3-second gust) Vasd=87mph; TCDL=3.5psf; BCDL=5.0psf; h=15ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-6-0 to 1-6-0, Interior (1) 1-6-0 to 6-0-0, Exterior(2R) 6-0-0 to 9-0-0, Interior (1) 9-0-0 to 13-6-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCLL: ASCE 7-16; Pf=25.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10; IBC 1607.11.2 minimum roof live load applied where required.
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 18.0 psf or 1.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.

- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 34 lb uplift at joint 2 and 34 lb uplift at joint 6.
- 8) This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
- 9) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord.

LOAD CASE(S) Standard



December 6, 2024

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

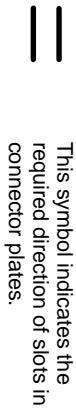
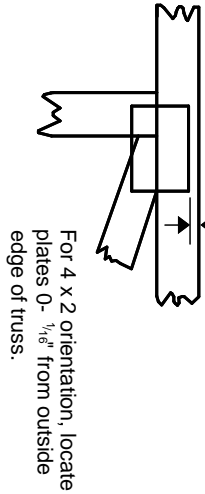
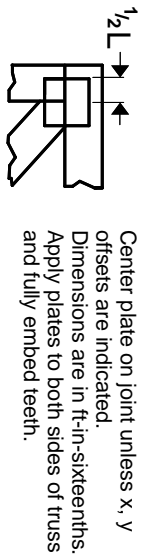
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall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

MiTek®

16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Symbols

PLATE LOCATION AND ORIENTATION



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

PLATE SIZE

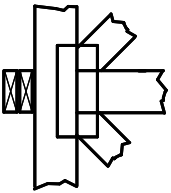
4 X 4

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

LATERAL BRACING LOCATION



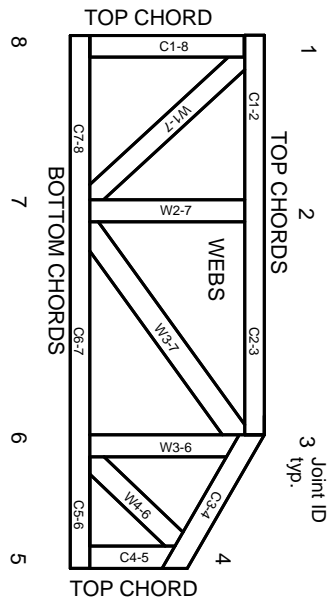
BEARING



Industry Standards:

ANSI/TP1: 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-1-1988, 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/TP1 section 6.3. These truss designs rely on Lumber values established by others.

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MITek®

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

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/TP1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TP1.
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/TP1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.



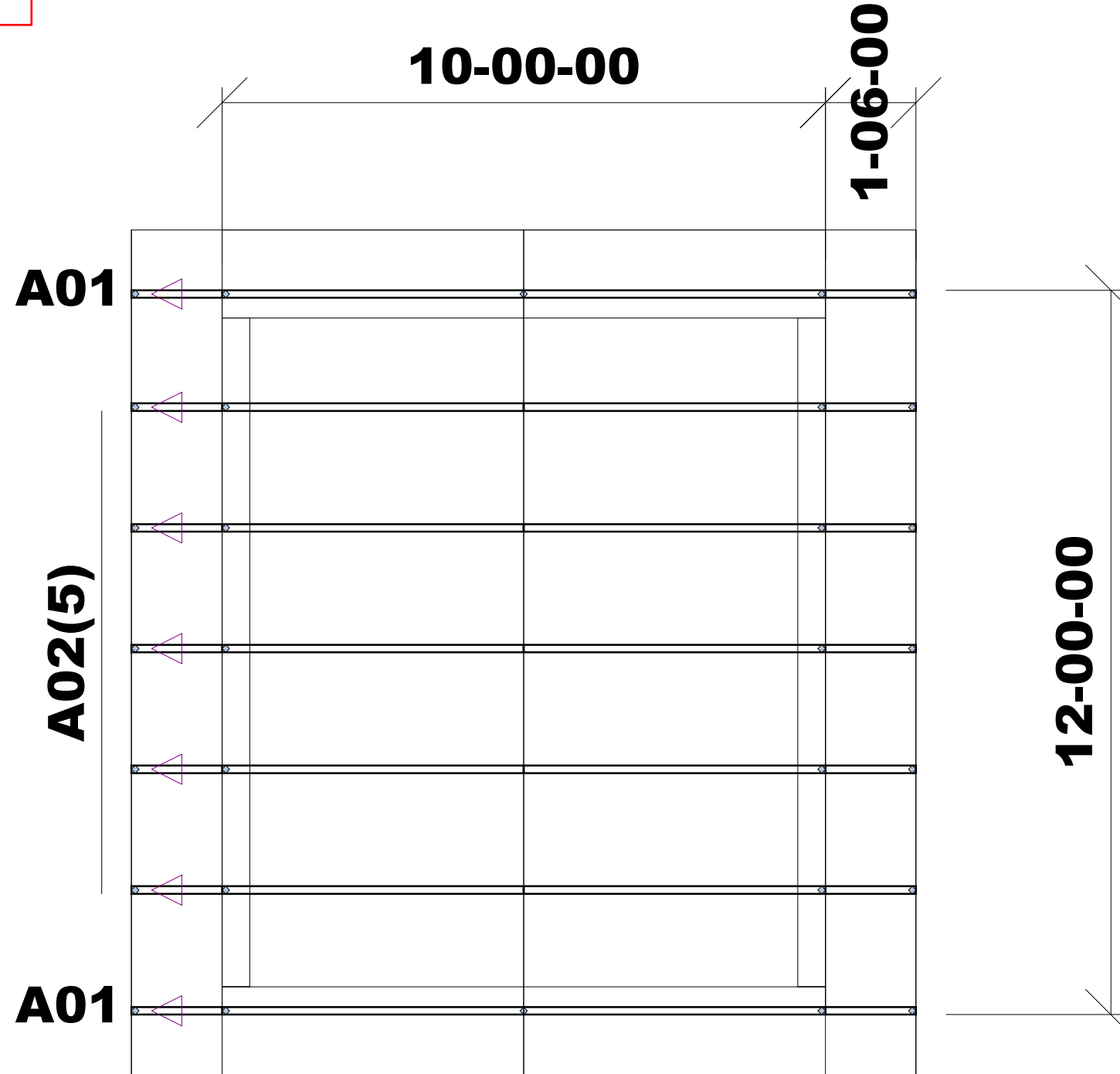
PRCNC20240216 - Revision #4
Village Buildings - Truss Package

ATTENTION:

Any modifications or repairs made to this component package are the responsibility of the building contractor. Written notice from the building contractor of any necessary repairs or modifications must be given to Chad Johnson, General Manager, Truss Components of WA. Engineered drawings must be received by the building contractor prior to any repairs or modifications being performed. ANY REPAIRS OR MODIFICATIONS DONE WITHOUT PRIOR WRITTEN APPROVAL ARE THE SOLE RESPONSIBILITY OF THE BUILDING CONTRACTOR. Repairs or modifications required because of damages caused by Truss Components of WA must first be approved in writing by General Manager at Truss Components of WA. NO BACKCHARGES WILL BE ACCEPTED WITHOUT PRIOR WRITTEN APPROVAL BY THE, GENERAL MANAGER OF TRUSS COMPONENTS OF WA. Every component package is engineered to specification and any alteration may compromise it's strength and void the warranty.

Village Units (unchanged from previous)
(qty: 11)

PRCNC20240216 - Revision #4
Village Buildings - Truss Package



Layout approved by: _____ Date: _____

△Triangle on layout and red paint on truss indicate left end of stamped truss drawing.



Bid/Job Num.	R2410192
Customer	Pennon Construction Co Inc
Job Name	PSE - Operational Training
Site Address	Center
City	325 Todd Rd NW
Roof Area	Puyallup
	211 ft ² Square Feet

Spacing:	2 Feet OC
Loading:	25/15/0/15 110 B
Pitch:	7/12
Eaves:	18"
T-Chord:	2x4



MiTek, Inc.
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200

Re: R2410192
PSE - Operational Training Center

The truss drawing(s) referenced below have been prepared by MiTek USA, Inc. under my direct supervision based on the parameters provided by Truss Components of WA.

Pages or sheets covered by this seal: I69543295 thru I69543296
My license renewal date for the state of Washington is Decmeber 7, 2025.



November 12, 2024

Pace, Adam

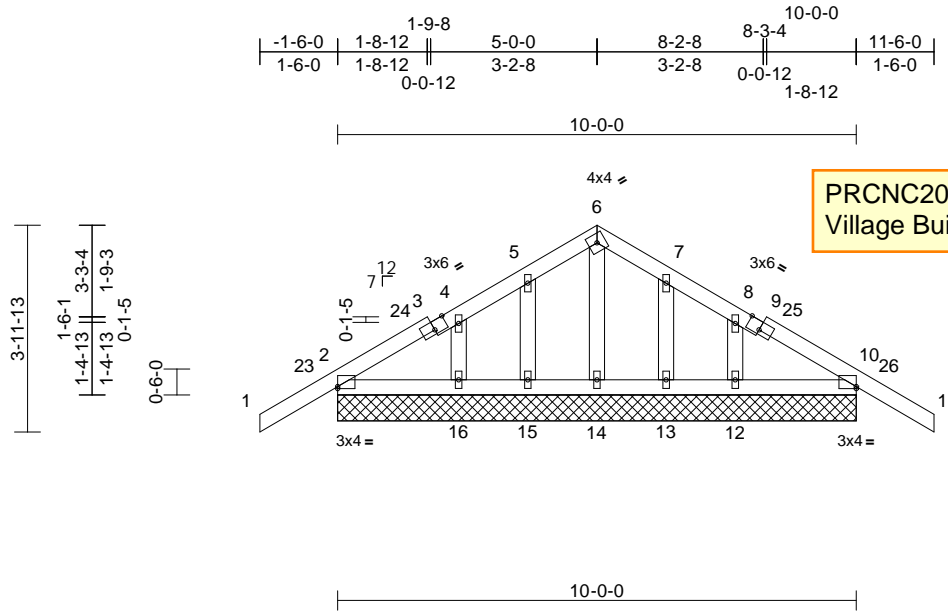
IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which 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 R2410192	Truss A01	Truss Type Common Supported Gable	Qty 2	Ply 1	PSE - Operational Training Center Job Reference (optional)	169543295
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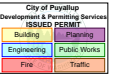
Truss Components of WA, Tumwater, WA - 98512,

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Page: 1



PRCNC20240216 - Revision #4
Village Buildings - Truss Package



Scale = 1:38.4

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (Roof Snow = 25.0)	25.0	Plate Grip DOL	1.15	TC	0.29	Vert(LL)	n/a	-	n/a	999	MT20	185/148
TCDL	15.0	Lumber DOL	1.15	BC	0.18	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.11	Horz(CT)	-0.01	12	n/a	n/a		
BCDL	15.0	Code	IBC2018/TPI2014	Matrix-AS								
											Weight: 40 lb	FT = 10%

LUMBER
TOP CHORD 2x4 HF No.2
BOT CHORD 2x4 HF No.2
OTHERS 2x4 HF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied.

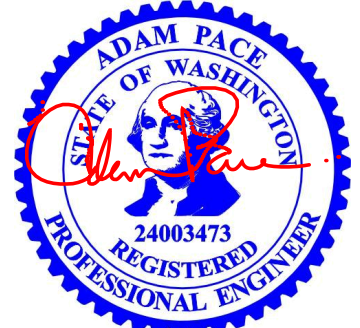
REACTIONS (size) 2=10-0-0, 10=10-0-0, 12=10-0-0, 13=10-0-0, 14=10-0-0, 15=10-0-0, 16=10-0-0, 17=10-0-0
Max Horiz 2=-53 (LC 12), 17=-53 (LC 12)
Max Uplift 2=-120 (LC 22), 12=-33 (LC 15), 13=-7 (LC 15), 14=-5 (LC 15), 15=-17 (LC 14), 16=-19 (LC 14), 17=-120 (LC 22)
Max Grav 2=194 (LC 21), 12=488 (LC 22), 13=43 (LC 22), 14=687 (LC 22), 15=178 (LC 21), 16=308 (LC 21), 17=194 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/69, 2-4=-175/536, 4-5=-140/531, 5-6=-112/529, 6-7=-114/550, 7-8=-133/529, 8-10=-177/577, 10-11=0/69
BOT CHORD 2-16=-452/223, 15-16=-452/223, 14-15=-452/223, 13-14=-452/223, 12-13=-452/223, 10-12=-452/223
WEBS 6-14=-613/142, 5-15=-160/47, 4-16=-225/61, 7-13=-106/35, 8-12=-298/78

NOTES

- Wind: ASCE 7-16; Vult=110mph (3-second gust) Vasd=87mph; TCDL=3.5psf; BCDL=5.0psf; h=15ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -1-6-0 to 1-6-0, Exterior(2N) 1-6-0 to 5-0-0, Corner(3R) 5-0-0 to 8-0-0, Exterior(2N) 8-0-0 to 11-6-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pf=25.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10; IBC 1607.11.2 minimum roof live load applied where required.
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 17.0 psf or 1.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
- All plates are 1.5x4 (||) MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 1-4-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 120 lb uplift at joint 2, 5 lb uplift at joint 14, 17 lb uplift at joint 15, 19 lb uplift at joint 16, 7 lb uplift at joint 13, 33 lb uplift at joint 12 and 120 lb uplift at joint 2.
- This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



November 12, 2024

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

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

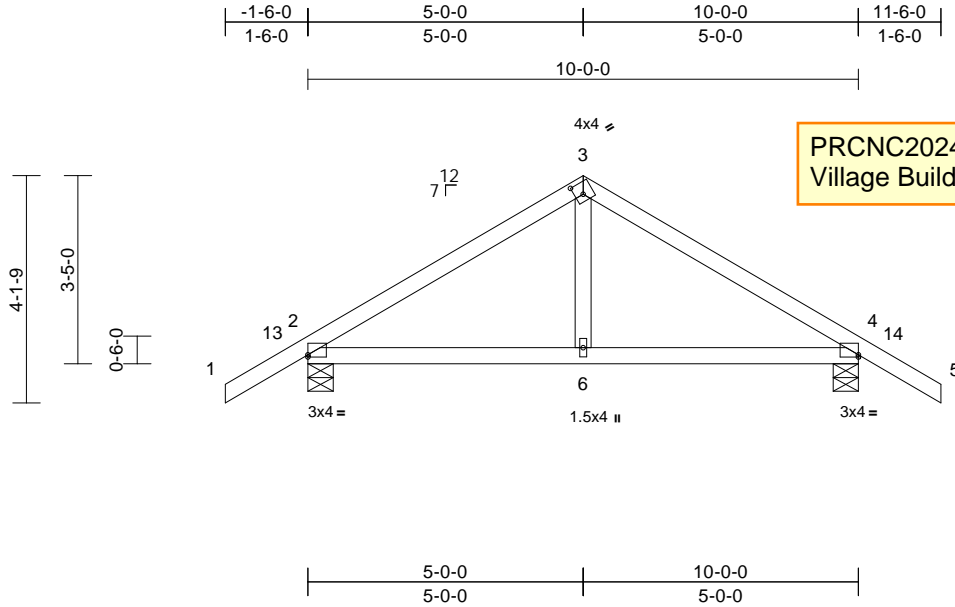
MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job R2410192	Truss A02	Truss Type Common	Qty 5	Ply 1	PSE - Operational Training Center Job Reference (optional)	169543296
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Truss Components of WA, Tumwater, WA - 98512,

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Page: 1



PRCNC20240216 - Revision #4
Village Buildings - Truss Package



Scale = 1:37.9

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (Roof Snow = 25.0)	25.0	Plate Grip DOL	1.15	TC	0.42	Vert(LL)	-0.03	6-9	>999	240	MT20	185/148
TCDL	15.0	Lumber DOL	1.15	BC	0.29	Vert(CT)	-0.05	6-12	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.01	4	n/a	n/a		
BCDL	15.0	Code	IBC2018/TPI2014	Matrix-AS								
											Weight: 33 lb	FT = 10%

LUMBER

TOP CHORD 2x4 HF No.2
BOT CHORD 2x4 HF No.2
WEBS 2x4 HF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied.

REACTIONS

(size) 2=0-5-8, 4=0-5-8
Max Horiz 2=55 (LC 13)
Max Uplift 2=-31 (LC 14), 4=-31 (LC 15)
Max Grav 2=812 (LC 21), 4=812 (LC 22)

FORCES

(lb) - Maximum Compression/Maximum Tension

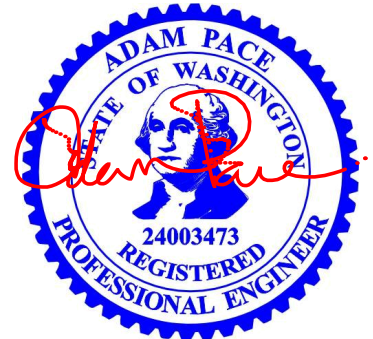
TOP CHORD 1-2=0/69, 2-3=-742/71, 3-4=-742/71, 4-5=0/69
BOT CHORD 2-6=-37/509, 4-6=-37/509
WEBS 3-6=0/268

- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 31 lb uplift at joint 2 and 31 lb uplift at joint 4.
- This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard

NOTES

- Wind: ASCE 7-16; Vult=110mph (3-second gust) Vasd=87mph; TCDL=3.5psf; BCDL=5.0psf; h=15ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-6-0 to 1-6-0, Interior (1) 1-6-0 to 5-0-0, Exterior(2R) 5-0-0 to 8-0-0, Interior (1) 8-0-0 to 11-6-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pf=25.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10; IBC 1607.11.2 minimum roof live load applied where required.
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 17.0 psf or 1.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.



November 12, 2024

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

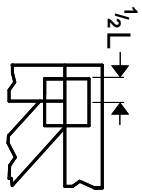
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall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

MiTek®

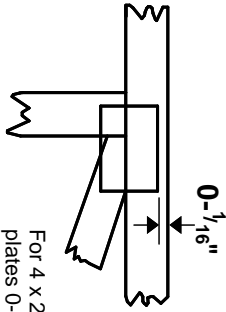
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Symbols

PLATE LOCATION AND ORIENTATION



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



For 4 x 2 orientation, locate plates 0- 1/16\"/>



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

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

PLATE SIZE

4 X 4

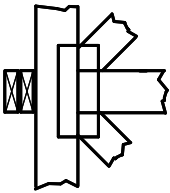
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



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

BEARING

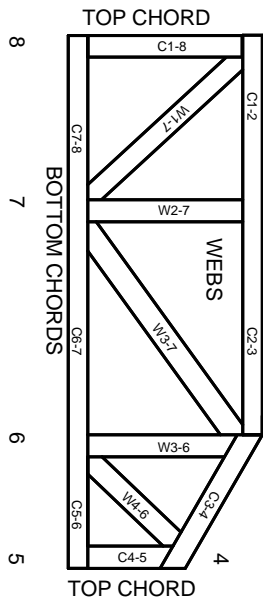


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

- ANSI/TFP1: National Design Specification for Metal Plate Connected Wood Truss Construction.
- DSB-22: Design Standard for Bracing.
- 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-1-1988, 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/TFP 1 section 6.3. These truss designs rely on Lumber values established by others.

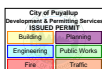
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General Safety Notes

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/TFP 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TFP 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TFP 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.



PRCNC20240216 - Revision #4
Village Buildings - Truss Package

