ENGINEERING BY
TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: 32573-32573B
16 WOODGROVE - ROOF

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by 84 Components - #2383.

Pages or sheets covered by this seal: I54390882 thru I54390883

My license renewal date for the state of North Carolina is December 31, 2022.

North Carolina COA: C-0844

September 27,2022

Fox, Steve

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.

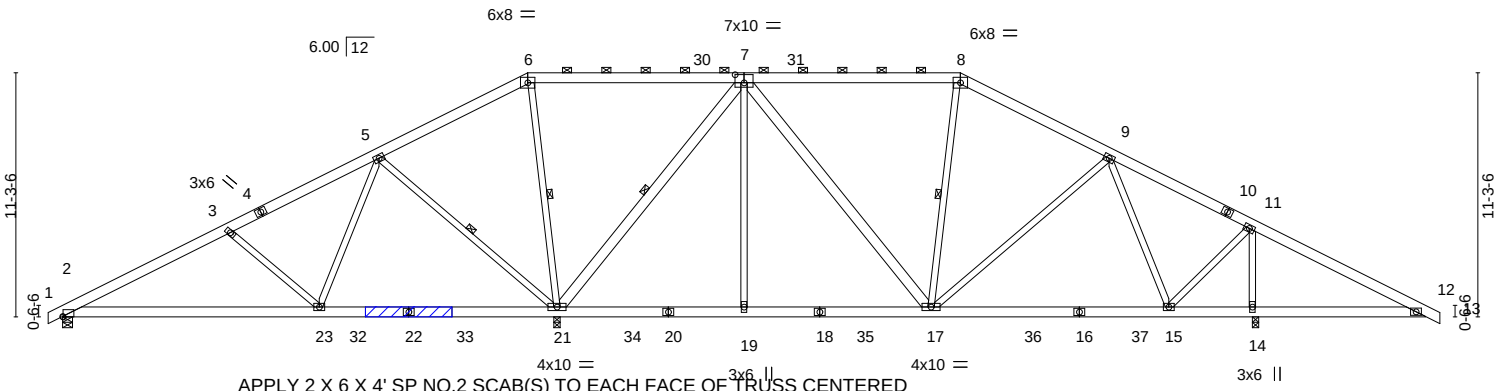
Job	Truss	Truss Type	Qty	Ply	16 WOODGROVE - ROOF
32573-32573B	T1AR	COMMON	5	1	I54390882
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.620 s Aug 22 2022 MiTek Industries, Inc. Mon Sep 26 10:23:20 2022 Page 1
ID:bR?R?vRvhaZzrqqpiA4cZKzSVGN-UPhDJ8iY3tyM?vpW?7tyCVFlyO5wvkTTD77nOTyZnsL

-0-8-0	7-9-0	14-7-8	21-6-0	31-6-0	41-6-0	48-4-8	55-3-0	63-0-0	63-8-0
0-8-0	7-9-0	6-10-8	6-10-8	10-0-0	10-0-0	6-10-8	6-10-8	7-9-0	0-8-0

REPAIR: PLATES ARE DAMAGED AT JOINT(S) { 22 }.

Scale = 1:106.5



APPLY 2 X 6 X 4' SP NO.2 SCAB(S) TO EACH FACE OF TRUSS CENTERED ON SPLICE AS SHOWN. ATTACH WITH (0.131" X 3") NAILS PER THE FOLLOWING NAIL SCHEDULE: 2 x 3'S - 1 ROW, 2 x 4'S - 2 ROWS, 2 x 6'S AND LARGER - 3 ROWS: SPACED @ 4" O.C. STAGGER NAIL SPACING FROM FRONT FACE AND BACK FACE FOR A NET 2" O.C SPACING IN THE TRUSS. USE 2" MEMBER END DISTANCE.

11-10-6	22-10-4	31-6-0	40-1-12	51-1-10	55-3-8	63-0-0
11-10-6	10-11-14	8-7-12	8-7-12	10-11-14	4-1-14	7-8-8

Plate Offsets (X,Y)-- [2:0-0-4,Edge], [7:0-5-0,0-4-8]

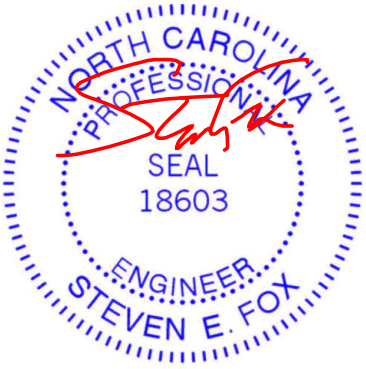
LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.74	Vert(LL)	-0.11	21-23	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.49	Vert(CT)	-0.21	23-26	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.89	Horz(CT)	0.02	14	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 494 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.2 *Except*
3-23,11-15,11-14: 2x4 SP No.3, 7-21,7-17: 2x6 SP No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 6-8.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 5-21, 6-21, 7-21, 8-17

REACTIONS. (size) 2=0-5-8, 21=0-3-8 (req. 0-4-9), 14=0-3-8
Max Horz 2=-188(LC 10)
Max Uplift 2=-49(LC 12), 21=-123(LC 12), 14=-111(LC 12)
Max Grav 2=649(LC 21), 21=2925(LC 17), 14=1893(LC 22)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-767/178, 3-5=-428/132, 5-6=0/835, 6-7=0/764, 7-8=-653/191, 8-9=-809/179, 9-11=-491/64, 11-12=-362/763
BOT CHORD 2-23=-54/656, 19-21=0/430, 17-19=0/430, 15-17=0/540, 14-15=-578/398, 12-14=-578/398
WEBS 3-23=-477/226, 5-23=-17/701, 5-21=-896/248, 6-21=-767/151, 7-21=-1652/189, 7-19=0/439, 7-17=0/443, 9-15=-755/278, 11-15=-139/1189, 11-14=-1700/417



NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=45ft; L=45ft; eave=7ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) WARNING: This long span truss requires extreme care and experience for proper and safe handling and erection. For general handling and erection guidance, see Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses ("BCSI"), jointly produced by SBCA and TPI. The building owner or the owner's authorized agent shall contract with a qualified registered design professional for the design and inspection of the temporary installation restraint/bracing and the permanent individual truss member restraint/bracing. MiTek assumes no responsibility for truss manufacture, handling, erection, or bracing.
4) Provide adequate drainage to prevent water ponding.
5) All plates are 4x6 MT20 unless otherwise indicated.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) WARNING: Required bearing size at joint(s) 21 greater than input bearing size.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 49 lb uplift at joint 2, 123 lb uplift at joint 21 and 111 lb uplift at joint 14.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

September 27,2022

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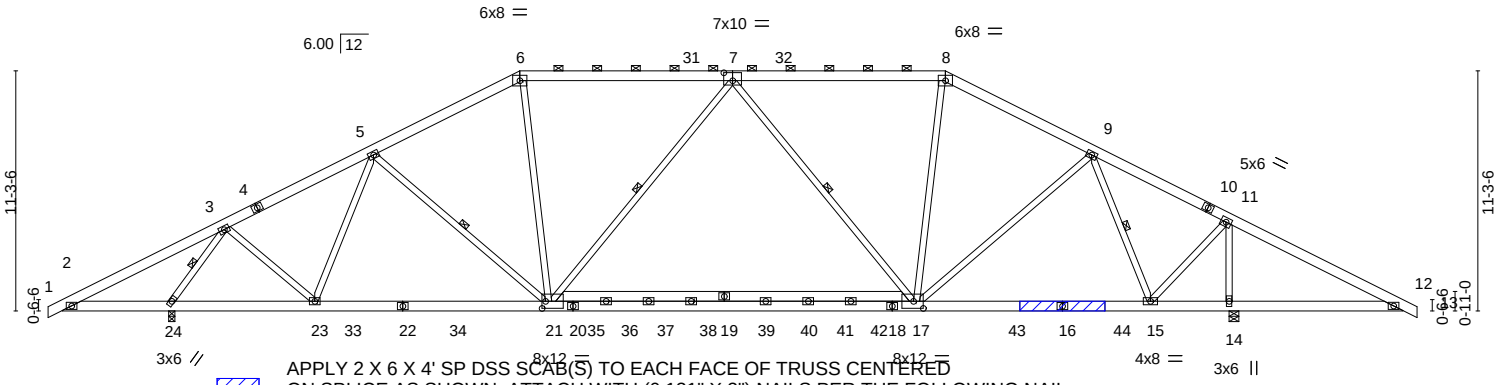
Job	Truss	Truss Type	Qty	Ply	16 WOODGROVE - ROOF
32573-32573B	T1BR	ROOF TRUSS	3	1	I54390883
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.620 s Aug 22 2022 MiTek Industries, Inc. Mon Sep 26 10:23:23 2022 Page 1
ID:bR?R?vRvhaZzrqqpiA4cZKzSVGN-u_MLy9lRLoKxsMX5hGQfq7tqic1864evv5MR?oyZnsI

-0-8-0	7-9-0	14-7-8	21-6-0	31-6-0	41-6-0	48-4-8	55-3-0	63-0-0	63-8-0
0-8-0	7-9-0	6-10-8	6-10-8	10-0-0	10-0-0	6-10-8	6-10-8	7-9-0	0-8-0

REPAIR: PLATES ARE DAMAGED AT JOINT(S) { 16 }.

Scale = 1:108.3



APPLY 2 X 6 X 4' SP DSS SCAB(S) TO EACH FACE OF TRUSS CENTERED ON SPLICE AS SHOWN. ATTACH WITH (0.131" X 3") NAILS PER THE FOLLOWING NAIL SCHEDULE: 2 x 3'S - 1 ROW, 2 x 4'S - 2 ROWS, 2 x 6'S AND LARGER - 3 ROWS: SPACED @ 4" O.C. STAGGER NAIL SPACING FROM FRONT FACE AND BACK FACE FOR A NET 2" O.C SPACING IN THE TRUSS. USE 2" MEMBER END DISTANCE.

5-0-0	11-10-6	22-10-4	31-6-0	40-1-12	51-1-10	55-3-8	63-0-0
5-0-0	6-10-6	10-11-14	8-7-12	8-7-12	10-11-14	4-1-14	7-8-8

Plate Offsets (X,Y)-- [7:0-5-0,0-4-8], [17:0-5-8,0-4-0], [21:0-2-0,0-4-0]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.64	Vert(LL)	-0.33	17-21	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.78	Vert(CT)	-0.58	17-21	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.86	Horz(CT)	0.08	14	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 502 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2 *Except*
16-18,20-22: 2x6 SP DSS
WEBS 2x4 SP No.2 *Except*
3-23,11-15,11-14,3-24: 2x4 SP No.3

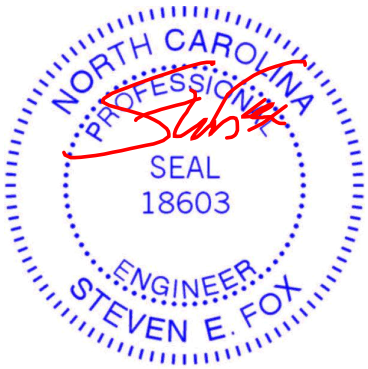
BRACING-
TOP CHORD Structural wood sheathing directly applied or 4-7-9 oc purlins, except 2-0-0 oc purlins (4-5-0 max.): 6-8.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 5-21, 7-21, 7-17, 9-15, 3-24

REACTIONS. (size) 14=0-5-8, 24=0-3-8 (req. 0-3-13)
Max Horz 24=-188(LC 10)
Max Uplift 14=-146(LC 12), 24=-226(LC 12)
Max Grav 14=2772(LC 58), 24=2433(LC 51)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-296/590, 3-5=-2235/274, 5-6=-2436/370, 6-7=-2198/372, 7-8=-1928/317, 8-9=-2151/311, 9-11=-1050/94, 11-12=-369/765
BOT CHORD 2-24=-438/337, 23-24=0/1276, 21-23=-59/2208, 17-21=-43/2340, 15-17=0/1338, 14-15=-578/406, 12-14=-578/406
WEBS 3-23=-42/1033, 5-23=-569/155, 6-21=0/665, 7-21=-360/113, 7-17=-704/207, 8-17=0/566, 9-17=-42/755, 9-15=-1469/341, 11-15=-239/1944, 11-14=-2545/529, 3-24=-2680/539

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=45ft; L=45ft; eave=7ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) WARNING: This long span truss requires extreme care and experience for proper and safe handling and erection. For general handling and erection guidance, see Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses ("BCSI"), jointly produced by SBCA and TPI. The building owner or the owner's authorized agent shall contract with a qualified registered design professional for the design and inspection of the temporary installation restraint/bracing and the permanent individual truss member restraint/bracing. MiTek assumes no responsibility for truss manufacture, handling, erection, or bracing.
4) Provide adequate drainage to prevent water ponding.
5) All plates are 4x6 MT20 unless otherwise indicated.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) WARNING: Required bearing size at joint(s) 24 greater than input bearing size.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 146 lb uplift at joint 14 and 226 lb uplift at joint 24.
10) Load case(s) 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.
11) LOAD CASE(S) – This design is the composite result of multiple load cases.

Continued on page 2



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NOTES-

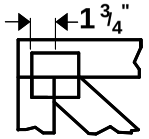
12) User moving load cases exist: Review the load cases for details.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
14) ATTIC SPACE SHOWN IS DESIGNED AS UNINHABITABLE.
15) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard Except:

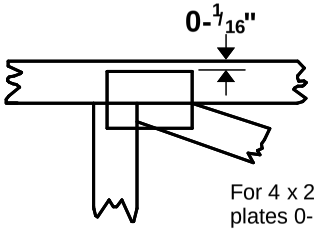
50) Reversal: User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-60(F), 6-8=-60(F), 8-13=-60(F), 25-28=-20(F)
51) Reversal: 1st User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-60(F), 6-8=-60(F), 8-13=-60(F), 21-25=-20(F), 21-35=-50(F=-20), 28-35=-20(F)
52) Reversal: 2nd User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-60(F), 6-8=-60(F), 8-13=-60(F), 25-35=-20(F), 35-37=-50(F=-20), 28-37=-20(F)
53) Reversal: 3rd User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-60(F), 6-8=-60(F), 8-13=-60(F), 25-37=-20(F), 37-38=-50(F=-20), 28-38=-20(F)
54) Reversal: 4th User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-60(F), 6-8=-60(F), 8-13=-60(F), 25-38=-20(F), 19-38=-50(F=-20), 19-28=-20(F)
55) Reversal: 5th User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-60(F), 6-8=-60(F), 8-13=-60(F), 19-25=-20(F), 19-39=-50(F=-20), 28-39=-20(F)
56) Reversal: 6th User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-60(F), 6-8=-60(F), 8-13=-60(F), 25-39=-20(F), 39-40=-50(F=-20), 28-40=-20(F)
57) Reversal: 7th User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-60(F), 6-8=-60(F), 8-13=-60(F), 25-40=-20(F), 40-41=-50(F=-20), 28-41=-20(F)
58) Reversal: 8th User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-60(F), 6-8=-60(F), 8-13=-60(F), 25-41=-20(F), 18-41=-50(F=-20), 18-28=-20(F)
59) Reversal: 9th User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-60(F), 6-8=-60(F), 8-13=-60(F), 25-42=-20(F), 17-42=-50(F=-20), 17-28=-20(F)
60) User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-60(F), 6-8=-60(F), 8-13=-60(F), 25-28=-20(F)
61) 1st User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-60(F), 6-8=-60(F), 8-13=-60(F), 21-25=-20(F), 21-35=-50(F=-20), 28-35=-20(F)
62) 2nd User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-60(F), 6-8=-60(F), 8-13=-60(F), 25-35=-20(F), 35-37=-50(F=-20), 28-37=-20(F)
63) 3rd User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-60(F), 6-8=-60(F), 8-13=-60(F), 25-37=-20(F), 37-38=-50(F=-20), 28-38=-20(F)
64) 4th User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-60(F), 6-8=-60(F), 8-13=-60(F), 25-38=-20(F), 19-38=-50(F=-20), 19-28=-20(F)
65) 5th User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-60(F), 6-8=-60(F), 8-13=-60(F), 19-25=-20(F), 19-39=-50(F=-20), 28-39=-20(F)
66) 6th User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-60(F), 6-8=-60(F), 8-13=-60(F), 25-39=-20(F), 39-40=-50(F=-20), 28-40=-20(F)
67) 7th User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-60(F), 6-8=-60(F), 8-13=-60(F), 25-40=-20(F), 40-41=-50(F=-20), 28-41=-20(F)
68) 8th User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-60(F), 6-8=-60(F), 8-13=-60(F), 25-41=-20(F), 18-41=-50(F=-20), 18-28=-20(F)
69) 9th User Defined Moving Load - User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-6=-60(F), 6-8=-60(F), 8-13=-60(F), 25-42=-20(F), 17-42=-50(F=-20), 17-28=-20(F)

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.

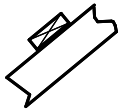
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

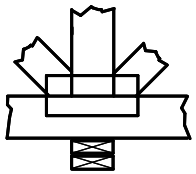
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



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

BEARING

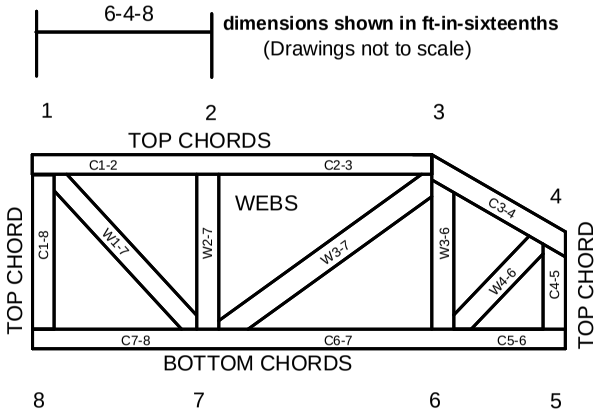


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing & 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-1311, ESR-1352, ESR1988
ER-3907, ESR-2362, ESR-1397, ESR-3282

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

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

MiTek
ENGINEERING BY TRENCO
A MiTek Affiliate

MiTek Engineering Reference Sheet: MII-7473 rev. 5/19/2020

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.