ENGINEERING BY
TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: 21-6297-A
POSTON PLAN ROOF

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Riverside Roof Truss.

Pages or sheets covered by this seal: I53767828 thru I53767832

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

North Carolina COA: C-0844

NORTH CAROLINA
PROFESSIONAL
SEAL
036322
ENGINEER
ERIC A GILBERT

August 23,2022

Gilbert, Eric

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.

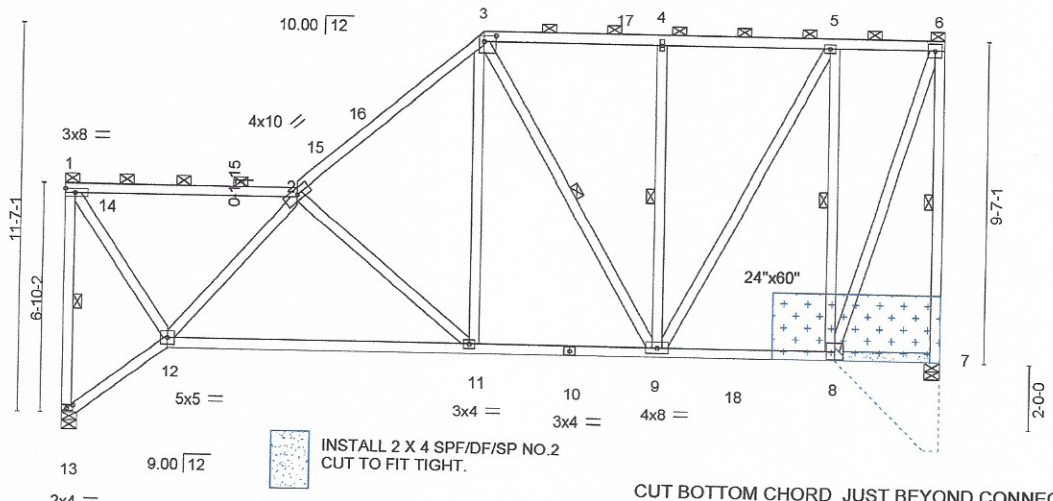
Job	Truss	Truss Type	Qty	Ply	POSTON PLAN ROOF		
21-6297-A	H2F	Piggyback Base	1	1	Job Reference (optional)	5 UNITS JTE	I53767828

Riverside Roof Truss, LLC Danville, VA. 24541

8.530 s Jun 10 2022 MiTek Industries, Inc. Mon Aug 22 16:32:35 2022 Page 1
ID:4mqzx5JtNAwoTDf?zpILBsylfeY-14CKAvh3kusKdfQC2C21JaPJ5RdE3BH80nprLTylEkA

REPAIR: MODIFY BOTTOM CHORD PROFILE AS SHOWN.

Scale = 1:68.7



INSTALL 2 X 4 SPF/DF/SP NO.2 CUT TO FIT TIGHT.

CUT BOTTOM CHORD JUST BEYOND CONNECTOR PLATES AT JOINT 8. THE JOINT MUST REMAIN UNDISTURBED.

ATTACH 7/16" OSB GUSSET (7/16" RATED SHEATHING 24/16 EXP 1) TO EACH FACE OF TRUSS WITH (0.131" X 2.5" MIN.) NAILS PER THE FOLLOWING NAIL SCHEDULE: 2 X 3'S - 2 ROWS, 2 X 4'S - 3 ROWS, 2 X 6'S AND LARGER - 4 ROWS: SPACED @ 4" O.C. NAILS TO BE DRIVEN FROM BOTH FACES. STAGGER SPACING FROM FRONT TO BACK FACE FOR A NET 2" O.C. SPACING IN EACH COVERED TRUSS MEMBER. USE 2" MEMBER END DISTANCE.

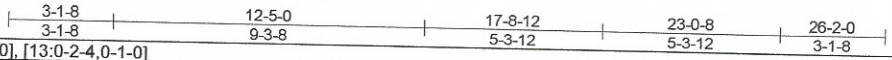


Plate Offsets (X,Y)-- 3:0-4-4,0-2-0], [13:0-2-4,0-1-0]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	30.0	Plate Grip DOL	1.15	TC	0.85	Vert(LL)	-0.21	11-12	>999	360	MT20	244/190
Snow (Pf/Pg)	23.1/30.0	Lumber DOL	1.15	BC	0.80	Vert(CT)	-0.43	11-12	>718	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.90	Horz(CT)	0.09	7	n/a	n/a		
BCLL	0.0 *	Code	IRC2015/TPI2014	Matrix-MS							Weight: 216 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x4 SP No.2 *Except*
1-2: 2x4 SP DSS, 2-3: 2x4 SP No.1
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except*
1-13,6-7,4-9,5-8: 2x4 SP No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-2-10 oc purlins, except end verticals, and 2-0-0 oc purlins (4-7-5 max.): 1-2, 3-6.
BOT CHORD Rigid ceiling directly applied or 6-9-8 oc bracing.
WEBS 1 Row at midpt 1-13, 6-7, 3-9, 4-9, 5-8

REACTIONS. (size) 13=0-5-8, 7=0-5-8
Max Horz 13=388(LC 13)
Max Uplift 13=-123(LC 16), 7=-234(LC 13)
Max Grav 13=1546(LC 38), 7=1676(LC 38)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-13=-1543/414, 1-2=-766/323, 2-3=-1460/230, 3-4=-1004/241, 4-5=-1004/241, 5-6=-438/196, 6-7=-1649/308
BOT CHORD 12-13=-576/587, 11-12=-700/1576, 9-11=-408/1045, 8-9=-188/510
WEBS 1-12=-381/1342, 2-12=-1276/300, 2-11=-686/382, 3-11=-143/645, 3-9=-406/169, 4-9=-728/169, 5-9=-280/1016, 5-8=-1423/398, 6-8=-319/1584

NOTES-
1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone 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
2) TCLL: ASCE 7-10; Pr=30.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=30.0 psf (ground snow); Pf=23.1 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10, Lu=50-0-0
3) Unbalanced snow loads have been considered for this design.
4) Provide adequate drainage to prevent water ponding.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Bearing at joint(s) 13, 7 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 123 lb uplift at joint 13 and 234 lb uplift at joint 7.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

August 23,2022

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	POSTON PLAN ROOF	I53767829
21-6297-A	H2H	Piggyback Base	1	1	Job Reference (optional)	

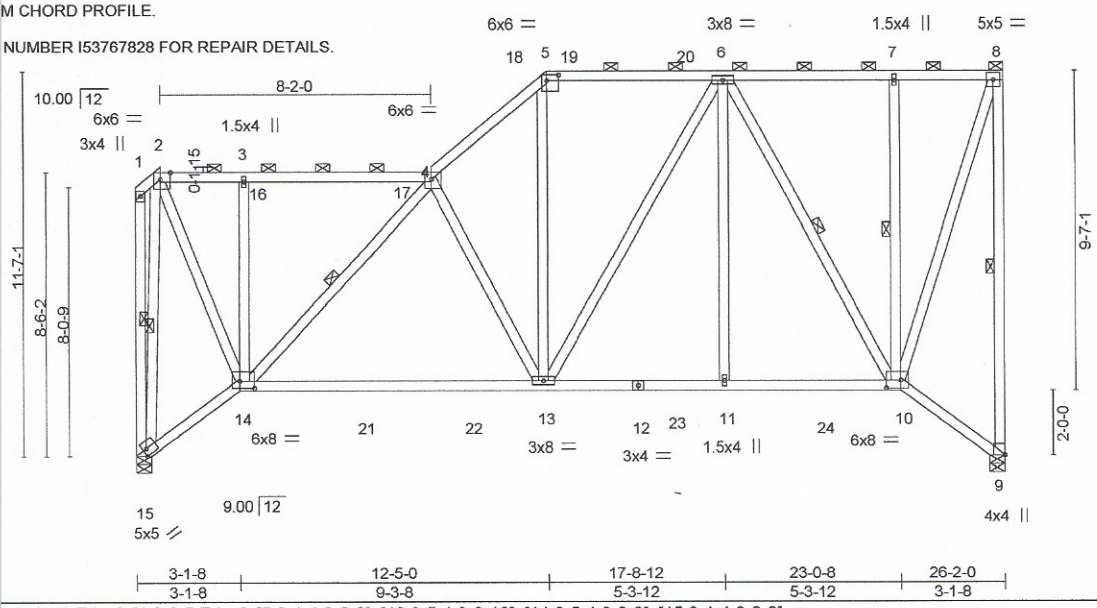
Riverside Roof Truss, LLC, Danville, Va - 24541, 8.530 s Dec 6 2021 MiTek Industries, Inc. Fri Aug 19 14:22:45 2022 Page 1
ID:4mqzx5JtNAwoTDf?zpILBsyIfeY-akCg2_3oIghwheMvpSRBHXVcy8Hcs0aYmQiuRcymFvu

0-9-0 3-1-8 | 8-11-0 | 12-5-0 | 17-8-12 | 23-0-8 | 26-2-0
0-9-0 2-4-8 | 5-9-8 | 3-6-0 | 5-3-12 | 5-3-12 | 3-1-8

REPAIR: MODIFY BOTTOM CHORD PROFILE.

SEE MITEK REFERENCE NUMBER I53767828 FOR REPAIR DETAILS.

Scale = 1:69.3



3-1-8 | 12-5-0 | 17-8-12 | 23-0-8 | 26-2-0
3-1-8 | 9-3-8 | 5-3-12 | 5-3-12 | 3-1-8

Plate Offsets (X,Y)-- [2:0-3-11,Edge], [4:0-2-5,Edge], [5:0-4-4,0-2-0], [10:0-5-4,0-2-12], [14:0-5-4,0-2-8], [15:0-1-4,0-2-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	30.0	Plate Grip DOL	1.15	TC	0.84	Vert(LL)	-0.22	13-14	>999	360	MT20	244/190
Snow (Pf/Pg)	23.1/30.0	Lumber DOL	1.15	BC	0.96	Vert(CT)	-0.44	13-14	>702	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.75	Horz(CT)	0.14	9	n/a	n/a		
BCLL	0.0 *	Code	IRC2015/TPI2014	Matrix-MS							Weight: 248 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except*
8-9: 2x4 SP DSS

BRACING-
TOP CHORD Structural wood sheathing directly applied or 4-5-13 oc purlins, except end verticals, and 2-0-0 oc purlins (4-2-15 max.): 2-4, 5-8.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 1 Row at midpt 8-9, 4-14, 6-10, 7-10, 1-15, 2-15

REACTIONS. (size) 9=0-5-8, 15=0-5-8
Max Horz 15=421(LC 13)
Max Uplift 9=-235(LC 13), 15=-154(LC 12)
Max Grav 9=1729(LC 40), 15=1618(LC 40)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-289/281, 2-3=-755/321, 3-4=-770/324, 4-5=-1545/270, 5-6=-1125/248, 6-7=-511/181, 7-8=-503/181, 8-9=-1700/381, 1-15=-330/293
BOT CHORD 14-15=-612/684, 13-14=-619/1459, 11-13=-370/1052, 10-11=-370/1052
WEBS 2-14=-455/1801, 3-14=-729/153, 4-14=-1018/230, 4-13=-685/348, 5-13=-59/669, 6-13=-165/337, 6-11=0/258, 6-10=-1090/281, 7-10=-535/166, 8-10=-410/1639, 2-15=-1477/153

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone 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) TCLL: ASCE 7-10; Pr=30.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=30.0 psf (ground snow); Pf=23.1 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) Provide adequate drainage to prevent water ponding.
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) Bearing at joint(s) 9, 15 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 9=235, 15=154.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

August 23,2022

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	POSTON PLAN ROOF	I53767830
21-6297-A	H2J	Piggyback Base	1	1	Job Reference (optional)	

Riverside Roof Truss, LLC, Danville, Va - 24541, 8.530 s Dec 6 2021 MiTek Industries, Inc. Fri Aug 19 14:22:46 2022 Page 1
ID:4mqzx5JtNAwoTDf?zpILBsyIfeY-3wl3FK4Q3_pmJox5MAyQqk1mBYfcbTri?4RSz2ymFvt

REPAIR: MODIFY BOTTOM CHORD PROFILE.

SEE MITEK REFERENCE NUMBER I53767828 FOR REPAIR DETAILS.

Scale = 1:69.1

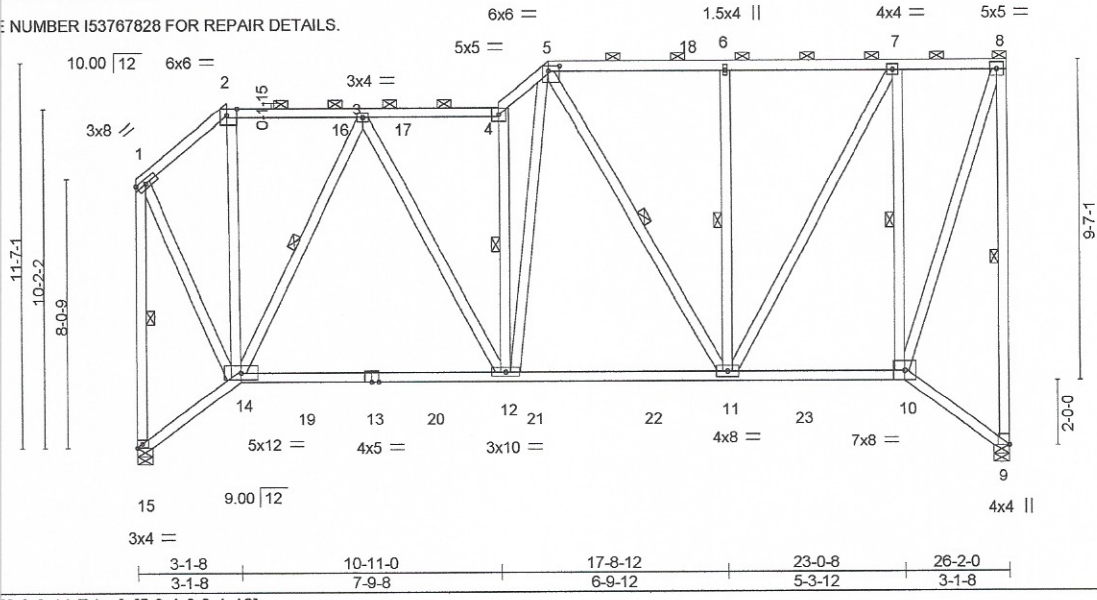


Plate Offsets (X,Y)-- [2:0-3-11,Edge], [5:0-4-0,0-1-12]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	30.0	Plate Grip DOL	1.15	TC	0.94	Vert(LL)	-0.18	12-14	>999	360	MT20	244/190
Snow (Pf/Pg)	23.1/30.0	Lumber DOL	1.15	BC	0.78	Vert(CT)	-0.32	12-14	>972	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.74	Horz(CT)	0.13	9	n/a	n/a		
BCLL	0.0 *	Code	IRC2015/TPI2014	Matrix-MS							Weight: 254 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except*
8-9: 2x4 SP DSS

BRACING-
TOP CHORD Structural wood sheathing directly applied or 4-0-6 oc purlins, except end verticals, and 2-0-0 oc purlins (4-5-7 max.): 2-4, 5-8.
BOT CHORD Rigid ceiling directly applied or 7-4-7 oc bracing.
WEBS 1 Row at midpt 8-9, 3-14, 4-12, 5-11, 6-11, 7-10, 1-15

REACTIONS. (size) 9=0-5-8, 15=0-5-8
Max Horz 15=421(LC 13)
Max Uplift 9=-235(LC 13), 15=-144(LC 16)
Max Grav 9=1786(LC 40), 15=1561(LC 40)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-734/357, 2-3=-574/300, 3-4=-1373/253, 4-5=-1776/362, 5-6=-1103/215, 6-7=-1103/215, 7-8=-521/182, 8-9=-1757/384, 1-15=-1543/438
BOT CHORD 14-15=-599/620, 12-14=-570/1096, 11-12=-461/1201, 10-11=-236/546
WEBS 2-14=-163/277, 3-14=-1262/235, 3-12=-93/642, 4-12=-1339/288, 5-11=-270/182, 6-11=-710/169, 7-11=-278/1148, 7-10=-1542/408, 8-10=-413/1698, 1-14=-190/1209, 5-12=-304/1022

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone 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) TCLL: ASCE 7-10; Pr=30.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=30.0 psf (ground snow); Pf=23.1 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) Provide adequate drainage to prevent water ponding.
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) Bearing at joint(s) 9, 15 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 9=235, 15=144.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

August 23,2022

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	POSTON PLAN ROOF	I53767831
21-6297-A	T1A	Piggyback Base	7	1	Job Reference (optional)	

Riverside Roof Truss, LLC, Danville, Va - 24541, 8.530 s Dec 6 2021 MiTek Industries, Inc. Fri Aug 19 14:22:48 2022 Page 1
ID:4mqzx5JtNAwoTDf?zpILBsyIfeY-?ltpg05gbb3UY54UUa_uv976YMKk3Kt?SOwZ2xymFvr

REPAIR: MODIFY BOTTOM CHORD PROFILE.

SEE MITEK REFERENCE NUMBER I53767828 FOR REPAIR DETAILS.

Scale = 1:71.1

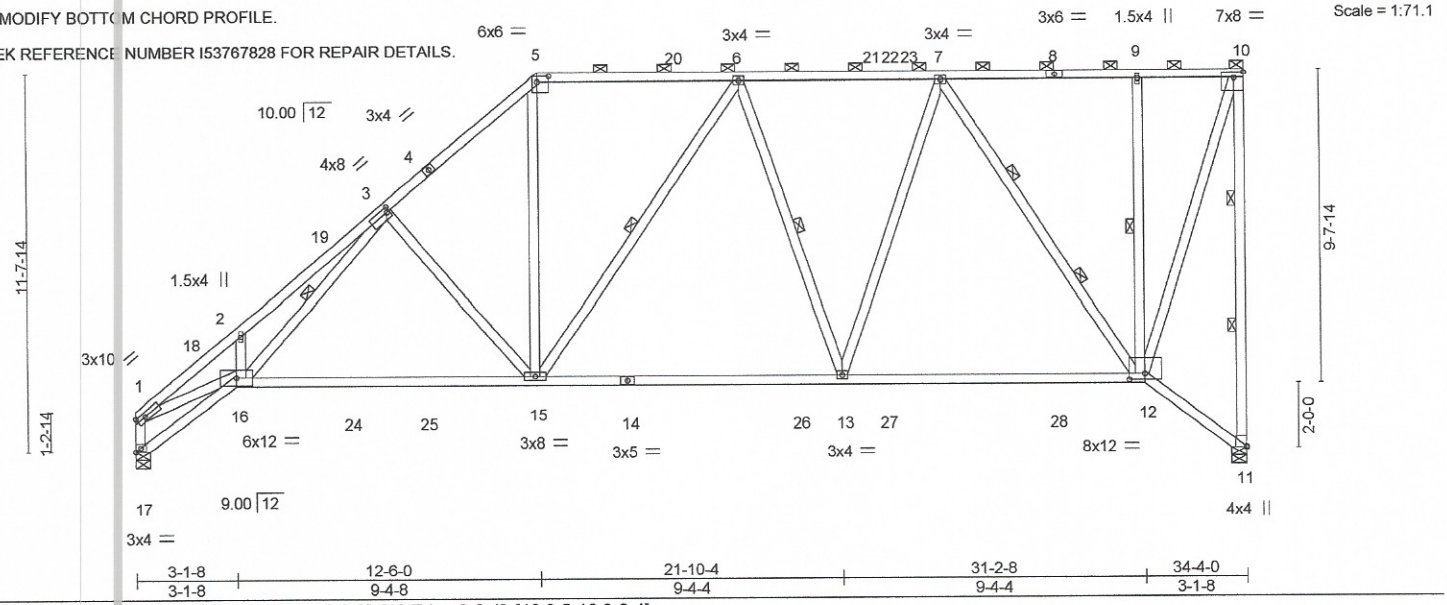


Plate Offsets (X,Y)-- [3:0-1-0,0-1-12], [5:0-4-4,0-2-0], [10:Edge,0-2-4], [12:0-5-12,0-2-4]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	30.0	Plate Grip DOL	1.15	TC	0.94	Vert(LL)	-0.28	12-13	>999	360	MT20	244/190
Snow (Pf/Pg)	23.1/30.0	Lumber DOL	1.15	BC	0.86	Vert(CT)	-0.53	15-16	>764	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.90	Horz(CT)	0.33	11	n/a	n/a		
BCLL	0.0 *	Code	IRC2015/TPI2014	Matrix-MS							Weight: 258 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x4 SP No.2 *Except* 5-8,8-10: 2x4 SP No.1
BOT CHORD 2x4 SP No.1
WEBS 2x4 SP No.3 *Except* 10-11: 2x4 SP DSS, 1-16: 2x4 SP No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins (3-4-13 max.): 5-10.
BOT CHORD Rigid ceiling directly applied or 6-10-9 oc bracing.
WEBS 1 Row at midpt 3-16, 6-15, 6-13, 9-12
2 Rows at 1/3 pts 10-11, 7-12

REACTIONS. (size) 11=0-5-8, 17=0-5-8
Max Horz 17=434(LC 13)
Max Uplift 11=-286(LC 13), 17=-183(LC 16)
Max Grav 11=2197(LC 34), 17=1708(LC 35)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-4097/1311, 2-3=-4160/1471, 3-5=-2135/422, 5-6=-1584/371, 6-7=-1740/348, 7-9=-672/217, 9-10=-662/216, 10-11=-2180/403, 1-17=-1713/577
BOT CHORD 16-17=-759/773, 15-16=-816/1897, 13-15=-531/1871, 12-13=-418/1542
WEBS 2-16=-381/210, 3-16=-1099/2167, 3-15=-860/389, 5-15=-135/965, 6-15=-510/247, 6-13=-416/243, 7-13=-116/728, 7-12=-1570/336, 9-12=-645/183, 10-12=-437/2178, 1-16=-952/3172

NOTES-
1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone 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
2) TCLL: ASCE 7-10; Pr=30.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=30.0 psf (ground snow); Pf=23.1 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10, Lu=50-0-0
3) Unbalanced snow loads have been considered for this design.
4) Provide adequate drainage to prevent water ponding.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Bearing at joint(s) 11, 17 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 11=286, 17=183.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

August 23,2022

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	POSTON PLAN ROOF	I53767832
21-6297-A	T1B	Piggyback Base	5	1	Job Reference (optional)	

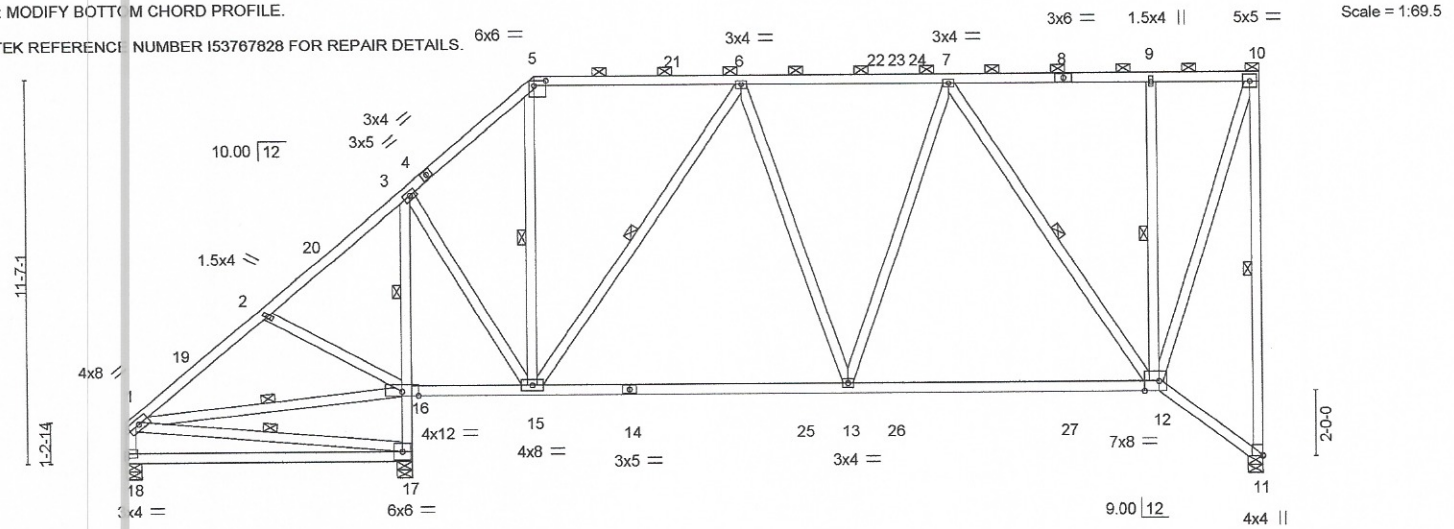
Riverside Roof Truss, LLC, Danville, Va - 24541, 8.530 s Dec 6 2021 MiTek Industries, Inc. Fri Aug 19 14:22:51 2022 Page 1
ID:4mqzx5JtNAwoTDf?zpILBsyIfeY-PtZyJ18ZtWS3PZp29jYbXoleQZM_GjXR8M9DfGymFvo

4-3-12	8-7-8	12-5-0	18-8-3	24-11-5	31-2-8	34-4-0
4-3-12	4-3-12	3-9-8	6-3-3	6-3-3	6-3-3	3-1-8

REPAIR: MODIFY BOTTOM CHORD PROFILE.

SEE MITEK REFERENCE NUMBER I53767828 FOR REPAIR DETAILS.

Scale = 1:69.5



8-2-0	8-7-8	12-5-0	21-9-12	31-2-8	34-4-0
8-2-0	0-5-8	3-9-8	9-4-12	9-4-12	3-1-8

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

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	30.0	Plate Grip DOL	1.15	TC	0.84	Vert(LL)	-0.23	12-13	>999	360	MT20	244/190
Snow (Pf/Pg)	23.1/30.0	Lumber DOL	1.15	BC	0.83	Vert(CT)	-0.41	12-13	>755	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.72	Horz(CT)	0.08	11	n/a	n/a		
BCLL	0.0 *	Code	IRC2015/TPI2014	Matrix-MS							Weight: 281 lb	FT = 20%
BCDL	10.0											

LUMBER-

TOP CHORD	2x4 SP No.2 *Except* 5-8: 2x4 SP No.1
BOT CHORD	2x4 SP No.2 *Except* 3-17: 2x4 SP No.3, 12-14: 2x4 SP No.1
WEBS	2x4 SP No.3 *Except* 10-11: 2x4 SP DSS

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (4-11-12 max.): 5-10.
BOT CHORD	Rigid ceiling directly applied or 3-11-15 oc bracing. Except: 1 Row at midpt 3-16
WEBS	1 Row at midpt 10-11, 5-15, 6-15, 7-12, 9-12, 1-17, 1-16

REACTIONS. (size) 11=0-5-8, 18=0-5-8, 17=0-5-8
Max Horz 18=430(LC 15)
Max Uplift 11=-205(LC 13), 18=-17(LC 12), 17=-317(LC 13)
Max Grav 11=1767(LC 34), 18=522(LC 41), 17=1756(LC 34)

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

TOP CHORD	1-2=-564/103, 2-3=-262/259, 3-5=-775/213, 5-6=-571/208, 6-7=-1186/260, 7-9=-539/195, 9-10=-529/194, 10-11=-1750/274, 1-18=-437/83
BOT CHORD	17-18=-535/632, 16-17=-1666/496, 3-16=-1585/361, 13-15=-316/1169, 12-13=-289/1130
WEBS	2-16=-426/199, 3-15=-113/1141, 6-15=-1054/169, 7-13=0/294, 7-12=-1058/177, 9-12=-647/182, 10-12=-301/1728, 1-17=-587/551, 1-16=-378/393

NOTES-

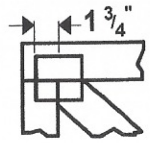
1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-10; Pr=30.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=30.0 psf (ground snow); Pf=23.1 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10, Lu=50-0-0
3) Unbalanced snow loads have been considered for this design.
4) Provide adequate drainage to prevent water ponding.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Bearing at joint(s) 11 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 18 except (jt=lb) 11=205, 17=317.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

August 23,2022

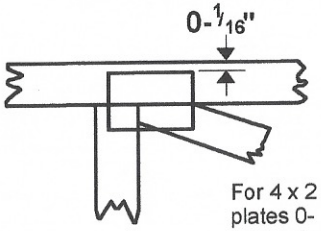
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

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.

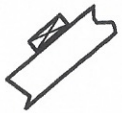
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

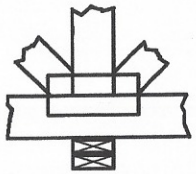
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

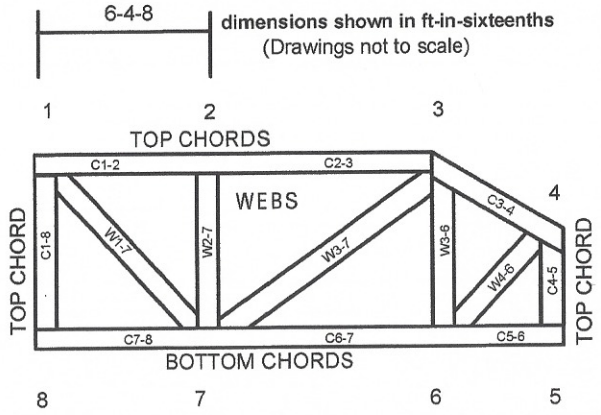


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

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

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.