ENGINEERING BY
TRENCO
A MiTek Affiliate

RE: Pinehurst B Vault Master
Pinhurst B Vault Master

Trenco
818 Soundside Rd
Edenton, NC 27932

Site Information:

Customer: D.R. HORTON - RAL - 055 Project Name: Pinehurst B Vault Master
Lot/Block: Model: PINEHURST / B
Address: Subdivision:
City: FUQUAY-VARINA State: NC

General Truss Engineering Criteria & Design Loads (Individual Truss Design Drawings Show Special Loading Conditions):

Design Code: IRC2015/TPI2014 Design Program: MiTek 20/20 8.5
Wind Code: ASCE 7-10 Wind Speed: 130 mph
Roof Load: 40.0 psf Floor Load: N/A psf

This package includes 9 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date
1	I47723291	A	9/1/2021
2	I47723292	A1	9/1/2021
3	I47723293	A2	9/1/2021
4	I47723294	A3	9/1/2021
5	I47723295	A3E	9/1/2021
6	I47723296	AE	9/1/2021
7	I47723297	BE	9/1/2021
8	I47723298	BGR	9/1/2021
9	I47723299	CE	9/1/2021

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

Truss Design Engineer's Name: Sevier, Scott

My license renewal date for the state of North Carolina is December 31, 2021.

North Carolina COA: C-0844

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 TRENCO. Any project specific information included is for TRENCO customers file reference purpose only, and was not taken into account in the preparation of these designs. 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.

September 01, 2021

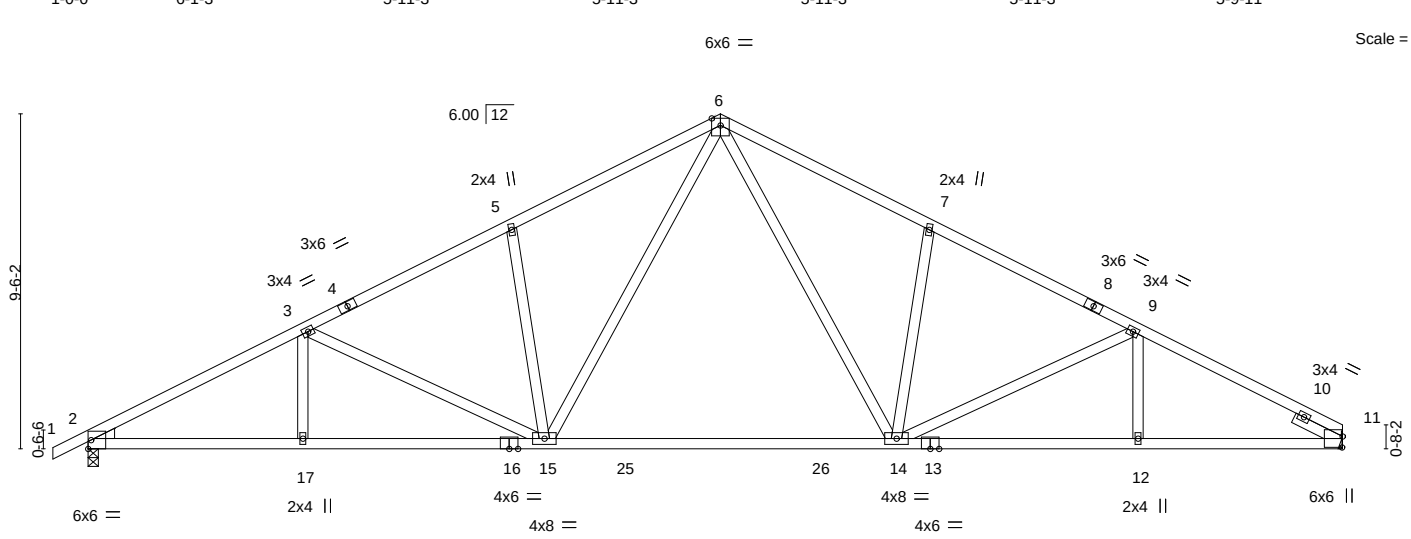
Sevier, Scott

Job	Truss	Truss Type	Qty	Ply	Pinhurst B Vault Master
Pinehurst B Vault Master	A	Common	3	1	I47723291
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Wed Sep 1 09:45:07 2021 Page 1
ID:SMVEKygkIeYRH9FtFyqHoHyi35J-QEnCy5Sl5lKVeQ3QN2XOis6n8yWEWNCsiX3XNmyi1mA

1-0-0	6-1-3	12-0-5	17-11-8	23-10-11	29-9-13	35-7-8
1-0-0	6-1-3	5-11-3	5-11-3	5-11-3	5-11-3	5-9-11

Scale = 1:65.4



6-1-3	12-11-8	22-11-8	29-9-13	35-7-8
6-1-3	6-10-5	10-0-0	6-10-5	5-9-11

Plate Offsets (X,Y)-- [11:0-3-12,0-0-3]

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	0.88	Vert(LL)	-0.38	14-15	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.81	Vert(CT)	-0.67	14-15	>638	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.51	Horz(CT)	0.10	11	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MS							Weight: 196 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2
BOT CHORD 2x4 SP No.1
WEBS 2x4 SP No.3
WEDGE
Left: 2x4 SP No.3
SLIDER Right 2x4 SP No.3 1-6-0

BRACING-
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 8-11-13 oc bracing.

REACTIONS. (size) 2=0-3-8, 11=Mechanical
Max Horz 2=170(LC 12)
Max Uplift 2=-189(LC 12), 11=-165(LC 13)
Max Grav 2=1486(LC 1), 11=1424(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2579/618, 3-5=-2121/567, 5-6=-2072/673, 6-7=-2058/670, 7-9=-2103/563, 9-11=-2453/600
BOT CHORD 2-17=-477/2225, 15-17=-477/2225, 14-15=-154/1377, 12-14=-454/2123, 11-12=-454/2123
WEBS 3-15=-456/187, 5-15=-369/245, 6-15=-243/854, 6-14=-237/831, 7-14=-380/248, 9-14=-370/165

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=30ft; 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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * 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.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=189, 11=165.

September 1,2021

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Pinhurst B Vault Master
Pinehurst B Vault Master	A1	ROOF TRUSS	6	1	I47723292
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Wed Sep 1 09:45:08 2021 Page 1
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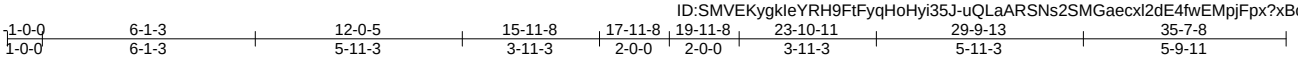

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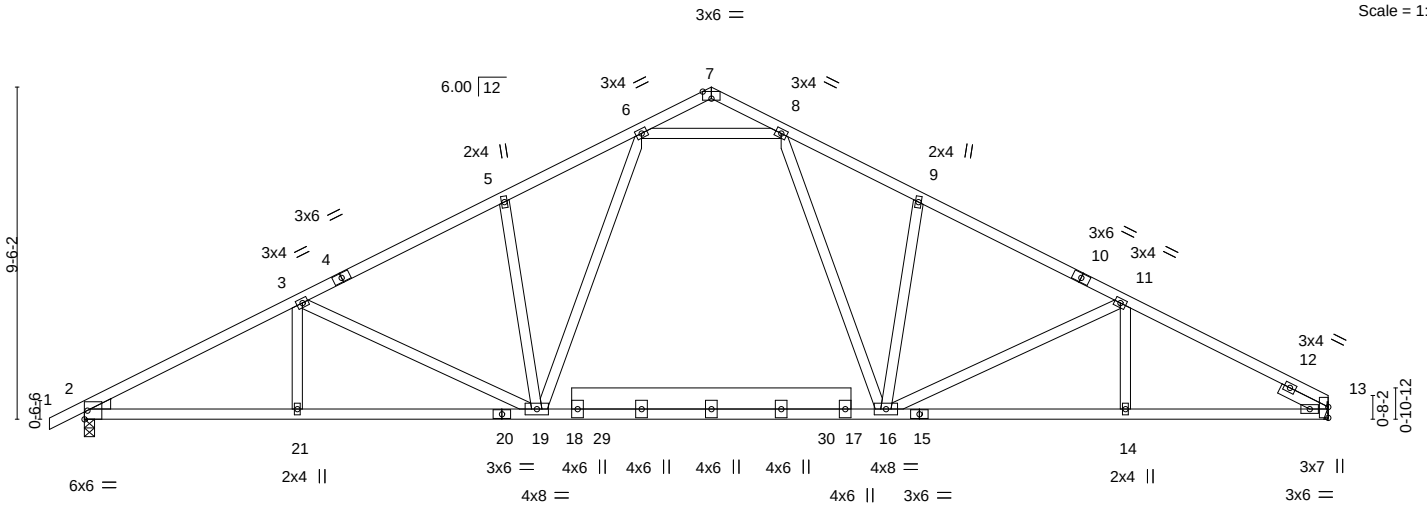

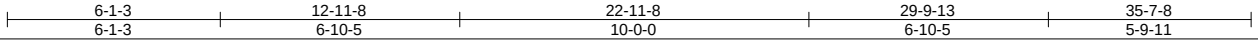

Plate Offsets (X,Y)-- [7:0-3-0,Edge]

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	0.92	Vert(LL)	-0.31	19-21	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.98	Vert(CT)	-0.47	19-21	>902	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.54	Horz(CT)	0.11	13	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MS							Weight: 222 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2 *Except* 17-18: 2x8 SP No.2
WEBS 2x4 SP No.3
WEDGE
Left: 2x4 SP No.3
SLIDER Right 2x4 SP No.3 1-6-0

BRACING-
TOP CHORD Structural wood sheathing directly applied or 1-10-13 oc purlins.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.

REACTIONS. (size) 2=0-3-8, 13=Mechanical
Max Horz 2=170(LC 12)
Max Uplift 2=-189(LC 12), 13=-165(LC 13)
Max Grav 2=1486(LC 1), 13=1424(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2588/617, 3-5=-2106/570, 5-6=-2043/653, 8-9=-2028/650, 9-11=-2090/566, 11-13=-2462/598
BOT CHORD 2-21=-477/2232, 19-21=-477/2232, 16-19=-209/1516, 14-16=-454/2130, 13-14=-454/2130
WEBS 3-19=-491/188, 5-19=-408/229, 6-19=-194/807, 8-16=-188/782, 9-16=-413/231, 11-16=-403/165, 6-8=-1402/519

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=30ft; 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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * 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.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=189, 13=165.
7) ATTIC SPACE SHOWN IS DESIGNED AS UNINHABITABLE.

September 1,2021

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Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Pinhurst B Vault Master
Pinehurst B Vault Master	A2	Roof Special	1	1	I47723293
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Wed Sep 1 09:45:09 2021 Page 1
ID:SMVEKygkIeYRH9FtFyqHoHyi35J-MduzNmT?dMaDtkCpVTZsnHC7qlAk_BE8ArYeSeyi1m8

1-0-0	6-1-3	12-0-5	17-11-8	23-7-8	29-8-12	35-11-0	36-11-0
1-0-0	6-1-3	5-11-3	5-11-3	5-8-0	6-1-4	6-2-4	1-0-0

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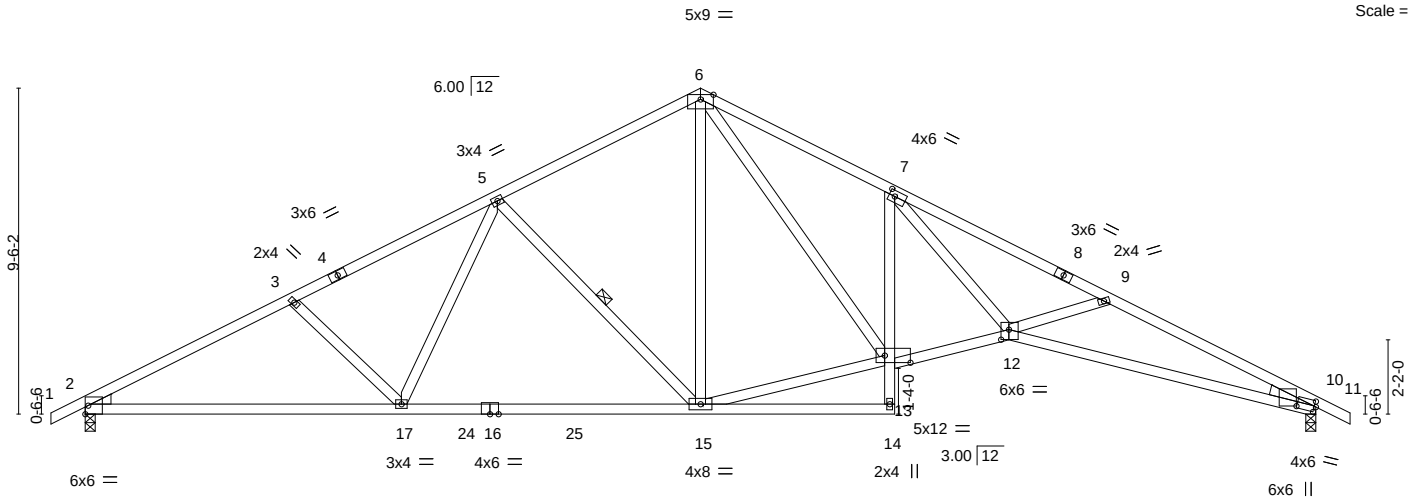

9-2-12	17-11-8	23-7-8	26-11-8	35-11-0
9-2-12	8-8-12	5-8-0	3-4-0	8-11-8

Plate Offsets (X,Y)-- [7:0-2-0,0-2-0], [10:0-1-10,0-6-13], [10:0-0-9,0-1-14], [12:0-2-12,0-3-8], [13:0-9-0,0-2-8]

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	0.81	Vert(LL)	-0.33	15-17	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.93	Vert(CT)	-0.63	15-17	>686	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.86	Horz(CT)	0.30	10	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MS							Weight: 205 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2 *Except*
7-14: 2x4 SP No.3, 10-12: 2x4 SP DSS
WEBS 2x4 SP No.3
WEDGE
Left: 2x4 SP No.3 , Right: 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 1 Row at midpt 5-15

REACTIONS. (size) 2=0-3-8, 10=0-3-8
Max Horz 2=158(LC 12)
Max Uplift 2=-190(LC 12), 10=-190(LC 13)
Max Grav 2=1497(LC 1), 10=1497(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2592/648, 3-5=-2342/612, 5-6=-1676/534, 6-7=-2722/827, 7-9=-4188/943, 9-10=-4514/1078
BOT CHORD 2-17=-474/2237, 15-17=-309/1861, 7-13=-1363/443, 12-13=-394/2438, 10-12=-883/4073
WEBS 3-17=-305/214, 5-17=-38/476, 5-15=-653/277, 6-15=-85/382, 13-15=-117/1407, 6-13=-445/1621, 7-12=-370/2081, 9-12=-301/245

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=30ft; 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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * 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.
5) Bearing at joint(s) 10 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=190.
7) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 10. This connection is for uplift only and does not consider lateral forces.

September 1,2021

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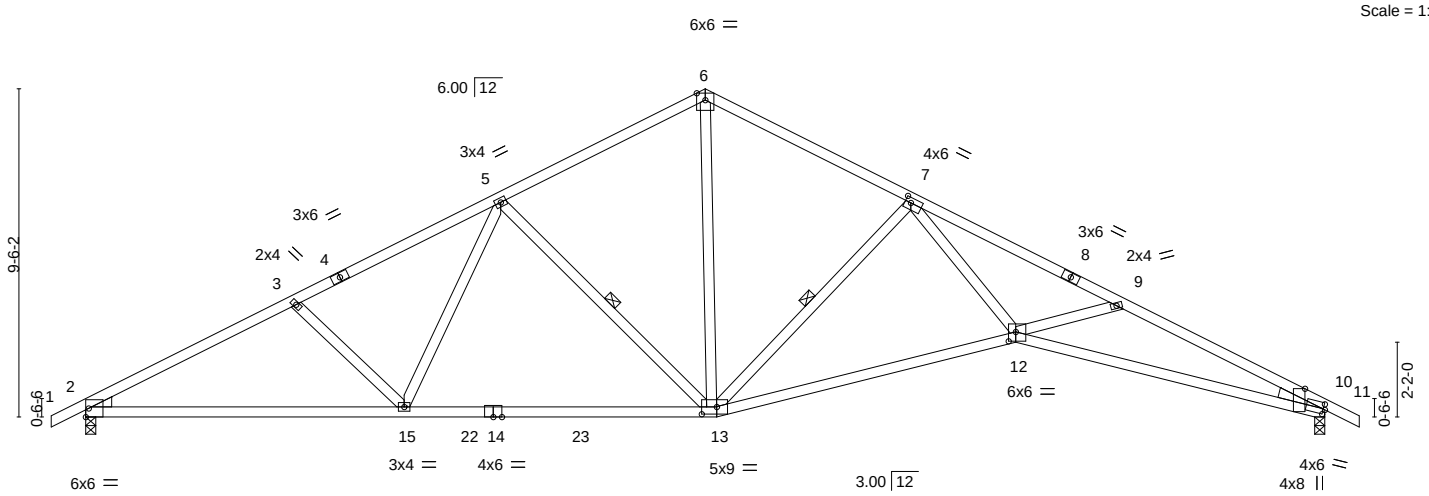
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Pinhurst B Vault Master
Pinehurst B Vault Master	A3	Roof Special	7	1	I47723294
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Wed Sep 1 09:45:10 2021 Page 1
ID:SMVEKygkIeYRH9FtFyqHoHyi35J-qpSLa6UdOgi4Vun?3A45JVkIU9VojdaIOVHC_4yi1m7

1-0-0	6-1-3	12-0-5	17-11-8	23-11-0	29-10-8	35-11-0	36-11-0
1-0-0	6-1-3	5-11-3	5-11-3	5-11-8	5-11-8	6-0-8	1-0-0

Scale = 1:66.8



9-2-12	18-3-8	26-11-8	35-11-0
9-2-12	9-0-12	8-8-0	8-11-8

Plate Offsets (X,Y)-- [7:0-2-0,0-1-12], [10:0-5-7,Edge], [10:0-0-9,0-1-10], [12:0-2-8,0-3-4], [13:0-5-4,0-2-8]

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	0.81	Vert(LL)	-0.36	13-15	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.94	Vert(CT)	-0.74	12-13	>584	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.92	Horz(CT)	0.29	10	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 187 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.1 *Except*
2-14: 2x4 SP No.2 or 2x4 SPF No.2, 10-12: 2x4 SP DSS
WEBS 2x4 SP No.3
WEDGE
Left: 2x4 SP No.3 , Right: 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 1 Row at midpt 5-13, 7-13

REACTIONS. (size) 2=0-3-8, 10=0-3-8
Max Horz 2=158(LC 16)
Max Uplift 2=-190(LC 12), 10=-190(LC 13)
Max Grav 2=1497(LC 1), 10=1497(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2594/648, 3-5=-2344/611, 5-6=-1652/530, 6-7=-1700/543, 7-9=-4218/935, 9-10=-4523/1073
BOT CHORD 2-15=-473/2238, 13-15=-310/1859, 12-13=-436/2488, 10-12=-878/4080
WEBS 3-15=-304/215, 5-15=-33/491, 5-13=-664/275, 6-13=-307/1107, 7-13=-1432/424, 7-12=-347/2220, 9-12=-272/236

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=30ft; 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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * 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.
5) Bearing at joint(s) 10 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=190.
7) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 10. This connection is for uplift only and does not consider lateral forces.

September 1,2021

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Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Pinhurst B Vault Master
Pinehurst B Vault Master	A3E	GABLE	1	1	I47723295
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Wed Sep 1 09:45:12 2021 Page 1
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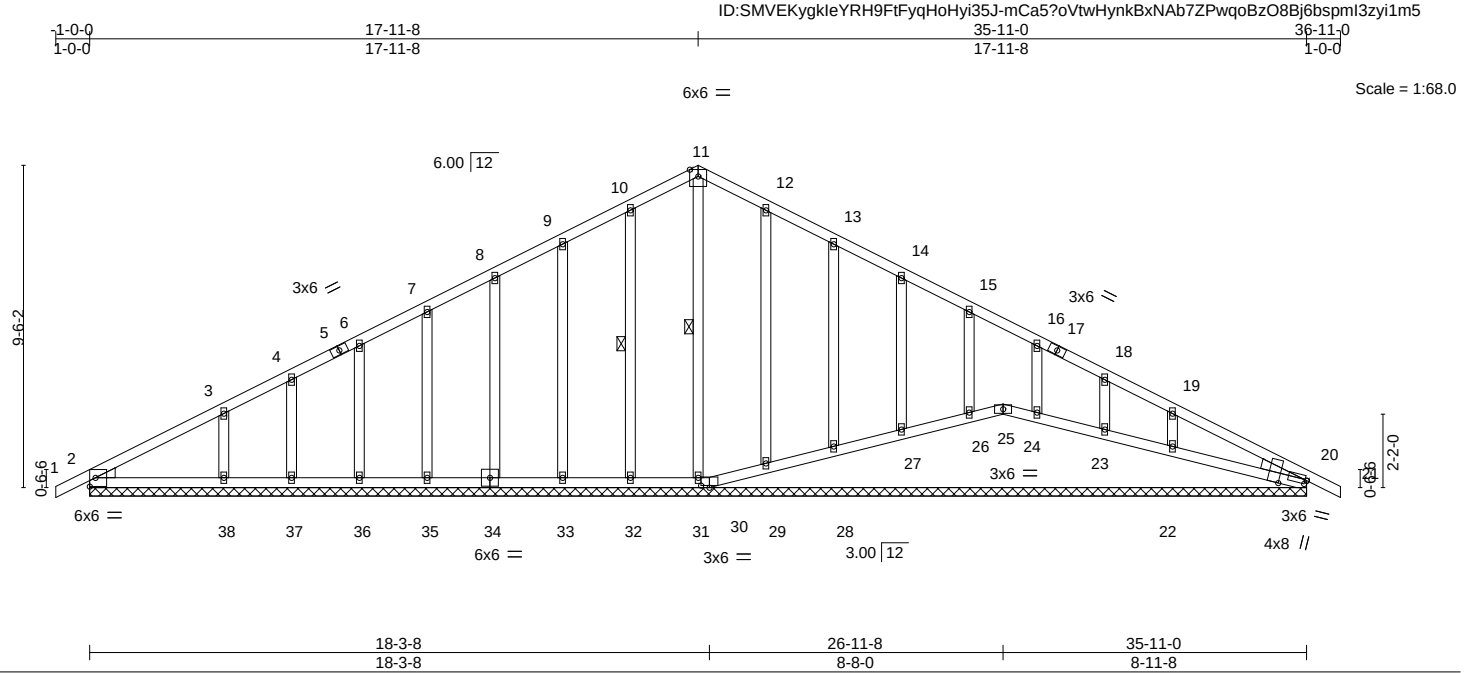

Plate Offsets (X,Y)-- [2:Edge,0-3-2], [20:0-3-4,Edge], [30:0-3-0,0-0-12]

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	0.16	Vert(LL)	0.00	21	n/r	120	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.12	Vert(CT)	0.01	21	n/r	90		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.15	Horz(CT)	0.01	20	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 224 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2
OTHERS 2x4 SP No.3
WEDGE
Left: 2x4 SP No.3 , Right: 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 22-23.
WEBS 1 Row at midpt 11-31, 10-32

REACTIONS. All bearings 35-11-0.
(lb) - Max Horz 2=159(LC 16)
Max Uplift All uplift 100 lb or less at joint(s) 2, 34, 30, 20, 32, 33, 35, 36, 37, 29, 28, 27, 26, 24, 23 except 38=-105(LC 12), 22=-106(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 2, 34, 30, 25, 20, 31, 32, 33, 35, 36, 37, 29, 28, 27, 26, 24, 23 except 38=307(LC 23), 22=307(LC 24)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 10-11=-109/278, 11-12=-109/278

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=30ft; 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) 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.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * 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.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 30, 29, 28, 27, 26, 24, 23 except (jt=lb) 22=106.
10) N/A

11) N/A

12) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 25, 29, 28, 27, 26, 24, 23, 22.

September 1,2021

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Job	Truss	Truss Type	Qty	Ply	Pinhurst B Vault Master
Pinehurst B Vault Master	AE	GABLE	1	1	I47723296
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Wed Sep 1 09:45:13 2021 Page 1
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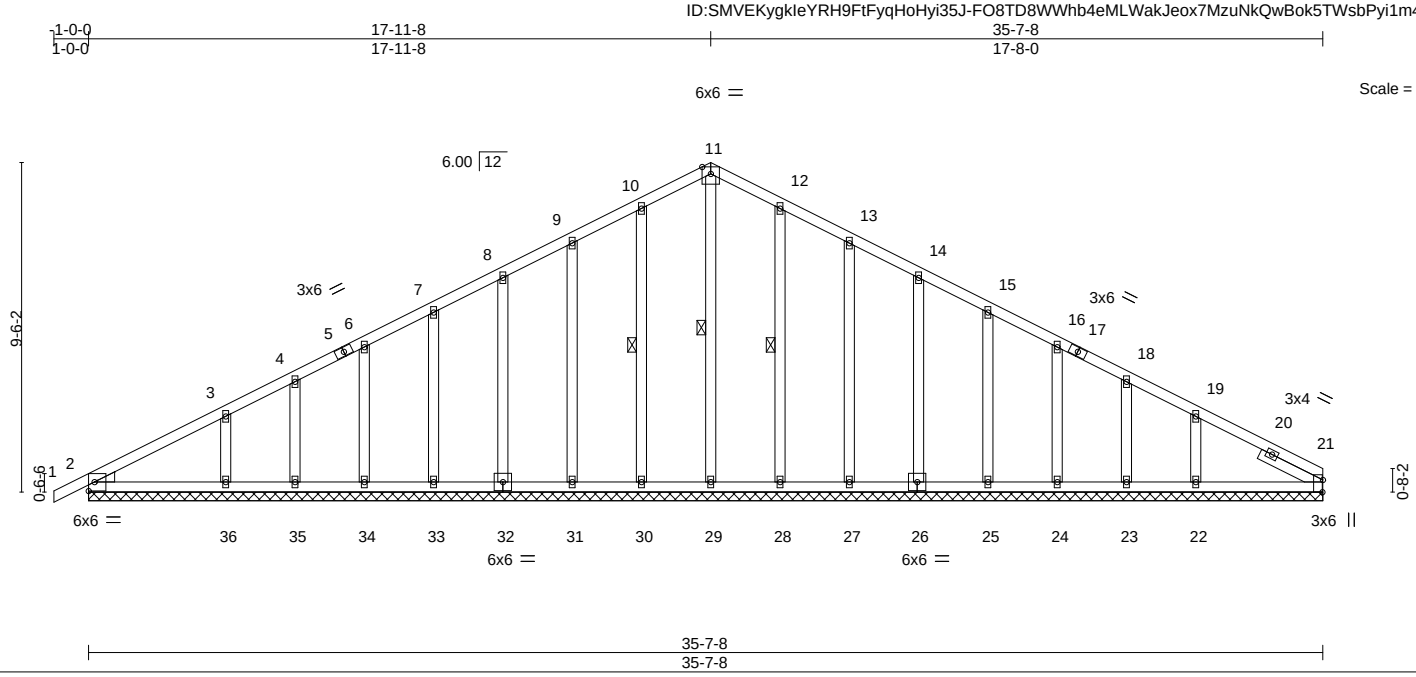

Plate Offsets (X,Y)-- [2:Edge,0-3-2], [21:0-4-4,Edge]

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	0.16	Vert(LL)	-0.00	1	n/r	120	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.12	Vert(CT)	0.01	1	n/r	90		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.12	Horz(CT)	0.01	21	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 235 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2
OTHERS 2x4 SP No.3
WEDGE
Left: 2x4 SP No.3
SLIDER Right 2x4 SP No.3 1-11-15

BRACING-
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 11-29, 10-30, 12-28

REACTIONS. All bearings 35-7-8.
(lb) - Max Horz 2=163(LC 12)
Max Uplift All uplift 100 lb or less at joint(s) 2, 30, 31, 32, 33, 34, 35, 28, 27, 26, 25, 24, 23 except 36=-105(LC 12), 22=-108(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 2, 21, 29, 30, 31, 32, 33, 34, 35, 28, 27, 26, 25, 24, 23 except 36=306(LC 23), 22=285(LC 24)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 10-11=-120/282, 11-12=-120/282

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=30ft; 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) 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.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * 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.

September 1,2021

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Job	Truss	Truss Type	Qty	Ply	Pinhurst B Vault Master
Pinehurst B Vault Master	BE	GABLE	1	1	I47723297
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Wed Sep 1 09:45:15 2021 Page 1
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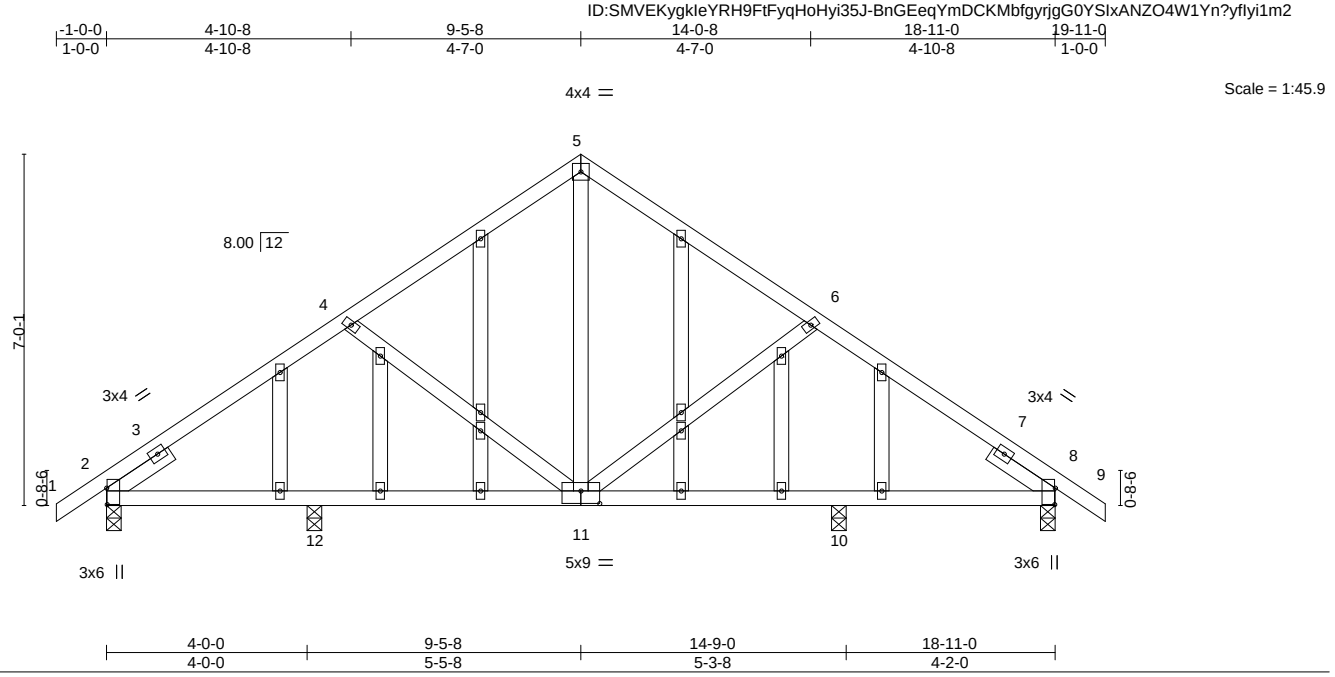

Plate Offsets (X,Y)-- [2:0-3-15,0-0-2], [8:0-3-15,0-0-2], [11:0-4-8,0-3-0]

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	0.25	Vert(LL)	-0.03	11	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.26	Vert(CT)	-0.05	11-12	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.17	Horz(CT)	0.02	8	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MS							Weight: 127 lb	FT = 20%

LUMBER-

TOP CHORD	2x4 SP No.2 or 2x4 SPF No.2
BOT CHORD	2x4 SP No.2 or 2x4 SPF No.2
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.3
SLIDER	Left 2x4 SP No.3 1-6-0, Right 2x4 SP No.3 1-6-0

BRACING-

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

REACTIONS. All bearings 0-3-8.
(lb) - Max Horz 2=-172(LC 10)
Max Uplift All uplift 100 lb or less at joint(s) except 2=-146(LC 12), 8=-147(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 12, 10 except 2=713(LC 1), 8=716(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-4=-856/257, 4-5=-657/231, 5-6=-657/231, 6-8=-856/256
BOT CHORD 2-12=-177/691, 11-12=-177/691, 10-11=-120/661, 8-10=-120/661
WEBS 5-11=-134/399, 6-11=-261/194, 4-11=-259/194

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=30ft; 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) 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.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable studs spaced at 2-0-0 oc.
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.
8) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 8. This connection is for uplift only and does not consider lateral forces.

September 1,2021

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Job	Truss	Truss Type	Qty	Ply	Pinhurst B Vault Master
Pinehurst B Vault Master	BGR	Common Girder	1	3	I47723298 Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Wed Sep 1 09:45:17 2021 Page 1
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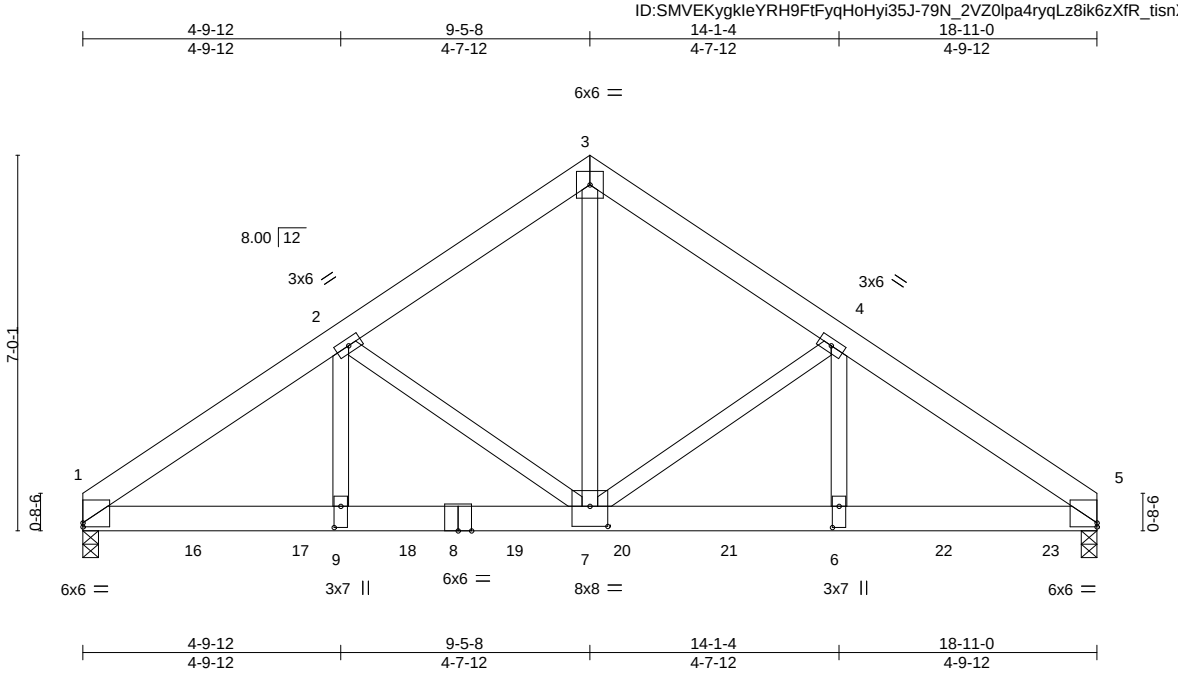

Plate Offsets (X,Y)-- [1:0-0-0,0-0-14], [5:0-0-0,0-0-14], [6:0-4-12,0-1-8], [7:0-4-0,0-4-8], [9:0-4-12,0-1-8]

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	0.19	Vert(LL)	-0.07	7-9	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.99	Vert(CT)	-0.14	7-9	>999	180		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.97	Horz(CT)	0.05	5	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MS							Weight: 397 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3

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

REACTIONS. (size) 1=0-3-8, 5=0-3-8
Max Horz 1=156(LC 34)
Max Uplift 1=-827(LC 12), 5=-930(LC 13)
Max Grav 1=6668(LC 1), 5=7484(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-9659/1276, 2-3=-6754/960, 3-4=-6760/961, 4-5=-9721/1286
BOT CHORD 1-9=-1033/7945, 7-9=-1033/7945, 6-7=-998/8031, 5-6=-998/8031
WEBS 3-7=-930/7023, 4-7=-3014/499, 4-6=-351/3223, 2-7=-2907/484, 2-9=-342/3163

NOTES-
1) 3-ply truss to be connected together with 10d (0.120"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 3 rows staggered at 0-4-0 oc.
Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; 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
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.
7) Two H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1 and 5. This connection is for uplift only and does not consider lateral forces.
8) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1404 lb down and 185 lb up at 2-0-12, 1404 lb down and 185 lb up at 4-0-12, 1404 lb down and 185 lb up at 6-0-12, 1404 lb down and 185 lb up at 8-0-12, 1404 lb down and 185 lb up at 10-0-12, 1404 lb down and 185 lb up at 12-0-12, 1404 lb down and 185 lb up at 14-0-12, and 1404 lb down and 185 lb up at 16-0-12, and 1406 lb down and 184 lb up at 18-0-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

September 1,2021

Continued on page 2

LOAD CASE(S) Standard

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LOAD CASE(S) Standard

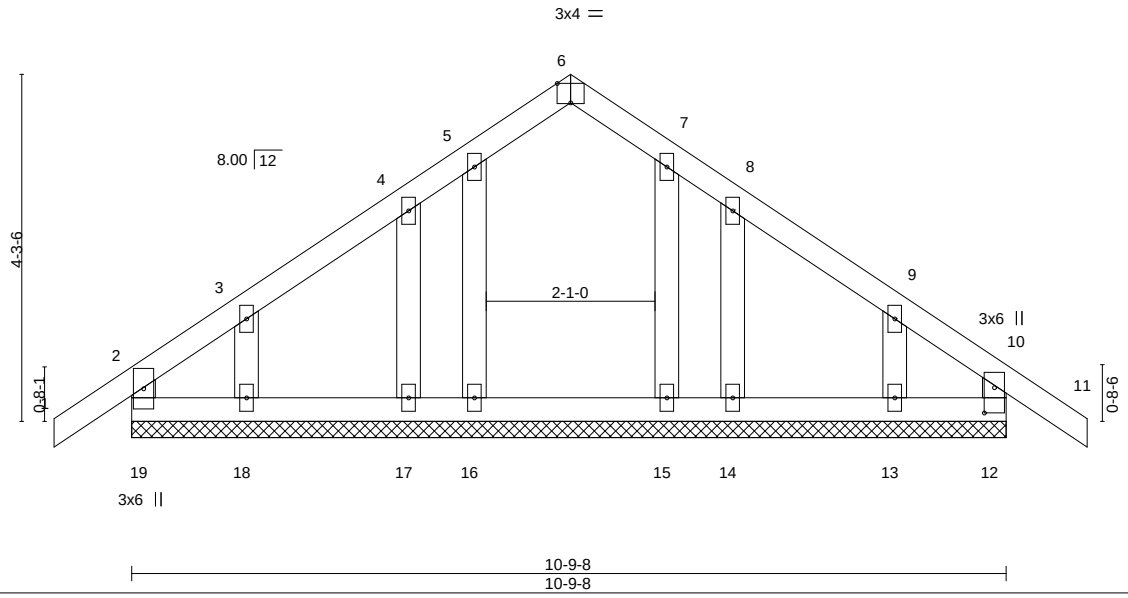
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (plf)
   Vert: 1-3=-60, 3-5=-60, 10-13=-20
   Concentrated Loads (lb)
   Vert: 6=-1404(B) 16=-1404(B) 17=-1404(B) 18=-1404(B) 19=-1404(B) 20=-1404(B) 21=-1404(B) 22=-1404(B) 23=-1406(B)

Job	Truss	Truss Type	Qty	Ply	Pinhurst B Vault Master
Pinehurst B Vault Master	CE	GABLE	1	1	I47723299
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.520 s Aug 27 2021 MiTek Industries, Inc. Wed Sep 1 09:45:17 2021 Page 1
ID:SMVEKygkIeYRH9FtFyqHoHyi35J-79N_2VZ0lpa4ryqLz8ik6zXgk_6Ys0FK?5U3kAyi1m0

-0-11-8 0-11-8 | 5-5-0 5-5-0 | 10-9-8 5-4-8 | 11-9-8 1-0-0

Scale = 1:28.4



10-9-8
10-9-8

Plate Offsets (X,Y)-- [6:0-2-0,Edge], [10:0-3-12,0-1-8]

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	0.11	Vert(LL)	-0.00	11	n/r	120	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	-0.01	11	n/r	90		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	12	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-R							Weight: 59 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2
WEBS 2x4 SP No.3
OTHERS 2x4 SP No.3

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

REACTIONS. All bearings 10-9-8.
(lb) - Max Horz 19=122(LC 11)
Max Uplift All uplift 100 lb or less at joint(s) 19, 12, 17, 18, 14, 13
Max Grav All reactions 250 lb or less at joint(s) 19, 12, 16, 15, 17, 18, 14, 13

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

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=30ft; 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) 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.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
7) Gable studs spaced at 2-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.

September 1,2021

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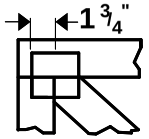
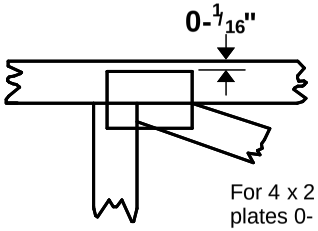
Symbols

PLATE LOCATION AND ORIENTATION



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



For 4 x 2 orientation, locate plates 0- 1/16" from outside edge of truss.

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

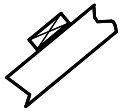
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

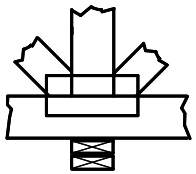
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

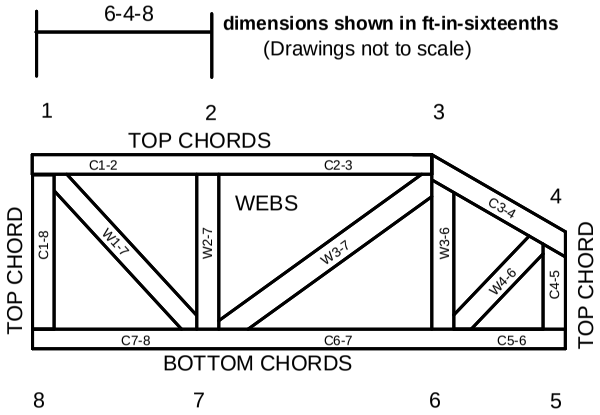


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

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 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.