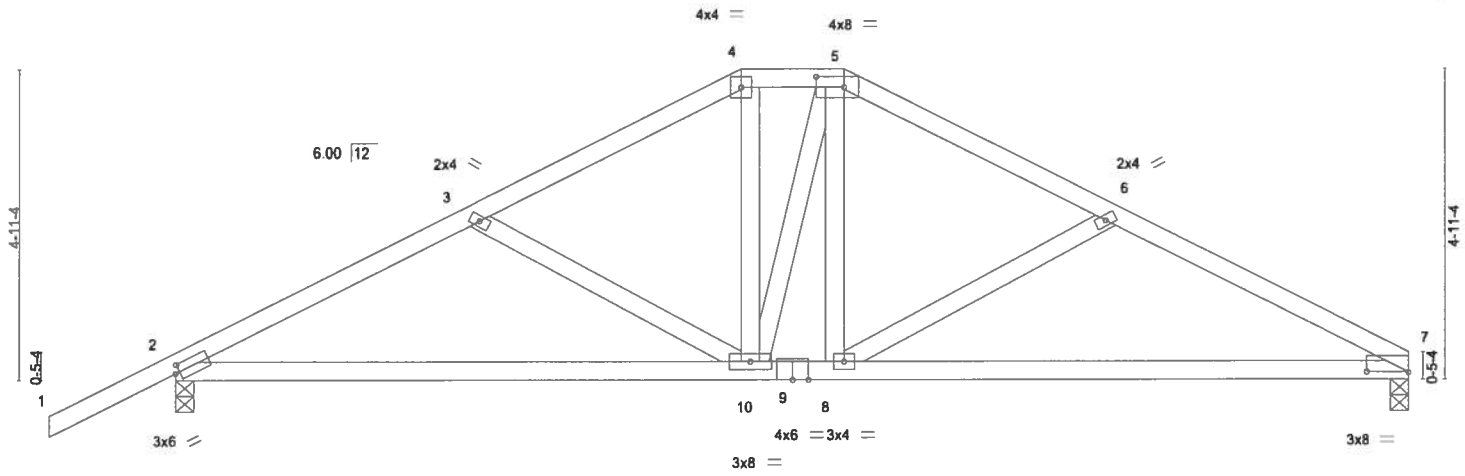
Job	Truss	Truss Type	Qty	Ply	SAMUEL MODEL - LOT 19 HA	T17785888
2042309	T02	Hip	1	1	Job Reference (optional)	

Builders FirstSource, Jacksonville, FL - 32244, 8.240 s Jun 8 2019 MiTek Industries, Inc. Tue Aug 6 10:28:33 2019 Page 1
ID:0yrXDNjrxhKUZlS4sq5QxWyyQw7-f7IFnuyiIDQwftIN2zhDl4ySUyt3ogC03XjmdTyqbZS

-2-0-0	4-9-15	9-0-0	10-7-8	14-9-9	19-7-8
2-0-0	4-9-15	4-2-1	1-7-8	4-2-1	4-9-15

Scale = 1:35.2



9-0-0	10-7-8	19-7-8
9-0-0	1-7-8	9-0-0

Plate Offsets (X,Y)– [2:0-0-14,0-1-8], [5:0-5-4,0-2-0], [7:0-8-0,0-0-1]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.37	Vert(LL)	-0.13	8-13	>999	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.67	Vert(CT)	-0.28	8-13	>844	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.16	Horz(CT)	0.03	7	n/a	n/a		
BCDL	10.0	Code FBC2017/TPI2014		Matrix-MS							Weight: 99 lb	FT = 20%

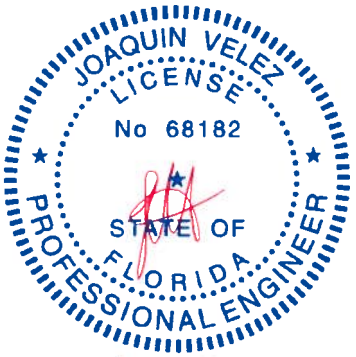
LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-1-12 oc purlins.
BOT CHORD Rigid ceiling directly applied or 8-0-15 oc bracing.

REACTIONS. (lb/size) 7=721/0-3-8, 2=840/0-3-8
Max Horz 2=83(LC 12)
Max Uplift 7=-147(LC 13), 2=-188(LC 12)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1187/656, 3-4=-923/516, 4-5=-780/511, 5-6=-929/521, 6-7=-1198/674
BOT CHORD 2-10=-507/1019, 8-10=-272/783, 7-8=-530/1046
WEBS 3-10=-288/276, 4-10=-101/270, 5-8=-137/276, 6-8=-314/299

NOTES- (8)
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope) and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * 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.
6) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 147 lb uplift at joint 7 and 188 lb uplift at joint 2.
8) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.



Joaquin Velez PE No.68182
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:

August 6,2019

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 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, DSB-89 and BCSI Building Component Safety Information*** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

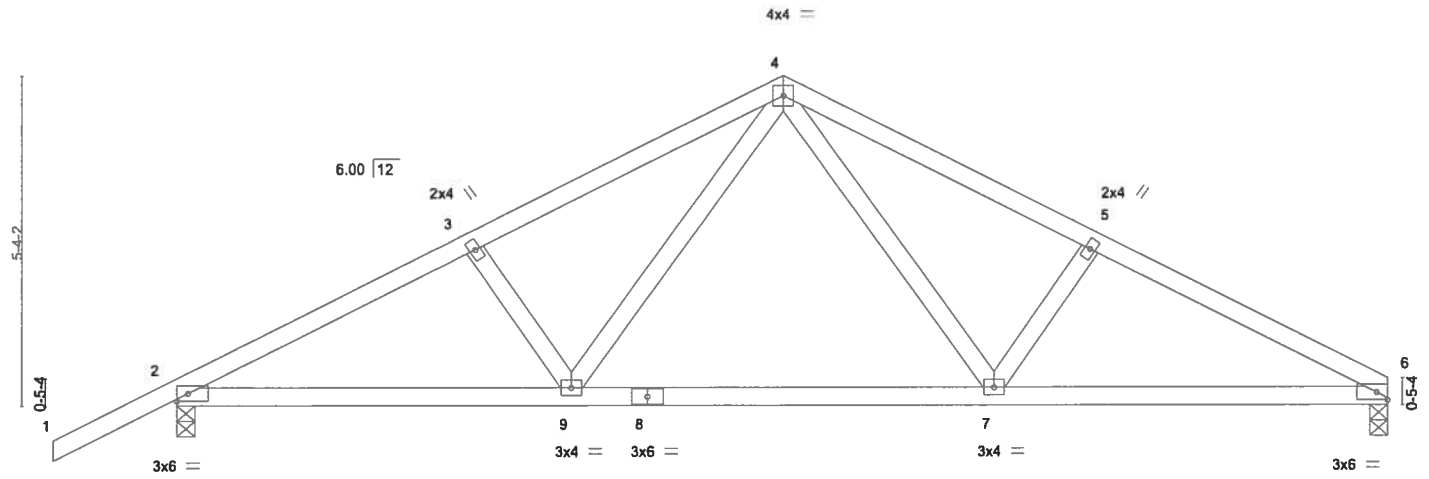
MiTek
6904 Parke East Blvd.
Tampa, FL 36610

Job	Truss	Truss Type	Qty	Ply	SAMUEL MODEL - LOT 19 HA	T17785889
2042309	T03	COMMON	5	1	Job Reference (optional)	

Builders FirstSource, Jacksonville, FL - 32244, 8.240 s Jun 8 2019 MiTek Industries, Inc. Tue Aug 6 10:28:34 2019 Page 1
ID:0yrXDNjrxhKUZlS4sq5QxWyyQw7-8Jsd?EzLTWYnH1tacgCSIHVbUM8lX5m9lBTJ9vyqbZR

-2-0-0	4-9-15	9-9-12	14-9-9	19-7-8
2-0-0	4-9-15	4-11-13	4-11-13	4-9-15

Scale = 1:35.9



6-4-12	13-2-12	19-7-8
6-4-12	6-10-0	6-4-12

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.48	Vert(LL)	0.22	7-9	>999	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.97	Vert(CT)	-0.35	7-9	>676	180		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.27	Horz(CT)	0.04	6	n/a	n/a		
BCDL	10.0	Code FBC2017/TPI2014		Matrix-MS							Weight: 91 lb	FT = 20%

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

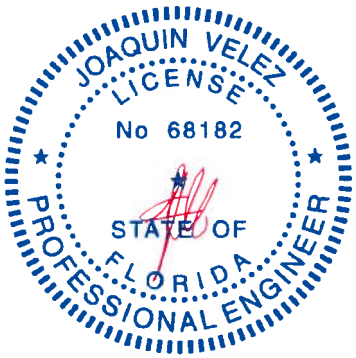
BRACING-
TOP CHORD Structural wood sheathing directly applied or 4-2-4 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-7-7 oc bracing.

REACTIONS. (lb/size) 6=926/0-3-8, 2=1045/0-3-8
Max Horz 2=88(LC 16)
Max Uplift 6=-205(LC 13), 2=-246(LC 12)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1699/908, 3-4=-1569/898, 4-5=-1591/918, 5-6=-1723/929
BOT CHORD 2-9=-732/1462, 7-9=-409/992, 6-7=-756/1490
WEBS 4-7=-368/683, 5-7=-233/256, 4-9=-336/652

NOTES- (8)
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope) and C-C Exterior(2) zone;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.
5) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 205 lb uplift at joint 6 and 246 lb uplift at joint 2.
7) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).
8) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.25, Plate Increase=1.25
Uniform Loads (plf)
Vert: 1-4=-54, 4-6=-54, 9-13=-20, 7-9=-80(F=-60), 7-10=-20



Joaquin Velez PE No.68182
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:

August 6,2019

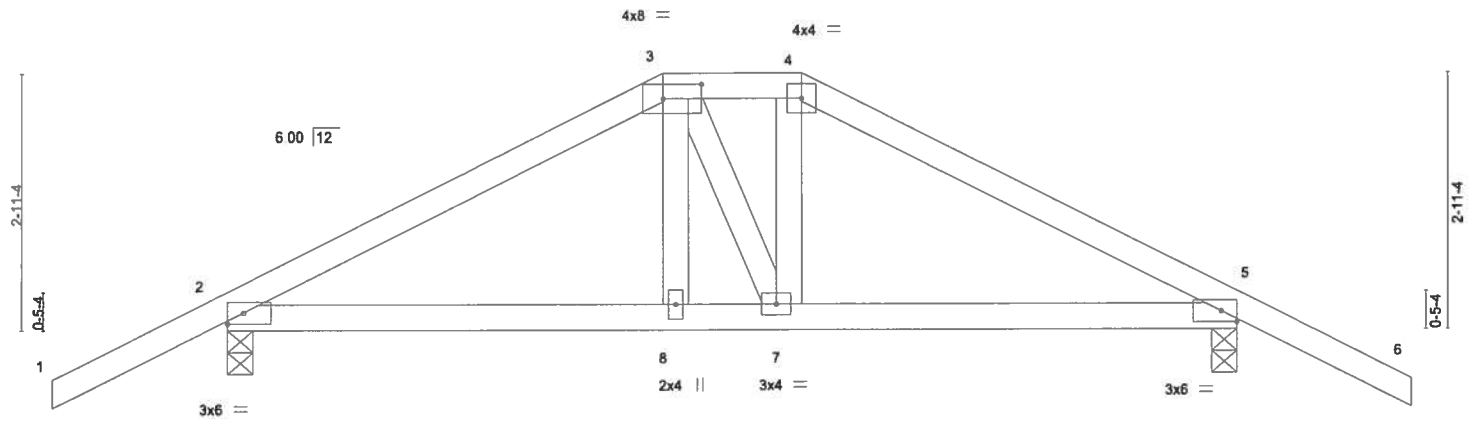
MiTek
6904 Parke East Blvd.
Tampa, FL 36610

Job	Truss	Truss Type	Qty	Ply	SAMUEL MODEL - LOT 19 HA	T17785890
2042309	T04	Hip Girder	1	1	Job Reference (optional)	

Builders FirstSource, Jacksonville, FL - 32244, 8.240 s Jun 8 2019 MiTek Industries, Inc. Tue Aug 6 10:28:35 2019 Page 1
ID:0yrXDNjrxhKUZiS4sq5QxWyyQw7-cVQ0Ca_zEqgevBSm9OjhrV2pYmfDGbrIXrCshLyqbZQ

-2-0-0 2-0-0 | 5-0-0 5-0-0 | 6-7-0 1-7-0 | 11-7-0 5-0-0 | 13-7-0 2-0-0

Scale = 1:25.4



5-0-0 5-0-0 | 6-7-0 1-7-0 | 11-7-0 5-0-0

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

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.27	Vert(LL)	-0.02	8-11	>999	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.31	Vert(CT)	-0.04	8-11	>999	180		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.08	Horz(CT)	0.01	5	n/a	n/a		
BCDL	10.0	Code FBC2017/TPI2014		Matrix-MS							Weight: 54 lb	FT = 20%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-10-1 oc purlins.
BOT CHORD Rigid ceiling directly applied or 9-8-5 oc bracing.

REACTIONS. (lb/size) 2=718/0-3-8, 5=718/0-3-8
Max Horz 2=-48(LC 6)
Max Uplift 2=-301(LC 8), 5=-301(LC 9)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-938/462, 3-4=-789/436, 4-5=-939/460
BOT CHORD 2-8=-370/781, 7-8=-369/787, 5-7=-357/782

NOTES- (10)
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope); Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * 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.
6) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 301 lb uplift at joint 2 and 301 lb uplift at joint 5.
8) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 168 lb down and 229 lb up at 5-0-0, and 168 lb down and 229 lb up at 6-7-0 on top chord, and 129 lb down and 15 lb up at 5-0-0, and 129 lb down and 15 lb up at 6-6-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
9) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).
10) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.25, Plate Increase=1.25
Uniform Loads (plf)
Vert: 1-3=-54, 3-4=-54, 4-6=-54, 9-12=-20
Concentrated Loads (lb)
Vert: 3=-121(F) 4=-121(F) 8=-60(F) 7=-60(F)

JOAQUIN VELEZ LICENSE No 68182 STATE OF FLORIDA PROFESSIONAL ENGINEER

Joaquin Velez PE No.68182
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:
August 6,2019

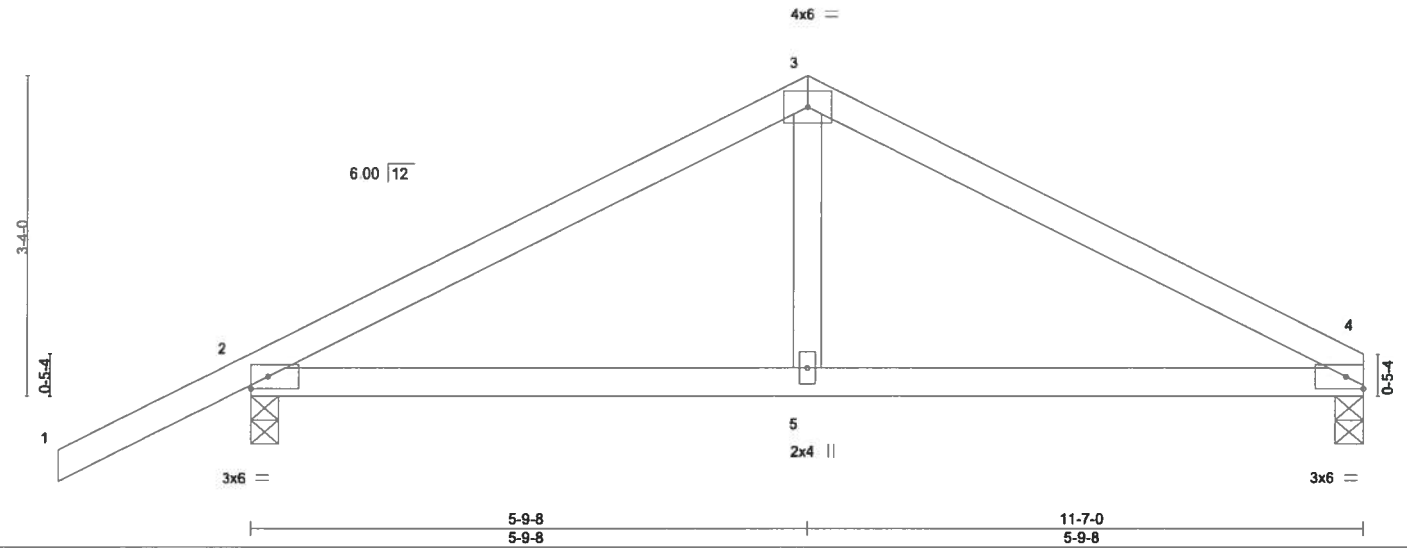
MiTek
6904 Parke East Blvd
Tampa, FL 36610

Job	Truss	Truss Type	Qty	Ply	SAMUEL MODEL - LOT 19 HA	T17785891
2042309	T05	Common	4	1	Job Reference (optional)	

Builders FirstSource, Jacksonville, FL - 32244, 8.240 s Jun 8 2019 MiTek Industries, Inc. Tue Aug 6 10:28:36 2019 Page 1
ID:0yrXDNjrxhKUZiS4sq5QxWyyQw7-4IzOQw_b?8oVXL1yj5FwNiazyAz_?2uSmVyQEoyqbZP

-2-0-0 2-0-0 | 5-9-8 5-9-8 | 11-7-0 5-9-8

Scale = 1:23.1



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.36	Vert(LL)	-0.04	5-8	>999	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.34	Vert(CT)	-0.07	5-8	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.10	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code FBC2017/TPI2014		Matrix-MS							Weight: 44 lb	FT = 20%

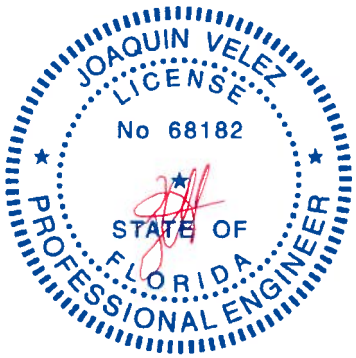
LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3

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. (lb/size) 4=419/0-3-8, 2=546/0-3-8
Max Horz 2=63(LC 12)
Max Uplift 4=-88(LC 13), 2=-131(LC 12)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-574/341, 3-4=-570/337
BOT CHORD 2-5=-200/453, 4-5=-200/453
WEBS 3-5=-18/256

NOTES- (7)
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope) and C-C Exterior(2) zone;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.
5) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 88 lb uplift at joint 4 and 131 lb uplift at joint 2.
7) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.



Joaquin Velez PE No.68182
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:

August 6,2019

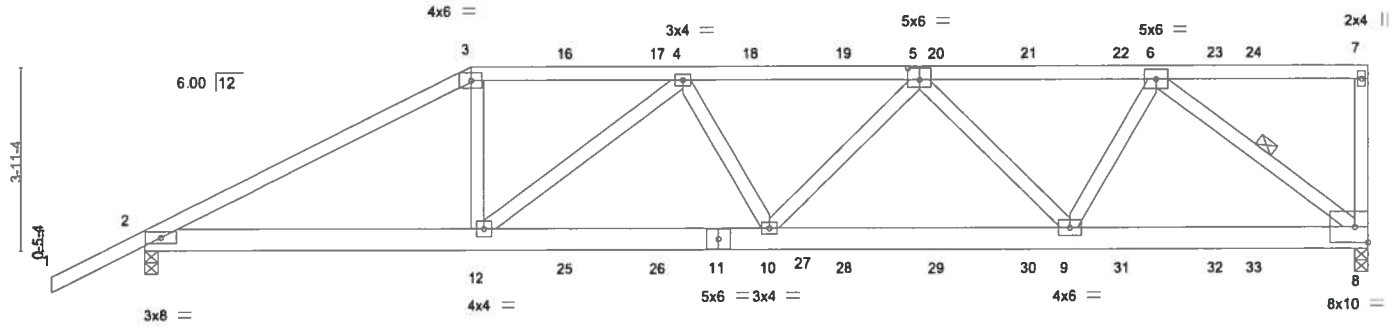
MiTek
6904 Parke East Blvd
Tampa, FL 36610

Job	Truss	Truss Type	Qty	Ply	SAMUEL MODEL - LOT 19 HA	T17785892
2042309	T06	Half Hip Girder	1	1	Job Reference (optional)	

Builders FirstSource, Jacksonville, FL - 32244, 8.240 s Jun 8 2019 MiTek Industries, Inc. Tue Aug 6 10:28:38 2019 Page 1
ID:0yrXDNjrxhKUZlS4sq5QxWyyQw7-0458qc0rXI2DmfALrWHOS7gE_zYJTpUlDpRWlgyqbZN

-2-0-0	7-0-0	11-6-14	16-8-0	21-9-3	26-4-0
2-0-0	7-0-0	4-6-14	5-1-2	5-1-3	4-6-14

Scale: 1/4"=1'



7-0-0	13-5-2	19-10-15	26-4-0
7-0-0	6-5-2	6-5-13	6-5-1

Plate Offsets (X,Y)— [5:0-3-0,0-3-0]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.64	Vert(LL)	-0.15	10	>999	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.79	Vert(CT)	-0.29	10-12	>999	180		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.67	Horz(CT)	0.09	8	n/a	n/a		
BCDL	10.0	Code FBC2017/TPI2014		Matrix-MS							Weight: 155 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2 *Except*
1-3: 2x4 SP M 31
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3

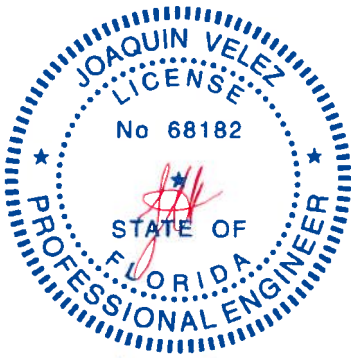
BRACING-
TOP CHORD Structural wood sheathing directly applied or 2-6-12 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-5-11 oc bracing.
WEBS 1 Row at midpt 6-8

REACTIONS. (lb/size) 8=2257/0-3-8, 2=1952/0-3-8
Max Horz 2=146(LC 23)
Max Uplift 8=-707(LC 5), 2=-624(LC 8)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-3584/1200, 3-4=-3173/1107, 4-5=-3883/1242, 5-6=-2858/869, 7-8=-289/164
BOT CHORD 2-12=-1098/3129, 10-12=-1315/3872, 9-10=-1194/3619, 8-9=-737/2238
WEBS 3-12=-214/1066, 4-12=-897/305, 5-10=-81/450, 5-9=-1132/483, 6-9=-284/1342, 6-8=-2829/934

NOTES- (9)
1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope); Lumber DOL=1.60 plate grip DOL=1.60
2) Provide adequate drainage to prevent water ponding.
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.
5) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 707 lb uplift at joint 8 and 624 lb uplift at joint 2.
7) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 183 lb down and 254 lb up at 7-0-0, 107 lb down and 102 lb up at 9-0-12, 107 lb down and 102 lb up at 11-0-12, 107 lb down and 102 lb up at 13-0-12, 107 lb down and 102 lb up at 15-0-12, 107 lb down and 102 lb up at 17-0-12, 107 lb down and 102 lb up at 19-0-12, 107 lb down and 102 lb up at 21-0-12, 107 lb down and 102 lb up at 23-0-12, and 107 lb down and 102 lb up at 23-10-12, and 126 lb down and 99 lb up at 26-2-4 on top chord, and 296 lb down and 134 lb up at 7-0-0, 85 lb down at 9-0-12, 85 lb down at 11-0-12, 85 lb down at 13-0-12, 85 lb down at 15-0-12, 85 lb down at 17-0-12, 85 lb down at 19-0-12, 85 lb down at 21-0-12, 85 lb down at 23-0-12, and 85 lb down at 23-10-12, and 99 lb down at 26-2-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
8) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).
9) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.

LOAD CASE(S) Standard



Joaquin Velez PE No.68182
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:

August 6,2019

Continued on page 2

MiTek
6904 Parke East Blvd.
Tampa, FL 36610

LOAD CASE(S) Standard

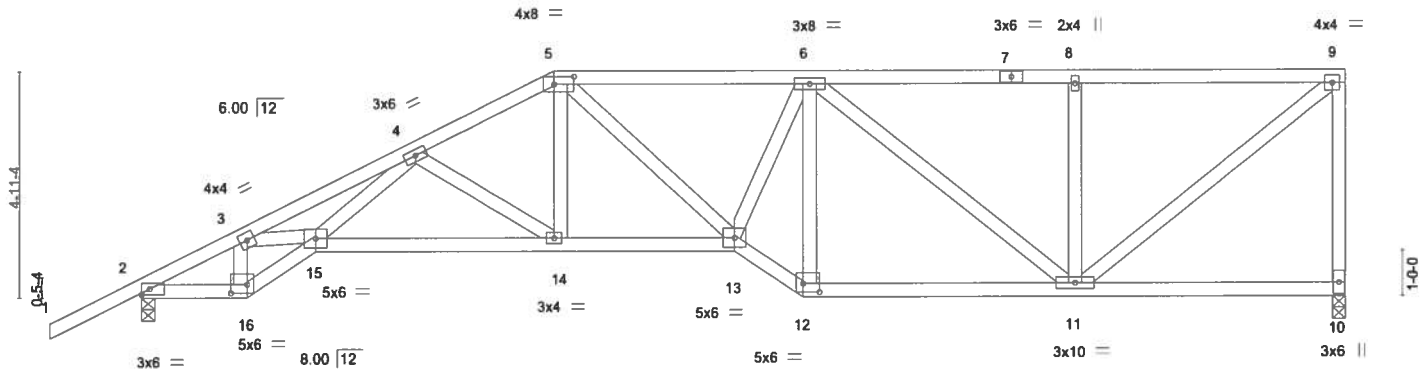
1) Dead + Roof Live (balanced): Lumber Increase=1.25, Plate Increase=1.25
   Uniform Loads (plf)
   Vert: 1-3=-54, 3-7=-54, 8-13=-20
   Concentrated Loads (lb)
   Vert: 3=-183(B) 7=-126(B) 8=-67(B) 12=-282(B) 16=-107(B) 17=-107(B) 18=-107(B) 19=-107(B) 20=-107(B) 21=-107(B) 22=-107(B) 23=-107(B) 24=-107(B) 25=-60(B) 26=-60(B) 27=-60(B) 28=-60(B) 29=-60(B) 30=-60(B) 31=-60(B) 32=-60(B) 33=-60(B)

Job	Truss	Truss Type	Qty	Ply	SAMUEL MODEL - LOT 19 HA	T17785893
2042309	T07	Half Hip	1	1	Job Reference (optional)	

Builders FirstSource, Jacksonville, FL - 32244, 8.240 s Jun 8 2019 MiTek Industries, Inc. Tue Aug 6 10:28:39 2019 Page 1
ID:0yrXDNjrxhKUZiS4sq5QxWyyQw7-UHfW2x1TI3A4OolXODod?LCTFNxxCG?uSTA4q6yqbZM

-2-0-0	2-3-8	5-11-11	9-0-0	14-5-8	20-4-12	26-4-0
2-0-0	2-3-8	3-8-3	3-0-5	5-5-8	5-11-4	5-11-4

Scale: 1/4"=1'



2-3-8	3-9-8	9-0-0	12-11-8	14-5-8	20-4-12	26-4-0
2-3-8	1-6-0	5-2-8	3-11-8	1-6-0	5-11-4	5-11-4

Plate Offsets (X,Y)– [5:0-5-4,0-2-0], [12:0-4-4,0-2-4], [16:0-4-4,0-2-4]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.42	Vert(LL)	-0.13	14	>999	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.58	Vert(CT)	-0.25	14-15	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.65	Horz(CT)	0.12	10	n/a	n/a		
BCDL	10.0	Code FBC2017/TPI2014		Matrix-MS							Weight: 156 lb	FT = 20%

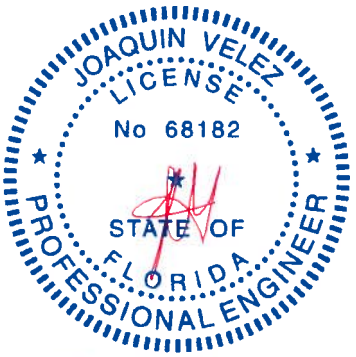
LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 2-11-9 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 5-4-0 oc bracing.

REACTIONS. (lb/size) 10=965/0-3-8, 2=1081/0-3-8
Max Horz 2=180(LC 12)
Max Uplift 10=-249(LC 9), 2=-209(LC 12)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1692/800, 3-4=-3222/1716, 4-5=-1788/933, 5-6=-1706/908, 6-8=-985/502, 8-9=-985/502, 9-10=-913/500
BOT CHORD 2-16=-907/1461, 15-16=-1000/1627, 14-15=-1233/2064, 13-14=-875/1583, 12-13=-859/1613, 11-12=-732/1375
WEBS 3-16=-937/601, 3-15=-839/1520, 4-15=-605/1105, 4-14=-600/440, 5-14=-221/460, 6-13=-466/865, 6-12=-799/488, 6-11=-500/294, 8-11=-335/258, 9-11=-633/1241

NOTES- (7)
1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope) and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Provide adequate drainage to prevent water ponding.
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.
5) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 249 lb uplift at joint 10 and 209 lb uplift at joint 2.
7) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.



Joaquin Velez PE No.68182
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:

August 6,2019

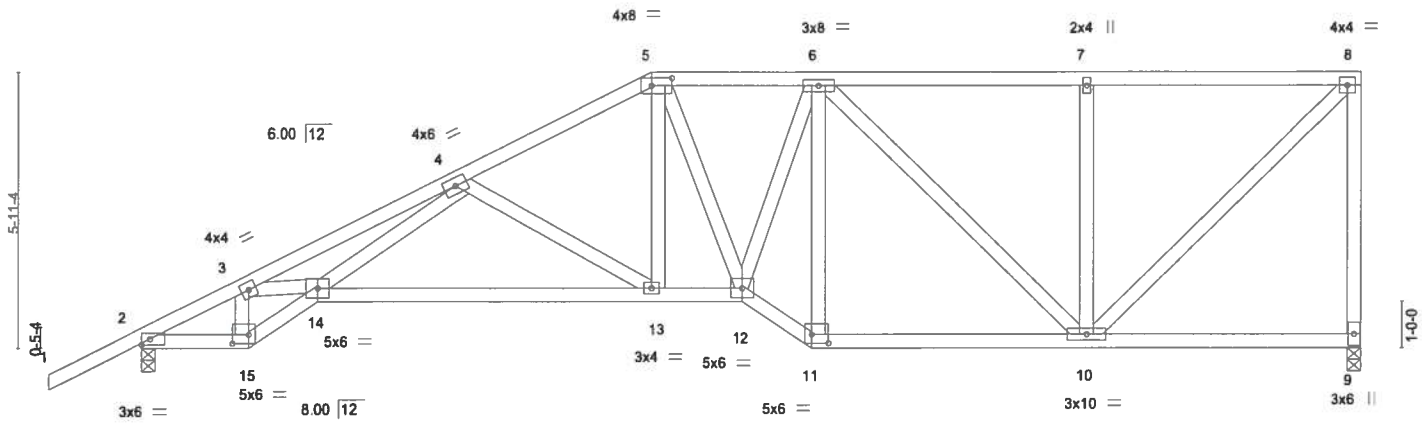
6904 Parke East Blvd.
Tampa, FL 36610

Job	Truss	Truss Type	Qty	Ply	SAMUEL MODEL - LOT 19 HA	T17785894
2042309	T08	Half Hip	1	1	Job Reference (optional)	

Builders FirstSource, Jacksonville, FL - 32244, 8.240 s Jun 8 2019 MiTek Industries, Inc. Tue Aug 6 10:28:40 2019 Page 1
ID:0yrXDNjrxhKUZiS4sq5QxWyyQw7-yTDvFH153MIx?yKkyxJsYYIb5nFBxl71g7wdNZyqbZL

-2-0-0	2-3-8	6-10-15	11-0-0	14-5-8	20-4-12	26-4-0
2-0-0	2-3-8	4-7-7	4-1-1	3-5-8	5-11-4	5-11-4

Scale: 1/4"=1'



2-3-8	3-9-8	11-0-0	12-11-8	14-5-8	20-4-12	26-4-0
2-3-8	1-6-0	7-2-8	1-11-8	1-6-0	5-11-4	5-11-4

Plate Offsets (X,Y)-- [5:0-5-4,0-2-0], [11:0-4-4,0-2-4], [15:0-4-4,0-2-4]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.60	Vert(LL)	-0.14	13-14	>999	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.70	Vert(CT)	-0.33	13-14	>961	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.72	Horz(CT)	0.12	9	n/a	n/a		
BCDL	10.0	Code	FBC2017/TPI2014	Matrix-MS							Weight: 169 lb	FT = 20%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied or 2-10-2 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 5-4-13 oc bracing.

REACTIONS. (lb/size) 9=965/0-3-8, 2=1081/0-3-8
Max Horz 2=214(LC 12)
Max Uplift 9=-247(LC 9), 2=-218(LC 12)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1697/800, 3-4=-3237/1742, 4-5=-1551/799, 5-6=-1343/758, 6-7=-813/429, 7-8=-813/429, 8-9=-914/513
BOT CHORD 2-15=-965/1468, 14-15=-1062/1643, 13-14=-1201/1900, 12-13=-762/1348, 11-12=-735/1314, 10-11=-623/1123
WEBS 3-15=-963/637, 3-14=-853/1524, 4-14=-697/1260, 4-13=-658/516, 5-13=-228/535, 6-12=-435/705, 6-11=-625/420, 6-10=-433/271, 7-10=-350/270, 8-10=-591/1119

NOTES- (8)
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope) and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * 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.
6) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 247 lb uplift at joint 9 and 218 lb uplift at joint 2.
8) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.

Joaquin Velez PE No.68182
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:
August 6,2019

MiTek
6904 Parke East Blvd.
Tampa, FL 36610

Job	Truss	Truss Type	Qty	Ply	SAMUEL MODEL - LOT 19 HA	T17785895
2042309	T09	Hip	1	1	Job Reference (optional)	

Builders FirstSource, Jacksonville, FL - 32244, 8.240 s Jun 8 2019 MiTek Industries, Inc. Tue Aug 6 10:28:42 2019 Page 1
ID:0yrXDNjrxhKUZiS4sq5QxWyyQw7-vrLfgz3Mb_ZfFGU64MLKdzqyOa_sPZcK8RPkRRyqbZJ

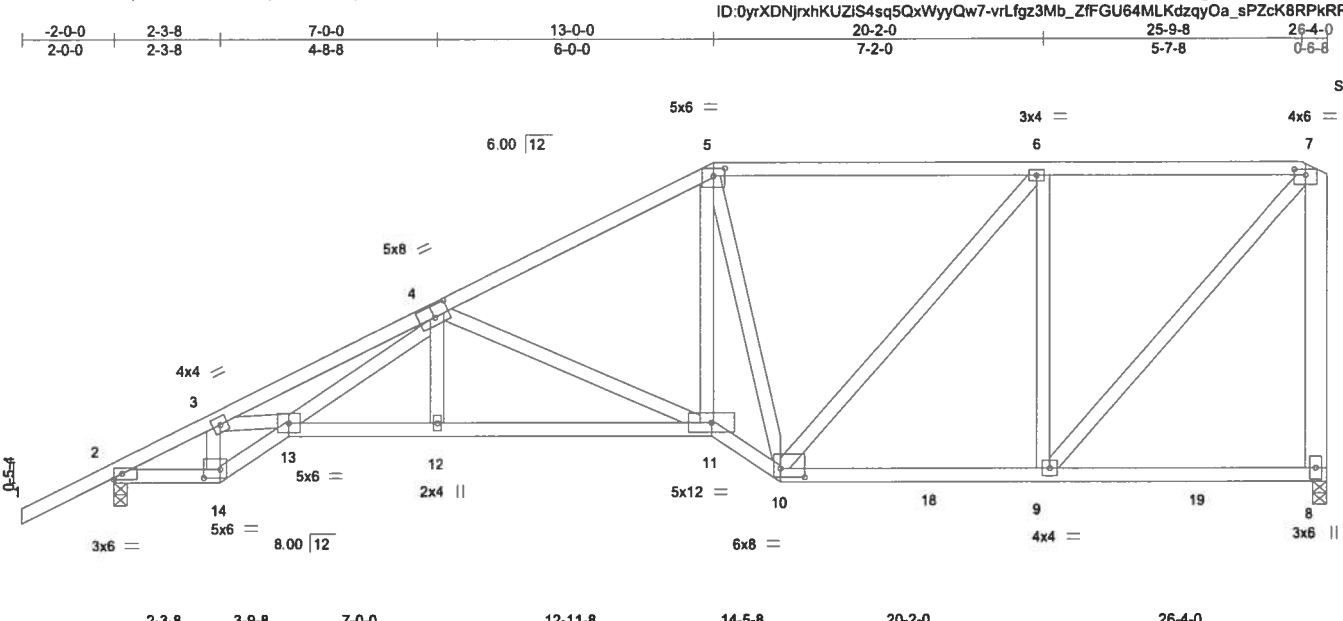


Plate Offsets (X,Y)-- [4:0-4-0,0-3-0], [5:0-3-0,0-2-0], [7:0-3-0,0-1-8], [10:0-6-4,0-2-4], [14:0-4-4,0-2-4]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.55	Vert(LL)	0.14	12	>999	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.56	Vert(CT)	-0.28	11-12	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.85	Horz(CT)	0.13	8	n/a	n/a		
BCDL	10.0	Code	FBC2017/TPI2014	Matrix-MS							Weight: 174 lb	FT = 20%

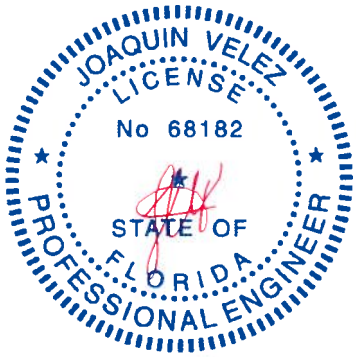
LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except*
7-8: 2x6 SP No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-0-2 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 5-3-1 oc bracing.

REACTIONS. (lb/size) 2=1078/0-3-8, 8=962/0-3-8
Max Horz 2=248(LC 12)
Max Uplift 2=-223(LC 12), 8=-243(LC 9)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1690/768, 3-4=-3155/1756, 4-5=-1342/682, 5-6=-922/537, 6-7=-710/392, 7-8=-907/530
BOT CHORD 2-14=-985/1459, 13-14=-1084/1614, 12-13=-1256/1955, 11-12=-1255/1962, 10-11=-801/1343, 9-10=-392/710
WEBS 3-14=-903/641, 3-13=-906/1458, 4-13=-717/1095, 4-11=-903/628, 5-11=-652/1144, 5-10=-929/630, 6-10=-222/326, 6-9=-653/477, 7-9=-579/1045, 4-12=0/250

NOTES- (8)
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope) and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * 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.
6) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 223 lb uplift at joint 2 and 243 lb uplift at joint 8.
8) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.



Joaquin Velez PE No.68182
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:

August 6,2019

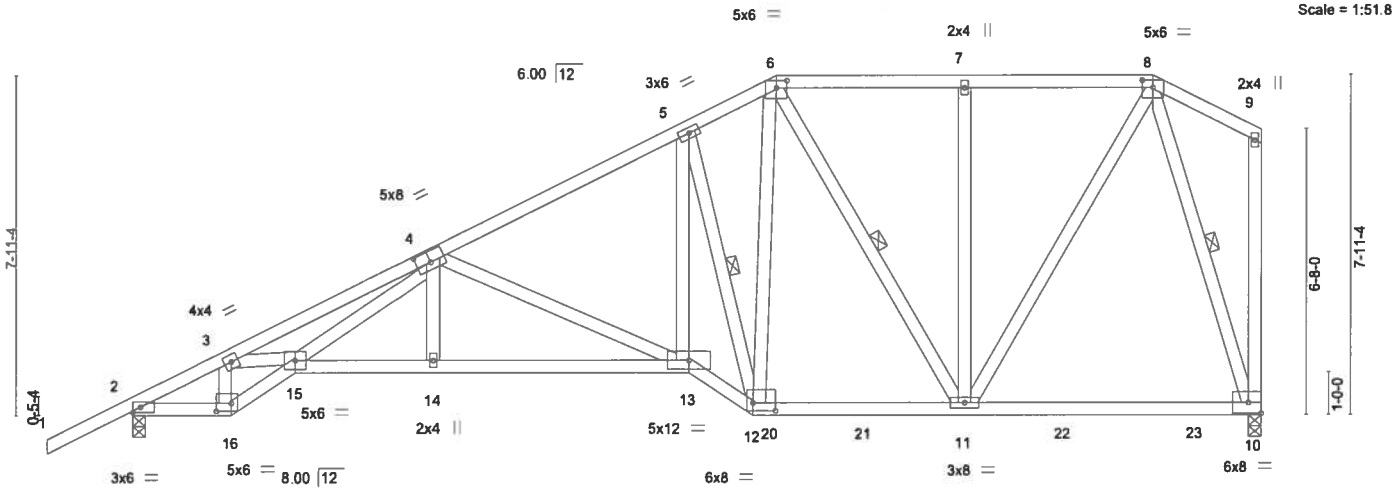
MiTek
6904 Parke East Blvd.
Tampa, FL 36610

Job	Truss	Truss Type	Qty	Ply	SAMUEL MODEL - LOT 19 HA	T17785896
2042309	T10	Hip	1	1	Job Reference (optional)	

Builders FirstSource, Jacksonville, FL - 32244, 8.240 s Jun 8 2019 MiTek Industries, Inc. Tue Aug 6 10:28:43 2019 Page 1
ID:0yrXDNjrxhKUZiS4sq5QxWyyQw7-N2v1uJ4_MHhWsQ3Id3tZ9BN7V_J183JUN48HzuyqbZI

-2-0-0 | 2-3-8 | 7-0-0 | 12-11-8 | 15-0-0 | 19-4-12 | 23-9-8 | 26-4-0
2-0-0 | 2-3-8 | 4-8-8 | 5-11-8 | 2-0-8 | 4-4-12 | 4-4-12 | 2-6-8

Scale = 1:51.8



2-3-8 | 3-9-8 | 7-0-0 | 12-11-8 | 14-5-8 | 19-4-12 | 26-4-0
2-3-8 | 1-6-0 | 3-2-8 | 5-11-8 | 1-6-0 | 4-11-4 | 6-11-4

Plate Offsets (X,Y)-- [4:0-4-0,0-3-0], [6:0-3-0,0-2-0], [8:0-3-0,0-2-0], [12:0-6-4,0-2-4], [16:0-4-4,0-2-4]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.53	Vert(LL)	-0.14	13-14	>999	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.57	Vert(CT)	-0.29	13-14	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.69	Horz(CT)	0.14	10	n/a	n/a		
BCDL	10.0	Code FBC2017/TPI2014		Matrix-MS							Weight: 194 lb	FT = 20%

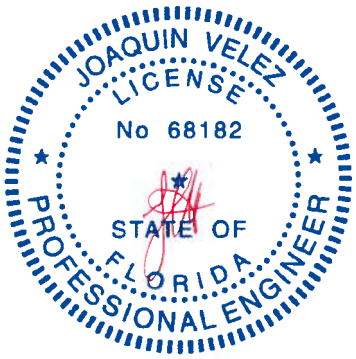
LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-0-1 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 5-3-1 oc bracing.
WEBS 1 Row at midpt 5-12, 6-11, 8-10

REACTIONS. (lb/size) 2=1081/0-3-8, 10=965/0-3-8
Max Horz 2=255(LC 12)
Max Uplift 2=-233(LC 12), 10=-184(LC 9)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1698/788, 3-4=-3166/1778, 4-5=-1354/707, 5-6=-996/623, 6-7=-658/423, 7-8=-658/423
BOT CHORD 2-16=-993/1466, 15-16=-1093/1622, 14-15=-1256/1961, 13-14=-1255/1968, 12-13=-845/1410, 11-12=-470/812, 10-11=-152/271
WEBS 3-16=-908/648, 3-15=-905/1461, 4-15=-724/1100, 4-14=0/251, 4-13=-895/610, 5-13=-665/1178, 5-12=-1320/875, 6-12=-387/571, 6-11=-313/227, 7-11=-273/208, 8-11=-412/784, 8-10=-885/506

NOTES- (8)
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope) and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * 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.
6) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 233 lb uplift at joint 2 and 184 lb uplift at joint 10.
8) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.



Joaquin Velez PE No.68182
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:

August 6,2019

Job	Truss	Truss Type	Qty	Ply	SAMUEL MODEL - LOT 19 HA	T17785897
2042309	T11	Hip	1	1	Job Reference (optional)	

Builders FirstSource, Jacksonville, FL - 32244, 8.240 s Jun 8 2019 MiTek Industries, Inc. Tue Aug 6 10:28:44 2019 Page 1
ID:0yrXDNjrxhKUZlS4sq5QxWyyQw7-rESP5f4c7bpMUaeVBnOoiOvEKOfFtXVdbkurWKyqbZH

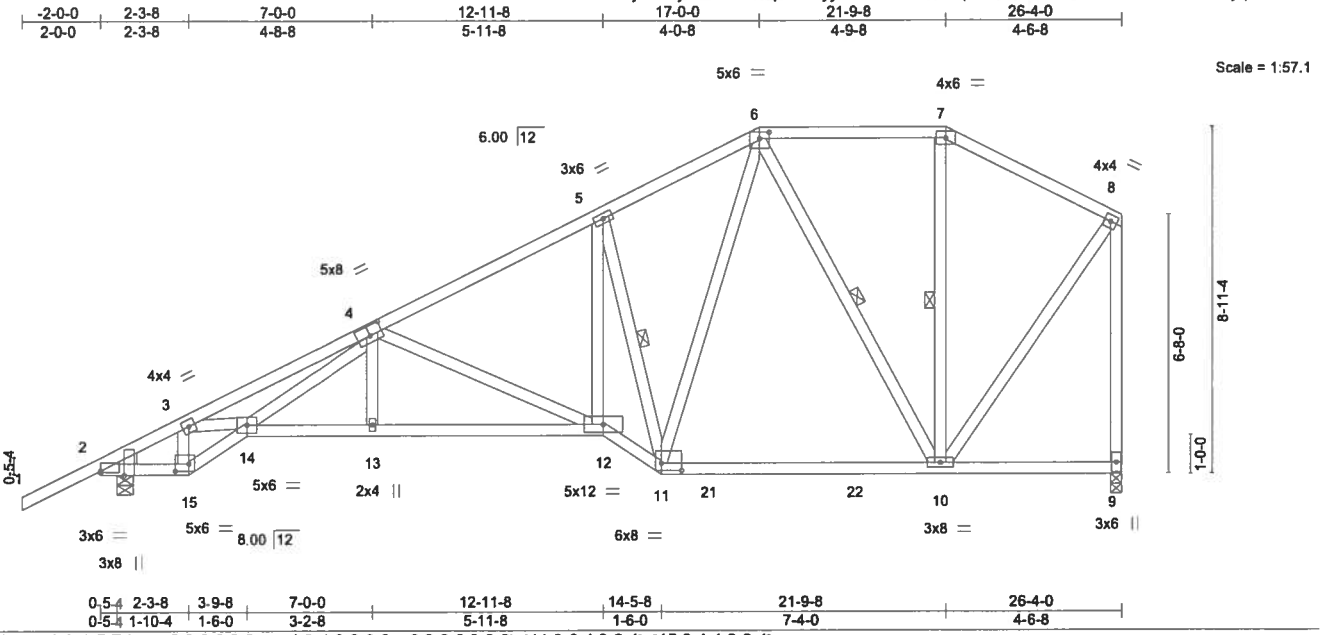


Plate Offsets (X,Y)-- [2:0-1-5,Edge], [2:0-0-0,0-0-7], [4:0-4-0,0-3-0], [6:0-3-0,0-2-0], [11:0-6-4,0-2-4], [15:0-4-4,0-2-4]

LOADING (psf)	SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.25	TC	0.78	Vert(LL)	-0.14	10-11	>999	240	MT20	244/190
TCDL 7.0	Lumber DOL	1.25	BC	0.57	Vert(CT)	-0.27	10-11	>999	180		
BCLL 0.0 *	Rep Stress Incr	YES	WB	0.63	Horz(CT)	0.12	9	n/a	n/a		
BCDL 10.0	Code FBC2017/TPI2014		Matrix-MS							Weight: 187 lb	FT = 20%

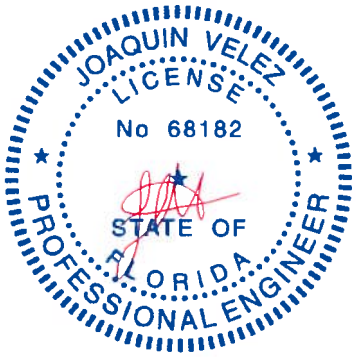
LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3
WEDGE
Left: 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-3-3 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 5-4-13 oc bracing.
WEBS 1 Row at midpt 5-11, 6-10, 7-10

REACTIONS. (lb/size) 9=946/0-3-8, 2=1099/0-4-15
Max Horz 2=268(LC 12)
Max Uplift 9=-189(LC 12), 2=-243(LC 12)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1323/615, 3-4=-2730/1574, 4-5=-1307/695, 5-6=-977/630, 6-7=-424/338, 7-8=-524/317, 8-9=-916/536
BOT CHORD 2-15=-816/1099, 14-15=-893/1207, 13-14=-1195/1821, 12-13=-1194/1828, 11-12=-838/1348, 10-11=-369/644
WEBS 3-15=-780/588, 3-14=-891/1422, 4-14=-565/774, 4-12=-786/553, 5-12=-646/1090, 5-11=-1275/892, 6-11=-406/645, 6-10=-489/319, 8-10=-372/726

NOTES- (8)
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope) and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * 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.
6) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 189 lb uplift at joint 9 and 243 lb uplift at joint 2.
8) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.



Joaquin Velez PE No.68182
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:

August 6,2019

Job	Truss	Truss Type	Qty	Ply	SAMUEL MODEL - LOT 19 HA	T17785898
2042309	T12	Hip	1	1	Job Reference (optional)	

Builders FirstSource, Jacksonville, FL - 32244, 8.240 s Jun 8 2019 MiTek Industries, Inc. Tue Aug 6 10:28:46 2019 Page 1
ID:0yrXDNjrxhKUZlS4sq5QxWyyQw7-ndaAWL6seC34jtotJCQGnp?a6CJnLNaw32NyaCyqbZF

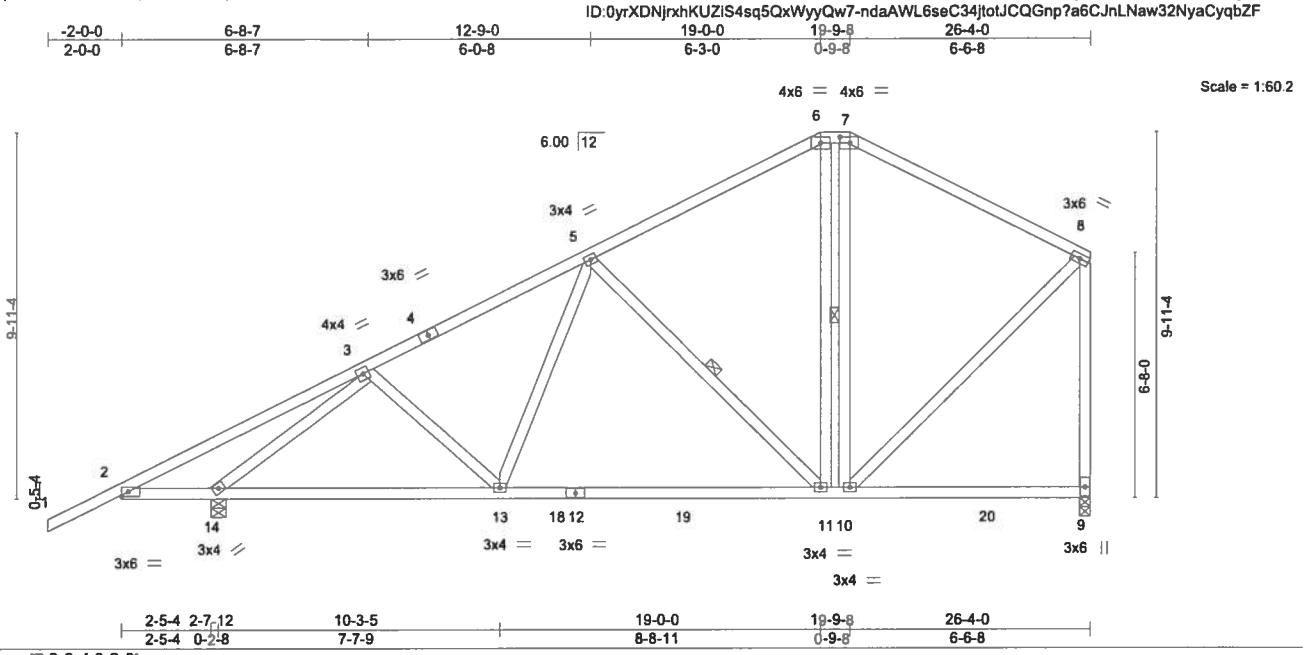


Plate Offsets (X,Y)— [7:0-3-4,0-2-0]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.82	Vert(LL)	-0.21	11-13	>999	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.69	Vert(CT)	-0.37	11-13	>774	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.85	Horz(CT)	0.02	9	n/a	n/a		
BCDL	10.0	Code FBC2017/TPI2014		Matrix-MS							Weight: 175 lb	FT = 20%

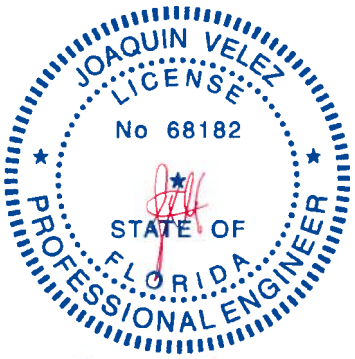
LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-8-9 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 5-11, 7-10

REACTIONS. (lb/size) 14=1193/0-4-15, 9=853/0-3-8
Max Horz 14=280(LC 12)
Max Uplift 14=-267(LC 12), 9=-190(LC 12)
Max Grav 14=1193(LC 1), 9=862(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-674/528, 3-5=-980/488, 5-6=-582/375, 6-7=-446/402, 7-8=-572/361, 8-9=-812/509
BOT CHORD 2-14=-406/770, 13-14=-594/806, 11-13=-497/768, 10-11=-229/446
WEBS 5-13=-25/292, 5-11=-468/384, 3-14=-1525/1129, 8-10=-308/610

NOTES- (8)
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope) and C-C Exterior(2) zone; cantilever left exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * 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.
6) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 267 lb uplift at joint 14 and 190 lb uplift at joint 9.
8) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.



Joaquin Velez PE No.68182
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:

August 6,2019

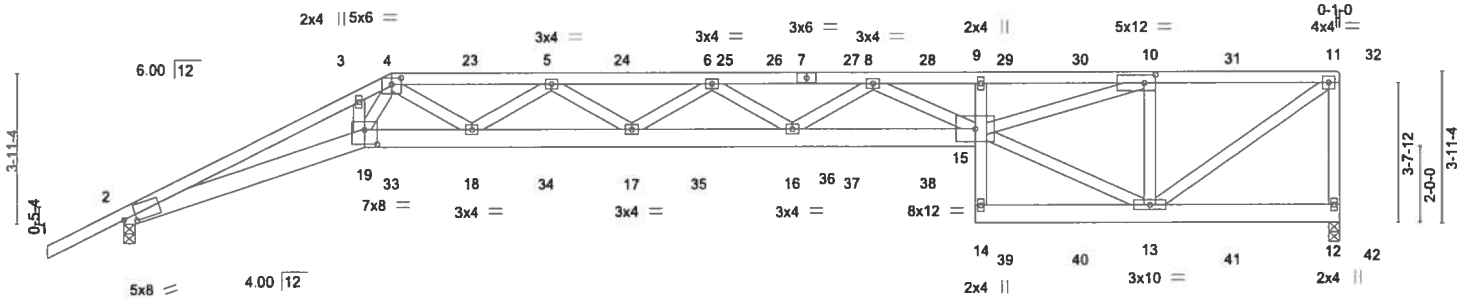
6904 Parke East Blvd
Tampa, FL 36610

Job	Truss	Truss Type	Qty	Ply	SAMUEL MODEL - LOT 19 HA	T17785899
2042309	T13	HALF HIP GIRDER	1	3	Job Reference (optional)	

Builders FirstSource, Jacksonville, FL - 32244, 8.240 s Jun 8 2019 MiTek Industries, Inc. Tue Aug 6 10:28:50 2019 Page 1
ID:0yrXDNjrxhKUZIS4sq5QxWyyQw7-gOqgMi9NIRZWCV5fY1VCyf9HZpdoH9KW_gL9j_yqbZB

-2-0-0	6-3-8	7-0-0	11-2-6	15-4-13	19-7-5	22-3-8	26-10-7	31-9-8	31-10-8
2-0-0	6-3-8	0-8-8	4-2-7	4-2-6	4-2-8	2-8-3	4-7-0	4-11-1	0-1-0

Scale = 1:58.0



6-3-8	9-1-3	13-3-10	17-6-1	22-3-8	26-10-7	31-10-8
6-3-8	2-9-11	4-2-7	4-2-7	4-9-7	4-7-0	5-0-1

Plate Offsets (X,Y)– [2:0-3-15,0-1-8], [4:0-3-0,0-2-0], [10:0-3-8,0-2-8], [19:0-4-0,0-4-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.67	Vert(LL)	0.55	16-17	>691	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.88	Vert(CT)	-1.00	16-17	>382	180		
BCLL	0.0 *	Rep Stress Incr	NO	WB	1.00	Horz(CT)	0.50	12	n/a	n/a		
BCDL	10.0	Code FBC2017/TPI2014		Matrix-MS							Weight: 578 lb	FT = 20%

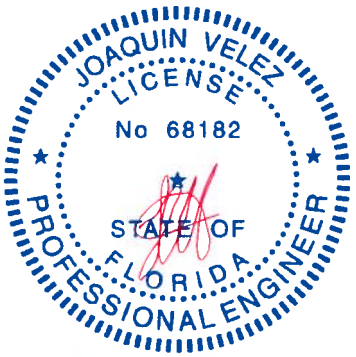
LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2 *Except*
9-14: 2x4 SP No.3
WEBS 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-6-13 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (lb/size) 12=2617/0-3-8, 2=2450/0-3-8
Max Horz 2=146(LC 27)
Max Uplift 12=-852(LC 5), 2=-831(LC 8)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-11483/4259, 3-4=-11243/4211, 4-5=-10701/3920, 5-6=-12570/4434, 6-8=-12733/4385, 8-9=-10684/3614, 9-10=-10446/3547, 10-11=-3052/1005, 11-12=-2470/873
BOT CHORD 2-19=-4001/10660, 18-19=-3362/8941, 17-18=-4348/12038, 16-17=-4586/13070, 15-16=-4227/12275, 9-15=-301/173, 13-14=-119/363
WEBS 3-19=-268/551, 4-19=-1202/3069, 4-18=-718/2223, 5-18=-1698/551, 5-17=-124/694, 6-17=-652/207, 6-16=-419/254, 8-16=-202/580, 8-15=-1818/699, 13-15=-972/2950, 10-15=-2695/7839, 10-13=-3232/1231, 11-13=-1229/3739

NOTES- (12)
1) 3-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-5-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 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 (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope); Lumber DOL=1.60 plate grip DOL=1.60
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.
8) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
9) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 852 lb uplift at joint 12 and 831 lb uplift at joint 2.



Joaquin Velez PE No.68182
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:
August 6,2019

Continued on page 2

MiTek
6904 Parke East Blvd.
Tampa, FL 36610

NOTES- (12)

11) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 426 lb down and 272 lb up at 7-0-0, 181 lb down and 103 lb up at 9-0-12, 181 lb down and 103 lb up at 11-0-12, 181 lb down and 103 lb up at 13-0-12, 181 lb down and 103 lb up at 15-0-12, 181 lb down and 103 lb up at 17-0-12, 181 lb down and 103 lb up at 19-0-12, 181 lb down and 103 lb up at 21-0-12, 107 lb down and 102 lb up at 23-0-12, 107 lb down and 102 lb up at 25-0-12, 107 lb down and 102 lb up at 27-0-12, and 107 lb down and 102 lb up at 29-0-12, and 125 lb down and 100 lb up at 31-4-12 on top chord, and 107 lb down and 134 lb up at 7-0-0, 0 lb down at 9-0-12, 0 lb down at 11-0-12, 0 lb down at 13-0-12, 0 lb down at 15-0-12, 0 lb down at 17-0-12, 0 lb down at 19-0-12, 0 lb down at 21-0-12, 85 lb down at 23-0-12, 85 lb down at 25-0-12, 85 lb down at 27-0-12, and 85 lb down at 29-0-12, and 99 lb down at 31-4-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
12) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.

LOAD CASE(S) Standard

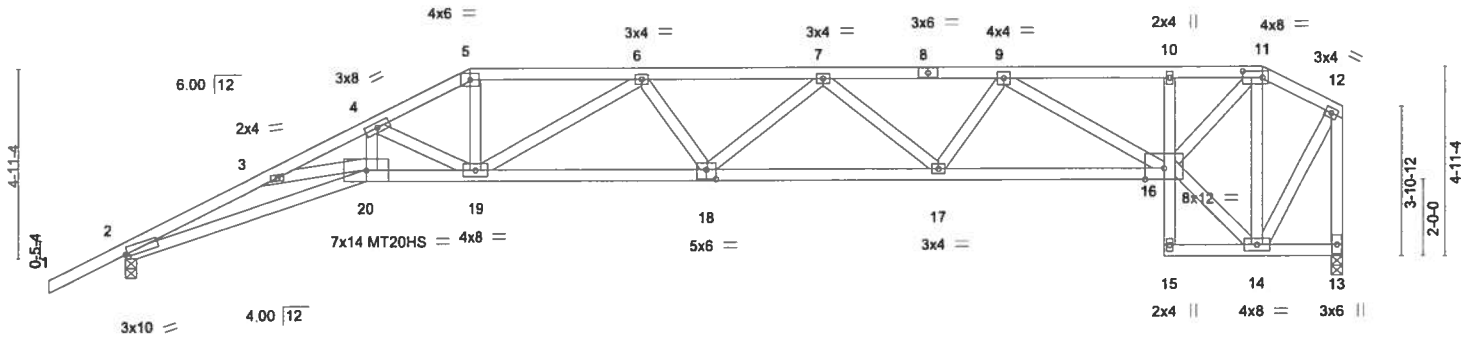
1) Dead + Roof Live (balanced): Lumber Increase=1.25, Plate Increase=1.25
   Uniform Loads (plf)
   Vert: 1-4=-54, 4-11=-54, 19-20=-20, 15-19=-20, 12-14=-20
   Concentrated Loads (lb)
   Vert: 4=-379(F) 5=-181(F) 10=-107(F) 13=-60(F) 23=-181(F) 24=-181(F) 25=-181(F) 26=-181(F) 27=-181(F) 28=-181(F) 29=-107(F) 30=-107(F) 31=-107(F) 32=-125(F) 33=-107(F) 39=-60(F) 40=-60(F) 41=-60(F) 42=-67(F)

Job	Truss	Truss Type	Qty	Ply	SAMUEL MODEL - LOT 19 HA	T17785900
2042309	T14	Hip	1	1	Job Reference (optional)	

Builders FirstSource, Jacksonville, FL - 32244, 8.240 s Jun 8 2019 MiTek Industries, Inc. Tue Aug 6 10:28:51 2019 Page 1
ID:0yrXDNjrxhKUZiS4sq5QxWyyQw7-8aN3Z2A7TlhNqegr5l0RUtiUiDzk0hRfCK4iGQyqbZA

-2-0-0	3-11-9	6-3-8	9-0-0	13-6-2	18-3-1	22-11-14	27-2-8	29-9-8	31-10-8
2-0-0	3-11-9	2-3-15	2-8-8	4-6-3	4-8-14	4-8-13	4-2-10	2-7-0	2-1-0

Scale = 1:58.0



6-3-8	9-0-0	15-2-13	21-3-4	27-2-8	29-9-8	31-10-8
6-3-8	2-8-8	6-2-13	6-0-7	5-11-4	2-7-0	2-1-0

Plate Offsets (X,Y)-- [2:0-0-12,0-0-13], [11:0-6-4,0-2-0], [18:0-3-0,0-3-0]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.51	Vert(LL)	-0.38	18	>999	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.83	Vert(CT)	-0.70	18-19	>540	180	MT20HS	187/143
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.68	Horz(CT)	0.47	13	n/a	n/a		
BCDL	10.0	Code FBC2017/TPI2014		Matrix-MS							Weight: 181 lb	FT = 20%

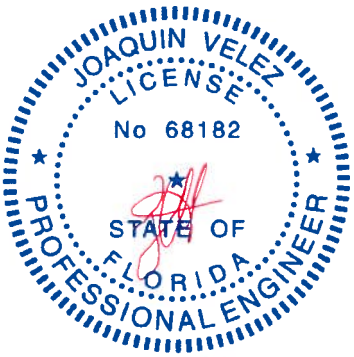
LUMBER-
TOP CHORD 2x4 SP No.2 *Except*
1-5: 2x4 SP M 31
BOT CHORD 2x4 SP M 31 *Except*
10-15: 2x4 SP No.3, 13-15,16-18: 2x4 SP No.2
WEBS 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 2-11-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 4-5-15 oc bracing.

REACTIONS. (lb/size) 2=1285/0-3-8, 13=1171/0-3-8
Max Horz 2=159(LC 12)
Max Uplift 2=-246(LC 9), 13=-261(LC 8)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-4613/2494, 3-4=-5005/2642, 4-5=-3189/1667, 5-6=-2889/1550, 6-7=-3484/1787, 7-9=-3093/1562, 9-10=-1703/884, 10-11=-1665/869, 11-12=-572/298, 12-13=-1144/582
BOT CHORD 2-20=-2413/4197, 19-20=-2367/4345, 18-19=-1761/3438, 17-18=-1734/3435, 16-17=-1407/2814
WEBS 3-20=-198/536, 4-20=-700/1333, 4-19=-1703/1009, 5-19=-611/1240, 6-19=-739/314, 7-17=-458/298, 9-17=-188/514, 9-16=-1304/673, 14-16=-260/561, 11-16=-886/1795, 11-14=-1172/600, 12-14=-464/963

NOTES- (10)
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope) and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are MT20 plates unless otherwise indicated.
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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
8) Bearing at joint(s) 2 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 246 lb uplift at joint 2 and 261 lb uplift at joint 13.
10) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.



Joaquin Velez PE No.68182
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:

August 6,2019

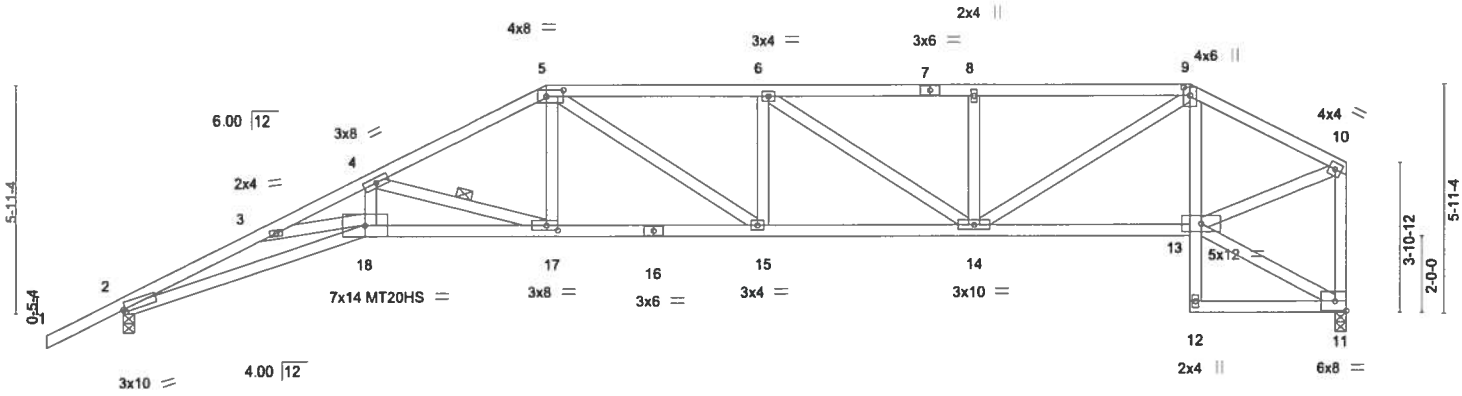
MiTek
6904 Parke East Blvd.
Tampa, FL 36610

Job	Truss	Truss Type	Qty	Ply	SAMUEL MODEL - LOT 19 HA	T17785901
2042309	T15	Hip	1	1	Job Reference (optional)	

Builders FirstSource, Jacksonville, FL - 32244, 8.240 s Jun 8 2019 MiTek Industries, Inc. Tue Aug 6 10:28:53 2019 Page 1
ID:0yrXDNjrxhKUZIS4sq5QxWyyQw7-4zVp_kBF?Mx53yqDDA2vZlnq90jNUdEygeZpKlyqbZ8

-2-0-0	3-11-9	6-3-8	11-0-0	16-7-12	22-1-12	27-9-8	31-10-8
2-0-0	3-11-9	2-3-15	4-8-8	5-7-12	5-6-0	5-7-12	4-1-0

Scale = 1:57.8



6-3-8	11-0-0	16-7-12	22-1-12	27-9-8	31-10-8
6-3-8	4-8-8	5-7-12	5-6-0	5-7-12	4-1-0

Plate Offsets (X,Y)-- [2:0-0-12,0-0-13], [5:0-5-4,0-2-0], [9:0-2-8,0-2-0], [17:0-3-8,0-1-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.52	Vert(LL)	-0.33	17-18	>999	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.63	Vert(CT)	-0.60	17-18	>630	180	MT20HS	187/143
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.54	Horz(CT)	0.39	11	n/a	n/a		
BCDL	10.0	Code	FBC2017/TPI2014	Matrix-MS							Weight: 182 lb	FT = 20%

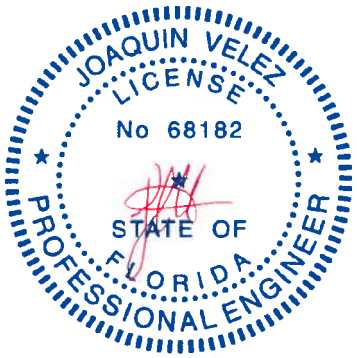
LUMBER-
TOP CHORD 2x4 SP No.2 *Except*
1-5: 2x4 SP M 31
BOT CHORD 2x4 SP M 31 *Except*
9-12: 2x4 SP No.3, 11-12,13-16: 2x4 SP No.2
WEBS 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-0-14 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 4-11-14 oc bracing.
WEBS 1 Row at midpt 4-17

REACTIONS. (lb/size) 2=1285/0-3-8, 11=1171/0-3-8
Max Horz 2=171(LC 12)
Max Uplift 2=-252(LC 12), 11=-227(LC 8)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-4610/2512, 3-4=-5031/2701, 4-5=-2637/1379, 5-6=-2579/1393, 6-8=-2197/1181, 8-9=-2197/1181, 9-10=-1308/671, 10-11=-1133/604
BOT CHORD 2-18=-2428/4193, 17-18=-2425/4368, 15-17=-1192/2339, 14-15=-1286/2579, 13-14=-557/1161, 9-13=-360/242
WEBS 3-18=-242/537, 4-18=-710/1377, 4-17=-2141/1297, 5-17=-345/735, 5-15=-169/433, 6-14=-476/254, 8-14=-312/238, 9-14=-616/1257, 10-13=-580/1212

NOTES- (10)
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope) and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are MT20 plates unless otherwise indicated.
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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
8) Bearing at joint(s) 2 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 252 lb uplift at joint 2 and 227 lb uplift at joint 11.
10) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.



Joaquin Velez PE No.68182
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:

August 6,2019

Job	Truss	Truss Type	Qty	Ply	SAMUEL MODEL - LOT 19 HA	T17785902
2042309	T16	Hip	1	1	Job Reference (optional)	

Builders FirstSource, Jacksonville, FL - 32244, 8.240 s Jun 8 2019 MiTek Industries, Inc. Tue Aug 6 10:28:55 2019 Page 1
ID:0yrXDNjrxhKUZiS4sq5QxWyyQw7-0MdZPQDWXzBpIG_cKb4NfjtBKqLNyRtF7y2wPByqbZ6

Scale = 1:72.0

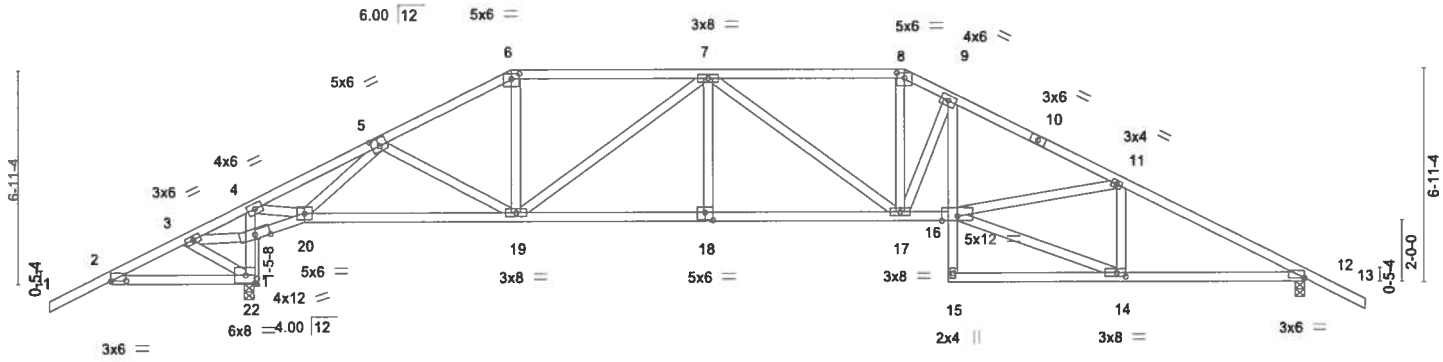


Plate Offsets (X,Y)– [2:0-6-0,0-0-1], [5:0-3-0,0-3-0], [6:0-3-0,0-2-0], [8:0-3-0,0-2-0], [12:0-0-0,0-0-3], [14:0-3-8,0-1-8], [18:0-3-0,0-3-0]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.47	Vert(LL)	-0.18	16	>999	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.79	Vert(CT)	-0.35	17-18	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.91	Horz(CT)	0.19	12	n/a	n/a		
BCDL	10.0	Code FBC2017/TPI2014		Matrix-MS							Weight: 227 lb	FT = 20%

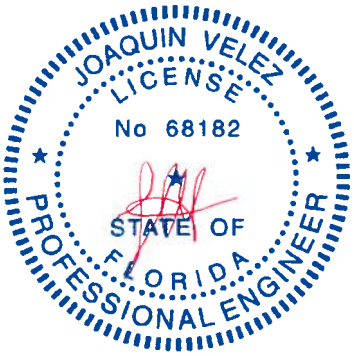
LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except*
4-22,9-15: 2x4 SP No.3
WEBS 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-2-2 oc purlins.
BOT CHORD Rigid ceiling directly applied or 3-6-2 oc bracing.

REACTIONS. (lb/size) 12=1340/0-3-8, 22=1747/0-3-12
Max Horz 22=102(LC 11)
Max Uplift 12=-277(LC 13), 22=-341(LC 12)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-669/508, 3-4=-1811/1346, 4-5=-1063/192, 5-6=-1788/768, 6-7=-1567/739, 7-8=-2113/1057, 8-9=-2353/1158, 9-11=-2806/1280, 11-12=-2249/1073
BOT CHORD 2-22=-421/705, 21-22=-1921/1503, 4-21=-1519/922, 20-21=-1294/1932, 19-20=-258/1389, 18-19=-649/2182, 17-18=-650/2179, 16-17=-842/2440, 9-16=-337/792, 12-14=-818/1947
WEBS 3-22=-662/401, 3-21=-1095/1646, 4-20=-1052/1911, 5-20=-1060/1256, 6-19=-134/540, 7-19=-799/444, 8-17=-387/853, 9-17=-870/493, 14-16=-860/2017, 11-16=-106/509, 11-14=-638/356

NOTES- (8)
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope) and C-C Exterior(2) zone; cantilever left exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * 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.
6) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 277 lb uplift at joint 12 and 341 lb uplift at joint 22.
8) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.



Joaquin Velez PE No.68182
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:

August 6,2019

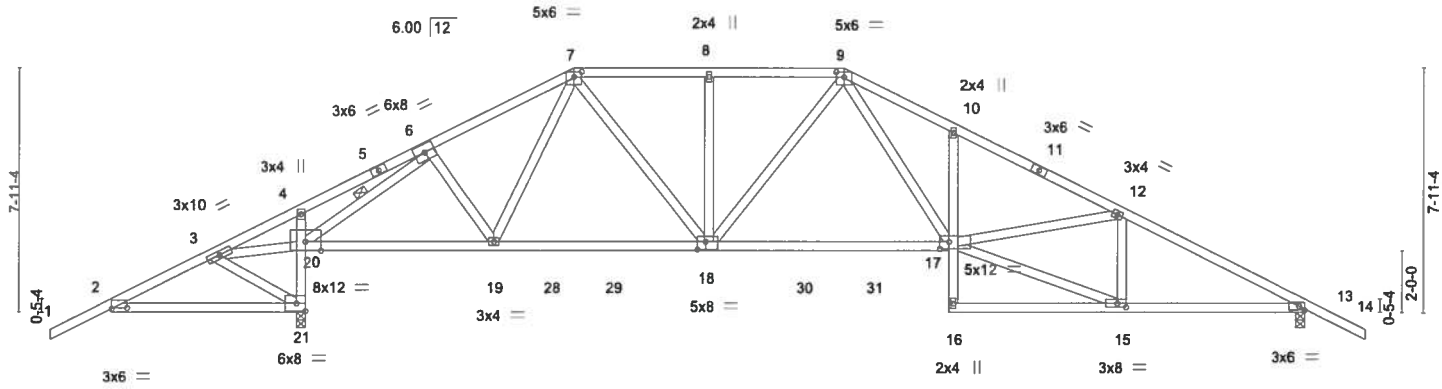
MiTek
6904 Parke East Blvd.
Tampa, FL 36610

Job	Truss	Truss Type	Qty	Ply	SAMUEL MODEL - LOT 19 HA	T17785903
2042309	T17	Hip	1	1	Job Reference (optional)	

Builders FirstSource, Jacksonville, FL - 32244, 8.240 s Jun 8 2019 MiTek Industries, Inc. Tue Aug 6 10:28:56 2019 Page 1
ID:0yrXDNjrxhKUZIS4sq5QxWyyQw7-UYBycmE8IHJfwQZoulccBwPJnEhFhw2OMcoTxdyqbZ5

-2-0-0	3-3-15	6-3-8	10-3-8	15-0-0	19-4-12	23-9-8	27-2-8	32-9-13	38-9-8	40-9-8
2-0-0	3-3-15	2-11-9	4-0-0	4-8-8	4-4-12	4-4-12	3-5-0	5-7-5	5-11-11	2-0-0

Scale = 1:72.0



6-3-8	12-5-0	19-4-12	27-2-8	32-9-13	38-9-8
6-3-8	6-1-7	6-11-12	7-9-12	5-7-5	5-11-11

Plate Offsets (X,Y)-- [2:0-6-0,0-0-5], [7:0-3-0,0-2-0], [9:0-3-0,0-2-0], [15:0-3-8,0-1-8], [17:0-3-8,0-2-12], [18:0-3-4,0-3-0]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.68	Vert(LL)	-0.19	17-18	>999	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.81	Vert(CT)	-0.41	17-18	>955	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.79	Horz(CT)	0.08	13	n/a	n/a		
BCDL	10.0	Code FBC2017/TPI2014		Matrix-MS							Weight: 228 lb	FT = 20%

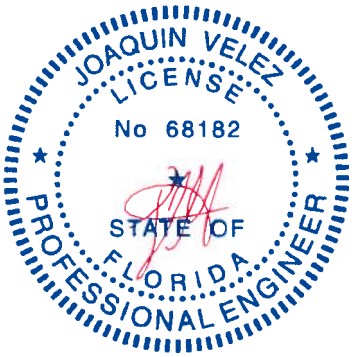
LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except*
4-21,10-16: 2x4 SP No.3
WEBS 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-5-14 oc purlins.
BOT CHORD Rigid ceiling directly applied or 3-4-1 oc bracing.
WEBS 1 Row at midpt 6-20

REACTIONS. (lb/size) 13=1253/0-3-8, 21=1834/0-3-8
Max Horz 21=-115(LC 10)
Max Uplift 13=-279(LC 13), 21=-374(LC 12)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-736/581, 3-4=-2440/1841, 4-6=-2371/1825, 6-7=-1166/399, 7-8=-1478/725, 8-9=-1483/729, 9-10=-2449/1214, 10-12=-2458/1085, 12-13=-2065/958
BOT CHORD 2-21=-475/768, 20-21=-2028/1658, 19-20=-116/851, 18-19=-112/1099, 17-18=-335/1539, 10-17=-260/277, 13-15=-711/1783
WEBS 3-21=-785/493, 3-20=-1567/2300, 6-20=-2986/2650, 6-19=-337/432, 7-19=-265/367, 7-18=-342/643, 8-18=-267/194, 9-17=-595/1132, 15-17=-742/1869, 12-17=-53/404, 12-15=-545/297

NOTES- (8)
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope) and C-C Exterior(2) zone; cantilever left exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * 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.
6) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 279 lb uplift at joint 13 and 374 lb uplift at joint 21.
8) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.



Joaquin Velez PE No.68182
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:
August 6,2019

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 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, DSB-89 and BCSI Building Component Safety Information*** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

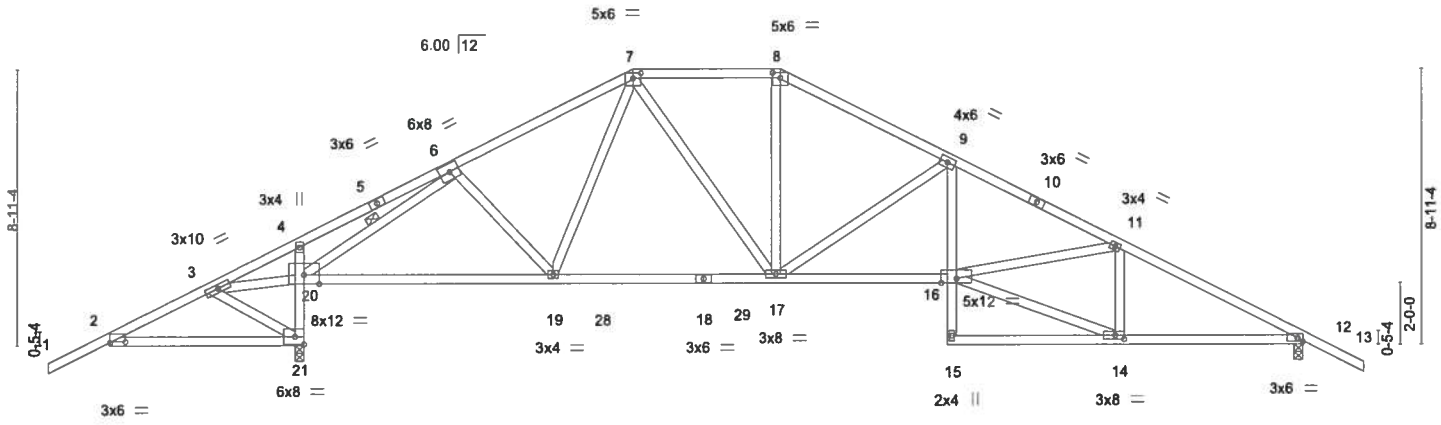
MiTek
6904 Parke East Blvd.
Tampa, FL 36610

Job	Truss	Truss Type	Qty	Ply	SAMUEL MODEL - LOT 19 HA	T17785904
2042309	T18	Hip	1	1	Job Reference (optional)	

Builders FirstSource, Jacksonville, FL - 32244, 8.240 s Jun 8 2019 MiTek Industries, Inc. Tue Aug 6 10:28:58 2019 Page 1
ID:0yrXDNjrxhKUZIS4sq5QxWyyQw7-RwJI1RFOquaN9jiB0je4GLVen1N09nQhpwHa?WyqbZ3

-2-0-0	3-3-15	6-3-8	11-1-14	17-0-0	21-9-8	27-2-8	32-9-13	38-9-8	40-9-8
2-0-0	3-3-15	2-11-9	4-10-6	5-10-2	4-9-8	5-5-0	5-7-5	5-11-11	2-0-0

Scale = 1:72.0



6-3-8	14-4-14	21-9-8	27-2-8	32-9-13	38-9-8
6-3-8	8-1-6	7-4-10	5-5-0	5-7-5	5-11-11

Plate Offsets (X,Y)-- [2:0-6-0,0-0-5], [7:0-3-0,0-2-0], [8:0-3-0,0-2-0], [14:0-3-8,0-1-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.72	Vert(LL)	-0.17	17-19	>999	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.79	Vert(CT)	-0.29	17-19	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.99	Horz(CT)	0.08	12	n/a	n/a		
BCDL	10.0	Code FBC2017/TPI2014		Matrix-MS							Weight: 227 lb	FT = 20%

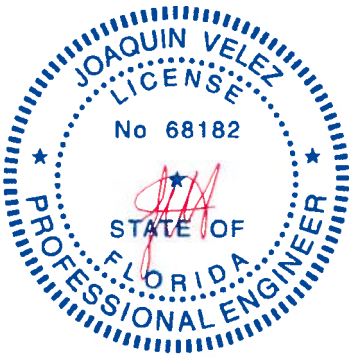
LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except*
4-21,9-15: 2x4 SP No.3
WEBS 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-5-13 oc purlins.
BOT CHORD Rigid ceiling directly applied or 3-3-12 oc bracing.
WEBS 1 Row at midpt 6-20

REACTIONS. (lb/size) 12=1253/0-3-8, 21=1834/0-3-8
Max Horz 21=129(LC 11)
Max Uplift 12=-288(LC 13), 21=-389(LC 12)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-737/582, 3-4=-2438/1832, 4-6=-2356/1804, 6-7=-1283/538, 7-8=-1321/730, 8-9=-1542/749, 9-11=-2531/1135, 11-12=-2063/969
BOT CHORD 2-21=-476/769, 20-21=-2027/1671, 4-20=-269/252, 19-20=-106/977, 17-19=-67/1102, 16-17=-720/2225, 9-16=-261/742, 12-14=-720/1780
WEBS 3-21=-792/492, 3-20=-1555/2301, 6-20=-3045/2768, 6-19=-207/288, 7-17=-235/430, 8-17=-126/432, 9-17=-1099/631, 14-16=-754/1861, 11-16=-28/433, 11-14=-575/314

NOTES- (8)
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope) and C-C Exterior(2) zone; cantilever left exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * 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.
6) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 288 lb uplift at joint 12 and 389 lb uplift at joint 21.
8) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.



Joaquin Velez PE No.68182
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:

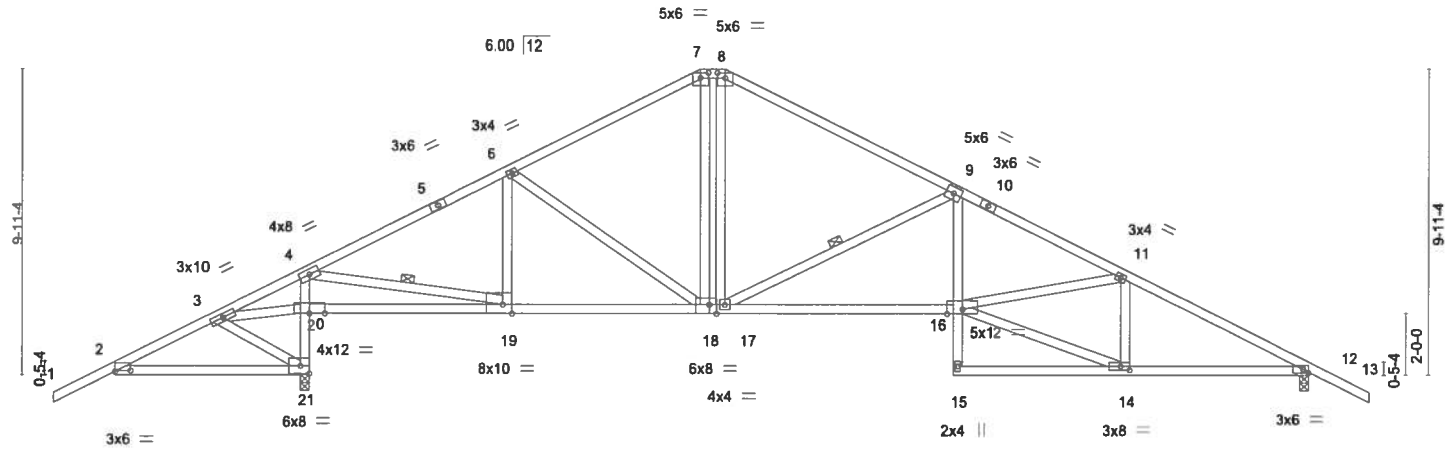
August 6,2019

Job	Truss	Truss Type	Qty	Ply	SAMUEL MODEL - LOT 19 HA	T17785905
2042309	T19	Hip	1	1	Job Reference (optional)	

Builders FirstSource, Jacksonville, FL - 32244, 8.240 s Jun 8 2019 MiTek Industries, Inc. Tue Aug 6 10:28:59 2019 Page 1
ID:0yrXDNjrxhKUZiS4sq5QxWyyQw7-v7s4EnG0bClEntHNZQ9JpY1qHRlZuEQq2a08YyyqbZ2

-2-0-0	3-3-15	6-3-8	12-8-12	19-0-0	19-9-8	27-2-8	32-9-13	38-9-8	40-9-8
2-0-0	3-3-15	2-11-9	6-5-4	6-3-4	0-9-8	7-5-0	5-7-5	5-11-11	2-0-0

Scale = 1:72.0



6-3-8	12-8-12	19-0-0	19-9-8	27-2-8	32-9-13	38-9-8
6-3-8	6-5-4	6-3-4	0-9-8	7-5-0	5-7-5	5-11-11

Plate Offsets (X,Y)-- [2:0-6-0,0-0-5], [7:0-3-0,0-2-0], [8:0-3-0,0-2-0], [14:0-3-8,0-1-8], [18:0-2-12,Edge], [19:0-3-8,Edge]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.67	Vert(LL)	-0.17	16-17	>999	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.84	Vert(CT)	-0.41	16-17	>965	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	1.00	Horz(CT)	0.09	12	n/a	n/a		
BCDL	10.0	Code	FBC2017/TPI2014	Matrix-MS							Weight: 232 lb	FT = 20%

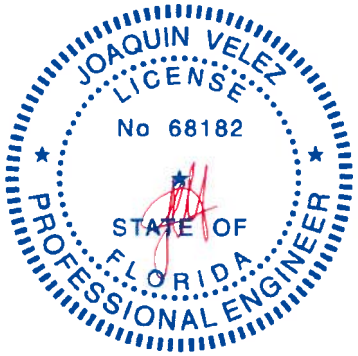
LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except*
4-21,9-15: 2x4 SP No.3
WEBS 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-5-5 oc purlins.
BOT CHORD Rigid ceiling directly applied or 3-3-12 oc bracing.
WEBS 1 Row at midpt 4-19, 9-17

REACTIONS. (lb/size) 12=1253/0-3-8, 21=1834/0-3-8
Max Horz 21=142(LC 11)
Max Uplift 12=-296(LC 13), 21=-401(LC 12)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-739/583, 3-4=-2436/1837, 4-6=-1279/430, 6-7=-1296/665, 7-8=-1100/668, 8-9=-1324/656, 9-11=-2547/1165, 11-12=-2059/979
BOT CHORD 2-21=-477/771, 20-21=-2028/1679, 4-20=-2105/1908, 19-20=-1538/2317, 18-19=-142/1074, 17-18=-82/1100, 16-17=-773/2270, 9-16=-254/760, 12-14=-727/1776
WEBS 3-21=-789/496, 3-20=-1558/2293, 4-19=-2344/2635, 6-19=-372/489, 7-18=-194/469, 8-17=-72/400, 9-17=-1313/774, 14-16=-754/1864, 11-16=-33/458, 11-14=-574/313

NOTES- (8)
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope) and C-C Exterior(2) zone; cantilever left exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * 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.
6) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 296 lb uplift at joint 12 and 401 lb uplift at joint 21.
8) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.



Joaquin Velez PE No.68182
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:

August 6,2019

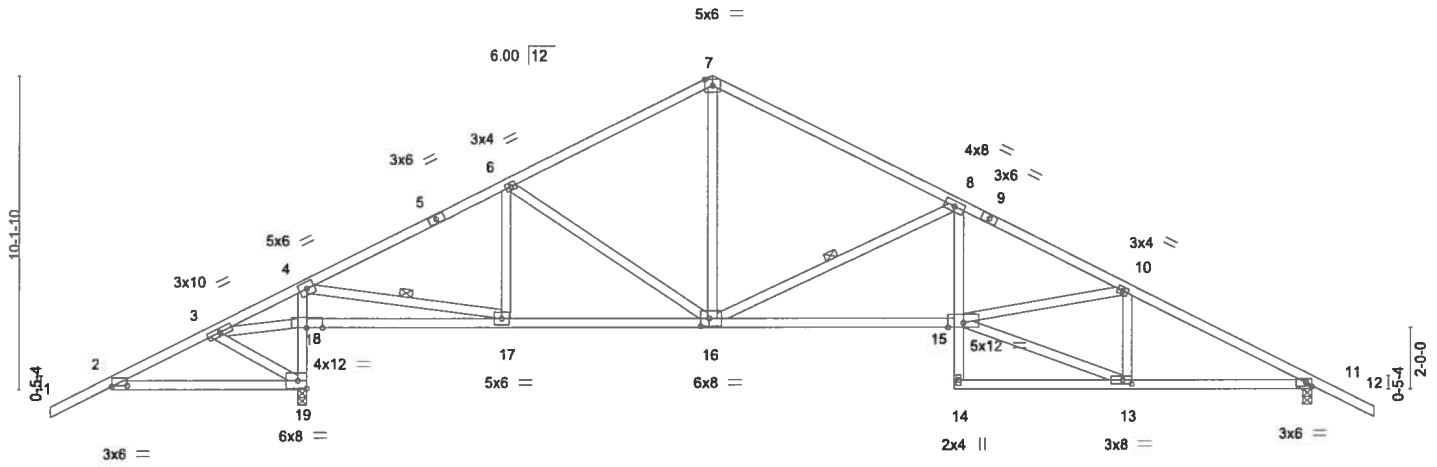
MiTek
6904 Parke East Blvd.
Tampa, FL 36610

Job	Truss	Truss Type	Qty	Ply	SAMUEL MODEL - LOT 19 HA	T17785906
2042309	T20	Roof Special	1	1	Job Reference (optional)	

Builders FirstSource, Jacksonville, FL - 32244, 8.240 s Jun 8 2019 MiTek Industries, Inc. Tue Aug 6 10:29:01 2019 Page 1
ID:0yrXDNjrxhKUZlS4sq5QxWyyQw7-rV_rfTIG6pyy0BRmhrBnuz7AGFO5MBY7WuVEcryqbZ0

-2-0-0	3-3-15	6-3-8	12-8-12	19-4-12	27-2-8	32-9-13	38-9-8	40-9-8
2-0-0	3-3-15	2-11-9	6-5-4	6-8-0	7-9-12	5-7-5	5-11-11	2-0-0

Scale = 1:71.6



6-3-8	12-8-12	19-4-12	27-2-8	32-9-13	38-9-8
6-3-8	6-5-4	6-8-0	7-9-12	5-7-5	5-11-11

Plate Offsets (X,Y)— [2:0-6-0,0-0-5], [13:0-3-8,0-1-8], [16:0-3-4,0-3-0]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.70	Vert(LL)	-0.18	15-16	>999	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.83	Vert(CT)	-0.41	15-16	>949	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.71	Horz(CT)	0.09	11	n/a	n/a		
BCDL	10.0	Code FBC2017/TPI2014		Matrix-MS							Weight: 222 lb	FT = 20%

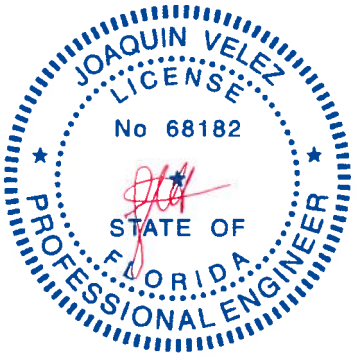
LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except*
4-19,8-14: 2x4 SP No.3
WEBS 2x4 SP No.3 *Except*
4-17: 2x4 SP No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 3-3-14 oc bracing.
WEBS 1 Row at midpt 4-17, 8-16

REACTIONS. (lb/size) 11=1253/0-3-8, 19=1834/0-3-8
Max Horz 19=-145(LC 10)
Max Uplift 11=-297(LC 13), 19=-403(LC 12)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-738/583, 3-4=-2438/1840, 4-6=-1283/437, 6-7=-1290/663, 7-8=-1300/647, 8-10=-2547/1170, 10-11=-2058/981
BOT CHORD 2-19=-477/771, 18-19=-2028/1681, 4-18=-2108/1913, 17-18=-1549/2327, 16-17=-151/1088, 15-16=-782/2273, 8-15=-244/751, 11-13=-728/1775
WEBS 3-19=-790/494, 3-18=-1561/2296, 4-17=-2362/2651, 6-17=-363/479, 7-16=-267/724, 8-16=-1332/791, 13-15=-749/1858, 10-15=-38/460, 10-13=-572/311

NOTES- (7)
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope) and C-C Exterior(2) zone; cantilever left 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.
5) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 297 lb uplift at joint 11 and 403 lb uplift at joint 19.
7) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.



Joaquin Velez PE No.68182
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:

August 6,2019

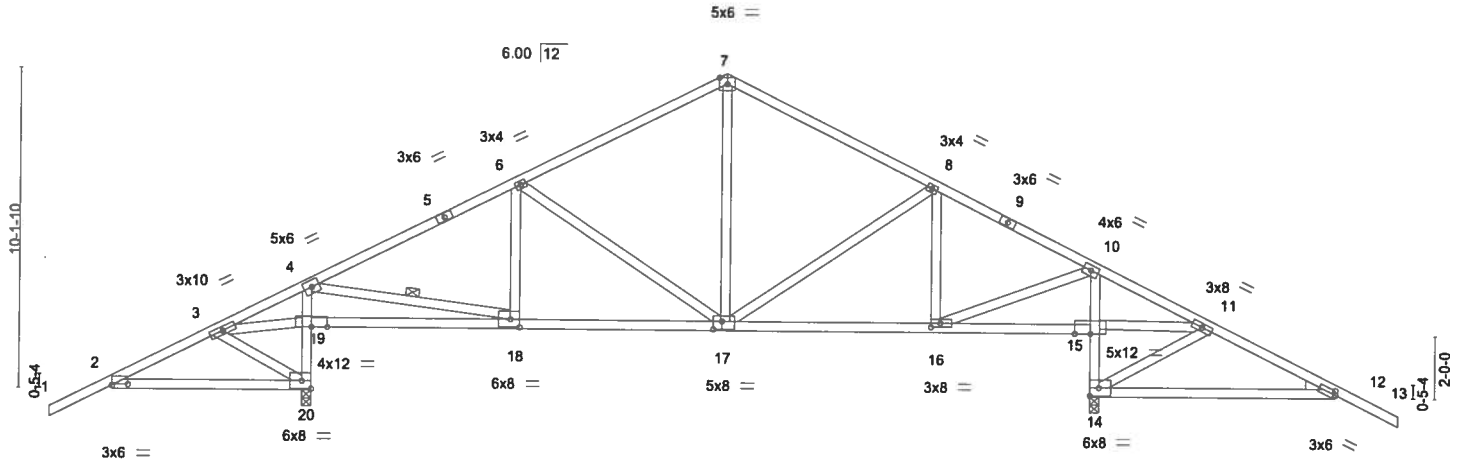
MiTek
6904 Parke East Blvd.
Tampa, FL 36610

Job	Truss	Truss Type	Qty	Ply	SAMUEL MODEL - LOT 19 HA	T17785907
2042309	T21	Roof Special	3	1	Job Reference (optional)	

Builders FirstSource, Jacksonville, FL - 32244, 8.240 s Jun 8 2019 MiTek Industries, Inc. Tue Aug 6 10:29:02 2019 Page 1
ID:0yrXDNjrxhKUZiS4sq5QxWyyQw7-JtYDtpIvt74peL0yFZl0RBfLgeIW5aKHkYFo8HyqbZ?

-2-0-0	3-3-15	6-3-8	12-8-12	19-4-12	26-0-12	31-0-0	34-8-9	38-9-8	40-9-8
2-0-0	3-3-15	2-11-9	6-5-3	6-8-0	6-8-0	4-11-4	3-8-9	4-0-15	2-0-0

Scale = 1:70.3



6-3-8	12-8-12	19-4-12	26-0-12	31-0-0	38-9-8
6-3-8	6-5-3	6-8-0	6-8-0	4-11-4	7-9-8

Plate Offsets (X,Y)— [2:0-6-0,0-0-5], [12:0-0-14,0-1-8], [16:0-3-8,0-1-8], [17:0-3-4,0-3-0], [18:0-3-8,0-3-0]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.66	Vert(LL)	-0.05	16-17	>999	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.76	Vert(CT)	-0.11	16-17	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.99	Horz(CT)	0.22	14	n/a	n/a		
BCDL	10.0	Code	FBC2017/TPI2014	Matrix-MS							Weight: 223 lb	FT = 20%

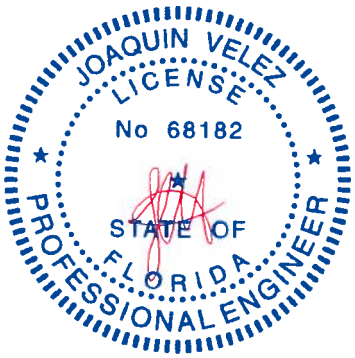
LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except*
4-20,10-14: 2x4 SP No.3
WEBS 2x4 SP No.3
WEDGE
Right: 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-6-8 oc purlins.
BOT CHORD Rigid ceiling directly applied or 3-7-14 oc bracing.
WEBS 1 Row at midpt 4-18

REACTIONS. (lb/size) 14=1636/0-3-8, 20=1451/0-3-8
Max Horz 20=145(LC 11)
Max Uplift 14=-388(LC 13), 20=-355(LC 12)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-739/583, 3-4=-2442/1843, 4-6=-685/159, 6-7=-559/170, 7-8=-557/187, 8-10=-410/103, 10-11=-2295/1783, 11-12=-792/639
BOT CHORD 2-20=-477/771, 19-20=-1646/1436, 4-19=-1730/1669, 18-19=-1556/2335, 17-18=-80/656, 16-17=0/649, 15-16=-1566/2312, 14-15=-1842/1667, 10-15=-1807/1693, 12-14=-513/818
WEBS 3-20=-791/496, 3-19=-1565/2301, 4-18=-2007/2103, 6-18=-254/417, 7-17=-32/275, 8-17=-292/220, 8-16=-555/658, 10-16=-1781/1928, 11-15=-1535/2277, 11-14=-922/562

NOTES- (7)
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope) and C-C Exterior(2) zone; cantilever 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.
5) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 388 lb uplift at joint 14 and 355 lb uplift at joint 20.
7) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.



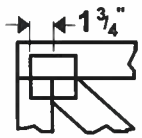
Joaquin Velez PE No.68182
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:

August 6,2019

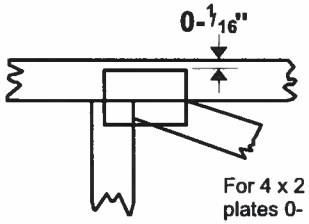
MiTek
6904 Parke East Blvd.
Tampa, FL 36610

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

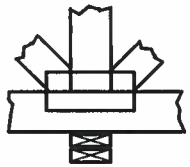
4 x 4

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

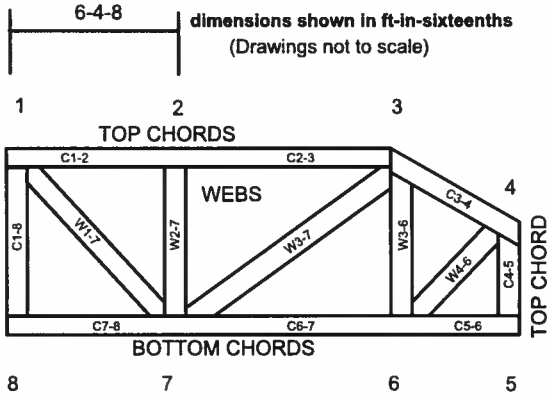


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

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®

MiTek Engineering Reference Sheet: MII-7473 rev. 10/03/2015

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.

RESIDENTIAL ENERGY CONSERVATION CODE DOCUMENTATION CHECKLIST

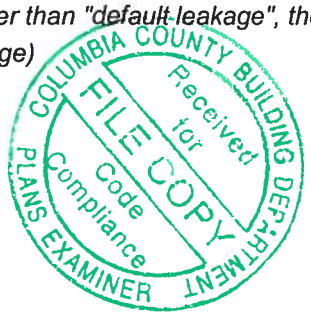
Florida Department of Business and Professional Regulation
Simulated Performance Alternative (Performance) Method

Applications for compliance with the 2017 Florida Building Code, Energy Conservation via the residential Simulated Performance Method shall include:

- ☐ *This checklist*
- ☐ *A Form R405 report that documents that the Proposed Design complies with Section R405.3 of the Florida Energy Code. This form shall include a summary page indicating home address, e-ratio and the pass or fail status along with summary areas and types of components, whether the home was simulated as a worst-case orientation, name and version of the compliance software tool, name of individual completing the compliance report (one page) and an input summary checklist that can be used for field verification (usually four pages/may be greater).*
- ☐ *Energy Performance Level (EPL) Display Card (one page)*
- ☐ *HVAC system sizing and selection based on ACCA Manual S or per exceptions provided in Section R403.7*
- ☐ *Mandatory Requirements (five pages)*

Required prior to CO for the Performance Method:

- ☐ *Air Barrier and Insulation Inspection Component Criteria checklist (Table R402.4.1.1 - one page)*
- ☐ *A completed Envelope Leakage Test Report (usually one page)*
- ☐ *If Form R405 duct leakage type indicates anything other than "default leakage", then a completed Form R405 Duct Leakage Test Report (usually one page)*



FORM R405-2017

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name:	190927 - Lot 19 Haight Ashbury	Builder Name:	
Street:		Permit Office:	
City, State, Zip:	Lake City , FL ,	Permit Number:	
Owner:	1500 Model	Jurisdiction:	
Design Location:	FL, Gainesville	County:	Columbia (Florida Climate Zone 2)

1. New construction or existing	New (From Plans)
2. Single family or multiple family	Single-family
3. Number of units, if multiple family	1
4. Number of Bedrooms	3
5. Is this a worst case?	Yes
6. Conditioned floor area above grade (ft²)	1500
Conditioned floor area below grade (ft²)	0

7. Windows(219.0 sqft.)	Description	Area
a. U-Factor: SHGC:	Dbl, U=0.35 SHGC=0.25	219.00 ft²
b. U-Factor: SHGC:	N/A	ft²
c. U-Factor: SHGC:	N/A	ft²
d. U-Factor: SHGC:	N/A	ft²
Area Weighted Average Overhang Depth:		3.570 ft.
Area Weighted Average SHGC:		0.250

8. Floor Types (1500.0 sqft.)	Insulation	Area
a. Slab-On-Grade Edge Insulation	R=0.0	1500.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

9. Wall Types (1570.0 sqft.)	Insulation	Area
a. Frame - Wood, Exterior	R=13.0	1354.70 ft²
b. Frame - Wood, Adjacent	R=13.0	215.33 ft²
c. N/A	R=	ft²
d. N/A	R=	ft²

10. Ceiling Types (1600.0 sqft.)	Insulation	Area
a. Under Attic (Vented)	R=38.0	1600.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

11. Ducts	R	ft²
a. Sup: Attic, Ret: Attic, AH: Garage	6	300

12. Cooling systems	kBtu/hr	Efficiency
a. Central Unit	32.0	SEER:15.00

13. Heating systems	kBtu/hr	Efficiency
a. Electric Heat Pump	32.0	HSPF:8.70

14. Hot water systems	
a. Electric	Cap: 40 gallons EF: 0.950
b. Conservation features None	
15. Credits	None

Glass/Floor Area: 0.146

Total Proposed Modified Loads: 42.07

Total Baseline Loads: 45.11

PASS

I hereby certify that the plans and specifications covered by this calculation are in compliance with the Florida Energy Code.

PREPARED BY: Evan Beamsley

DATE: 2019-08-13

I hereby certify that this building, as designed, is in compliance with the Florida Energy Code.

OWNER/AGENT: _____

DATE: 8-13-19

Review of the plans and specifications covered by this calculation indicates compliance with the Florida Energy Code. Before construction is completed this building will be inspected for compliance with Section 553.908 Florida Statutes.

BUILDING OFFICIAL: _____

DATE: _____

- Compliance requires certification by the air handler unit manufacturer that the air handler enclosure qualifies as certified factory-sealed in accordance with R403.3.2.1.

- Compliance requires an Air Barrier and Insulation Inspection Checklist in accordance with R402.4.1.1 and this project requires an envelope leakage test report with envelope leakage no greater than 7.00 ACH50 (R402.4.1.2).

FORM R405-2017

INPUT SUMMARY CHECKLIST REPORT

PROJECT

Title:	190927 - Lot 19 Haight Ashbury	Bedrooms:	3	Address Type:	Lot Information
Building Type:	User	Conditioned Area:	1500	Lot #	19
Owner Name:	1500 Model	Total Stories:	1	Block/Subdivision:	Haight Ashbury
# of Units:	1	Worst Case:	Yes	PlatBook:	
Builder Name:		Rotate Angle:	45	Street:	
Permit Office:		Cross Ventilation:		County:	Columbia
Jurisdiction:		Whole House Fan:		City, State, Zip:	Lake City , FL ,
Family Type:	Single-family				
New/Existing:	New (From Plans)				
Comment:					

CLIMATE

√	Design Location	TMY Site	Design Temp 97.5 %	Design Temp 2.5 %	Int Design Temp Winter	Int Design Temp Summer	Heating Degree Days	Design Moisture	Daily Temp Range
_____	FL, Gainesville	FL_GAINESVILLE_REGI	32	92	70	75	1305.5	51	Medium

BLOCKS

Number	Name	Area	Volume
1	Block1	1500	12000

SPACES

Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Infil ID	Finished	Cooled	Heated
1	Main	1500	12000	Yes	6	3	1	Yes	Yes	Yes

FLOORS

√	#	Floor Type	Space	Perimeter	R-Value	Area		Tile	Wood	Carpet
_____	1	Slab-On-Grade Edge Insulatio	Main	198 ft	0	1500 ft²	---	0.3	0.3	0.4

ROOF

√	#	Type	Materials	Roof Area	Gable Area	Roof Color	Solar Absor.	SA Tested	Emitt	Emitt Tested	Deck Insul.	Pitch (deg)
_____	1	Gable or shed	Composition shingles	1678 ft²	376 ft²	Dark	0.92	No	0.9	No	0	26.6

ATTIC

√	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
_____	1	Full attic	Vented	300	1500 ft²	Y	N

CEILING

√	#	Ceiling Type	Space	R-Value	Ins Type	Area	Framing Frac	Truss Type
_____	1	Under Attic (Vented)	Main	38	Blown	1600 ft²	0.11	Wood

FORM R405-2017

INPUT SUMMARY CHECKLIST REPORT

WALLS

√	#	Ornt	Adjacent To	Wall Type	Space	Cavity R-Value	Width Ft	Width In	Height Ft	Height In	Area	Sheathing R-Value	Framing Fraction	Solar Absor.	Below Grade%
____	1	N=>NE	Exterior	Frame - Wood	Main	13	16	8	8		133.3 ft²		0.23	0.75	0
____	2	NE=>E	Exterior	Frame - Wood	Main	13	4	2	8		33.3 ft²		0.23	0.75	0
____	3	E=>SE	Exterior	Frame - Wood	Main	13	3		8		24.0 ft²		0.23	0.75	0
____	4	N=>NE	Exterior	Frame - Wood	Main	13	13	2	8		105.3 ft²		0.23	0.75	0
____	5	NW=>N	Exterior	Frame - Wood	Main	13	4	2	8		33.3 ft²		0.23	0.75	0
____	6	W=>NW	Exterior	Frame - Wood	Main	13	3		8		24.0 ft²		0.23	0.75	0
____	7	N=>NE	Exterior	Frame - Wood	Main	13	11	8	8		93.3 ft²		0.23	0.75	0
____	8	E=>SE	Exterior	Frame - Wood	Main	13	45	6	8		364.0 ft²		0.23	0.75	0
____	9	S=>SW	Exterior	Frame - Wood	Main	13	11	7	8		92.7 ft²		0.23	0.75	0
____	10	W=>NW	Exterior	Frame - Wood	Main	13	6	8	8		53.3 ft²		0.23	0.75	0
____	11	S=>SW	Exterior	Frame - Wood	Main	13	10	3	8		82.0 ft²		0.23	0.75	0
____	12	W=>NW	Exterior	Frame - Wood	Main	13	7	6	8		60.0 ft²		0.23	0.75	0
____	13	S=>SW	Exterior	Frame - Wood	Main	13	6		8		48.0 ft²		0.23	0.75	0
____	14	W=>NW	Garage	Frame - Wood	Main	13	5		8		40.0 ft²		0.23	0.75	0
____	15	S=>SW	Garage	Frame - Wood	Main	13	10	11	8		87.3 ft²		0.23	0.75	0
____	16	W=>NW	Garage	Frame - Wood	Main	13	2	4	8		18.7 ft²		0.23	0.75	0
____	17	S=>SW	Garage	Frame - Wood	Main	13	8	8	8		69.3 ft²		0.23	0.75	0
____	18	W=>NW	Exterior	Frame - Wood	Main	13	26	0	8		208.0 ft²		0.23	0.75	0

DOORS

√	#	Ornt	Door Type	Space	Storms	U-Value	Width Ft	Width In	Height Ft	Height In	Area
_____	1	NE=>E	Insulated	Main	None	.4	1		6	8	6.7 ft²
_____	2	NW=>N	Insulated	Main	None	.4	1		6	8	6.7 ft²
_____	3	S=>SW	Insulated	Main	None	.4	3		6	8	20 ft²
_____	4	S=>SW	Insulated	Main	None	.4	3		6	8	20 ft²

WINDOWS

Orientation shown is the entered orientation (=>) changed to Worst Case.

√	#	Ornt	Wall ID	Frame	Panes	NFRC	U-Factor	SHGC	Imp	Area	Overhang Depth	Overhang Separation	Int Shade	Screening
_____	1	N=>NE	1	Metal	Low-E Double	Yes	0.35	0.25	N	15.0 ft²	1 ft 6 in	0 ft 0 in	None	None
_____	2	NE=>E	2	Metal	Low-E Double	Yes	0.35	0.25	N	10.0 ft²	3 ft 6 in	0 ft 0 in	None	None
_____	3	N=>NE	4	Metal	Low-E Double	Yes	0.35	0.25	N	45.0 ft²	7 ft 6 in	1 ft 0 in	None	None
_____	4	NW=>N	5	Metal	Low-E Double	Yes	0.35	0.25	N	13.3 ft²	10 ft 0 in	0 ft 0 in	None	None
_____	5	N=>NE	7	Metal	Low-E Double	Yes	0.35	0.25	N	30.0 ft²	1 ft 6 in	0 ft 0 in	None	None
_____	6	E=>SE	8	Metal	Low-E Double	Yes	0.35	0.25	N	30.0 ft²	1 ft 6 in	0 ft 0 in	None	None
_____	7	E=>SE	8	Metal	Low-E Double	Yes	0.35	0.25	N	6.0 ft²	1 ft 6 in	0 ft 0 in	None	None
_____	8	S=>SW	9	Metal	Low-E Double	Yes	0.35	0.25	N	30.0 ft²	1 ft 6 in	0 ft 0 in	None	None
_____	9	S=>SW	11	Metal	Low-E Double	Yes	0.35	0.25	N	30.0 ft²	1 ft 6 in	0 ft 0 in	None	None
_____	10	S=>SW	13	Metal	Low-E Double	Yes	0.35	0.25	N	6.7 ft²	9 ft 0 in	0 ft 0 in	None	None
_____	11	W=>NW	18	Metal	Low-E Double	Yes	0.35	0.25	N	3.0 ft²	1 ft 6 in	0 ft 0 in	None	None

FORM R405-2017

INPUT SUMMARY CHECKLIST REPORT

GARAGE

√	#	Floor Area	Ceiling Area	Exposed Wall Perimeter	Avg. Wall Height	Exposed Wall Insulation
_____	1	430 ft²	430 ft²	58 ft	8 ft	1

INFILTRATION

#	Scope	Method	SLA	CFM 50	ELA	EqLA	ACH	ACH 50
1	Wholehouse	Proposed ACH(50)	.000356	1400	76.86	144.54	.2719	7

HEATING SYSTEM

√	#	System Type	Subtype	Efficiency	Capacity	Block	Ducts
_____	1	Electric Heat Pump/	None	HSPF:8.7	32 kBtu/hr	1	sys#1

COOLING SYSTEM

√	#	System Type	Subtype	Efficiency	Capacity	Air Flow	SHR	Block	Ducts
_____	1	Central Unit/	None	SEER: 15	32 kBtu/hr	960 cfm	0.75	1	sys#1

HOT WATER SYSTEM

√	#	System Type	SubType	Location	EF	Cap	Use	SetPnt	Conservation
_____	1	Electric	None	Garage	0.95	40 gal	60 gal	120 deg	None

SOLAR HOT WATER SYSTEM

√	FSEC Cert #	Company Name	System Model #	Collector Model #	Collector Area	Storage Volume	FEF
_____	None	None			ft²		

DUCTS

√	#	— Supply — Location	R-Value	Area	— Return — Location	Area	Leakage Type	Air Handler	CFM 25 TOT	CFM25 OUT	QN	RLF	HVAC # Heat	HVAC # Cool
_____	1	Attic	6	300 ft²	Attic	75 ft²	Default Leakage	Garage	(Default)	(Default)			1	1

FORM R405-2017

INPUT SUMMARY CHECKLIST REPORT

TEMPERATURES

Programable Thermostat: N

Ceiling Fans:

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Cooling	[ ]	[ ]	[ ]	[ ]	[ ]	[X]	[X]	[X]	[X]	[ ]	[ ]	[ ]
Heating	[X]	[X]	[X]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[X]	[X]
Venting	[ ]	[ ]	[X]	[X]	[ ]	[ ]	[ ]	[ ]	[ ]	[X]	[X]	[ ]

Thermostat Schedule: HERS 2006 Reference

Schedule Type		Hours 1	2	3	4	5	6	7	8	9	10	11	12
Cooling (WD)	AM	78	78	78	78	78	78	78	78	78	78	78	78
	PM	78	78	78	78	78	78	78	78	78	78	78	78
Cooling (WEH)	AM	78	78	78	78	78	78	78	78	78	78	78	78
	PM	78	78	78	78	78	78	78	78	78	78	78	78
Heating (WD)	AM	68	68	68	68	68	68	68	68	68	68	68	68
	PM	68	68	68	68	68	68	68	68	68	68	68	68
Heating (WEH)	AM	68	68	68	68	68	68	68	68	68	68	68	68
	PM	68	68	68	68	68	68	68	68	68	68	68	68

MASS

Mass Type	Area	Thickness	Furniture Fraction	Space
Default(8 lbs/sq.ft.	0 ft²	0 ft	0.3	Main

Name: Evan Beamsley

Signature: _____

Rating Compant: Evan Beamsley

Date: _____

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE INDEX* = 93

The lower the Energy Performance Index, the more efficient the home.

1. New home or, addition	1. New (From Plans)
2. Single-family or multiple-family	2. Single-family
3. No. of units (if multiple-family)	3. 1
4. Number of bedrooms	4. 3
5. Is this a worst case? (yes/no)	5. Yes
6. Conditioned floor area (sq. ft.)	6. 1500
7. Windows, type and area	
a) U-factor:(weighted average)	7a. 0.350
b) Solar Heat Gain Coefficient (SHGC)	7b. 0.250
c) Area	7c. 219.0
8. Skylights	
a) U-factor:(weighted average)	8a. NA
b) Solar Heat Gain Coefficient (SHGC)	8b. NA
9. Floor type, insulation level:	
a) Slab-on-grade (R-value)	9a. 0.0
b) Wood, raised (R-value)	9b.
c) Concrete, raised (R-value)	9c.
10. Wall type and insulation:	
A. Exterior:	
1. Wood frame (Insulation R-value)	10A1. 13.0
2. Masonry (Insulation R-value)	10A2.
B. Adjacent:	
1. Wood frame (Insulation R-value)	10B1. 13.0
2. Masonry (Insulation R-value)	10B2.
11. Ceiling type and insulation level	
a) Under attic	11a. 38.0
b) Single assembly	11b.
c) Knee walls/skylight walls	11c.
d) Radiant barrier installed	11d. Yes

12. Ducts, location & insulation level	
a) Supply ducts	R 6.0
b) Return ducts	R 6.0
c) AHU location	Attic/Attic
13. Cooling system:	Capacity 32.0
a) Split system	SEER
b) Single package	SEER
c) Ground/water source	SEER/COP
d) Room unit/PTAC	EER
e) Other	15.0
14. Heating system:	Capacity 32.0
a) Split system heat pump	HSPF
b) Single package heat pump	HSPF
c) Electric resistance	COP
d) Gas furnace, natural gas	AFUE
e) Gas furnace, LPG	AFUE
f) Other	8.70
15. Water heating system	
a) Electric resistance	EF 0.95
b) Gas fired, natural gas	EF
c) Gas fired, LPG	EF
d) Solar system with tank	EF
e) Dedicated heat pump with tank	EF
f) Heat recovery unit	HeatRec%
g) Other	
16. HVAC credits claimed (Performance Method)	
a) Ceiling fans	
b) Cross ventilation	No
c) Whole house fan	No
d) Multizone cooling credit	
e) Multizone heating credit	
f) Programmable thermostat	No

*Label required by Section R303.1.3 of the Florida Building Code, Energy Conservation, if not DEFAULT.

I certify that this home has complied with the Florida Building Code, Energy Conservation, through the above energy saving features which will be installed (or exceeded) in this home before final inspection. Otherwise, a new EPL display card will be completed based on installed code compliant features.

Builder Signature:_____ Date:_____

Address of New Home: _____ City/FL Zip: Lake City, FL

Florida Building Code, Energy Conservation, 6th Edition (2017)
Mandatory Requirements for Residential Performance, Prescriptive and ERI Methods

ADDRESS:	Permit Number:
Lake City , FL ,	

MANDATORY REQUIREMENTS See individual code sections for full details.

✓

SECTION R401 GENERAL

☐ **R401.3 Energy Performance Level (EPL) display card (Mandatory).** The building official shall require that an energy performance level (EPL) display card be completed and certified by the builder to be accurate and correct before final approval of the building for occupancy. Florida law (Section 553.9085, Florida Statutes) requires the EPL display card to be included as an addendum to each sales contract for both presold and nonpresold residential buildings. The EPL display card contains information indicating the energy performance level and efficiencies of components installed in a dwelling unit. The building official shall verify that the EPL display card completed and signed by the builder accurately reflects the plans and specifications submitted to demonstrate code compliance for the building. A copy of the EPL display card can be found in Appendix RD.

☐ **R402.4 Air leakage (Mandatory).** The building thermal envelope shall be constructed to limit air leakage in accordance with the requirements of Sections R402.4.1 through R402.4.5.

Exception: Dwelling units of R-2 Occupancies and multiple attached single family dwellings shall be permitted to comply with Section C402.5.

☐ **R402.4.1 Building thermal envelope.** The building thermal envelope shall comply with Sections R402.4.1.1 and R402.4.1.2. The sealing methods between dissimilar materials shall allow for differential expansion and contraction.

☐ **R402.4.1.1 Installation.** The components of the building thermal envelope as listed in Table R402.4.1.1 shall be installed in accordance with the manufacturer's instructions and the criteria listed in Table R402.4.1.1, as applicable to the method of construction. Where required by the code official, an approved third party shall inspect all components and verify compliance.

☐ **R402.4.1.2 Testing.** The building or dwelling unit shall be tested and verified as having an air leakage rate not exceeding seven air changes per hour in Climate Zones 1 and 2, and three air changes per hour in Climate Zones 3 through 8. Testing shall be conducted in accordance with ANSI/RESNET/ICC 380 and reported at a pressure of 0.2 inch w.g. (50 pascals). Testing shall be conducted by either individuals as defined in Section 553.993(5) or (7), Florida Statutes, or individuals licensed as set forth in Section 489.105(3)(f), (g) or (i) or an approved third party. A written report of the results of the test shall be signed by the party conducting the test and provided to the code official. Testing shall be performed at any time after creation of all penetrations of the building thermal envelope.

Exception: Testing is not required for additions, alterations, renovations, or repairs, of the building thermal envelope of existing buildings in which the new construction is less than 85 percent of the building thermal envelope.

During testing:
1. Exterior windows and doors, fireplace and stove doors shall be closed, but not sealed, beyond the intended weatherstripping or other infiltration control measures.
2. Dampers including exhaust, intake, makeup air, backdraft and flue dampers shall be closed, but not sealed beyond intended infiltration control measures.
3. Interior doors, if installed at the time of the test, shall be open.
4. Exterior doors for continuous ventilation systems and heat recovery ventilators shall be closed and sealed.
5. Heating and cooling systems, if installed at the time of the test, shall be turned off.
6. Supply and return registers, if installed at the time of the test, shall be fully open.

☐ **R402.4.2 Fireplaces.** New wood-burning fireplaces shall have tight-fitting flue dampers or doors, and outdoor combustion air. Where using tight-fitting doors on factory-built fireplaces listed and labeled in accordance with UL 127, the doors shall be tested and listed for the fireplace. Where using tight-fitting doors on masonry fireplaces, the doors shall be listed and labeled in accordance with UL 907.

☐ **R402.4.3 Fenestration air leakage.** Windows, skylights and sliding glass doors shall have an air infiltration rate of no more than 0.3 cfm per square foot (1.5 L/s/m2), and swinging doors no more than 0.5 cfm per square foot (2.6 L/s/m2), when tested according to NFRC 400 or AAMA/ WDMA/CSA 101/I.S.2/A440 by an accredited, independent laboratory and listed and labeled by the manufacturer.

Exception: Site-built windows, skylights and doors.

MANDATORY REQUIREMENTS - (Continued)

☐ **R402.4.4 Rooms containing fuel-burning appliances.** In Climate Zones 3 through 8, where open combustion air ducts provide combustion air to open combustion fuel burning appliances, the appliances and combustion air opening shall be located outside the building thermal envelope or enclosed in a room, isolated from inside the thermal envelope. Such rooms shall be sealed and insulated in accordance with the envelope requirements of Table R402.1.2, where the walls, floors and ceilings shall meet not less than the basement wall R-value requirement. The door into the room shall be fully gasketed and any water lines and ducts in the room insulated in accordance with Section R403. The combustion air duct shall be insulated where it passes through conditioned space to a minimum of R-8.

Exceptions:

1. Direct vent appliances with both intake and exhaust pipes installed continuous to the outside.
2. Fireplaces and stoves complying with Section R402.4.2 and Section R1006 of the Florida Building Code, Residential.

☐ **R402.4.5 Recessed lighting.** Recessed luminaires installed in the building thermal envelope shall be sealed to limit air leakage between conditioned and unconditioned spaces. All recessed luminaires shall be IC-rated and labeled as having an air leakage rate not more than 2.0 cfm (0.944 L/s) when tested in accordance with ASTM E283 at a 1.57 psf (75 Pa) pressure differential. All recessed luminaires shall be sealed with a gasket or caulk between the housing and the interior wall or ceiling covering.

SECTION R403 SYSTEMS

R403.1 Controls.

☐ **R403.1.1 Thermostat provision (Mandatory).** At least one thermostat shall be provided for each separate heating and cooling system.

☐ **R403.1.3 Heat pump supplementary heat (Mandatory).** Heat pumps having supplementary electric-resistance heat shall have controls that, except during defrost, prevent supplemental heat operation when the heat pump compressor can meet the heating load.

☐ **R403.3.2 Sealing (Mandatory)** All ducts, air handlers, filter boxes and building cavities that form the primary air containment passageways for air distribution systems shall be considered ducts or plenum chambers, shall be constructed and sealed in accordance with Section C403.2.9.2 of the Commercial Provisions of this code and shall be shown to meet duct tightness criteria below.

Duct tightness shall be verified by testing in accordance with ANSI/RESNET/ICC 380 by either individuals as defined in Section 553.993(5) or (7), Florida Statutes, or individuals licensed as set forth in Section 489.105(3)(f), (g) or (i), Florida Statutes, to be "substantially leak free" in accordance with Section R403.3.3.

☐ **R403.3.2.1 Sealed air handler.** Air handlers shall have a manufacturer's designation for an air leakage of no more than 2 percent of the design airflow rate when tested in accordance with ASHRAE 193.

☐ **R403.3.3 Duct testing (Mandatory).** Ducts shall be pressure tested to determine air leakage by one of the following methods:

1. Rough-in test: Total leakage shall be measured with a pressure differential of 0.1 inch w.g. (25 Pa) across the system, including the manufa air handler enclosure if installed at the time of the test. All registers shall be taped or otherwise sealed during the test.
2. Postconstruction test: Total leakage shall be measured with a pressure differential of 0.1 inch w.g. (25 Pa) across the entire system, including the manufacturer's air handler enclosure. Registers shall be taped or otherwise sealed during the test.

Exceptions:

1. A duct air leakage test shall not be required where the ducts and air handlers are located entirely within the building thermal envelope.
2. Duct testing is not mandatory for buildings complying by Section 405 of this code.

A written report of the results of the test shall be signed by the party conducting the test and provided to the code official.

☐ **R403.3.5 Building cavities (Mandatory).** Building framing cavities shall not be used as ducts or plenums.

☐ **R403.4 Mechanical system piping insulation (Mandatory).** Mechanical system piping capable of carrying fluids above 105°F (41°C) or below 55°F (13°C) shall be insulated to a minimum of R-3.

☐ **R403.4.1 Protection of piping insulation.** Piping insulation exposed to weather shall be protected from damage, including that caused by sunlight, moisture, equipment maintenance and wind, and shall provide shielding from solar radiation that can cause degradation of the material. Adhesive tape shall not be permitted.

☐ **R403.5.1 Heated water circulation and temperature maintenance systems (Mandatory)** Heated water circulation systems shall be in accordance with Section R403.5.1.1. Heat trace temperature maintenance systems shall be in accordance with Section R403.5.1.2. Automatic controls, temperature sensors and pumps shall be accessible. Manual controls shall be readily accessible.

☐ **R403.5.1.1 Circulation systems.** Heated water circulation systems shall be provided with a circulation pump. The system return pipe shall be a dedicated return pipe or a cold water supply pipe. Gravity and thermosiphon circulation systems shall be prohibited. Controls for circulating hot water system pumps shall start the pump based on the identification of a demand for hot water within the occupancy. The controls shall automatically turn off the pump when the water in the circulation loop is at the desired temperature and when there is no demand for hot water.

☐ **R403.5.1.2 Heat trace systems.** Electric heat trace systems shall comply with IEEE 515.1 or UL 515. Controls for such systems shall automatically adjust the energy input to the heat tracing to maintain the desired water temperature in the piping in accordance with the times when heated water is used in the occupancy.

MANDATORY REQUIREMENTS - (Continued)

☐ **R403.5.5 Heat traps (Mandatory).** Storage water heaters not equipped with integral heat traps and having vertical pipe risers shall have heat traps installed on both the inlets and outlets. External heat traps shall consist of either a commercially available heat trap or a downward and upward bend of at least 3 ½ inches (89 mm) in the hot water distribution line and cold water line located as close as possible to the storage tank.

R403.5.6 Water heater efficiencies (Mandatory).

☐ **R403.5.6.1.1 Automatic controls.** Service water-heating systems shall be equipped with automatic temperature controls capable of adjustment from the lowest to the highest acceptable temperature settings for the intended use. The minimum temperature setting range shall be from 100°F to 140°F (38°C to 60°C).

☐ **R403.5.6.1.2 Shut down.** A separate switch or a clearly marked circuit breaker shall be provided to permit the power supplied to electric service systems to be turned off. A separate valve shall be provided to permit the energy supplied to the main burner(s) of combustion types of service water-heating systems to be turned off.

☐ **R403.5.6.2 Water-heating equipment.** Water-heating equipment installed in residential units shall meet the minimum efficiencies of Table C404.2 in Chapter 4 of the Florida Building Code, Energy Conservation, Commercial Provisions, for the type of equipment installed. Equipment used to provide heating functions as part of a combination system shall satisfy all stated requirements for the appropriate water-heating category. Solar water heaters shall meet the criteria of Section R403.5.6.2.1.

☐ **R403.5.6.2.1 Solar water-heating systems.** Solar systems for domestic hot water production are rated by the annual solar energy factor of the system. The solar energy factor of a system shall be determined from the Florida Solar Energy Center Directory of Certified Solar Systems. Solar collectors shall be tested in accordance with ISO Standard 9806, Test Methods for Solar Collectors, and SRCC Standard TM-1, Solar Domestic Hot Water System and Component Test Protocol. Collectors in installed solar water-heating systems should meet the following criteria:

1. Be installed with a tilt angle between 10 degrees and 40 degrees of the horizontal; and
2. Be installed at an orientation within 45 degrees of true south.

☐ **R403.6 Mechanical ventilation (Mandatory).** The building shall be provided with ventilation that meets the requirements of the Florida Building Code, Residential, or Florida Building Code, Mechanical, as applicable, or with other approved means of ventilation including: Natural, Infiltration or Mechanical means. Outdoor air intakes and exhausts shall have automatic or gravity dampers that close when the ventilation system is not operating.

☐ **R403.6.1 Whole-house mechanical ventilation system fan efficacy.** When installed to function as a whole-house mechanical ventilation system, fans shall meet the efficacy requirements of Table R403.6.1.

Exception: Where whole-house mechanical ventilation fans are integral to tested and listed HVAC equipment, they shall be powered by an electronically commutated motor.

☐ **R403.6.2 Ventilation air.** Residential buildings designed to be operated at a positive indoor pressure or for mechanical ventilation shall meet the following criteria:

1. The design air change per hour minimums for residential buildings in ASHRAE 62.2, Ventilation for Acceptable Indoor Air Quality, shall be the maximum rates allowed for residential applications.
2. No ventilation or air-conditioning system make-up air shall be provided to conditioned space from attics, crawlspaces, attached enclosed garages or outdoor spaces adjacent to swimming pools or spas.
3. If ventilation air is drawn from enclosed space(s), then the walls of the space(s) from which air is drawn shall be insulated to a minimum of R-11 and the ceiling shall be insulated to a minimum of R-19, space permitting, or R-10 otherwise.

R403.7 Heating and cooling equipment (Mandatory).

☐ **R403.7.1 Equipment sizing.** Heating and cooling equipment shall be sized in accordance with ACCA Manual S based on the equipment loads calculated in accordance with ACCA Manual J or other approved heating and cooling calculation methodologies, based on building loads for the directional orientation of the building. The manufacturer and model number of the outdoor and indoor units (if split system) shall be submitted along with the sensible and total cooling capacities at the design conditions described in Section R302.1. This Code does not allow designer safety factors, provisions for future expansion or other factors that affect equipment sizing. System sizing calculations shall not include loads created by local intermittent mechanical ventilation such as standard kitchen and bathroom exhaust systems. New or replacement heating and cooling equipment shall have an efficiency rating equal to or greater than the minimum required by federal law for the geographic location where the equipment is installed.

TABLE R403.6.1
WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM FAN EFFICACY

FAN LOCATION	AIRFLOW RATE MINIMUM (CFM)	MINIMUM EFFICACY [a] (CFM/WATT)	AIRFLOW RATE MAXIMUM (CFM)
Range hoods	Any	2.8 cfm/watt	Any
In-line fan	Any	2.8 cfm/watt	Any
Bathroom, utility room	10	1.4 cfm/watt	<90
Bathroom, utility room	90	2.8 cfm/watt	Any

For SI: 1 cfm = 28.3 L/min. a. When tested in accordance with HVI Standard 916

MANDATORY REQUIREMENTS - (Continued)

☐ **R403.7.1.1 Cooling equipment capacity.** Cooling only equipment shall be selected so that its total capacity is not less than the calculated total load but not more than 1.15 times greater than the total load calculated according to the procedure selected in Section 403.7, or the closest available size provided by the manufacturer's product lines. The corresponding latent capacity of the equipment shall not be less than the calculated latent load.

The published value for AHRI total capacity is a nominal, rating-test value and shall not be used for equipment sizing. Manufacturer's expanded performance data shall be used to select cooling-only equipment. This selection shall be based on the outdoor design dry-bulb temperature for the load calculation (or entering water temperature for water-source equipment), the blower CFM provided by the expanded performance data, the design value for entering wet-bulb temperature and the design value for entering dry-bulb temperature.

Design values for entering wet-bulb and dry-bulb temperatures shall be for the indoor dry bulb and relative humidity used for the load calculation and shall be adjusted for return side gains if the return duct(s) is installed in an unconditioned space.

Exceptions:

1. Attached single- and multiple-family residential equipment sizing may be selected so that its cooling capacity is less than the calculated total sensible load but not less than 80 percent of that load.
2. When signed and sealed by a Florida-registered engineer, in attached single- and multiple-family units, the capacity of equipment may be sized in accordance with good design practice.

R403.7.1.2 Heating equipment capacity.

☐ **R403.7.1.2.1 Heat pumps.** Heat pump sizing shall be based on the cooling requirements as calculated according to Section R403.7.1.1, and the heat pump total cooling capacity shall not be more than 1.15 times greater than the design cooling load even if the design heating load is 1.15 times greater than the design cooling load.

☐ **R403.7.1.2.2 Electric resistance furnaces.** Electric resistance furnaces shall be sized within 4 kW of the design requirements calculated according to the procedure selected in Section R403.7.1.

☐ **R403.7.1.2.3 Fossil fuel heating equipment.** The capacity of fossil fuel heating equipment with natural draft atmospheric burners shall not be less than the design load calculated in accordance with Section R403.7.1.

☐ **R403.7.1.3 Extra capacity required for special occasions.** Residences requiring excess cooling or heating equipment capacity on an intermittent basis, such as anticipated additional loads caused by major entertainment events, shall have equipment sized or controlled to prevent continuous space cooling or heating within that space by one or more of the following options:

1. A separate cooling or heating system is utilized to provide cooling or heating to the major entertainment areas.
2. A variable capacity system sized for optimum performance during base load periods is utilized.

☐ **R403.8 Systems serving multiple dwelling units (Mandatory).** Systems serving multiple dwelling units shall comply with Sections C403 and C404 of the IECC—Commercial Provisions in lieu of Section R403.

☐ **R403.9 Snow melt and ice system controls (Mandatory)** Snow- and ice-melting systems, supplied through energy service to the building, shall include automatic controls capable of shutting off the system when the pavement temperature is above 50°F (10°C), and no precipitation is falling and an automatic or manual control that will allow shutoff when the outdoor temperature is above 40°F (4.8°C).

☐ **R403.10 Pools and permanent spa energy consumption (Mandatory).** The energy consumption of pools and permanent spas shall be in accordance with Sections R403.10.1 through R403.10.5.

☐ **R403.10.1 Heaters.** The electric power to heaters shall be controlled by a readily accessible on-off switch that is an integral part of the heater mounted on the exterior of the heater, or external to and within 3 feet (914 mm) of the heater. Operation of such switch shall not change the setting of the heater thermostat. Such switches shall be in addition to a circuit breaker for the power to the heater. Gas-fired heaters shall not be equipped with continuously burning ignition pilots.

☐ **R403.10.2 Time switches.** Time switches or other control methods that can automatically turn off and on according to a preset schedule shall be installed for heaters and pump motors. Heaters and pump motors that have built-in time switches shall be in compliance with this section.

Exceptions:

1. Where public health standards require 24-hour pump operation.
2. Pumps that operate solar- and waste-heat-recovery pool heating systems.
3. Where pumps are powered exclusively from on-site renewable generation.

☐ **R403.10.3 Covers.** Outdoor heated swimming pools and outdoor permanent spas shall be equipped with a vapor-retardant cover on or at the water surface or a liquid cover or other means proven to reduce heat loss.

Exception: Where more than 70 percent of the energy for heating, computed over an operation season, is from site-recovered energy, such as from a heat pump or solar energy source, covers or other vapor-retardant means shall not be required.

☐ **R403.10.4 Gas- and oil-fired pool and spa heaters.** All gas- and oil-fired pool and spa heaters shall have a minimum thermal efficiency of 82 percent for heaters manufactured on or after April 16, 2013, when tested in accordance with ANSI Z 21.56. Pool heaters fired by natural or LP gas shall not have continuously burning pilot lights.

☐ **R403.10.5 Heat pump pool heaters.** Heat pump pool heaters shall have a minimum COP of 4.0 when tested in accordance with AHRI 1160, Table 2, Standard Rating Conditions-Low Air Temperature. A test report from an independent laboratory is required to verify procedure compliance. Geothermal swimming pool heat pumps are not required to meet this standard.

☐ **R403.11 Portable spas (Mandatory).** The energy consumption of electric-powered portable spas shall be controlled by the requirements of APSP-14.

SECTION R404

ELECTRICAL POWER AND LIGHTING SYSTEMS

☐ **R404.1 Lighting equipment (Mandatory).** Not less than 75 percent of the lamps in permanently installed lighting fixtures shall be high-efficacy lamps or not less than 75 percent of the permanently installed lighting fixtures shall contain only high-efficacy lamps.

Exception: Low-voltage lighting.

R404.1.1 Lighting equipment (Mandatory) Fuel gas lighting systems shall not have continuously burning pilot lights.

2017 - AIR BARRIER AND INSULATION INSPECTION COMPONENT CRITERIA

TABLE 402.4.1.1
AIR BARRIER AND INSULATION INSPECTION COMPONENT CRITERIA

				CHECK
Project Name:	190927 - Lot 19 Haight Ashbury	Builder Name:		
Street:		Permit Office:		
City, State, Zip:	Lake City , FL ,	Permit Number:		
Owner:	1500 Model	Jurisdiction:		
Design Location:	FL, Gainesville			

COMPONENT	AIR BARRIER CRITERIA	INSULATION INSTALLATION CRITERIA	
General requirements	A continuous air barrier shall be installed in the building envelope. The exterior thermal envelope contains a continuous air barrier. Breaks or joints in the air barrier shall be sealed.	Air-permeable insulation shall not be used as a sealing material.	
Ceiling/attic	The air barrier in any dropped ceiling/soffit shall be aligned with the insulation and any gaps in the air barrier shall be sealed. Access openings, drop down stairs or knee wall doors to unconditioned attic spaces shall be sealed.	The insulation in any dropped ceiling/soffit shall be aligned with the air barrier.	
Walls	The junction of the foundation and sill plate shall be sealed. The junction of the top plate and the top of exterior walls shall be sealed. Knee walls shall be sealed.	Cavities within corners and headers of frame walls shall be insulated by completely filling the cavity with a material having a thermal resistance of R-3 per inch minimum. Exterior thermal envelope insulation for framed walls shall be installed in substantial contact and continuous alignment with the air barrier.	
Windows, skylights and doors	The space between window/door jambs and framing, and skylights and framing shall be sealed.		
Rim joists	Rim joists shall include the air barrier.	Rim joists shall be insulated.	
Floors (including above-garage and cantilevered floors)	The air barrier shall be installed at any exposed edge of insulation.	Floor framing cavity insulation shall be installed to maintain permanent contact with the underside of subfloor decking, or floor framing cavity insulation shall be permitted to be in contact with the top side of sheathing, or continuous insulation installed on the underside of floor framing and extends from the bottom to the top of all perimeter floor framing members.	
Crawl space walls	Exposed earth in unvented crawl spaces shall be covered with a Class I vapor retarder with overlapping joints taped.	Where provided instead of floor insulation, insulation shall be permanently attached to the crawlspace	
Shafts, penetrations	Duct shafts, utility penetrations, and flue shafts opening to exterior or unconditioned space shall be sealed.		
Narrow cavities		Batts in narrow cavities shall be cut to fit, or narrow cavities shall be filled by insulation that on installation readily conforms to the available cavity spaces.	
Garage separation	Air sealing shall be provided between the garage and conditioned spaces.		
Recessed lighting	Recessed light fixtures installed in the building thermal envelope shall be sealed to the drywall.	Recessed light fixtures installed in the building thermal envelope shall be air tight and IC rated.	
Plumbing and wiring		Batt insulation shall be cut neatly to fit around wiring and plumbing in exterior walls, or insulation that on installation readily conforms to available space shall extend behind piping and wiring.	
Shower/tub on exterior wall	The air barrier installed at exterior walls adjacent to showers and tubs shall separate them from the showers and tubs.	Exterior walls adjacent to showers and tubs shall be insulated.	
Electrical/phone box on exterior walls	The air barrier shall be installed behind electrical or communication boxes or air-sealed boxes shall be installed.		
HVAC register boots	HVAC register boots that penetrate building thermal envelope shall be sealed to the sub-floor or drywall.		
Concealed sprinklers	When required to be sealed, concealed fire sprinklers shall only be sealed in a manner that is recommended by the manufacturer. Caulking or other adhesive sealants shall not be used to fill voids between fire sprinkler cover plates and walls or ceilings.		

a. In addition, inspection of log walls shall be in accordance with the provisions of ICC-400.

Envelope Leakage Test Report (Blower Door Test)

Residential Prescriptive, Performance or ERI Method Compliance
2017 Florida Building Code, Energy Conservation, 6th Edition

Jurisdiction:	Permit #:

Job Information

Builder:	Community: Haight Ashbury	Lot: 19
Address:		
City: Lake City	State: FL	Zip:

Air Leakage Test Results *Passing results must meet either the Performance, Prescriptive, or ERI Method*

○ **PRESCRIPTIVE METHOD-**The building or dwelling unit shall be tested and verified as having an air leakage rate of not exceeding 7 air changes per hour at a pressure of 0.2 inch w.g. (50 Pascals) in Climate Zones 1 and 2.

○ **PERFORMANCE or ERI METHOD-**The building or dwelling unit shall be tested and verified as having an air leakage rate of not exceeding the selected ACH(50) value, as shown on Form R405-2017 (Performance) or R406-2017 (ERI), section labeled as infiltration, sub-section ACH50.

ACH(50) specified on Form R405-2017-Energy Calc (Performance) or R406-2017 (ERI): 7.000

_____ x 60 ÷ 12000 = _____
CFM(50) Building Volume ACH(50)

☐ **PASS**

☐ When ACH(50) is less than 3, Mechanical Ventilation installation must be verified by building department.

Method for calculating building volume:

○ Retrieved from architectural plans

● Code software calculated

○ Field measured and calculated

R402.4.1.2 Testing. Testing shall be conducted in accordance with ANSI/RESNET/ICC 380 and reported at a pressure of 0.2 inch w.g. (50 Pascals). Testing shall be conducted by either individuals as defined in Section 553.993(5) or (7), *Florida Statues.*or individuals licensed as set forth in Section 489.105(3)(f), (g), or (i) or an approved third party. A written report of the results of the test shall be signed by the party conducting the test and provided to the*code official.* Testing shall be performed at any time after creation of all penetrations of the *building thermal envelope.*

During testing:
1. Exterior windows and doors, fireplace and stove doors shall be closed, but not sealed, beyond the intended weatherstripping or other infiltration control measures.
2. Dampers including exhaust, intake, makeup air, back draft and flue dampers shall be closed, but not sealed beyond intended infiltration control measures.
3. Interior doors, if installed at the time of the test, shall be open.
4. Exterior doors for continuous ventilation systems and heat recovery ventilators shall be closed and sealed.
5. Heating and cooling systems, if installed at the time of the test, shall be turned off.
6. Supply and return registers, if installed at the time of the test, shall be fully open.

Testing Company

Company Name: _____ Phone: _____

I hereby verify that the above Air Leakage results are in accordance with the 2017 6th Edition Florida Building Code Energy Conservation requirements according to the compliance method selected above.

Signature of Tester: _____ Date of Test: _____

Printed Name of Tester: _____

License/Certification #: _____ Issuing Authority: _____

Residential System Sizing Calculation

Summary

1500 Model

Project Title:
190927 - Lot 19 Haight Ashbury

Lake City, FL

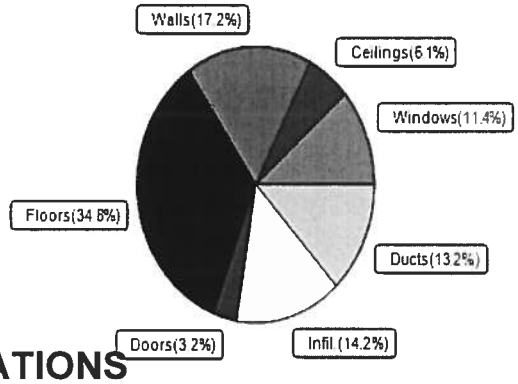
2019-04-24

Location for weather data: Gainesville, FL - Defaults: Latitude(29.7) Altitude(152 ft.) Temp Range(M) Humidity data: Interior RH (50%) Outdoor wet bulb (77F) Humidity difference(51gr.)					
Winter design temperature(TMY3 99%)	30	F	Summer design temperature(TMY3 99%)	94	F
Winter setpoint	70	F	Summer setpoint	75	F
Winter temperature difference	40	F	Summer temperature difference	19	F
Total heating load calculation	**26838**	**Btuh**	**Total cooling load calculation**	**23357**	**Btuh**
Submitted heating capacity	% of calc	Btuh	Submitted cooling capacity	% of calc	Btuh
Total (Electric Heat Pump)	119.2	32000	Sensible (SHR = 0.75)	125.9	24000
Heat Pump + Auxiliary(0.0kW)	119.2	32000	Latent	186.1	8000
			Total (Electric Heat Pump)	137.0	32000

WINTER CALCULATIONS

Winter Heating Load (for 1500 sqft)

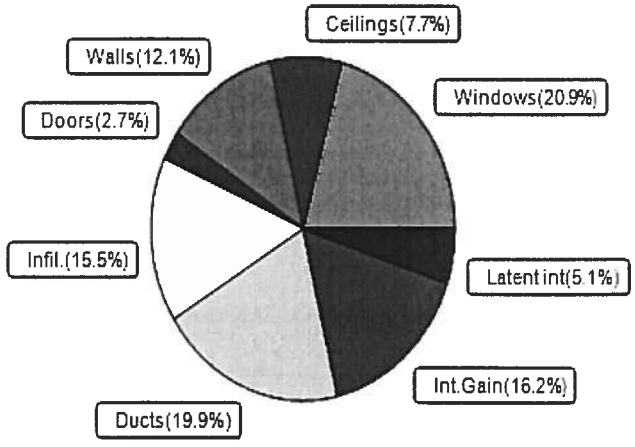
Load component			Load	
Window total	219	sqft	3066	Btuh
Wall total	1298	sqft	4607	Btuh
Door total	53	sqft	853	Btuh
Ceiling total	1600	sqft	1624	Btuh
Floor total	1500	sqft	9346	Btuh
Infiltration	87	cfm	3811	Btuh
Duct loss			3530	Btuh
Subtotal			**26838**	**Btuh**
Ventilation	0	cfm	0	Btuh
TOTAL HEAT LOSS			**26838**	**Btuh**



SUMMER CALCULATIONS

Summer Cooling Load (for 1500 sqft)

Load component			Load	
Window total	219	sqft	4873	Btuh
Wall total	1298	sqft	2824	Btuh
Door total	53	sqft	640	Btuh
Ceiling total	1600	sqft	1787	Btuh
Floor total			0	Btuh
Infiltration	65	cfm	1358	Btuh
Internal gain			3780	Btuh
Duct gain			3797	Btuh
Sens. Ventilation	0	cfm	0	Btuh
Blower Load			0	Btuh
Total sensible gain			**19059**	**Btuh**
Latent gain(ducts)			845	Btuh
Latent gain(infiltration)			2253	Btuh
Latent gain(ventilation)			0	Btuh
Latent gain(internal/occupants/other)			1200	Btuh
Total latent gain			**4298**	**Btuh**
TOTAL HEAT GAIN			**23357**	**Btuh**



Powered by ACCA MANUAL J 8th Edition

EnergyGauge® System Sizing
PREPARED BY: Evan Beamsley
DATE: 2019-08-13

System Sizing Calculations - Winter

Residential Load - Whole House Component Details

1500 Model

Lake City, FL

Project Title:
190927 - Lot 19 Haight Ashbury
Building Type: User

2019-04-24

Reference City: Gainesville, FL (Defaults) Winter Temperature Difference: 40.0 F (TMY3 99%)
This calculation is for Worst Case. The house has been rotated 225 degrees.

Component Loads for Whole House

Window	Panes/Type	Frame	U	Orientation	Area(sqft) X	HTM=	Load
1	2, NFRC 0.25	Metal	0.35	SW	15.0	14.0	210 Btuh
2	2, NFRC 0.25	Metal	0.35	W	10.0	14.0	140 Btuh
3	2, NFRC 0.25	Metal	0.35	SW	45.0	14.0	630 Btuh
4	2, NFRC 0.25	Metal	0.35	S	13.3	14.0	187 Btuh
5	2, NFRC 0.25	Metal	0.35	SW	30.0	14.0	420 Btuh
6	2, NFRC 0.25	Metal	0.35	NW	30.0	14.0	420 Btuh
7	2, NFRC 0.25	Metal	0.35	NW	6.0	14.0	84 Btuh
8	2, NFRC 0.25	Metal	0.35	NE	30.0	14.0	420 Btuh
9	2, NFRC 0.25	Metal	0.35	NE	30.0	14.0	420 Btuh
10	2, NFRC 0.25	Metal	0.35	NE	6.7	14.0	93 Btuh
11	2, NFRC 0.25	Metal	0.35	SE	3.0	14.0	42 Btuh
	Window Total				219.0(sqft)		3066 Btuh

Walls	Type	Ornt.	Ueff.	R-Value (Cav/Sh)	Area X	HTM=	Load
1	Frame - Wood	- Ext	(0.089)	13.0/0.0	118	3.55	420 Btuh
2	Frame - Wood	- Ext	(0.089)	13.0/0.0	17	3.55	59 Btuh
3	Frame - Wood	- Ext	(0.089)	13.0/0.0	24	3.55	85 Btuh
4	Frame - Wood	- Ext	(0.089)	13.0/0.0	60	3.55	214 Btuh
5	Frame - Wood	- Ext	(0.089)	13.0/0.0	13	3.55	47 Btuh
6	Frame - Wood	- Ext	(0.089)	13.0/0.0	24	3.55	85 Btuh
7	Frame - Wood	- Ext	(0.089)	13.0/0.0	63	3.55	225 Btuh
8	Frame - Wood	- Ext	(0.089)	13.0/0.0	328	3.55	1165 Btuh
9	Frame - Wood	- Ext	(0.089)	13.0/0.0	63	3.55	222 Btuh
10	Frame - Wood	- Ext	(0.089)	13.0/0.0	53	3.55	189 Btuh
11	Frame - Wood	- Ext	(0.089)	13.0/0.0	52	3.55	185 Btuh
12	Frame - Wood	- Ext	(0.089)	13.0/0.0	60	3.55	213 Btuh
13	Frame - Wood	- Ext	(0.089)	13.0/0.0	21	3.55	76 Btuh
14	Frame - Wood	- Adj	(0.089)	13.0/0.0	40	3.55	142 Btuh
15	Frame - Wood	- Adj	(0.089)	13.0/0.0	67	3.55	239 Btuh
16	Frame - Wood	- Adj	(0.089)	13.0/0.0	19	3.55	66 Btuh
17	Frame - Wood	- Adj	(0.089)	13.0/0.0	69	3.55	246 Btuh
18	Frame - Wood	- Ext	(0.089)	13.0/0.0	205	3.55	728 Btuh
	Wall Total				1298(sqft)		4607 Btuh

Doors	Type	Storm	Ueff.	Area X	HTM=	Load
1	Insulated - Exterior,	n	(0.400)	7	16.0	107 Btuh
2	Insulated - Exterior,	n	(0.400)	7	16.0	107 Btuh
3	Insulated - Exterior,	n	(0.400)	20	16.0	320 Btuh
4	Insulated - Garage,	n	(0.400)	20	16.0	320 Btuh
	Door Total			53(sqft)		853Btuh

Ceilings	Type/Color/Surface	Ueff.	R-Value	Area X	HTM=	Load
1	Vented Attic/D/Shing	(0.025)	38.0/0.0	1600	1.0	1624 Btuh
	Ceiling Total			1600(sqft)		1624Btuh

Manual J Winter Calculations

Residential Load - Component Details (continued)

1500 Model

Lake City, FL

Project Title:
190927 - Lot 19 Haight Ashbury
Building Type: User

2019-04-24

Floors	Type	Ueff.	R-Value	Size X	HTM=	Load
1	Slab On Grade	(1.180)	0.0	198.0 ft(perim.)	47.2	9346 Btuh
	Floor Total			1500 sqft		9346 Btuh
				Envelope Subtotal:		19496 Btuh
Infiltration	Type	Wholehouse ACH	Volume(cuft)	Wall Ratio	CFM=	
	Natural	0.44	12000	1.00	87.0	3811 Btuh
Duct load	Average sealed, R6.0, Supply(Att), Return(Att)				(DLM of 0.151)	3530 Btuh
All Zones			**Sensible Subtotal All Zones**			**26838 Btuh**

WHOLE HOUSE TOTALS

Totals for Heating	Subtotal Sensible Heat Loss	26838 Btuh
	Ventilation Sensible Heat Loss	0 Btuh
	Total Heat Loss	26838 Btuh

EQUIPMENT

1. Electric Heat Pump	#	32000 Btuh

Key: Window types - NFRC (Requires U-Factor and Shading coefficient(SHGC) of glass as numerical values)
or - Glass as 'Clear' or 'Tint' (Uses U-Factor and SHGC defaults)
U - (Window U-Factor)
HTM - (ManualJ Heat Transfer Multiplier)

Version 8

System Sizing Calculations - Summer

Residential Load - Whole House Component Details

1500 Model

Project Title:
190927 - Lot 19 Haight Ashbury

Lake City, FL

2019-04-24

Reference City: Gainesville, FL Temperature Difference: 19.0F(TMY3 99%) Humidity difference: 51gr.

This calculation is for Worst Case. The house has been rotated 225 degrees.

Component Loads for Whole House

Window	Type* Panes	SHGC	U	InSh	IS	Ornt	Overhang Len	Hgt	Window Area(sqft) Gross	Shaded	Unshaded	HTM Shaded	Unshaded	Load
1	2 NFRC	0.25,	0.35	No	No	SW	1.5ft.	0.0ft.	15.0	7.4	7.6	12	25	275 Btuh
2	2 NFRC	0.25,	0.35	No	No	W	3.5ft.	0.0ft.	10.0	4.4	5.6	12	31	225 Btuh
3	2 NFRC	0.25,	0.35	No	No	SW	7.5ft.	1.0ft.	45.0	45.0	0.0	12	25	536 Btuh
4	2 NFRC	0.25,	0.35	No	No	S	10.0f	0.0ft.	13.3	13.3	0.0	12	14	159 Btuh
5	2 NFRC	0.25,	0.35	No	No	SW	1.5ft.	0.0ft.	30.0	14.8	15.2	12	25	549 Btuh
6	2 NFRC	0.25,	0.35	No	No	NW	1.5ft.	0.0ft.	30.0	0.0	30.0	12	23	703 Btuh
7	2 NFRC	0.25,	0.35	No	No	NW	1.5ft.	0.0ft.	6.0	0.0	6.0	12	23	141 Btuh
8	2 NFRC	0.25,	0.35	No	No	NE	1.5ft.	0.0ft.	30.0	0.0	30.0	12	23	703 Btuh
9	2 NFRC	0.25,	0.35	No	No	NE	1.5ft.	0.0ft.	30.0	0.0	30.0	12	23	703 Btuh
10	2 NFRC	0.25,	0.35	No	No	NE	9.0ft.	0.0ft.	6.7	0.0	6.7	12	23	156 Btuh
11	2 NFRC	0.25,	0.35	No	No	SE	1.5ft.	0.0ft.	3.0	3.0	0.0	12	25	36 Btuh
	Excursion													685 Btuh
	Window Total								219 (sqft)					4873 Btuh

Walls	Type	U-Value	R-Value Cav/Sheath	Area(sqft)	HTM	Load
1	Frame - Wood - Ext	0.09	13.0/0.0	118.3	2.3	268 Btuh
2	Frame - Wood - Ext	0.09	13.0/0.0	16.7	2.3	38 Btuh
3	Frame - Wood - Ext	0.09	13.0/0.0	24.0	2.3	54 Btuh
4	Frame - Wood - Ext	0.09	13.0/0.0	60.3	2.3	137 Btuh
5	Frame - Wood - Ext	0.09	13.0/0.0	13.3	2.3	30 Btuh
6	Frame - Wood - Ext	0.09	13.0/0.0	24.0	2.3	54 Btuh
7	Frame - Wood - Ext	0.09	13.0/0.0	63.3	2.3	143 Btuh
8	Frame - Wood - Ext	0.09	13.0/0.0	328.0	2.3	742 Btuh
9	Frame - Wood - Ext	0.09	13.0/0.0	62.7	2.3	142 Btuh
10	Frame - Wood - Ext	0.09	13.0/0.0	53.3	2.3	121 Btuh
11	Frame - Wood - Ext	0.09	13.0/0.0	52.0	2.3	118 Btuh
12	Frame - Wood - Ext	0.09	13.0/0.0	60.0	2.3	136 Btuh
13	Frame - Wood - Ext	0.09	13.0/0.0	21.3	2.3	48 Btuh
14	Frame - Wood - Adj	0.09	13.0/0.0	40.0	1.7	67 Btuh
15	Frame - Wood - Adj	0.09	13.0/0.0	67.3	1.7	114 Btuh
16	Frame - Wood - Adj	0.09	13.0/0.0	18.7	1.7	31 Btuh
17	Frame - Wood - Adj	0.09	13.0/0.0	69.3	1.7	117 Btuh
18	Frame - Wood - Ext	0.09	13.0/0.0	205.0	2.3	464 Btuh
	Wall Total			1298 (sqft)		2824 Btuh

Doors	Type	Area (sqft)	HTM	Load
1	Insulated - Exterior	6.7	12.0	80 Btuh
2	Insulated - Exterior	6.7	12.0	80 Btuh
3	Insulated - Exterior	20.0	12.0	240 Btuh
4	Insulated - Garage	20.0	12.0	240 Btuh
	Door Total	53 (sqft)		640 Btuh

Ceilings	Type/Color/Surface	U-Value	R-Value	Area(sqft)	HTM	Load
1	Vented Attic/DarkShingle/RB	0.025	38.0/0.0	1600.0	1.12	1787 Btuh
	Ceiling Total			1600 (sqft)		1787 Btuh

Floors	Type	R-Value	Size	HTM	Load
1	Slab On Grade	0.0	1500 (ft-perimeter)	0.0	0 Btuh
	Floor Total		1500.0 (sqft)		0 Btuh

Manual J Summer Calculations

Residential Load - Component Details (continued)

1500 Model

Project Title: 190927 - Lot 19 Haight Ashbury

Climate:FL_GAINESVILLE_REGIONAL_A

Lake City, FL

2019-04-24

			Envelope Subtotal:			10124 Btuh
Infiltration	Type Natural	Average ACH 0.33	Volume(cuft) 12000	Wall Ratio 1	CFM= 65.3	Load 1358 Btuh
Internal gain		Occupants 6	Btuh/occupant X 230	+	Appliance 2400	Load 3780 Btuh
			Sensible Envelope Load:			15262 Btuh
Duct load	Average sealed, Supply(R6.0-Attic), Return(R6.0-Attic)		(DGM of 0.249)			3797 Btuh
			Sensible Load All Zones			**19059 Btuh**

Manual J Summer Calculations

Residential Load - Component Details (continued)

1500 Model

Project Title: 190927 - Lot 19 Haight Ashbury

Climate:FL_GAINESVILLE_REGIONAL_A

Lake City, FL

2019-04-24

WHOLE HOUSE TOTALS

Whole House Totals for Cooling	**Sensible Envelope Load All Zones**	**15262 Btuh**
	Sensible Duct Load	3797 Btuh
	Total Sensible Zone Loads	**19059 Btuh**
	Sensible ventilation	0 Btuh
	Blower	0 Btuh
	Total sensible gain	**19059 Btuh**
	Latent infiltration gain (for 51 gr. humidity difference)	2253 Btuh
	Latent ventilation gain	0 Btuh
	Latent duct gain	845 Btuh
	Latent occupant gain (6.0 people @ 200 Btuh per person)	1200 Btuh
	Latent other gain	0 Btuh
	Latent total gain	**4298 Btuh**
	TOTAL GAIN	**23357 Btuh**

EQUIPMENT

1. Central Unit	#	32000 Btuh

*Key: Window types (Panes - Number and type of panes of glass)
(SHGC - Shading coefficient of glass as SHGC numerical value)
(U - Window U-Factor)
(InSh - Interior shading device: none(No), Blinds(B), Draperies(D) or Roller Shades(R))
- For Blinds: Assume medium color, half closed
For Draperies: Assume medium weave, half closed
For Roller shades: Assume translucent, half closed
(IS - Insect screen: none(N), Full(F) or Half(½))
(Ornt - compass orientation)

Version 8