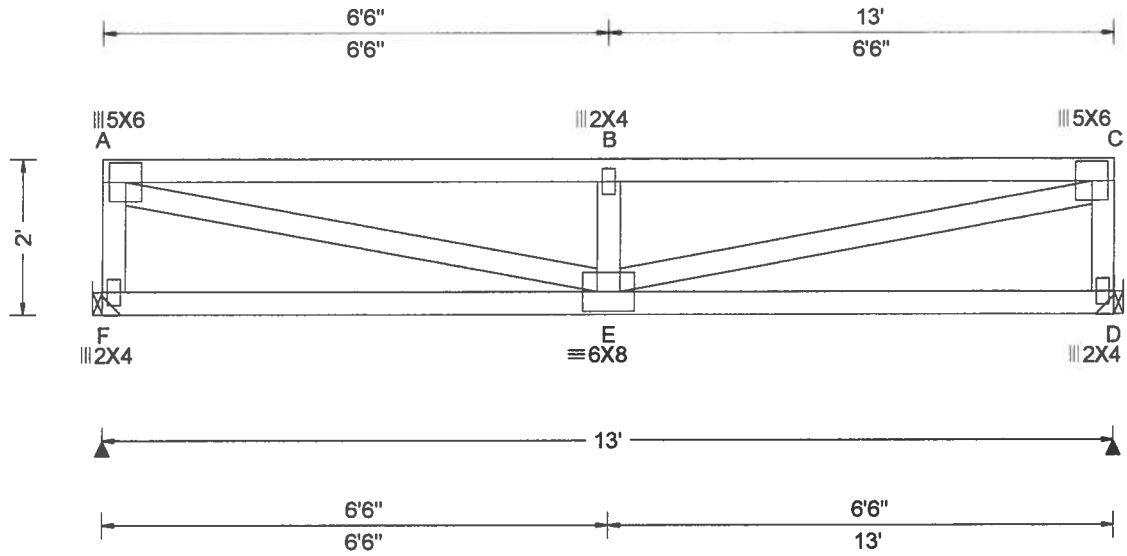
SEQN: 542125 FLAT FROM: CDM	Ply: 1 Qty: 9	**Job Number:** 19-3056 /Heldon Residence /ZECHER CONSTRUCTION **Truss Label:** FT1		Cust: R 215 JRef: 1WO82150004 T5 DrwNo: 247.19.1534.57060 / YK 09/04/2019	



Loading Criteria (psf)
TCLL: 40.00
TCDL: 10.00
BCLL: 0.00
BCDL: 5.00
Des Ld: 55.00
NCBCLL: 10.00
Soffit: 0.00
Load Duration: 1.00
Spacing: 24.0 "

Wind Criteria
Wind Std: NA
Speed: NA mph
Enclosure: NA
Category: NA
EXP: NA Kzt: NA
Mean Height: NA ft
TCDL: NA psf
BCDL: NA psf
MWFRS Parallel Dist: NA
C&C Dist a: NA ft
Loc. from endwall: NA
I: NA GCpi: NA
Wind Duration: NA

Snow Criteria (Pg,Pf in PSF)
Pg: NA Ct: NA CAT: NA
Pf: NA Ce: NA
Lu: NA Cs: NA
Snow Duration: NA

Code / Misc Criteria
Bldg Code: FBC 2017 RES
TPI Std: 2014
Rep Fac: No
FT/RT:20(0)/10(0)
Plate Type(s):
WAVE

Defl/CSI Criteria

PP Deflection in	loc	L/defl	L/#
VERT(LL): 0.092	B	999	480
VERT(CL): 0.127	B	999	360
HORZ(LL): 0.009	A	-	-
HORZ(TL): 0.012	A	-	-

Creep Factor: 2.0
Max TC CSI: 0.516
Max BC CSI: 0.289
Max Web CSI: 0.783

VIEW Ver: 18.02.00A.1126.20

▲Maximum Reactions (lbs)

	Gravity			Non-Gravity		
Loc	R+	/ R-	/ Rh	/ Rw	/ U	/ RL
F	715	/-	/-	/-	/-	/-
D	715	/-	/-	/-	/-	/-

F Brg Width = - Min Req = -
D Brg Width = - Min Req = -
Members not listed have forces less than 375#

Maximum Top Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
A - B	0	-1626	B - C	0	-1626

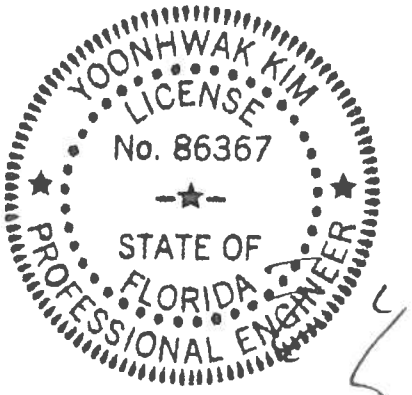
Maximum Web Forces Per Ply (lbs)

Webs	Tens.	Comp.	Webs	Tens.	Comp.
A - F	0	-681	E - C	1644	0
A - E	1644	0	C - D	0	-681
B - E	0	-773			

Lumber
Top chord 2x4 SP 2400f-2.0E
Bot chord 2x4 SP #2
Webs 2x4 SP #3

Hangers / Ties
(J) Hanger Support Required, by others

Additional Notes
Refer to General Notes for additional information
Truss must be installed as shown with top chord up.
The overall height of this truss excluding overhang is 2-0-0.



#0-278
09/04/2019

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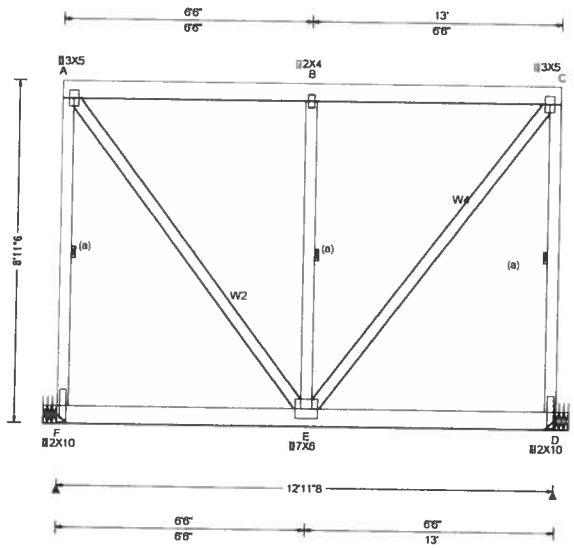
ALPINE
AN ITW COMPANY
6750 Forum Drive
Suite 305
Orlando FL, 32821

SEQN: 567631 FLAT FROM: CDM	Ply: 1 Qty: 1	**Job Number:** 19-3056 /Heldon Residence /ZECHER CONSTRUCTION **Truss Label:** M01	Cust: R 215 JRef: 1WO82150004 T2 DrwNo: 247.19.1535.10417 / YK 09/04/2019	



Loading Criteria (psf)

TCLL:	20.00
TCDL:	10.00
BCLL:	0.00
BCDL:	10.00
Des Ld:	40.00
NCBCLL:	10.00
Soffit:	2.00

Load Duration: 1.25
Spacing: 24.0 "

Wind Criteria
Wind Std: ASCE 7-10
Speed: 130 mph
Enclosure: Closed
Risk Category: II
EXP: C Kzt: NA
Mean Height: 17.95 ft
TCDL: 5.0 psf
BCDL: 5.0 psf
MWFRS Parallel Dist: 0 to h/2
C&C Dist a: 3.00 ft
Loc. from endwall: not in 9.00 ft
GCpi: 0.18
Wind Duration: 1.60

Snow Criteria (Pg,Pf in PSF)
Pg: NA Ct: NA CAT: NA
Pf: NA Ce: NA
Lu: NA Cs: NA
Snow Duration: NA

Code / Misc Criteria
Bldg Code: FBC 2017 RES
TPI Std: 2014
Rep Fac: Varies by Ld Case
FT/RT:20(0)/10(0)
Plate Type(s):
WAVE

Defl/CSI Criteria

PP Deflection in	loc	L/defl	L/#
VERT(LL): 0.024	B	999	240
VERT(CL): 0.047	B	999	240
HORZ(LL): 0.002	A	-	-
HORZ(TL): 0.003	A	-	-

Creep Factor: 2.0
Max TC CSI: 0.057
Max BC CSI: 0.477
Max Web CSI: 0.920

VIEW Ver: 18.02.01B.0321.08

▲ Maximum Reactions (lbs)

	Gravity		Non-Gravity		
Loc	R+ / R-	/ Rh	/ Rw	/ U	/ RL
F	1342 /-	/-	/-	/542	/-
D	1342 /-	/-	/-	/542	/-

Wind reactions based on MWFRS
F Brg Width = - Min Req = -
D Brg Width = - Min Req = -
Members not listed have forces less than 375#

Maximum Top Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
A - B	294	-719	B - C	294	-719

Maximum Web Forces Per Ply (lbs)

Webs	Tens.	Comp.	Webs	Tens.	Comp.
A - F	424	-1021	E - C	1183	-484
A - E	1183	-484	C - D	424	-1021

Lumber

Top chord 2x6 SP 2400f-2.0E
Bot chord 2x6 SP 2400f-2.0E
Webs 2x4 SP #3 :W2, W4 2x4 SP #2:

Bracing

(a) Continuous lateral restraint equally spaced on member.

Special Loads

------(Lumber Dur.Fac.=1.25 / Plate Dur.Fac.=1.25)
TC: From 30 plf at 0.00 to 30 plf at 13.00
BC: From 10 plf at 0.00 to 10 plf at 13.00
BC: 361 lb Conc. Load at 1.94, 3.94, 5.94, 7.06 9.06,11.06

Purlins

The TC of this truss shall be braced with attached spans at 24" oc in lieu of structural sheathing.

Wind

Wind loads and reactions based on MWFRS.

End verticals not exposed to wind pressure.

Additional Notes

Refer to General Notes for additional information

Truss must be installed as shown with top chord up.

The overall height of this truss excluding overhang is 9-11-6.

YOONHWAK KIM
LICENSE
No. 86367
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

#0-278
09/04/2019

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ALPINE
AN ITW COMPANY
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Suite 305
Orlando FL, 32821

Gable Stud Reinforcement Detail

ASCE 7-10: 140 mph Wind Speed, 30' Mean Height, Enclosed, Exposure C, Kzt = 1.00

Or: 120 mph Wind Speed, 30' Mean Height, Partially Enclosed, Exposure C, Kzt = 1.00
Or: 120 mph Wind Speed, 30' Mean Height, Enclosed, Exposure D, Kzt = 1.00
Or: 100 mph wind speed, 30' Mean Height, Partially Enclosed, Exposure D, Kzt = 1.00

Max Gable Vertical Length

2x4 Gable Vertical Spacing	Species	Brace Grade	No Braces	(1) 1x4 "L" Brace ≡ Group A	(1) 1x4 "L" Brace ≡ Group B	(1) 2x4 "L" Brace ≡ Group A	(1) 2x4 "L" Brace ≡ Group B	(2) 2x4 "L" Brace ≡≡ Group A	(2) 2x4 "L" Brace ≡≡ Group B	(1) 2x6 "L" Brace ≡ Group A	(1) 2x6 "L" Brace ≡ Group B	(2) 2x6 "L" Brace ≡≡ Group A	(2) 2x6 "L" Brace ≡≡ Group B
24" o.c.	SPF HF	#1 / #2	4' 1"	6' 11"	7' 2"	8' 2"	8' 6"	9' 9"	10' 2"	12' 10"	13' 4"	14' 0"	14' 0"
		#3	3' 10"	6' 2"	6' 7"	8' 1"	8' 5"	9' 8"	10' 0"	12' 8"	13' 2"	14' 0"	14' 0"
		Stud	3' 10"	6' 2"	6' 6"	8' 1"	8' 5"	9' 8"	10' 0"	12' 8"	13' 2"	14' 0"	14' 0"
		Standard	3' 10"	5' 3"	5' 7"	7' 0"	7' 6"	9' 6"	10' 0"	11' 0"	11' 10"	14' 0"	14' 0"
	SP DFL	#1	4' 2"	7' 0"	7' 3"	8' 3"	8' 7"	9' 10"	10' 3"	13' 0"	13' 6"	14' 0"	14' 0"
		#2	4' 1"	6' 11"	7' 2"	8' 2"	8' 6"	9' 9"	10' 2"	12' 10"	13' 4"	14' 0"	14' 0"
		#3	4' 0"	5' 7"	5' 11"	7' 5"	7' 11"	9' 8"	10' 1"	11' 7"	12' 5"	14' 0"	14' 0"
		Stud	4' 0"	5' 7"	5' 11"	7' 5"	7' 11"	9' 8"	10' 1"	11' 7"	12' 5"	14' 0"	14' 0"
		Standard	3' 9"	4' 11"	5' 13"	6' 6"	7' 0"	8' 10"	9' 6"	10' 3"	11' 0"	13' 11"	14' 0"
16" o.c.	SPF HF	#1 / #2	4' 8"	7' 11"	8' 3"	9' 4"	9' 9"	11' 2"	11' 7"	14' 0"	14' 0"	14' 0"	14' 0"
		#3	4' 5"	7' 6"	8' 3"	9' 3"	9' 7"	11' 0"	11' 6"	14' 0"	14' 0"	14' 0"	14' 0"
		Stud	4' 5"	7' 6"	8' 0"	9' 3"	9' 7"	11' 0"	11' 6"	14' 0"	14' 0"	14' 0"	14' 0"
		Standard	4' 5"	6' 5"	6' 10"	8' 7"	9' 2"	11' 0"	11' 6"	13' 6"	14' 0"	14' 0"	14' 0"
	SP DFL	#1	4' 10"	8' 0"	8' 4"	9' 6"	9' 10"	11' 3"	11' 9"	14' 0"	14' 0"	14' 0"	14' 0"
		#2	4' 8"	7' 11"	8' 3"	9' 4"	9' 9"	11' 2"	11' 7"	14' 0"	14' 0"	14' 0"	14' 0"
		#3	4' 7"	6' 10"	7' 3"	9' 1"	9' 8"	11' 1"	11' 6"	14' 0"	14' 0"	14' 0"	14' 0"
		Stud	4' 7"	6' 10"	7' 3"	9' 1"	9' 8"	11' 1"	11' 6"	14' 0"	14' 0"	14' 0"	14' 0"
		Standard	4' 5"	6' 0"	6' 5"	8' 0"	8' 7"	10' 10"	11' 6"	12' 7"	13' 15"	14' 0"	14' 0"
12" o.c.	SPF HF	#1 / #2	5' 2"	8' 9"	9' 1"	10' 4"	10' 9"	11' 2"	12' 9"	14' 0"	14' 0"	14' 0"	14' 0"
		#3	4' 10"	8' 7"	8' 11"	10' 2"	10' 7"	12' 2"	12' 8"	14' 0"	14' 0"	14' 0"	14' 0"
		Stud	4' 10"	8' 7"	8' 11"	10' 2"	10' 7"	12' 2"	12' 8"	14' 0"	14' 0"	14' 0"	14' 0"
		Standard	4' 10"	7' 5"	7' 11"	9' 11"	10' 7"	12' 2"	12' 8"	14' 0"	14' 0"	14' 0"	14' 0"
	SP DFL	#1	5' 4"	8' 10"	9' 2"	10' 5"	10' 10"	12' 5"	12' 11"	14' 0"	14' 0"	14' 0"	14' 0"
		#2	5' 2"	8' 9"	9' 1"	10' 4"	10' 9"	12' 3"	12' 9"	14' 0"	14' 0"	14' 0"	14' 0"
		#3	5' 0"	7' 10"	8' 4"	10' 3"	10' 8"	12' 2"	12' 8"	14' 0"	14' 0"	14' 0"	14' 0"
		Stud	5' 0"	7' 10"	8' 4"	10' 3"	10' 8"	12' 2"	12' 8"	14' 0"	14' 0"	14' 0"	14' 0"
		Standard	4' 10"	6' 11"	7' 4"	9' 3"	9' 10"	12' 2"	12' 8"	14' 0"	14' 0"	14' 0"	14' 0"

Bracing Group Species and Grades:

Group A:

Spruce-Pine-Fir		Hem-Fir	
#1 / #2	Standard	#2	Stud
#3	Stud	#3	Standard

Douglas Fir-Larch	Southern Pine≡≡
#3	#3
Stud	Stud
Standard	Standard

Group B:

Hem-Fir
#1 & Btr
#1

Douglas Fir-Larch	Southern Pine≡≡
#1	#1
#2	#2

1x4 Braces shall be SRB (Stress-Rated Board).
≡≡For 1x4 So. Pine use only Industrial 55 or Industrial 45 Stress-Rated Boards. Group B values may be used with these grades.

Gable Truss Detail Notes:

Wind Load deflection criterion is L/240.

Provide uplift connections for 100 plf over continuous bearing (5 psf TC Dead Load).

Gable end supports load from 4' 0" outlookers with 2' 0" overhang, or 12" plywood overhang.

Attach "L" braces with 10d (0.128"x3.0" min) nails.
※ For (1) "L" brace: space nails at 2" o.c. in 18" end zones and 4" o.c. between zones.
※※For (2) "L" braces: space nails at 3" o.c. in 18" end zones and 6" o.c. between zones.

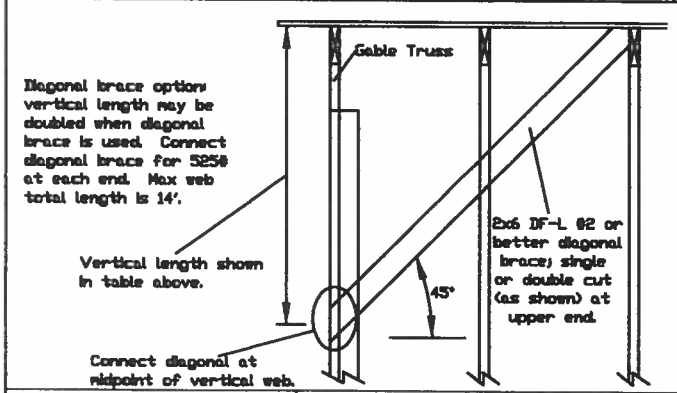
"L" bracing must be a minimum of 80% of web member length.

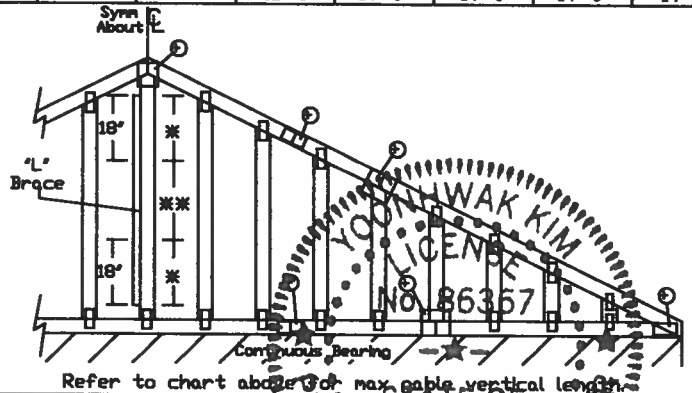
Gable Vertical Plate Sizes

Vertical Length	No Splice
Less than 4' 0"	2X4
Greater than 4' 0", but less than 11' 6"	3X4
Greater than 11' 6"	4X4

+ Refer to common truss design for peak, splice, and heel plates.

Refer to the Building Designer for conditions not addressed by this detail.





Refer to chart above for max. gable vertical length.

YOUNGWAK KIM LICENSE NO. 86367 STATE OF FLORIDA PROFESSIONAL ENGINEER

ALPINE AN ITW COMPANY

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Suite 200
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ALPINE) www.alpinebc.com; TPI) www.tpinst.org; SBCA) www.sbcindustry.org; ICC) www.iccsafe.org

MAX. TOT. LD. 60 PSF

MAX. SPACING 24.0"

REF	ASCE7-10-GAB14030
DATE	10/01/14
DRWG	A14030ENC101014

09/04/2019
#8-278

CLR Reinforcing Member Substitution

This detail is to be used when a Continuous Lateral Restraint (CLR) is specified on a truss design but an alternative web reinforcement method is desired.

Notes:

This detail is only applicable for changing the specified CLR shown on single ply sealed designs to T-reinforcement or L-reinforecement or scab reinforcement.

Alternative reinforcement specified in chart below may be conservative. For minimum alternative reinforcement, re-run design with appropriate reinforcement type.

Use scabs instead of L- or T- reinforcement on webs with intersecting truss joints, such as K-web joints, that may interfere with proper application along the narrow face of the web.

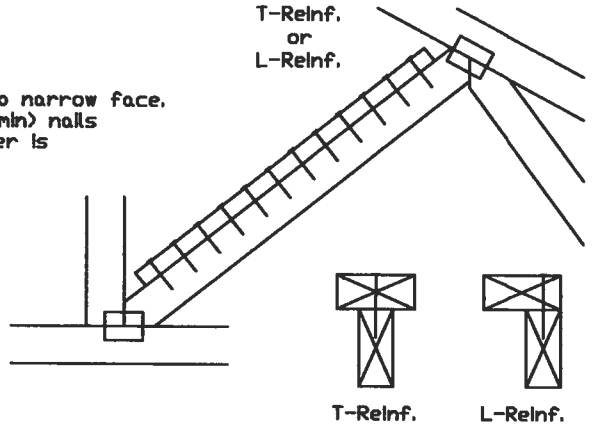
Web Member Size	Specified CLR Restraint	Alternative Reinforecement T- or L- Reinf.	Alternative Reinforecement Scab Reinf.
2x3 or 2x4	1 row	2x4	1-2x4
2x3 or 2x4	2 rows	2x6	2-2x4
2x6	1 row	2x4	1-2x6
2x6	2 rows	2x6	2-2x4 G⑩
2x8	1 row	2x6	1-2x8
2x8	2 rows	2x6	2-2x6 G⑩

T-reinforcement, L-reinforcement, or scab reinforcement to be same species and grade or better than web member unless specified otherwise on Engineer's sealed design.

G⑩ Center scab on wide face of web. Apply (1) scab to each face of web.

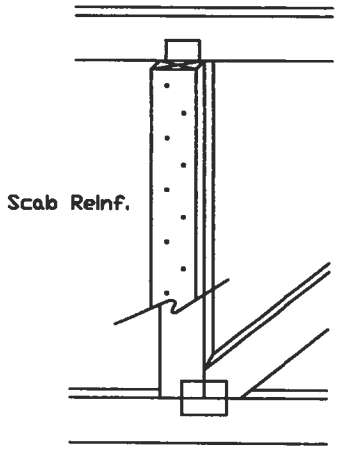
T-Reinforcement or L-Reinforcement:

Apply to either side of web narrow face. Attach with 10d (0.128"x3.0",min) nails at 6" o.c. Reinforcing member is a minimum 80% of web member length.



Scab Reinforcement:

Apply scab(s) to wide face of web. No more than (1) scab per face. Attach with 10d (0.128"x3.0",min) nails at 6" o.c. Reinforcing member is a minimum 80% of web member length.



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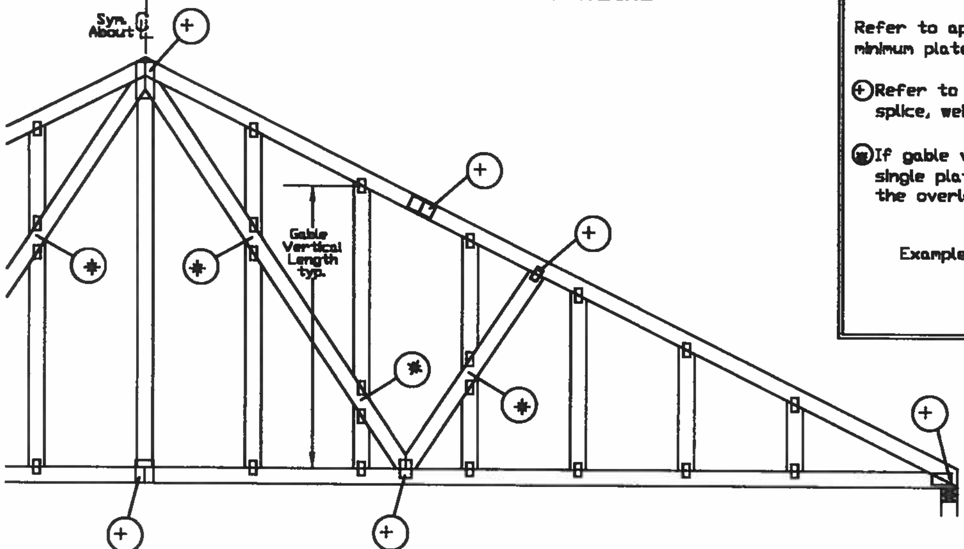
For more information see this job's general notes page and these web sites:
ALPINE) www.alpinetw.com TPI) www.tpinst.org SBCA) www.sbcindustry.org ICC) www.iccsafe.org

TC LL	PSF	REF CLR Subst.
TC DL	PSF	DATE 01/02/19
BC DL	PSF	DRWG BRCLBSUB0119
BC LL	PSF	
TOT. LD.	PSF	
DUR. FAC.		
SPACING		

09/04/2019
#0-278

Gable Detail

For Let-In Verticals



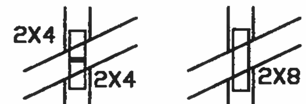
Gable Truss Plate Sizes

Refer to appropriate Alpine gable detail for minimum plate sizes for vertical studs.

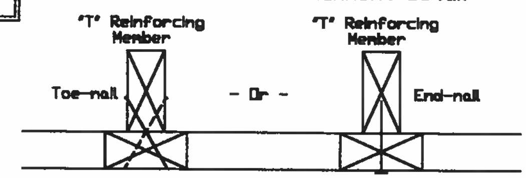
(+) Refer to Engineered truss design for peak, splice, web, and heel plates.

(✱) If gable vertical plates overlap, use a single plate that covers the total area of the overlapped plates to span the web.

Example:



"T" Reinforcement Attachment Detail



To convert from "L" to "T" reinforcing members, multiply "T" increase by length (based on appropriate Alpine gable detail).

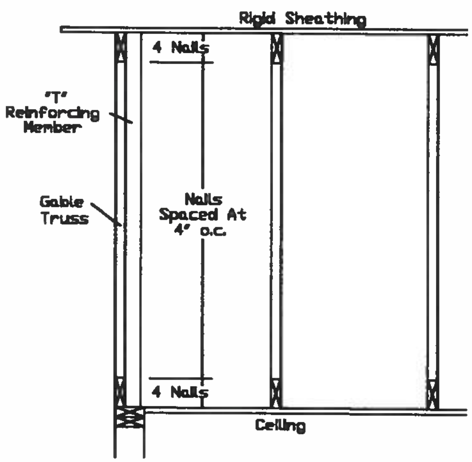
Maximum allowable "T" reinforced gable vertical length is 14' from top to bottom chord.

"T" reinforcing member material must match size, specie, and grade of the "L" reinforcing member.

Web Length Increase w/ "T" Brace

"T" Reinf. Mbr. Size	"T" Increase
2x4	30 %
2x6	20 %

Example:
ASCE 7-10 Wind Speed = 120 mph
Mean Roof Height = 30 ft, Kzt = 1.00
Gable Vertical = 24"o.c. SP #3
"T" Reinforcing Member Size = 2x4
"T" Brace Increase (From Above) = 30% = 1.30
(1) 2x4 "L" Brace Length = 8' 7"
Maximum "T" Reinforced Gable Vertical Length
1.30 x 8' 7" = 11' 2"



Provide connections for uplift specified on the engineered truss design.

Attach each "T" reinforcing member with
End Driven Nails:
10d Common (0.148"x 3",min) Nails at 4" o.c. plus
(4) nails in the top and bottom chords.

Toenailed Nails:
10d Common (0.148"x3",min) Toenails at 4" o.c. plus
(4) toenails in the top and bottom chords.

This detail to be used with the appropriate Alpine gable detail for ASCE wind load.

ASCE 7-05 Gable Detail Drawings
A13015051014, A12015051014, A11015051014, A10015051014, A14015051014,
A13030051014, A12030051014, A11030051014, A10030051014, A14030051014

ASCE 7-10 & ASCE 7-16 Gable Detail Drawings
A11515ENC100118, A12015ENC100118, A14015ENC100118, A16015ENC100118,
A18015ENC100118, A20015ENC100118, A20015END100118, A20015PED100118,
A11530ENC100118, A12030ENC100118, A14030ENC100118, A16030ENC100118,
A18030ENC100118, A20030ENC100118, A20030END100118, A20030PED100118,
S11515ENC100118, S12015ENC100118, S14015ENC100118, S16015ENC100118,
S18015ENC100118, S20015ENC100118, S20015END100118, S20015PED100118,
S11530ENC100118, S12030ENC100118, S14030ENC100118, S16030ENC100118,
S18030ENC100118, S20030ENC100118, S20030END100118, S20030PED100118

See appropriate Alpine gable detail for maximum unreinforced gable vertical length.

STATE OF FLORIDA PROFESSIONAL ENGINEER No. 86367

ALPINE
AN ITW COMPANY
13723 Riverport Drive
Suite 200
Maryland Heights, MO 63043

WARNING READ AND FOLLOW ALL NOTES ON THIS DRAWING!
IMPORTANT FURNISH THIS DRAWING TO ALL CONTRACTORS INCLUDING THE INSTALLERS.

Trusses require extreme care in fabricating, handling, shipping, installing and bracing. Refer to and follow the latest edition of BCSI (Building Component Safety Information, by TPI and SBCA) for safety practices prior to performing these functions. Installers shall provide temporary bracing per BCSI. Unless noted otherwise, top chord shall have properly attached structural sheathing and bottom chord shall have a properly attached rigid ceiling. Locations shown for permanent lateral restraint of webs shall have bracing installed per BCSI sections B3, B7 or B10, as applicable. Apply plates to each face of truss and position as shown above and on the Joint Details, unless noted otherwise. Refer to drawings 160A-Z for standard plate positions.

Alpine, a division of ITW Building Components Group Inc. shall not be responsible for any deviation from this drawing, any failure to build the truss in conformance with ANSI/TPI 1, or for handling, shipping, installation & bracing of trusses.

A seal on this drawing or cover page listing this drawing, indicates acceptance of professional engineering responsibility solely for the design shown. The suitability and use of this drawing for any structure is the responsibility of the Building Designer per ANSI/TPI 1 Sec.2.

For more information see this job's general notes page and these web sites:
ALPINE: www.alpineitw.com; TPI: www.tpinst.org; SBCA: www.sbcindustry.org; ICC: www.iccsafe.org

10/04/2019

REF	LET-IN VERT
DATE	01/02/2018
DRWG	GBLLETIN0118

MAX. TOT. LD. 60 PSF
DUR. FAC. ANY
MAX. SPACING 24.0"

Gable Stud Reinforcement Detail

ASCE 7-10: 140 mph Wind Speed, 15' Mean Height, Enclosed, Exposure C, Kzt = 1.00

Or: 120 mph Wind Speed, 15' Mean Height, Partially Enclosed, Exposure C, Kzt = 1.00
Or: 120 mph Wind Speed, 15' Mean Height, Enclosed, Exposure D, Kzt = 1.00
Or: 100 mph Wind Speed, 15' Mean Height, Partially Enclosed, Exposure D, Kzt = 1.00

Max Gable Vertical Length

2x4 Gable Vertical Spacing	Species	Brace Grade	No Braces	(1) 1x4 "L" Brace ≡ Group A	(1) 1x4 "L" Brace ≡ Group B	(1) 2x4 "L" Brace ≡ Group A	(1) 2x4 "L" Brace ≡ Group B	(2) 2x4 "L" Brace ≡ Group A	(2) 2x4 "L" Brace ≡ Group B	(1) 2x6 "L" Brace ≡ Group A	(1) 2x6 "L" Brace ≡ Group B	(2) 2x6 "L" Brace ≡ Group A	(2) 2x6 "L" Brace ≡ Group B
24" o.c.	SPF HF	#1 / #2	4' 3"	7' 3"	7' 7"	8' 7"	8' 11"	10' 3"	10' 8"	13' 6"	14' 0"	14' 0"	14' 0"
		#3	4' 1"	6' 7"	7' 1"	8' 6"	8' 10"	10' 1"	10' 6"	13' 4"	13' 10"	14' 0"	14' 0"
		Stud	4' 1"	6' 7"	7' 0"	8' 6"	8' 10"	10' 1"	10' 6"	13' 4"	13' 10"	14' 0"	14' 0"
		Standard	4' 1"	5' 8"	6' 0"	7' 7"	8' 1"	10' 1"	10' 6"	13' 4"	13' 10"	14' 0"	14' 0"
	SP DFL	#1	4' 6"	7' 4"	7' 8"	8' 8"	9' 0"	10' 4"	10' 9"	11' 10"	12' 8"	14' 0"	14' 0"
		#2	4' 3"	7' 3"	7' 7"	8' 7"	8' 11"	10' 3"	10' 8"	13' 8"	14' 0"	14' 0"	14' 0"
		#3	4' 2"	6' 0"	6' 4"	7' 11"	8' 6"	10' 2"	10' 7"	13' 6"	14' 0"	14' 0"	14' 0"
		Stud	4' 2"	6' 0"	6' 4"	7' 11"	8' 6"	10' 2"	10' 7"	12' 5"	13' 4"	14' 0"	14' 0"
		Standard	4' 0"	5' 3"	5' 7"	7' 0"	7' 6"	9' 6"	10' 2"	12' 5"	13' 4"	14' 0"	14' 0"
16" o.c.	SPF HF	#1 / #2	4' 11"	8' 4"	8' 8"	9' 10"	10' 3"	11' 8"	12' 2"	11' 0"	11' 10"	14' 0"	14' 0"
		#3	4' 8"	8' 1"	8' 8"	9' 8"	10' 1"	11' 7"	12' 1"	14' 0"	14' 0"	14' 0"	14' 0"
		Stud	4' 8"	8' 1"	8' 6"	9' 8"	10' 1"	11' 7"	12' 1"	14' 0"	14' 0"	14' 0"	14' 0"
		Standard	4' 8"	6' 11"	7' 5"	9' 3"	9' 11"	11' 7"	12' 1"	14' 0"	14' 0"	14' 0"	14' 0"
	SP DFL	#1	5' 1"	8' 5"	8' 9"	9' 11"	10' 4"	11' 10"	12' 4"	14' 0"	14' 0"	14' 0"	14' 0"
		#2	4' 11"	8' 4"	8' 8"	9' 10"	10' 3"	11' 8"	12' 2"	14' 0"	14' 0"	14' 0"	14' 0"
		#3	4' 9"	7' 4"	7' 9"	9' 9"	10' 2"	11' 8"	12' 1"	14' 0"	14' 0"	14' 0"	14' 0"
		Stud	4' 9"	7' 4"	7' 9"	9' 9"	10' 2"	11' 8"	12' 1"	14' 0"	14' 0"	14' 0"	14' 0"
		Standard	4' 8"	6' 5"	6' 10"	8' 7"	9' 2"	11' 7"	12' 1"	13' 6"	14' 0"	14' 0"	14' 0"
12" o.c.	SPF HF	#1 / #2	5' 5"	9' 2"	9' 6"	10' 10"	11' 3"	11' 8"	13' 5"	14' 0"	14' 0"	14' 0"	14' 0"
		#3	5' 1"	9' 0"	9' 4"	10' 8"	11' 1"	12' 9"	13' 3"	14' 0"	14' 0"	14' 0"	14' 0"
		Stud	5' 1"	9' 0"	9' 4"	10' 8"	11' 1"	12' 9"	13' 3"	14' 0"	14' 0"	14' 0"	14' 0"
		Standard	5' 1"	8' 0"	8' 6"	10' 8"	11' 1"	12' 9"	13' 3"	14' 0"	14' 0"	14' 0"	14' 0"
	SP DFL	#1	5' 8"	9' 3"	9' 8"	10' 11"	11' 4"	13' 0"	13' 6"	14' 0"	14' 0"	14' 0"	14' 0"
		#2	5' 5"	9' 2"	9' 6"	10' 10"	11' 3"	12' 11"	13' 5"	14' 0"	14' 0"	14' 0"	14' 0"
		#3	5' 3"	8' 5"	9' 0"	10' 9"	11' 2"	12' 10"	13' 4"	14' 0"	14' 0"	14' 0"	14' 0"
		Stud	5' 3"	8' 5"	9' 0"	10' 9"	11' 2"	12' 10"	13' 4"	14' 0"	14' 0"	14' 0"	14' 0"
		Standard	5' 1"	7' 5"	7' 11"	9' 11"	10' 7"	12' 9"	13' 3"	14' 0"	14' 0"	14' 0"	14' 0"

Bracing Group Species and Grades:

Group A:

Spruce-Pine-Fir	
#1 / #2	Standard
#3	Stud

Hem-Fir	
#2	Stud
#3	Standard

Douglas Fir-Larch
#3
Stud
Standard

Southern Pine≡≡
#3
Stud
Standard

Group B:

Hem-Fir
#1 & Btr
#1

Douglas Fir-Larch
#1
#2

Southern Pine≡≡
#1
#2

1x4 Braces shall be SRB (Stress-Rated Board).
≡≡For 1x4 So. Pine use only Industrial 55 or Industrial 45 Stress-Rated Boards. Group B values may be used with these grades.

Gable Truss Detail Notes:

Wind Load deflection criterion is L/240.

Provide uplift connections for 55 plf over continuous bearing (5 psf TC Dead Load).

Gable end supports load from 4' 0" outlookers with 2' 0" overhang, or 12" plywood overhang.

Attach "L" braces with 10d (0.128"x3.0" min) nails.
* For (1) "L" brace: space nails at 2" o.c. in 18" end zones and 4" o.c. between zones.
**For (2) "L" braces: space nails at 3" o.c. in 18" end zones and 6" o.c. between zones.

"L" bracing must be a minimum of 80% of web member length.

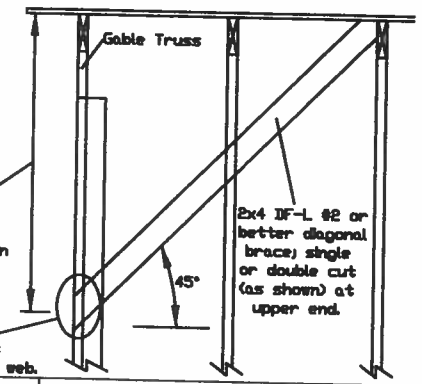
Gable Vertical Plate Sizes

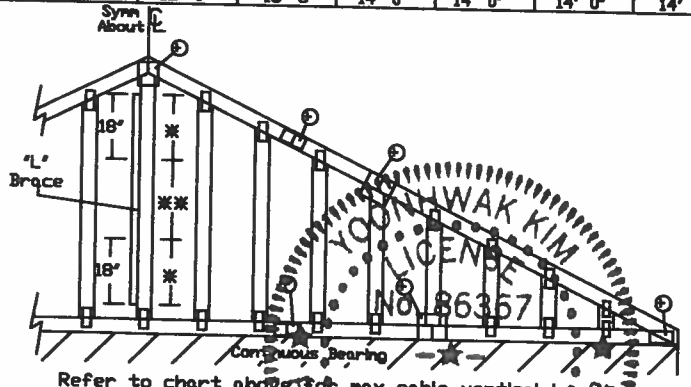
Vertical Length	No Splice
Less than 4' 0"	1X4 or 2X3
Greater than 4' 0"	3X4

+ Refer to common truss design for peak, splice, and heel plates.

Refer to the Building Designer for conditions not addressed by this detail.

Diagonal brace option: vertical length may be doubled when diagonal brace is used. Connect diagonal brace for 450# at each end. Max web total length is 14'.





Refer to chart above for max. gable vertical length.

YOUNHWAK KIM LICENSE No. 86367 STATE OF FLORIDA PROFESSIONAL ENGINEER

MAX. TOT. L.D. 60 PSF

MAX. SPACING 24.0"

ALPINE AN ITW COMPANY
13723 Riverport Drive
Suite 200
Maryland Heights, MO 63043

WARNING: READ AND FOLLOW ALL NOTES ON THIS DRAWING
IMPORTANT: FURNISH THIS DRAWING TO ALL CONTRACTORS INCLUDING THE INSTALLERS.

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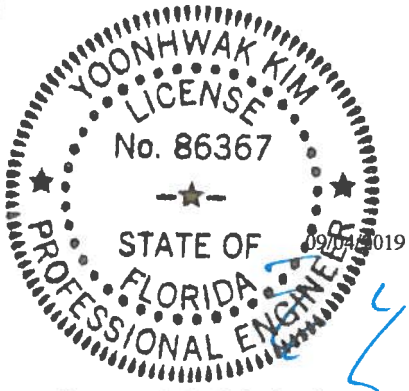
Alpine, a division of ITW Building Components Group Inc. shall not be responsible for any deviation from this drawing, any failure to build the truss in conformance with ANSI/TPI 1, or for handling, shipping, installation & bracing of trusses.

A seal on this drawing or cover page listing this drawing, indicates acceptance of professional engineering responsibility solely for the design shown. The suitability and use of this drawing for any structure is the responsibility of the Building Designer per ANSI/TPI 1 Sec.2.

For more information see this job's general notes page and these web sites:
ALPINE: www.alpinetruss.com; TPI: www.tpinst.org; SBCA: www.sbcindustry.org; ICC: www.iccsafe.org

REF	ASCE7-10-GAB14015
DATE	10/01/14
DRWG	A14015ENC101014



This document has been electronically signed and sealed using a Digital Signature. Printed copies without an original signature must be verified using the original electronic version.

ALPINE AN ITW COMPANY

#0-278

Alpine, an ITW Company
6750 Forum Drive, Suite 305
Orlando, FL 32821
Phone: (800)755-6001
www.alpineitw.com

Site Information:	Page 1:
Customer: W. B. Howland Company, Inc.	*Job Number:* 19-3056F
Job Description: /Heldon Residence /Contractor	
Address: 138 SW HEATHER COURT , FT WHITE, FL 32038	

Job Engineering Criteria:	
Design Code: FBC 2017 RES	*IntelliVIEW Version:* 18.02.01 *JRef #:* 1WO82150005
Wind Standard: NA *Wind Speed (mph):* 0	*Roof Load (psf):* None *Floor Load (psf):* 40.00-10.00- 0.00- 5.00

This package contains general notes pages, 7 truss drawing(s) and 3 detail(s).

Item	Seal #	Truss
1	247.19.1532.05057	F01
3	247.19.1532.26647	F03
5	247.19.1532.39783	F05
7	247.19.1532.52273	F07

Item	Seal #	Truss
2	247.19.1532.13853	F02
4	247.19.1532.35660	F04
6	247.19.1532.45407	F06

General Notes

Truss Design Engineer Scope of Work, Design Assumptions and Design Responsibilities:
The design responsibilities assumed in the preparation of these design drawings are those specified in ANSI/TPI 1, Chapter 2; and the National Design Standard for Metal Plate Connected Wood Truss Construction, by the Truss Plate Institute. The truss component designs conform to the applicable provisions of ANSI/TPI 1 and NDS, the National Design Specification for Wood Construction by AF&PA. The truss component designs are based on the specified loading and dimension information furnished by others to the Truss Design Engineer. The Truss Design Engineer has no duty to independently verify the accuracy or completeness of the information provided by others and may rely on that information without liability. The responsibility for verification of that information remains with others neither employed nor controlled by the Truss Design Engineer. The Truss Design Engineer's seal and signature on the attached drawings, or cover page listing these drawings, indicates acceptance of professional engineering responsibility solely for the truss component designs and not for the technical information furnished by others which technical information and consequences thereof remain their sole responsibility.

The suitability and use of these drawings for any particular structure is the responsibility of the Building Designer in accordance with ANSI/TPI 1 Chapter 2. The Building Designer is responsible for determining that the dimensions and loads for each truss component match those required by the plans and by the actual use of the individual component, and for ascertaining that the loads shown on the drawings meet or exceed applicable building code requirements and any additional factors required in the particular application. Truss components using metal connector plates with integral teeth shall not be placed in environments that will cause the moisture content of the wood in which plates are embedded to exceed 19% and/or cause corrosion of connector plates and other metal fasteners.

The Truss Design Engineer shall not be responsible for items beyond the specific scope of the agreed contracted work set forth herein, including but not limited to: verifying the dimensions of the truss component, calculation of any of the truss component design loads, inspection of the truss components before or after installation, the design of temporary or permanent bracing and their attachment required in the roof and/or floor systems, the design of diaphragms or shear walls, the design of load transfer connections to and from diaphragms and shear walls, the design of load transfer to the foundation, the design of connections for truss components to their bearing supports, the design of the bearing supports, installation of the truss components, observation of the truss component installation process, review of truss assembly procedures, sequencing of the truss component installation, construction means and methods, site and/or worker safety in the installation of the truss components and/or its connections.

This document may be a high quality facsimile of the original engineering document which is a digitally signed electronic file with third party authentication. A wet or embossed seal copy of this engineering document is available upon request.

Temporary Lateral Restraint and Bracing:
Temporary lateral restraint and diagonal bracing shall be installed according to the provisions of BCSI chapters B1, B2, B7 and/or B10 (Building Component Safety Information, by TPI and SBCA), or as specified by the Building Designer or other Registered Design Professional. The required locations for lateral restraint and/or bracing depicted on these drawings are only for the permanent lateral support of the truss members to reduce buckling lengths, and do not apply to and may not be relied upon for the temporary stability of the truss components during their installation.

Permanent Lateral Restraint and Bracing:
The required locations for lateral restraint or bracing depicted on these drawings are for the permanent lateral support of the truss members to reduce buckling lengths. Permanent lateral support shall be installed according to the provisions of BCSI chapters B3, B7 and/or B10, or as specified by the Building Designer or other Registered Design Professional. These drawings do not depict or specify installation/erection bracing, wind bracing, portal bracing or similar building stability bracing which are parts of the overall building design to be specified, designed and detailed by the Building Designer.

Connector Plate Information:
Alpine connector plates are made of ASTM A653 or ASTM A1063 galvanized steel with the following designations, gauges and grades: W=Wave, 20ga, grade 40; H=High Strength, 20ga, grade 60; S=Super Strength, 18ga, grade 60. Information on model code compliance is contained in the ICC Evaluation Service report ESR-1118, available on-line at www.icc-es.org.

General Notes (continued)

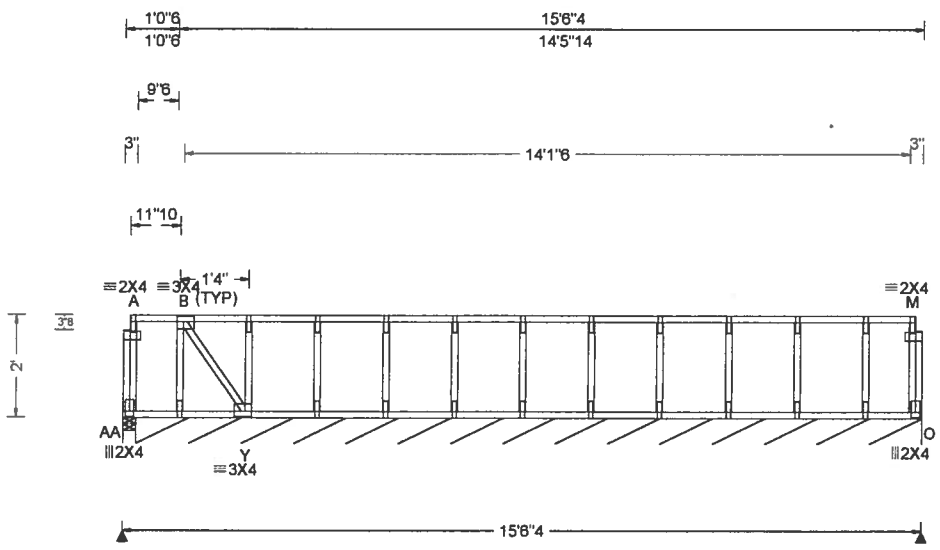
Key to Terms:
Information provided on drawings reflects a summary of the pertinent information required for the truss design. Detailed information on load cases, reactions, member lengths, forces and members requiring permanent lateral support may be found in calculation sheets available upon written request.

BCDL = Bottom Chord standard design Dead Load in pounds per square foot.
BCLL = Bottom Chord standard design Live Load in pounds per square foot.
Des Ld = total of TCLL, TCDL, BCLL and BCDL Design Load in pounds per square foot.
HORZ(LL) = maximum Horizontal panel point deflection due to Live Load, in inches.
HORZ(TL) = maximum Horizontal panel point long term deflection in inches, due to Total Load, including creep adjustment.
HPL = additional Horizontal Load added to a truss Piece in pounds per linear foot or pounds.
L/# = user specified divisor for limiting span/deflection ratio for evaluation of actual L/defl value.
L/defl = ratio of Length between bearings, in inches, divided by the immediate vertical Deflection, in inches, at the referenced panel point. Reported as 999 if greater than or equal to 999.
Loc = Location, starting location of left end of bearing or panel point (joint) location of deflection.
Max BC CSI = Maximum bending and axial Combined Stress Index for Bottom Chords for of all load cases.
Max TC CSI = Maximum bending and axial Combined Stress Index for Top Chords for of all load cases.
Max Web CSI= Maximum bending and axial Combined Stress Index for Webs for of all load cases.
NCBCLL = Non-Concurrent Bottom Chord design Live Load in pounds per square foot.
PL = additional Load applied at a user specified angle on a truss Piece in pounds per linear foot or pounds.
PLB = additional vertical load added to a Bottom chord Piece of a truss in pounds per linear foot or pounds
PLT = additional vertical load added to a Top chord Piece of a truss in pounds per linear foot or pounds.
PP = Panel Point.
R = maximum downward design Reaction, in pounds, from all specified gravity load cases, at the indicated location (Loc).
-R = maximum upward design Reaction, in pounds, from all specified gravity load cases, at the identified location (Loc).
Rh = maximum horizontal design Reaction in either direction, in pounds, from all specified gravity load cases, at the indicated location (Loc).
RL = maximum horizontal design Reaction in either direction, in pounds, from all specified non-gravity (wind or seismic) load cases, at the indicated location (Loc).
Rw = maximum downward design Reaction, in pounds, from all specified non-gravity (wind or seismic) load cases, at the identified location (Loc).
TCDL = Top Chord standard design Dead Load in pounds per square foot.
TCLL = Top Chord standard design Live Load in pounds per square foot.
U = maximum Upward design reaction, in pounds, from all specified non-gravity (wind or seismic) load cases, at the indicated location (Loc).
VERT(CL) = maximum Vertical panel point deflection in inches due to Live Load and Creep Component of Dead Load in inches.
VERT(LL) = maximum Vertical panel point deflection in inches due to Live Load.
VERT(TL) = maximum Vertical panel point long term deflection in inches due to Total load, including creep adjustment.
W = Width of non-hanger bearing, in inches.

Refer to ASCE-7 for Wind and Seismic abbreviations.
Uppercase Acronyms not explained above are as defined in TPI 1.

References:
1. AF&PA: American Forest & Paper Association, 1111 19th Street, NW, Suite 800, Washington, DC 20036; www.afandpa.org.
2. ICC: International Code Council; www.iccsafe.org.
3. Alpine, a division of ITW Building Components Group Inc.: 13723 Riverport Drive, Suite 200, Maryland Heights, MO 63043; www.alpineitw.com.
4. TPI: Truss Plate Institute, 218 North Lee Street, Suite 312, Alexandria, VA 22314; www.tpinst.org.
5. SBCA: Wood Truss Council of America, 6300 Enterprise Lane, Madison, WI 53719; www.sbcindustry.co

SEQN: 567606 SY42 FROM: CDM	Ply: 1 Qty: 1	**Job Number:** 19-3056F /Heldon Residence /Contractor **Truss Label:** F01	Cust. R 215 JRef: 1WO82150005 T11 DrwNo: 247.19.1532.05057 / YK 09/04/2019	



Loading Criteria (psf)	**Wind Criteria**	**Snow Criteria** (Pg,Pf in PSF)	**Defl/CSI Criteria**	**▲Maximum Reactions (lbs), or *=PLF**
TCLL: 40.00 TCDL: 10.00 BCLL: 0.00 BCDL: 5.00 Des Ld: 55.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.00 Spacing: 24.0 "	Wind Std: NA Speed: NA mph Enclosure: NA Category: NA EXP: NA Kzt: NA Mean Height: NA ft TCDL: NA psf BCDL: NA psf MWFRS Parallel Dist: NA C&C Dist a: NA ft Loc. from endwall: NA I: NA GCpi: NA Wind Duration: NA	Pg: NA Ct: NA CAT: NA Pf: NA Ce: NA Lu: NA Cs: NA Snow Duration: NA **Code / Misc Criteria** Bldg Code: FBC 2017 RES TPI Std: 2014 Rep Fac: Varies by Ld Case FT/RT:20(0)/10(0) Plate Type(s): WAVE	PP Deflection in loc L/defl L/# VERT(LL): 0.001 M 999 480 VERT(CL): 0.001 M 999 360 HORZ(LL): -0.000 B - - HORZ(TL): 0.000 B - - Creep Factor: 2.0 Max TC CSI: 0.190 Max BC CSI: 0.019 Max Web CSI: 0.070 VIEW Ver: 18.02.01B.0321.08	Gravity / Non-Gravity Loc R+ / R- / Rh / Rw / U / RL AA 92 /- /- /- /- /- O* 213 /- /- /- /- /- AA Brg Width = 3.0 Min Req = 1.5 O Brg Width = 183 Min Req = - Bearings AA & AA are a rigid surface. Members not listed have forces less than 375#

Lumber

Top chord 4x2 SP #2
Bot chord 4x2 SP #2
Webs 4x2 SP #3

Plating Notes

All plates are 1X4 except as noted.

Additional Notes

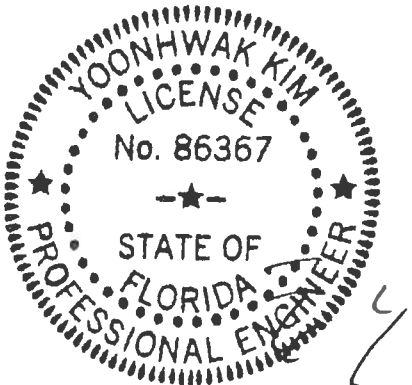
Refer to General Notes for additional information

See detail STRBRIBR1014 for bracing and bridging recommendations.

Provide for complete drainage of roof.

Truss must be installed as shown with top chord up.

The overall height of this truss excluding overhang is 2-0-0.



#0-278
09/04/2019

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****IMPORTANT**** FURNISH THIS DRAWING TO ALL CONTRACTORS INCLUDING THE INSTALLERS

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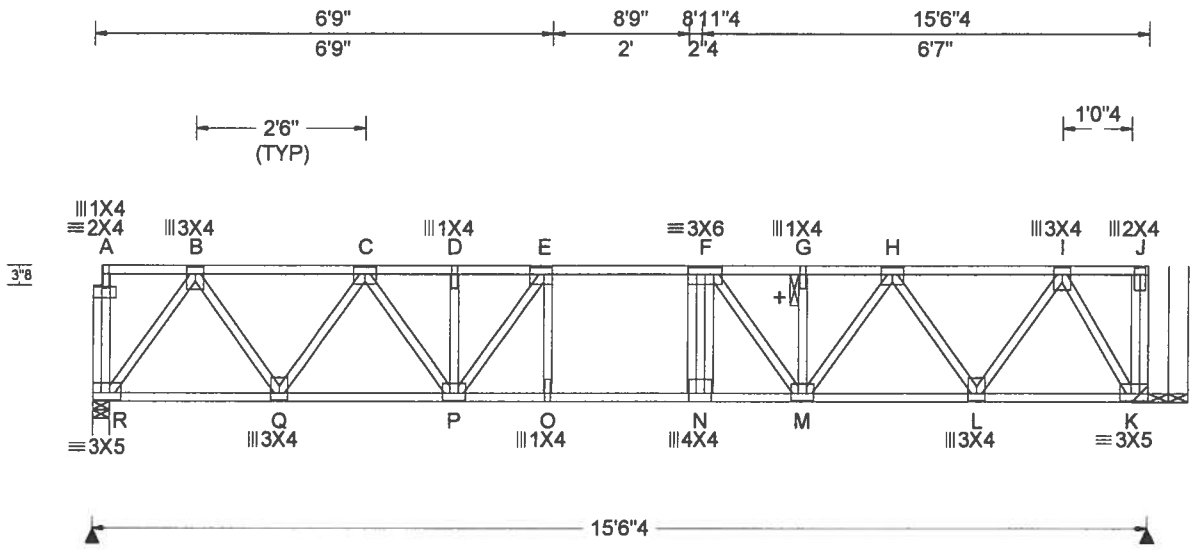
For more information see this job's general notes page and these web sites: ALPINE: www.alpineitw.com, TPI: www.tpinst.org; SBCA: www.sbcindustry.com; ICC: www.iccsafe.org

ALPINE
AN ITW COMPANY
6750 Forum Drive
Suite 305
Orlando FL, 32821

SEQN: 567608 SY42	Ply: 1	**Job Number:** 19-3056F	Cust: R 215 JRef: 1WO82150005 T8
FROM: CDM	Qty: 4	/Heldon Residence /Contractor	DrwNo: 247.19.1532.13853
		Truss Label: F02	/ YK 09/04/2019



Loading Criteria (psf)
TCLL: 40.00
TCDL: 10.00
BCLL: 0.00
BCDL: 5.00
Des Ld: 55.00
NCBCLL: 10.00
Soffit: 2.00
Load Duration: 1.00
Spacing: 24.0 "

Wind Criteria
Wind Std: NA
Speed: NA mph
Enclosure: NA
Category: NA
EXP: NA Kzt: NA
Mean Height: NA ft
TCDL: NA psf
BCDL: NA psf
MWFRS Parallel Dist: NA
C&C Dist a: NA ft
Loc. from endwall: NA
I: NA GCpi: NA
Wind Duration: NA

Snow Criteria (Pg,Pf in PSF)
Pg: NA Ct: NA CAT: NA
Pf: NA Ce: NA
Lu: NA Cs: NA
Snow Duration: NA

Code / Misc Criteria
Bldg Code: FBC 2017 RES
TPI Std: 2014
Rep Fac: Yes
FT/RT:12(0)/10(0)
Plate Type(s):
WAVE

Defl/CSI Criteria

PP Deflection in	loc	L/defl	L/#
VERT(LL): 0.102	E	999	480
VERT(CL): 0.171	E	999	360
HORZ(LL): 0.026	B	-	-
HORZ(TL): 0.044	B	-	-

Creep Factor: 2.0
Max TC CSI: 0.727
Max BC CSI: 0.815
Max Web CSI: 0.339

VIEW Ver: 18.02.01B.0321.08

▲ Maximum Reactions (lbs)

	Gravity			Non-Gravity		
Loc	R+	/ R-	/ Rh	/ Rw	/ U	/ RL
R	838	/-	/-	/-	/-	/-
K	857	/-	/-	/-	/-	/-

R Brg Width = 3.0 Min Req = 1.5
K Brg Width = - Min Req = -
Bearing R is a rigid surface.
Members not listed have forces less than 375#

Maximum Top Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
B - C	0	-923	F - G	0	-1451
C - D	0	-1496	G - H	0	-1451
D - E	0	-1496	H - I	0	-833
E - F	0	-1645			

Maximum Bot Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
R - Q	548	0	N - M	1644	0
Q - P	1278	0	M - L	1211	0
P - O	1644	0	L - K	438	0
O - N	1645	0			

Maximum Web Forces Per Ply (lbs)

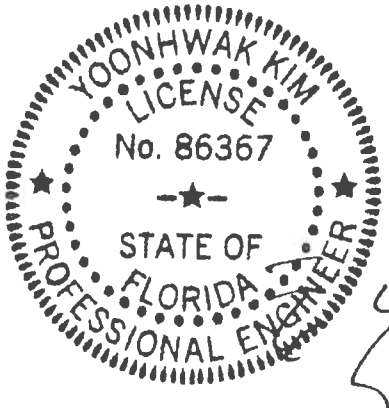
Webs	Tens.	Comp.	Webs	Tens.	Comp.
R - B	0	-957	F - M	0	-492
B - Q	675	0	M - H	419	0
Q - C	0	-641	H - L	0	-680
C - P	380	0	L - I	713	0
P - E	18	-463	I - K	0	-920

Lumber
Top chord 4x2 SP #2
Bot chord 4x2 SP #2
Webs 4x2 SP #3

Plating Notes
All plates are 3X4 except as noted.

Hangers / Ties
(J) Hanger Support Required, by others

Additional Notes
Refer to General Notes for additional information
+ 2x6 continuous strongback. See detail STRBRIBR1014 for bracing and bridging recommendations.
Truss must be installed as shown with top chord up.
The overall height of this truss excluding overhang is 2-0-0.



#0-278
09/04/2019

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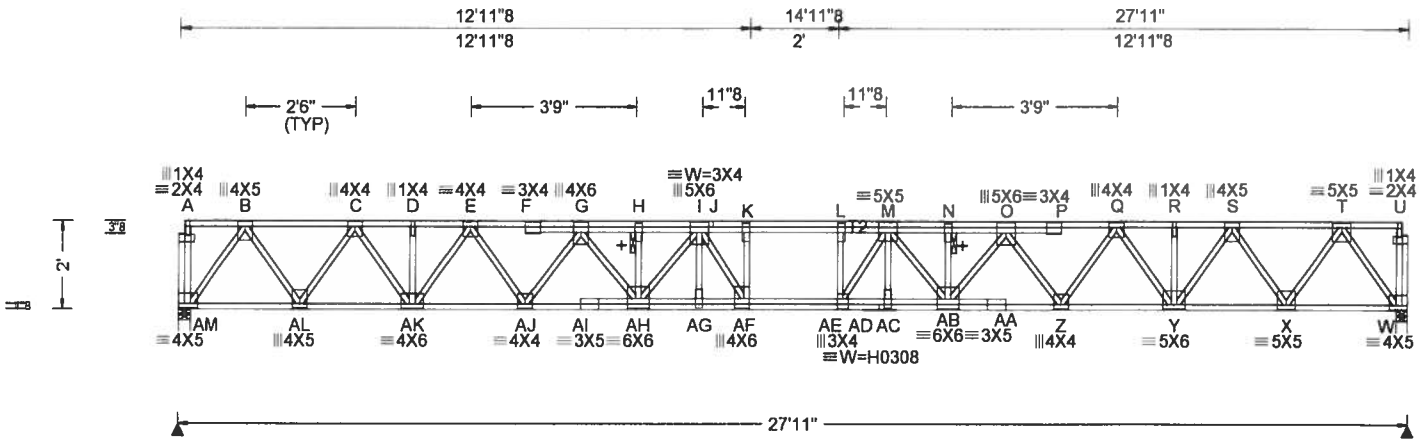
ALPINE
AN ITW COMPANY
6750 Forum Drive
Suite 305
Orlando FL, 32821

SEQN: 567627 SY42 FROM: CDM	Ply: 2 Qty: 1	**Job Number:** 19-3056F /Heldon Residence /Contractor **Truss Label:** F03	Cust: R 215 JRef: 1WO82150005 T15 DrwNo: 247.19.1532.26647 / YK 09/04/2019	

2 Complete Trusses Required



Loading Criteria (psf)
TCLL: 40.00
TCDL: 10.00
BCLL: 0.00
BCDL: 5.00
Des Ld: 55.00
NCBCLL: 10.00
Soffit: 2.00
Load Duration: 1.00
Spacing: 24.0 "

Wind Criteria
Wind Std: NA
Speed: NA mph
Enclosure: NA
Category: NA
EXP: NA Kzt: NA
Mean Height: NA ft
TCDL: NA psf
BCDL: NA psf
MWFRS Parallel Dist: NA
C&C Dist a: NA ft
Loc. from endwall: NA
I: NA GCpi: NA
Wind Duration: NA

Snow Criteria (Pg,Pf in PSF)
Pg: NA Ct: NA CAT: NA
Pf: NA Ce: NA
Lu: NA Cs: NA
Snow Duration: NA

Code / Misc Criteria
Bldg Code: FBC 2017 RES
TPI Std: 2014
Rep Fac: Varies by Ld Case
FT/RT:12(0)/10(0)
Plate Type(s):
WAVE, HS

Defl/CSI Criteria

PP Deflection in	loc	L/defl	L/#
VERT(LL): 0.497	L	665	480
VERT(CL): 0.683	L	483	360
HORZ(LL): 0.064	W	-	-
HORZ(TL): 0.088	W	-	-

Creep Factor: 2.0
Max TC CSI: 0.868
Max BC CSI: 0.767
Max Web CSI: 0.633

VIEW Ver: 18.02.01B.0321.08

▲ Maximum Reactions (lbs)

	Gravity			Non-Gravity		
Loc	R+	/ R-	/ Rh	/ Rw	/ U	/ RL
AM	2262	/-	/-	/-	/-	/-
W	2493	/-	/-	/-	/-	/-

AM Brg Width = 3.0 Min Req = 1.5
W Brg Width = 3.0 Min Req = 1.5
Bearings AM & W are a rigid surface.
Members not listed have forces less than 375#

Maximum Top Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
B - C	0	-1432	K - L	0	-5871
C - D	0	-2699	L - M	0	-5873
D - E	0	-2699	M - N	0	-5569
E - F	0	-3760	N - O	0	-5569
F - G	0	-3763	O - P	0	-4235
G - H	0	-4902	P - Q	0	-4233
H - I	0	-4902	Q - R	0	-3015
I - J	0	-5856	R - S	0	-3015
J - K	0	-5856	S - T	0	-1589

Maximum Bot Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
AM-AL	771	0	AE-AD	6143	0
AL-AK	2087	0	AD-AC	6143	0
AK-AJ	3241	0	AC-AB	6143	0
AJ-AI	4359	0	AB-AA	4928	0
AI-AH	4358	0	AA- Z	4929	0
AH-AG	5355	0	Z - Y	3631	0
AG-AF	5355	0	Y - X	2321	0
AF-AE	5871	0	X - W	852	0

Maximum Web Forces Per Ply (lbs)

Webs	Tens.	Comp.	Webs	Tens.	Comp.
AM- B	0	-1346	AE- M	50	-536
B -AL	1191	0	M -AB	0	-930
AL- C	0	-1180	AB- O	1067	0
C -AK	1068	0	O - Z	0	-1226
AK- E	0	-944	Z - Q	1084	0
E -AJ	937	0	Q - Y	0	-1075
AJ- G	0	-1054	Y - S	1210	0
G -AH	905	0	S - X	0	-1319
AH- I	0	-734	X - T	1329	0
I -AF	994	0	T - W	0	-1486
AF- K	0	-433			

Lumber

Top chord 4x2 SP M-31 :T2 4x2 SP #2:
Bot chord 4x2 SP 2400f-2.0E
Webs 4x2 SP #3

Special Loads

------(Lumber Dur.Fac.=1.00 / Plate Dur.Fac.=1.00)
TC: From 100 plf at 0.13 to 100 plf at 27.79
BC: From 10 plf at 0.00 to 10 plf at 27.92
TC: 1709 lb Conc. Load at 15.81

Plating Notes

All plates are 2X5 except as noted.

Additional Notes

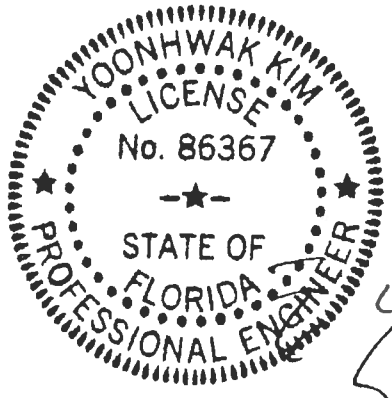
See DWG CNSY42PL0118 for connection details of 2 ply trusses.

Refer to General Notes for additional information

+ 2x6 continuous strongback. See detail STRBRIBR1014 for bracing and bridging recommendations.

Truss must be installed as shown with top chord up.

The overall height of this truss excluding overhang is 2-0-0.



#0-278
09/04/2019

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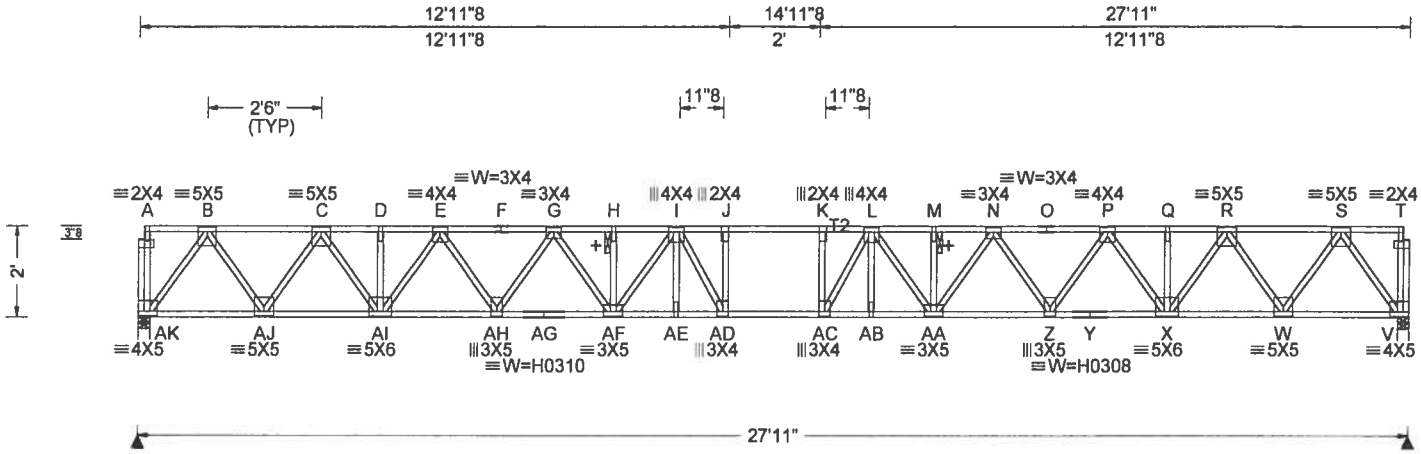
ALPINE
AN ITW COMPANY
6750 Forum Drive
Suite 305
Orlando FL, 32821

SEQN: 567619 SY42	Ply: 1	**Job Number:** 19-3056F	Cust: R 215 JRef: 1WO82150005 T9
FROM: CDM	Qty: 10	/Heldon Residence /Contractor	DrwNo: 247.19.1532.35660
		Truss Label: F04	/ YK 09/04/2019



Loading Criteria (psf)

TCLL:	40.00
TCDL:	10.00
BCLL:	0.00
BCDL:	5.00
Des Ld:	55.00
NCBCLL:	10.00
Soffit:	2.00

Load Duration: 1.00
Spacing: 24.0 "

Wind Criteria
Wind Std: NA
Speed: NA mph
Enclosure: NA
Category: NA
EXP: NA Kzt: NA
Mean Height: NA ft
TCDL: NA psf
BCDL: NA psf
MWFRS Parallel Dist: NA
C&C Dist a: NA ft
Loc. from endwall: NA
I: NA GCpi: NA
Wind Duration: NA

Snow Criteria (Pg,Pf in PSF)
Pg: NA Ct: NA CAT: NA
Pf: NA Ce: NA
Lu: NA Cs: NA
Snow Duration: NA

Code / Misc Criteria
Bldg Code: FBC 2017 RES
TPI Std: 2014
Rep Fac: Yes
FT/RT:12(0)/10(0)
Plate Type(s):
WAVE, HS

Defl/CSI Criteria

PP Deflection in	loc	L/defl	L/#
VERT(LL): 0.546	K	605	480
VERT(CL): 0.752	K	439	360
HORZ(LL): 0.092	B	-	-
HORZ(TL): 0.126	B	-	-

Creep Factor: 2.0
Max TC CSI: 0.750
Max BC CSI: 0.773
Max Web CSI: 0.713

VIEW Ver: 18.02.01B.0321.08

▲ Maximum Reactions (lbs)

	Gravity			Non-Gravity		
Loc	R+	/ R-	/ Rh	/ Rw	/ U	/ RL
AK	1523	/-	/-	/-	/-	/-
V	1523	/-	/-	/-	/-	/-

AK Brg Width = 3.0 Min Req = 1.5
V Brg Width = 3.0 Min Req = 1.5
Bearings AK & V are a rigid surface.
Members not listed have forces less than 375#

Maximum Top Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
B - C	0	-1858	K - L	0	-5529
C - D	0	-3365	L - M	0	-5194
D - E	0	-3365	M - N	0	-5194
E - F	0	-4453	N - O	0	-4453
F - G	0	-4453	O - P	0	-4453
G - H	0	-5194	P - Q	0	-3365
H - I	0	-5194	Q - R	0	-3365
I - J	0	-5529	R - S	0	-1858
J - K	0	-5535			

Maximum Bot Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
AK-AJ	1027	0	AC-AB	5426	0
AJ-AI	2670	0	AB-AA	5426	0
AI-AH	3998	0	AA- Z	4890	0
AH-AG	4890	0	Z - Y	3998	0
AG-AF	4890	0	Y - X	3998	0
AF-AE	5426	0	X - W	2670	0
AE-AD	5426	0	W - V	1027	0
AD-AC	5535	0			

Maximum Web Forces Per Ply (lbs)

Webs	Tens.	Comp.	Webs	Tens.	Comp.
AK- B	0	-1791	K -AC	85	-390
B -AJ	1497	0	AC- L	747	-358
AJ- C	0	-1464	L -AA	0	-471
C -AI	1213	0	AA- N	541	0
AI- E	0	-1104	N - Z	0	-788
E -AH	820	0	Z - P	820	0
AH- G	0	-788	P - X	0	-1104
G -AF	541	0	X - R	1213	0
AF- I	0	-471	R - W	0	-1464
I -AD	747	-358	W - S	1497	0
AD- J	85	-390	S - V	0	-1791

Lumber

Top chord 4x2 SP #2 :T2 4x2 SP 2400f-2.0E:
Bot chord 4x2 SP 2400f-2.0E
Webs 4x2 SP #3

Plating Notes

All plates are 1X4 except as noted.

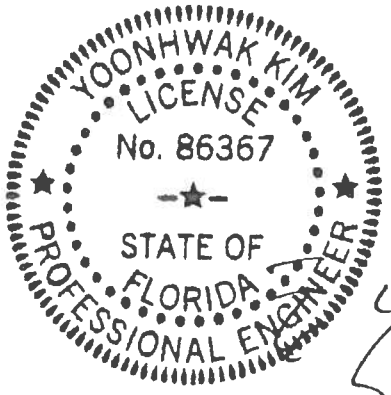
Additional Notes

Refer to General Notes for additional information

+ 2x6 continuous strongback. See detail STRBRIBR1014 for bracing and bridging recommendations.

Truss must be installed as shown with top chord up.

The overall height of this truss excluding overhang is 2-0-0.



#0-278
09/04/2019

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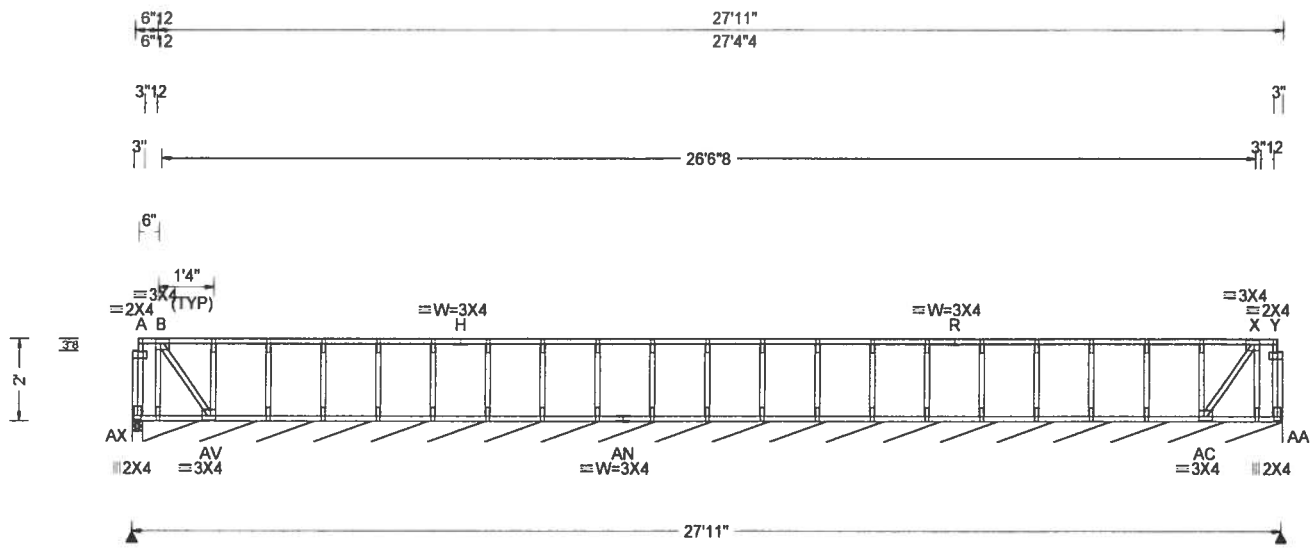
ALPINE
AN ITW COMPANY
6750 Forum Drive
Suite 305
Orlando FL, 32821

SEQN: 567616 SY42 FROM: CDM	Ply: 1 Qty: 1	**Job Number:** 19-3056F /Heldon Residence /Contractor **Truss Label:** F05	Cust: R 215 JRef: 1WO82150005 T16 DrwNo: 247.19.1532.39783 / YK 09/04/2019	



Loading Criteria (psf)
TCLL: 40.00
TCDL: 10.00
BCLL: 0.00
BCDL: 5.00
Des Ld: 55.00
NCBCLL: 10.00
Soffit: 2.00
Load Duration: 1.00
Spacing: 24.0 "

Wind Criteria
Wind Std: NA
Speed: NA mph
Enclosure: NA
Category: NA
EXP: NA Kzt: NA
Mean Height: NA ft
TCDL: NA psf
BCDL: NA psf
MWFRS Parallel Dist: NA
C&C Dist a: NA ft
Loc. from endwall: NA
I: NA GCpi: NA
Wind Duration: NA

Snow Criteria (Pg,Pf in PSF)
Pg: NA Ct: NA CAT: NA
Pf: NA Ce: NA
Lu: NA Cs: NA
Snow Duration: NA

Code / Misc Criteria
Bldg Code: FBC 2017 RES
TPI Std: 2014
Rep Fac: Varies by Ld Case
FT/RT:20(0)/10(0)
Plate Type(s):
WAVE

Defl/CSI Criteria

PP Deflection in	loc	L/defl	L/#
VERT(LL): 0.001	C	999	480
VERT(CL): 0.001	C	999	360
HORZ(LL): -0.000	B	-	-
HORZ(TL): 0.000	B	-	-

Creep Factor: 2.0
Max TC CSI: 0.189
Max BC CSI: 0.019
Max Web CSI: 0.069

VIEW Ver: 18.02.01B.0321.08

▲ Maximum Reactions (lbs), or *=PLF

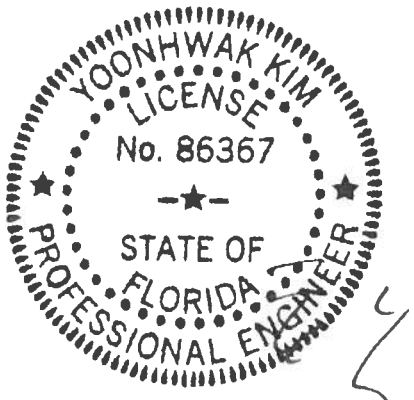
	Gravity			Non-Gravity		
Loc	R+	/ R-	/ Rh	/ Rw	/ U	/ RL
AX	29	/-	/-	/-	/-	/-
AA*	218	/-	/-	/-	/-	/-

AX Brg Width = 3.0 Min Req = 1.5
AA Brg Width = 332 Min Req = -
Bearings AX & AX are a rigid surface.
Members not listed have forces less than 375#

Lumber
Top chord 4x2 SP #2
Bot chord 4x2 SP #2
Webs 4x2 SP #3

Plating Notes
All plates are 1X4 except as noted.

Additional Notes
Refer to General Notes for additional information
See detail STRBRIBR1014 for bracing and bridging recommendations.
Provide for complete drainage of roof.
Truss must be installed as shown with top chord up.
The overall height of this truss excluding overhang is 2-0-0.



#0-278
09/04/2019

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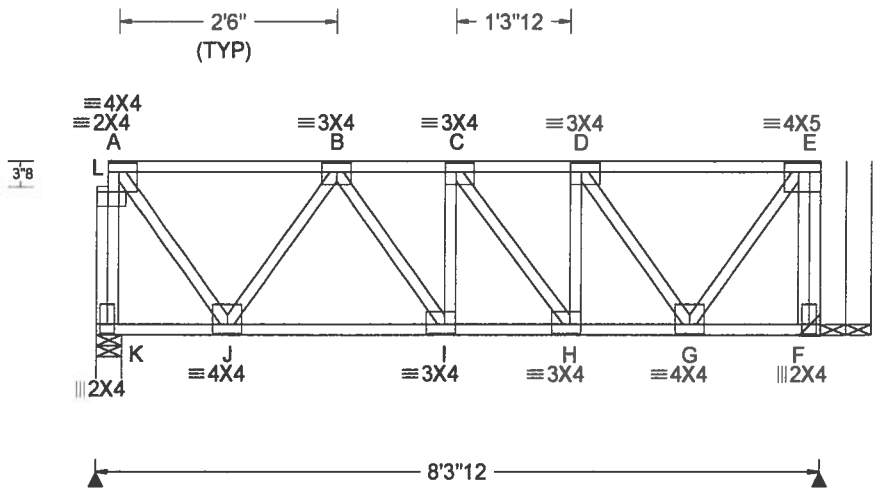
ALPINE AN ITW COMPANY
6750 Forum Drive
Suite 305
Orlando FL, 32821

SEQN: 567610 SY42 FROM: CDM	Ply: 2 Qty: 1	**Job Number:** 19-3056F /Heldon Residence /Contractor **Truss Label:** F06	Cust: R 215 JRef: 1WO82150005 T12 DrwNo: 247.19.1532.45407 / YK 09/04/2019	

2 Complete Trusses Required



Loading Criteria (psf)
TCLL: 40.00
TCDL: 10.00
BCLL: 0.00
BCDL: 5.00
Des Ld: 55.00
NCBCLL: 10.00
Soffit: 2.00
Load Duration: 1.00
Spacing: 24.0 "

Wind Criteria
Wind Std: NA
Speed: NA mph
Enclosure: NA
Category: NA
EXP: NA Kzt: NA
Mean Height: NA ft
TCDL: NA psf
BCDL: NA psf
MWFRS Parallel Dist: NA
C&C Dist a: NA ft
Loc. from endwall: NA
I: NA GCpi: NA
Wind Duration: NA

Snow Criteria (Pg,Pf in PSF)
Pg: NA Ct: NA CAT: NA
Pf: NA Ce: NA
Lu: NA Cs: NA
Snow Duration: NA

Code / Misc Criteria
Bldg Code: FBC 2017 RES
TPI Std: 2014
Rep Fac: Varies by Ld Case
FT/RT:12(0)/10(0)
Plate Type(s):
WAVE

Defl/CSI Criteria

PP Deflection in	loc	L/defl	L/#
VERT(LL): 0.043	I	999	480
VERT(CL): 0.060	I	999	360
HORZ(LL): 0.006	G	-	-
HORZ(TL): 0.009	G	-	-

Creep Factor: 2.0
Max TC CSI: 0.838
Max BC CSI: 0.371
Max Web CSI: 0.441

VIEW Ver: 18.02.01B.0321.08

▲ Maximum Reactions (lbs)

	Gravity			Non-Gravity		
Loc	R+	/ R-	/ Rh	/ Rw	/ U	/ RL
K	2171	/-	/-	/-	/-	/-
F	1709	/-	/-	/-	/-	/-

K Brg Width = 3.5 Min Req = 1.5
F Brg Width = - Min Req = -
Bearing K is a rigid surface.
Members not listed have forces less than 375#

Maximum Top Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
A - B	0	-531	C - D	0	-966
B - C	0	-1043	D - E	0	-479

Maximum Bot Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
J - I	1041	0	H - G	959	0
I - H	1042	0			

Maximum Web Forces Per Ply (lbs)

Webs	Tens.	Comp.	Webs	Tens.	Comp.
L - K	0	-1078	D - G	0	-865
A - L	0	-1074	G - E	865	0
A - J	926	0	E - F	0	-844
J - B	0	-920			

Lumber

Top chord 4x2 SP 2400f-2.0E
Bot chord 4x2 SP #2
Webs 4x2 SP #3

Special Loads

------(Lumber Dur.Fac.=1.00 / Plate Dur.Fac.=1.00)
TC: From 50 plf at 0.13 to 50 plf at 8.31
BC: From 5 plf at 0.00 to 5 plf at 8.31
TC: 857 lb Conc. Load at 0.96, 2.46, 4.46, 6.46

Hangers / Ties

(J) Hanger Support Required, by others

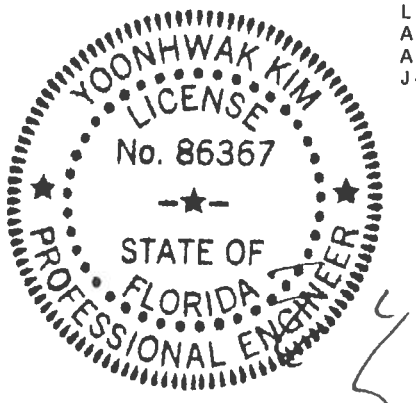
Additional Notes

See DWG CNSY42PL0118 for connection details of 2 ply trusses.

Refer to General Notes for additional information

Truss must be installed as shown with top chord up.

The overall height of this truss excluding overhang is 2-0-0.



#0-278
09/04/2019

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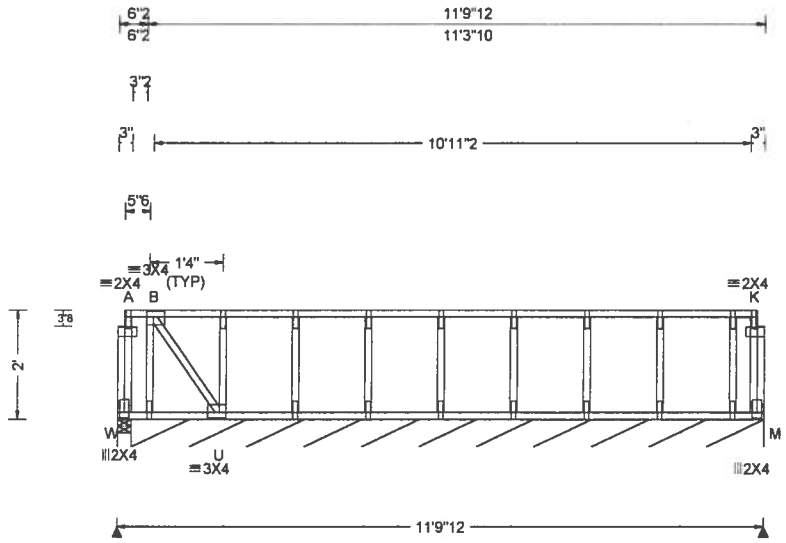
ALPINE
AN ITW COMPANY
6750 Forum Drive
Suite 305
Orlando FL, 32821

SEQN: 567604 SY42 FROM: CDM	Ply: 1 Qty: 1	**Job Number:** 19-3056F /Heldon Residence /Contractor **Truss Label:** F07	Cust: R 215 JRef: 1WO82150005 T1 DrwNo: 247.19.1532.52273 / YK 09/04/2019	



Loading Criteria (psf)
TCLL: 40.00
TCDL: 10.00
BCLL: 0.00
BCDL: 5.00
Des Ld: 55.00
NCBCLL: 10.00
Soffit: 2.00
Load Duration: 1.00
Spacing: 24.0 "

Wind Criteria
Wind Std: NA
Speed: NA mph
Enclosure: NA
Category: NA
EXP: NA Kzt: NA
Mean Height: NA ft
TCDL: NA psf
BCDL: NA psf
MWFRS Parallel Dist: NA
C&C Dist a: NA ft
Loc. from endwall: NA
I: NA GCpi: NA
Wind Duration: NA

Snow Criteria (Pg,Pf in PSF)
Pg: NA Ct: NA CAT: NA
Pf: NA Ce: NA
Lu: NA Cs: NA
Snow Duration: NA

Code / Misc Criteria
Bldg Code: FBC 2017 RES
TPI Std: 2014
Rep Fac: Varies by Ld Case
FT/RT:20(0)/10(0)
Plate Type(s):
WAVE

Defl/CSI Criteria

PP Deflection in	loc	L/defl	L/#
VERT(LL): 0.001	I	999	480
VERT(CL): 0.001	I	999	360
HORZ(LL): -0.000	B	-	-
HORZ(TL): 0.000	B	-	-

Creep Factor: 2.0
Max TC CSI: 0.198
Max BC CSI: 0.019
Max Web CSI: 0.071

VIEW Ver: 18.02.01B.0321.08

▲Maximum Reactions (lbs), or *=PLF

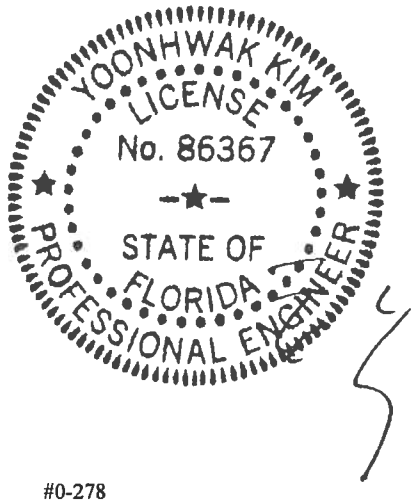
	Gravity			Non-Gravity		
Loc	R+	/ R-	/ Rh	/ Rw	/ U	/ RL
W	19	/-	/-	/-	/-	/-
M*	217	/-	/-	/-	/-	/-

W Brg Width = 3.0 Min Req = 1.5
M Brg Width = 138 Min Req = -
Bearings W & W are a rigid surface.
Members not listed have forces less than 375#

Lumber
Top chord 4x2 SP #2
Bot chord 4x2 SP #2
Webs 4x2 SP #3

Plating Notes
All plates are 1X4 except as noted.

Additional Notes
Refer to General Notes for additional information
See detail STRBRIBR1014 for bracing and bridging recommendations.
Provide for complete drainage of roof.
Truss must be installed as shown with top chord up.
The overall height of this truss excluding overhang is 2-0-0.



#0-278
09/04/2019

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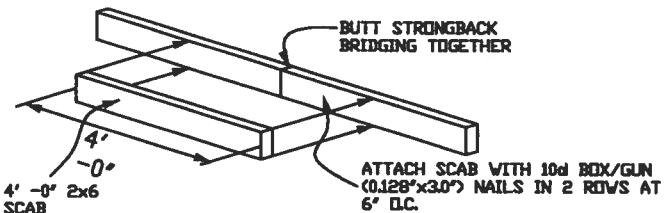
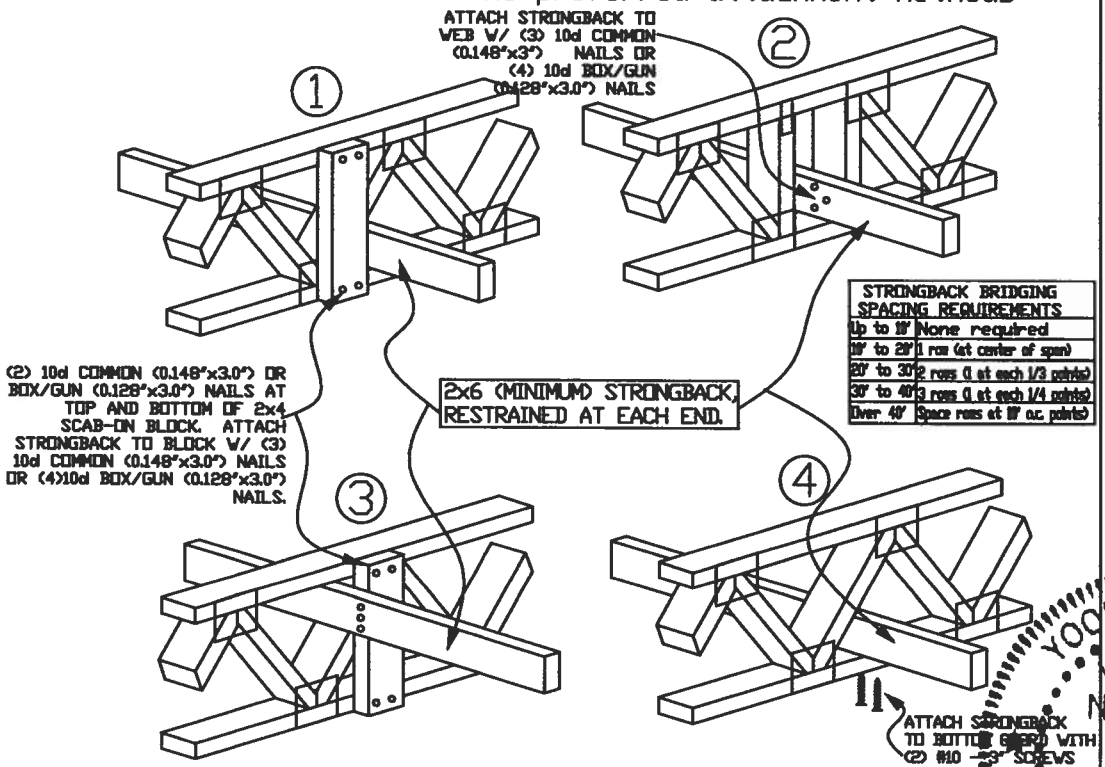
STRONGBACK BRIDGING RECOMMENDATIONS



STRONGBACK BRIDGING SPLICE DETAIL

NOTE: Details 1 and 2 are the preferred attachment methods



STRONGBACK BRIDGING SPACING REQUIREMENTS	
Up to 19'	None required
19' to 29'	1 row (at center of span)
29' to 39'	2 rows (1 at each 1/3 points)
39' to 49'	3 rows (1 at each 1/4 points)
Over 49'	Space rows at 19' o.c. points)

STRONGBACK BRIDGING ATTACHMENT ALTERNATIVES

- All scab-on blocks shall be a minimum 2x4 "stress graded lumber."
- All strongback bridging and bracing shall be a minimum 2x6 "stress graded lumber."
- The purpose of strongback bridging is to develop load sharing between individual trusses, resulting in an overall increase in the stiffness of the floor system. 2x6 strongback bridging, positioned as shown in details, is recommended at 10' -0" o.c. (max.)
- The terms "bridging" and "bracing" are sometimes mistakenly used interchangeably. "Bracing" is an important structural requirement of any floor or roof system. Refer to the Truss Design Drawing (TDD) for the bracing requirements for each individual truss component. "Bridging," particularly "strongback bridging" is a recommendation for a truss system to help control vibration. In addition to aiding in the distribution of point loads between adjacent truss, strongback bridging serves to reduce "bounce" or residual vibration resulting from moving point loads, such as footsteps.

The performance of all floor systems are enhanced by the installation of strongback bridging and therefore is strongly recommended by Alpine.

For additional information regarding strongback bridging, refer to BCSI (Building Component Safety Information).

YOONHWAK KIM LICENSE No. 86367 STATE OF FLORIDA PROFESSIONAL ENGINEER

ALPINE AN ITW COMPANY
13723 Riverport Drive
Suite 200
Maryland Heights, MO 63043

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For more information see this job's general notes page and these web sites:
ALPINE www.alpinebc.com TPI www.tpinst.org SBCA www.sbcindustry.org ICC www.iccsafe.org

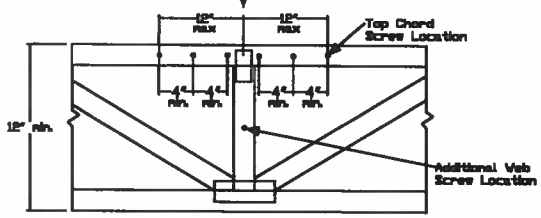
TC LL	PSF	REF STRONGBACK
TC DL	PSF	DATE 10/01/14
BC DL	PSF	DRWG STRBRIBR1014
BC LL	PSF	
TOT. L.D.	PSF	
DUR. FAC.	1.00	
SPACING		

09/04/2019
#0-278

System 42 Ply to Ply Connection Detail

Using GRK (RSS) JTS 1/4x6-3/4 or Simpson SDS25600 or SDW22634 Strong Drive Screws or Equal.

Max. Concentrated Load per Chart Below

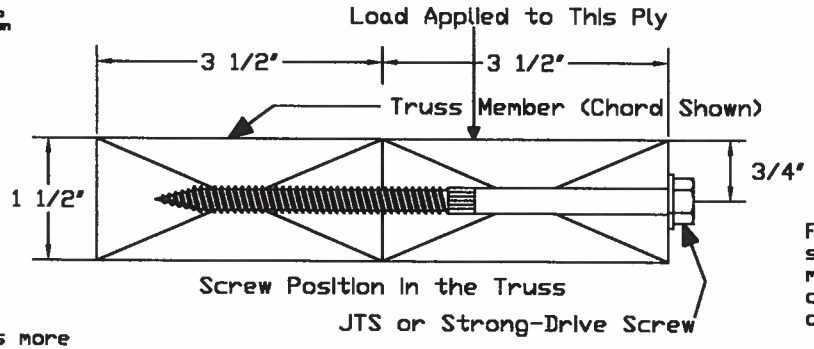


Apply screws to top chord within 12" of the concentrated load location @ 4" o.c., min, evenly distributing them to each side of the concentrated load. A maximum of 6 screws may be applied to the top chord for each concentrated load.

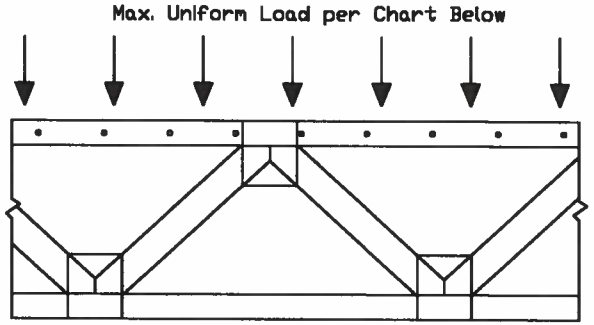
For double top chords, evenly distribute the screws over both top chords, using same spacing guidelines specified above. The max number of top chord screws is 6 per chord member for a total maximum of 12 screws.

If the concentrated load connection requires more screws than 6 per top chord member and the load is located at a panel point where webs intersect the top chord, the remainder of required screws may be applied to those webs below the concentrated load location evenly spaced @ 4" o.c., min, keeping the 3" min end distances. Each additional screw is worth 474 lb for SP webs, 442 lb for DFL webs, and 400 lb for SPF webs.

Refer to Alpine sealed drawing for individual truss design.



Max. Uniform Load per Chart Below



For single top chord, see chart below for screw spacing. For double top chord the screw spacing may be doubled (but may not exceed 24" o.c. per chord). Screw spacing shall be offset by 1/2 the o.c. spacing in each chord.

Screws need only apply to the extents of that load.

For chord sections supporting less than 100 plf apply one screw at each top chord joint location.

# of Screws	Maximum Concentrated Load (lbs) (1.00 DF)		
	SP	DFL	SPF
1	474	442	400
2	984	884	800
3	1422	1326	1200
4	1896	1768	1600
5	2370	2210	2000
6	2844	2652	2400
7	3318	3094	2800
8	3792	3536	3200
9	4266	3978	3600
10	4740	4420	4000
11	5214	4862	4400
12	5688	5304	4800

General Notes:

1. Screws centered along the 1.5" dimension of the 4x2 member.
2. Minimum end distance of 3".
3. Screws installed with head in loaded member.
4. Gap between plies not to exceed 1/8".
5. Screw location may be adjusted up to 1" to avoid conflict with other hardware or to avoid lumber defects.
6. Do not install screws in areas where lumber wane exceeds 1/4".
7. Equal loads from both faces or loads that are evenly distributed to each ply do not require connections per this detail.
8. For 3x2 members use GRK (RSS) JTS 1/4x5 screws or Simpson's SDS25412 or SDW22500 screws or equ.
9. Contact Alpine for special connections not covered by this detail.

Top Chord Screw o.c. Spacing (inch)	Maximum Uniform Load (plf) Along Top Chord (1.00 DF)		
	SP	DFL	SPF
4	1422	1326	1200
6	948	884	800
8	711	663	600
10	568	530	480
12	474	442	400
14	406	378	342
16	355	331	300
18	316	294	266
20	284	265	240
22	258	241	218
24	237	221	200

YOONHWAK KIM LICENSE No. 86367 STATE OF FLORIDA PROFESSIONAL ENGINEER

ALPINE AN ITW COMPANY

13723 Riverport Drive
Suite 200
Maryland Heights, MO 63043

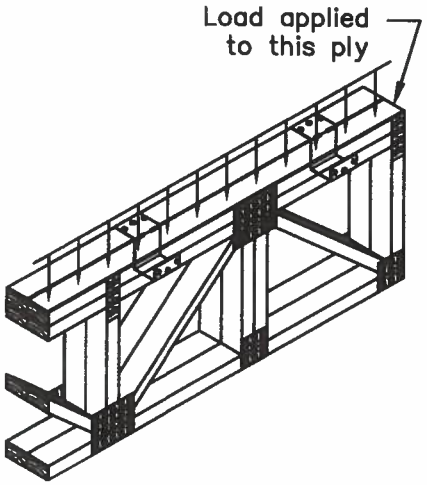
04/04/2019

TC LL	PSF	REF SY42 Connection
TC DL	PSF	DATE 01/19/2018
BC DL	PSF	DRWG CNSY42PL0118
BC LL	PSF	
TOT. LD.	PSF	
DUR. FAC.	1.00	
SPACING		

SY32/SY42 PLY TO PLY LSC CONNECTION DETAIL

FOR DOWNWARD LOADS ONLY

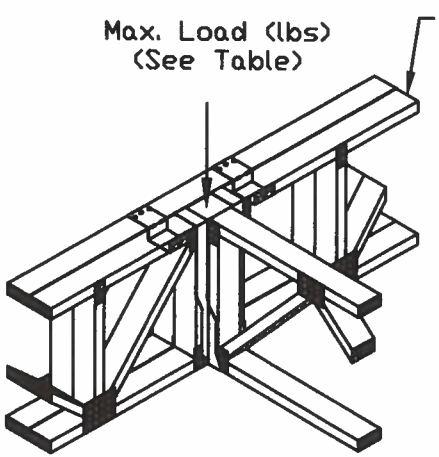
Uniform Load Application



Max. T.C. Uniform Load (plf)			Clip Spacing Along Top Chord
SP	DF	SPF/HF	
935	810	585	12" o.c.
625	540	390	18" o.c.
470	405	295	24" o.c.
375	325	235	30" o.c.

Maximum LSC spacing is 30" o.c.

Concentrated Load Application



Max Load (lbs)		
SP	DF	SPF/HF
1870	1620	1170

Note:
Install LSC adjacent, equidistant and not more than 6" on each side of concentrated load.

Installation Instructions:

1. Position and attach LSC to loaded ply with (3) 0.131"x1.5" nails into narrow face.
2. Bend clip over adjacent ply and attach with (3) 0.131"x1.5" nails into wide face.

LSC42 for single 4x2 chords
LSC32 for single 3x2 chords

LSC42-2 for stacked 4x2 chords
LSC32-2 for stacked 3x2 chords

Refer to Alpine sealed drawing for individual truss design.

YOONHWAK KIM
LICENSE
No. 86367
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

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AN ITW COMPANY

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ALPINE) www.alpinetts.com TPI) www.tpinst.org/ SBCA) www.sbcindustry.org/ ICC) www.access.org

REF	SY42 Connection
DATE	10/01/14
DRWG	LSCSYX2A1014
DUR. FAC.	ALL

09/04/2019
#0-278

Residential System Sizing Calculation

Summary

138 SW Heather Court
Ft White, FL 32038

Project Title:
Helton Residence

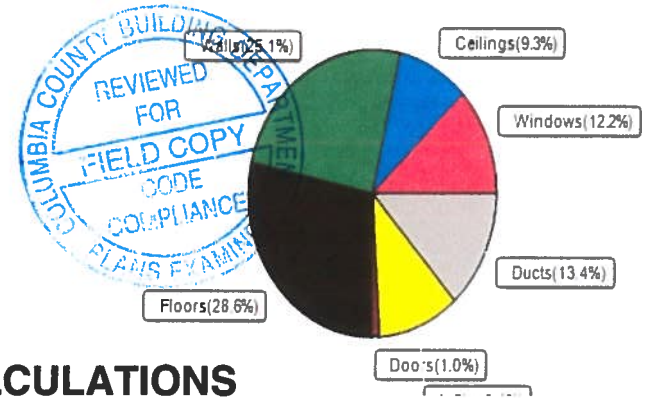
9/16/2019

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	**32796**	**Btuh**		**Total cooling load calculation**	**24898**	**Btuh**
Submitted heating capacity	% of calc	Btuh		Submitted cooling capacity	% of calc	Btuh
Total (Electric Heat Pump)	146.4	48000		Sensible (SHR = 0.85)	193.5	40800
Heat Pump + Auxiliary(0.0kW)	146.4	48000		Latent	188.9	7200
				Total (Electric Heat Pump)	192.8	48000

WINTER CALCULATIONS

Winter Heating Load (for 2405 sqft)

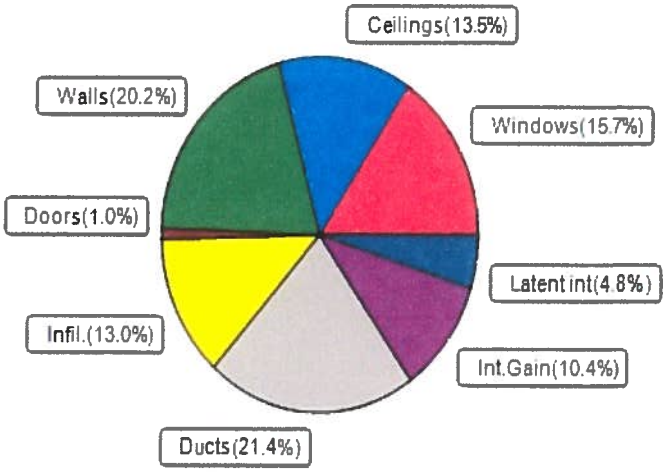
Load component			Load	
Window total	303	sqft	4000	Btuh
Wall total	2389	sqft	8238	Btuh
Door total	20	sqft	320	Btuh
Ceiling total	2405	sqft	3064	Btuh
Floor total	See detail report		9369	Btuh
Infiltration	78	cfm	3417	Btuh
Duct loss			4389	Btuh
Subtotal			**32796**	**Btuh**
Ventilation	0	cfm	0	Btuh
TOTAL HEAT LOSS			**32796**	**Btuh**



SUMMER CALCULATIONS

Summer Cooling Load (for 2405 sqft)

Load component			Load	
Window total	303	sqft	3916	Btuh
Wall total	2389	sqft	5026	Btuh
Door total	20	sqft	240	Btuh
Ceiling total	2405	sqft	3370	Btuh
Floor total			0	Btuh
Infiltration	59	cfm	1217	Btuh
Internal gain			2580	Btuh
Duct gain			4738	Btuh
Sens. Ventilation	0	cfm	0	Btuh
Blower Load			0	Btuh
Total sensible gain			**21086**	**Btuh**
Latent gain(ducts)			592	Btuh
Latent gain(infiltration)			2020	Btuh
Latent gain(ventilation)			0	Btuh
Latent gain(internal/occupants/other)			1200	Btuh
Total latent gain			**3812**	**Btuh**
TOTAL HEAT GAIN			**24898**	**Btuh**



Powered by ACCA MANUAL J 8th Edition

EnergyGauge® System Sizing
PREPARED BY: _____
DATE: _____

FORM R405-2017

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name:	Helton Residence	Builder Name:	IC Construction
Street:	138 SW Heather Court	Permit Office:	Columbia County
City, State, Zip:	Ft White , FL , 32038	Permit Number:	
Owner:		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?	No
6. Conditioned floor area above grade (ft²)	2405
Conditioned floor area below grade (ft²)	0

7. Windows(303.0 sqft.)	Description	Area
a. U-Factor:	Dbl, U=0.33	303.00 ft²
SHGC:	SHGC=0.22	
b. U-Factor:	N/A	ft²
SHGC:		
c. U-Factor:	N/A	ft²
SHGC:		
d. U-Factor:	N/A	ft²
SHGC:		
Area Weighted Average Overhang Depth:		4.470 ft.
Area Weighted Average SHGC:		0.220

8. Floor Types (2405.0 sqft.)	Insulation	Area
a. Slab-On-Grade Edge Insulation	R=0.0	1557.00 ft²
b. Floor Over Other Space	R=19.0	848.00 ft²
c. N/A	R=	ft²

9. Wall Types (2711.8 sqft.)	Insulation	Area
a. Frame - Wood, Exterior	R=13.0	2309.00 ft²
b. Frame - Wood, Adjacent	R=13.0	402.75 ft²
c. N/A	R=	ft²
d. N/A	R=	ft²

10. Ceiling Types (2405.0 sqft.)	Insulation	Area
a. Under Attic (Vented)	R=30.0	2405.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

11. Ducts	R	ft²
a. Sup: Attic, Ret: Attic, AH: Garage	6	481

12. Cooling systems	kBtu/hr	Efficiency
a. Central Unit	48.0	SEER:14.00

13. Heating systems	kBtu/hr	Efficiency
a. Electric Heat Pump	48.0	HSPF:8.50

14. Hot water systems
a. Electric — Cap: 40 gallons, EF: 0.920
b. Conservation features: None

15. Credits: CF, Pstat

COLUMBIA COUNTY BUILDING DEPARTMENT REVIEWED FOR FIELD COPY CODE COMPLIANCE PLANS EXAMINER

Glass/Floor Area: 0.126

Total Proposed Modified Loads: 62.49
Total Baseline Loads: 70.60

PASS

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

PREPARED BY: _____
DATE: 9-16-19

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

OWNER/AGENT: _____
DATE: _____

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.

GREAT SEAL OF THE STATE OF FLORIDA 1845 IN GOD WE TRUST

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 5.00 ACH50 (R402.4.1.2).
- Compliance with a proposed duct leakage Qn requires a Duct Leakage Test Report confirming duct leakage to outdoors, tested in accordance with ANSI/RESNET/ICC 380, is not greater than 0.030 Qn for whole house.

FORM R405-2017

INPUT SUMMARY CHECKLIST REPORT

PROJECT

Title:	Helton Residence	Bedrooms:	3	Address Type:	Street Address
Building Type:	User	Conditioned Area:	4798	Lot #	
Owner Name:		Total Stories:	2	Block/Subdivision:	
# of Units:	1	Worst Case:	No	PlatBook:	
Builder Name:	IC Construction	Rotate Angle:	0	Street:	138 SW Heather Court
Permit Office:	Columbia County	Cross Ventilation:		County:	Columbia
Jurisdiction:		Whole House Fan:		City, State, Zip:	Ft White , FL , 32038
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	2405	20797

SPACES

Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Infil ID	Finished	Cooled	Heated
1	1st Floor	1557	14013	Yes	2	1	1	Yes	Yes	Yes
2	2nd Floor	848	6784	No	4	2	1	Yes	Yes	Yes

FLOORS

√	#	Floor Type	Space	Perimeter	Perimeter R-Value	Area	Joist R-Value	Tile	Wood	Carpet
_____	1	Slab-On-Grade Edge Insulatio	1st Floor	198.5 ft	0	1557 ft²	----	0.33	0.33	0.34
_____	2	Floor Over Other Space	2nd Floor	----	----	848 ft²	19	0	0.5	0.5

ROOF

√	#	Type	Materials	Roof Area	Gable Area	Roof Color	Rad Barr	Solar Absor.	SA Tested	Emitt	Emitt Tested	Deck Insul.	Pitch (deg)
_____	1	Gable or shed	Composition shingles	1741 ft²	390 ft²	Medium	N	0.85	No	0.9	No	0	26.6

ATTIC

√	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
_____	1	Full attic	Vented	300	1557 ft²	N	N

FORM R405-2017

INPUT SUMMARY CHECKLIST REPORT

CEILING

√	#	Ceiling Type	Space	R-Value	Ins Type	Area	Framing Frac	Truss Type
____	1	Under Attic (Vented)	1st Floor	30	Blown	1557 ft²	0.11	Wood
____	2	Under Attic (Vented)	2nd Floor	30	Blown	848 ft²	0.11	Wood

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	Exterior	Frame - Wood	1st Floor	13	44	0	9		396.0 ft²	0.625	0.23	0.75	0
____	2	E	Exterior	Frame - Wood	1st Floor	13	9		9		81.0 ft²	0.625	0.23	0.75	0
____	3	S	Garage	Frame - Wood	1st Floor	13	26		9		234.0 ft²	0.625	0.23	0.75	0
____	4	E	Garage	Frame - Wood	1st Floor	13	18	9	9		168.8 ft²	0.625	0.23	0.75	0
____	5	S	Exterior	Frame - Wood	1st Floor	13	28		9		252.0 ft²	0.625	0.23	0.75	0
____	6	S	Exterior	Frame - Wood	1st Floor	13	16		9		144.0 ft²	0.625	0.23	0.75	0
____	7	W	Exterior	Frame - Wood	1st Floor	13	28		9		252.0 ft²	0.625	0.23	0.75	0
____	8	N	Exterior	Frame - Wood	2nd Floor	13	30	3	8		242.0 ft²	0.625	0.23	0.75	0
____	9	E	Exterior	Frame - Wood	2nd Floor	13	28		8		224.0 ft²	0.625	0.23	0.75	0
____	10	S	Exterior	Frame - Wood	2nd Floor	13	30	3	8		242.0 ft²	0.625	0.23	0.75	0
____	11	W	Exterior	Frame - Wood	2nd Floor	13	28		8		224.0 ft²	0.625	0.23	0.75	0
____	12	N	Exterior	Frame - Wood	1st Floor	13	28		9		252.0 ft²	0.625	0.23	0.75	0

DOORS

√	#	Ornt	Door Type	Space	Storms	U-Value	Width Ft	Width In	Height Ft	Height In	Area
____	1	S	Insulated	1st Floor	None	.4	3		6	8	20 ft²

WINDOWS

Orientation shown is the entered, Proposed orientation.

√	#	Ornt	Wall ID	Frame	Panes	NFRC	U-Factor	SHGC	Imp	Area	Overhang Depth	Overhang Separation	Int Shade	Screening
____	1	N	1	Vinyl	Low-E Double	Yes	0.33	0.22	N	45.0 ft²	1 ft 6 in	1 ft 4 in	None	None
____	2	N	12	Vinyl	Low-E Double	Yes	0.33	0.22	N	18.0 ft²	11 ft 6 in	1 ft 4 in	None	None
____	3	N	12	Vinyl	Low-E Double	Yes	0.33	0.22	N	60.0 ft²	11 ft 6 in	1 ft 4 in	None	None
____	4	E	2	Vinyl	Low-E Double	Yes	0.33	0.22	N	9.0 ft²	1 ft 6 in	1 ft 4 in	None	None
____	5	S	5	Vinyl	Low-E Double	Yes	0.33	0.22	N	30.0 ft²	1 ft 6 in	1 ft 4 in	None	None
____	6	S	5	Vinyl	Low-E Double	Yes	0.33	0.22	N	8.0 ft²	1 ft 6 in	1 ft 4 in	None	None
____	7	S	6	Vinyl	Low-E Double	Yes	0.33	0.22	N	15.0 ft²	9 ft 6 in	1 ft 4 in	None	None
____	8	W	7	Vinyl	Low-E Double	Yes	0.33	0.22	N	20.0 ft²	1 ft 6 in	1 ft 4 in	None	None
____	9	N	8	Vinyl	Low-E Double	Yes	0.33	0.22	N	60.0 ft²	1 ft 6 in	1 ft 4 in	None	None
____	10	E	9	Vinyl	Low-E Double	Yes	0.33	0.22	N	8.0 ft²	1 ft 6 in	1 ft 4 in	None	None
____	11	S	10	Vinyl	Low-E Double	Yes	0.33	0.22	N	30.0 ft²	1 ft 6 in	1 ft 4 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	650 ft²	650 ft²	57 ft	9 ft	1

INFILTRATION

#	Scope	Method	SLA	CFM 50	ELA	EqLA	ACH	ACH 50
1	Wholehouse	Proposed ACH(50)	.000275	1733.1	95.14	178.93	.1407	5

HEATING SYSTEM

√	#	System Type	Subtype	Efficiency	Capacity	Block	Ducts
_____	1	Electric Heat Pump/	None	HSPF:8.5	48 kBtu/hr	1	sys#1

COOLING SYSTEM

√	#	System Type	Subtype	Efficiency	Capacity	Air Flow	SHR	Block	Ducts
_____	1	Central Unit/	None	SEER: 14	48 kBtu/hr	1440 cfm	0.85	1	sys#1

HOT WATER SYSTEM

√	#	System Type	SubType	Location	EF	Cap	Use	SetPnt	Conservation
_____	1	Electric	None	Garage	0.92	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	Cool
_____	1	Attic	6	481 ft²	Attic	120.25	Prop. Leak Free	Garage	--- cfm	72.2 cfm	0.03	0.50	1	1

FORM R405-2017

INPUT SUMMARY CHECKLIST REPORT

TEMPERATURES

Programable Thermostat: Y

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	80	80	80	80
	PM	80	80	80	80	78	78	78	78	78	78	78	78
Cooling (WEH)	AM	78	78	78	78	78	78	78	78	80	80	80	80
	PM	80	80	80	80	78	78	78	78	78	78	78	78
Heating (WD)	AM	65	65	65	65	65	65	65	68	68	68	68	68
	PM	68	68	68	68	68	68	68	68	68	68	68	68
Heating (WEH)	AM	65	65	65	65	65	65	65	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	1st Floor
Default(8 lbs/sq.ft.	0 ft²	0 ft	0.3	2nd Floor

Residential System Sizing Calculation

Summary

Project Title:
Helton Residence

138 SW Heather Court
Ft White, FL 32038

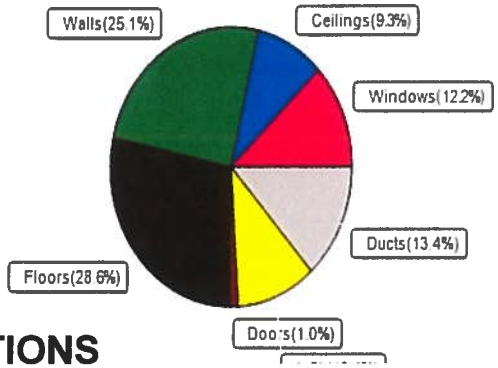
9/16/2019

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	**32796**	**Btuh**		**Total cooling load calculation**	**24898**	**Btuh**
Submitted heating capacity	% of calc	Btuh		Submitted cooling capacity	% of calc	Btuh
Total (Electric Heat Pump)	146.4	48000		Sensible (SHR = 0.85)	193.5	40800
Heat Pump + Auxiliary(0.0kW)	146.4	48000		Latent	188.9	7200
				Total (Electric Heat Pump)	192.8	48000

WINTER CALCULATIONS

Winter Heating Load (for 2405 sqft)

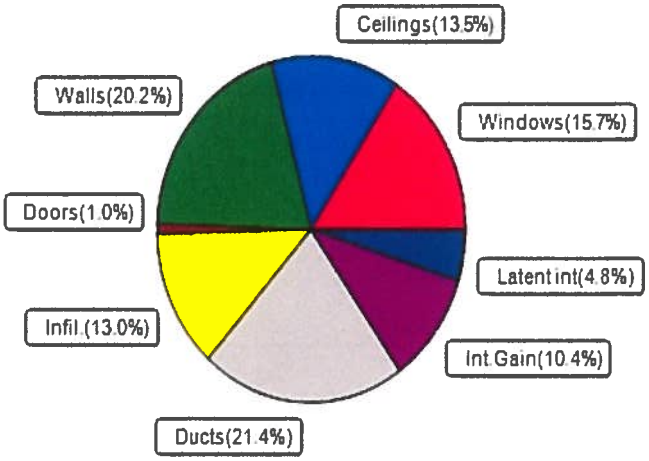
Load component			Load	
Window total	303	sqft	4000	Btuh
Wall total	2389	sqft	8238	Btuh
Door total	20	sqft	320	Btuh
Ceiling total	2405	sqft	3064	Btuh
Floor total	See detail report		9369	Btuh
Infiltration	78	cfm	3417	Btuh
Duct loss			4389	Btuh
Subtotal			**32796**	**Btuh**
Ventilation	0	cfm	0	Btuh
TOTAL HEAT LOSS			**32796**	**Btuh**



SUMMER CALCULATIONS

Summer Cooling Load (for 2405 sqft)

Load component			Load	
Window total	303	sqft	3916	Btuh
Wall total	2389	sqft	5026	Btuh
Door total	20	sqft	240	Btuh
Ceiling total	2405	sqft	3370	Btuh
Floor total			0	Btuh
Infiltration	59	cfm	1217	Btuh
Internal gain			2580	Btuh
Duct gain			4738	Btuh
Sens. Ventilation	0	cfm	0	Btuh
Blower Load			0	Btuh
Total sensible gain			**21086**	**Btuh**
Latent gain(ducts)			592	Btuh
Latent gain(infiltration)			2020	Btuh
Latent gain(ventilation)			0	Btuh
Latent gain(internal/occupants/other)			1200	Btuh
Total latent gain			**3812**	**Btuh**
TOTAL HEAT GAIN			**24898**	**Btuh**



8th Edition

EnergyGauge® System Sizing
PREPARED BY: _____
DATE: 9-16-18

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE INDEX* = 89

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. No
6. Conditioned floor area (sq. ft.)	6. 2405
7. Windows, type and area	
a) U-factor:(weighted average)	7a. 0.330
b) Solar Heat Gain Coefficient (SHGC)	7b. 0.220
c) Area	7c. 303.0
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. 30.0
b) Single assembly	11b.
c) Knee walls/skylight walls	11c.
d) Radiant barrier installed	11d. No

12. Ducts, location & insulation level	
a) Supply ducts	R 6.0
b) Return ducts	R 6.0
c) AHU location	Garage
13. Cooling system:	Capacity 48.0
a) Split system	SEER
b) Single package	SEER
c) Ground/water source	SEER/COP
d) Room unit/PTAC	EER
e) Other	14.0
14. Heating system:	Capacity 48.0
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	8.50
15. Water heating system	
a) Electric resistance	EF 0.92
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	Yes

*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: 138 SW Heather Court City/FL Zip: Ft White, FL 32038

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE INDEX* = 89

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.	No
6. Conditioned floor area (sq. ft.)	6.	2405
7. Windows, type and area		
a) U-factor:(weighted average)	7a.	0.330
b) Solar Heat Gain Coefficient (SHGC)	7b.	0.220
c) Area	7c.	303.0
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.	30.0
b) Single assembly	11b.	
c) Knee walls/skylight walls	11c.	
d) Radiant barrier installed	11d.	No

12. Ducts, location & insulation level		
a) Supply ducts	R	6.0
b) Return ducts	R	6.0
c) AHU location		Garage
13. Cooling system:	Capacity	48.0
a) Split system	SEER	
b) Single package	SEER	
c) Ground/water source	SEER/COP	
d) Room unit/PTAC	EER	
e) Other		14.0
14. Heating system:	Capacity	48.0
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		8.50
15. Water heating system		
a) Electric resistance	EF	0.92
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		Yes

*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: 138 SW Heather Court City/FL Zip: Ft White, FL 32038