Gable Stud Reinforcement Detail

ASCE 7-16: 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	
#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).

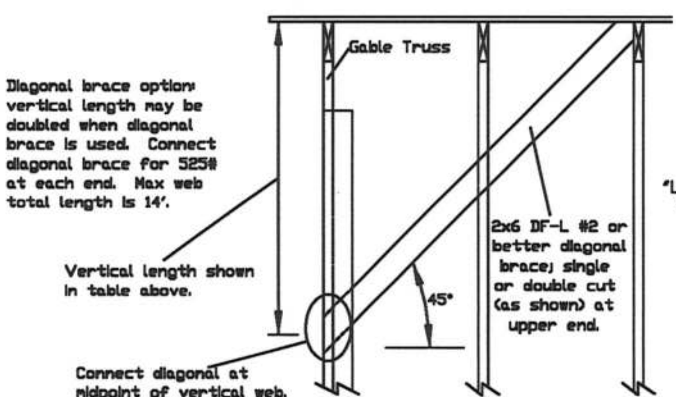
⁎⁎⁎For 1x4 So. Pine use only Industrial 55 or Industrial 45 Stress-Rated Boards. Group B values may be used with these grades.

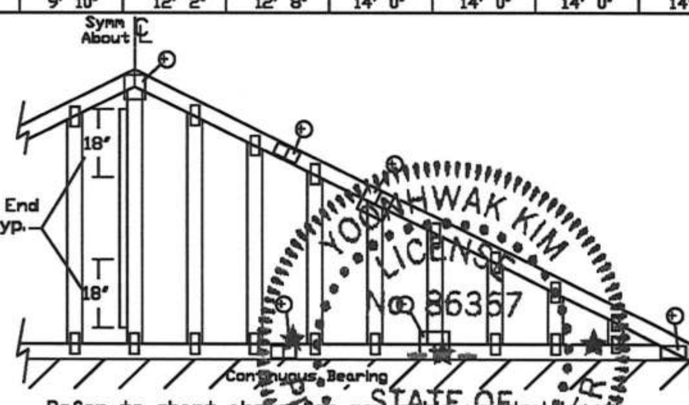
Gable Truss Detail Notes:

Wind Load deflection criterion is L/240.

Provide uplift connections for 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.





Refer to chart above for max gable vertical length.

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.

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YOONHWAK KIM LICENSE No 86367 STATE OF FLORIDA PROFESSIONAL ENGINEER

MAX. TOT. LD. 60 PSF

MAX. SPACING 24.0"

REF	ASCE7-16-GAB14030
DATE	01/26/2018
DRWG	A14030ENC160118

FL REG# 278, Yoonhwak Kim, FL PE #86367

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.

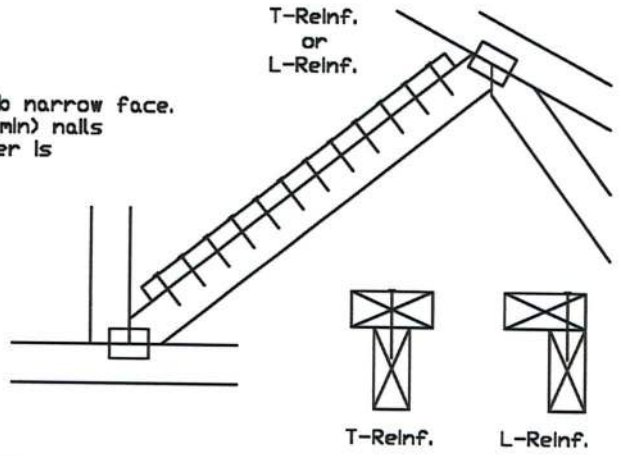
Web Member Size	Specified CLR Restraint	Alternative Reinforecement T- or L- Reinf.	Alternative Reinforecement Scab Reinf.
2x3 or 2x4	1 row	2x4	1-2x4
2x3 or 2x4	2 rows	2x6	2-2x4
2x6	1 row	2x4	1-2x6
2x6	2 rows	2x6	2-2x4 Ⓒ
2x8	1 row	2x6	1-2x8
2x8	2 rows	2x6	2-2x6 Ⓒ

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.

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

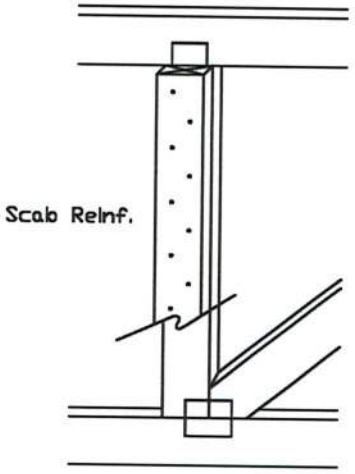
T-Reinforcement or L-Reinforcement:

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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12/10/2021 Rev. # 278, Yoonhwak Kim, FL PE #86367

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		

NAIL SPACING DETAIL

MINIMUM SPACING FOR SINGLE BLOCK IS SHOWN. DOUBLE NAIL SPACINGS AND STAGGER NAILING FOR TWO BLOCKS. GREATER SPACING MAY BE REQUIRED TO AVOID SPLITTING.

BLOCK LOCATION, SIZE, LENGTH,GRADE AND TOTAL NUMBER AND TYPE OF NAILS ARE TO BE SPECIFIED ON SEALED DESIGN REFERENCING THIS DETAIL.

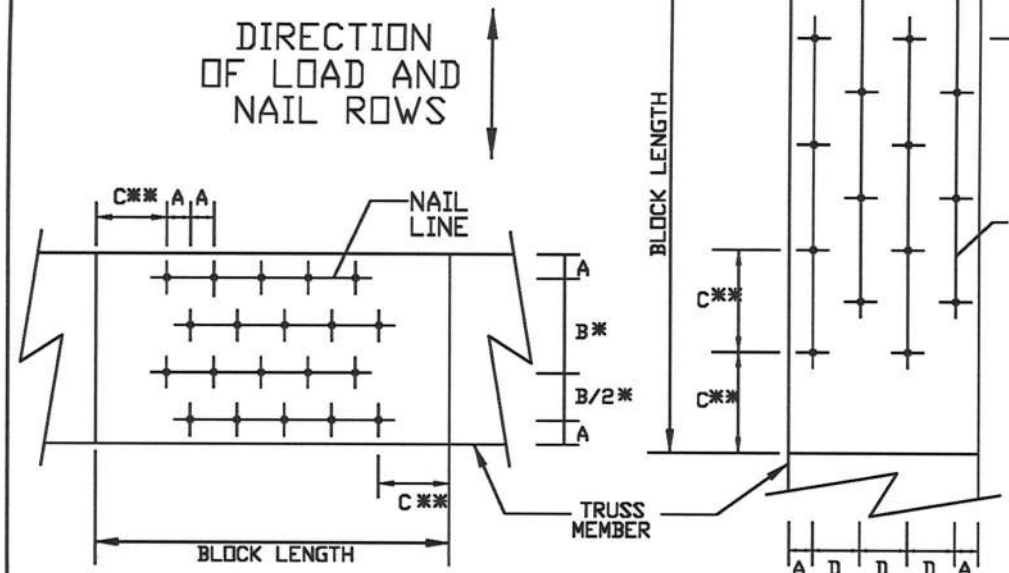
LOAD PERPENDICULAR TO GRAIN
A - EDGE DISTANCE AND SPACING BETWEEN STAGGERED ROWS OF NAILS (6 NAIL DIAMETERS)
B - SPACING OF NAILS IN A ROW (12 NAIL DIAMETERS)
C - END DISTANCE (15 NAIL DIAMETERS)

LOAD PARALLEL TO GRAIN
A - EDGE DISTANCE (6 NAIL DIAMETERS)
C - SPACING OF NAILS IN A ROW AND END DISTANCE (15 NAIL DIAMETERS)
D - SPACING BETWEEN STAGGERED ROWS OF NAILS (7 1/2 NAIL DIAMETERS)

IF NAIL HOLES ARE PREBORED, SOME SPACING MAY BE REDUCED BY THE AMOUNTS GIVEN BELOW:
* SPACING MAY BE REDUCED BY 50%
** SPACING MAY BE REDUCED BY 33%

MINIMUM NAIL SPACING DISTANCES

NAIL TYPE	DISTANCES A	B*	C**	D
8d BOX (0.113"X 2.5",MIN)	3/4"	1 3/8"	1 3/4"	7/8"
10d BOX (0.128"X 3.",MIN)	7/8"	1 5/8"	2"	1"
12d BOX (0.128"X 3.25",MIN)	7/8"	1 5/8"	2"	1"
16d BOX (0.135"X 3.5",MIN)	7/8"	1 5/8"	2 1/8"	1 1/8"
20d BOX (0.148"X 4.",MIN)	1"	1 7/8"	2 1/4"	1 1/8"
8d COMMON (0.131"X 2.5",MIN)	7/8"	1 5/8"	2"	1"
10d COMMON (0.148"X 3.",MIN)	1"	1 7/8"	2 1/4"	1 1/8"
12d COMMON (0.148"X 3.25",MIN)	1"	1 7/8"	2 1/4"	1 1/8"
16d COMMON (0.162"X 3.5",MIN)	1'	2"	2 1/2"	1 1/4"
GUN (0.120"X 2.5",MIN)	3/4"	1 1/2"	1 7/8"	1"
GUN (0.131"X 2.5",MIN)	7/8"	1 5/8"	2"	1"
GUN (0.120"X 3.",MIN)	3/4"	1 1/2"	1 7/8"	1"
GUN (0.131"X 3.",MIN)	7/8"	1 5/8"	2"	1"



LOAD APPLIED PERPENDICULAR TO GRAIN LOAD APPLIED PARALLEL TO GRAIN

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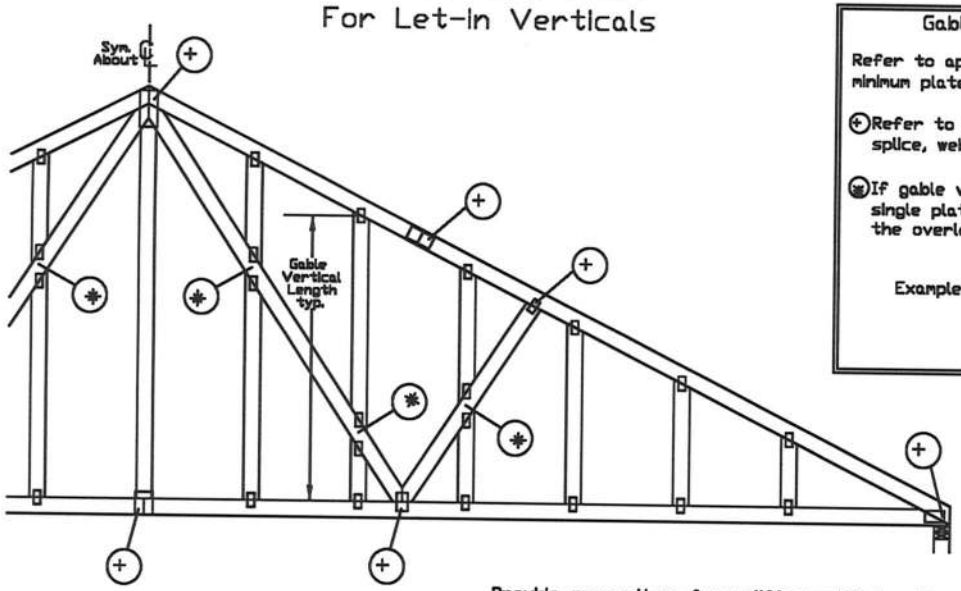
REF	NAIL SPACE
DATE	10/01/2014
DRWG	CNNAILSP1014

10/10/2021
78, Yoonhwak Kim, FL PE #86367

Gable Detail
For Let-In Verticals



Gable Truss Plate Sizes

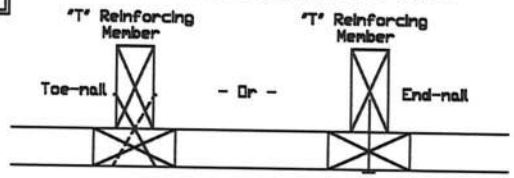
Refer to appropriate Alpine gable detail for minimum plate sizes for vertical studs.

(+) 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: 2X4 2X4 2X8

"T" Reinforcement Attachment Detail



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.

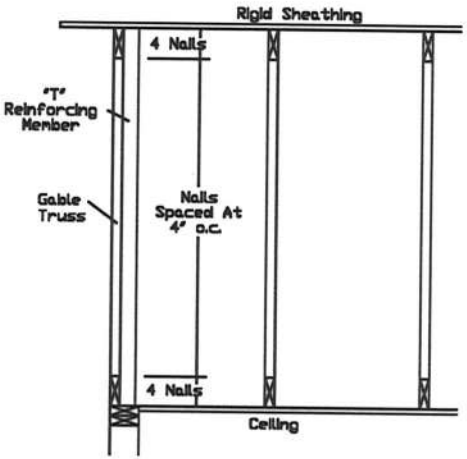
Toenailed Nails:
- 10d Common (0.148"x3",min) Toenails at 4" o.c. plus
- (4) toenails in the top and bottom chords.

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.



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"

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YOONHWAK KIM LICENSE NO. 86367 STATE OF FLORIDA PROFESSIONAL ENGINEER

12/10/2021

Yoonhwak Kim, FL PE #86367

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

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

Piggyback Detail - ASCE 7-16: 160 mph, 30' Mean Height, Enclosed, Exposure C, Kzt=1.00

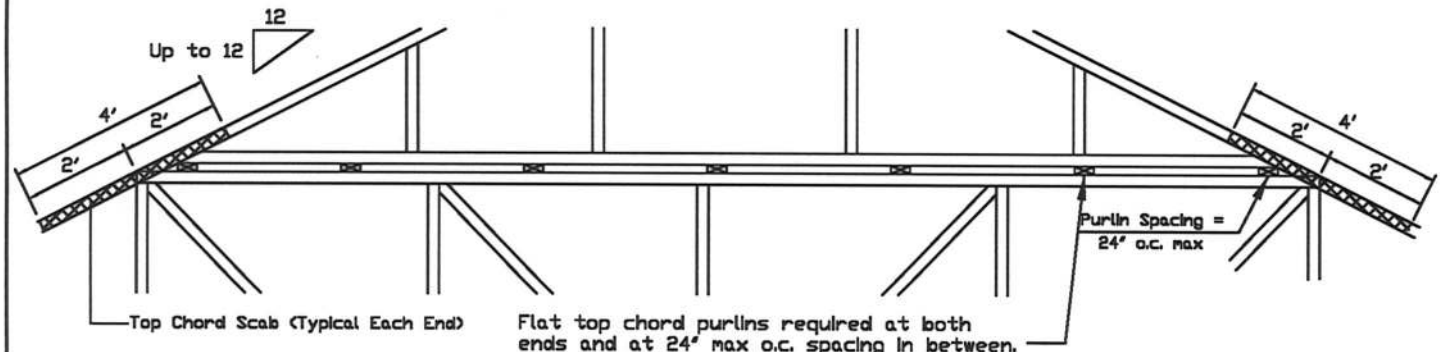
160 mph Wind, 30.00 ft Mean Hgt, ASCE 7-16, Enclosed Bldg. located anywhere in roof, Exp C, Wind DL= 5.0 psf (min), Kzt=1.0.
Or 140 mph wind, 30.00 ft Mean Hgt, ASCE 7-16, Enclosed Bldg. located anywhere in roof, Exp D, wind DL= 5.0 psf (min), Kzt=1.0.

Note: Top chords of trusses supporting piggyback cap trusses must be adequately braced by sheathing or purlins. The building Engineer of Record shall provide diagonal bracing or any other suitable anchorage to permanently restrain purlins, and lateral bracing for out of plane loads over gable ends.

Maximum truss spacing is 24" o.c. detail is not applicable if cap supports additional loads such as cupola, steeple, chimney or drag strut loads.

** Refer to Engineer's sealed truss design drawing for piggyback and base truss specifications.

Detail A : Purlin Spacing = 24" o.c. or less



Piggyback cap truss slant nailed to all top chord purlin bracing with (2) 16d box nails (0.135"x3.5") and secure top chord with 2x4 #3 grade scab (1 side only at each end) attached with 2 rows of 10d box nails (0.128"x3") at 4" o.c.

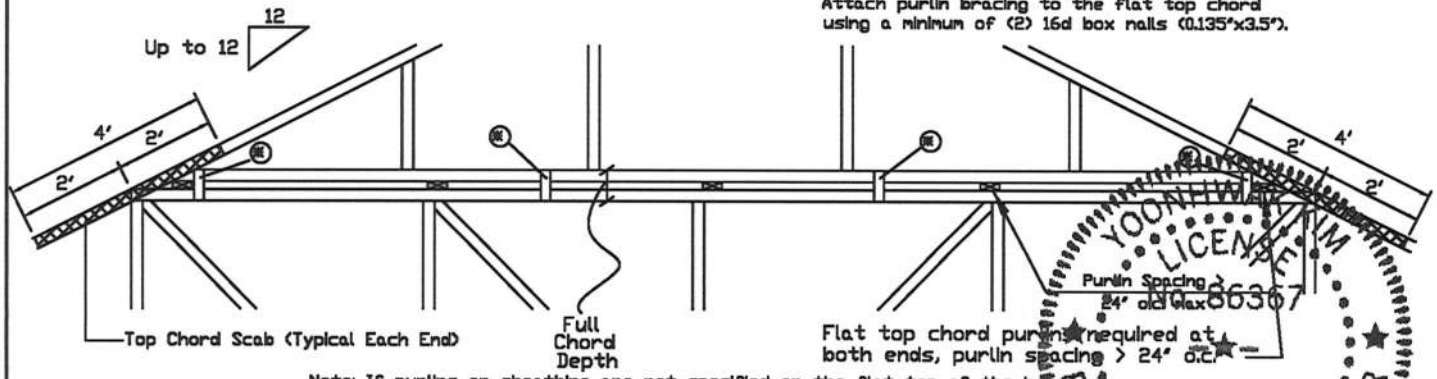
Attach purlin bracing to the flat top chord using (2) 16d box nails (0.135"x3.5").

The top chord #3 grade 2x4 scab may be replaced with either of the following: (1) 3X8 Trulox plate attached with (8) 0.120"x1.375" nails, (4) into cap TC & (4) into base truss TC or (1) 28PB wave piggyback plate plated to the piggyback truss TC and attached to the base truss TC with (4) 0.120"x1.375" nails. Note: Nailing thru holes of wave plate is acceptable.

Detail B : Purlin Spacing > 24" o.c.

Piggyback cap truss slant nailed to all top chord purlin bracing with (2) 16d box nails (0.135"x3.5") and secure top chord with 2x4 #3 grade scab (1 side only at each end) attached with 2 rows of 10d box nails (0.128"x3") at 4" o.c.

Attach purlin bracing to the flat top chord using a minimum of (2) 16d box nails (0.135"x3.5").



Note: If purlins or sheathing are not specified on the flat top of the base truss, purlins must be installed at 24" o.c. max. and use Detail A.

** In addition, provide connection with one of the following methods:

Trulox
Use 3X8 Trulox plates for 2x4 chord member, and 3X10 Trulox plates for 2x6 and larger chord members. Attach to each face @ 8" o.c. with (4) 0.120"x1.375" nails into cap bottom chord and (4) in base truss top chord. Trulox plates may be staggered 4" o.c. front to back faces.

APA Rated Gusset
8"x8"x7/16" (min) APA rated sheathing gussets (each face). Attach @ 8" o.c. with (8) 6d common (0.113"x2") nails per gusset, (4) in cap bottom chord and (4) in base truss top chord. Gussets may be staggered 4" o.c. front to back faces.

2x4 Vertical Scabs
2x4 SPF #2, full chord depth scabs (each face). Attach @ 8" o.c. with (6) 10d box nails (0.128"x3") per scab, (3) in cap bottom chord and (3) in base truss top chord. Scabs may be staggered 4" o.c. front to back faces.

28PB Wave Piggyback Plate
One 28PB wave piggyback plate to each face @ 8" o.c. Attach teeth to piggyback at time of fabrication. Attach to supporting truss with (4) 0.120"x1.375" nails per face per ply. Piggyback plates may be staggered 4" o.c. front to back faces.

YOONHWAK KIM LICENSE NUMBER 86367 STATE OF FLORIDA PROFESSIONAL ENGINEER

ALPINE
AN ITW COMPANY
514 Earth City Expressway
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Earth City, MO 63045

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 Sec2.

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

REF	PIGGYBACK
DATE	01/02/2018
DRWG	PB160160118
SPACING	24.0"

1/10/2021
878, Yoonhwak Kim, FL PE #86367

Piggyback Detail - ASCE 7-16: 180 mph, 30' Mean Hgt, Partially Enclosed, Exp. C, Kzt=1.00

180 mph Wind, 30.00 ft Mean Hgt, ASCE 7-16, Part. Enclosed Bldg. located anywhere in roof, Exp C, Wind DL= 5.0 psf (min), Kzt=1.0.
Or 160 mph wind, 30.00 ft Mean Hgt, ASCE 7-16, Part. Enclosed Bldg. located anywhere in roof, Exp D, wind DL= 5.0 psf (min), Kzt=1.0.

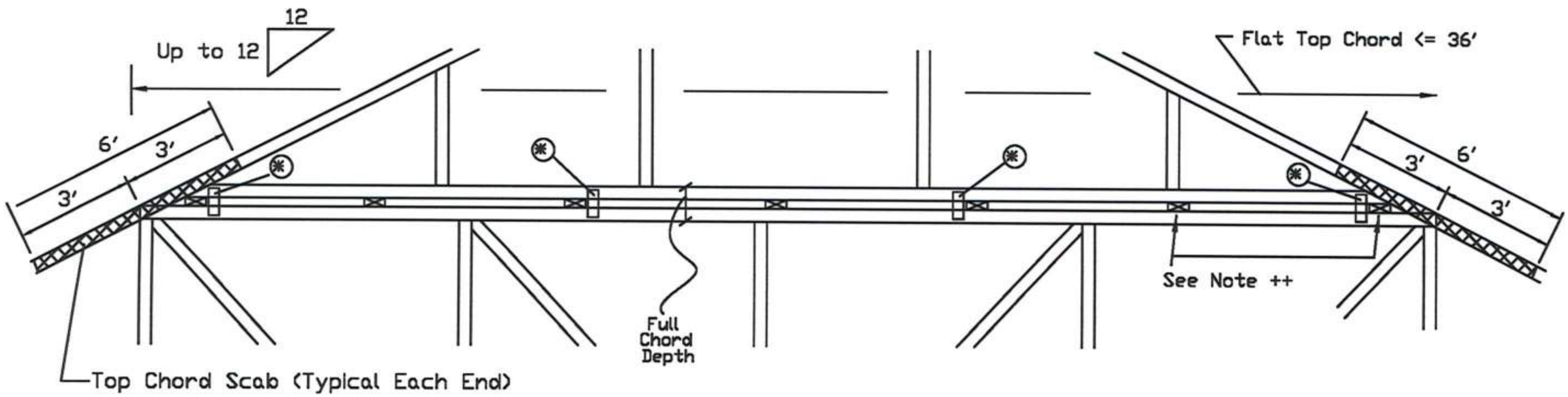
Note: Top chords of trusses supporting piggyback cap trusses must be adequately braced by sheathing or purlins. The building Engineer of Record shall provide diagonal bracing or any other suitable anchorage to permanently restrain purlins, and lateral bracing for out of plane loads over gable ends.

Maximum truss spacing is 24" o.c. detail is not applicable if cap supports additional loads such as cupola, steeple, chimney or drag strut loads.

** Refer to Engineer's sealed truss design drawing for piggyback and base truss specifications.

Piggyback cap truss slant nailed to all top chord purlin bracing with (2) 16d box nails (0.135"x3.5") and secure top chord with 2x4 #3 grade scab (1 side only at each end) attached with 2 rows of 10d box nails (0.128"x3") at 4" o.c.

++ Flat top chord purlins required at both ends and at a maximum of 24" intervals unless otherwise noted on base truss design drawing. Attach purlin bracing to the flat top chord using a minimum of (2) 16d box nails (0.135"x3.5").



* In addition, provide connection with one of the following methods:	
Trulox Use 3X8 Trulox plates for 2x4 chord member, and 3X10 Trulox plates for 2x6 and larger chord members. Attach to each face @ 8' o.c. with (4) 0.120"x1.375" nails into cap bottom chord and (4) in base truss top chord. Trulox plates may be staggered 4' o.c. front to back faces.	**28PB Wave Piggyback Plate** One 28PB wave piggyback plate to each face @ 8' o.c. Attach teeth to piggyback at time of fabrication. Attach to supporting truss with (4) 0.120"x1.375" nails per face per ply. Piggyback plates may be staggered 4' o.c. front to back faces.
APA Rated Gusset 8"x8"x7/16" (min) APA rated sheathing gussets (each face). Attach @ 8' o.c. with (8) 6d common (0.113"x2") nails per gusset, (4) in cap bottom chord and (4) in base truss top chord. Gussets may be staggered 4' o.c. front to back faces.	**2x4 Vertical Scabs** 2x4 SPF #2 full chord depth scabs (each face). Attach @ 8' o.c. with (6) 10d box nails (0.128"x3") per scab, (3) in cap bottom chord and (3) in base truss top chord. Scabs may be staggered 4' o.c. front to back faces.

STATE OF FLORIDA PROFESSIONAL ENGINEER No. 86367

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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.alpineitw.com; TPI: www.tpinst.org; SBCA: www.sbcacomponents.com; ICC: www.iccsafe.org

ALPINE AN ITW COMPANY
514 Earth City Expressway
Suite 242
Earth City, MO 63045

FL REG# 278, Yoonhwak Kim, FL PE #86367

REF	PIGGYBACK
DATE	01/02/2018
DRWG	PB180160118
SPACING	24.0"

Cracked or Broken Member Repair Detail

This drawing specifies repairs for a truss with broken chord or web member.

This design is valid only for single ply trusses with 2x4 or 2x6 broken members. No more than one break per chord panel and no more than two breaks per truss are allowed. Contact the truss manufacturer for any repairs that do not comply with this detail.

(B) = Damaged area, 12" max length of damaged section
(L) = Minimum nailing distance on each side of damaged area (B)
(S) = Two 2x4 or two 2x6 side members, same size, grade, and species as damaged member. Apply one scab per face. Minimum side member length(s) = (2)(L) + (B)

Scab member length (S) must be within the broken panel.

Nail into 2x4 members using two (2) rows at 4" o.c., rows staggered.
Nail into 2x6 members using three (3) rows at 4" o.c., rows staggered.

Nail using 10d box or gun nails (0.128"x3", min) into each side member.

The maximum permitted lumber grade for use with this detail is limited to Visual grade #1 and MSR grade 1650f.

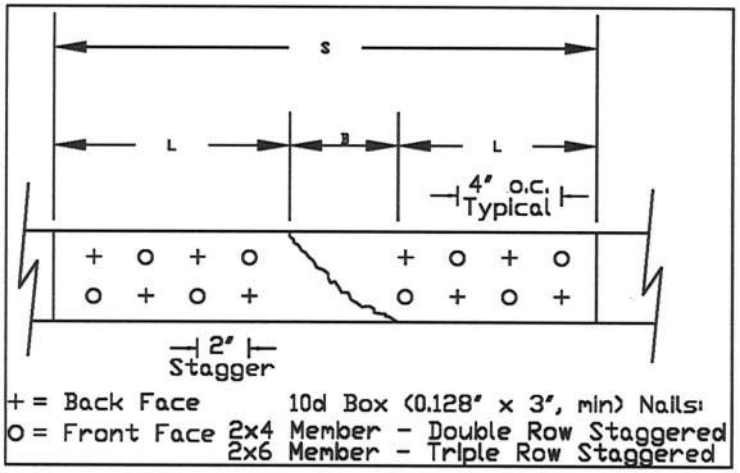
This repair detail may be used for broken connector plate at mid-panel splices.

This repair detail may not be used for damaged chord or web sections occurring within the connector plate area.

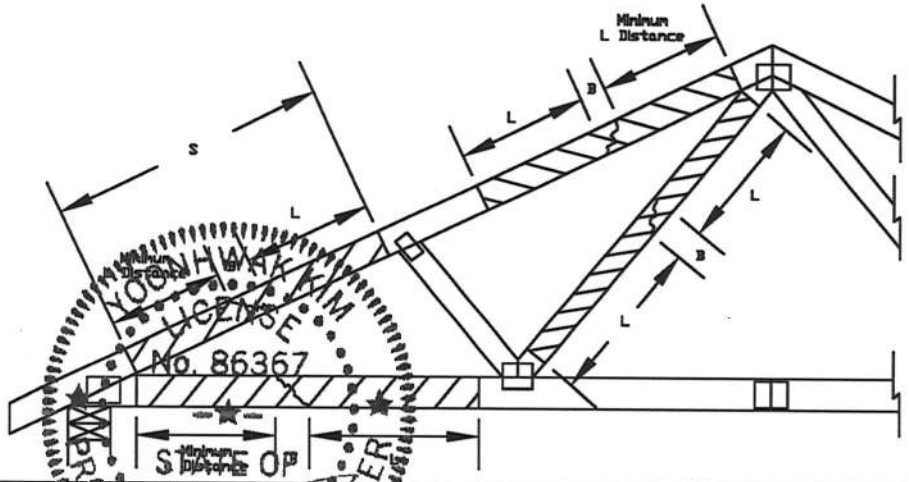
Broken chord may not support any tie-in loads.

Load Duration = 0%
Member forces may be increased for Duration of Load

Member	Size	L	Maximum Member Axial Force SPF-C	HF	DF-L	SYP
Web Only	2x4	12"	620#	635#	730#	800#
Web Only	2x4	18"	975#	1055#	1295#	1415#
Web or Chord	2x4	24"	975#	1055#	1495#	1745#
Web or Chord	2x6		1465#	1585#	2245#	2620#
Web or Chord	2x4	30"	1910#	1960#	2315#	2555#
Web or Chord	2x6		2230#	2365#	3125#	3575#
Web or Chord	2x4	36"	2470#	2530#	2930#	3210#
Web or Chord	2x6		3535#	3635#	4295#	4745#
Web or Chord	2x4	42"	2975#	3045#	3505#	3835#
Web or Chord	2x6		4395#	4500#	5225#	5725#
Web or Chord	2x4	48"	3460#	3540#	4070#	4445#
Web or Chord	2x6		5165#	5280#	6095#	6660#



Nail Spacing Detail



YOONHWAK KIM
LICENSE
No. 86367
STATE OF
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PROFESSIONAL ENGINEER

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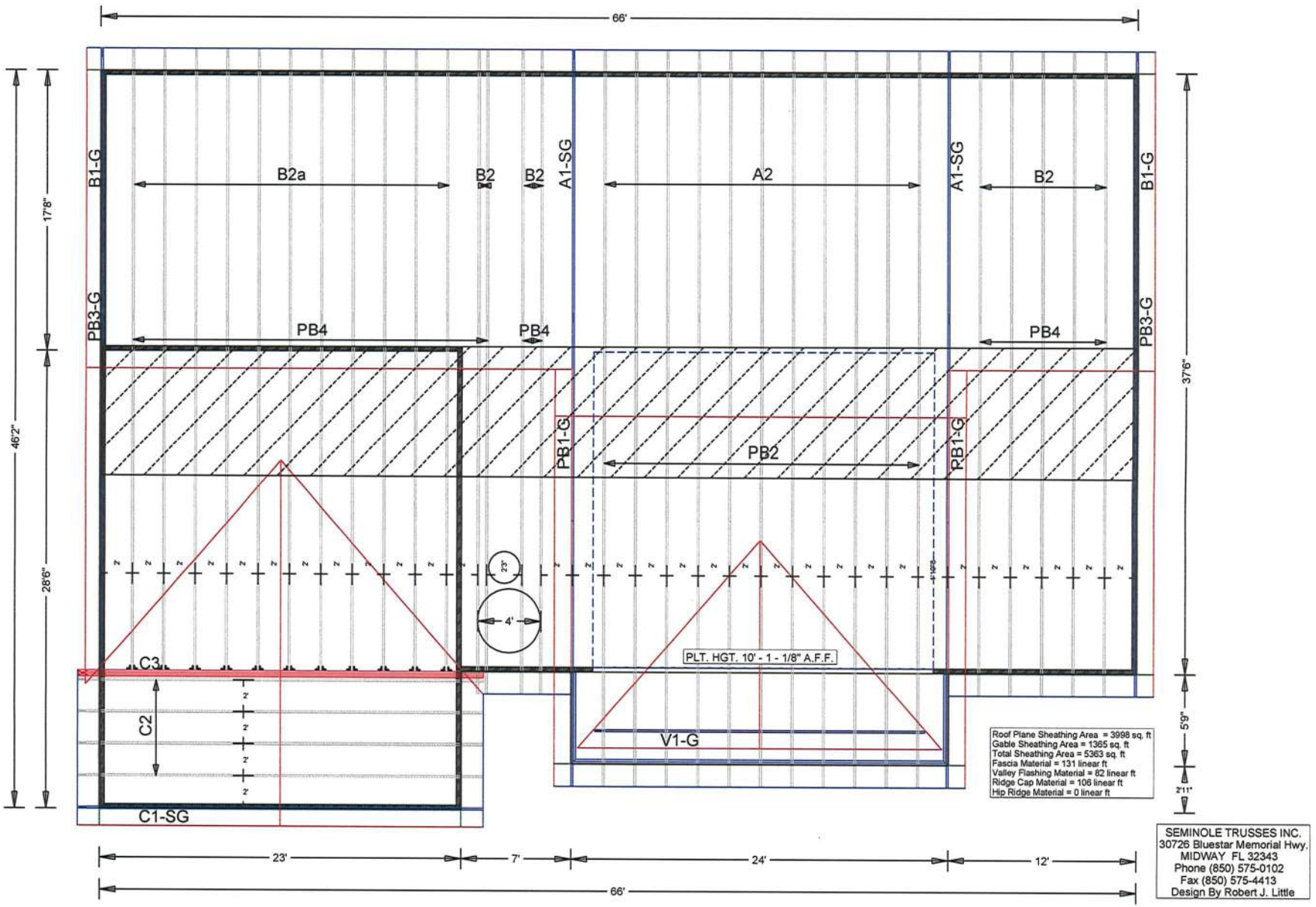
For more information see this job's general notes page and these web sites:
ALPINE www.alpineitw.com/ TPI www.tpinst.org/ SBCA www.sbcacomponents.com/ ICC www.iccsafe.org

10/10/2021
278, Yoonhwak Kim, FL PE #86367

REF	MEMBER REPAIR
DATE	10/01/14
DRWG	REPCHRD1014
SPACING	24.0" MAX

ALL WALLS SHOWN TO BE BEARING
AMERICA'S HOME PLACE, INC.
DUBE RESIDENCE ~ GLENRIDGE-A



Roof Plane Sheathing Area = 3998 sq. ft
Gable Sheathing Area = 1365 sq. ft
Total Sheathing Area = 5363 sq. ft
Fascia Material = 131 linear ft
Valley Flashing Material = 82 linear ft
Ridge Cap Material = 106 linear ft
Hip Ridge Material = 0 linear ft

SEMINOLE TRUSSES INC.
30726 Bluestar Memorial Hwy.
MIDWAY FL 32343
Phone (850) 575-0102
Fax (850) 575-4413
Design By Robert J. Little

Job Name: DUBE RESIDENCE
Customer: America's Home Place
Designer: ROBERT J. LITTLE
PlanName: GLENRIDGE-A
Created : 12-11-2021

JOB NO:
B54819a

PAGE NO:

12/10/2021

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

FL REG# 278, Yoonhwak Kim, FL PE #86367

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

Site Information:	Page 1:
Customer: Seminole Trusses, Inc.	*Job Number:* B54819a
Job Description: DUBE RESIDENCE	
Address: 266 SW COLES CRT., FORT WHITE, FL 32038	

Job Engineering Criteria:	
Design Code: FBC 7th Ed. 2020 Res.	*IntelliVIEW Version:* 20.02.00A *JRef #:* 1Xb88570001
Wind Standard: ASCE 7-16 *Wind Speed (mph):* 130 *Building Type:* Closed	*Design Loading (psf):* 37.00

This package contains general notes pages, 13 truss drawing(s) and 8 detail(s).

Item	Drawing Number	Truss
1	344.21.1040.23893	A1-SG 43'3" Gable
3	344.21.1040.33030	B1-G 37'6" Gable
5	344.21.1040.37653	B2a 37'6" Common
7	344.21.1010.29218	C2 23' Common
9	344.21.1040.55467	V1-G 20'11"13 Valley
11	344.21.1041.15980	PB2 12'10" Common
13	344.21.1010.29219	PB4 7'1" Common
15	A14030ENC160118	
17	CNNAILSP1014	
19	PB160160118	
21	REPCHRD1014	

Item	Drawing Number	Truss
2	344.21.1040.28513	A2 43'3" Common
4	344.21.1040.35357	B2 37'6" Common
6	344.21.1040.40177	C1-SG 23' Gable
8	344.21.1040.50607	C3 23' Common Girder
10	344.21.1041.13053	PB1-G 12'10" Gable
12	344.21.1041.19477	PB3-G 7'1" Gable
14	A14015ENC160118	
16	BRCLBSUB0119	
18	GBLLETIN0118	
20	PB180160118	

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 AWC. 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.

Fire Retardant Treated Lumber:
Fire retardant treated lumber must be properly re-dried and maintained below 19% or less moisture level through all stages of construction and usage. Fire retardant treated lumber may be more brittle than untreated lumber. Special handling care must be taken to prevent breakage during all handling activities.

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.

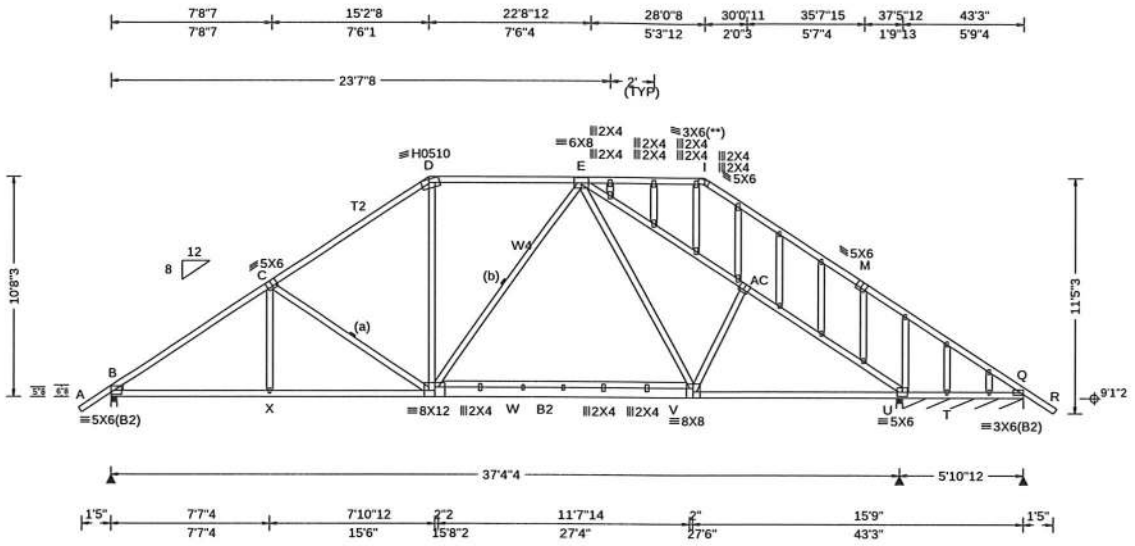
BCDL = Bottom Chord standard design Dead Load in pounds per square foot.
BCLL = Bottom Chord standard design Live Load in pounds per square foot.
CL = Certified lumber.
Des Ld = total of TCLL, TCDL, BCLL and BCDL Design Load in pounds per square foot.
FRT = Fire Retardant Treated lumber.
FRT-DB = D-Blaze Fire Retardant Treated lumber.
FRT-DC = Dricon Fire Retardant Treated lumber.
FRT-FP = FirePRO Fire Retardant Treated lumber.
FRT-FL = FlamePRO Fire Retardant Treated lumber.
FRT-FT = FlameTech Fire Retardant Treated lumber.
FRT-PG = PYRO-GUARD Fire Retardant Treated lumber.
g = green lumber.
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.
Ic = Incised lumber.
FJ = Finger Jointed lumber.
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 vertical Deflection due to creep, 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(CTL) = maximum Vertical panel point deflection ratios due to Live Load and Creep Component of Dead Load, and maximum long term Vertical panel point deflection in inches due to Total load, including creep adjustment.
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. AWC: American Wood Council; 222 Catoctin Circle SE, Suite 201; Leesburg, VA 20175; www.awc.org.
2. ICC: International Code Council; www.iccsafe.org.
3. Alpine, a division of ITW Building Components Group Inc.: 514 Earth City Expressway, Suite 242, Earth City, MO 63045; www.alpineitw.com.
4. TPI: Truss Plate Institute, 2670 Crain Highway, Suite 203, Waldorf, MD 20601; www.tpinst.org.
5. SBCA: Wood Truss Council of America, 6300 Enterprise Lane, Madison, WI 53719; www. sbcacomponents.com.

SEQN: 92038 GABL FROM: RJL	Ply: 1 Qty: 2	**Job Number:** B54819a DUBE RESIDENCE **Truss Label:** A1-SG 43'3" Gable	Cust: R 857 JRef:1Xb88570001 T10 DrwNo: 344.21.1040.23893 / YK 12/10/2021	



Loading Criteria (psf)

TCLL:	20.00
TCDL:	7.00
BCLL:	0.00
BCDL:	10.00
Des Ld:	37.00
NCBCLL:	10.00
Soffit:	0.00

Load Duration: 1.25
Spacing: 24.0 "

Wind Criteria
Wind Std: ASCE 7-16
Speed: 130 mph
Enclosure: Closed
Risk Category: II
EXP: B Kzt: NA
Mean Height: 15.00 ft
TCDL: 4.2 psf
BCDL: 5.2 psf
MWFRS Parallel Dist: h/2 to h
C&C Dist a: 4.32 ft
Loc. from endwall: not in 10.00 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

Building Code:
FBC 7th Ed. 2020 Res.
TPI Std: 2014
Rep Fac: No
FT/RT:20(0)/10(0)
Plate Type(s):
WAVE, HS

Defl/CSI Criteria

PP Deflection in	loc	L/defl	L/#
VERT(LL): 0.138	W	999	360
VERT(CL): 0.274	G	999	240
HORZ(LL): 0.075	N	-	-
HORZ(TL): 0.146	N	-	-

Creep Factor: 2.0
Max TC CSI: 0.894
Max BC CSI: 0.834
Max Web CSI: 0.594

VIEW Ver: 20.02.00A.1020.20

▲Maximum Reactions (lbs), or *=PLF

	Gravity			Non-Gravity		
Loc	R+	/ R-	/ Rh	/ Rw	/ U	/ RL
B	2201	/-	/-	/929	/227	/273
U	1989	/-	/-	/914	/197	/-
Q*	128	/-	/-	/38	/25	/-
T		/-148				

Wind reactions based on MWFRS
B Brg Wid = 3.5 Min Req = 2.6
U Brg Wid = 3.5 Min Req = 2.0
Q Brg Wid = 69.0 Min Req = -
Bearings B, U, & U 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	362	- 3263	E - I	175	- 590
C - D	412	- 2733	I - M	192	- 812
D - E	394	- 2128	M - Q	166	- 846

Maximum Bot Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
B - X	2576	- 265	V - U	2611	- 336
X - W	2579	- 268	U - Q	633	- 123

Maximum Web Forces Per Ply (lbs)

Webs	Tens.	Comp.	Webs	Tens.	Comp.
C - W	131	- 562	E -AC	374	- 2365
D - W	630	- 29	V -AC	131	- 400
E - V	574	- 2	AC- U	415	- 2540

Lumber

Top chord: 2x4 SP #1; T2 2x4 SP SS Dense;
Bot chord: 2x4 SP #1; B2 2x6 SP #1;
Webs: 2x4 SP #3; W4 2x4 SP #1;
Lt Wedge: 2x4 SP #3;

Bracing

(a) Continuous lateral restraint equally spaced on member. Or 1x4 #3SRB SPF-S or better "T" reinforcement. 80% length of web member. Attached with 8d Box or Gun (0.113"x2.5",min.)nails @ 6" oc.

(b) Continuous lateral restraint equally spaced on member. Or 2x6 #3 or better "T" reinforcement. 80% length of web member. Attached with 10d Box or Gun (0.128"x3",min.)nails @ 6" oc.

Plating Notes

All plates are 1.5X3 except as noted.

(**) 1 plate(s) require special positioning. Refer to scaled plate plot details for special positioning requirements.

Loading

Truss designed to support 1-0-0 top chord outlookers and cladding load not to exceed 5.00 PSF one face and 24.0" span opposite face. Top chord must not be cut or notched, unless specified otherwise.

Wind

Wind loads based on MWFRS with additional C&C member design.

Wind loading based on both gable and hip roof types.

Blocking

Blocking reinforcement required to prevent buckling of members over the bearings:
Bearing 2 located at 37.2' (blocking >= 16.66" if used)

Additional Notes

See DWGS A14015ENC160118 & GBLLETIN0118 for gable wind bracing and other requirements.

WARNING: 20 psf additional bottom chord live load check has been modified

WIND LOAD CASE MODIFIED!

YOONHWAK KIM LICENSE No. 86367 STATE OF FLORIDA PROFESSIONAL ENGINEER

FL REG# 278, Yoonhwak Kim, FL PE #86367
12/10/2021

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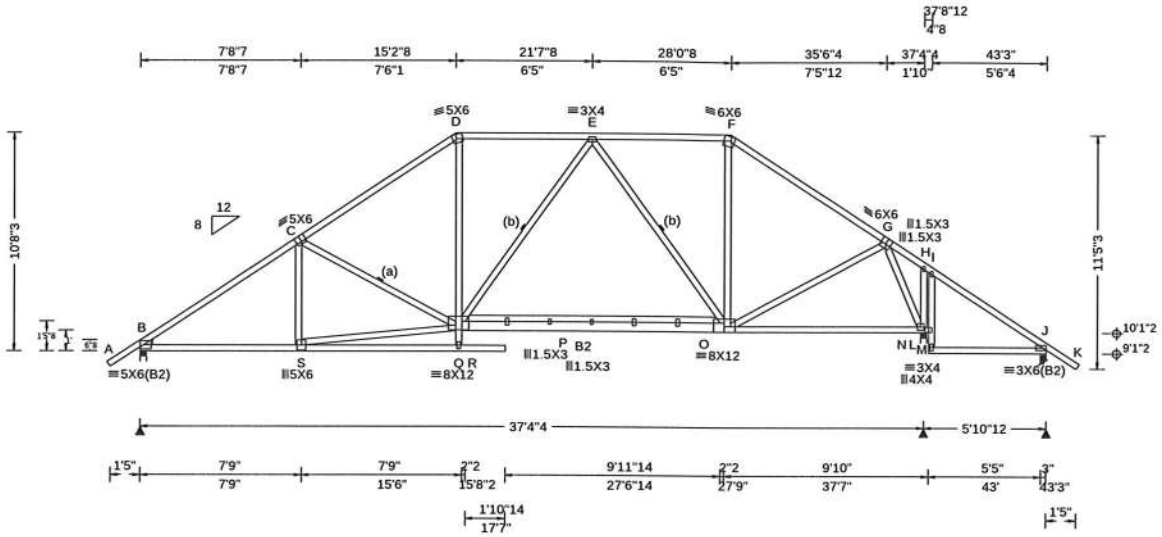
ALPINE AN ITW COMPANY
6750 Forum Drive
Suite 305
Orlando FL, 32821

SEQN: 92045 COMN FROM: RJL	Ply: 1 Qty: 11	**Job Number:** B54819a DUBE RESIDENCE **Truss Label:** A2 43'3" Common	Cust: R 857 JRef: 1Xb88570001 T5 DrwNo: 344.21.1040.28513 / YK 12/10/2021	



Loading Criteria (psf)

TCLL:	20.00
TCDL:	7.00
BCLL:	0.00
BCDL:	10.00
Des Ld:	37.00
NCBCLL:	10.00
Soffit:	0.00

Load Duration: 1.25
Spacing: 24.0 "

Wind Criteria
Wind Std: ASCE 7-16
Speed: 130 mph
Enclosure: Closed
Risk Category: II
EXP: B Kzt: NA
Mean Height: 15.00 ft
TCDL: 4.2 psf
BCDL: 5.2 psf
MWFRS Parallel Dist: h to 2h
C&C Dist a: 4.32 ft
Loc. from endwall: not in 13.00 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

Building Code:
FBC 7th Ed. 2020 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): 0.133	P	999	360
VERT(CL): 0.200	P	999	240
HORZ(LL): 0.048	N	-	-
HORZ(TL): 0.082	N	-	-

Creep Factor: 2.0
Max TC CSI: 0.651
Max BC CSI: 0.693
Max Web CSI: 0.895

VIEW Ver: 20.02.00A.1020.20

▲Maximum Reactions (lbs)

	Gravity			Non-Gravity		
Loc	R+	/ R-	/ Rh	/ Rw	/ U	/ RL
B	1782	/-	/-	/836	/211	/243
N	2035	/-	/-	/851	/257	/-
J	273	/-	/-	/214	/32	/-

Wind reactions based on MWFRS
B Brg Wid = 3.5 Min Req = 2.1
N Brg Wid = 3.5 Min Req = 2.4
J Brg Wid = 3.5 Min Req = 1.5
Bearings B, N, & J 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	326	- 2554	E - F	301	- 1421
C - D	353	- 2248	F - G	306	- 1798
D - E	332	- 1786			

Maximum Bot Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
B - S	2017	- 244	O - N	591	- 88

Maximum Web Forces Per Ply (lbs)

Webs	Tens.	Comp.	Webs	Tens.	Comp.
S - Q	1991	- 230	O - F	422	- 19
D - Q	675	- 46	O - G	924	- 151
E - O	209	- 719	G - N	312	- 1886

Lumber

Top chord: 2x4 SP #1;
Bot chord: 2x4 SP #1; B2 2x6 SP #1;
Webs: 2x4 SP #3;
Lt Wedge: 2x4 SP #3;

Bracing

(a) Continuous lateral restraint equally spaced on member. Or 1x4 #3SRB SPF-S or better "T" reinforcement. 80% length of web member. Attached with 8d Box or Gun (0.113"x2.5",min.)nails @ 6" oc.

(b) Continuous lateral restraint equally spaced on member. Or 2x4 #3 or better "T" reinforcement. 80% length of web member. Attached with 10d Box or Gun (0.128"x3",min.)nails @ 6" oc.

Special Loads

------(Lumber Dur.Fac.=1.25 / Plate Dur.Fac.=1.25)

TC: From	57 plf at	-1.58 to	57 plf at	15.50
TC: From	97 plf at	15.50 to	97 plf at	27.75
TC: From	57 plf at	27.75 to	57 plf at	44.83
BC: From	20 plf at	0.00 to	20 plf at	43.25
PLB: From	40 plf at	5.40 to	40 plf at	7.46

Plating Notes

All plates are 2X4 except as noted.

Wind

Wind loads based on MWFRS with additional C&C member design.

Wind loading based on both gable and hip roof types.

Additional Notes

WARNING: 20 psf additional bottom chord live load check has been modified

WIND LOAD CASE MODIFIED!

YOONHWAK KIM LICENSE No. 86367 STATE OF FLORIDA PROFESSIONAL ENGINEER

FL REG# 278, Yoonhwak Kim, FL PE #86367
12/10/2021

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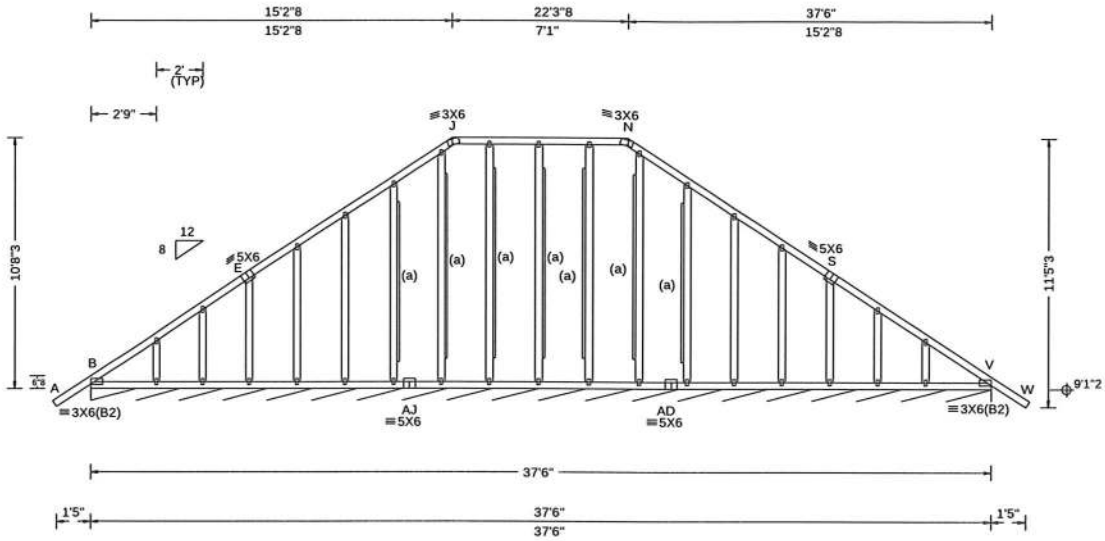
ALPINE AN ITW COMPANY
6750 Forum Drive
Suite 305
Orlando FL, 32821

SEQN: 92024 GABL FROM: RJL	Ply: 1 Qty: 2	**Job Number:** B54819a DUBE RESIDENCE **Truss Label:** B1-G 37'6" Gable	Cust: R 857 JRef:1Xb88570001 T8 DrwNo: 344.21.1040.33030 / YK 12/10/2021	



Loading Criteria (psf)	**Wind Criteria**	**Snow Criteria** (Pg,Pf in PSF)	**Defl/CSI Criteria**	**▲Maximum Reactions (lbs), or *=PLF**
TCLL: 20.00 TCDL: 7.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 37.00 NCBCLL: 10.00 Soffit: 0.00 Load Duration: 1.25 Spacing: 24.0 "	Wind Std: ASCE 7-16 Speed: 130 mph Enclosure: Closed Risk Category: II EXP: B Kzt: NA Mean Height: 15.00 ft TCDL: 4.2 psf BCDL: 5.2 psf MWFRS Parallel Dist: 0 to h/2 C&C Dist a: 3.75 ft Loc. from endwall: Any GCpi: 0.18 Wind Duration: 1.60	Pg: NA Ct: NA CAT: NA Pf: NA Ce: NA Lu: NA Cs: NA Snow Duration: NA Building Code: FBC 7th Ed. 2020 Res. TPI Std: 2014 Rep Fac: No FT/RT:20(0)/10(0) Plate Type(s): WAVE	PP Deflection in loc L/defl L/# VERT(LL): 0.003 N 999 360 VERT(CL): 0.006 N 999 240 HORZ(LL): 0.004 S - - HORZ(TL): 0.006 P - - Creep Factor: 2.0 Max TC CSI: 0.130 Max BC CSI: 0.049 Max Web CSI: 0.121 VIEW Ver: 20.02.00A.1020.20	Gravity / Non-Gravity Loc R+ / R- / Rh / Rw / U / RL V* 112 /- /- /42 /6 /7 Wind reactions based on MWFRS V Brg Wid = 450 Min Req = - Bearing B is a rigid surface. Members not listed have forces less than 375#

Lumber

Top chord: 2x4 SP #1;
Bot chord: 2x4 SP #1;
Webs: 2x4 SP #3;

Bracing

(a) 1x4 #3SRB SPF-S or better "L" reinforcement. 80% length of web member. Attach with 8d Box or Gun (0.113"x2.5",min.)nails @ 6" oc.

Plating Notes

All plates are 1.5X3 except as noted.

Loading

Truss designed to support 1-0-0 top chord outlookers and cladding load not to exceed 5.00 PSF one face and 24.0" span opposite face. Top chord must not be cut or notched, unless specified otherwise.

Wind

Wind loads based on MWFRS with additional C&C member design.

Wind loading based on both gable and hip roof types.

Additional Notes

See DWGS A14015ENC160118 & GBLLETIN0118 for gable wind bracing and other requirements.

FL REG# 278, Yoonhwak Kim, FL PE #86367
12/10/2021

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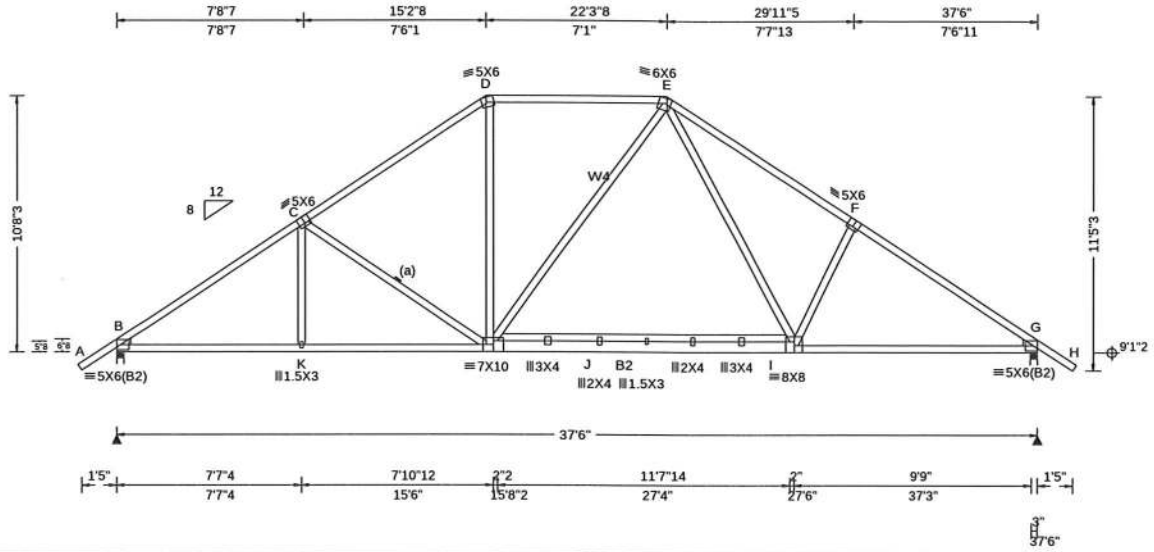
ALPINE
AN ITW COMPANY
6750 Forum Drive
Suite 305
Orlando FL, 32821

SEQN: 92057 COMN FROM: RJL	Ply: 1 Qty: 9	**Job Number:** B54819a DUBE RESIDENCE **Truss Label:** B2 37'6" Common	Cust: R 857 JRef:1Xb88570001 T7 DrwNo: 344.21.1040.35357 / YK 12/10/2021	



Loading Criteria (psf)		Wind Criteria	Snow Criteria (Pg,Pf in PSF)	Defl/CSI Criteria
TCLL:	20.00	Wind Std: ASCE 7-16	Pg: NA Ct: NA CAT: NA	PP Deflection in loc L/defl L/#
TCDL:	7.00	Speed: 130 mph	Pf: NA Ce: NA	VERT(LL): 0.246 J 999 360
BCLL:	0.00	Enclosure: Closed	Lu: NA Cs: NA	VERT(CL): 0.395 J 999 240
BCDL:	10.00	Risk Category: II	Snow Duration: NA	HORZ(LL): 0.077 G - -
Des Ld:	37.00	EXP: B Kzt: NA		HORZ(TL): 0.123 G - -
NCBCLL:	10.00	Mean Height: 15.00 ft	Building Code:	Creep Factor: 2.0
Soffit:	0.00	TCDL: 4.2 psf	FBC 7th Ed. 2020 Res.	Max TC CSI: 0.802
Load Duration:	1.25	BCDL: 5.2 psf	TPI Std: 2014	Max BC CSI: 0.873
Spacing:	24.0 "	MWFRS Parallel Dist: 0 to h/2	Rep Fac: No	Max Web CSI: 0.582
		C&C Dist a: 3.75 ft	FT/RT:20(0)/10(0)	
		Loc. from endwall: Any	Plate Type(s):	
		GCpi: 0.18	WAVE	VIEW Ver: 20.02.00A.1020.20
		Wind Duration: 1.60		

▲Maximum Reactions (lbs)

	Gravity			Non-Gravity		
Loc	R+	/ R-	/ Rh	/ Rw	/ U	/ RL
B	1881	/-	/-	/831	/212	/237
G	1924	/-	/-	/831	/255	/-

Wind reactions based on MWFRS
B Brg Wid = 3.5 Min Req = 2.2
G Brg Wid = 3.5 Min Req = 2.3
Bearings B & G 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	355	- 2729	E - F	447	- 2656
C - D	384	- 2157	F - G	438	- 2853
D - E	376	- 1726			

Maximum Bot Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
B - K	2161	- 244	I - G	2272	- 336
K - J	2163	- 247			

Maximum Web Forces Per Ply (lbs)

Webs	Tens.	Comp.	Webs	Tens.	Comp.
C - J	158	- 551	E - I	995	- 101
D - J	718	- 59			

Lumber

Top chord: 2x4 SP #1;
Bot chord: 2x4 SP #1; B2 2x6 SP #1;
Webs: 2x4 SP #3; W4 2x4 SP #1;
Lt Wedge: 2x4 SP #3;Rt Wedge: 2x4 SP #3;

Bracing

(a) Continuous lateral restraint equally spaced on member. Or 1x4 #3SRB SPF-S or better "T" reinforcement. 80% length of web member. Attached with 8d Box or Gun (0.113"x2.5",min.)nails @ 6" oc.

Special Loads

------(Lumber Dur.Fac.=1.25 / Plate Dur.Fac.=1.25)

TC: From	57 plf at	-1.58 to	57 plf at	39.08
BC: From	20 plf at	0.00 to	20 plf at	15.50
BC: From	60 plf at	15.50 to	60 plf at	27.50
BC: From	20 plf at	27.50 to	20 plf at	37.50
PLB: From	40 plf at	5.40 to	40 plf at	7.46
PLB: From	40 plf at	29.35 to	40 plf at	32.10

Wind

Wind loads based on MWFRS with additional C&C member design.

Wind loading based on both gable and hip roof types.

Additional Notes

WARNING: 20 psf additional bottom chord live load check has been modified

WIND LOAD CASE MODIFIED!

YOONHWAK KIM LICENSE No. 86367 STATE OF FLORIDA PROFESSIONAL ENGINEER

FL REG# 278, Yoonhwak Kim, FL PE #86367
12/10/2021

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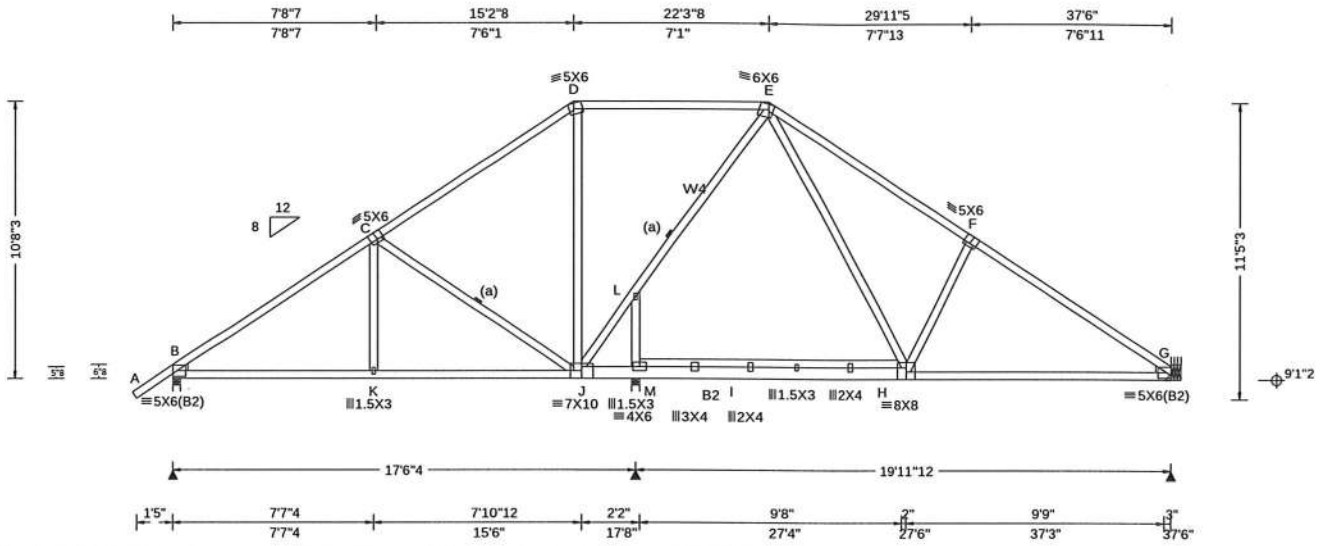
ALPINE AN ITW COMPANY
6750 Forum Drive
Suite 305
Orlando FL, 32821

SEQN: 92059 COMN FROM: RJL	Ply: 1 Qty: 11	**Job Number:** B54819a DUBE RESIDENCE **Truss Label:** B2a 37'6" Common	Cust: R 857 JRef:1Xb88570001 T11 DrwNo: 344.21.1040.37653 / YK 12/10/2021	



Loading Criteria (psf)

TCLL:	20.00
TCDL:	7.00
BCLL:	0.00
BCDL:	10.00
Des Ld:	37.00
NCBCLL:	10.00
Soffit:	0.00
Load Duration:	1.25
Spacing:	24.0 "

Wind Criteria
Wind Std: ASCE 7-16
Speed: 130 mph
Enclosure: Closed
Risk Category: II
EXP: B Kzt: NA
Mean Height: 15.00 ft
TCDL: 4.2 psf
BCDL: 5.2 psf
MWFRS Parallel Dist: 0 to h/2
C&C Dist a: 3.75 ft
Loc. from endwall: Any
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

Building Code:
FBC 7th Ed. 2020 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): 0.095	H	999	360
VERT(CL): 0.155	H	999	240
HORZ(LL): 0.043	G	-	-
HORZ(TL): 0.070	G	-	-

Creep Factor: 2.0
Max TC CSI: 0.525
Max BC CSI: 0.868
Max Web CSI: 0.344

VIEW Ver: 20.02.00A.1020.20

▲ Maximum Reactions (lbs)

Loc	Gravity R+	/ R-	/ Rh	Non-Gravity / Rw	/ U	/ RL
B	1370	/-	/-	/667	/95	/224
M	879	/-	/-	/310	/180	/-
G	1385	/-	/-	/634	/125	/-

Wind reactions based on MWFRS
B Brg Wid = 3.5 Min Req = 1.6
M Brg Wid = 3.5 Min Req = 1.5
G Brg Wid = -
Bearings B & M 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	325	- 1871	E - F	426	- 1863
C - D	353	- 1206	F - G	359	- 2057
D - E	349	- 908			

Maximum Bot Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
B - K	1454	- 181	I - M	1135	- 272
K - J	1451	- 182	H - G	1622	- 212
J - I	1063	- 109			

Maximum Web Forces Per Ply (lbs)

Webs	Tens.	Comp.	Webs	Tens.	Comp.
C - J	163	- 675	E - H	904	- 85
J - L	105	- 384	H - F	221	- 376
L - E	97	- 427			

Lumber

Top chord: 2x4 SP #1;
Bot chord: 2x4 SP #1; B2 2x6 SP #1;
Webs: 2x4 SP #3; W4 2x4 SP #1;
Lt Wedge: 2x4 SP #3;Rt Wedge: 2x4 SP #3;

Bracing

(a) Continuous lateral restraint equally spaced on member.

Special Loads

------(Lumber Dur.Fac.=1.25 / Plate Dur.Fac.=1.25)

TC: From	57 plf at	-1.58 to	57 plf at	37.50
BC: From	20 plf at	0.00 to	20 plf at	17.67
BC: From	60 plf at	17.67 to	60 plf at	27.50
BC: From	20 plf at	27.50 to	20 plf at	37.50
PLB: From	40 plf at	5.40 to	40 plf at	7.46
PLB: From	40 plf at	29.35 to	40 plf at	32.10

Wind

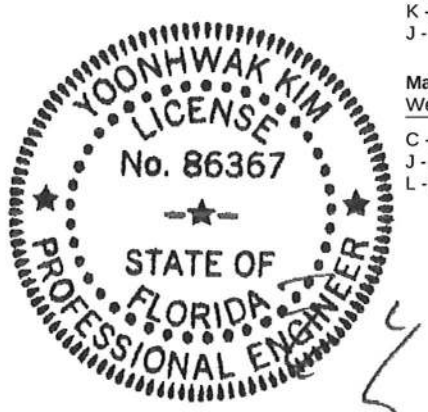
Wind loads based on MWFRS with additional C&C member design.

Wind loading based on both gable and hip roof types.

Additional Notes

WARNING: 20 psf additional bottom chord live load check has been modified

WIND LOAD CASE MODIFIED!



FL REG# 278, Yoonhwak Kim, FL PE #86367
12/10/2021

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ALPINE
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6750 Forum Drive
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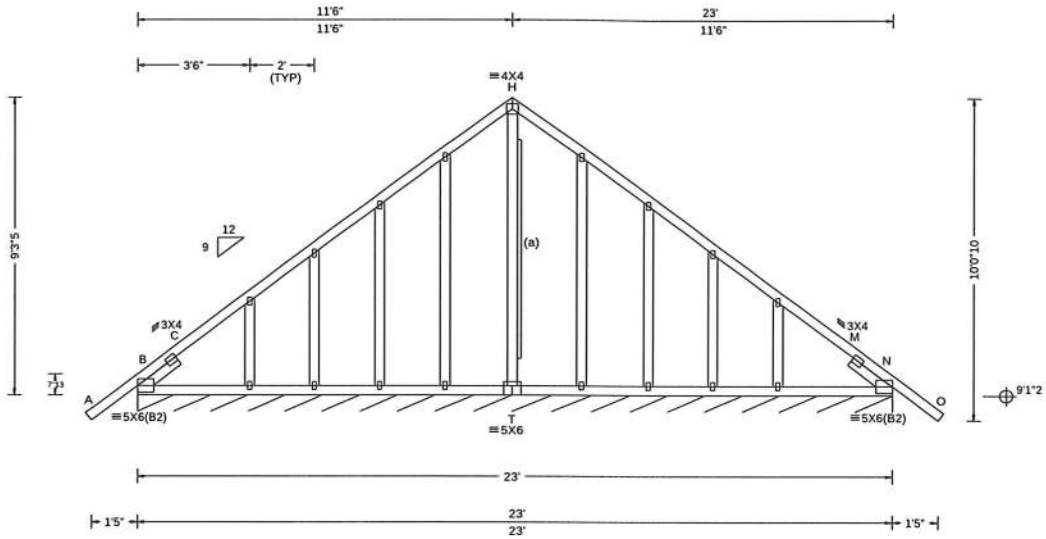
Orlando FL, 32821

SEQN: 92018 GABL FROM: RJL	Ply: 1 Qty: 1	**Job Number:** B54819a DUBE RESIDENCE **Truss Label:** C1-SG 23' Gable	Cust: R 857 JRef:1Xb88570001 T2 DrwNo: 344.21.1040.40177 / YK 12/10/2021	



Loading Criteria (psf)	**Wind Criteria**	**Snow Criteria** (Pg,Pf in PSF)	**Defl/CSI Criteria**
TCLL: 20.00	Wind Std: ASCE 7-16	Pg: NA Ct: NA CAT: NA	PP Deflection in loc L/defl L/#
TCDL: 7.00	Speed: 130 mph	Pf: NA Ce: NA	VERT(LL): -0.003 M 999 360
BCLL: 0.00	Enclosure: Closed	Lu: NA Cs: NA	VERT(CL): 0.006 C 999 240
BCDL: 10.00	Risk Category: II	Snow Duration: NA	HORZ(LL): 0.004 M - -
Des Ld: 37.00	EXP: B Kzt: NA		HORZ(TL): 0.005 M - -
NCBCLL: 10.00	Mean Height: 15.00 ft	Building Code:	Creep Factor: 2.0
Soffit: 0.00	TCDL: 4.2 psf	FBC 7th Ed. 2020 Res.	Max TC CSI: 0.132
Load Duration: 1.25	BCDL: 5.2 psf	TPI Std: 2014	Max BC CSI: 0.051
Spacing: 24.0 "	MWFRS Parallel Dist: 0 to h/2	Rep Fac: No	Max Web CSI: 0.142
	C&C Dist a: 3.00 ft	FT/RT:20(0)/10(0)	
	Loc. from endwall: Any	Plate Type(s):	
	GCpi: 0.18	WAVE	VIEW Ver: 20.02.00A.1020.20
	Wind Duration: 1.60		

▲ Maximum Reactions (lbs), or *=PLF

	Gravity			Non-Gravity		
Loc	R+	/ R-	/ Rh	/ Rw	/ U	/ RL
N*	108	/-	/-	/45	/6	/10

Wind reactions based on MWFRS
N Brg Wid = 276 Min Req = -
Bearing B 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	282	-462	M - N	282	-462

Lumber

Top chord: 2x4 SP #1;
Bot chord: 2x4 SP #1;
Webs: 2x4 SP #3;
Lt Slider: 2x4 SP #3; block length = 1.500'
Rt Slider: 2x4 SP #3; block length = 1.500'

Bracing

(a) 1x4 #3SRB SPF-S or better "L" reinforcement. 80% length of web member. Attach with 8d Box or Gun (0.113"x2.5",min.)nails @ 6" oc.

Plating Notes

All plates are 1.5X3 except as noted.

Loading

Truss designed to support 1-0-0 top chord outlookers and cladding load not to exceed 5.00 PSF one face and 24.0" span opposite face. Top chord must not be cut or notched, unless specified otherwise.

Wind

Wind loads based on MWFRS with additional C&C member design.

Wind loading based on both gable and hip roof types.

Additional Notes

See DWGS A14015ENC160118 & GBLLETIN0118 for gable wind bracing and other requirements.

FL REG# 278, Yoonhwak Kim, FL PE #86367
12/10/2021

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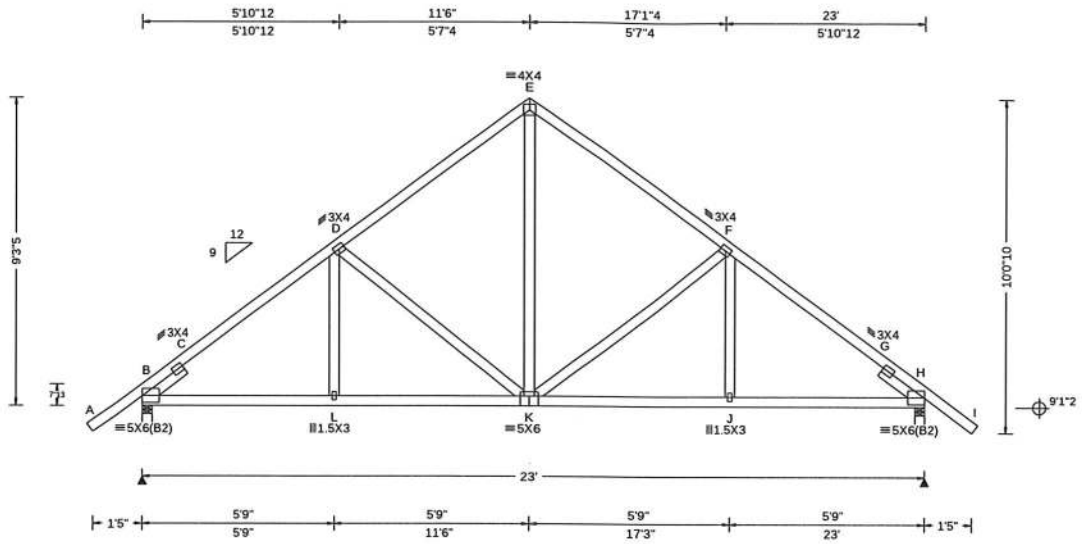
ALPINE
AN ITW COMPANY
6750 Forum Drive
Suite 305
Orlando FL, 32821

SEQN: 92069 / COMN FROM: RJL	Ply: 1 Qty: 4	**Job Number:** B54819a DUBE RESIDENCE **Truss Label:** C2 23' Common	Cust: R 857 JRef: 1Xb88570001 T3 / DrwNo: 344.21.1010.29218 SSB / WHK 12/10/2021



Loading Criteria (psf)

TCLL:	20.00
TCDL:	7.00
BCLL:	0.00
BCDL:	10.00
Des Ld:	37.00
NCBCLL:	10.00
Soffit:	0.00

Load Duration: 1.25
Spacing: 24.0 "

Wind Criteria
Wind Std: ASCE 7-16
Speed: 130 mph
Enclosure: Closed
Risk Category: II
EXP: B Kzt: NA
Mean Height: 15.00 ft
TCDL: 4.2 psf
BCDL: 5.2 psf
MWFRS Parallel Dist: 0 to h/2
C&C Dist a: 3.00 ft
Loc. from endwall: Any
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

Building Code:
FBC 7th Ed. 2020 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): 0.027	K	999	360
VERT(CL): 0.050	K	999	240
HORZ(LL): 0.013	H	-	-
HORZ(TL): 0.025	H	-	-

Creep Factor: 2.0
Max TC CSI: 0.246
Max BC CSI: 0.270
Max Web CSI: 0.339

VIEW Ver: 20.02.00A.1020.20

▲ Maximum Reactions (lbs)

	Gravity			Non-Gravity		
Loc	R+	/ R-	/ Rh	/ Rw	/ U	/ RL
B	978	/-	/-	/539	/48	/214
H	978	/-	/-	/539	/48	/-

Wind reactions based on MWFRS
B Brg Wid = 3.5 Min Req = 1.5
H Brg Wid = 3.5 Min Req = 1.5
Bearings B & H 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	322	- 1295	E - F	218	- 813
C - D	174	- 1109	F - G	174	- 1109
D - E	217	- 813	G - H	322	- 1295

Maximum Bot Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
B - L	826	- 25	K - J	824	- 21
L - K	824	- 25	J - H	826	- 21

Maximum Web Forces Per Ply (lbs)

Webs	Tens.	Comp.
E - K	541	- 111

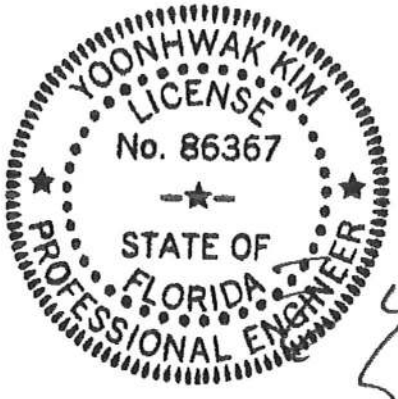
Lumber

Top chord: 2x4 SP #1;
Bot chord: 2x4 SP #1;
Webs: 2x4 SP #3;
Lt Slider: 2x4 SP #3; block length = 1.500'
Rt Slider: 2x4 SP #3; block length = 1.500'

Wind

Wind loads based on MWFRS with additional C&C member design.

Wind loading based on both gable and hip roof types.



FL REG# 278, Yoonhwak Kim, FL PE #86367
12/10/2021

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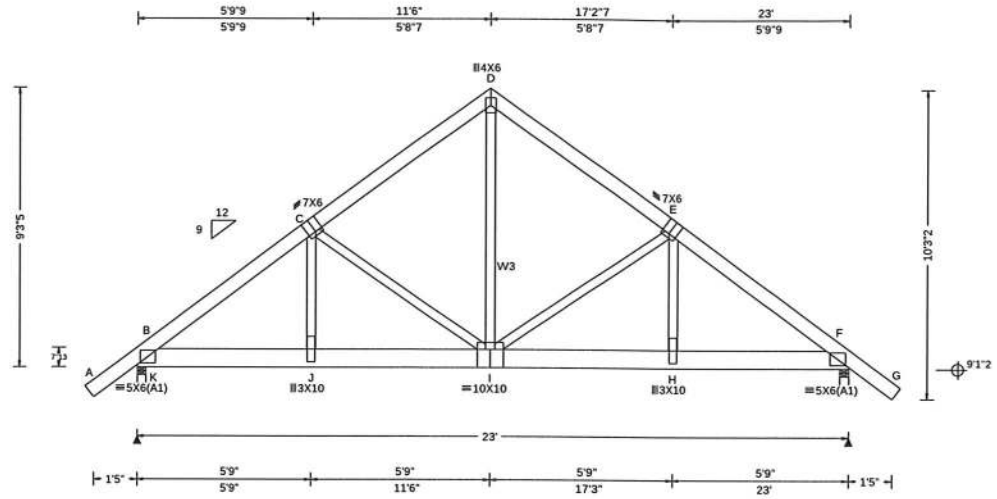
ALPINE
AN ITW COMPANY
6750 Forum Drive
Suite 305
Orlando FL, 32821

SEQN: 92067 COMN FROM: RJL	Ply: 3 Qty: 1	**Job Number:** B54819a DUBE RESIDENCE **Truss Label:** C3 23' Common Girder	Cust: R 857 JRef:1Xb88570001 T4 DrwNo: 344.21.1040.50607 / YK 12/10/2021	

3 Complete Trusses Required



Loading Criteria (psf)

TCLL:	20.00
TCDL:	7.00
BCLL:	0.00
BCDL:	10.00
Des Ld:	37.00
NCBCLL:	0.00
Soffit:	0.00
Load Duration:	1.25
Spacing:	24.0 "

Wind Criteria
Wind Std: ASCE 7-16
Speed: 130 mph
Enclosure: Closed
Risk Category: II
EXP: B Kzt: NA
Mean Height: 15.00 ft
TCDL: 4.2 psf
BCDL: 5.2 psf
MWFRS Parallel Dist: 0 to h/2
C&C Dist a: 3.00 ft
Loc. from endwall: not in 4.50 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

Building Code:
FBC 7th Ed. 2020 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):	0.066 I	999	360
VERT(CL):	0.121 I	999	240
HORZ(LL):	0.027 C	-	-
HORZ(TL):	0.049 C	-	-

Creep Factor: 2.0
Max TC CSI: 0.141
Max BC CSI: 0.309
Max Web CSI: 0.487

VIEW Ver: 20.02.00A.1020.20

▲Maximum Reactions (lbs)

	Gravity			Non-Gravity		
Loc	R+	/ R-	/ Rh	/ Rw	/ U	/ RL
K	8218	/-	/-	/-	/784	/-
F	8750	/-	/-	/-	/832	/-

Wind reactions based on MWFRS
K Brg Wid = 3.5 Min Req = 2.8
F Brg Wid = 3.5 Min Req = 2.9
Bearings K & F 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	340	- 3601	D - E	236	- 2478
C - D	236	- 2477	E - F	340	- 3610

Maximum Bot Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
B - J	2848	- 265	I - H	2855	- 266
J - I	2845	- 265	H - F	2858	- 266

Maximum Web Forces Per Ply (lbs)

Webs	Tens.	Comp.	Webs	Tens.	Comp.
J - C	1270	- 101	I - E	104	- 1114
C - I	103	- 1102	E - H	1279	- 102
D - I	2787	- 243			

Lumber

Top chord: 2x6 SP #1;
Bot chord: 2x8 SP SS Dense;
Webs: 2x4 SP #3; W3 2x4 SP #1;

Nailnote

Nail Schedule:0.128"x3", min. nails
Top Chord: 1 Row @12.00" o.c.
Bot Chord: 2 Rows @ 4.50" o.c. (Each Row)
Webs : 1 Row @ 4" o.c.
Repeat nailing as each layer is applied. Use equal spacing between rows and stagger nails in each row to avoid splitting.

Special Loads

------(Lumber Dur.Fac.=1.25 / Plate Dur.Fac.=1.25)
TC: From 58 plf at -1.69 to 58 plf at 24.69
BC: From 10 plf at 0.00 to 10 plf at 23.00
BC: 1385 lb Conc. Load at 1.90, 3.90, 5.90, 7.90 9.90,11.90,13.90,15.90,17.90,19.90,21.90

Wind

Wind loads and reactions based on MWFRS.

Wind loading based on both gable and hip roof types.

FL REG# 278, Yoonhwak Kim, FL PE #86367
12/10/2021

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ALPINE
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6750 Forum Drive
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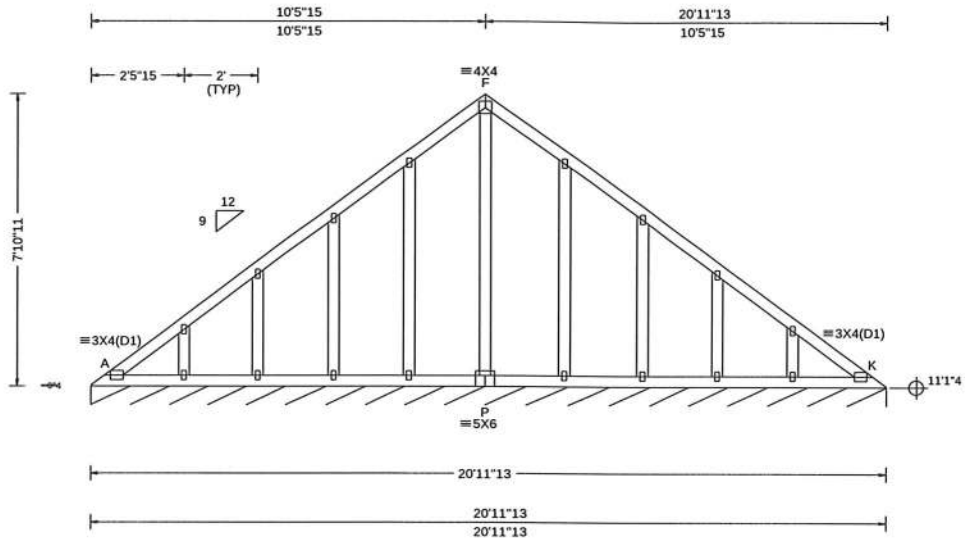
Orlando FL, 32821

SEQN: 92028 GABL FROM: RJL	Ply: 1 Qty: 1	**Job Number:** B54819a DUBE RESIDENCE **Truss Label:** V1-G 20'11"13 Valley	Cust: R 857 JRef: 1Xb88570001 T6 DrwNo: 344.21.1040.55467 / YK 12/10/2021



Loading Criteria (psf)	**Wind Criteria**	**Snow Criteria** (Pg,Pf in PSF)	**Defl/CSI Criteria**	**▲Maximum Reactions (lbs), or *=PLF**
TCLL: 20.00 TCDL: 7.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 37.00 NCBCLL: 10.00 Soffit: 0.00 Load Duration: 1.25 Spacing: 24.0 "	Wind Std: ASCE 7-16 Speed: 130 mph Enclosure: Closed Risk Category: II EXP: B Kzt: NA Mean Height: 15.20 ft TCDL: 4.2 psf BCDL: 5.2 psf MWFRS Parallel Dist: 0 to h/2 C&C Dist a: 3.00 ft Loc. from endwall: Any GCpi: 0.18 Wind Duration: 1.60	Pg: NA Ct: NA CAT: NA Pf: NA Ce: NA Lu: NA Cs: NA Snow Duration: NA Building Code: FBC 7th Ed. 2020 Res. TPI Std: 2014 Rep Fac: No FT/RT:20(0)/10(0) Plate Type(s): WAVE	PP Deflection in loc L/defl L/# VERT(LL): 0.001 A 999 360 VERT(CL): 0.002 G 999 240 HORZ(LL): 0.001 H - - HORZ(TL): 0.002 E - - Creep Factor: 2.0 Max TC CSI: 0.065 Max BC CSI: 0.040 Max Web CSI: 0.157 VIEW Ver: 20.02.00A.1020.20	Gravity / Non-Gravity Loc R+ / R- / Rh / Rw / U / RL K* 95 /- /- /41 /4 /8 Wind reactions based on MWFRS K Brg Wid = 251 Min Req = - Bearing A is a rigid surface. Members not listed have forces less than 375#

Lumber

Top chord: 2x4 SP #1;
Bot chord: 2x4 SP #1;
Webs: 2x4 SP #3;

Plating Notes

All plates are 1.5X3 except as noted.

Loading

Truss designed to support 1-0-0 top chord outlookers and cladding load not to exceed 5.00 PSF one face and 24.0" span opposite face. Top chord must not be cut or notched, unless specified otherwise.

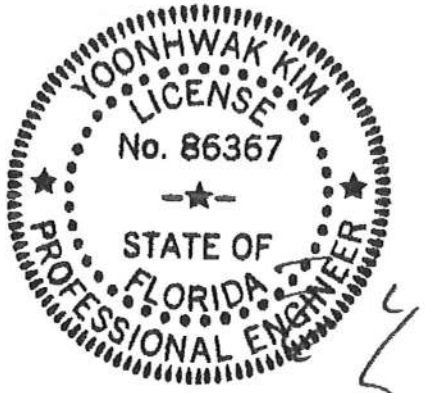
Wind

Wind loads based on MWFRS with additional C&C member design.

Wind loading based on both gable and hip roof types.

Additional Notes

See DWGS A14030ENC160118 & GBLLETIN0118 for gable wind bracing and other requirements.



FL REG# 278, Yoonhwak Kim, FL PE #86367
12/10/2021

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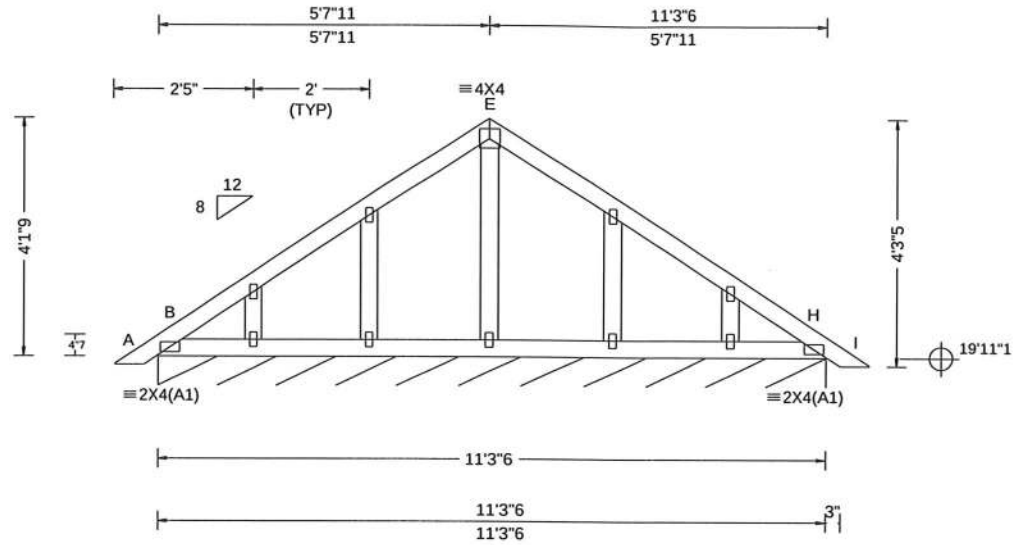
ALPINE
AN ITW COMPANY
6750 Forum Drive
Suite 305
Orlando FL, 32821

SEQN: 92061 GABL FROM: RJL	Ply: 1 Qty: 2	**Job Number:** B54819a DUBE RESIDENCE **Truss Label:** PB1-G 12'10" Gable	Cust: R 857 JRef: 1Xb88570001 T15 DrwNo: 344.21.1041.13053 / YK 12/10/2021	



Loading Criteria (psf)	Wind Criteria	Snow Criteria (Pg,Pf in PSF)	Defl/CSI Criteria	▲ Maximum Reactions (lbs), or *=PLF
TCLL: 20.00 TCDL: 7.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 37.00 NCBCLL: 10.00 Soffit: 0.00 Load Duration: 1.25 Spacing: 24.0 "	Wind Std: ASCE 7-16 Speed: 130 mph Enclosure: Closed Risk Category: II EXP: B Kzt: NA Mean Height: 21.93 ft TCDL: 4.2 psf BCDL: 5.2 psf MWFRS Parallel Dist: h/2 to h C&C Dist a: 3.00 ft Loc. from endwall: not in 10.00 ft GCpi: 0.18 Wind Duration: 1.60	Pg: NA Ct: NA CAT: NA Pf: NA Ce: NA Lu: NA Cs: NA Snow Duration: NA Building Code: FBC 7th Ed. 2020 Res. TPI Std: 2014 Rep Fac: No FT/RT:20(0)/10(0) Plate Type(s): WAVE	PP Deflection in loc L/defl L/# VERT(LL): 0.000 E 999 360 VERT(CL): 0.001 E 999 240 HORZ(LL): -0.001 D - - HORZ(TL): 0.001 D - - Creep Factor: 2.0 Max TC CSI: 0.055 Max BC CSI: 0.023 Max Web CSI: 0.028 VIEW Ver: 20.02.00A.1020.20	Gravity / Non-Gravity Loc R+ / R- / Rh / Rw / U / RL B* 91 /- /- /42 /20 /9 Wind reactions based on MWFRS B Brg Wid = 135 Min Req = - Bearing B is a rigid surface. Members not listed have forces less than 375#

Lumber

Top chord: 2x4 SP #1;
Bot chord: 2x4 SP #1;
Webs: 2x4 SP #3;

Plating Notes

All plates are 1.5X3 except as noted.

Loading

Truss designed to support 1-0-0 top chord outlookers and cladding load not to exceed 5.00 PSF one face and 24.0" span opposite face. Top chord must not be cut or notched, unless specified otherwise.

Wind

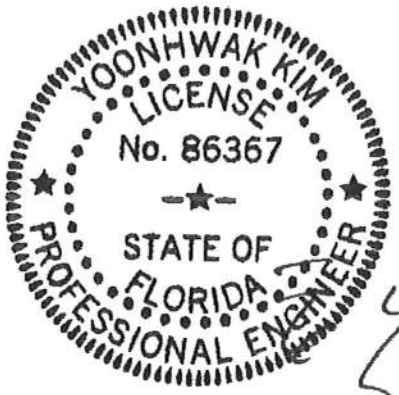
Wind loads based on MWFRS with additional C&C member design.

Wind loading based on both gable and hip roof types.

Additional Notes

See DWGS A14030ENC160118 & GBLLETIN0118 for gable wind bracing and other requirements.

See DWG PBSCAB101014 for piggyback details.



FL REG# 278, Yoonhwak Kim, FL PE #86367
12/10/2021

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ALPINE
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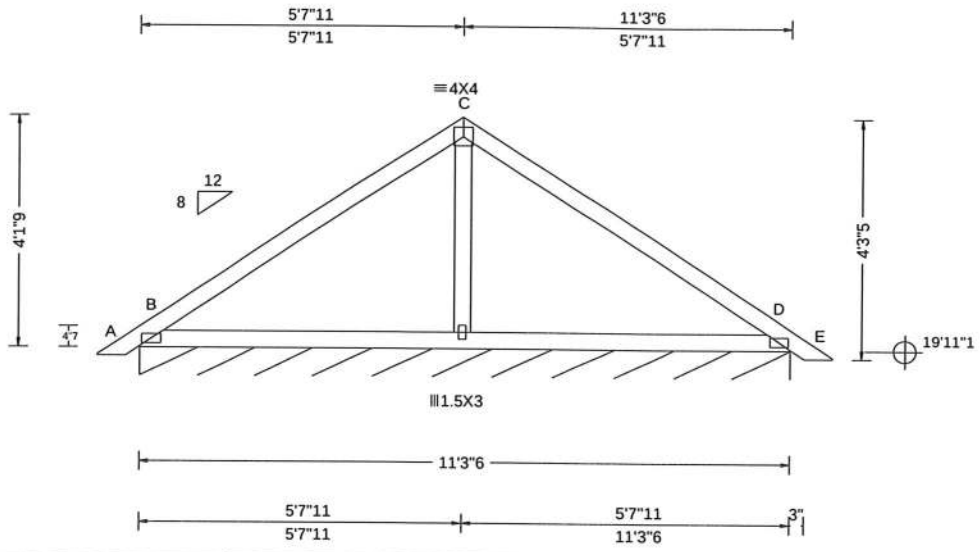
6750 Forum Drive
Suite 305
Orlando FL, 32821

SEQN: 92022 GABL FROM: RJL	Ply: 1 Qty: 11	**Job Number:** B54819a DUBE RESIDENCE **Truss Label:** PB2 12'10" Common	Cust: R 857 JRef: 1Xb88570001 T16 DrwNo: 344.21.1041.15980 / YK 12/10/2021	



Loading Criteria (psf)	**Wind Criteria**	**Snow Criteria** (Pg,Pf in PSF)	**Defl/CSI Criteria**
TCLL: 20.00 TCDL: 7.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 37.00 NCBCLL: 10.00 Soffit: 0.00 Load Duration: 1.25 Spacing: 24.0 "	Wind Std: ASCE 7-16 Speed: 130 mph Enclosure: Closed Risk Category: II EXP: B Kzt: NA Mean Height: 21.93 ft TCDL: 4.2 psf BCDL: 5.2 psf MWFRS Parallel Dist: h/2 to h C&C Dist a: 3.00 ft Loc. from endwall: not in 9.00 ft GCpi: 0.18 Wind Duration: 1.60	Pg: NA Ct: NA CAT: NA Pf: NA Ce: NA Lu: NA Cs: NA Snow Duration: NA Building Code: FBC 7th Ed. 2020 Res. TPI Std: 2014 Rep Fac: No FT/RT:20(0)/10(0) Plate Type(s): WAVE	PP Deflection in loc L/defl L/# VERT(LL): 0.005 D 999 360 VERT(CL): 0.009 D 999 240 HORZ(LL): -0.005 D - - HORZ(TL): 0.009 D - - Creep Factor: 2.0 Max TC CSI: 0.345 Max BC CSI: 0.307 Max Web CSI: 0.021 VIEW Ver: 20.02.00A.1020.20

▲ Maximum Reactions (lbs), or *=PLF

	Gravity			Non-Gravity		
Loc	R+	/ R-	/ Rh	/ Rw	/ U	/ RL
B*	82	/-	/-	/40	/5	/8

Wind reactions based on MWFRS
B Brg Wid = 135 Min Req = -
Bearing B 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	220	- 387	C - D	219	- 387

Lumber

Top chord: 2x4 SP #1;
Bot chord: 2x4 SP #1;
Webs: 2x4 SP #3;

Plating Notes

All plates are 2X4(A1) except as noted.

Wind

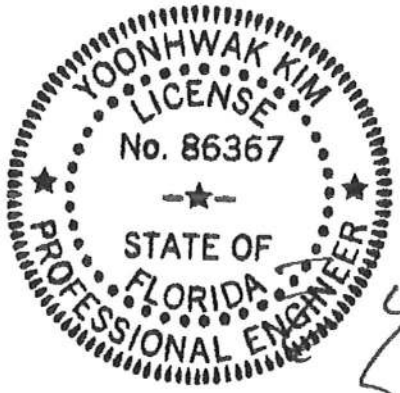
Wind loads based on MWFRS with additional C&C member design.

Wind loading based on both gable and hip roof types.

Additional Notes

See DWGS A14030ENC160118 & GBLLETIN0118 for gable wind bracing and other requirements.

See DWG PBSCAB101014 for piggyback details.



FL REG# 278, Yoonhwak Kim, FL PE #86367
12/10/2021

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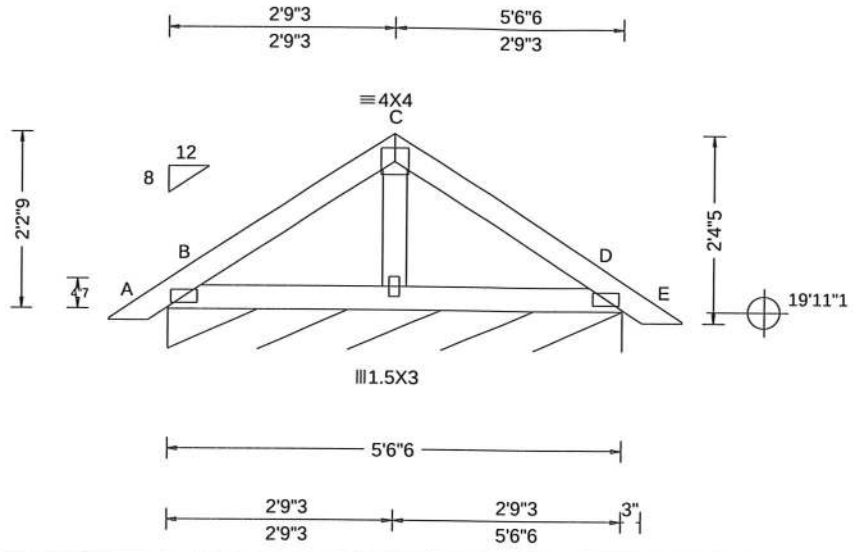
ALPINE
AN ITW COMPANY
6750 Forum Drive
Suite 305
Orlando FL, 32821

SEQN: 92026 GABL FROM: RJL	Ply: 1 Qty: 2	**Job Number:** B54819a DUBE RESIDENCE **Truss Label:** PB3-G 7'1" Gable	Cust: R 857 JRef:1Xb88570001 T14 DrwNo: 344.21.1041.19477 / YK 12/10/2021	



Loading Criteria (psf)

TCLL:	20.00
TCDL:	7.00
BCLL:	0.00
BCDL:	10.00
Des Ld:	37.00
NCBCLL:	10.00
Soffit:	0.00

Load Duration: 1.25
Spacing: 24.0 "

Wind Criteria
Wind Std: ASCE 7-16
Speed: 130 mph
Enclosure: Closed
Risk Category: II
EXP: B Kzt: NA
Mean Height: 20.97 ft
TCDL: 4.2 psf
BCDL: 5.2 psf
MWFRS Parallel Dist: 0 to h/2
C&C Dist a: 3.00 ft
Loc. from endwall: Any
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

Building Code:
FBC 7th Ed. 2020 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): -0.001	D	999	360
VERT(CL): 0.001	D	999	240
HORZ(LL): -0.001	B	-	-
HORZ(TL): 0.001	B	-	-

Creep Factor: 2.0
Max TC CSI: 0.096
Max BC CSI: 0.058
Max Web CSI: 0.010

VIEW Ver: 20.02.00A.1020.20

▲Maximum Reactions (lbs), or *=PLF

	Gravity		Non-Gravity		
Loc	R+ / R-	/ Rh	/ Rw	/ U	/ RL
B*	92 / -	/-	/45	/50	/10

Wind reactions based on MWFRS
B Brg Wid = 66.4 Min Req = -
Bearing B is a rigid surface.
Members not listed have forces less than 375#

Lumber

Top chord: 2x4 SP #1;
Bot chord: 2x4 SP #1;
Webs: 2x4 SP #3;

Plating Notes

All plates are 2X4(A1) except as noted.

Loading

Truss designed to support 1-0-0 top chord outlookers and cladding load not to exceed 5.00 PSF one face and 24.0" span opposite face. Top chord must not be cut or notched, unless specified otherwise.

Wind

Wind loads based on MWFRS with additional C&C member design.

Wind loading based on both gable and hip roof types.

Additional Notes

See DWGS A14030ENC160118 & GBLLETIN0118 for gable wind bracing and other requirements.

See DWG PBSCAB101014 for piggyback details.

FL REG# 278, Yoonhwak Kim, FL PE #86367
12/10/2021

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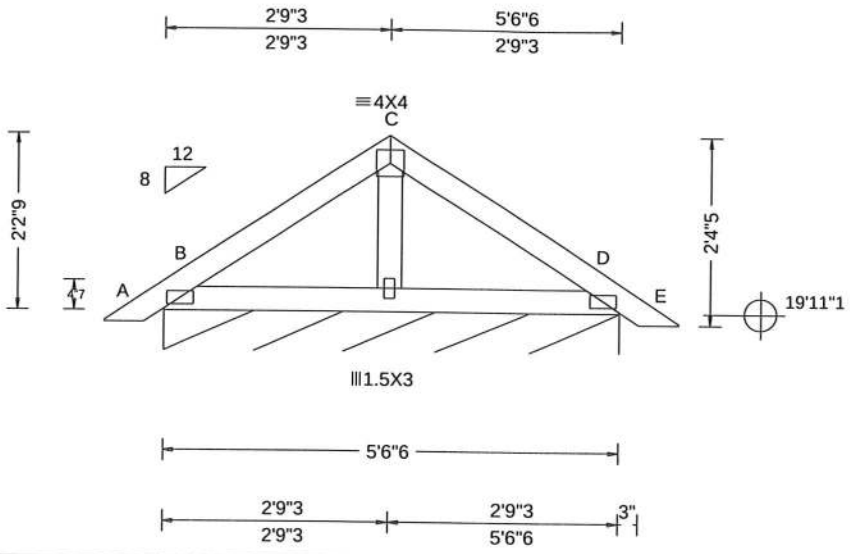
ALPINE
AN ITW COMPANY
6750 Forum Drive
Suite 305
Orlando FL, 32821

SEQN: 87396 / GABL FROM: RJL	Ply: 1 Qty: 20	**Job Number:** B54819a DUBE RESIDENCE **Truss Label:** PB4 7'1" Common	Cust: R 857 JRef:1Xb88570001 T12 / DrwNo: 344.21.1010.29219 SSB / DF 12/10/2021



Loading Criteria (psf)	Wind Criteria	Snow Criteria (Pg,Pf in PSF)	Defl/CSI Criteria
TCLL: 20.00	Wind Std: ASCE 7-16	Pg: NA Ct: NA CAT: NA	PP Deflection in loc L/defl L/#
TCDL: 7.00	Speed: 130 mph	Pf: NA Ce: NA	VERT(LL): 0.001 D 999 360
BCLL: 0.00	Enclosure: Closed	Lu: NA Cs: NA	VERT(CL): 0.001 D 999 240
BCDL: 10.00	Risk Category: II	Snow Duration: NA	HORZ(LL): -0.001 D - -
Des Ld: 37.00	EXP: B Kzt: NA		HORZ(TL): 0.001 D - -
NCBCLL: 10.00	Mean Height: 20.97 ft	Building Code:	Creep Factor: 2.0
Soffit: 0.00	TCDL: 4.2 psf	FBC 7th Ed. 2020 Res.	Max TC CSI: 0.085
Load Duration: 1.25	BCDL: 5.2 psf	TPI Std: 2014	Max BC CSI: 0.058
Spacing: 24.0 "	MWFRS Parallel Dist: 0 to h/2	Rep Fac: No	Max Web CSI: 0.010
	C&C Dist a: 3.00 ft	FT/RT:20(0)/10(0)	
	Loc. from endwall: Any	Plate Type(s):	
	GCpi: 0.18	WAVE	VIEW Ver: 20.02.00A.1020.20
	Wind Duration: 1.60		

▲ Maximum Reactions (lbs), or *=PLF

	Gravity			Non-Gravity		
Loc	R+	/ R-	/ Rh	/ Rw	/ U	/ RL
B*	87	/-	/-	/42	/12	/9

Wind reactions based on MWFRS
B Brg Wid = 66.4 Min Req = -
Bearing B is a rigid surface.
Members not listed have forces less than 375#

Lumber

Top chord: 2x4 SP #1;
Bot chord: 2x4 SP #1;
Webs: 2x4 SP #3;

Plating Notes

All plates are 2X4(A1) except as noted.

Wind

Wind loads based on MWFRS with additional C&C member design.

Wind loading based on both gable and hip roof types.

Refer to drawing PB160160118 or piggyback detail.

YOONHWAK KIM LICENSE No. 86367 STATE OF FLORIDA PROFESSIONAL ENGINEER

FL REG# 278, Yoonhwak Kim, FL PE #86367
12/10/2021

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6750 Forum Drive
Suite 305
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Gable Stud Reinforcement Detail

ASCE 7-16: 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"	11' 10"	12' 8"	14' 0"	14' 0"
	SP DFL	#1	4' 6"	7' 4"	7' 8"	8' 8"	9' 0"	10' 4"	10' 9"	13' 8"	14' 0"	14' 0"	14' 0"
		#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' 2"	6' 0"	6' 4"	7' 11"	8' 6"	10' 2"	10' 7"	12' 5"	13' 4"	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"	11' 0"	11' 10"	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"	14' 0"	14' 0"	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" braces: 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.

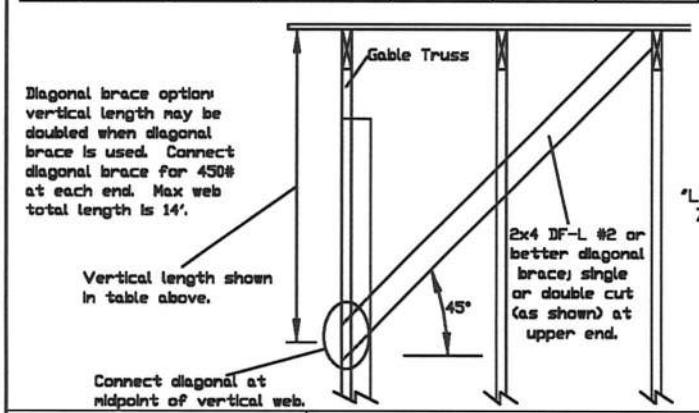
"L" bracing must be a minimum of 80% of web member length.

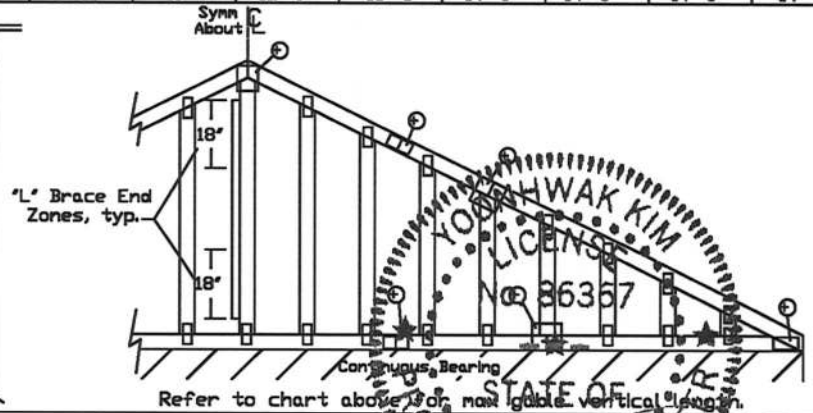
Gable Vertical Plate Sizes

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.





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For more information see this Job's general notes page and these web sites:
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ALPINE
AN ITW COMPANY
514 Earth City Expressway
Suite 242
Earth City, MO 63045

MAX. TOT. LD. 60 PSF

MAX. SPACING 24.0"

REF	ASCE7-16-GAB14015
DATE	01/26/2018
DRWG	A14015ENC160118

FL PE# 378, Yoonhwak Kim, FL PE #86367