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ALPINE
AN ITW COMPANY

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FL REG# 278, Yoonhwak Kim, FL PE #86367
Florida Certificate of Product Approval #FL 1999

09/28/2022

Site Information:	Page 1:
Customer: W. B. Howland Company, Inc.	*Job Number:* 22-8406
Job Description: Rice, Lauri & Rachael	
Address: FL	

Job Engineering Criteria:	
Design Code: FBC 7th Ed. 2020 Res.	*IntelliVIEW Version:* 21.02.01 *JRef #:* 1XJc2150014
Wind Standard: ASCE 7-16 *Wind Speed (mph):* 130 *Building Type:* Closed	*Design Loading (psf):* 40.00

This package contains general notes pages, 4 truss drawing(s) and 3 detail(s).

Item	Drawing Number	Truss
1	271.22.1450.17100	A01
3	271.22.1450.21667	A03
5	A14015ENC160118	
7	BRCLBSUB0119	

Item	Drawing Number	Truss
2	271.22.1450.19987	A02
4	271.22.1450.25077	A04
6	GBLLETIN0118	

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.

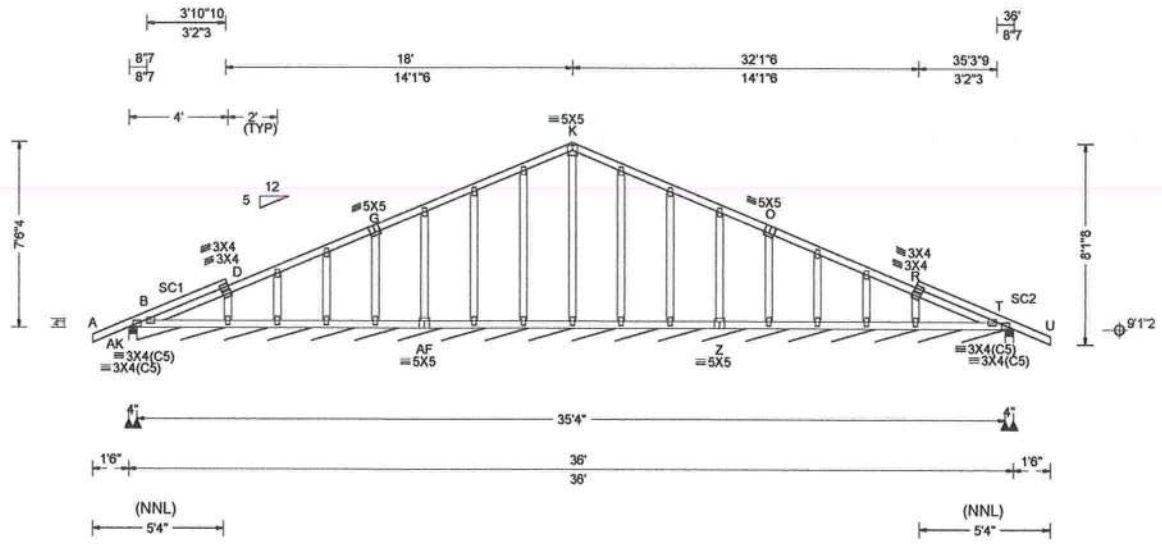
BCDL = Bottom Chord standard design Dead Load in pounds per square foot.
BCLL = Bottom Chord standard design Live Load in pounds per square foot.
CL = Certified lumber.
Des Ld = total of TCLL, TCDL, BCLL and BCDL Design Load in pounds per square foot.
FRT = Fire Retardant Treated lumber.
FRT-DB = D-Blaze 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.: 155 Harlem Ave, North Building, 4th Floor, Glenview, IL 60025; 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: 675680 GABL FROM: CDM	Ply: 1 Qty: 2	**Job Number:** 22-8406 Rice, Lauri & Rachael **Truss Label:** A01	Cust: R 215 JRef: 1XJc2150014 T5 DrwNo: 271.22.1450.17100 SSB / YK 09/28/2022	



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 7-16
Speed: 130 mph
Enclosure: Closed
Risk Category: II
EXP: C Kzt: NA
Mean Height: 15.00 ft
TCDL: 5.0 psf
BCDL: 5.0 psf
MWFRS Parallel Dist: 0 to h/2
C&C Dist a: 3.60 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: Yes
FT/RT:20(0)/10(0)
Plate Type(s):
WAVE

Defl/CSI Criteria

PP Deflection in	loc	L/defl	L/#
VERT(LL): 0.001	B	999	240
VERT(CL): 0.004	B	999	180
HORZ(LL): 0.004	R	-	-
HORZ(TL): 0.005	R	-	-

Creep Factor: 2.0
Max TC CSI: 0.266
Max BC CSI: 0.063
Max Web CSI: 0.121

VIEW Ver: 21.02.01.1216.14

▲ Maximum Reactions (lbs), or *=PLF

	Gravity			Non-Gravity		
Loc	R+	/ R-	/ Rh	/ Rw	/ U	/ RL
AK	299	/-	/-	/168	/48	/209
AK*	72	/-	/-	/38	/13	/-
T	299	/-	/-	/197	/48	/-

Wind reactions based on MWFRS
AK Brg Wid = 4.0 Min Req = 1.5 (Truss)
AK Brg Wid = 424 Min Req = -
T Brg Wid = 4.0 Min Req = 1.5 (Truss)
Bearings AK, AK, & T are a rigid surface.
Members not listed have forces less than 375#

Lumber

Top chord: 2x4 SP #2;
Bot chord: 2x4 SP #2;
Webs: 2x4 SP #3;
Stack Chord: SC1 2x4 SP #2;
Stack Chord: SC2 2x4 SP #2;

Plating Notes

All plates are 2X4 except as noted.

Loading

Gable end supports 8" max rake overhang. Top chord must not be cut or notched.

Wind

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

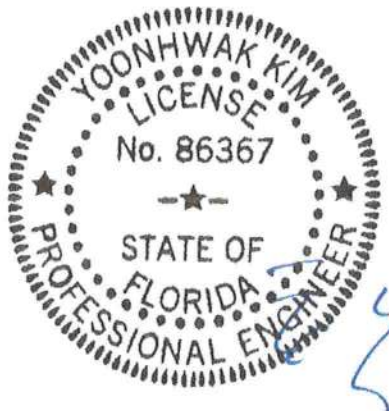
Wind loading based on both gable and hip roof types.

Additional Notes

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

Stacked top chord must NOT be notched or cut in area (NNL). Dropped top chord braced at 24" oc intervals. Attach stacked top chord (SC) to dropped top chord in notchable area using 3x4 tie-plates 24" oc. Center plate on stacked/dropped chord interface, plate length perpendicular to chord length. Splice top chord in notchable area using 3x6.

The overall height of this truss excluding overhang is 7-6-4.



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

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For more information see these web sites: Alpine: alpineitw.com; TPI: tpinst.org; SBCA: sbcacomponents.com; ICC: iccsafe.org; AWC: awc.org

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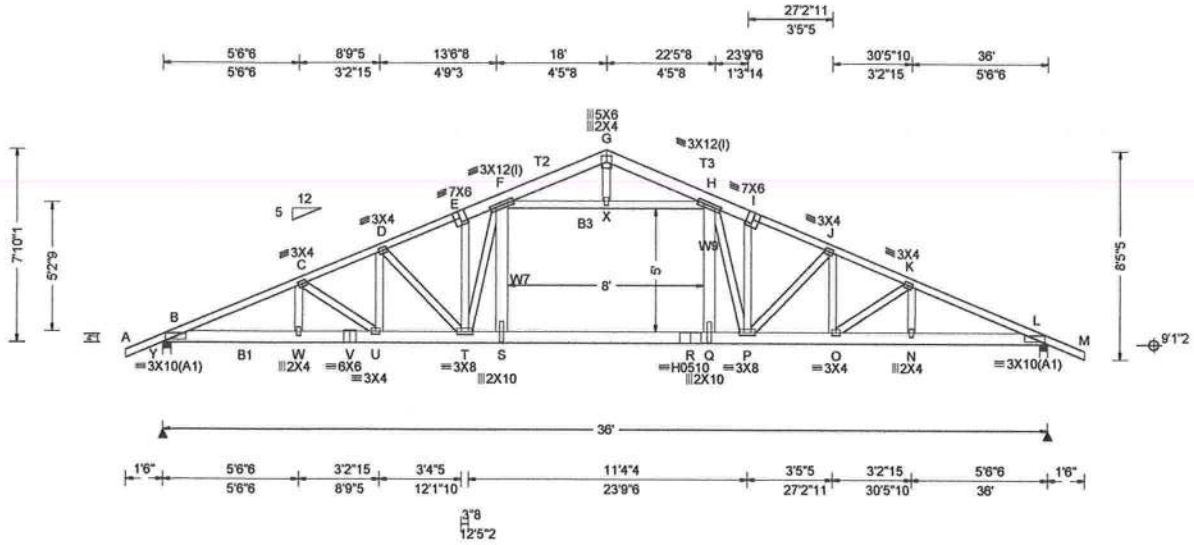
Glenview, IL 60025

SEQN: 675801 ATIC FROM: CDM	Ply: 1 Qty: 24	**Job Number:** 22-8406 Rice, Lauri & Rachael **Truss Label:** A02	Cust: R 215 JRef: 1XJc2150014 T1 DrwNo: 271.22.1450.19987 SSB / YK 09/28/2022	



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 7-16
Speed: 130 mph
Enclosure: Closed
Risk Category: II
EXP: C Kzt: NA
Mean Height: 15.00 ft
TCDL: 5.0 psf
BCDL: 5.0 psf
MWFRS Parallel Dist: 0 to h/2
C&C Dist a: 3.60 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: Yes
FT/RT:20(0)/10(0)
Plate Type(s):
WAVE, HS

Defl/CSI Criteria

PP Deflection in	loc	L/defl	L/#
VERT(LL): 0.234	S	999	240
VERT(CL): 0.518	S	826	180
HORZ(LL): 0.060	L	-	-
HORZ(TL): 0.118	E	-	-

Creep Factor: 2.0
Max TC CSI: 0.601
Max BC CSI: 0.836
Max Web CSI: 0.273

VIEW Ver: 21.02.01.1216.14

▲ Maximum Reactions (lbs)

	Gravity			Non-Gravity		
Loc	R+	/ R-	/ Rh	/ Rw	/ U	/ RL
Y	2156	/-	/-	/913	/286	/210
L	2154	/-	/-	/913	/286	/-

Wind reactions based on MWFRS
Y Brg Wid = 4.0 Min Req = 2.5 (Truss)
L Brg Wid = 4.0 Min Req = 1.8 (Truss)
Bearings Y & L 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	1297	-4687	G - H	423	-988
C - D	1246	-4410	H - I	1181	-4036
D - E	1147	-4070	I - J	1149	-4067
E - F	1178	-4041	J - K	1245	-4399
F - G	423	-989	K - L	1291	-4657

Maximum Bot Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
B - W	4276	-1109	R - Q	3721	-744
W - V	4274	-1110	Q - P	3705	-745
V - U	4274	-1110	P - O	4006	-940
U - T	4016	-966	O - N	4247	-1079
T - S	3705	-746	N - L	4248	-1077
S - R	3721	-744			

Maximum Web Forces Per Ply (lbs)

Webs	Tens.	Comp.	Webs	Tens.	Comp.
D - T	223	-426	X - H	739	-2842
T - F	522	-467	Q - H	1265	-125
F - S	1269	-131	H - P	515	-467
F - X	739	-2842	P - J	219	-417

Lumber

Top chord: 2x4 SP #2; T2,T3 2x6 SP #2;
Bot chord: 2x6 SP 2400f-2.0E; B1 2x6 SP #2;
B3 2x4 SP #2;
Webs: 2x4 SP #3; W7,W9 2x6 SP #2;

Plating Notes

(I) - plates so marked were sized using 0% Fabrication Tolerance, 0 degrees Rotational Tolerance, and/or zero Positioning Tolerance.

Loading

Attic room loading from 14-0-0 to 22-0-0: Live Load: 40 PSF. Dead Load: 10 PSF Ceiling: 10 PSF, Kneewalls: 10 PSF

Purlins

Collar-tie braced with continuous lateral bracing at 24" oc. or rigid ceiling.

Wind

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

Wind loading based on both gable and hip roof types.

Additional Notes

The overall height of this truss excluding overhang is 7-10-1.

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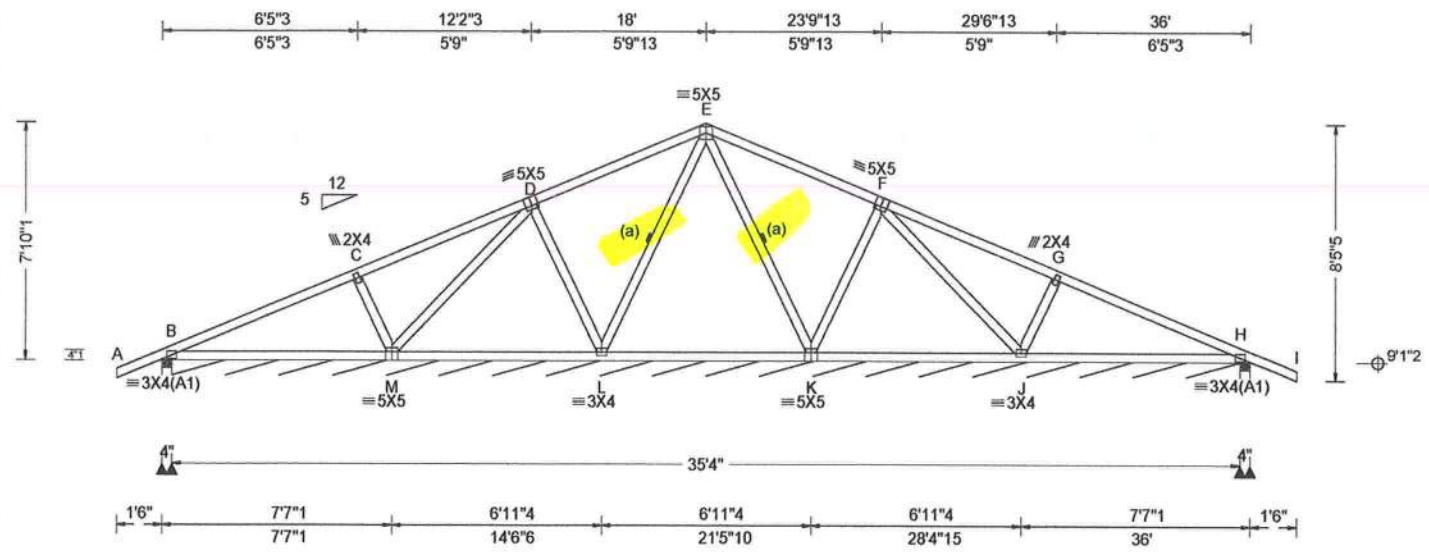
Glenview, IL 60025

SEQN: 675675 COMN FROM: CDM	Ply: 1 Qty: 1	**Job Number:** 22-8406 Rice, Lauri & Rachael **Truss Label:** A03	Cust: R 215 JRef: 1XJc2150014 T4 DrwNo: 271.22.1450.21667 SSB / YK 09/28/2022



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: 10.00	Speed: 130 mph	Pf: NA Ce: NA	VERT(LL): 0.013 B 999 240
BCLL: 0.00	Enclosure: Closed	Lu: NA Cs: NA	VERT(CL): 0.029 B 999 180
BCDL: 10.00	Risk Category: II	Snow Duration: NA	HORZ(LL): 0.007 B - -
Des Ld: 40.00	EXP: C Kzt: NA		HORZ(TL): 0.014 B - -
NCBCLL: 10.00	Mean Height: 15.00 ft	Building Code:	Creep Factor: 2.0
Soffit: 2.00	TCDL: 5.0 psf	FBC 7th Ed. 2020 Res.	Max TC CSI: 0.429
Load Duration: 1.25	BCDL: 5.0 psf	TPI Std: 2014	Max BC CSI: 0.422
Spacing: 24.0 "	MWFRS Parallel Dist: h/2 to h	Rep Fac: Yes	Max Web CSI: 0.194
	C&C Dist a: 3.60 ft	FT/RT:20(0)/10(0)	
	Loc. from endwall: not in 9.00 ft	Plate Type(s):	
	GCpi: 0.18	WAVE	VIEW Ver: 21.02.01.1216.14
	Wind Duration: 1.60		

▲ Maximum Reactions (lbs), or *=PLF

	Gravity			Non-Gravity		
Loc	R+	/ R-	/ Rh	/ Rw	/ U	/ RL
B	419	/-	/-	/254	/78	/210
B*	65	/-	/-	/34	/12	/-
H	418	/-	/-	/287	/78	/-

Wind reactions based on MWFRS
B Brg Wid = 4.0 Min Req = 1.5 (Truss)
B Brg Wid = 424 Min Req = -
H Brg Wid = 4.0 Min Req = 1.5 (Truss)
Bearings B, B, & H are a rigid surface.
Members not listed have forces less than 375#

Lumber

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

Bracing

(a) Continuous lateral restraint equally spaced on member.

Wind

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

Wind loading based on both gable and hip roof types.

Additional Notes

The overall height of this truss excluding overhang is 7-10-1.

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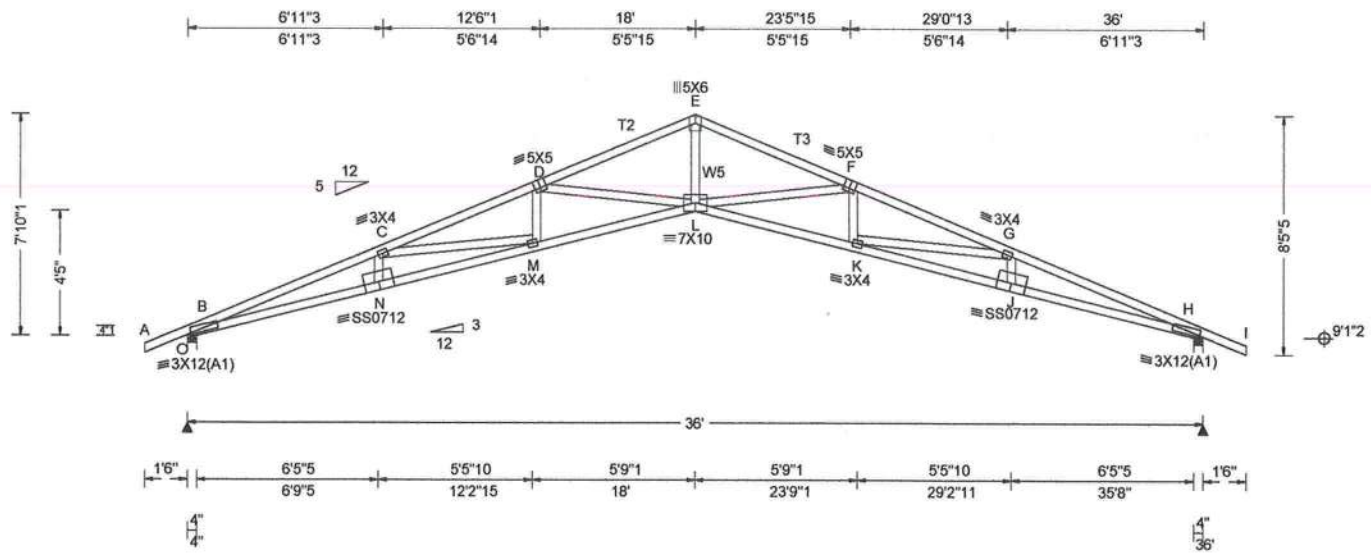
155 Harlem Ave
North Building, 4th Floor
Glenview, IL 60025

SEQN: 675678 COMN FROM: CDM	Ply: 1 Qty: 5	**Job Number:** 22-8406 Rice, Lauri & Rachael **Truss Label:** A04	Cust: R 215 JRef: 1XJc2150014 T3 DrwNo: 271.22.1450.25077 SSB / YK 09/28/2022	



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: 10.00	Speed: 130 mph	Pf: NA Ce: NA	VERT(LL): 0.841 L 509 240
BCLL: 0.00	Enclosure: Closed	Lu: NA Cs: NA	VERT(CL): 1.704 L 251 180
BCDL: 10.00	Risk Category: II	Snow Duration: NA	HORZ(LL): 0.550 H - -
Des Ld: 40.00	EXP: C Kzt: NA		HORZ(TL): 1.115 H - -
NCBCLL: 10.00	Mean Height: 15.00 ft	Building Code:	Creep Factor: 2.0
Soffit: 2.00	TCDL: 5.0 psf	FBC 7th Ed. 2020 Res.	Max TC CSI: 0.613
Load Duration: 1.25	BCDL: 5.0 psf	TPI Std: 2014	Max BC CSI: 0.747
Spacing: 24.0 "	MWFRS Parallel Dist: 0 to h/2	Rep Fac: Yes	Max Web CSI: 0.778
	C&C Dist a: 3.60 ft	FT/RT:20(0)/10(0)	
	Loc. from endwall: Any	Plate Type(s):	
	GCpi: 0.18	WAVE, 18SS	VIEW Ver: 21.02.01.1216.14
	Wind Duration: 1.60		

▲ Maximum Reactions (lbs)

	Gravity			Non-Gravity		
Loc	R+	/ R-	/ Rh	/ Rw	/ U	/ RL
O	1580	/-	/-	/917	/285	/210
H	1580	/-	/-	/917	/285	/-

Wind reactions based on MWFRS
O Brg Wid = 4.0 Min Req = 1.5 (Truss)
H Brg Wid = 4.0 Min Req = 1.5 (Truss)
Bearings O & 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	2587	-6699	E - F	1767	-4646
C - D	2320	-5999	F - G	2282	-5999
D - E	1745	-4646	G - H	2563	-6699

Maximum Bot Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
B - N	6283	-2349	L - K	5641	-1922
N - M	6312	-2364	K - J	6312	-2308
M - L	5641	-1985	J - H	6283	-2292

Maximum Web Forces Per Ply (lbs)

Webs	Tens.	Comp.	Webs	Tens.	Comp.
C - M	380	-610	L - F	673	-1248
M - D	389	-52	F - K	389	-51
D - L	672	-1248	K - G	375	-610
E - L	3193	-1064			

Lumber

Top chord: 2x4 SP M-31; T2,T3 2x4 SP #2;
Bot chord: 2x4 SP M-31;
Webs: 2x4 SP #3; W5 2x4 SP #2;

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: Furnish a copy of this DWG to the installation contractor. Special care must be taken during handling, shipping and installation of trusses. See "WARNING" note below.

The overall height of this truss excluding overhang is 7-10-1.

FL REG# 278, Yoonhwak Kim, FL PE #86367
Florida Certificate of Product Approval #FL 1999

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For more information see these web sites: Alpine: alpineitw.com; TPI: tpinst.org; SBCA: sbcacomponents.com; ICC: iccsafe.org; AWC: awc.org

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155 Harlem Ave
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Glenview, IL 60025

Gable Stud Reinforcement Detail

ASCE 7-16: 140 mph Wind Speed, 15' Mean Height, Enclosed, Exposure C, Kzt = 1.00

☐ 120 mph Wind Speed, 15' Mean Height, Partially Enclosed, Exposure C, Kzt = 1.00
☐ 120 mph Wind Speed, 15' Mean Height, Enclosed, Exposure D, Kzt = 1.00
☐ 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" 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.

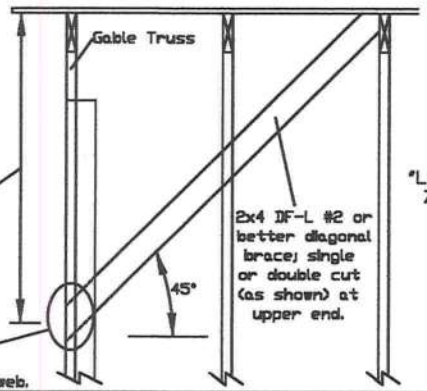
"L" bracing must be a minimum of 80% of web member length.

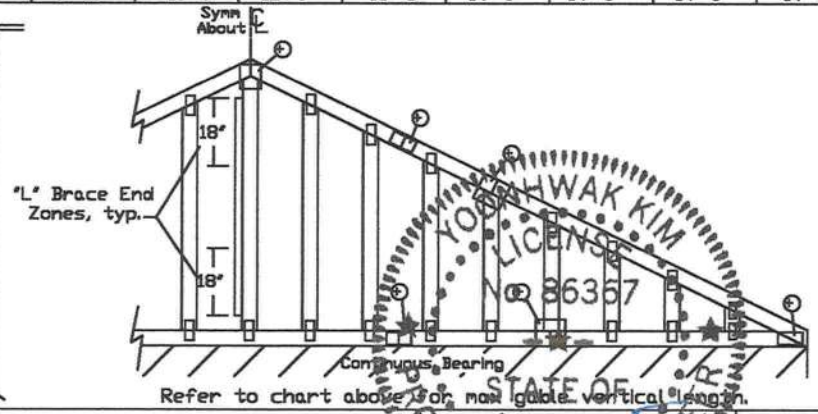
Gable Vertical Plate Sizes	
Vertical Length	No Splice
Less than 4' 0"	1X4 or 2X3
Greater than 4' 0"	3X4

+ 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.

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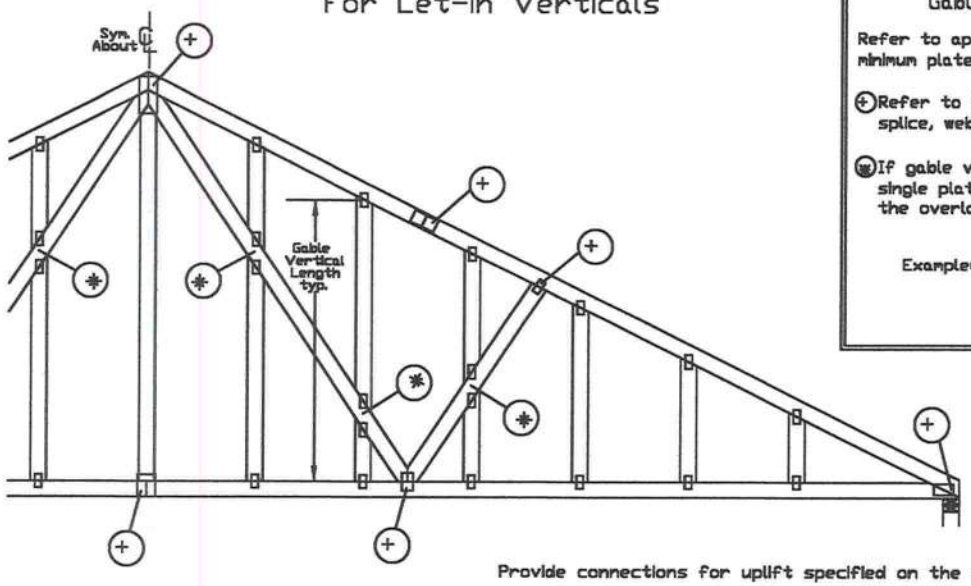
MAX. TOT. LD. 60 PSF

MAX. SPACING 24.0"

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

Gable Detail
For Let-In Verticals



Gable Truss Plate Sizes

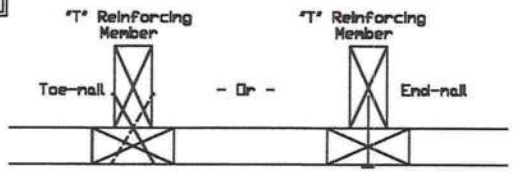
Refer to appropriate Alpine gable detail for minimum plate sizes for vertical studs.

Ⓐ 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.

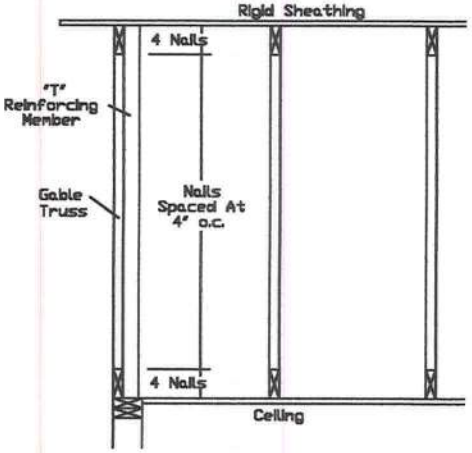
Toenailed Nails:
10d Common (0.148"x3",min) Toenails at 4" o.c. plus
(4) toenails in the top and bottom chords.

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).

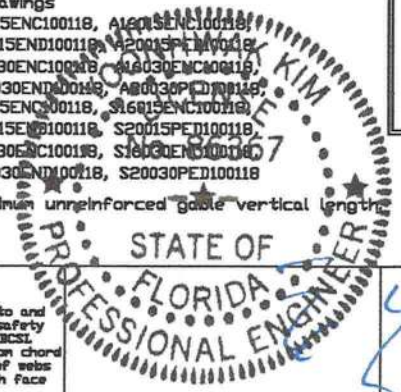
Maximum allowable "T" reinforced gable vertical length is 14' from top to bottom chord.

"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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ALPINE) www.alpinelts.com TPI) www.tpinst.org SBCA) www.sbcacomponents.com ICC) www.iccsafe.org

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

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

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.

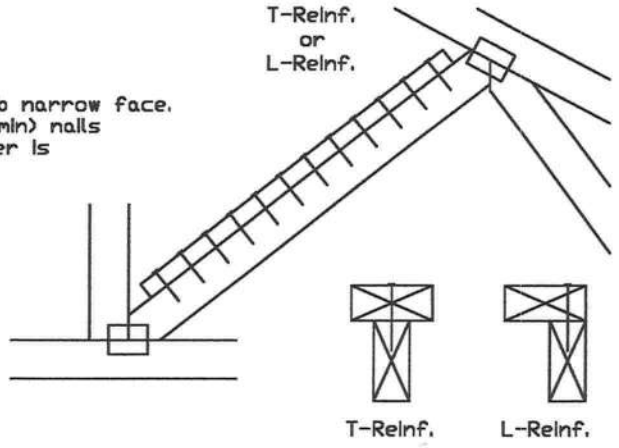
Web Member Size	Specified CLR Restraint	Alternative Reinforecement T- or L- Reinf.	Alternative Reinforecement Scab Reinf.
2x3 or 2x4	1 row	2x4	1-2x4
2x3 or 2x4	2 rows	2x6	2-2x4
2x6	1 row	2x4	1-2x6
2x6	2 rows	2x6	2-2x4 ⊕⊕
2x8	1 row	2x6	1-2x8
2x8	2 rows	2x6	2-2x6 ⊕⊕

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.

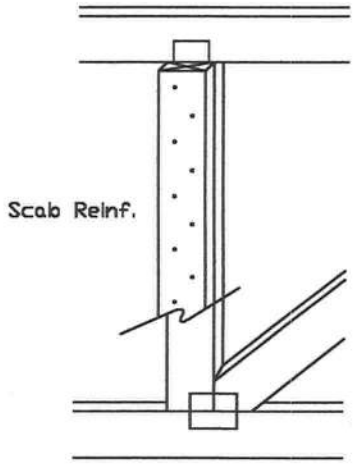
T-Reinforcement or L-Reinforcement:

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.



YOONHWAK KIM LICENSE No. 86367 STATE OF FLORIDA PROFESSIONAL ENGINEER

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Glenview, IL 60025

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09/28/2022

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		