

DO NOT CUT ANY TRUSS

**THIS IS AN ENGINEERED
PRODUCT; CUTTING, DRILLING,
NOTCHING, NON-UNIFORM
LOADING, OR ANY OTHER
ALTERATIONS VIOLATE THE
INTEGRITY OF THIS PRODUCT
AND VOID THE WARRANTY.**

**FOR MORE INFORMATION ABOUT THIS
OR OTHER MATTERS
PLEASE CALL ANDREWS TRUSS
(828)321-3105**



Phone: (828) 321-3105

Fax: (828) 321-3265

P.O. Box 1429 • 47 McClelland Creek Road • Andrews, North Carolina 28901

CUSTOMER NOTICE

Thank you for choosing Andrews Truss, Inc. as your truss provider. We take pride in our ability to produce a quality product and provide excellent service. However, we are human and occasionally make mistakes. We will exercise the right to correct our own errors and maintain our good relationship with you. Your satisfaction is the key to our future.

To ensure that we build your order to your exact specifications, we will provide a copy of the layout/truss drawings for your approval prior to construction. All pitches, dimensions, and bearings must be verified.

In the event that any problem is encountered, we request that we be advised as soon as possible. Be assured that we will do all within our power to help make corrections and/or replacements in a timely manner. This is true whether the error is yours or ours.

Andrews Truss will gladly repair or replace any of its products not manufactured in accordance with customer-approved specifications. However, we can **not** be responsible to provide free replacement for unusable product which a customer approves prior to construction. Additionally, we are **not** responsible for other associated expenses or charges made without our approval, whether it is labor, materials or other services such as crane service.

Our delivery personnel will deliver your order as close to the job site as reasonably possible provided that there is a safe, level, and accessible place suitable for unloading. Andrews Truss cannot assume responsibility for property damage to low hanging wires, trees, fences, etc., resulting from a requested delivery.

Andrews Truss is **totally committed** to your complete satisfaction by any reasonable standard and will do everything possible to make your building project successful. Thank you for your business.



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FLOOR TRUSSES

NOTICE: Check your engineering - no floor truss is to have a second floor load or a roof load or a concentrated load applied to it unless your engineering specifies that extra load. Loading your truss beyond engineered levels voids the warranty.

Top chord bearing floor truss seat must be located within 3/4" of the nearest (first or last) web of truss. Failure to properly position seat to truss voids truss warranty.

Bottom chord bearing floor truss must be seated as engineered. If not designed for wide wall seats, you must put a narrow filler on top of the plate to create a smaller seat. Failure to provide appropriate truss seats voids the truss warranty.

ROOF TRUSSES

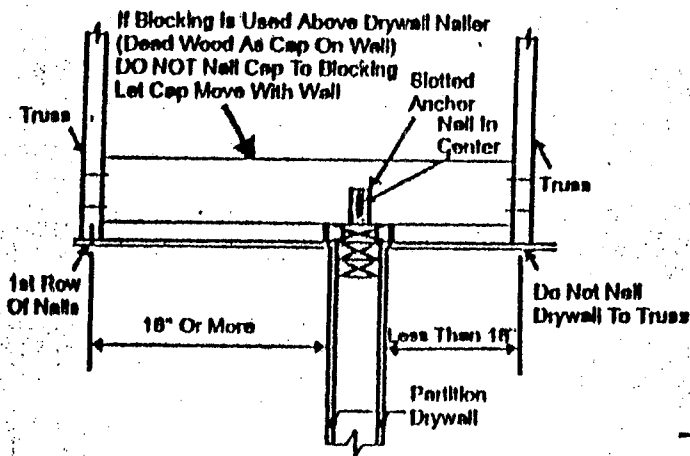
NOTICE: Check your engineering sheets for specified lateral bracing. You must apply all specified bracing at the time of erection or your truss warranty is void.

Also, check for any requirement of special bearing sizes. Failure to provide bearings as engineered will void the truss warranty.

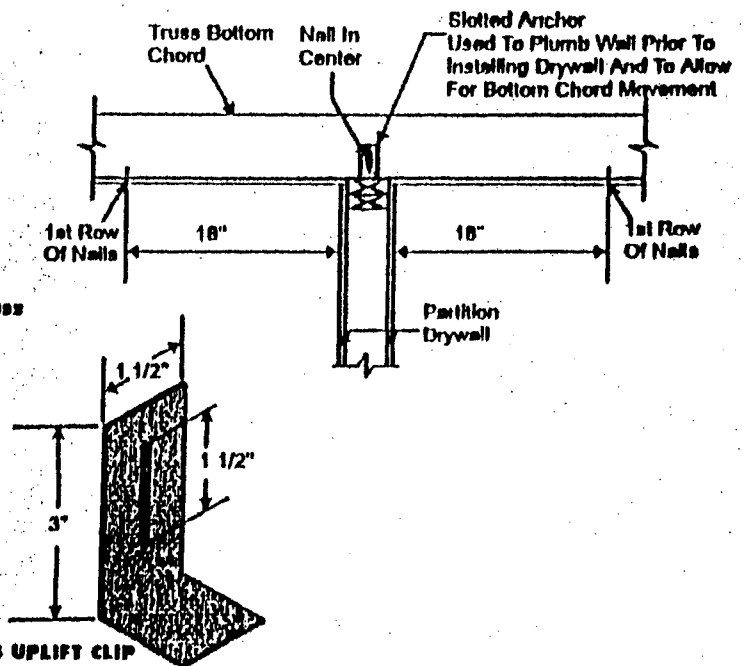
CEILING PARTITION SEPARATION

The below detail shows how to attach interior nonbearing partitions to wood trusses, providing some stability to the wall, yet permitting the truss to move vertically allowing slight movement, with a minimum of cracks at the ceiling/wall joint.

TRUSS PARALLEL TO NON-LOAD BEARING WALL



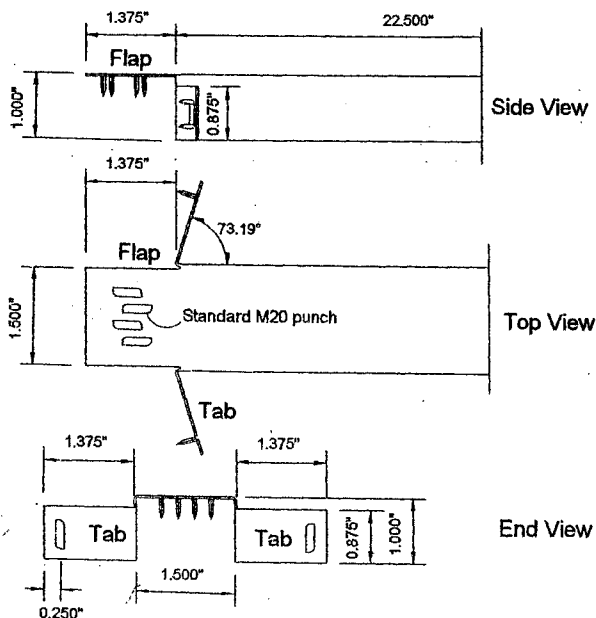
TRUSS PERPENDICULAR TO NON-LOAD BEARING WALL



Truss fabricators *should not* assume responsibility for the phenomenon known as "Ceiling-Partition Separation". While its exact cause is still being studied, the condition is known to be related to seasonal changes of temperature and moisture content differentials in the ceiling joists and rafters brought about by burying the ceiling joists in insulation. Erection contractors and Sheet Rock contractors should be made aware of the problems and its solution.

Truss Bracing System

Dimensions



Specifications

-- Steel --

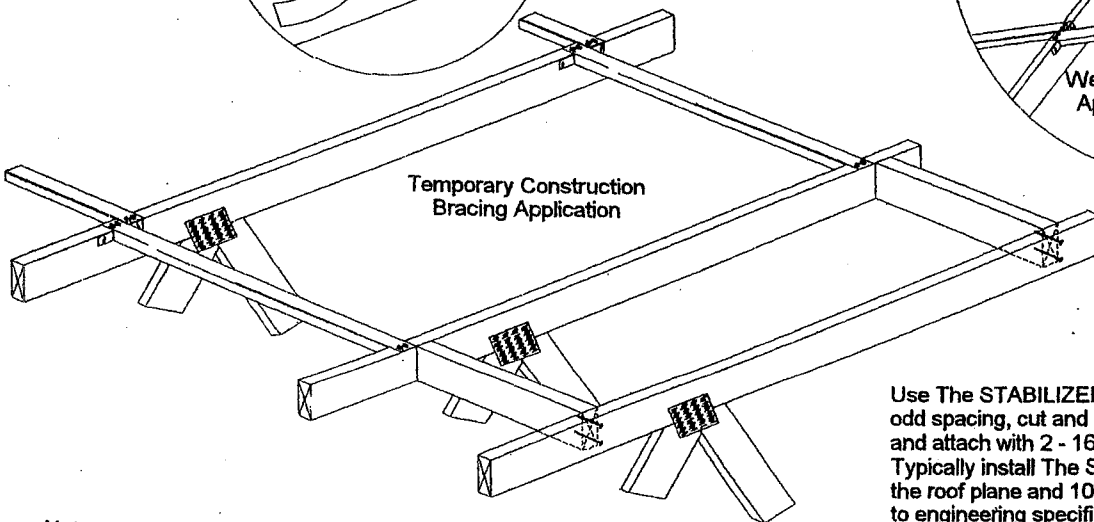
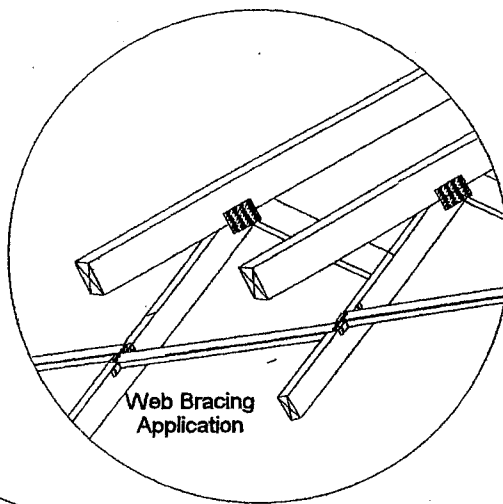
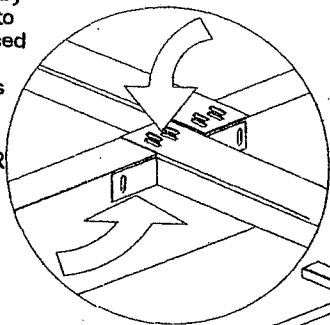
ASTM A653 Grade 40
 0.036 inch (20 ga) thickness
 G60 Galvanize coating
 0.83 lb/ft

-- Ultimate Allowables --

Compression = 1040 lbs
 Tension = 340 lbs
 Bending Moment = 460 in-lb
 End Moment = 432 in-lb

Installation Guidelines

The STABILIZER is installed by embedding the M20 teeth of the top flap into the truss member to be braced with a framing hammer, making sure teeth are driven straight. Teeth shall be considered fully embedded when the flap is flush with the member being braced. STABILIZER tabs are then secured by driving the tab teeth into the member to be braced in the same fashion as the flap. Flap and tabs must be properly installed on each end to ensure STABILIZER performance.



The STABILIZER may be used for temporary construction bracing in the roof and ceiling planes and as permanent lateral bracing for webs as specified on truss engineering.

Use The STABILIZER for standard 24" oc spacing. For odd spacing, cut and insert solid block between trusses and attach with 2 - 16d nails into each end. Typically install The STABILIZER at 6' - 8' centers along the roof plane and 10' - 15' along the ceiling plane. Refer to engineering specifications or HIB-91 as published by The Truss Plate Institute for specific bracing requirements.

Note:
 Stabilizer bracing must be supplemented with diagonal bracing in the roof and ceiling planes and cross-bracing at required intervals when used as permanent web lateral bracing

STEPDOWN CORNER SET

TOP CHORD 2X4 SO. PINE #2 N OR SPF #1/#2
SEE TABLE BELOW FOR HIPJACK GRADE

BOT CHORD 2X4 SO. PINE #2 N OR SPF #1/#2

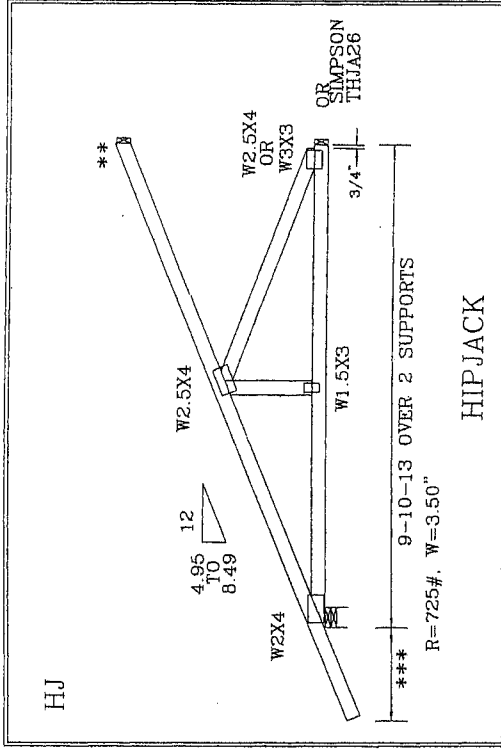
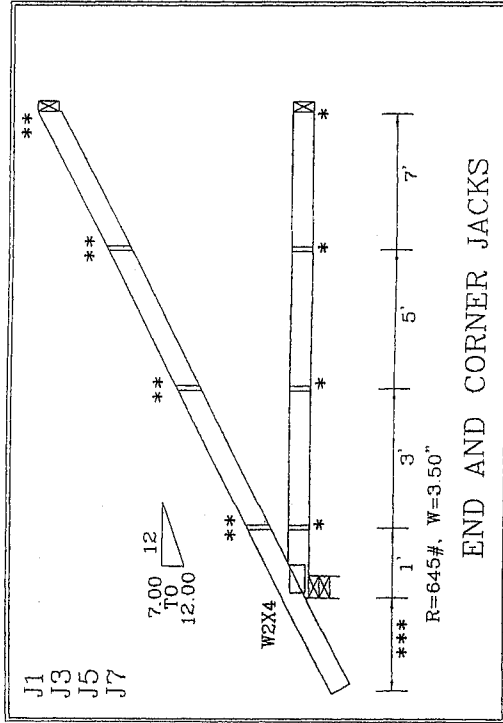
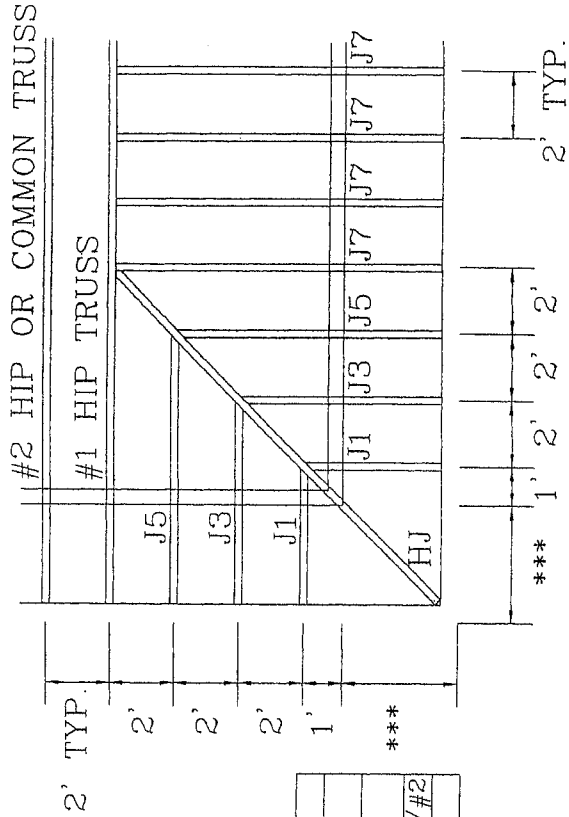
WEBS 2X4 SO. PINE #3 OR SPF #3

CORNER SET SETBACK	
7' 0" 0	

HIPJACK TOP CHORD LUMBER GRADE		SOFFIT WEIGHT
MAX NORMAL OVERHANG LENGTH***		2 PSF
1-09-00	2-05-11 SP #2 N OR SPF #1/#2 SP #2 DENSE OR SPF #1/#2	10 PSF
2-00-00	2-09-15 SP #2 N	SP #2 DENSE

* (2) 16d TOENAILS

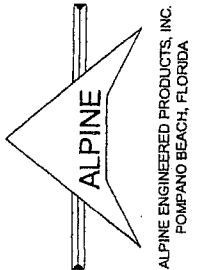
** (3) 16d TOENAILS



TC LL	30 PSF	REF	7' STBK CS
TC DL	10 PSF	DATE	11/26/03
BC DL	10 PSF	DRWG	CS7SBK7B1103
BC LL	0 PSF		-ENG MLH/KAR
TOT. LD.	50 PSF		
DUR. FAC.	1.15		
SPACING	SEE ABOVE		

WARNING TRUSSES REQUIRE EXTREME CARE IN FABRICATING, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO BCS 1-03 BUILDING COMPONENT SAFETY INFORMATION, PUBLISHED BY TPI TRUSS PLATE INSTITUTE, 583 D'ONOFRIO DR., SUITE 200, MADISON, WI 53719 AND VITA WOOD TRUSS COUNCIL OF AMERICA, 6300 ENTERPRISE LN, MADISON, WI 53719 FOR SAFETY PRACTICES PRIOR TO PERFORMING THESE FUNCTIONS. UNLESS OTHERWISE INDICATED, TOP CHORD SHALL HAVE PROPERLY ATTACHED STRUCTURAL PANELS AND BOTTOM CHORD SHALL HAVE A PROPERLY ATTACHED RIGID CEILING.

IMPORTANT FURNISH COPY OF THIS DESIGN TO INSTALLATION CONTRACTOR. ALPINE ENGINEERED PRODUCTS, INC., SHALL NOT BE RESPONSIBLE FOR ANY DEVIATION FROM THIS DESIGN; ANY FAILURE TO BUILD THE TRUSS IN CONFORMANCE WITH TPI OR FABRICATING, HANDLING, SHIPPING, INSTALLING & BRACING OF TRUSSES. DESIGN CONFORMS WITH APPLICABLE PROVISIONS OF NDS (NATIONAL DESIGN SPEC. 40/60 (V.A.4) AND TPI. ALPINE CONNECTOR PLATES ARE MADE OF 2018/1664 (V.H./A/O ASTM A653 GRADE 40/60 (V.A.4) AND TPI. ALPINE CONNECTOR PLATES TO EACH FACE OF TRUSS AND, UNLESS OTHERWISE LOCATED ON THIS DESIGN POSITION PER DRAWINGS, ALL SEAL ON THIS DRAWING INDICATES ACCEPTANCE OF PROFESSIONAL ENGINEERING RESPONSIBILITY SOLELY FOR THE TRUSS COMPONENT DESIGN SHOWN. THE SUITABILITY AND USE OF THIS COMPONENT FOR ANY BUILDING IS THE RESPONSIBILITY OF THE BUILDING DESIGNER. PER ANSII/TPI 1 SEC 2



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)

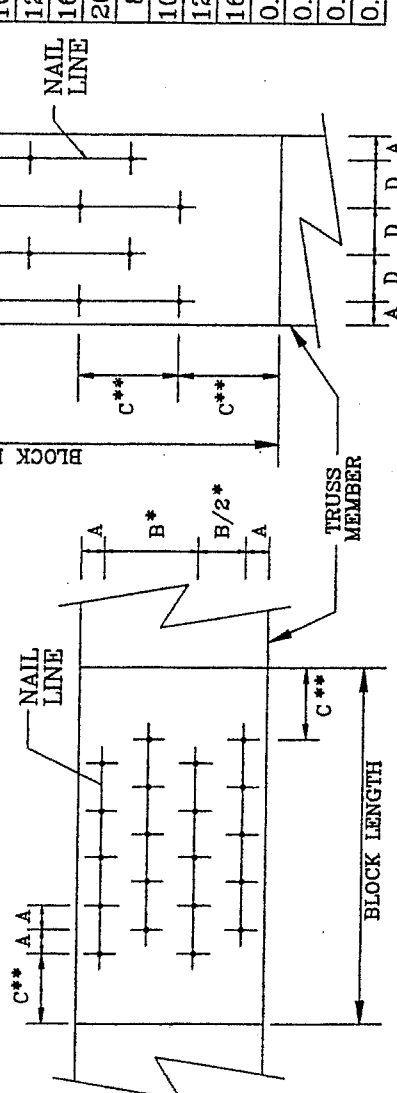
LOAD PARALLEL TO GRAIN

- 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%

DIRECTION OF LOAD AND NAIL ROWS



MAXIMUM NUMBER OF NAIL LINES PARALLEL TO GRAIN

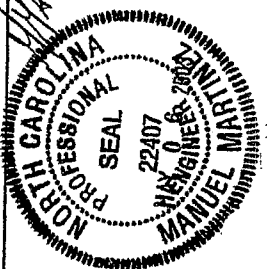
NAIL TYPE	CHORD SIZE				
	2X4	2X6	2X8	2X10	2X12
8d BOX (0.113"x2.5")	3	6	9	12	15
10d BOX (0.128"x3")	3	5	7	10	12
12d BOX (0.128"x3.25")	3	5	7	10	12
16d BOX (0.135"x3.5")	3	5	7	10	12
20d BOX (0.148"x4")	2	4	5	6	8
8d COMMON (0.131"x2.5")	3	5	7	10	12
10d COMMON (0.148"x3")	2	4	6	8	10
12d COMMON (0.148"x3.25")	2	4	6	8	10
16d COMMON (0.162"x3.5")	2	4	6	8	10
0.120"x2.5" GUN	3	6	8	11	14
0.131"x2.5" GUN	3	5	7	10	12
0.120"x3.0" GUN	3	6	8	11	14
0.131"x3.0" GUN	3	5	7	10	12

MINIMUM NAIL SPACING DISTANCES

NAIL TYPE	DISTANCES			
	A	B*	C**	D
8d BOX (0.113"x2.5")	3/4"	1 3/8"	1 3/4"	7/8"
10d BOX (0.128"x3")	7/8"	1 5/8"	2"	1"
12d BOX (0.128"x3.25")	7/8"	1 5/8"	2"	1"
16d BOX (0.135"x3.5")	7/8"	1 5/8"	2 1/8"	1 1/8"
20d BOX (0.148"x4")	1"	1 7/8"	2 1/4"	1 1/8"
8d COMMON (0.131"x2.5")	7/8"	1 5/8"	2"	1"
10d COMMON (0.148"x3")	1"	1 7/8"	2 1/4"	1 1/8"
12d COMMON (0.148"x3.25")	1"	1 7/8"	2 1/4"	1 1/8"
16d COMMON (0.162"x3.5")	1"	2"	2 1/2"	1 1/4"
0.120"x2.5" GUN	3/4"	1 1/2"	1 7/8"	1"
0.131"x2.5" GUN	7/8"	1 5/8"	2"	1"
0.120"x3.0" GUN	3/4"	1 1/2"	1 7/8"	1"
0.131"x3.0" GUN	7/8"	1 5/8"	2"	1"

LOAD APPLIED PERPENDICULAR TO GRAIN LOAD APPLIED PARALLEL TO GRAIN

THIS DRAWING REPLACES DRAWING 139 AND C>NNAILS0699



WARNING: TRUSSES REQUIRE EXTREME CARE IN FABRICATING, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO THE TRUSS MANUFACTURER'S INSTRUCTIONS FOR SAFETY PRACTICES PRIOR TO USE. BRACING MUST BE INSTALLED AND SECURED TO THE TRUSS CHORDS AS SHOWN. TRUSS CHORDS SHALL HAVE PROPERLY ATTACHED STRUCTURAL PANELS AND BOTTOM CHORD SHALL HAVE A PROPERLY ATTACHED RIGID CEILING.

IMPORTANT: FURNISH A COPY OF THIS DESIGN TO THE INSTALLATION CONTRACTOR. ALPINE ENGINEERED PRODUCTS, INC. SHALL NOT BE RESPONSIBLE FOR ANY DEVIATION FROM THIS DESIGN. ANY CHANGES TO BUILD THE TRUSSES IN CONFORMANCE WITH TPI OR FABRICATING, HANDLING, AND INSTALLING AND BRACING OF TRUSSES. DESIGN CONFORMS WITH APPLICABLE SPECIFICATIONS AND PAPER EXCEPT AS NOTED. APPLICABLE CONNECTIONS ARE MADE TO ASTM A53 GRADE GALV. STEEL TRUSSES AND, UNLESS OTHERWISE LOCATED IN THIS DESIGN, CONNECTIONS TO EACH FACE OF TRUSS AND, UNLESS OTHERWISE LOCATED IN THIS DESIGN, CONNECTIONS TO EACH FACE OF CHORDS SHALL BE MADE TO THE TRUSS CHORDS. ACCEPTANCE OF THE TRUSS DESIGN SHALL BE THE RESPONSIBILITY OF THE BUILDING DESIGNER. PER ANSI/TPI 1-1995 SECTION E.

ALPINE
ALPINE ENGINEERED PRODUCTS, INC.
POMPANO BEACH, FLORIDA

REF	NAIL SPACE
DATE	12/16/99
DRWG	C>NNAILS0699
	-ENG DLJ/KAR

BEARING BLOCK NAIL SPACING DETAIL

MAXIMUM NUMBER OF NAIL LINES PARALLEL TO GRAIN

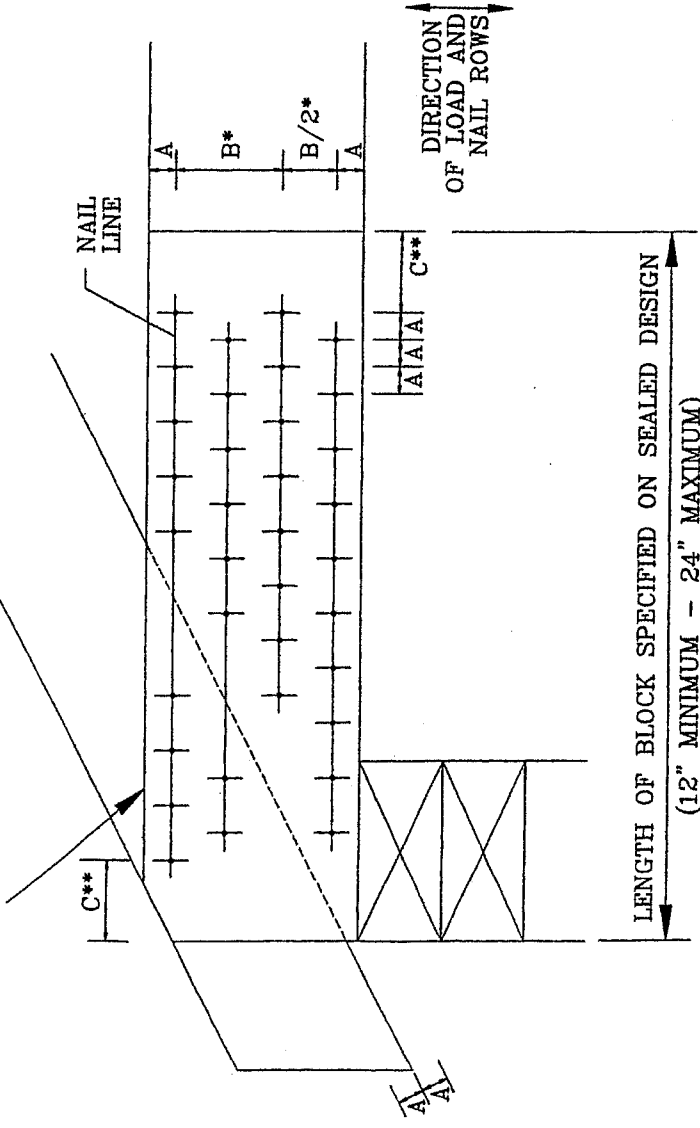
NAIL TYPE	CHORD SIZE				
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0.120"x3.0" GUN	3	6	8	11	14
0.131"x3.0" GUN	3	5	7	10	12

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

- 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)

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%

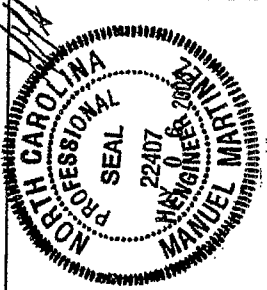
BEARING BLOCK TO BE SAME SPECIES, SIZE AND GRADE AS BOTTOM CHORD.



MINIMUM NAIL SPACING DISTANCES

NAIL TYPE	DISTANCES		
	A	B*	C**
8d BOX (0.113"x2.5")	3/4"	1 3/8"	1 3/4"
10d BOX (0.128"x3")	7/8"	1 5/8"	2"
12d BOX (0.128"x3.25")	7/8"	1 5/8"	2"
16d BOX (0.135"x3.5")	7/8"	1 5/8"	2 1/8"
20d BOX (0.148"x4")	1"	1 7/8"	2 1/4"
8d COMMON (0.131"x2.5")	7/8"	1 5/8"	2"
10d COMMON (0.148"x3")	1"	1 7/8"	2 1/4"
12d COMMON (0.148"x3.25")	1"	1 7/8"	2 1/4"
16d COMMON (0.162"x3.5")	1"	2"	2 1/2"
0.120"x2.5" GUN	3/4"	1 1/2"	1 7/8"
0.131"x2.5" GUN	7/8"	1 5/8"	2"
0.120"x3.0" GUN	3/4"	1 1/2"	1 7/8"
0.131"x3.0" GUN	7/8"	1 5/8"	2"

THIS DRAWING REPLACES DRAWING B139 AND CNBRGBLK0699



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DESIGNER SHALL BE RESPONSIBLE FOR ANY DEVIATION FROM THIS DESIGN. THE SEAL ON THIS DRAWING INDICATES ACCEPTANCE OF PROFESSIONAL ENGINEERING RESPONSIBILITY SOLELY FOR THE TRUSS COMPONENT DESIGN SHOWN. THE SUITABILITY AND USE OF THIS COMPONENT FOR ANY PARTICULAR BUILDING IS THE RESPONSIBILITY OF THE BUILDING DESIGNER, PER ANS/A/TPI 1-1995 SECTION 2.

ALPINE
 ALPINE ENGINEERED PRODUCTS, INC.
 POMPANO BEACH, FLORIDA

REF BEARING BLOCK
 DATE 12/16/99
 DRWG CNBRGBLK1299
 -ENG SJP/KAR

ANCHORAGE AND RESTRAINT OF LATERAL BRACING

THIS IS A DANGEROUS CONDITION

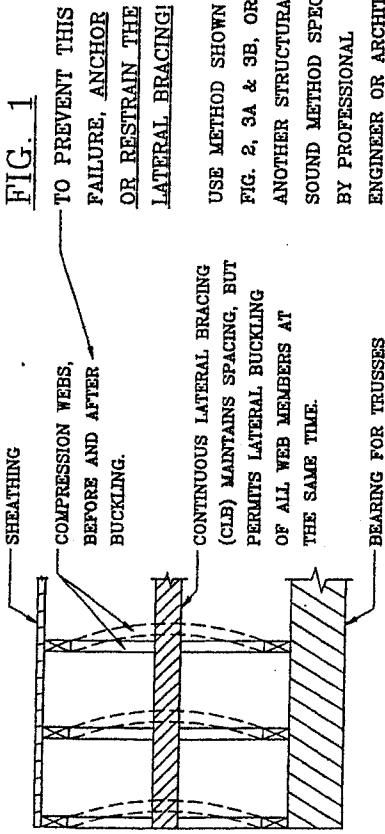


FIG. 1

TO PREVENT THIS FAILURE, ANCHOR OR RESTRAIN THE LATERAL BRACING!

USE METHOD SHOWN IN FIG. 2, 3A & 3B, OR ANOTHER STRUCTURALLY SOUND METHOD SPECIFIED BY PROFESSIONAL ENGINEER OR ARCHITECT.

FIG. 2

ANCHORAGE BY BUILDING DESIGNER (OTHER ANCHORAGE PROVISIONS FOR OTHER TYPES OF WALLS).

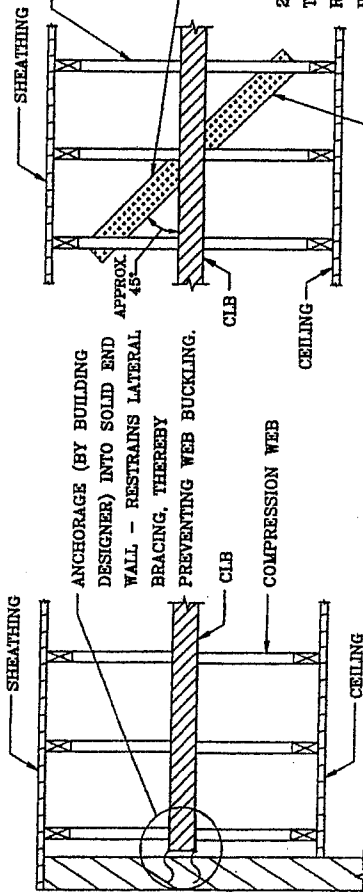
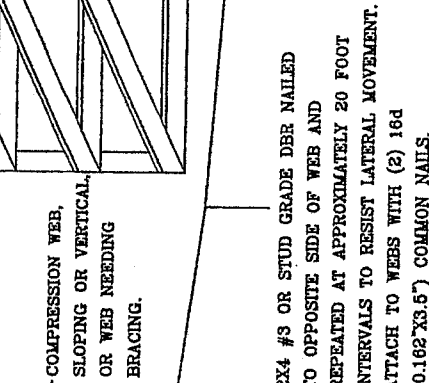


FIG. 3A

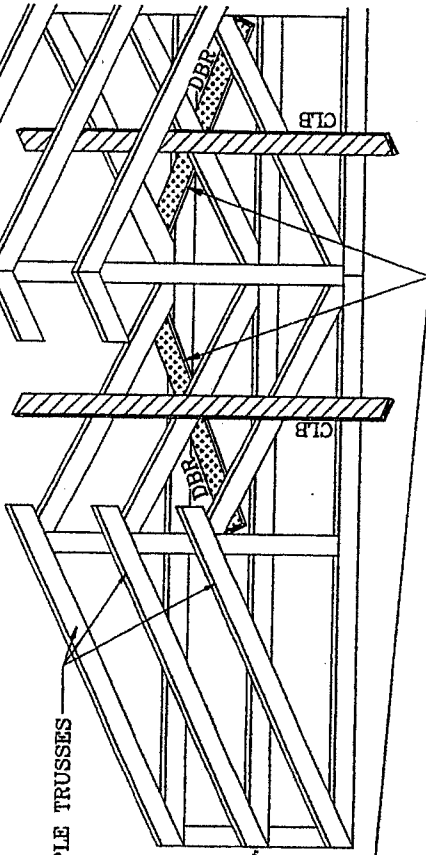
DIAGONAL BRACE RESTRAINT (DBR) WITHIN THE UNIT (3A & 3B)



DBR MAY TRAVERSE MORE THAN TWO TRUSSES, DEPENDING ON TRUSS HEIGHT.

FIG. 3B

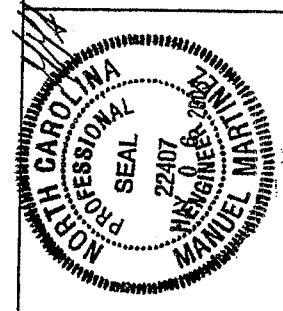
EXAMPLE TRUSSES



THE DRAWING BELOW (FIG. 3B) SHOWS HOW TO RESTRAIN THE CONTINUOUS LATERAL BRACING (CLB - [diagonal hatching]). WHEN ANCHORAGE IS NOT AVAILABLE AS SHOWN IN FIG. 2 THE DIAGONAL BRACE RESTRAINT (DBR - [cross-hatching]) MEMBERS ARE 2X4'S, THE ENDS OF WHICH ARE ATTACHED TO TOP & BOTTOM CHORDS. THE DIAGONAL BRACE MAY BE ATTACHED DIRECTLY TO THE CLB OR TO THE WEB OPPOSITE THE CLB. USE THE SAME NAILING SHOWN IN FIG. 3A.

WARNING: TRUSSES REQUIRE EXTREME CARE IN FABRICATING, HANDLING, SHIPPING, INSTALLING AND BRACING. HANDLING, INSTALLING AND BRACING, PUBLISHED BY TPI TRUSS PLATE INSTITUTE, 582 HOWE STREET, SUITE 200, MADISON, VT. 05719. FOR SAFETY PRACTICES PRIOR TO PERFORMING THESE FUNCTIONS, SEE THE TPI TRUSS TOP CHORD SHALL HAVE PROPERLY ATTACHED STRUCTURAL PANELS AND BRITISH CHORD SHALL HAVE A PROPERLY ATTACHED RIGID CEILING.

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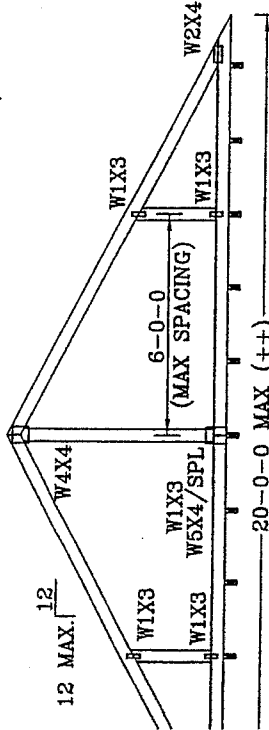
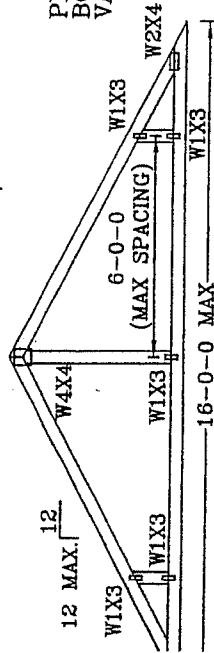
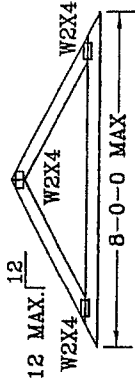
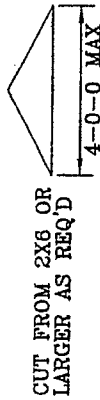
THIS DRAWING REPLACES DRAWING 137
REF BRACE RESTRAINT
DATE 06/25/99
DRWG BRCLBANC0699
-ENG KGF/KAR

VALLEY TRUSS DETAIL

TOP CHORD 2X4 SP #2 OR SPF #1/#2 OR BETTER.
 BOT CHORD 2X3(*) OR 2X4 SP #2N OR SPF #1/#2 OR BETTER.
 WEBS 2X4 SP #3 OR BETTER.

* 2X3 MAY BE RIPPED FROM A 2X6 (PITCHED OR SQUARE).

** ATTACH EACH VALLEY TO EVERY SUPPORTING TRUSS WITH:
 (2) 16d BOX (0.135" X 3.5") NAILS TOE-NAILED FOR
 SBC 110 MPH, ASCE 7-93 110 MPH WIND OR
 ASCE 7-98 130 MPH WIND. 15' MEAN HEIGHT, ENCLOSED
 BUILDING, EXP. C, RESIDENTIAL, WIND TC DL=5 PSF.



SUPPORTING TRUSSES AT 24" OC MAXIMUM SPACING.

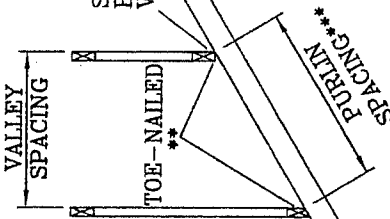
*** NOTE THAT THE PURLIN SPACING FOR BRACING THE TOP CHORD OF THE TRUSS BENEATH THE VALLEY IS MEASURED ALONG THE SLOPE OF THE TOP CHORD.

++ LARGER SPANS MAY BE BUILT AS LONG AS THE VERTICAL HEIGHT DOES NOT EXCEED 12'0".

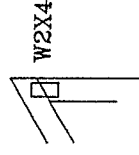
BOTTOM CHORD MAY BE SQUARE OR PITCHED CUT AS SHOWN.



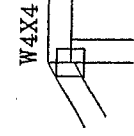
PITCHED CUT BOTTOM VALLEY



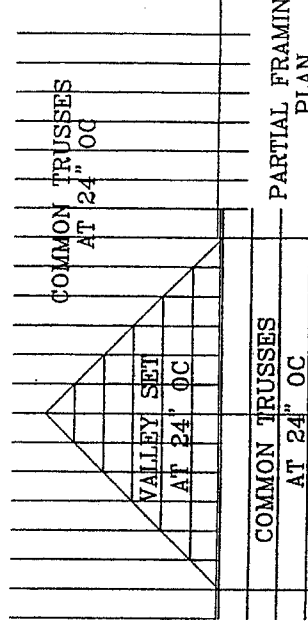
SQUARE CUT BOTTOM VALLEY



OPTIONAL STUB END DETAIL

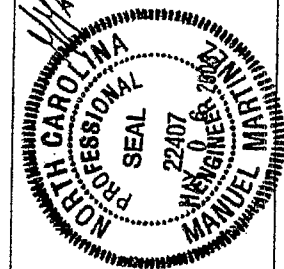


OPTIONAL HIP JOINT DETAIL



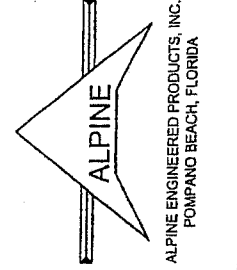
PARTIAL FRAMING PLAN

WARNING: TRUSSES REQUIRE EXTREME CARE IN FABRICATING, HANDLING, SHIPPING, INSTALLATION AND MAINTENANCE. REFER TO MID-91 CHANGING INSTALLING AND BRACING, PUBLISHED BY TPI TRUSS PRODUCTS, INC. FOR THE LATEST REVISIONS TO THESE PRACTICES. THE SAFETY PRACTICES PRIOR TO PERFORMING THESE FUNCTIONS. UNLESS OTHERWISE INDICATED, TOP CHORD SHALL HAVE PROPERLY ATTACHED STRUCTURAL PANELS AND BOTTOM CHORD SHALL HAVE A PROPERLY ATTACHED RIGID CEILING.
 IMPORTANT: FURNISH A COPY OF THIS DESIGN TO THE INSTALLATION CONTRACTOR. ALPINE ENGINEERED PRODUCTS, INC. SHALL NOT BE RESPONSIBLE FOR ANY DEVIATION FROM THIS DESIGN. THE TRUSSES IN CONFORMANCE WITH TPI OR FABRICATING, HANDLING, SHIPPING, INSTALLATION AND BRACING DESIGN CONFORMS WITH APPLICABLE PROVISIONS OF THE INTERNATIONAL BUILDING CODES, IBC, MADE BY 2006 AMERICAN FOREST AND PAPER ASSOCIATION AND TPI APPLICATIONS. SEE MADE BY 2006 ASTM A663 GRA4 GALV. STEEL EXCEPT AS NOTED. APPLY CONNECTORS PER TRUSS AND, UNLESS OTHERWISE LOCATED ON THIS DRAWING, POSITION CONNECTORS PER DRAWINGS 160 A-2. THE SEAL ON THIS DRAWING INDICATES ACCEPTANCE OF PROFESSIONAL ENGINEERING RESPONSIBILITY SOLELY FOR THE TRUSS COMPONENT DESIGN SHOWN. THE LIABILITY AND USE OF THIS COMPONENT FOR ANY PARTICULAR BUILDING IS THE RESPONSIBILITY OF THE BUILDING DESIGNER, PER ANSIT/TP1 1-1995 SECTION 2.



THIS DRAWING REPLACES DRAWING A105

TC LL	30	40 PSF	REF	VALLEY DETAIL
TC DL	20	7 PSF	DATE	06/25/99
BC DL	10	10 PSF	DRWG	VALTRUSS1001
BC LL	0	0 PSF	-ENG	MLH/KAR
TOT. LD.	60	55	57 PSF	
DUR.FAC.	1.25/1.33	1.15/1.15		
SPACING	24"			



BOTTOM CHORD FILLER DETAIL

* OPTIONAL INTERIOR OR CANTILEVER BEARING. MINIMUM PLATE SIZES (1X3 WAVE) MAY BE USED IF BEARING IS OMITTED. WEDGE OR VERTICAL MEMBER MUST COINCIDE WITH BEARING LOCATION.

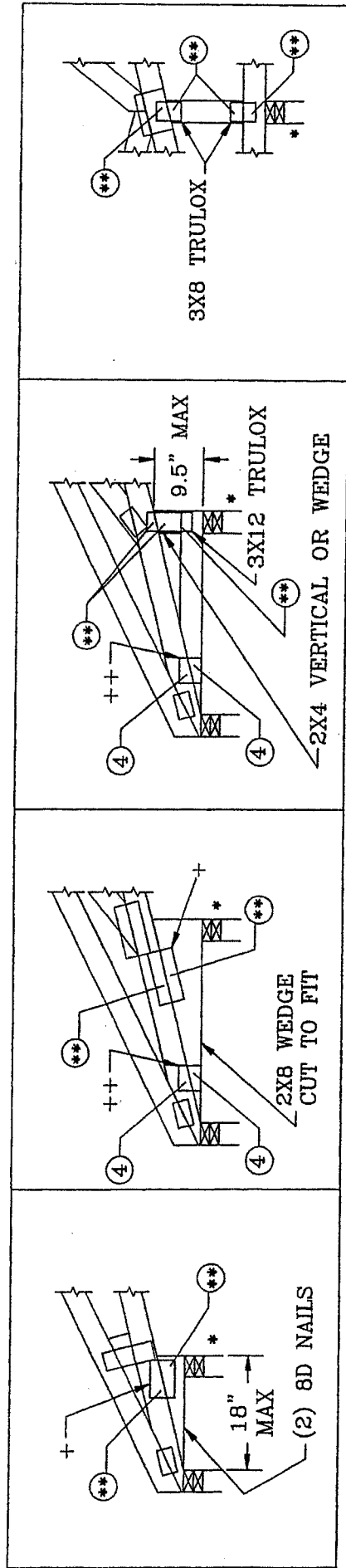
+ 3X4 WAVE OR 4X8 TRULOX
 ++ 2X4 WAVE OR 3X6 TRULOX

11 GAUGE (0.120")X1.375" NAILS REQUIRED FOR TRULOX PLATE ATTACHMENT. NAILS SPECIFIED IN CIRCLES MUST BE APPLIED TO EACH FACE OF THE TRUSS. SEE DWG 160TL FOR NAILING AND TRULOX PLATE REQUIREMENTS.

REFER TO ENGINEER'S SEALED DESIGN REFERENCING THIS DETAIL FOR LUMBER, PLATES, AND OTHER INFORMATION NOT SHOWN.

ALL TRULOX PLATES SHOWN ARE MINIMUMS. LARGER PLATES MAY BE REQUIRED TO ACCOMODATE REQUIRED NAILS (**)

FILLER BOTTOM CHORD OR WEDGE SPECIES	MAXIMUM REACTION		MINIMUM BEARING AREA	** REQUIRED NAILS PER FACE WITH TRULOX PLATES					
	DOWNWARD	UPLIFT		1.00 D.O.L.	1.15 D.O.L.	1.25 D.O.L.	1.33 D.O.L.	1.60 D.O.L.	
DOUGLAS FIR-LARCH	3281#	1656#	1.5" X 3.5"	12	11	10	9	8	
HEM-FIR	2126#	1095#	1.5" X 3.5"	9	8	7	7	6	
SPRUCE-PINE-FIR	2231#	1192#	1.5" X 3.5"	10	9	8	8	6	
SOUTHERN PINE DENSE	3465#	1791#	1.5" X 3.5"	12	11	10	9	8	
SOUTHERN PINE	2966#	1492#	1.5" X 3.5"	10	9	8	8	7	
SOUTHERN PINE NON-DENSE	2520#	1343#	1.5" X 3.5"	9	8	7	7	6	



THIS DRAWING REPLACES DRAWINGS A115 A115/R & 884.132

TC LL	—	PSF
TC DL	—	PSF
BC DL	10.0	PSF
BC LL	—	PSF
TOT. LD.	—	PSF

DUR. FAC. 1.0/1.15/1.25/1.33
 SPACING 24.0"

ALPINE
 ALPINE ENGINEERED PRODUCTS, INC.
 POMPANO BEACH, FLORIDA

WARNING TRUSSES REQUIRE EXTREME CARE IN FABRICATING, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO HD-91 HANDLING, INSTALLING AND BRACING, PUBLISHED BY ALPINE ENGINEERED PRODUCTS, INC. 1000 JENNIFER DR., SUITE 200, HADDISON, VT. 05719 FOR SAFETY PRACTICES. PRIOR TO THE USE OF TRUSSES, THE USER SHALL VERIFY THAT THE TRUSS CHORD SHALL HAVE PROPERLY ATTACHED STRUCTURAL PANELS AND BOTTOM CHORD SHALL HAVE A PROPERLY ATTACHED RIGID CEILING. IT IS THE USER'S RESPONSIBILITY TO VERIFY THAT THE TRUSS DESIGNER'S DESIGN IS IN CONFORMANCE WITH THE DESIGN SPECIFICATION PUBLISHED BY THE USER'S LOCAL BUILDING DEPARTMENT. THE USER SHALL BE RESPONSIBLE FOR ANY DEVIATION FROM THIS DESIGN. ANY FAILURE TO BUILD THE TRUSSES IN CONFORMANCE WITH TPI OR FABRICATING, HANDLING, SHIPPING, INSTALLING AND BRACING OF TRUSSES. DESIGN CONFORMS WITH AMERICAN FORESTRY STANDARDS OF NDS (NATIONAL DESIGN SPECIFICATION PUBLISHED BY THE AMERICAN FORESTRY STANDARDS ASSOCIATION) AND TPI. ALPINE CONNECTORS ARE MADE OF ASTA 3055 GRAO GALV. STEEL. ALL TRUSS DESIGNERS SHOULD BE AWARE THAT THE TRUSS AND, UNLESS OTHERWISE INDICATED, ALL TRUSS CONNECTORS PER DRAWINGS 160 A-2. THE SEAL ON THIS DRAWING INDICATES A PROFESSIONAL ENGINEER'S RESPONSIBILITY SOLELY FOR THE TRUSS DESIGN AND NOT THE PROFESSIONAL LIABILITY OF THE BUILDING DESIGNER. PER ANSI/TPI-1-1995 SECTION 2.

CLB WEB BRACE SUBSTITUTION

THIS DETAIL IS TO BE USED WHEN CONTINUOUS LATERAL BRACING (CLB) IS SPECIFIED ON AN ALPINE TRUSS DESIGN BUT AN ALTERNATIVE WEB BRACING METHOD IS DESIRED.

NOTES:

THIS DETAIL IS ONLY APPLICABLE FOR CHANGING THE SPECIFIED CLB SHOWN ON SINGLE PLY SEALED DESIGNS TO T-BRACING OR SCAB BRACING.

ALTERNATIVE BRACING SPECIFIED IN CHART BELOW MAY BE CONSERVATIVE FOR MINIMUM ALTERNATIVE BRACING. RE-RUN DESIGN WITH APPROPRIATE BRACING.

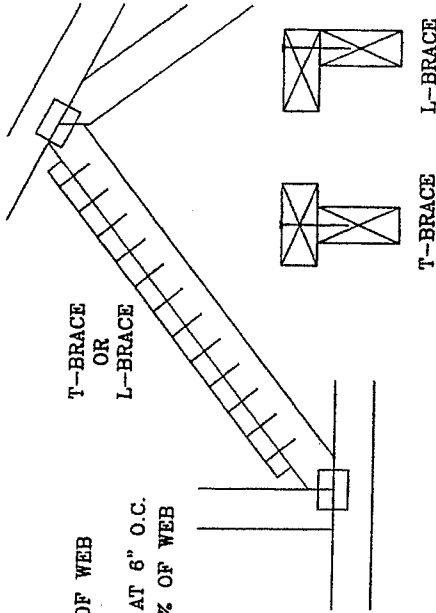
WEB MEMBER SIZE	SPECIFIED CLB BRACING	T OR L-BRACE	ALTERNATIVE BRACING
2X3 OR 2X4	1 ROW	2X4	1-2X4
	2 ROWS	2X6	2-2X4
2X6	1 ROW	2X4	1-2X6
	2 ROWS	2X6	2-2X4(*)
2X8	1 ROW	2X6	1-2X8
	2 ROWS	2X6	2-2X6(*)

T-BRACE, L-BRACE AND SCAB BRACE 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.

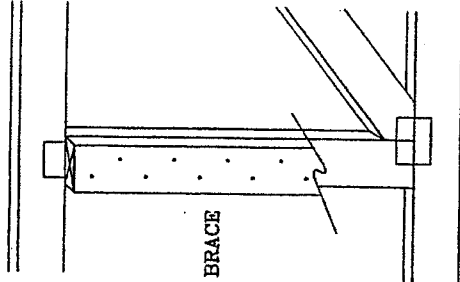
T-BRACING OR L-BRACING:

APPLY TO EITHER SIDE OF WEB NARROW FACE
ATTACH WITH 16d NAILS AT 6" O.C.
BRACE IS A MINIMUM 80% OF WEB MEMBER LENGTH



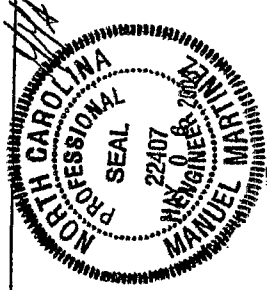
SCAB BRACING:

APPLY SCAB(S) TO WIDE FACE OF WEB. NO MORE THAN (1) SCAB PER FACE.
ATTACH WITH 10d NAILS AT 6" O.C.
BRACE IS A MINIMUM 80% OF WEB MEMBER LENGTH



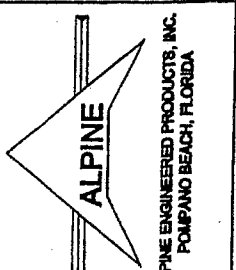
WARNING: TRUSSES REQUIRE EXTREME CARE IN FABRICATING, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO 108-91 GRADING INSTALLING AND BRACING, PUBLISHED BY TPI CLASS PUBLICATIONS, 200, MADISON, VT 05719, FOR SAFETY PRACTICES PRIOR TO PERFORMING THESE FUNCTIONS. UNLESS OTHERWISE INDICATED, TOP CHORD SHALL HAVE PROPERLY ATTACHED STRUCTURAL PANELS AND BOTTOM CHORD SHALL HAVE A PROPERLY ATTACHED RIGID CEILING.

IMPORTANT: FURNISH A COPY OF THIS DESIGN TO THE INSTALLATION CONTRACTOR. ALPINE ENGINEERED PRODUCTS, INC. SHALL NOT BE RESPONSIBLE FOR ANY DEVIATION FROM THIS DESIGN. ANY FAILURE TO BUILD THE TRUSSES IN CONFORMANCE WITH TPI OR FABRICATING, HANDLING, SHIPPING, INSTALLING AND BRACING OF TRUSSES. DESIGN CONFORMS WITH AMERICAN FOREST AND PAPER ASSOCIATION DESIGN SPECIFICATION PUBLISHED BY THE AMERICAN FOREST AND PAPER ASSOCIATION AS NOTED. APPLICABLE CONNECTIONS TO EACH FACE OF ASTM A653 GRA40 GALV. STEEL EXCEPT AS NOTED. APPLICABLE CONNECTIONS TO EACH FACE OF TRUSS AND, UNLESS OTHERWISE LOCATED ON THIS DRAWING, ACCEPTANCE OF THE ENGINEERING RESPONSIBILITY SOLELY FOR THE TRUSS COMPONENT DESIGN, AND THE SUITABILITY AND USE OF THIS COMPONENT FOR ANY PARTICULAR BUILDING IS THE RESPONSIBILITY OF THE BUILDING DESIGNER. PER ANSIT/TP1 1-1995 SECTION 2.



THIS DRAWING REPLACES DRAWING 579,640

TC LL	PSF	REF	CLB SUBST.
TC DL	PSF	DATE	06/25/99
BC DL	PSF	DRWG	BRCIBSUB0699
BC LL	PSF		-ENG MLH/KAR
TOT. LD.	PSF		
DUR. FAC.			
SPACING			



PIGGYBACK DETAIL

TOP CHORD 2X4 #2 OR BETTER
 BOT CHORD 2X4 #2 OR BETTER
 WEBS 2X4 #3 OR BETTER

REFER TO SEALED DESIGN FOR DASHED PLATES.

SPACE PIGGYBACK VERTICALS AT 4' OC MAX.

TOP AND BOTTOM CHORD SPLICES MUST BE STAGGERED SO THAT ONE SPLICE IS NOT DIRECTLY OVER ANOTHER.

PIGGYBACK BOTTOM CHORD MAY BE OMITTED. ATTACH VERTICAL WEBS TO TRUSS TOP CHORD WITH 1.5X3 PLATE.

ATTACH PURLINS TO TOP OF FLAT TOP CHORD. IF PIGGYBACK IS SOLID LUMBER OR THE BOTTOM CHORD IS OMITTED, PURLINS MAY BE APPLIED BENEATH THE TOP CHORD OF SUPPORTING TRUSS.

REFER TO ENGINEER'S SEALED DESIGN FOR REQUIRED PURLIN SPACING.

THIS DETAIL IS APPLICABLE FOR THE FOLLOWING WIND CONDITIONS:

110 MPH WIND, 30' MEAN HGT, ASCE 7-93 CLOSED BLDG, LOCATED ANYWHERE IN ROOF, 1 MI FROM COAST

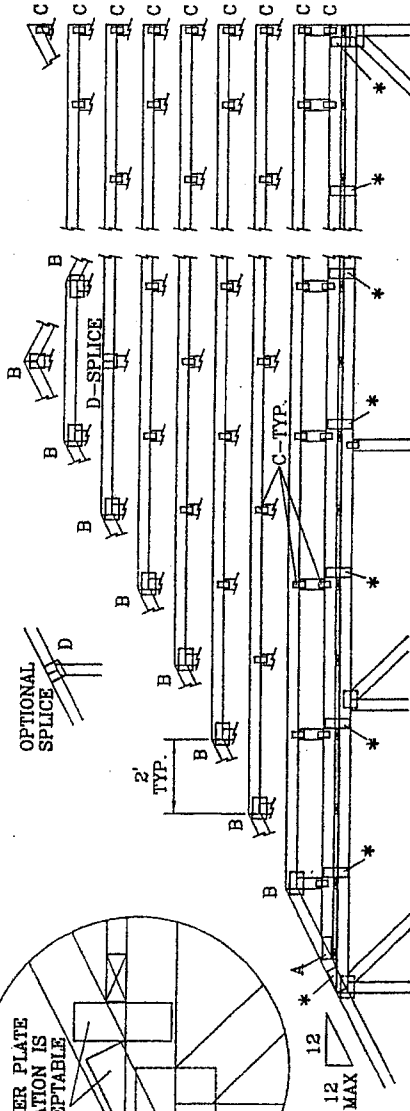
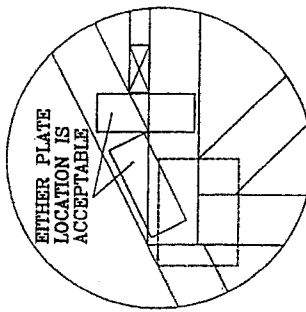
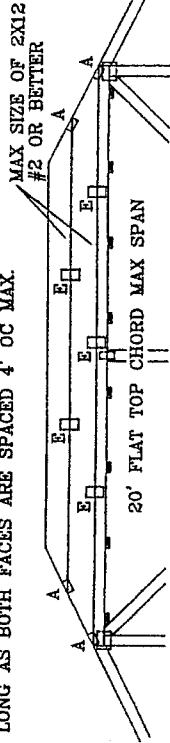
CAT I, EXP C, WIND TC DL=5 PSF, WIND BC DL=5 PSF

110 MPH WIND, 30' MEAN HGT, SBC

ENCLOSED BLDG, LOCATED ANYWHERE IN ROOF

WIND TC DL=5 PSF, WIND BC DL=5 PSF
 FRONT FACE (E*) PLATES MAY BE OFFSET FROM BACK FACE PLATES AS LONG AS BOTH FACES ARE SPACED 4' OC MAX.

130 MPH WIND, 30' MEAN HGT, ASCE 7-98, CLOSED BLDG, LOCATED ANYWHERE IN ROOF, CAT II, EXP. C, WIND TC DL=5 PSF, WIND BC DL=5 PSF

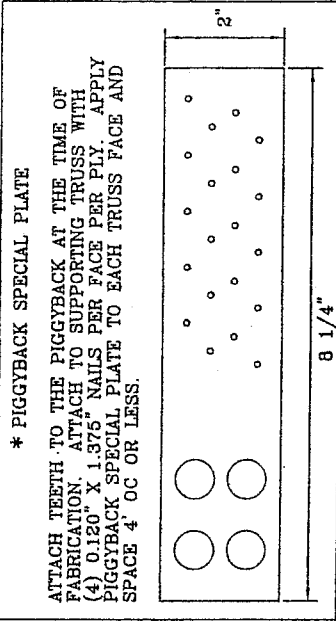


*ATTACH PIGGYBACK WITH 3X8 TRUOX OR ALPINE PIGGYBACK SPECIAL PLATE.

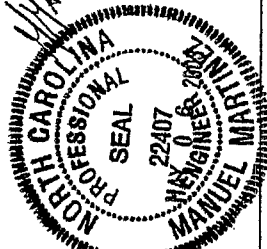
JOINT TYPE	SPANS UP TO		
	30'	34'	38'
A	2X4	2.5X4	3X5
B	4X6	5X6	5X6
C	1.5X3	1.5X4	1.5X4
D	5X4	5X5	5X6
E	4X6 OR 3X6 TRUOX AT 4' OC, ROTATED VERTICALLY		

ATTACH TRUOX PLATES WITH (8) 0.120" X 1.375" NAILS, OR EQUAL, PER FACE PER PLY. (4) NAILS IN EACH MEMBER TO BE CONNECTED. REFER TO DRAWING 160 TL FOR TRUOX INFORMATION.

WEB LENGTH	WEB BRACING CHART
0' TO 7'9"	NO BRACING
7'9" TO 10'	1x4 "T" BRACE. SAME GRADE, SPECIES AS WEB MEMBER, OR BETTER, AND 80% LENGTH OF WEB MEMBER. ATTACH WITH 8d NAILS AT 4" OC.
10' TO 14'	2x4 "T" BRACE. SAME GRADE, SPECIES AS WEB MEMBER, OR BETTER, AND 80% LENGTH OF WEB MEMBER. ATTACH WITH 16d NAILS AT 4" OC.



THIS DRAWING REPLACES DRAWINGS 634,016 634,017 & 847,045



WARNING** TRUSSES REQUIRE EXTREME CARE IN FABRICATING, HANDLING, SHIPPING, UNLOADING, INSTALLING AND BRACING. REFER TO HIB-91 HANDLING, INSTALLING AND BRACING MANUAL, PUBLISHED BY TPI TRUSS PLATE INSTITUTE, 583 DOWNEY DR., SUITE 200, MADISON, WI 53716. FOR SAFETY PRACTICES PRIOR TO PERFORMING THESE FUNCTIONS. UNLESS OTHERWISE INDICATED, TOP CHORD SHALL HAVE PROPERLY ATTACHED STRUCTURAL PANELS AND BOTTOM CHORD SHALL HAVE A PROPERLY ATTACHED RIGID CEILING.
 ENGINEERED PRODUCTS, INC. HAS REVIEWED THIS DESIGN TO THE INSTALLATION CONTRACTOR. ALPINE DESIGNING ANY FAILURE TO BUILD THE TRUSSES IN CONFORMANCE WITH THE DESIGN, HANDLING, SHIPPING, INSTALLING AND BRACING OF TRUSSES. DESIGN CONTRACTOR, WITH APPLICABLE PROVISIONS OF NDS (NATIONAL DESIGN SPECIFICATION PUBLISHED BY THE AMERICAN FOREST AND PAPER ASSOCIATION) AND TPI, ALPINE CONNECTORS ARE MADE OF 20GA 45TH A653 GR40 GALV. STEEL, EXCEPT AS NOTED. APPLY CONNECTORS TO EACH FACE OF TRUSSES, UNLESS OTHERWISE LOCATED ON THIS DESIGN. POSITION CONNECTORS PER DRAWINGS. ENGINEERING RESPONSIBILITY FOR THE TRUSS COMPONENT BUILDING IS THE RESPONSIBILITY AND USE OF THE DESIGNER. FOR PARTICULAR BUILDING IS THE RESPONSIBILITY OF THE BUILDING DESIGNER, PER ANSI/TPI 1-1993 SECTION 2.

ALPINE
 ENGINEERED PRODUCTS, INC.
 POMPANO BEACH, FLORIDA

MAX LOADING	55 PSF AT 1.33 DUR. FAC.
50 PSF AT 1.25 DUR. FAC.	
47 PSF AT 1.15 DUR. FAC.	
SPACING	24.0"

REF	PIGGYBACK
DATE	10/24/01
DRWG	PIGGYBACK1001
	-ENG DLJ/KAR

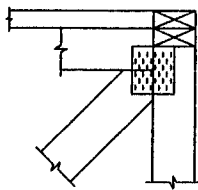
Roof Truss Girder Ledger Detail

CASE 1 - SAME CHORD SIZE AND LEDGER DETAIL

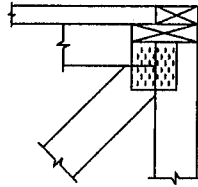
LUMBER SPECIES	MAX. GRAVITY LOAD (plf.)					
	2x4 LEDGER / 2x4 CHORD	2x6 LEDGER / 2x6 CHORD	2x8 LEDGER / 2x8 CHORD	2x10 LEDGER / 2x10 CHORD	2x12 LEDGER / 2x12 CHORD	2x10 LEDGER / 2x10 CHORD
	MIN. NAILING	MAX. NAILING	MIN. NAILING	MAX. NAILING	MIN. NAILING	MAX. NAILING
SYP	508	1016	508	1270	508	1779
DOUG-FIR	465	931	465	1164	465	1629
SPF	396	792	396	991	396	1387

CASE 2 & 3 - CHORD SIZE AND LEDGER SIZE DIFFERENT

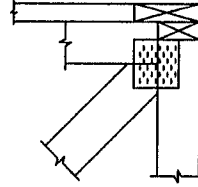
LUMBER SPECIES	MAX. GRAVITY LOAD (plf.)					
	2x4 MIN. MBR. / 2x6 MAX. MBR.	2x6 MIN. MBR. / 2x8 MAX. MBR.	2x8 MIN. MBR. / 2x10 OR 2x12 MAX. MBR.	2x10 MIN. MBR. / 2x12 MAX. MBR.	MIN. NAILING	MAX. NAILING
SYP	508	1016	508	1270	508	1779
DOUG-FIR	465	931	465	1164	465	1629
SPF	396	792	396	991	396	1387



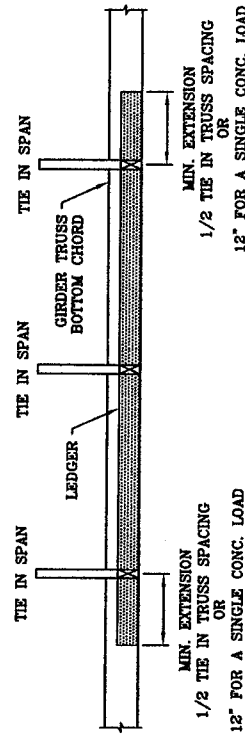
CASE 1
LEDGER AND CHORD
SAME SIZE



CASE 2
LEDGER LARGER
THAN CHORD



CASE 3
LEDGER SMALLER
THAN CHORD



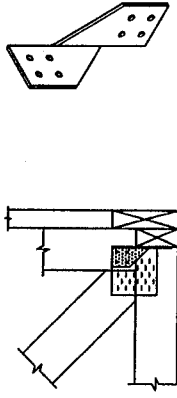
TOE NAILED CONNECTION
MAXIMUM UPLIFT REACTION:

- (2) 16d COMMON (0.162"x3.5") NAILS
- SYP = 195 lb's
- DF = 180 lb's
- HF = 156 lb's
- SPF = 153 lb's

VALUES MAY BE INCREASED BY
APPROPRIATE D.O.L. FACTORS

TOE NAILS TO BE DRIVEN THROUGH
THE BOTTOM CHORD OF THE TIE IN
MEMBER INTO THE LEDGER.

ALTERNATE UPLIFT CONNECTION
USP RT7 OR EQUIVALENT.



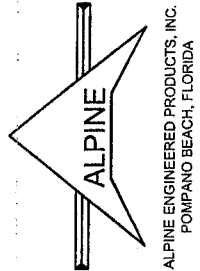
RT7 CONNECTION CAPACITY (SYP/DF) = 585 lb.
RT7 CONNECTION CAPACITY (SPF) = 503 lb.
AT 133% D.O.L.

GENERAL NOTES:

- LEDGER MUST EXTEND 1/2 OF THE TIE IN TRUSS SPACING BEYOND THE LAST TRUSS IN A RUN OF TRUSSES OR 12" LEFT AND RIGHT OF ANY SINGLE TIE IN LOAD.
- THE DIFFERENCE IN CHORD SIZE AND LEDGER SIZE SHALL NOT BE GREATER THAN THE MINIMUM AND MAXIMUM SIZES STATED IN THE TABLE FOR CASES 2 AND 3.
- MAX. TIE IN SPAN(S) REACTION:
= (MAX. LOAD (plf) FROM CHART) X (TIE IN SPAN SPACING (ft.))
MAX. TIE IN SPAN REACTION NOT TO EXCEED:
1080# FOR SYP
1400# FOR DOUG-FIR
780# FOR SPF
- MAX TIE IN SPAN ON CENTER SPACING = 34"
- APPLY LEDGER, ONE FACE ONLY, AS SHOWN. SECURE LEDGER USING 10d COMMON (0.148"x3.0") WIRE NAILS OR (0.131"x3.0") GUN NAILS PER THE FOLLOWING MAX. NAIL SCHEDULE.
2x8's - 2 ROWS @ 5.0" O.C.
2x4's - 2 ROWS @ 5.0" O.C.
2x6's - 4 ROWS @ 5.0" O.C.
- THE SPECIFIED NUMBER OF ROWS CORRESPONDS TO THE MIN. SIZE OF ANY MEMBER THAT IS A PART OF THE CONNECTION.
- THE MIN. NAILING PATTERN FOR ANY CONNECTION IS:
2 ROWS @ 5.0" O.C.

WARNING TRUSSES REQUIRE EXTREME CARE IN FABRICATING, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO HEB-91 CHANGING INSTALLING AND BRACING, PUBLISHED BY TPI TRUSS PLATE INSTALLATION SYSTEMS, INC., 200 MADISON, VT. 05759. FOR SAFETY PRACTICES PRIOR TO PERFORMING THESE FUNCTIONS. THE FUNCTIONS INDICATED, TOP CHORD SHALL HAVE PROPERLY ATTACHED STRUCTURAL PANELS AND BOTTOM CHORD SHALL HAVE A PROPERLY ATTACHED RIGID CEILING.
IMPORTANT FURNISH COPY OF THIS DESIGN TO INSTALLATION CONTRACTOR. ALPINE ENGINEERED PRODUCTS, INC., SHALL NOT BE RESPONSIBLE FOR ANY DEVIATION FROM THIS DESIGN, ANY FAILURE TO BUILD THE TRUSS IN CONFORMANCE WITH TPI OR FABRICATING, HANDLING, SHIPPING, INSTALLING & BRACING OF TRUSSES. DESIGN CONFORMS WITH APPLICABLE PROVISIONS OF NDS (NATIONAL DESIGN SPEC. BY AF&PA) AND TPI. ALPINE CONNECTOR PLATES ARE MADE OF 2018/16 GA (V.H/S/K) ASTM A653 GRADE 40/60 (V.H/S) GALV. STEEL. APPLY PLATES TO EACH FACE OF TRUSS AND, UNLESS OTHERWISE LOCATED ON THIS DESIGN, POSITION PER DRAWINGS 160A-Z. ANY INSPECTION OF TRUSS SHALL BE PER ANNEX A3 OF TPI 1-2002 SEC. 3. A SEAL ON THIS DRAWING INDICATES FACTORY INSPECTION OF THE TRUSS COMPONENT RESPONSIBILITY SOLELY FOR THE TRUSS COMPONENT DESIGN SHOWN. THE DESIGNATION OF THIS COMPONENT FOR ANY BUILDING IS THE RESPONSIBILITY OF THE BUILDING DESIGNER, PER ANSI/TPI 1 SEC. 2.

TC LL	---	PSF	REF	XXXXXXX
TC DL	---	PSF	DATE	xx/xx/xx
BC DL	xxx	PSF	DRWG	XXXXXXXXXXXX
BC LL	---	PSF	-ENG	XXXXXX
TOT. LD.	---	PSF		
DUR. FAC.	1.0/1.15/1.25/1.33			
SPACING	24.0"			



ALPINE ENGINEERED PRODUCTS, INC.
POMPANO BEACH, FLORIDA

COMMON RESIDENTIAL GABLE END WIND BRACING REQUIREMENTS - STIFFENERS

80 MPH FASTEST MILE WIND, 30 FT MEAN HGT, ASCE 7-93, CLOSED BLDG, LOCATED ANYWHERE IN ROOF, I=1.05, CAT I, EXP C, WIND TC DL=5.0 PSF, WIND BC DL=5.0 PSF.

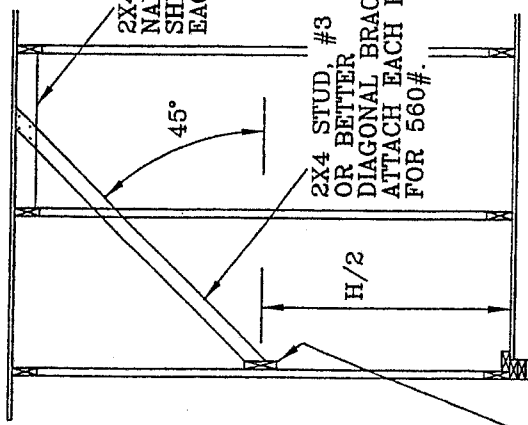
OR

100 MPH 3 SECOND GUST WIND, 30 FT MEAN HGT, ASCE 7-98, CLOSED BLDG, LOCATED ANYWHERE IN ROOF, I=1.00, CAT II, EXP C, WIND TC DL=5.0 PSF, WIND BC DL=5.0 PSF.

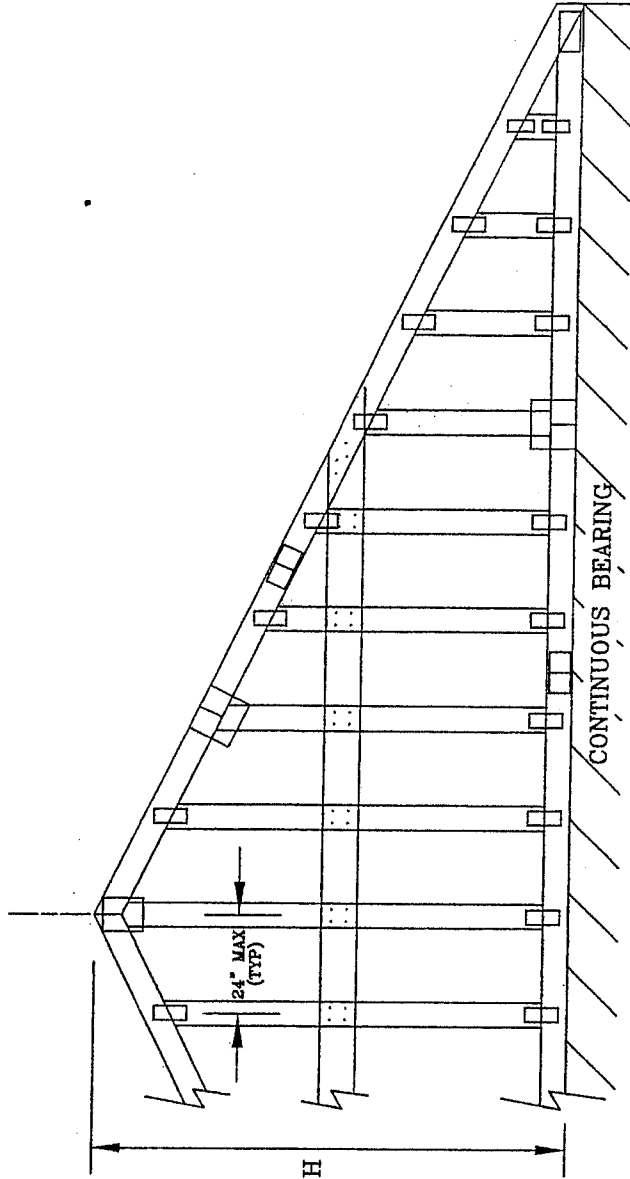
LATERAL CHORD BRACING REQUIREMENTS
 TOP: CONTINUOUS ROOF SHEATHING
 BOT: CONTINUOUS CEILING DIAPHRAGM

SEE ENGINEER'S SEALED DESIGN REFERENCING THIS DETAIL FOR LUMBER, PLATES, AND OTHER INFORMATION NOT SHOWN ON THIS DETAIL.

NAILS: 10d COMMON (0.148"x3")
 OR 0.125"x3" GUN NAILS



2X6 #2 STIFFBACK ATTACHED TO EACH STUD W/ 4 NAILS



H LESS THAN 4'6" - NO STUD BRACING REQUIRED
 H GREATER THAN 4'6" TO 7'6" IN LENGTH
 PROVIDE A 2X6 STIFFBACK AT MID-HEIGHT AND BRACE STIFFBACK TO ROOF DIAPHRAGM EVERY 6'0" (SEE DETAIL BELOW OR REFER TO DRAWING A08030EN0699).
 H GREATER THAN 7'6" TO 12'0" MAX.
 PROVIDE A 2X6 STIFFBACK AT MID-HEIGHT AND BRACE TO ROOF DIAPHRAGM EVERY 4'0" (SEE DETAIL BELOW OR REFER TO DRWG A08030EN0699).

THIS DRAWING REPLACES DRAWING 59469/GE

PSF	REF	GE WHALER
PSF	DATE	09/18/01
PSF	DRWG	GBLBRSTC0901
PSF		-ENG SJP/KAR

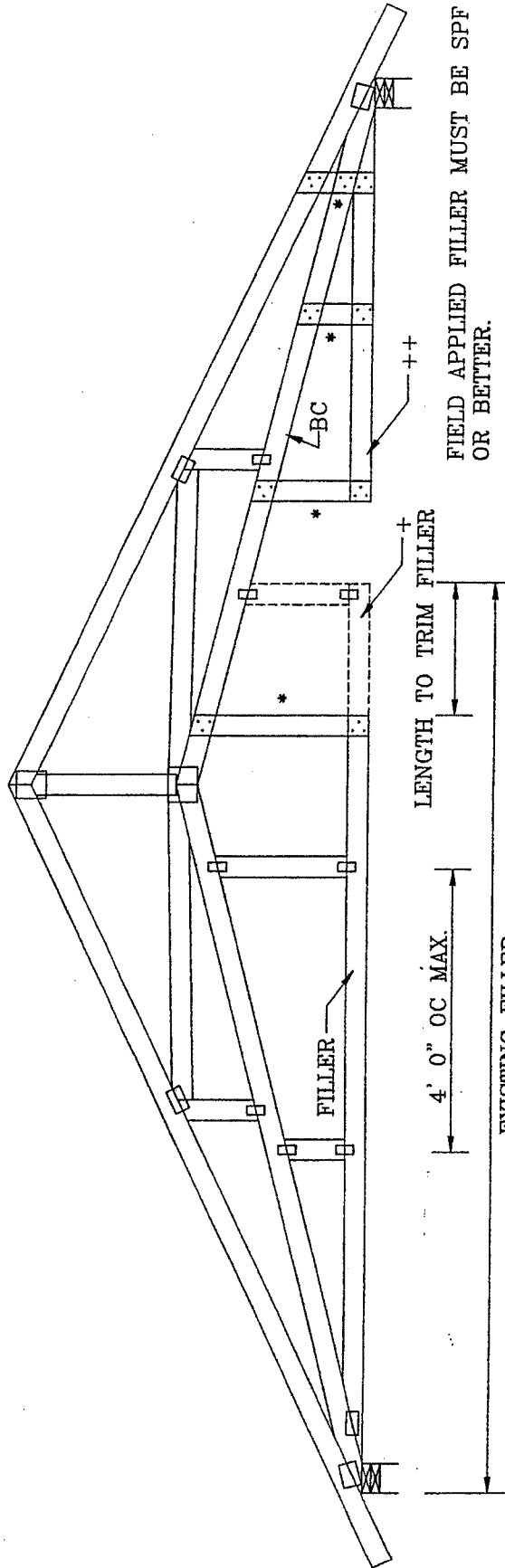
WARNING: TRUSSES REQUIRE EXTREME CARE IN FABRICATING, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO HB-91 HANDLING, INSTALLING AND BRACING, PUBLISHED BY THE ALPINE ENGINEERING PRODUCTS, INC., 583 JONAS DR., SUITE 200, MADISON, WI 53719 FOR SAFETY PRACTICES REGARDING THESE FUNCTIONS. UNLESS OTHERWISE INDICATED, TOP CHORD SHALL HAVE PROPERLY DRILLED STRUCTURAL PANELS AND BOTTOM CHORD SHALL HAVE A PROPERLY ATTACHED RIGID CEILING. FURNISH A COPY OF THIS DESIGN TO THE INSTALLATION CONTRACTOR. ALPINE ENGINEERING PRODUCTS, INC. SHALL NOT BE RESPONSIBLE FOR ANY DEVIATION FROM THIS DESIGN. ANY FAILURE TO BUILD THE TRUSSES IN CONFORMANCE WITH TPI OR FABRICATING, INSTALLING, OR BRACING OF TRUSSES. DESIGN CONFIRMS WITH AMERICAN FOREST AND PAPER INDUSTRIES NATIONAL DESIGN SPECIFICATION FOR THE AMERICAN FOREST AND PAPER INDUSTRIES AND TPI. ALPINE CONNECTORS ARE MADE OF 20GA ASTM A653 GRA0 GALV. STEEL ACCEPTED ON THIS DESIGN. ALPINE CONNECTORS TO EACH FACE OF TRUSS AND, UNLESS OTHERWISE LOCATED ON THIS DESIGN, ACCEPTANCE OF THESE CONNECTIONS PER DRAWINGS 160 A-2. THE SEAL ON THIS DRAWING INDICATES ACCEPTANCE OF THIS DESIGN FOR THE TRUSS COMPONENT DESIGN. THE SEALING OF THIS DRAWING IS THE RESPONSIBILITY OF THE BUILDING DESIGNER, PER ANSI/TPI 1-1995 SECTION 2.

ALPINE ENGINEERING PRODUCTS, INC.
 POMPANO BEACH, FLORIDA

BOTTOM CHORD FILLER REPAIR

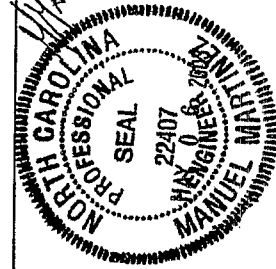
RECOMMENDED REPAIR PROCEDURE

1. MEASURE DISTANCE FOR NEW LENGTH OF FILLER.
 2. APPLY NEW 2X4 STUD GRADE OR BETTER VERTICAL SCAB TO BOTTOM CHORD AND FILLER WITH (3) NAILS 0.131" DIA. x 3.0" OR LARGER, (I.E. 10d OR 16d COMMON, SINKER, GUN, OR 16d BOX NAILS) TO EACH END OF VERTICAL.
 3. CAREFULLY REMOVE EFFECTED CONNECTOR PLATES. USE CARE NOT TO DAMAGE THE REMAINING CONNECTOR PLATES OR LUMBER IN ANY WAY.
 4. TRIM FILLER TO LENGTH, AT EDGE OF NEW VERTICAL SCAB.
- MAXIMUM BOTTOM CHORD LOAD IS 10 PSF.
- + BOTTOM CHORD FILLER TO BE REMOVED. SEE NOTE #3.
- ++ FIELD APPLIED FILLER.
- * 2X4 STUD GRADE OR BETTER VERTICAL SCAB. ATTACH TO BOTTOM CHORD AND FILLER WITH (3) NAILS WITH A MIN. 0.131" DIA. X 3.0" LENGTH.
- REFER TO ENGINEER'S SEALED DESIGN REFERENCING THIS DETAIL FOR ALLOWABLE FILLER DIMENSIONS, PLACEMENT, AND WEBBING.



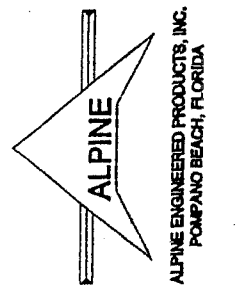
THIS DRAWING REPLACES DRAWING 962.767

REF	BC FILLER REP.
DATE	06/25/99
DRWG	REPBCFIL0699
-ENG MLH/KAR	



WARNINGS TRUSSES REQUIRE EXTREME CARE IN FABRICATING, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO THE 1989 ALPINE TRUSS MANUFACTURING PRACTICES PUBLISHED BY TPI TRUSS PLATE INSTITUTE, 583 DOWNTOWN DRIVE, SUITE 200, WASHINGTON, DC 20004. SAFETY PRACTICES PRIOR TO PERFORMING THESE FUNCTIONS. UNLESS OTHERWISE INDICATED, TOP CHORD SHALL HAVE PROPERLY ATTACHED STRUCTURAL PANELS AND BOTTOM CHORD SHALL HAVE A PROPERLY ATTACHED RIGID CEILING.

IMPORTANT FURNISH A COPY OF THIS DESIGN TO THE INSTALLATION CONTRACTOR. ALPINE ENGINEERED PRODUCTS, INC. SHALL NOT BE RESPONSIBLE FOR ANY DEVIATION FROM THIS DESIGN. FAILURE TO BUILD THE TRUSSES IN CONFORMANCE WITH TPI OR FABRICATING, HANDLING, SHIPPING, INSTALLING AND BRACING OF TRUSSES. DESIGN CONFORMS WITH APPLICABLE PROVISIONS OF THE INTERNATIONAL DESIGN SPECIFICATION PUBLISHED BY THE AMERICAN FOREST AND PAPER ASSOCIATION. INDIVIDUAL CONNECTIONS ARE MADE OF 20GA ASTH A653 GR40 GALV. STEEL EXCEPT AS NOTED. APPLY PENICILLIN CONCEPT PAGE OF TRUSS AND, UNLESS OTHERWISE LOCATED ON THIS DESIGN. POSITIONING CONNECTIONS OF DRAWINGS 160-A-2. THE SEAL ON THIS DRAWING INDICATES ACCEPTANCE OF PROFESSIONAL ENGINEERING RESPONSIBILITY SOLELY FOR THE TRUSS COMPONENT DESIGN. SHOW THE SUITABILITY AND USE OF THIS COMPONENT FOR ANY PARTICULAR BUILDING IS THE RESPONSIBILITY OF THE BUILDING DESIGNER. PER ANSI/TPI 1-1995 SECTION 2.



THIS DRAWING SPECIFIES REPAIRS FOR A TRUSS WITH CRACKED OR BROKEN WEBS.

THIS DESIGN IS VALID ONLY FOR SINGLE PLY TRUSSES WITH 2X4 #3, STUD, OR STANDARD CRACKED OR BROKEN WEBS. NO MORE THAN 1 CRACK OR BREAK PER WEB AND 2 CRACKED OR BROKEN WEBS PER TRUSS ARE ALLOWED. CONTACT THE TRUSS MANUFACTURER FOR ANY REPAIRS THAT DO NOT COMPLY WITH THIS DETAIL.

CRACKED OR BROKEN WEB REPAIR DETAIL

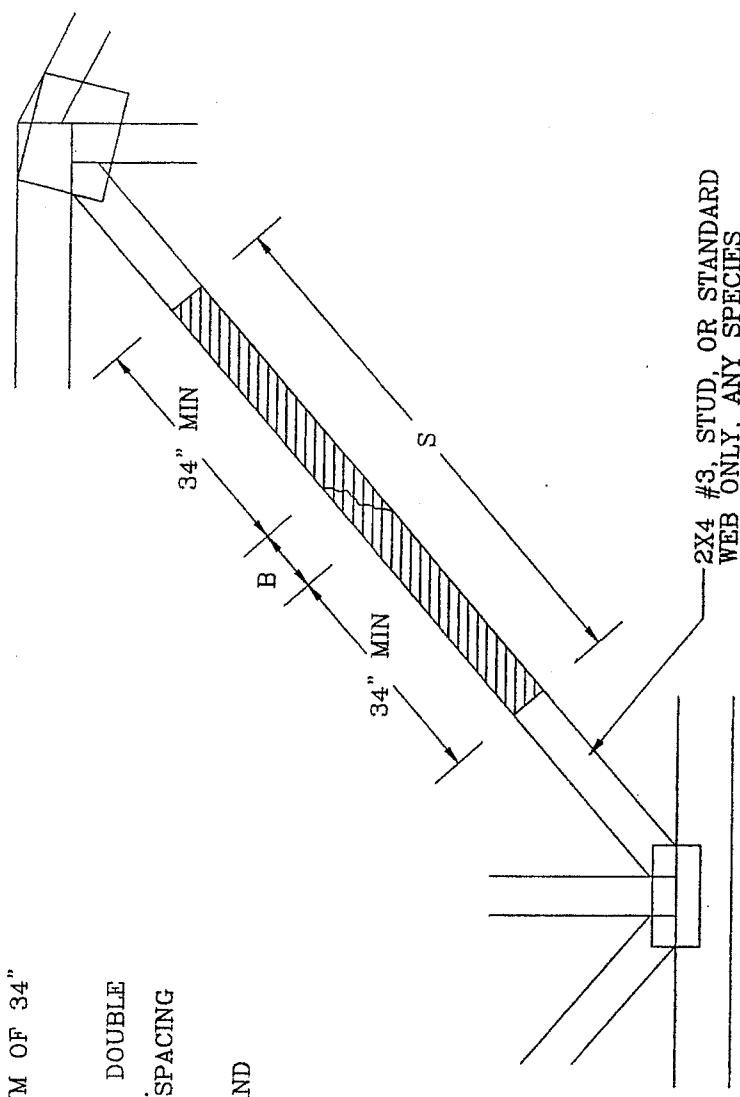
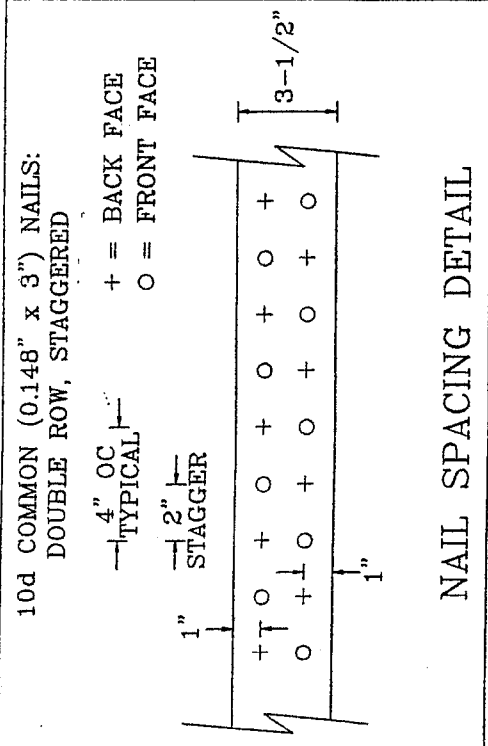
(B) = DAMAGED AREA, 0" MIN TO 12" MAX LENGTH OF CRACK OR BREAK IN WEB.

(S) = (2) 2X4 SCABS, SAME GRADE, SPECIES AS WEB MEMBER. MINIMUM LENGTH OF SCAB MUST BE THE GREATER OF:

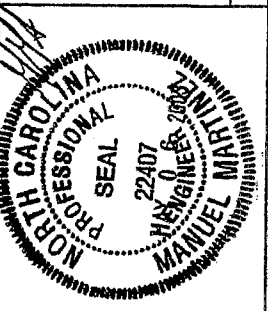
- 68" + LENGTH OF DAMAGED AREA (B), MINIMUM OF 34" ON BOTH SIDES OF THE DAMAGED AREA. OR
- 80% OF THE ORIGINAL WEB LENGTH.

ATTACH ONE SCAB TO EACH FACE OF THE WEB WITH A DOUBLE ROW OF 10d COMMON NAILS SPACED 4" OC STAGGERED. REFER TO NAIL SPACING DETAIL FOR ADDITIONAL NAIL SPACING INFORMATION.

NOTE: FIELD REPAIRS MUST COMPLY WITH ALPINE DESIGNS AND SPECIFICATIONS.



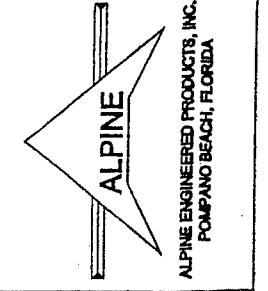
THIS DRAWING REPLACES DRAWINGS HC25094073 & 958,849



TRUSS REPAIR

DAMAGED TRUSSES MUST BE CAREFULLY EVALUATED TO DETERMINE THE EXTENT OF DAMAGE AND THE FEASIBILITY OF REPAIR. IN SOME CASES THE PRUDENT SOLUTION IS TO SCRAP THE DAMAGED TRUSSES AND REBUILD. INTERNAL WOOD FIBER DAMAGE AND EXCESS CONNECTOR STRESS FROM BENDING OR SHOCK CANNOT BE READILY DETECTED. THEREFORE, IT IS VITAL THAT THE TRUSS FABRICATOR AND BUILDING CONTRACTOR CONSIDER THE CAUSE OF THE DAMAGE IN THEIR DECISION WHETHER TO REPAIR OR REBUILD.

REPAIR WORK SHOWN ON THIS DRAWING APPLIES ONLY TO THOSE SECTIONS OF THE TRUSS REPORTED BY THE TRUSS MANUFACTURER TO HAVE BEEN DAMAGED. A QUALIFIED THIRD PARTY INSPECTOR SHALL CHECK TRUSSES TO DETERMINE THE EXTENT OF ANY FURTHER DAMAGE. IF ANY AND VERIFY THAT REPAIRS HAVE BEEN PERFORMED AS INDICATED ON THIS DRAWING.



REF	WEB REPAIR
DATE	06/25/99
DRWG	REPWEBSC0699
-ENG	MLH/KAR
SPACING	24.0"

TOE-NAIL DETAIL

TOE-NAILS TO BE DRIVEN AT AN ANGLE OF APPROXIMATELY THIRTY DEGREES WITH THE PIECE AND STARTED APPROXIMATELY ONE-THIRD THE LENGTH OF THE NAIL FROM THE END OF THE MEMBER.

PER ANSI/AF&PA NDS-1997 SECTION 12.4.1 - EDGE DISTANCE, END DISTANCE, SPACING: "EDGE DISTANCES, END DISTANCES AND SPACINGS FOR NAILS AND SPIKES SHALL BE SUFFICIENT TO PREVENT SPLITTING OF THE WOOD."

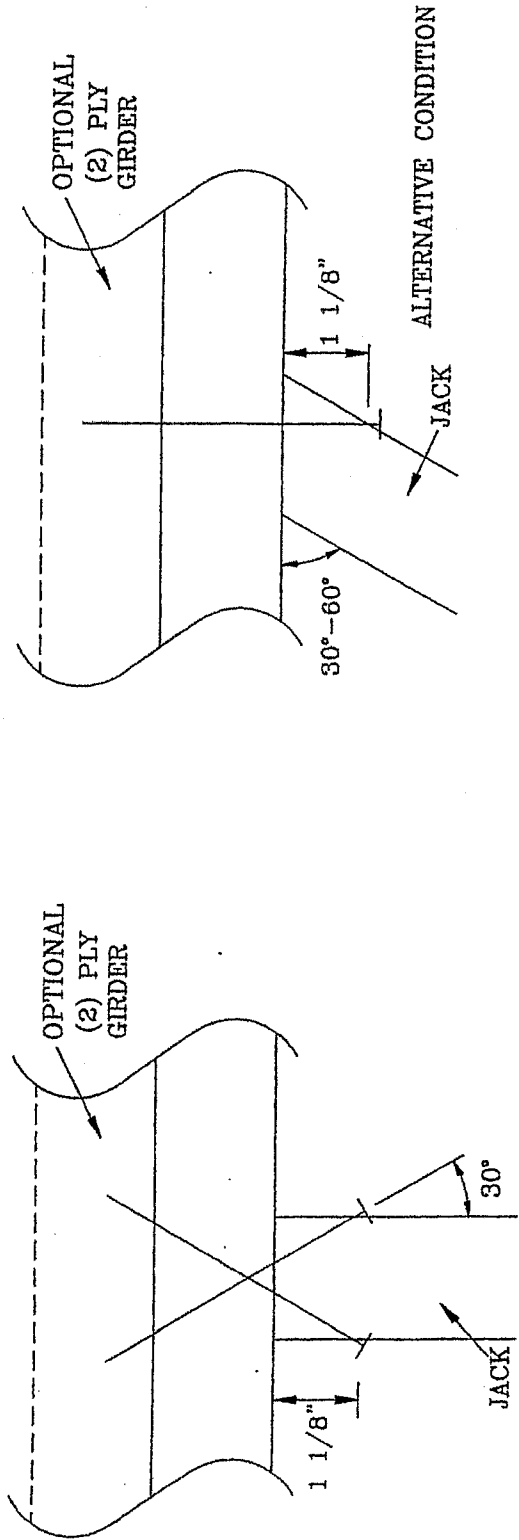
THE NUMBER OF TOE-NAILS TO BE USED IN A SPECIFIC APPLICATION IS DEPENDENT UPON PROPERTIES FOR THE CHORD SIZE, LUMBER SPECIES, AND NAIL TYPE. PROPER CONSTRUCTION PRACTICES AS WELL AS GOOD JUDGEMENT SHOULD DETERMINE THE NUMBER OF NAILS TO BE USED.

THIS DETAIL DISPLAYS A TOE-NAILED CONNECTION FOR JACK FRAMING INTO A SINGLE OR DOUBLE PLY SUPPORTING GIRDER.

MAXIMUM LATERAL RESISTANCE OF 16d (0.162"x3.5") COMMON TOE-NAILS

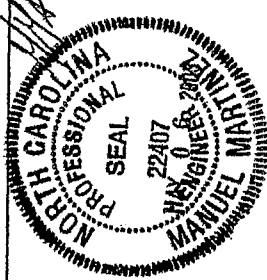
NUMBER OF TOE-NAILS	SOUTHERN PINE		DOUGLAS FIR-LARCH		HEM-FIR		SPRUCE PINE FIR	
	1 PLY	2 PLYS	1 PLY	2 PLYS	1 PLY	2 PLYS	1 PLY	2 PLYS
2	197#	256#	181#	234#	156#	203#	154#	199#
3	296#	383#	271#	351#	234#	304#	230#	298#
4	394#	511#	361#	468#	312#	406#	307#	397#
5	493#	639#	452#	585#	390#	507#	384#	496#

ALL VALUES MAY BE MULTIPLIED BY APPROPRIATE DURATION OF LOAD FACTOR.



THIS DRAWING REPLACES DRAWING 784040

TC LL	PSF	REF	TOE-NAIL
TC DL	PSF	DATE	06/25/99
BC DL	PSF	DRWG	CNTONAIL0699
BC LL	PSF	-ENG	SJP/KAR
TOT. LD.	PSF		
DUR. FAC.	1.00		
SPACING			



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IMPORTANT: PURCHASER SHALL NOTIFY DESIGN TO THE INSTALLATION CONTRACTOR. ALPINE ENGINEERED PRODUCTS, INC. SHALL NOT BE RESPONSIBLE FOR ANY VARIATION FROM THIS DESIGN ANY FAILURE TO BUILD THE TRUSSES IN CONFORMANCE WITH THE DESIGN OR HANDLING, SHIPPING, INSTALLING AND BRACING OF TRUSSES. DESIGN CHANGES WITH APPLICABLE PROVISIONS OF NDS (NATIONAL DESIGN SPECIFICATION) PUBLISHED BY THE AMERICAN FOREST AND PAPER ASSOCIATION AND TPI ALPINE CONNECTORS ARE MADE TO THE 2004 ASTH A659 GR40 GALV. STEEL EXCEPT AS NOTED. APPLY CONNECTORS TO EACH FACE OF TRUSS AND, UNLESS OTHERWISE LOCATED ON THIS DRAWING INDICATES ACCEPTANCE OF PROFESSIONAL ENGINEERING RESPONSIBILITY SOLELY FOR THE TRUSS COMPONENT DESIGN SHOWN. THE SUITABILITY AND USE OF THIS COMPONENT FOR ANY PARTICULAR BUILDING IS THE RESPONSIBILITY OF THE BUILDING DESIGNER, PER ANSI/TPI 1-1995 SECTION 2.

