

# Alpine Engineered Products, Inc.

1950 Marley Drive Haines City, FL 33844  
Florida Engineering Certificate of Authorization Number: 567  
Florida Certificate of Product Approval # FL1999  
Page 1 of 1 Document ID: ISXW487-Z0808155617

Truss Fabricator: Anderson Truss Company  
Job Identification: 6-228--Mike Todd Construction Zebra 1 -- , \*\*  
Truss Count: 25  
Model Code: Florida Building Code 2004  
Truss Criteria: ANSI/TPI-2002(STD)/FBC  
Engineering Software: Alpine Software, Version 7.24.  
Structural Engineer of Record: The identity of the structural EOR did not exist as of  
Address: the seal date per section 61G15-31.003(5a) of the FAC  
Minimum Design Loads: Roof - 40.0 PSF @ 1.25 Duration  
Floor - N/A  
Wind - 110 MPH ASCE 7-02 -Closed

## Notes:

1. Determination as to the suitability of these truss components for the structure is the responsibility of the building designer/engineer of record, as defined in ANSI/TPI 1
2. The drawing date shown on this index sheet must match the date shown on the individual truss component drawing.
3. As shown on attached drawings; the drawing number is preceded by: HCUSR487

Details: TCFILLER-BCFILLER-

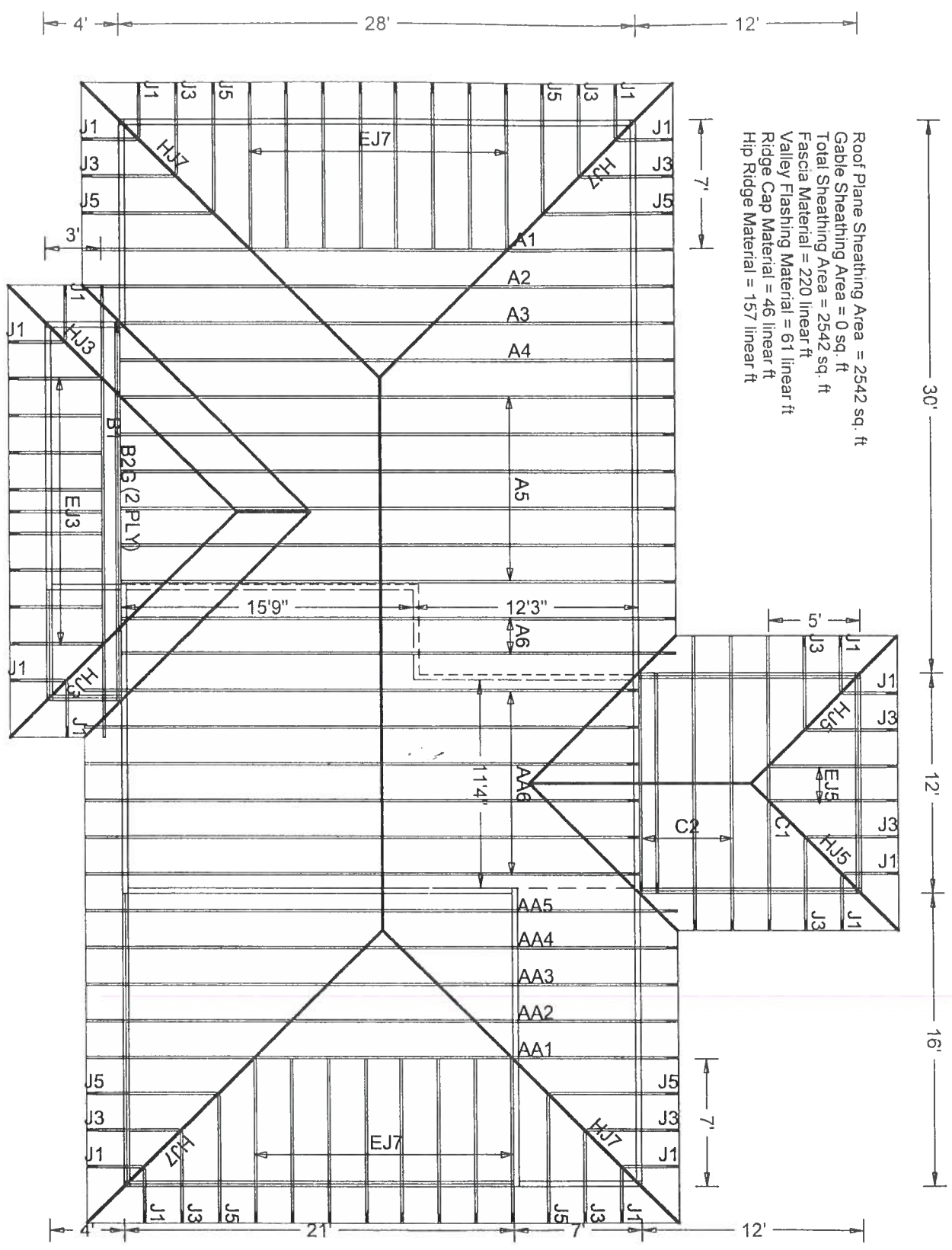
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1	86959--A1		06159106	06/08/06
2	86960--A2		06159098	06/08/06
3	86961--A3		06159099	06/08/06
4	86962--A4		06159107	06/08/06
5	86963--A5		06159108	06/08/06
6	86964--A6		06159100	06/08/06
7	86965--AA1		06159109	06/08/06
8	86966--AA2		06159110	06/08/06
9	86967--AA3		06159111	06/08/06
10	86968--AA4		06159112	06/08/06
11	86969--AA5		06159114	06/08/06
12	86970--AA6		06159101	06/08/06
13	86971--B1		06159115	06/08/06
14	86972--B2G		06159116	06/08/06
15	86973--C1		06159117	06/08/06
16	86974--C2		06159102	06/08/06
17	86975--HJ7		06159006	06/08/06
18	86976--EJ7		06159103	06/08/06
19	86977--J5		06159104	06/08/06
20	86978--J3		06159008	06/08/06
21	86979--J1		06159009	06/08/06
22	86980--HJ5		06159007	06/08/06
23	86981--EJ5		06159010	06/08/06
24	86982--HJ3		06159118	06/08/06
25	86983--EJ3		06159105	06/08/06

Seal Date: 06/08/2006

-Truss Design Engineer-  
Arthur R. Fisher  
Florida License Number: 59687  
1950 Marley Drive  
Haines City, FL 33844



Roof Plane Sheathing Area = 2542 sq. ft  
 Gable Sheathing Area = 0 sq. ft  
 Total Sheathing Area = 2542 sq. ft  
 Fascia Material = 220 linear ft  
 Valley Flashing Material = 61 linear ft  
 Ridge Cap Material = 46 linear ft  
 Hip Ridge Material = 157 linear ft



#6-228 MIKE TODD CONSTRUCTION - ZEBRA 1  
 6/8/06

Scale: 1/8" = 1'

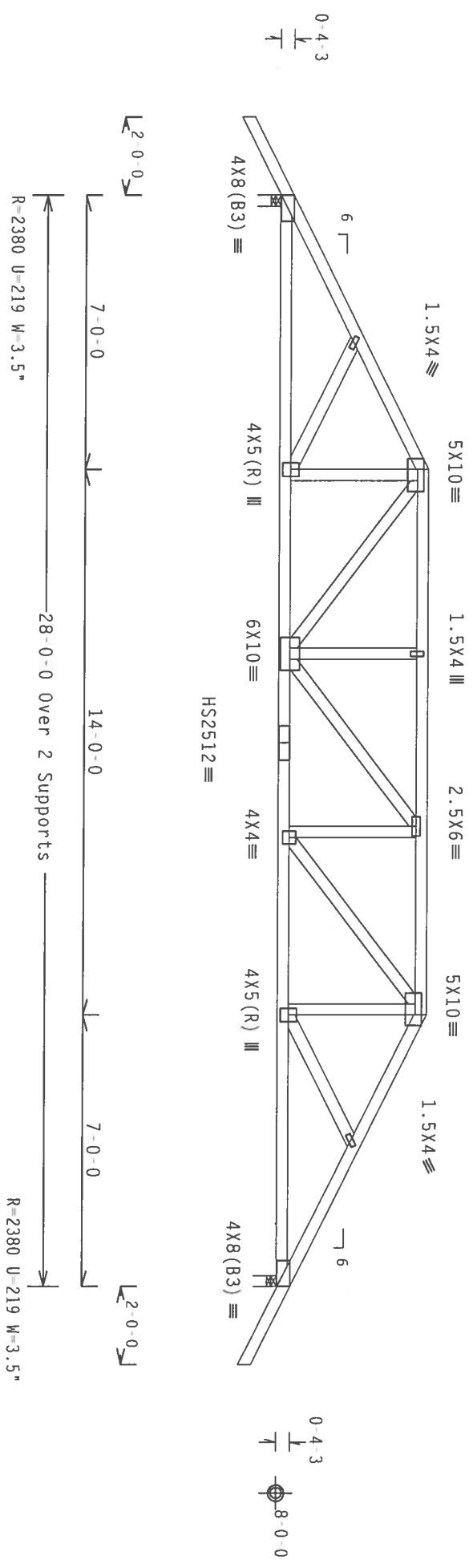
754-4387  
 869-0477 cell

100 chord 4x4 3P #2 Dense  
Bot chord 2x4 SP #2 Dense  
Webs 2x4 SP #3

In lieu of structural panels or rigid ceiling use purlins to brace TC @  
24" OC, BC @ 24" OC.

110 mph wind, 15.00 ft mean hgt, ASCE 7-02, CLOSED bldg, located  
anywhere in roof, CAT II, Exp B, wind TC DL=5.0 psf, wind BC DL=5.0  
psf.

#1 hip supports 7'-0" jacks with no webs.  
Deflection meets L/360 live and L/240 total load. Creep increase  
factor for dead load is 1.50.



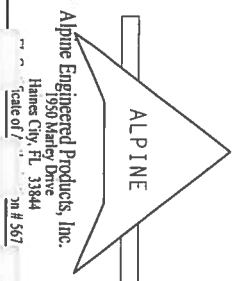
PLT TYP. 20 Gauge HS, Wave

Design Crit: TPI-2002(STD)/FBC  
Cq/RT=1.00(1.25)/10(0)

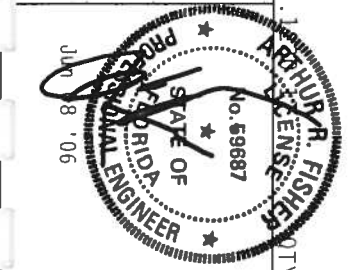
7.24.1

FL/-/4/-/R/-

Scale = .25"/ft.



**ALPINE**  
Engineered Products, Inc.  
1950 Marley Drive  
Haines City, FL 33844  
Scale of 1/4" = 1'-0"



TC LL	20.0 PSF	REF R487--	86959
TC DL	10.0 PSF	DATE	06/08/06
BC DL	10.0 PSF	DRW HCUSR487	06159106
BC LL	0.0 PSF	HC-ENG JB/AF	
TOT.LD.	40.0 PSF	SEON-	8125
DUR.FAC.	1.25		
SPACING	24.0"		

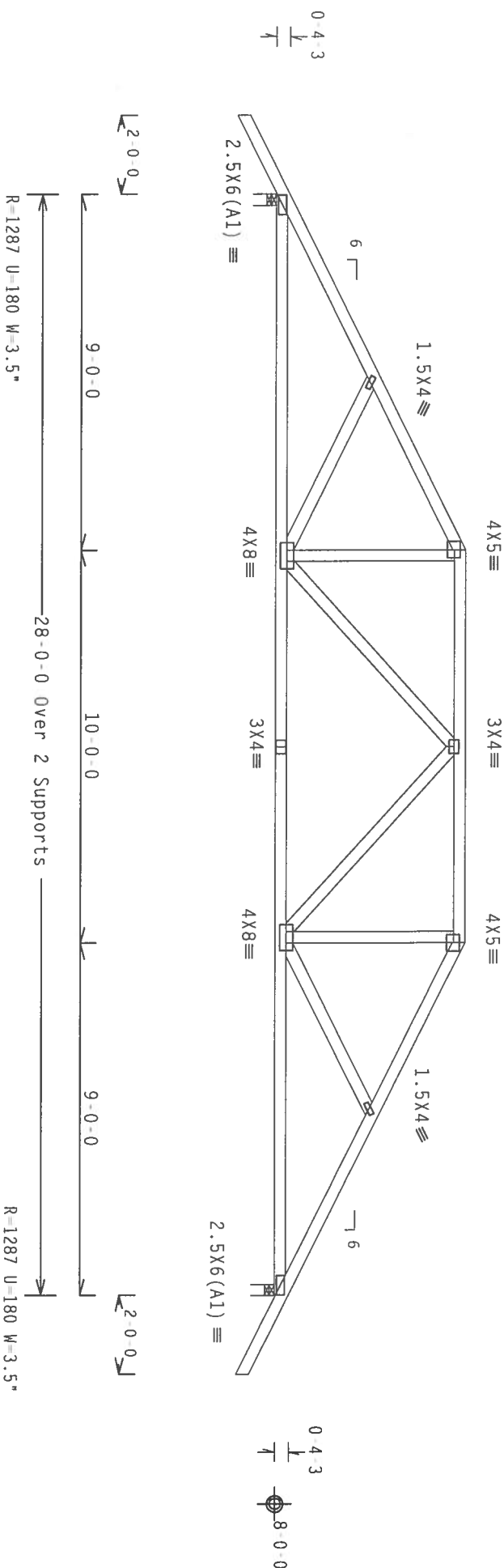
JREF - 1SXW487 Z08

Top chord 2x4 SP #2 Dense  
Bot chord 2x4 SP #2 Dense  
Webs 2x4 SP #3

In lieu of structural panels or rigid ceiling use purlins to brace TC @ 24" OC, BC @ 24" OC.

110 mph wind, 15.00 ft mean hgt, ASCE 7-02, CLOSED bldg, not located within 4.50 ft from roof edge, CAT II, EXP B, wind TC DL=5.0 psf, wind BC DL=5.0 psf.

Deflection meets L/360 live and L/240 total load. Creep increase factor for dead load is 1.50.



PLT TYP. Wave

Design Crit: TPI-2002(STD)/FBC  
Cq/RT=1.00(1.25)/10(0)

7.24.1

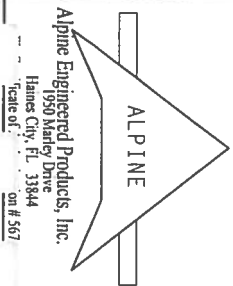
FL/-/4/-/R/-

Scale = .25"/ft.

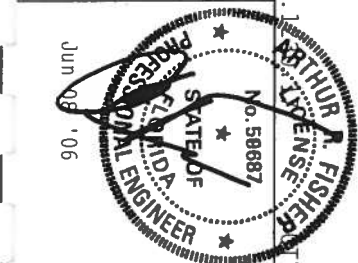
**\*\*\*WARNING\*\*\*** TRUSSES REQUIRE EXTREME CARE IN FABRICATION, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO BCSP 1-03 (BUILDING COMPONENT SAFETY INFORMATION), PUBLISHED BY TPI TRUSS PLATE INSTITUTE, 580 D'ORFORD DR., SUITE 200, MADISON, WI 53719, AND WCA (WOOD TRUSS COUNCIL OF AMERICA, 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 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 TRUSS IN CONFORMANCE WITH TPI:

ON FABRICATING, HANDLING, SHIPPING, INSTALLING & BRACING OF TRUSSES, ALPINE DESIGN CONFORMS WITH APPLICABLE PROVISIONS OF NDS (NATIONAL DESIGN SPEC. BY NIPRA) AND TPI. ALPINE CONNECTION PLATES ARE MADE OF 2018/16GA (K/H/S/K) ASH 6633 GRADE 40/60 (K/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 PLATES FOLLOWED BY (1) SHALL BE PER AMERICAN AS OF TPI 2002 SEC. 3. A SEAL ON THIS DESIGN INDICATES ACCEPTANCE OF PROFESSIONAL ENGINEERING RESPONSIBILITY SOLELY FOR THE TRUSS COMPONENT DESIGN. THIS SEAL IS NOT VALID FOR ANY OTHER USE OF THIS COMPONENT FOR ANY BUILDING IS THE RESPONSIBILITY OF THE BUILDING DESIGNER PER ANSI/TPI 1 SEC. 2.



Alpine Engineered Products, Inc.  
1950 Marley Drive  
Haines City, FL 33844  
Phone: 888-357-3567  
Fax: 888-357-3567

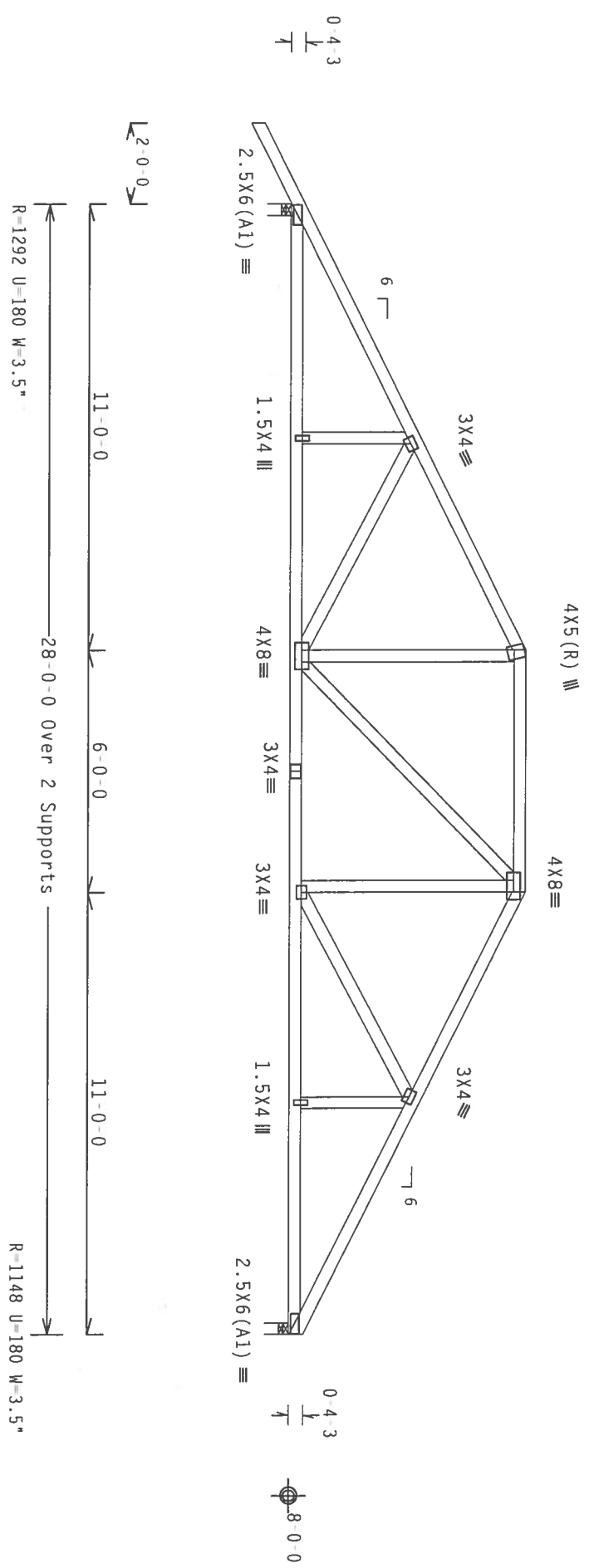


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TC DL	10.0 PSF	DATE	06/08/06
BC DL	10.0 PSF	DRW	HCUR487 06159098
BC LL	0.0 PSF	HC-ENG	JB/AF
TOT. LD.	40.0 PSF	SEGN	8138
DUR. FAC.	1.25		
SPACING	24.0"	URFF -	1SXW487 208

TOP CHORD 2x4 SP #2 Dense  
Bot Chord 2x4 SP #3  
Webs 2x4 SP #3

In lieu of structural panels or rigid ceiling use purlins to brace TC @ 24" OC, BC @ 24" OC.

110 mph wind, 15.00 ft mean hgt, ASCE 7-02, CLUSTED bldg, not located within 4.50 ft from roof edge, CAT II, EXP B, wind TC DL=5.0 psf, wind BC DL=5.0 psf.  
Deflection meets L/360 live and L/240 total load. Creep increase factor for dead load is 1.50.



PLT TYP. Wave

Design Crit: TP1-2002(STD)/FBC  
Cq/RT=1.00(1.25)/10(0)

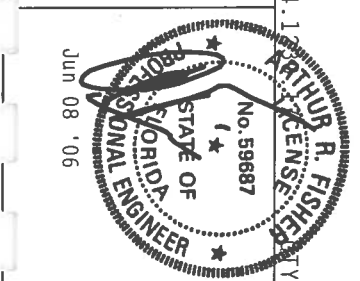
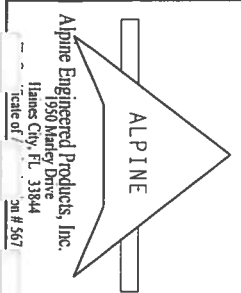
7.24.13

Scale = .25"/ft.

\*\*WARNING\*\* TRUSSES REQUIRE EXTERIOR GALT IN FABRICATION, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO BCST 1.03 (BUILDING COMPONENT SAFETY INFORMATION), PUBLISHED BY THE TRUSS PLATE INSTITUTE, 503 D'AMORIO DR., SUITE 200, MADISON, WI 53719, AND WICA (WOOD TRUSS COUNCIL OF AMERICA, 6200 ENTERPRISE LN., MADISON, WI 53719) FOR SAFETY PRACTICES PRIOR TO PERFORMING THESE FUNCTIONS. UNLESS OTHERWISE INDICATED, TOP CHORD SHALL HAVE PROPERLY ATTACHED STRUCUTUAL 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 TRUSS IN CONFORMANCE WITH TP1 OR FABRICATING, HANDLING, SHIPPING, INSTALLING & BRACING OF TRUSSES, DESIGN CONDITIONS WITH APPLICABLE PROVISIONS OF AISC (QUALITY DESIGN SPEC. BY AISC) AND TP1. ALPINE

PLATES TO EACH FACE OF TRUSS AND, UNLESS OTHERWISE LOCATED ON THIS DESIGN, POSITION PER DRAWINGS T604.2. UNLESS OTHERWISE NOTED, TRUSSES SHALL BE DESIGNED TO MEET THE REQUIREMENTS OF TP1-2002, SEC. 3 FOR THE TRUSS COMPONENTS. THE ACCEPTANCE OF THIS DESIGN BY THE TRUSS MANUFACTURER SHALL BE A CONDITION OF THE TRUSS COMPONENT DESIGN. THE SUITABILITY AND USE OF THIS COMPONENT FOR ANY BUILDING IS THE RESPONSIBILITY OF THE BUILDING DESIGNER PER ANSI/TP1 1 SEC. 2.

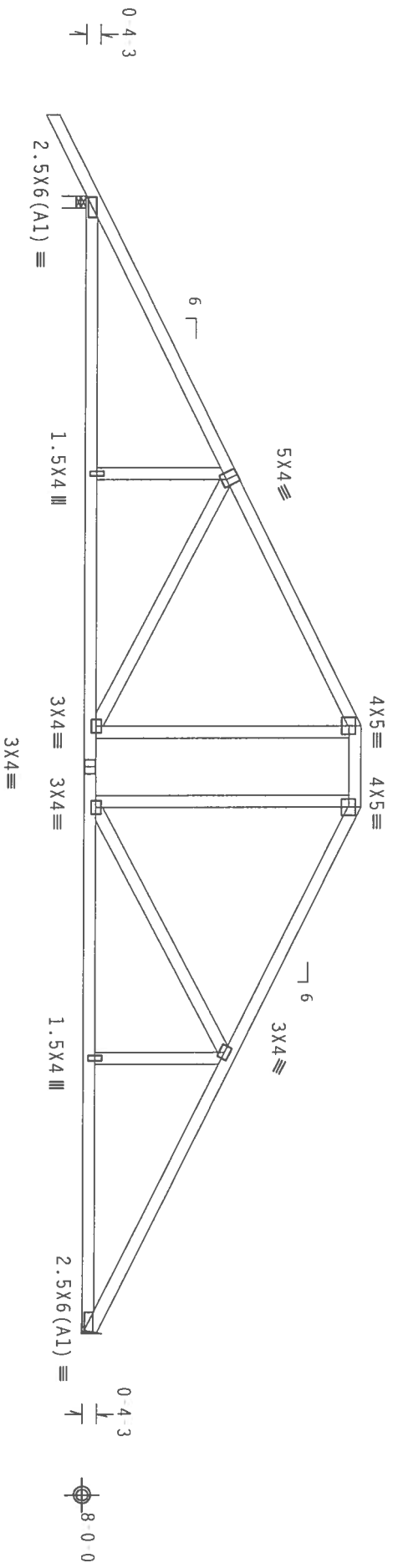


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TC DL	10.0 PSF	DATE	06/08/06
BC DL	10.0 PSF	DRW	HCUSR487 06159099
BC LL	0.0 PSF	HC-ENG	JB/AF
TOT. LD.	40.0 PSF	SEQN-	8152
DUR. FAC.	1.25		
SPACING	24.0"	JRFF -	1SXW487 Z08

10P chord 2x4 3' #2 dense  
Bot chord 2x4 SP #2 dense  
Webs 2x4 SP #3

H = recommended connection based on manufacturer tested capacities and calculations. Conditions may exist that require different connections than indicated. Refer to manufacturer publication for additional information.

110 mph wind, 15.00 ft mean hgt, ASCE 7-02, CLOSED bldg, not located within 4.50 ft from roof edge, CAT II, EXP B, wind TC DL=5.0 psf, wind BC DL=5.0 psf.  
In lieu of structural panels or rigid ceiling use purlins to brace TC @ 24" OC, BC @ 24" OC.  
Deflection meets L/360 live and L/240 total load. Creep increase factor for dead load is 1.50.



PLT TYP. Wave

Design Crit: TPI-2002(STD)/FBC

Cq/RT=1.00(1.25)/10(0)

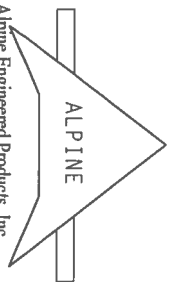
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FL/-/4/-/R/-

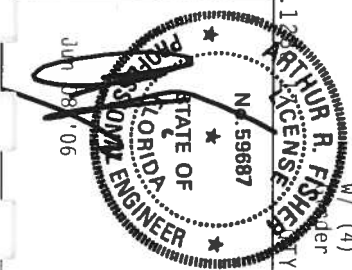
Scale = .25"/ft.

**\*\*WARNING\*\*** TRUSSES REQUIRE EXTREME CARE IN FABRICATION, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO BCST 1.03 (BUILDING COMPONENT SAFETY INFORMATION), PUBLISHED BY TPI (TRUSS PLATE INSTITUTE), 563 D. GORDON DR., SUITE 200, MADISON, WI 53719, AND WCA (WOOD TRUSS COUNCIL OF AMERICA, 6200 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 A COPY OF THIS DESIGN TO THE INSTALLATION CONTRACTOR. 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 WDS (NATIONAL DESIGN SPEC. BY AIA/AIA) AND TPI. ALPINE PLATES TO EACH FACE OF TRUSS AND, UNLESS OTHERWISE LOCATED ON THIS DESIGN, POSITION PER DRAWINGS 160A Z.



Alpine Engineered Products, Inc.  
1950 Marley Drive  
Haines City, FL 33844  
on # 567



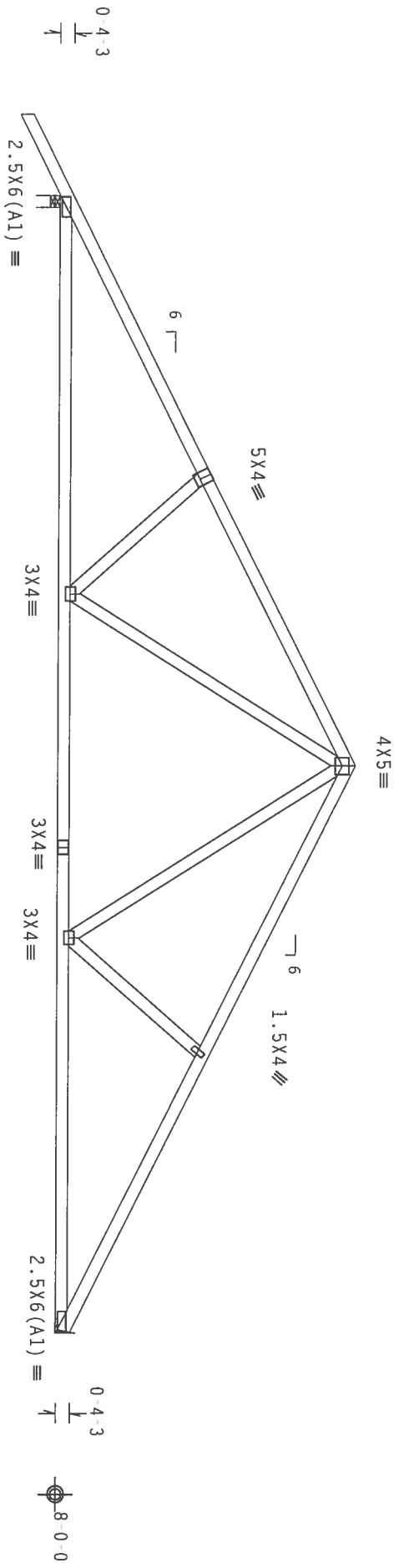
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TC DL	10.0 PSF	DATE 06/08/06
BC DL	10.0 PSF	DRW HCUR487 06159107
BC LL	0.0 PSF	HC-ENG JB/AF
TOT. LD.	40.0 PSF	SEQN- 8169
DUR. FAC.	1.25	
SPACING	24.0"	JRFF- 1SXW487 208



TOP CHORD 2x4 SP #2 DENSE  
Bot chord 2x4 SP #2 DENSE  
Webs 2x4 SP #3

H = recommended connection based on manufacturer tested capacities and calculations. Conditions may exist that require different connections than indicated. Refer to manufacturer publication for additional information.

110 mph wind, 15.00 ft mean hgt, ASCE 7-02, CLOSED bldg, not located within 4.50 ft from roof edge, CAT II, EXP B, wind TC DL=5.0 psf, wind BC DL=5.0 psf.  
In lieu of structural panels or rigid ceiling use purlins to brace TC @ 24" OC, BC @ 24" OC.  
Deflection meets L/360 live and L/240 total load. Creep increase factor for dead load is 1.50.



R-1293 U-180 W-3.5"

Design Crit: TP1-2002(STD)/FBC

Cq/RT=1.00(1.25)/10(0)

7.24.1

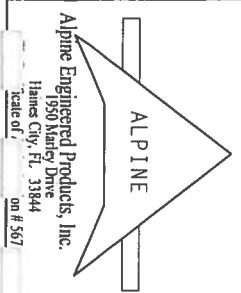
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Scale = .25"/ft.

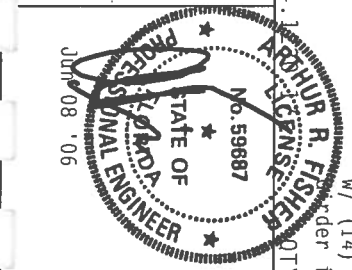
**\*\*WARNING\*\*** TRUSSES REQUIRE EXTERIOR CARE IN FABRICATION, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO BC51 1.03 (BUILDING COMPONENT SAFETY INFORMATION), PUBLISHED BY TPI TRUSS PLATE INSTITUTE, 583 D'AMORE DR., SUITE 200, MADISON, WI 53719, AND WICK (WOOD TRUSS COUNCIL OF AMERICA, 6000 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 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 TRUSS IN CONFORMANCE WITH TPI OR FABRICATING, HANDLING, SHIPPING, INSTALLING & BRACING OF TRUSSES, DESIGN CONFORMS WITH APPLICABLE PROVISIONS OF NDS (NATIONAL DESIGN SPEC. BY AIA/PA) AND TPI. ALPINE CONNECTION PLATES ARE MADE OF 2018/1604 (H/SX) ASH 6000 GRADE, 40/60 (K, W/S) GALV. STEEL. APPLY ALL APPLICABLE CONNECTIONS TO THE TRUSS AND, UNLESS OTHERWISE LOCATED ON THIS DESIGN, POSITION PER DRAWINGS 160A Z.

ALPINE ENGINEERED PRODUCTS, INC. SHALL BE PERMITTED AS OF TP11 2002 SEC.3. A SEAL ON THIS DRAWING INDICATES ACCEPTANCE OF THE DESIGN AND USE OF THIS COMPONENT FOR ANY BUILDING IS THE RESPONSIBILITY OF THE BUILDING DESIGNER PER AISI/TP1 SEC. 2.



Alpine Engineered Products, Inc.  
1950 Marley Drive  
Haines City, FL 33844  
on #367

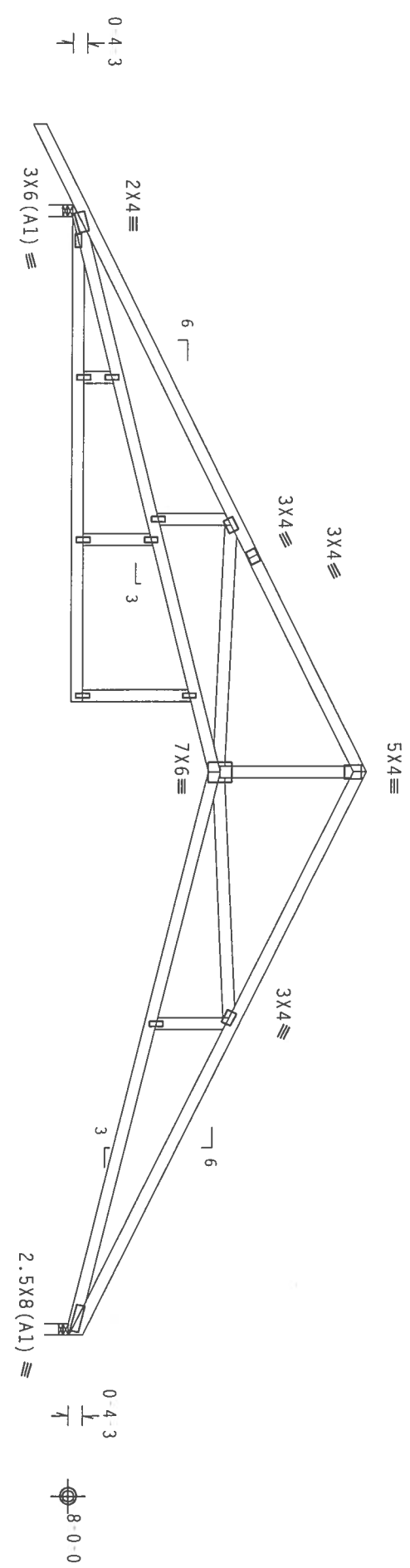


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TC DL	10.0 PSF	DATE 06/08/06
BC DL	10.0 PSF	DRW HCUR487 06159108
BC LL	0.0 PSF	HC-ENG JB/AF
TOT. LD.	40.0 PSF	SEQN 8194
DUR. FAC.	1.25	
SPACING	24.0"	JRFF-1SXW487 Z08

100' chord 2x4 SP #2 Dense  
Webs 2x4 SP #3  
Filler 2x4 SP #3

SEE DWGS TCFILLER1103 AND BCFILLER1103 FOR FILLER DETAILS.  
LATERALLY BRACE BOTTOM CHORD ABOVE FILLER AT 24" O.C. AND TOP  
CHORD UNDER FILLER AT 24" OC INCLUDING A LATERAL BRACE AT  
CHORD ENDS.

110 mph wind, 15.00 ft mean hgt, ASCE 7-02, CLOSED bldg, not located  
within 4.50 ft from roof edge, CAT II, EXP B, wind TC DL=5.0 psf, wind  
BC DL=5.0 psf.  
Calculated horizontal deflection is 0.19" due to live load and 0.29"  
due to dead load.  
In lieu of structural panels use purlins to brace TC @ 24" OC.  
Deflection meets L/360 live and L/240 total load. Creep increase  
factor for dead load is 1.50.



12'-3" 14'-0" 14'-0" 15'-9" 14'-0" 28'-0" Over 2 Supports  
R-1292 U-180 W-3.5" R-1157 U-180 W-3.5"

Note: All Plates Are 1.5X4 Except As Shown.

PLT TYP. Wave Design Crit: TPI-2002(STD)/FBC

Cq/RT=1.00(1.25)/10(0)

7.24.1

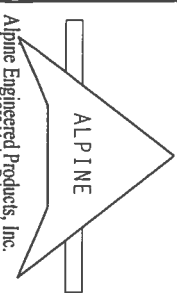
FL/-/4/-/R/-

Scale = .25"/ft.

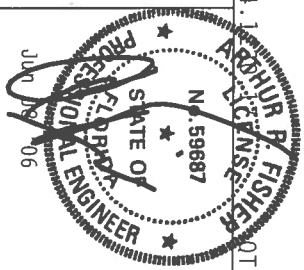
**\*\*WARNING\*\*** TRUSSES REQUIRE EXTREME CARE IN FABRICATION, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO BCSE 1-03 (BUILDING COMPONENT SAFETY INFORMATION), PUBLISHED BY TPI (TRUSS PLATE INSTITUTE), 1000 DOWNEY DR., SUITE 200, MADISON, WI 53719, AND NCSA (NATIONAL COUNCIL OF AMERICA, 6000 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 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 TRUSS IN CONFORMANCE WITH TPI OR FABRICATING, HANDLING, SHIPPING, INSTALLING & BRACING OF TRUSSES, DESIGN CONDITIONS WITH APPLICABLE PROVISIONS OF AISC (NATIONAL DESIGN SPEC. BY AISC) AND TPI. ALPINE

CONNECTION PLATES ARE MADE OF 20/16/16GA (W/4/S/8) ASH A653 GRADE 40/60 (W/4/S/5) GALV. STEEL. APPLY PLATES TO EACH FACE OF TRUSS AND, UNLESS OTHERWISE LOCATED ON THIS DESIGN, POSITION PER DRAWINGS 160A Z. THE TRUSS SHALL BE PERMANENTLY MARKED AS OF TPI 2002 SEC.3. A SEAL ON THIS DRAWING INDICATES THE TRUSS IS THE PROPERTY OF ALPINE ENGINEERED PRODUCTS, INC. THE TRUSS COMPONENT DESIGNER SHALL BE RESPONSIBLE FOR THE RESPONSIBILITY OF THE BUILDING DESIGNER PER ANSI/TPI 1 SEC. 2.



Alpine Engineered Products, Inc.  
1950 Marley Drive  
James City, FL 33844  
on #567



TC LL	20.0 PSF	REF R487--	86964
TC DL	10.0 PSF	DATE	06/08/06
BC DL	10.0 PSF	DRW HCUR487	06159100
BC LL	0.0 PSF	HC-ENG JB/AF	*
TOT. LD.	40.0 PSF	SEQN-	8219
DUR. FAC.	1.25		
SPACING	24.0"	JRFF-15XW487	Z08

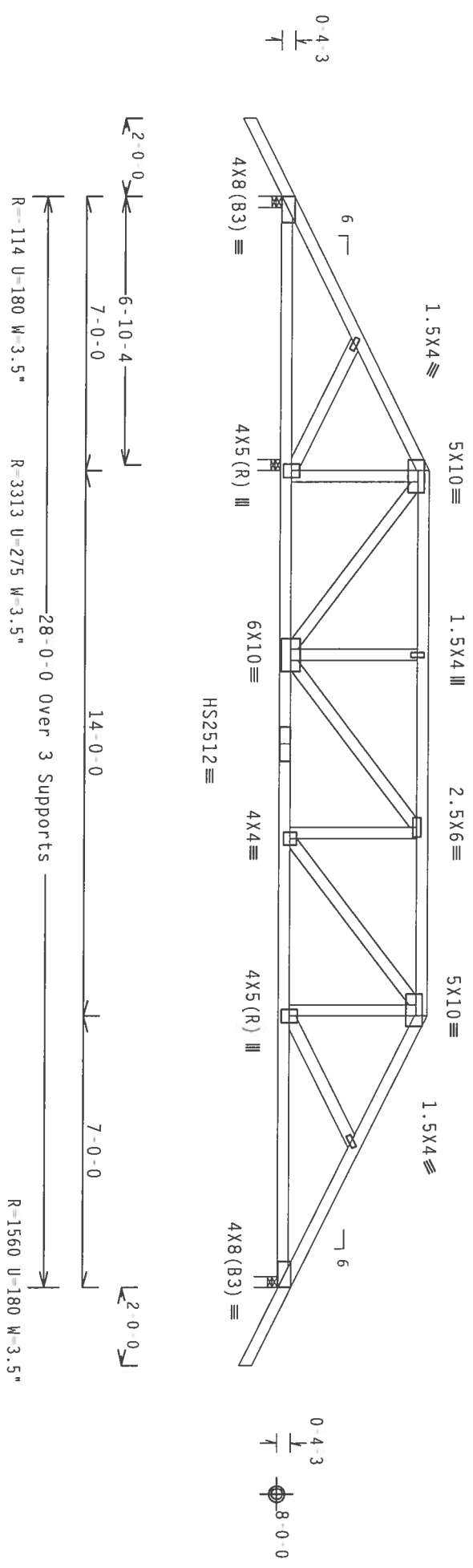


100 chord 2x4 SP #2 Dense  
Webs 2x4 SP #3

In lieu of structural panels or rigid ceiling use purlins to brace TC @ 24" OC, BC @ 24" OC.

110 mph wind, 15.00 ft mean hgt, ASCE 7-02, CLOSED bldg, located anywhere in roof, CAT II, EXP B, wind TC DL=5.0 psf, wind BC DL=5.0 psf.

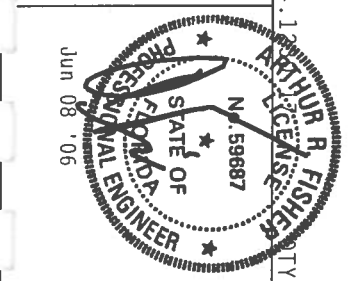
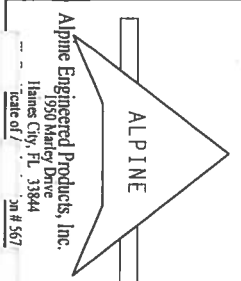
#1 hip supports 7'-0" jacks with no webs.  
Deflection meets L/360 live and L/240 total load. Creep increase factor for dead load is 1.50.



PLT TYP. 20 Gauge HS Wave  
Design Crit: TPI-2002 (STD)/FBC  
Cq/RT=1.00(1.25)/10(0)

**\*\*WARNING\*\*** TRUSSES REQUIRE EXTERIOR CASE IN FABRICATION, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO BC51.1.03 (BUILDING COMPONENT SAFETY INFORMATION), PUBLISHED BY TPI TRUSS PLAYING AND BUILDING, 1500 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 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 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 CONNECTION PLATES ARE MADE OF 2018/16GA (W.H/S/K) ASTM A653 GRADE 40/60 (K, K/H, S) GALV. STEEL. APPLY PLATES TO EACH FACE OF TRUSS AND, UNLESS OTHERWISE LOCATED ON THIS DESIGN, POSITION PER DRAWINGS 160A, Z, AND 160B. CONNECTION OF PLATES FOLLOWS BY (1) SHALL BE PER ANNEX A3 OF TPI 1.2002 SEC.3. A SEAL ON THIS ANNEX 1.2002 SEC.3. PROFESSIONAL ENGINEERING RESPONSIBILITY SOCIETY FOR THE TRUSS COMPONENT DESIGN SHOWN THE SPLITTING AND USE OF THIS COMPONENT FOR ANY BUILDING IS THE RESPONSIBILITY OF THE BUILDING DESIGNER PER ANSI/TPI 1 SEC. 2.



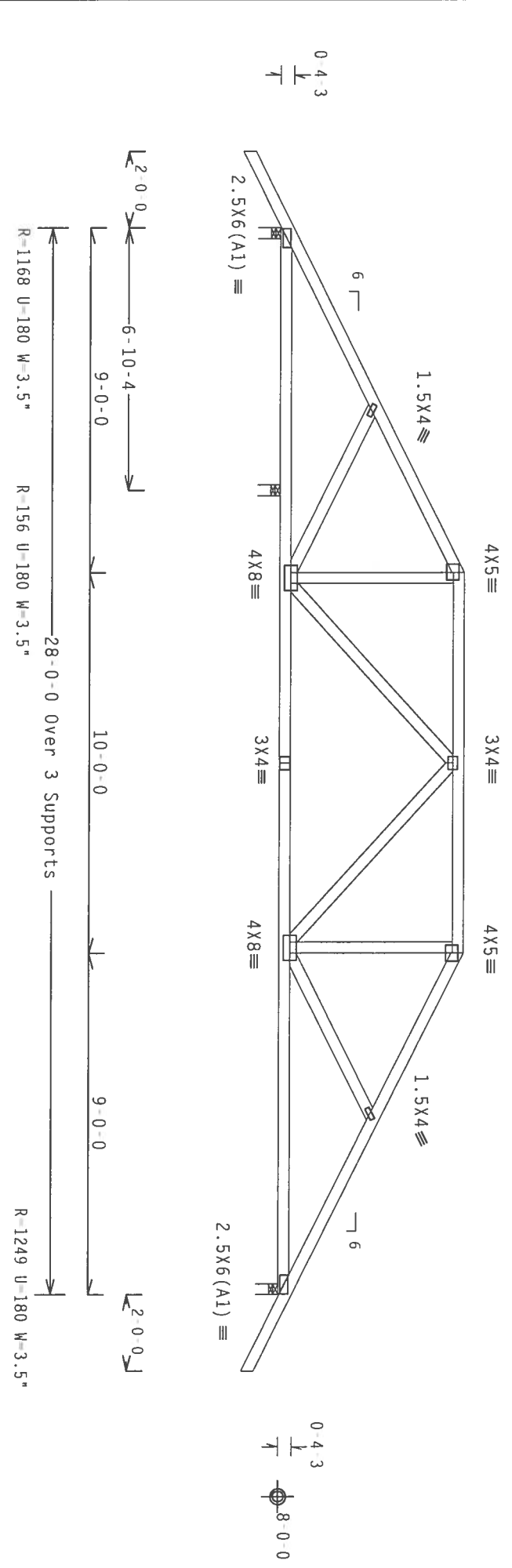
TC LL	20.0 PSF	REF R487 - 86965
TC DL	10.0 PSF	DATE 06/08/06
BC DL	10.0 PSF	DRW HCUR487 06159109
BC LL	0.0 PSF	HC-ENG JB/AF
TOT. LD.	40.0 PSF	SEGN 8129
DUR. FAC.	1.25	
SPACING	24.0"	JREF- 1SXW487 208

100 chord 2x4 SP #2 Dense  
Webs 2x4 SP #3

In lieu of structural panels or rigid ceiling use purlins to brace TC @  
24" OC, BC @ 24" OC.

110 mph wind, 15.00 ft mean hgt, ASCE 7-02, CLUSTD bldg, not located  
within 4.50 ft from roof edge, CAT II, EXP B, wind TC DL=5.0 psf, wind  
BC DL=5.0 psf.

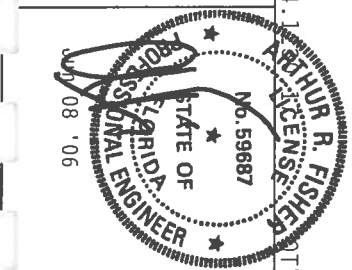
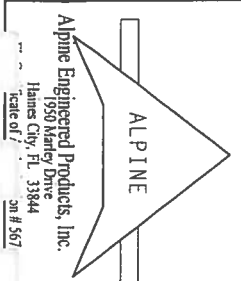
Deflection meets L/360 live and L/240 total load. Creep increase  
factor for dead load is 1.50.



PLT TYP. Wave  
Design Crit: TP1-2002(STD)/FBC  
Cq/RT=1.00(1.25)/10(0) 7.24.1  
Scale = .25"/ft.

**\*\*WARNING\*\*** TRUSS'S REQUIRE EXTERIOR GALT IN FABRICATION, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO BCST 1.03 (BUILDING COMPONENT SAFETY INFORMATION), PUBLISHED BY TP1 (TRUSS PLATE INSTITUTE, 503 D'AMORENIO DR., SUITE 200, MADISON, WI 53719) AND WCA (WOOD TRUSS COUNCIL OF AMERICA, 6200 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.

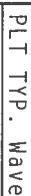
**\*\*IMPORTANT\*\*** FURNISH A COPY OF THIS DESIGN TO THE INSTALLATION CONTRACTOR. ALPINE ENGINEERED PRODUCTS, INC. SHALL NOT BE RESPONSIBLE FOR ANY DEVIATION FROM THIS DESIGN. ANY FAILURE TO BUILD THE TRUSS IN CONFORMANCE WITH TP1 OR FABRICATING, HANDLING, SHIPPING, INSTALLING & BRACING OF TRUSSES, UNLESS OTHERWISE INDICATED, SHALL BE THE RESPONSIBILITY OF THE 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 TP1 OR FABRICATING, HANDLING, SHIPPING, INSTALLING & BRACING OF TRUSSES, UNLESS OTHERWISE INDICATED, SHALL BE THE RESPONSIBILITY OF THE INSTALLATION CONTRACTOR.



FL/-/4/-/1/R/-		Scale = .25"/ft.	
TC LL	20.0 PSF	REF	R487 - 86966
TC DL	10.0 PSF	DATE	06/08/06
BC DL	10.0 PSF	DRW	HCUSR487 06159110
BC LL	0.0 PSF	HC-ENG	JB/AF
TOT. LD.	40.0 PSF	SEON	8144
DUR. FAC.	1.25		
SPACING	24.0"	JREF	1SXW487 208

110 mph wind, 15.00 ft mean hgt, ASCE / 02, CLOSED bldg, not located within 4.50 ft from roof edge, CAT 11, EXP B, wind TC DL=5.0 psf, wind BC DL=5.0 psf.

Deflection meets  $L/360$  live and  $L/240$  total load. Creep increase factor for dead load is 1.50.



Design Crit: TPI-2002(STD)/FBC

Cq/RT=1.00(1.25)/10(0) 7.24.1241.1(CNS) 1

TY:1 FL/-/4/-/-/R/-

Scale = .25"/Ft.

**\*WARNING\*** FRAMES REQUIRE EXTERIOR CARE IN FABRICATION, HANDLING, SHIPPING, INSTALLING, AND BRACING. REFER TO SPEC 1.03 (BUILDING COMPONENT SAFETY INFORMATION), PUBLISHED BY TPI (TRUSS PLATE INSTITUTE, 5805 O'DONORIO DR., SUITE 200, MADISON, WI 53719) AND WTA (WOOD TRUSS COUNCIL OF AMERICA, 6500 ENTERPRISE, IN MADISON, WI 53719) FOR ADVISORY 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 TIGHTENING CLADDING.


**\*\*IMPORTANT\*\* FURNISH A COPY OF THIS DESIGN TO THE INSTALLATION CONTRACTOR.**

TRUSS IN CONFORMANCE WITH TPI; OR FABRICATING, HANDLING, SHIPPING, INSTALLING & BRACING

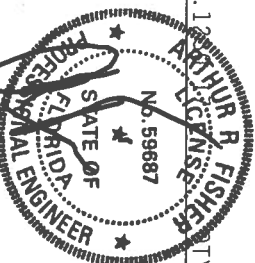
CONNECTOR PLATES ARE MADE OF 20/18/16GA (H, H/S, K) ASTM A653 GRADE 40/60 (H, K/H, S) GALV. STEEL. APPLY

ANY INSPECTION OF PLATES FOLLOWED BY (V) SHALL BE PER ANNEX A3 OF IP11 2002 SEC.3. A SEAL ON THIS DRAWING INDICATES ACCEPTANCE OF PROFESSIONAL ENGINEERING RESPONSIBILITY SOLELY FOR THE TRUSS COMPONENT

DESIGNER, THE CONTRACTOR AND USE OF THIS CONSTRUCTION AND BUILDING IS THE RESPONSIBILITY OF THE BUILDING DESIGNER PER ANSI/AP1 1 SEC. 2.



**Alpine Engineered Products, Inc.**  
 1950 Hanger Drive  
 Titusville, FL 32784  
 Telephone: 407/261-5671  
 Telex: 5671



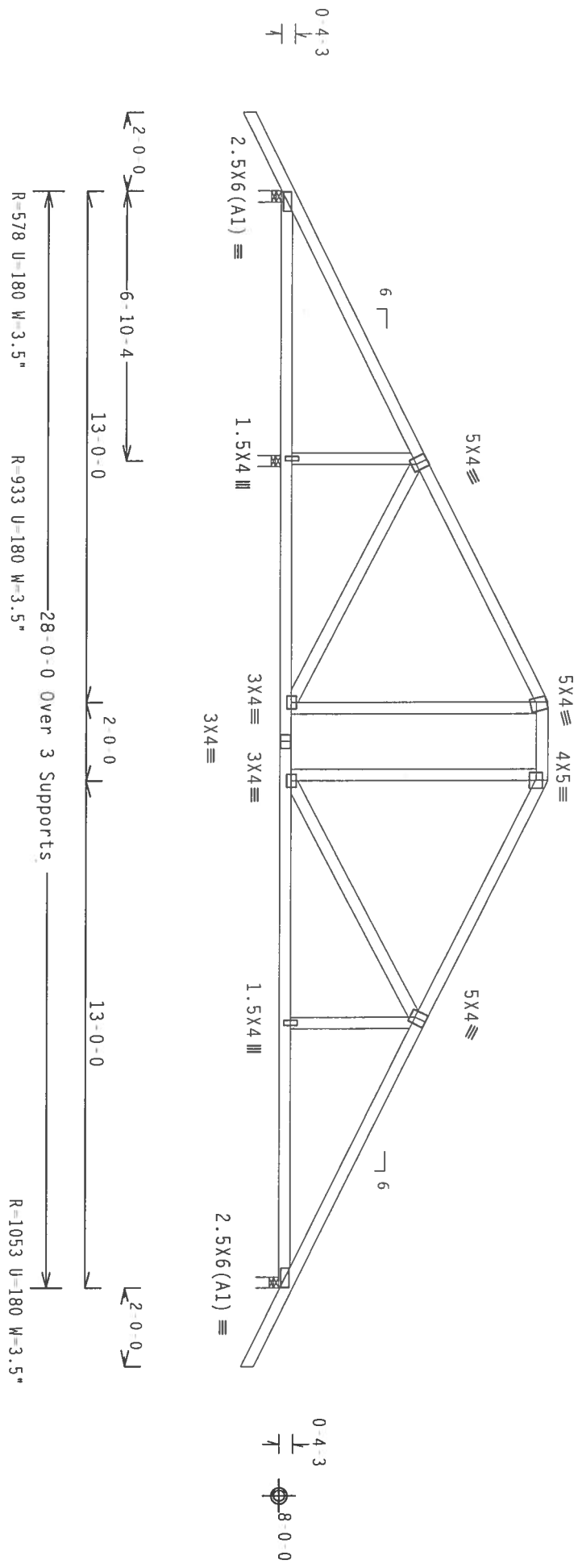
TC LL	20.0 PSF	REF	R487 - 86967
TC DL	10.0 PSF	DATE	06/08/06
BC DL	10.0 PSF	DRW	H05H487 06159111
BC LL	0.0 PSF	HC-ENG	JB/AF
TOT.LD.	40.0 PSF	SEQN-	8159
DUR.FAC.	1.25		
SPACING	24.0"	JRFF-	15XW487 Z08

TOP CHORD 2x4 SP #2 UENSE  
BOT CHORD 2x4 SP #2 DENSE  
WEBS 2x4 SP #3

In lieu of structural panels or rigid ceiling use purlins to brace TC @ 24" OC, BC @ 24" OC.

110 mph wind, 15.00 ft mean hgt, ASCE 7-02, CLOSED bldg, not located within 4.50 ft from roof edge, CAT II, EXP B, wind TC DL=5.0 psf, wind BC DL=5.0 psf.

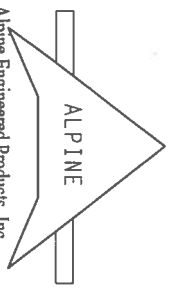
Deflection meets L/360 live and L/240 total load. Creep increase factor for dead load is 1.50.



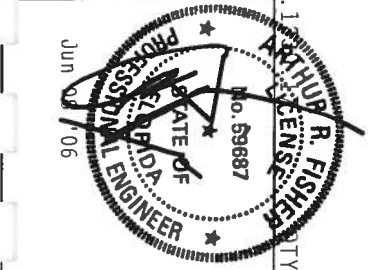
PLT TYP. Wave Design Cnt: TP1-2002(STD)/FBC Cq/RT=1.00(1.25)/10(0) 7.24.1 ARTHUR R. FISHER, P.E. JUN 11 2006

\*\*WARNING\*\* TRUSSES REQUIRE EXTREME CARE IN FABRICATION, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO RC31.03 (BUILDING COMPONENT SAFETY INFORMATION), PUBLISHED BY TPI (TRUSS PLATE INSTITUTE), 563 D'ONOFIO DR., SUITE 200, MADISON, WI 53719, AND WCA (WOOD TRUSS COUNCIL OF AMERICA, 6200 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 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 TRUSS IN CONFORMANCE WITH TPI OR FABRICATING, HANDLING, SHIPPING, INSTALLING A BRACING OF TRUSSES, DESIGN CONFORMS WITH APPLICABLE PROVISIONS OF THIS NATIONAL DESIGN SPEC. BY AREA AND TPI. ALPINE PLATES TO EACH FACE OF TRUSS AND, UNLESS OTHERWISE LOCATED ON THIS DESIGN, POSITION PER DRAWINGS 160A, Z, AND INSPECTION OF PLATES FOLLOWED BY (1) SHALL BE PERFORMED AS OF TPI 2002 SEC.3. A SEAL ON THIS DESIGN INDICATES THE SIGNATURE OF PROFESSIONAL ENGINEERING RESPONSIBILITY SOLELY FOR THE TRUSS COMPONENT DESIGN. ANY USE OF THIS COMPONENT FOR ANY BUILDING IS THE RESPONSIBILITY OF THE BUILDING DESIGNER PER ANSI/TPI 1 SEC. 2.



Alpine Engineered Products, Inc.  
1950 Marley Drive  
James City, FL 33844  
Phone #567



TC LL	20.0 PSF	REF	R487 - 86968
TC DL	10.0 PSF	DATE	06/08/06
BC DL	10.0 PSF	DRW	HCSR487 06159112
BC LL	0.0 PSF	HC-ENG	JB/AF
TOT.LD.	40.0 PSF	SEQN	8180
DUR.FAC.	1.25		
SPACING	24.0"	JRFF	15XW487 Z08

110 mph wind, 15.00 ft mean hgt, ASCE 7-02, CLOSED bldg, not located within 4.50 ft from roof edge, CAT I, EXP B, wind TC DL=5.0 psf, wind BC DL=5.0 psf.

Deflection meets  $L/360$  live and  $L/240$  total load. Creep increase factor for dead load is 1.50.



Design Crit: TPI-2002(STD)/FBC

$$C_q/RT=1.00(1.25)/10(0)$$

7.24.1

FL/-/4/-/-/R/-

Scale = .25"/Ft.


**WARNING:** TRUSSES REQUIRING EXTERIOR CARE IN FABRICATION, HANDLING, SHIPPING, INSTALLING AND BRACING REFER TO BEST PRACTICES (BUILDING COMPONENT SAFETY INFORMATION), CONSULTED BY TPI (TRUSS PLANET INSTITUTE, 503 D'ORVILLE RD., SUITE 200, HADSPEN, MI 49319) AND WCA (WOOD TRUSS COUNCIL OF AMERICA, 6200 CHESTERPARK, HADSPEN, MI 49319) FOR SAFETY PRACTICES PRIOR TO PERFORMING THESE FUNCTIONS. TRUSSES OUTSIDE, IMMOBILIZED FOR CHORD SHALL HAVE PROPERLY ATTACHED STRUCTURAL PANELS AND BOTTOM CHORD SHALL HAVE A PROPERLY ATTACHED CHORD CEILING.

**\*\* IMPORTANT \*\*** FURNISH A COPY OF THIS DESIGN TO THE INSTALLATION CONTRACTOR.

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 & BRACING OF TRUSSES, DESIGN COMPLIANCE WITH APPLICABLE PROVISIONS OF MDS (NATIONAL DESIGN SPEC. BY AISC) AND TPI. CONNECTION PLATES, THE MEMBER END CONNECTIONS, ALPHITE

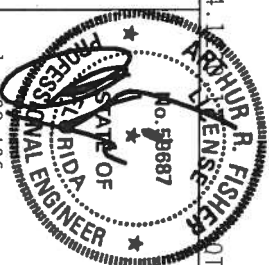
CONNECTION PLATES SHALL BE MADE OF 20/16 TONN (W.H/ST) ASHIN ASSOCI 40/60 (R. K/H/ST) GALV. STEEL. PLATES TO EACH FACE OF TRUSS AND, UNLESS OTHERWISE LOCATED ON THIS DESIGN, POSITION PER DRAWINGS APPY. 2 ANY INSPECTION OF PLATES FOLLOWED BY (1) SHALL BE PER ANNEX A3 OF TPII 2002 SEC. 3. A SEAL ON THIS DRAWING INDICATES ACCEPTANCE OF PROTECTIVE ENGINEERING. DECONSTRUCTION OF THE TRUSS COMPONENT

DESIGN SHOWN THE SUITABILITY AND USE OF THIS COMPONENT FOR ANY BUILDING IS THE RESPONSIBILITY OF THE BUILDING DESIGNER PER ANSI/TPI 1 SEC. 2.



ALPINE

1950 Marley Drive  
Haines City, FL 33844  
Scale of 1" = 1/2" on #567



TC LL	20.0 PSF	REF	R487 - 86969
TC DL	10.0 PSF	DATE	06/08/06
BC DL	10.0 PSF	DRW	HCUSR487 06159114
BC LL	0.0 PSF	HC-ENG	JB/AF
TOT.LD.	40.0 PSF	SEQN-	8201
DUR.FAC.	1.25		
SPACING	24.0"	JRFF -	15XW4R7 Z08

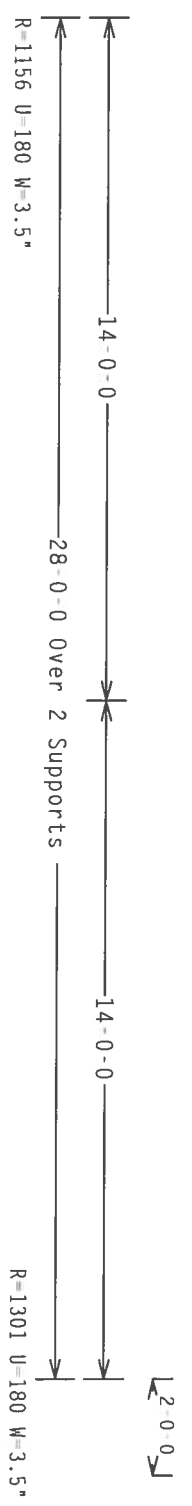
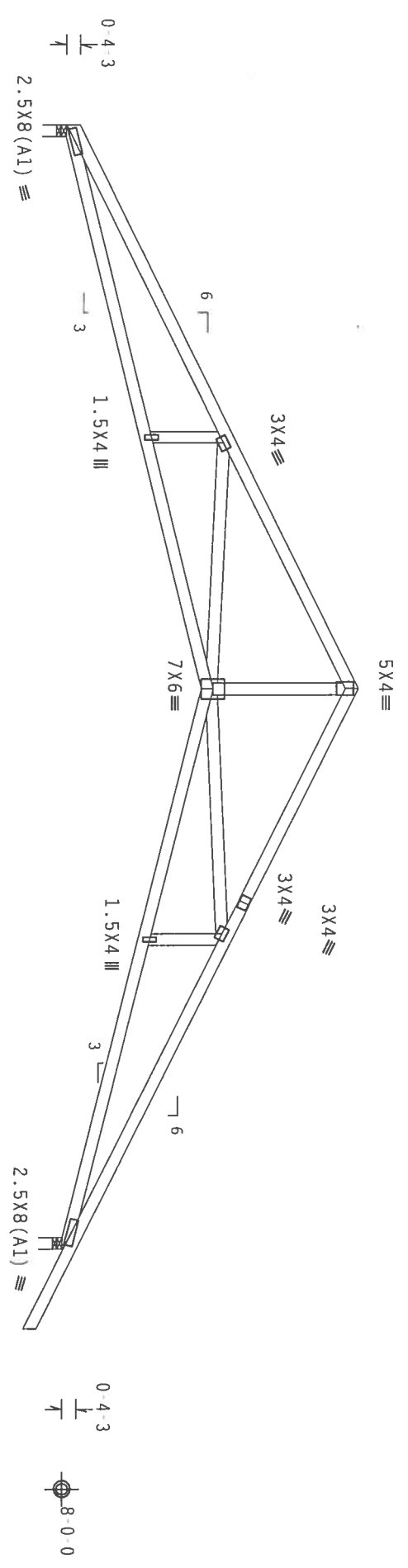
top chord 2x4 sp #2 dense  
Bot chord 2x4 sp #2 Dense  
Webs 2x4 sp #3

Calculated horizontal deflection is 0.19" due to live load and 0.30" due to dead load.

Deflection meets L/360 live and L/240 total load. Creep increase factor for dead load is 1.50.

110 mph wind, 15.00 ft mean hgt, ASCE 7-02, CLOSED bldg, not located within 4.50 ft from roof edge, CAT II, EXP B, wind TC DL=5.0 psf, wind BC DL=5.0 psf.

In lieu of structural panels or rigid ceiling use purlins to brace TC @ 24" OC, BC @ 24" OC.



PLT TYP. Wave  
Design Cmt: TPI-2002(STD)/FBC  
Cq/RT=1.00(1.25)/10(0)



Scale = .25"/ft.

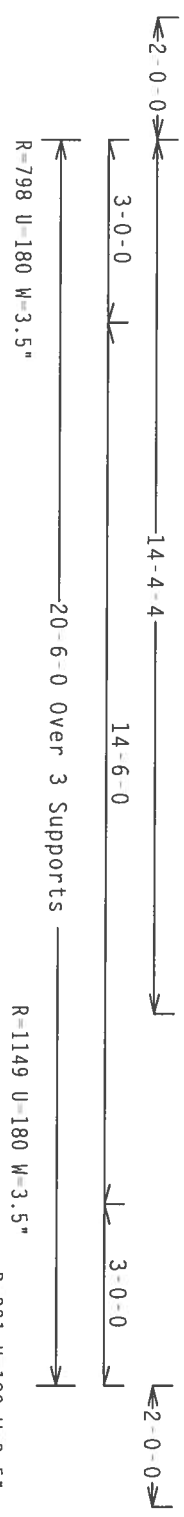
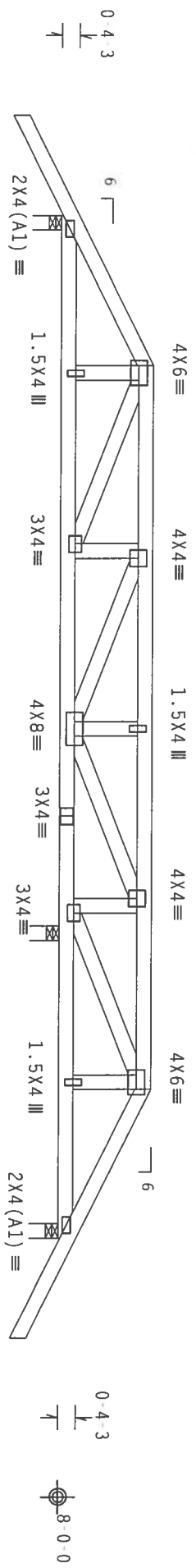
ALPINE		ALPINE ENGINEERED PRODUCTS, INC.	
1990 Marley Drive		JAMES CITY, FL 33844	
State of FL		08/06	
TPI-2002(STD)/FBC		REF R487-- 86970	
TC LL		20.0 PSF	
TC DL		10.0 PSF	
BC DL		10.0 PSF	
BC LL		0.0 PSF	
TOT. LD.		40.0 PSF	
DUR. FAC.		1.25	
SPACING		24.0"	
JREF- 1SXW4R7 Z08		DATE 06/08/06	
		DRW HCUR487 06159101	
		HC-ENG JB/AF	
		SEQN- 8209	

top chord 2x4 or #2 uense  
Bot chord 2x4 SP #2 Dense  
Webs 2x4 SP #3

In lieu of structural panels or rigid ceiling use purlins to brace TC @ 24" OC, BC @ 24" OC.

110 mph wind, 15.00 ft mean hgt, ASCE 7-02, CLOSED bldg, located anywhere in roof, CAT II, EXP B, wind TC DL=5.0 psf, wind BC DL=5.0 psf.

#1 hip supports 3-0-0 jacks with no webs.  
Deflection meets L/360 live and L/240 total load. Creep increase factor for dead load is 1.50.



PLT TYP. Wave

Design Cmt: TPI-2002(STD)/FBC  
Cq/RT=1.00(1.25)/10(0)

FL/-/4/-/R/-

Scale = .3125"/Ft.

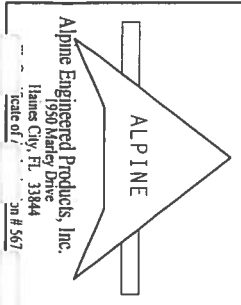
**\*\*WARNING\*\*** TRUSSES REQUIRE EXTREME CARE IN FABRICATION, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO BCST 1.03 (BUILDING COMPONENT SAFETY INFORMATION), PUBLISHED BY TPI (TRUSS PLATE INSTITUTE, 563 D'ONOFRIO DR., SUITE 200, MADISON, WI 53719), AND WCA (WOOD TRUSS COUNCIL OF AMERICA, 6300 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 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 TRUSS IN CONFORMANCE WITH TPI OR FABRICATING, HANDLING, SHIPPING, INSTALLING & BRACING OF TRUSSES, DESIGN CONFORMS WITH APPLICABLE PROVISIONS OF NDS (NATIONAL DESIGN SPEC. BY APA) AND TPI. ALPINE PLATES TO EACH FACE OF TRUSS AND, UNLESS OTHERWISE LOCATED ON THIS DESIGN, POSITION PER DRAWINGS 1604.2.

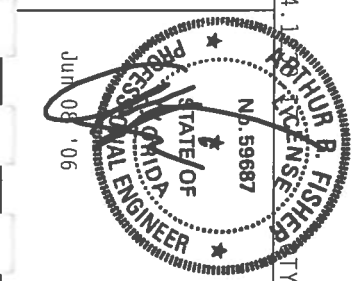
ALPINE ENGINEERED PRODUCTS, INC. SHALL NOT BE RESPONSIBLE FOR ANY DEVIATION FROM THIS DESIGN. ANY FAILURE TO BUILD THE TRUSS IN CONFORMANCE WITH TPI OR FABRICATING, HANDLING, SHIPPING, INSTALLING & BRACING OF TRUSSES, DESIGN CONFORMS WITH APPLICABLE PROVISIONS OF NDS (NATIONAL DESIGN SPEC. BY APA) AND TPI. ALPINE PLATES TO EACH FACE OF TRUSS AND, UNLESS OTHERWISE LOCATED ON THIS DESIGN, POSITION PER DRAWINGS 1604.2.

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 APA) AND TPI. ALPINE PLATES TO EACH FACE OF TRUSS AND, UNLESS OTHERWISE LOCATED ON THIS DESIGN, POSITION PER DRAWINGS 1604.2.

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 APA) AND TPI. ALPINE PLATES TO EACH FACE OF TRUSS AND, UNLESS OTHERWISE LOCATED ON THIS DESIGN, POSITION PER DRAWINGS 1604.2.



Alpine Engineered Products, Inc.  
1950 Marley Drive  
James City, FL 33844  
on #567



TC LL	20.0 PSF	REF R487-- 86971
TC DL	10.0 PSF	DATE 06/08/06
BC DL	10.0 PSF	DRW HCUSR487 06159115
BC LL	0.0 PSF	HC-ENG JB/AF
TOT.LD.	40.0 PSF	SEQN- 8235
DUR.FAC.	1.25	
SPACING	24.0"	JRFF- 1SXW487 Z08



TOP CHORD 2x4 SP #2 Dense  
Bot Chord 2x8 SP #1 Dense  
Webs 2x4 SP #3 : W6 2x4 SP #2 Dense:

SPECIAL LOADS

(LUMBER DUR.FAC.=1.25 / PLATE DUR.FAC.=1.25)  
TC - From 62 PLF at 0.00 to 62 PLF at 20.50  
BC - From 20 PLF at 0.00 to 20 PLF at 20.50  
BC - 1147 LB Conc. Load at 2.06, 4.06, 6.06, 8.06, 10.06  
12.06, 14.06

In lieu of structural panels or rigid ceiling use purlins to brace TC @  
24" OC, BC @ 24" OC.

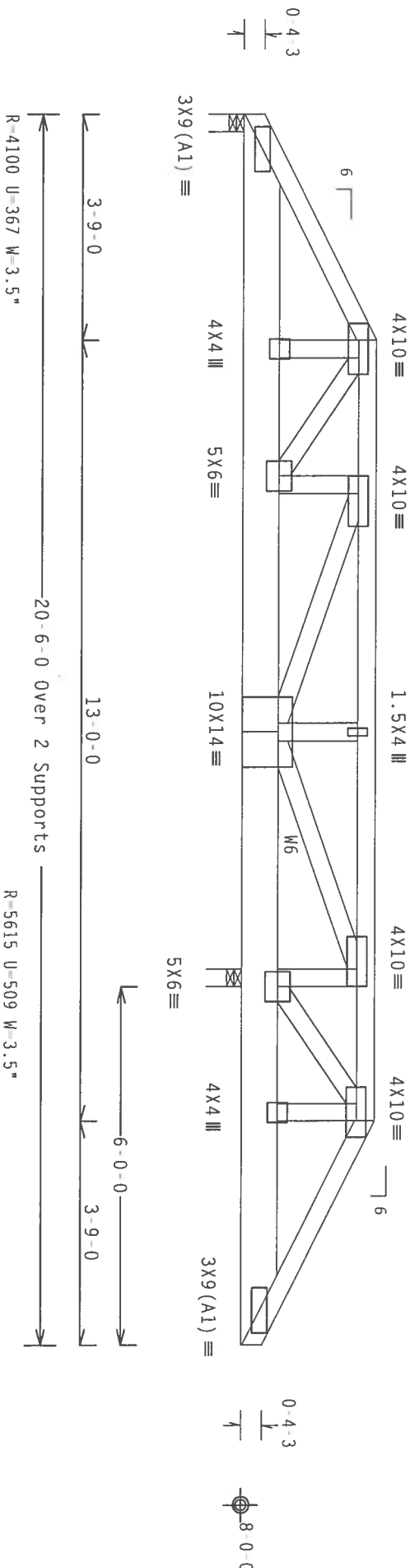
2 COMPLETE TRUSSES REQUIRED

Nailing Schedule: (12d Common (0.148"x3.25", min.) nails)

Top Chord: 1 Row @12.00" o.c.  
Bot Chord: 1 Row @ 4.75" o.c.  
Webs : 1 Row @ 4" o.c.  
Use equal spacing between rows and stagger nails  
in each row to avoid splitting.

110 mph wind, 15.00 ft mean hgt, ASCE 7-02, CLOSED bldg, not located  
within 4.50 ft from roof edge, CAT II, EXP B, wind TC DL=5.0 psf, wind  
BC DL=5.0 psf.

Deflection meets L/360 live and L/240 total load. Creep increase  
factor for dead load is 1.50.



PLT TYP. Wave

Design Crit: TP1-2002(STD)/FBC  
Cq/RT=1.00(1.25)/10(0)

7.24.12

FL/-/4/-/R/-

Scale = .375"/Ft.

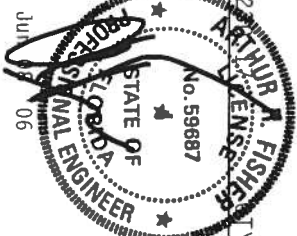
**\*\*WARNING\*\*** TRUSSES REQUIRE EXTREME CARE IN FABRICATION, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO BCSP 1.03 (BUILDING COMPONENT SAFETY INFORMATION), PUBLISHED BY TPI (TRUSS PLATE INSTITUTE, 583 D'ONOFIO DR., SUITE 200, MADISON, WI 53719) AND NCA (NATIONAL TRUSS COUNCIL OF AMERICA, 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 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 TRUSS IN CONFORMANCE WITH TPI OR FABRICATING, HANDLING, SHIPPING, INSTALLING AND BRACING OF TRUSSES, DESIGN CONFORMS WITH APPLICABLE PROVISIONS OF NDS (NATIONAL DESIGN SPEC. BY APA) AND TPI. ALPINE CONNECTION PLATES ARE MADE OF 20/18/16GA (U/L/S/S) ASTM A563 GRADE 40/60 (W, K/H/S) GALV. STEEL. APPLY PLATES TO EACH FACE OF TRUSS AND, UNLESS OTHERWISE LOCATED ON THIS DESIGN, POSITION PER DRAWING 160A 2.

ANY INSPECTION OF PLATES FOLLOWED BY TPI SHALL BE PERMITTED AS OF 1/1/2002 SEC.3. A SEAL ON THIS DESIGN INDICATES THE DESIGNER'S ACCEPTANCE OF THE DESIGN. THE SEAL IS THE PROPERTY OF THE TRUSS COMPONENT DESIGNER. THE SEAL IS NOT TO BE USED FOR ANY COMPONENT FOR ANY BUILDING IS THE RESPONSIBILITY OF THE BUILDING DESIGNER PER ANSI/TPI 1 SEC. 2.



Alpine Engineered Products, Inc.  
1950 Marley Drive  
Haines City, FL 33844  
Phone /  
Fax #567



TC LL	20.0 PSF	REF	R487 - 86972
TC DL	10.0 PSF	DATE	06/08/06
BC DL	10.0 PSF	DRW	HCUSR487 06159116
BC LL	0.0 PSF	HC-ENG	JB/AF
TOT.LD.	40.0 PSF	SEON-	8227
DUR.FAC.	1.25		
SPACING	24.0"		
		DRF-	15XW487 Z08

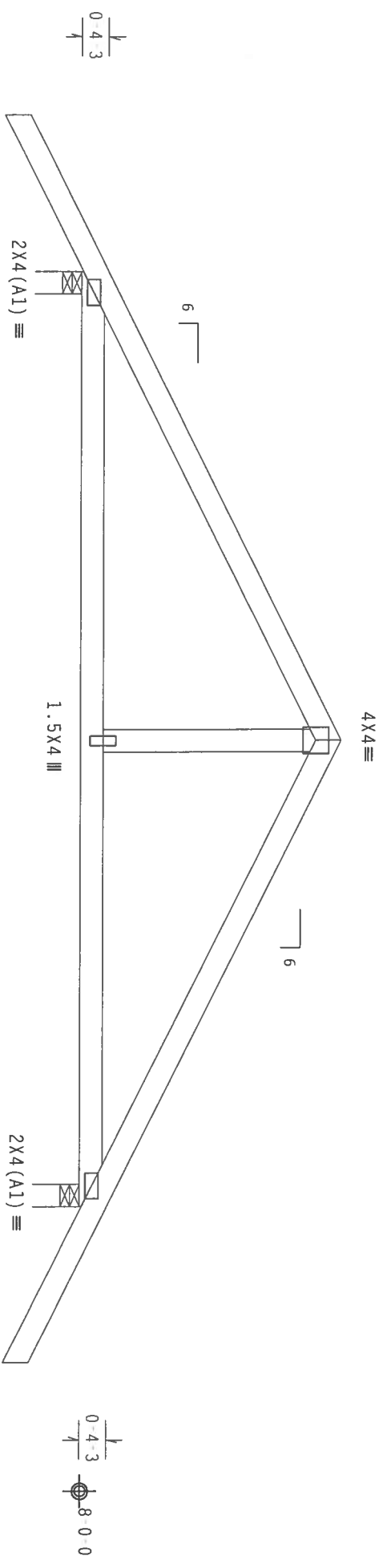


TOP CHORD 4X4 SP #2 Dense  
Bot Chord 2x4 SP #2 Dense  
Webs 2x4 SP #3

In lieu of structural panels or rigid ceiling use purlins to brace TC @ 24" OC, BC @ 24" OC.

110 mph wind, 15.00 ft mean hgt, ASCE 7-02, CLOSED bldg, located anywhere in roof, CAT II, EXP B, wind TC DL=5.0 psf, wind BC DL=5.0 psf.

Deflection meets L/360 live and L/240 total load. Creep increase factor for dead load is 1.50.



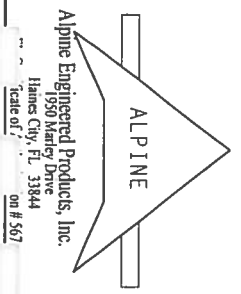
PLT TYP. Wave

Design Crit: TPI-2002(STD)/FBC  
Cq/RT=1.00(1.25)/10(0)

7.24.10

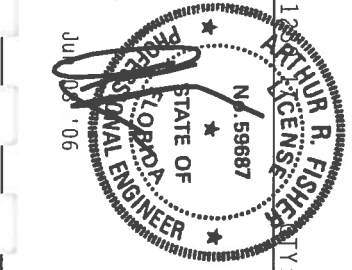
FL/-/4/-/R/-

Scale = .5"/ft.



**\*\*WARNING\*\*** TRUSSES REQUIRE EXTREME CARE IN FABRICATION, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO RES. 1.03 (BUILDING COMPONENT SAFETY INFORMATION), PUBLISHED BY TPI (TRUSS PLATE INSTITUTE, 583 D. OMERIO DR., SUITE 200, MADISON, WI 53719), AND WCA (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 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 TRUSS IN CONFORMANCE WITH TPI: OR FABRICATING, HANDLING, SHIPPING, INSTALLING & BRACING OF TRUSSES, CONSTRUCTION PLANTS ARE MADE OF 20/18/16 (K/D/S) ASH OR 40/60 (K/D/S) GALV. STEEL. APPLY PLATES TO EACH FACE OF TRUSS AND, UNLESS OTHERWISE LOCATED ON THIS DESIGN, POSITION PER DRAWING 160A.2. UNLESS OTHERWISE INDICATED, ALL TRUSSES SHALL BE PER AMERICAN STANDARD TPI-2002, SEC. 3.3. A SEAL ON THIS DRAWING INDICATES THE ACCEPTANCE OF THE DESIGN AND THE RESPONSIBILITY OF THE TRUSS COMPONENT DESIGN SHOWN. BUILDING DESIGNER PER ANSI/TPI 1 SEC. 2.



TC LL	20.0 PSF	REF	R487 - 86974
TC DL	10.0 PSF	DATE	06/08/06
BC DL	10.0 PSF	DRW	HCUSR487 06159102
BC LL	0.0 PSF	HC-ENG	JB/AF *
TOT. LD.	40.0 PSF	SEQN	8100
DUR. FAC.	1.25		
SPACING	24.0"	JRFF	1SXW487 208



Top chord 2x4 SP #2 Dense  
Bot chord 2x4 SP #2 Dense

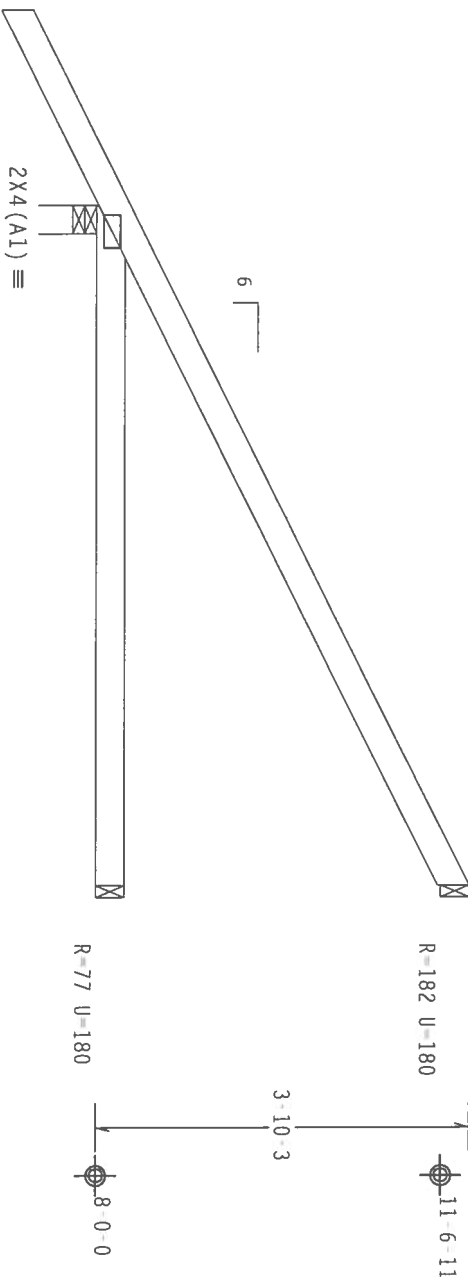
In lieu of structural panels or rigid ceiling use purlins to brace TC @  
24" OC, BC @ 24" OC.

Provide ( 2 ) 16d common nails(0.162"x3.5"), toe nailed at Top chord.  
Provide ( 2 ) 16d common nails(0.162"x3.5"), toe nailed at Bot chord.

110 mph wind, 15.00 ft mean hgt, ASCE 7-02, CLOSED bldg, not located  
within 4.50 ft from roof edge, CAT II, EXP B, wind TC DL=5.0 psf, wind  
BC DL=5.0 psf.

Deflection meets L/360 live and L/240 total load. Creep increase  
factor for dead load is 1.50.

0.43  
1/4



2'-0'-0"

7'-0'-0" Over 3 Supports  
R=450 U=180 W=3.5"

PLT TYP. Wave

Design Crit: TPI-2002(STD)/FBC  
Cq/RT=1.00(1.25)/10(0)

7.24.1

FL/-/4/-/R/-

Scale = .5"/ft.

**\*\*WARNING\*\*** TRUSSES REQUIRE EXTREME CARE IN FABRICATION, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO BCSP 1.03 (BUILDING COMPONENT SAFETY INFORMATION), PUBLISHED BY TPI TRUSSES, 1000 W. 10TH AVE., SUITE 200, MADISON, WI 53719, AND VICA (WOOD TRUSS COUNCIL OF AMERICA, 600 ENTERPRISE DR., 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 A COPY OF THIS DESIGN TO THE INSTALLATION CONTRACTOR.

ALPINE  
Alpine Engineered Products, Inc.  
1950 Marley Drive  
Haines City, FL 33844  
Tel: 813/567-1111  
Fax: 813/567-1112  
www.alpine-engineered.com



Scale = .5"/ft.

TC LL	20.0 PSF	REF R487 - 86976
TC DL	10.0 PSF	DATE 06/08/06
BC DL	10.0 PSF	DRW HCUSR487 06159103
BC LL	0.0 PSF	HC-ENG JB/AF
TOT.LD.	40.0 PSF	SEQN- 8071
DUR.FAC.	1.25	
CDLING	24.0"	JRF - ISXW487 208



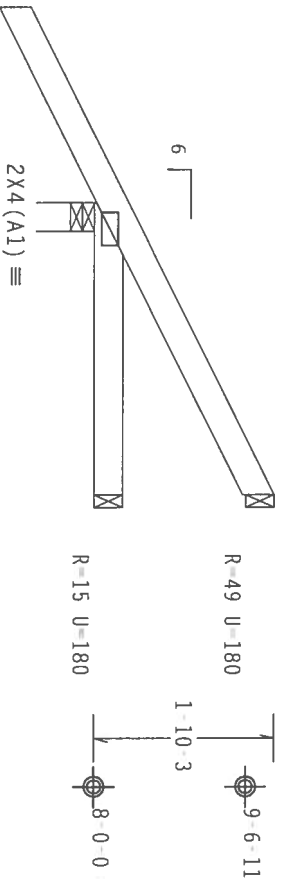
top chord 2x4 3' #2 dense  
Bot chord 2x4 SP #2 Dense

In lieu of structural panels or rigid ceiling use purlins to brace TC  
@ 24" OC, BC @ 24" OC.

Provide ( 2 ) 16d common nails(0.162"x3.5"), toe nailed at Top chord.  
Provide ( 2 ) 16d common nails(0.162"x3.5"), toe nailed at Bot chord.

110 mph wind, 15.00 ft mean hgt, ASCE 7-02, CLUSTED bldg, located  
anywhere in roof, CAT II, EXP B, wind TC DL-5.0 psf, wind BC DL-5.0  
psf.

Deflection meets L/360 live and L/240 total load. Creep increase  
factor for dead load is 1.50.



2-0-0

3 0 0 Over 3 Supports  
R=317 U=180 W=3.5"

PLT TYP. Wave

Design Crit: TPI-2002(STD)/FBC

Cg/RT=1.00(1.25)/10(0)

7.24

TY:1

FL/-/4/-/R/-

Scale =.5"/ft.

**\*\*WARNING\*\*** TRUSSES REQUIRE EXTREME CARE IN FABRICATION, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO RES. 1.03 (BUILDING COMPONENT SAFETY INFORMATION), PUBLISHED BY TPI (TRUSS PLATE INSTITUTE, 503 MADISON, MI 48319) 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.

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 AIA/NA) AND TPI. APPLY

CONNECTOR PLATES MADE OF 20/18/16GA (W/H/S/K) ASH A653 GRADE 40/60 (W. K/H/S) GALV. STEEL. APPLY

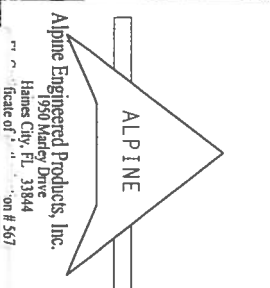
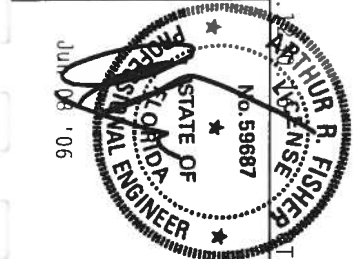
PLATES TO EACH FACE OF TRUSS AND, UNLESS OTHERWISE LOCATED ON THIS DESIGN, POSITION PER DRAWINGS 160A Z.

ANY INSPECTION OF PLATES FOLLOWED BY (1) SHALL BE PER AMER 43 OF TPI 2002 SEC.3. A SEAL ON THIS

DESIGN INDICATES ACCEPTANCE OF PROFESSIONAL ENGINEERING RESPONSIBILITY. SILENT FOR THE TRUSS COMPONENT

DESIGN AND THE SUBSEQUENT USE OF THIS COMPONENT FOR ANY BUILDING IS THE RESPONSIBILITY OF THE

BUILDING DESIGNER PER AMI/TPI 1 SEC. 2.



TC LL	20.0 PSF	REF R487 - - 86978
TC DL	10.0 PSF	DATE 06/08/06
BC DL	10.0 PSF	DRW HCUSR487 06159008
BC LL	0.0 PSF	HC-ENG TCE/AF *
TOT.LD.	40.0 PSF	SEON- 87850
DUR.FAC.	1.25	
SPACING	24.0"	JRFF - 1SXW487 208



TOP CHORD 2X4 SP #2 Dense  
Bot chord 2x4 SP #2 Dense

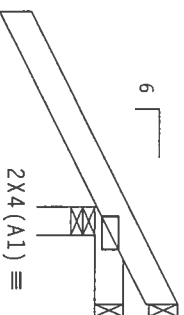
In lieu of structural panels or rigid ceiling use purlins to brace TC @ 24" OC, BC @ 24" OC.

Provide ( 2 ) 16d common nails(0.162"x3.5"), toe nailed at Top chord.  
Provide ( 2 ) 16d common nails(0.162"x3.5"), toe nailed at Bot chord.

110 mph wind, 15.00 ft mean hgt, ASCE 7-02, CLUSTED bldg, located anywhere in roof, CAT II, EXP B, wind TC DL=5.0 psf, wind BC DL=5.0 psf.

Deflection meets L/360 live and L/240 total load. Creep increase factor for dead load is 1.50.

0.43  
1



2-0-0

1-0-0 Over 3 Supports

R=361 U=180 W=3.5"

PLT TYP. Wave

Design Crit: TPI-2002(STD)/FBC

Cq/RT=1.00(1.25)/10(0)

7.24.1

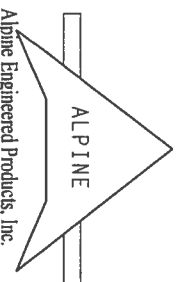
FL/-/4/-/-/R/-

Scale =.5"/Ft.

**\*\*WARNING\*\*** TRUSSES REQUIRE EXTREME CARE IN FABRICATION, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO BCN 1.03 (BUILDING COMPONENT SAFETY INFORMATION), PUBLISHED BY TPI TRUSS PLATE INSTITUTE, 563 DORRISTON DR., SUITE 200, MADISON, MI 48131, AND WICKA (WOOD TRUSS COUNCIL OF AMERICA, 6300 ENTERPRISE LN, MADISON, MI 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\*\*** TURNISH 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 TRUSS IN CONFORMANCE WITH TPI: OR FABRICATING, HANDLING, SHIPPING, INSTALLING & BRACING OF TRUSSES, DESIGN CONFORMS WITH APPLICABLE PROVISIONS OF IBCS (NATIONAL DESIGN SPEC. BY AIA/AIA AND TPI). ALPINE CONNECTOR PLATES ARE MADE OF 2018/16GA (W/H/S/K) ASH 4053 GRADE 40/60 (K, K/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 PLATES FOLLOWED BY (1) SHALL BE PER AMERICAN ASSOCIATION OF BUILDING OFFICIALS (AIA) DRAWING INDICATES ACCEPTANCE OF PROFESSIONAL ENGINEERING RESPONSIBILITY. A SEAL ON THIS DRAWING SHALL BE REQUIRED FOR THE USE OF THIS COMPONENT FOR ANY BUILDING IS THE RESPONSIBILITY OF THE BUILDING DESIGNER PER ASCE 7.1 SEC. 2.



Alpine Engineered Products, Inc.  
James City, FL 33844  
Phone # 567



TC LL	20.0 PSF	REF R487 - 86979
TC DL	10.0 PSF	DATE 06/08/06
BC DL	10.0 PSF	DRW HCUR487 06159009
BC LL	0.0 PSF	HC-ENG JB/AF
TOT. LD.	40.0 PSF	SEON- 7002
DUR. FAC.	1.25	
SPACING	24.0"	JRFF- 1SXW487 Z08



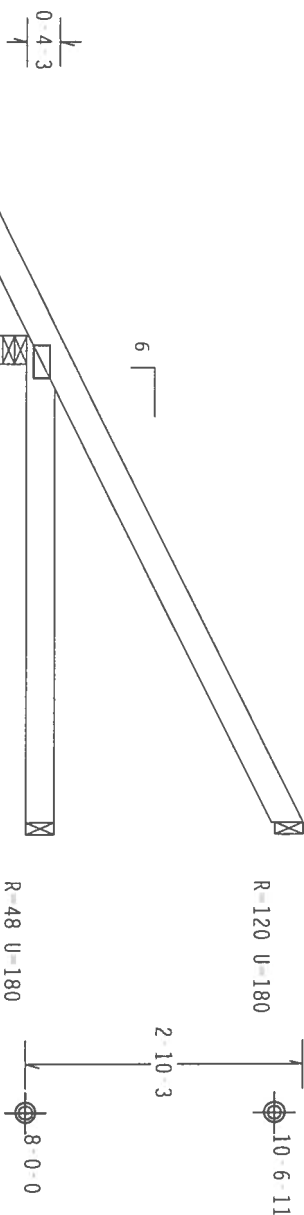
100 chord 2x4 3' #2 uense  
Bot chord 2x4 SP #2 Dense

In lieu of structural panels or rigid ceiling use purlins to brace TC @  
24" OC, BC @ 24" OC.

Provide ( 2 ) 16d common nails(0.162"x3.5"), toe nailed at Top chord.  
Provide ( 2 ) 16d common nails(0.162"x3.5"), toe nailed at Bot chord.

110 mph wind, 15.00 ft mean hgt, ASCE / 02, C10S10 bldg, not located  
within 4.50 ft from roof edge, Cat II, Exp B, wind TC DL=5.0 psf, wind  
BC DL=5.0 psf.

Deflection meets L/360 live and L/240 total load. Creep increase  
factor for dead load is 1.50.



2'-0'-0"

5'-0'-0" Over 3 Supports  
R-377 U-180 W=3.5"

PLT TYP. Wave

Design Crit: TPI-2002(STD)/FBC

Cq/RT=1.00(1.25)/10(0)

7.24.11

ARTHUR R. FISHER

PROFESSIONAL ENGINEER

FL / 4 / - / - / R / -

Scale = .5" / Ft.

**\*\*WARNING\*\*** TRUSSES REQUIRE EXTREME CARE IN FABRICATION, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO BCST 1.03 (BUILDING COMPONENT SAFETY INFORMATION), PUBLISHED BY TPI (TRUSS PLATE INSTITUTE, 563 D'ONOFIO DR., SUITE 200, MADISON, WI 53719) AND WCA (WOOD TRUSS COUNCIL OF AMERICA, 6200 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 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 TRUSS IN CONFORMANCE WITH TPI OR FABRICATING, HANDLING, SHIPPING, INSTALLING & BRACING OF TRUSSES, DESIGN CONFORMS WITH APPLICABLE PROVISIONS OF AISC (NATIONAL DESIGN SPEC. BY AISC) AND TPI. ALPINE

CONNECTOR PLATES ARE MADE OF 2018/16GA (W/5/8) ASTM A653 GRADE 40/60 (4. K/4.5) GALV. STEEL. APPLY PLATES TO EACH FACE OF TRUSS AND, UNLESS OTHERWISE LOCATED ON THIS DESIGN, POSITION PER DRAWINGS 160A Z.

ANY IMPROVEMENT OF PLATES FOLLOWED BY (1) SHALL BE PER ANNEX A2 OF TPI 2002 SEC.3. A SEAL ON THIS DRAWING INDICATES ACCEPTANCE OF PROFESSIONAL ENGINEERING RESPONSIBILITY SOLELY FOR THE TRUSS COMPONENT DESIGN SHOWN. THE SUSTAINABILITY AND USE OF THIS COMPONENT FOR ANY BUILDING IS THE RESPONSIBILITY OF THE BUILDING DESIGNER PER ANSI/TPI 1 SEC. 2.

Alpine Engineered Products, Inc.

1850 Marley Drive  
Tallahassee, FL 32304

Scale of: 1/4" = 1'-0"

08/08/06

08/08/06

08/08/06

08/08/06

08/08/06

08/08/06

08/08/06

08/08/06

08/08/06

08/08/06

08/08/06

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08/08/06

08/08/06

08/08/06

TOP CHORD 2x4 3x #2 Dense  
Bot chord 2x4 SP #2 Dense

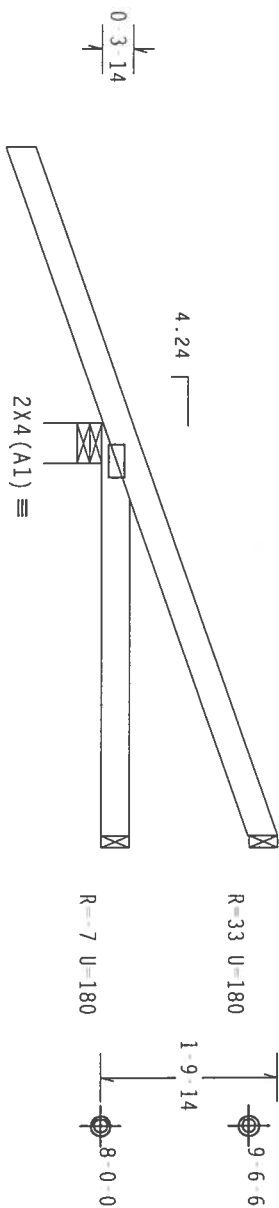
In lieu of structural panels or rigid ceiling use purlins to brace TC @  
24" OC, BC @ 24" OC.

Deflection meets L/360 live and L/240 total load. Creep increase factor  
for dead load is 1.50.

110 mph wind, 15.00 ft mean hgt, ASCE 7-02, CLUSTED bldg, located  
anywhere in roof, CAT II, EXP B, wind TC DL=5.0 psf, wind BC DL=5.0  
psf.

Hipjack supports 3-0-0 setback jacks with no webs.

Provide ( 2 ) 16d common nails (0.162"x3.5"), toe nailed at Top chord.  
Provide ( 2 ) 16d common nails (0.162"x3.5"), toe nailed at Bot chord.



2-9-15

4-2-15 Over 3 Supports  
R=319 U=180 W=4.95"

PLT TYP. Wave

Design Crit: TPI-2002(STD)/FBC

Cq/RT=1.00(1.25)/10(0)

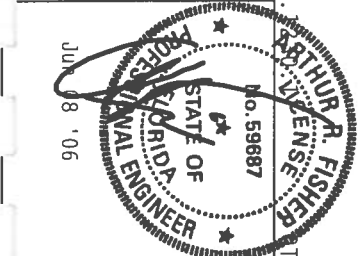
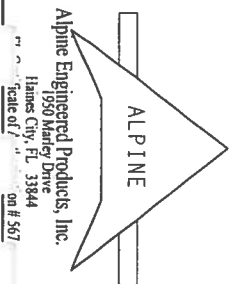
7.24

TY:1 FL/-/4/-/R/-

Scale =.5"/Ft.

**\*\*WARNING\*\*** TRUSSES REQUIRE EXTREME CARE IN FABRICATION, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO BCSE 1.03 (BUILDING COMPONENT SAFETY INFORMATION), PUBLISHED BY TPI TRUSS PLATE INSTITUTE, 503 D. GORRISON DR., SUITE 200, MADISON, WI 53719, AND WCA, (WOOD TRUSS COUNCIL OF AMERICA, 6200 ENTERPRISE BL, 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.

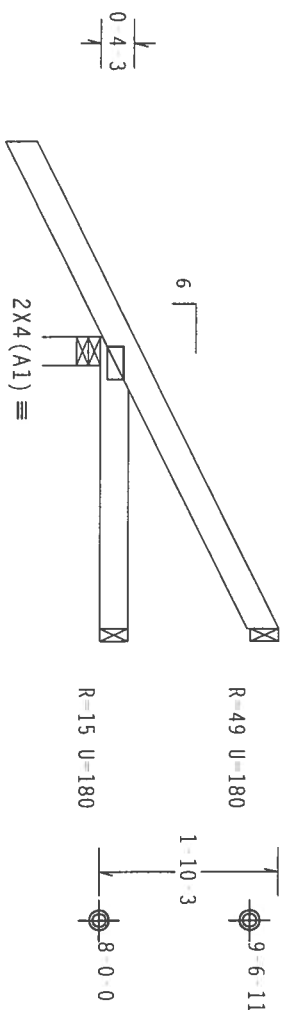
**\*\*IMPORTANT\*\*** FURNISH A COPY OF THIS DESIGN TO THE INSTALLATION CONTRACTOR. ALPINE ENGINEERED PRODUCTS, INC. SHALL NOT BE RESPONSIBLE FOR ANY DEVIATION FROM THIS DESIGN. ANY FAILURE TO BUILD THE TRUSS IN CONFORMANCE WITH TPI OR FABRICATING, HANDLING, SHIPPING, INSTALLING A BRACING OF TRUSSES, DESIGN CONFORMS WITH APPLICABLE PROVISIONS OF 2010/1604 (W/S/X) ASH A653 GRADE 40/50 (4, K/H/S) GALV. STEEL. APPLY CORRECTION PLATES TO EACH FACE OF TRUSS AND, UNLESS OTHERWISE LOCATED ON THIS DESIGN, POSITION PER BRANCHES 1604 Z. ANY INSPECTION OF PLATES FOLLOWED BY (1) SHALL BE PER AMEX AS OF TPI 2002 SEC. 3. THE A SEAL ON THIS DRAWING INDICATES ACCEPTANCE OF PROFESSIONAL ENGINEERING RESPONSIBILITY SOCIETY FOR THE TRUSS COMPONENT DESIGN. THE SEAL IS VALIDITY AND USE OF THIS COMPONENT FOR ANY BUILDING IS THE RESPONSIBILITY OF THE BUILDING DESIGNER PER ANSI/TPI 1 SEC. 2.



TC LL	20.0 PSF	REF	R487 - 86982
TC DL	10.0 PSF	DATE	06/08/06
BC DL	10.0 PSF	DRW	HCSR487 06159118
BC LL	0.0 PSF	HC-ENG	AF/AF
TOT. LD.	40.0 PSF	SEQN	8240
DUR. FAC.	1.25		
SPACING	24.0"	JRFF -	15XW487 Z08

In lieu of structural panels or rigid ceiling use purlins to brace TC @ 24" OC, BC @ 24" OC.

110 mph wind, 15.00 ft mean hgt. ASCE 7-02, CLOSED bldg, located anywhere in roof, CAT II, wind TC DL=5.0 psf, wind BC DL=5.0 psf.



2-0-0

3.0.0 Over 3 Supports  
R=317 U=180 W=3.5"

PLT TYP. Wave

Design Crit: TPI-2002(STD)/FBC

 $Cq/RT=1.00(1.25)/10(0)$ 

FL/-/4/-/-/R/-

Scale = .5"/Ft.

**WARNING:** FIRE RESISTIVE EXTERIOR CEMENT FABRICATION, HANDLING, SHIPPING, INSTALLING AND BRACING REFER TO BC61 1.03 (BUILDING EXTERIOR SAFETY INFORMATION), PUBLISHED BY TPI (TIMOS PLATE INSTITUTE, 583 D'ORONIO RD., SUITE 200, MADISON, WI 53719) AND MECA (WOOD TRUSS COUNCIL OF AMERICA, 6200 ENTERPRISE BLVD., MADISON, WI 53719) FOR SAFETY PRACTICES PRIOR TO PERFORMING THESE FUNCTIONS. UNLESS OTHERWISE INDICATED, TOP CHORD SHALL HAVE PROPERLY ATTACHED STRUCTURAL PANTS AND BOTTOM CHORD SHALL HAVE A PROPERLY ATTACHED CEILING.


**\*\*IMPORTANT\*\* FURNISH A COPY OF THIS DESIGN TO THE INSTALLATION CONTRACTOR. ALPINE ENGINEERED**

TRUSS IN CONFORMANCE WITH IPI: OR FABRICATING, HANDLING, SHIPPING, INSTALLING & BRACING OF TRUSSES.

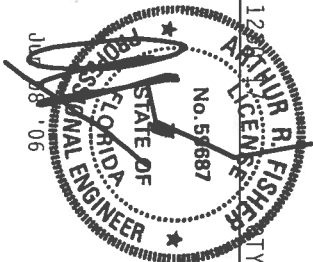
CONNECTOR PLATES ARE MADE OF 20/18/16GA (H, H/S, K) ASIM A653 GRADE 40/60 (H, K/H, S) GALV. STEEL. APPLY

ANY INSPECTION OF PLATES FOLLOWED BY (1) SHALL BE PER ANNEX A3 OF IP11-2002 SEC.3. A SEAL ON THIS

DESIGN SHOWN. THE SUITABILITY AND USE OF THIS COMPONENT FOR ANY BUILDING IS THE RESPONSIBILITY OF THE

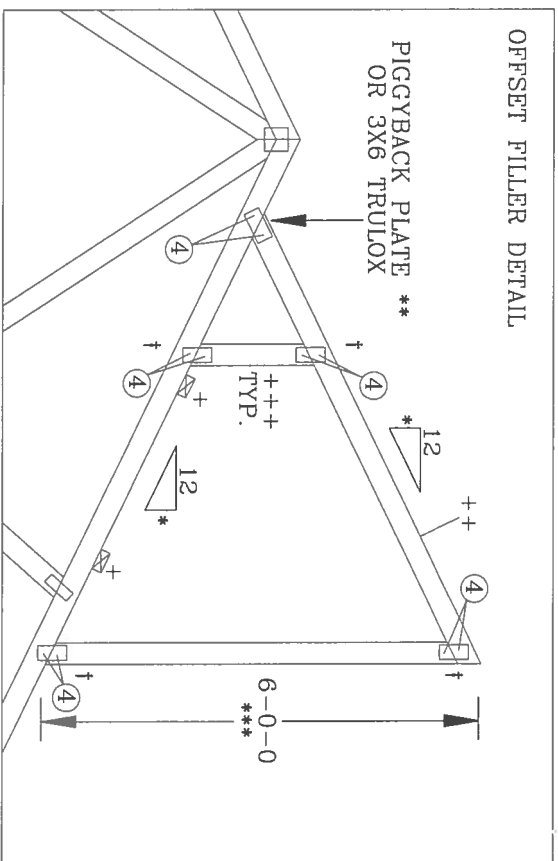


**Alpine Engineered Products, Inc.**  
 1950 Maiter Drive  
 Haines City, FL 33844  
 Telex 171111 Alpine  
 Phone 813/567-1111



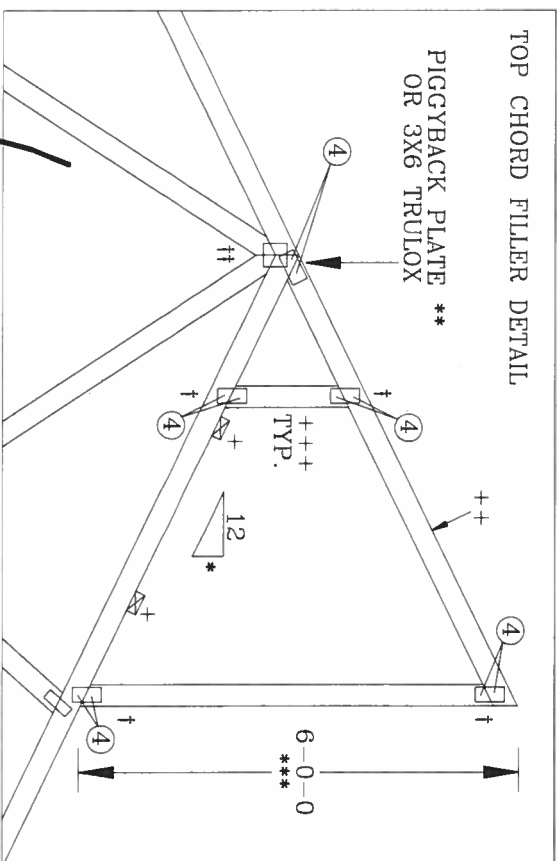
TC LL	20.0 PSF	REF	R487 - 86983
TC DL	10.0 PSF	DATE	06/08/06
BC DL	10.0 PSF	DRW	HCUSR487 06159105
BC LL	0.0 PSF	HC-ENG	JB/AF *
TOT.LD.	40.0 PSF	SEQN-	8108
DUR.FAC.	1.25		
SPACING	24.0"	JRFF -	1SXW487 Z08

+ 2X4 CONTINUOUS LATERAL BRACING AT 24" OC MAXIMUM  
 SPACING. ATTACH TO EACH TOP CHORD WITH (2) 16d NAILS.  
 BRACING MATERIAL TO BE SUPPLIED AND ATTACHED AT BOTH  
 ENDS TO A SUITABLE SUPPORT BY ERECTION CONTRACTOR.  
 ++ 2X4 SO. PINE #2 N OR SPF #1/#2 FILLER TOP CHORD.  
 +++ 2X4 SO. PINE #3 OR SPF #1/#2 VERTICAL WEBS SPACED  
 48" OC MAXIMUM.  
 \* 8/12 MAXIMUM PITCH.  
 \*\* 2X8.25 PIGGYBACK SPECIAL PLATE. SEE DRAWING PIGBACKB0699  
 FOR PIGGYBACK SPECIAL PLATE INFORMATION.  
 \*\*\* 6'0" MAXIMUM HEIGHT.  
 † W2X4 OR 3X6 TRULOX.  
 †† REFER TO ENGINEER'S SEALED DESIGN REFERENCING THIS  
 DETAIL FOR LUMBER, PLATES, AND OTHER INFORMATION NOT  
 SHOWN.  
 11 GAUGE (0.120")X1.375" NAILS REQUIRED FOR TRULOX PLATE  
 ATTACHMENT. NAILS SPECIFIED IN CIRCLES MUST BE APPLIED TO  
 EACH FACE OF EACH TRUSS PLY. SEE DWG 1607L FOR NAILING AND  
 TRULOX PLATE REQUIREMENTS.



## OFFSET FILLER DETAIL

PIGGYBACK PLATE \*\*  
OR 3X6 TRULOX




### TOP CHORD FILLER DETAIL

PIGGYBACK PLATE \*\*  
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 EACH TRUSS PLY. SEE DWG 1607L FOR NAILING AND TRULOX PLATE REQUIREMENTS.

EXTENDED TOP CHORD FILLER DETAIL

(4)  T

\*\*\* 6'0" MAXIMUM HEIGHT.  
 \*\* 2X8,25 PIGGYBACK SPECIAL PLATE. SEE DRAWING PIGBACK0699  
 FOR PIGGYBACK SPECIAL PLATE INFORMATION.

\* 8/12 MAXIMUM PITCH.

+++ 2X4 SO. PINE #3 OR SPF #1/#2 VERTICAL WEBS SPACED  
48" OC MAXIMUM.

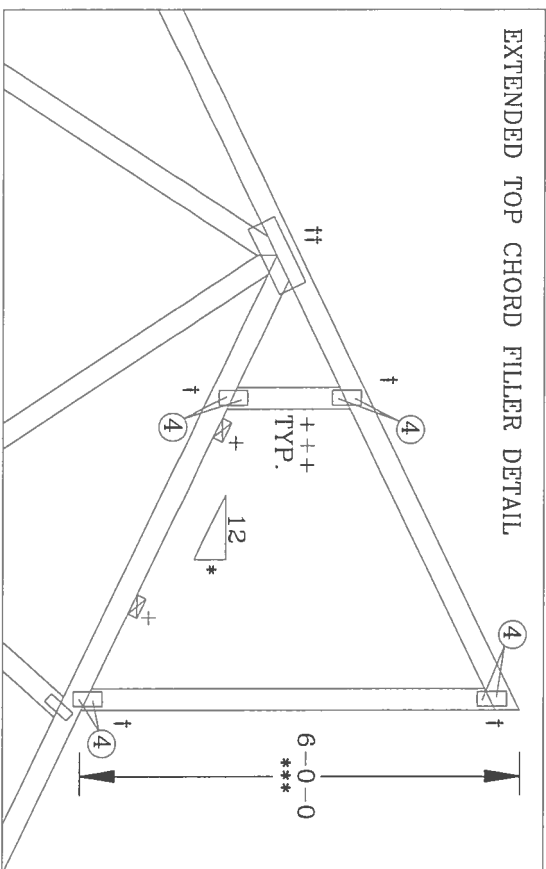
++ 2X4 SO. PINE #2 N OR SPF #1/#2 FILLER TOP CHORD.

† W2X4 OR 3X6 TRULOX.

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

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

EXTENDED TOP CHORD FILLER DETAIL



ALPINE

ALPINE ENGINEERED PRODUCTS, INC.  
POMPANO BEACH, FLORIDA

■ **WARNING:** THESE PROCESSES REQUIRE EXTREME CARE IN FABRICATING, HANDLING, SHIPPING, INSTALLING AND MAINTAINING. SEE THE FOLLOWING FOR THE MOST RECENT EDITIONS OF THE TPI CRUSS AND TPI PLATE INSTITUTE, 593 DUNDRIE DR., SUITE 200, HAITISON, MI 53179, AND VITA CYCLOD TRUSS COUNCIL OF AMERICA, 6300 ENTERPRISE, IN MADISON, MI 53719 FOR SAFETY PRACTICES PRIOR TO PERFORMING THESE FUNCTIONS. UNLESS OTHERWISE INDICATED, TOP CYCLOD SHALL HAVE PROPERLY ATTACHED STRUCTURAL PANELS AND BOTTOM CYCLOD 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 CONSIDERS WITH APPLICABLE ASSUMPTIONS OF WIND, SEISMIC, & OTHER LOADS.

BRAING OF TREES DESIGN CONCEPTS WITH APPLICABLE PROVISIONS OF MODERNIZATION DESIGN SPECIFICATIONS FOR ALUMINUM AND STEEL ALUMINUM CONNECTOR PLATES ARE MADE BY 08/16/166A (V/S/V) ASTM A965 GRADATION 40/60 C/A/K/H/S GALV. STEEL APPLY PLATES TO EACH FACE OF TRUSS AND UNLESS OTHERWISE INDICATED ON DRAWINGS POSITION PER DRAWINGS 1604-2 AN INSPECTION OF PLATES FOLLOWED BY IT SHALL BE PROFESSIONAL ENGINEERING RESPONSIBILITY SILENTLY FOR THE TRESS COMPONENT DESIGN SHOW THE SUITABILITY AND USE OF THIS COMPONENT FOR ANY BUILDING IS THE RESPONSIBILITY OF THE BUILDING DESIGNER PER ANSI/TPI 1 SEC. 2

THIS DRAWING REPLACES DRAWING 884,080

TC LL	MAX 30 PSF	REF	TC-FILLER
TC DL	MAX 15 PSF	DATE	11/26/03
BC DL	MAX 10 PSF	DRWG	TCFILLER1103
BC LL	0 PSF	-ENG	SJP/KAR
TOT. LD.	MAX 55 PSF		
DUR. FAC.	1.15 OR 1.33		
SPACING	24.0"		

# 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.

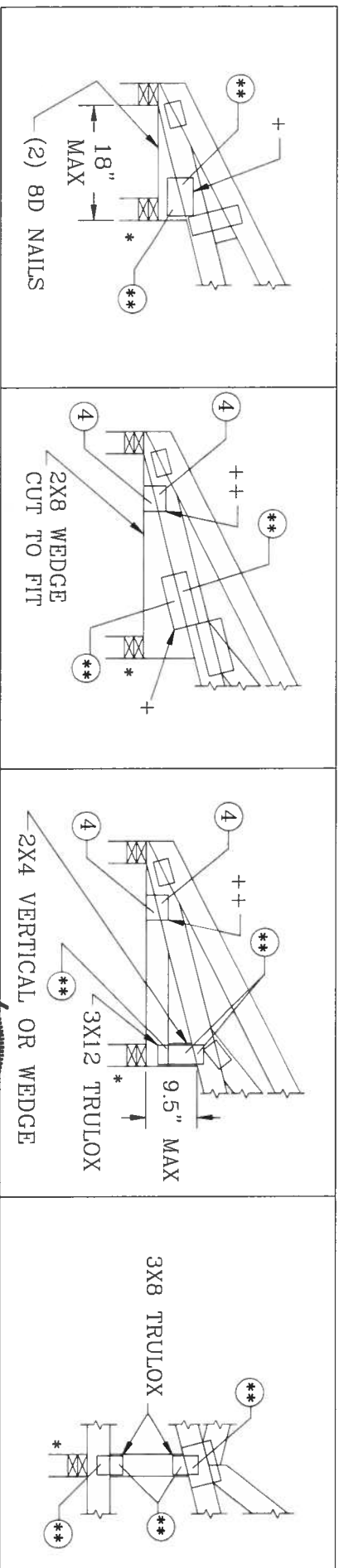
+ 3X4 WAVE OR 4X8 TRULOX  
++ 2X4 WAVE OR 3X6 TRULOX

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.

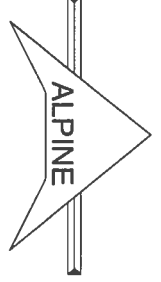
REFER TO ENGINEER'S SEALED DESIGN REFERENCING THIS DETAIL FOR LUMBER, PLATES, AND OTHER INFORMATION NOT SHOWN.

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	



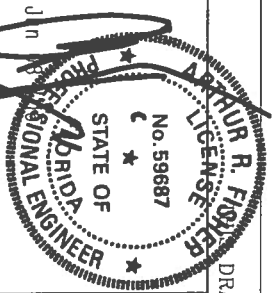
DRAWING REPLACES DRAWINGS A115 A115/R & 884.132



ALPINE ENGINEERED PRODUCTS, INC.  
POMPANO BEACH, FLORIDA

**WARNING\*\*** TRUSSES REQUIRE EXTREME CARE IN FABRICATING, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO BEST 1-03 (BUILDING COMPONENT SAFETY INFORMATION), PUBLISHED BY THE TRUSS PLATE INSTITUTE, 283 DUNDREID DR., SUITE 200, HADSDON, NJ 07719 AND VTRA CWOOD TRUSS COUNCIL, 10000 W. 10TH AVE., SUITE 100, DENVER, CO 80231 FOR SAFETY PRACTICES SUPERIOR TO FURNISHING THESE TRUSSES. THESE TRUSSES ARE NOT TO BE USED FOR ANY OTHER APPLICATIONS WITHOUT THE DESIGNER'S WRITTEN PERMISSION. 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 THE DESIGN OR FABRICATING, HANDLING, SHIPPING, INSTALLING & BRACING OF TRUSSES. DESIGN CONNECTORS WITH APPLICABLE PROVISIONS OF NDS (NATIONAL DESIGN SPEC, 40/60 (C/A/H/S) GALV. STEEL, APPLY PLATES TO EACH FACE OF TRUSS AND, UNLESS OTHERWISE LOCATED BY AREA) AND TPI. ALPINE CONNECTOR PLATES ARE MADE OF 20/18/16GA (C/A/H/S) ASTM A653 GRADE 40/60 (C/A/H/S) GALV. STEEL. INSULATION IN PLATES IS NOT REQUIRED. IF INSULATION IS REQUIRED BY THE DESIGNER, IT SHALL BE SPECIFIED IN THE DESIGN. THE DESIGNER SHALL BE RESPONSIBLE FOR THE TRUSS COMPONENT DESIGN SHOWN. THE SUITABILITY AND USE OF THIS COMPONENT FOR ANY BUILDING IS THE RESPONSIBILITY OF THE BUILDING DESIGNER, PER ANSI/TPI 1 SEC. 2



ARTHUR R. FOYLER  
No. 59687  
STATE OF FLORIDA  
PROFESSIONAL ENGINEER

TC LL	—	PSF	REF	BC FILLER
TC DL	—	PSF	DATE	11/26/03
BC DL	10.0	PSF	DRWG	BCFILLER1103
BC LL	—	PSF	—	ENG DLJ/KAR
TOT. LD.	—	PSF		
DUR. FAC.	1.0/1.15/1.25/1.33			
SPACING	24.0"			





Data entry by: MT      Date: 06 01 06

Project name: ZEBRA CT. ~~Baca~~ - 1  
Location : COLUMBIA COUNTY

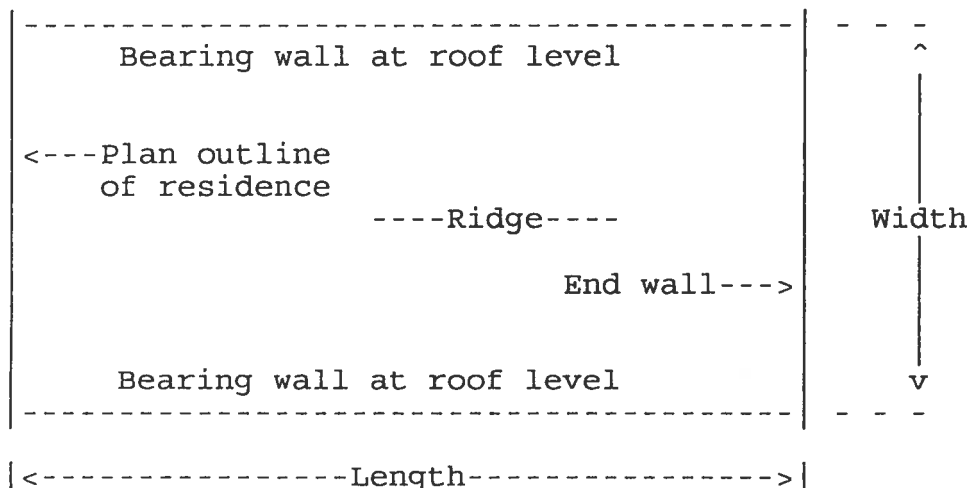
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R E S I D E N T I A L   W I N D   D E S I G N   A N D   A N A L Y S I S

A product of EDA Software, Inc.

Based on the Standard Building Code, 1994 edition  
-----

\*\*\*\* GENERAL INPUT DATA \*\*\*\*

Permanent construction  
Simple rectangular building



Length along bearing walls out to out of studs = 66 feet  
Width along end walls out to out of studs = 28 feet  
Roof overhang in long direction from outer face of stud = 2 feet generally  
Roof overhang at short end wall from outer face of stud = 2 feet generally  
Height of exterior wall to top of plate on long side = 8 feet constant  
Roof cross slope = 6 /12

Wind velocity = 100 mph

\*\*\*\* DEGREE OF ENCLOSURE \*\*\*\*

-----  
Assume that this building is an 'Enclosed building' per Code 1606.2.3.  
-----

AR7005 27 Jun 2006

\*\*\*\* STRUCTURAL FRAMING INPUT DATA \*\*\*\*

\*\*\* Roof Structural Data \*\*\*

Member number 1  
 Jack truss--hip-ended roof  
 Span length out to out of supports = 28 feet  
 Roof cross slope = 6 /12  
 Truss spacing = 24 inches  
 Overhang = 2 feet

Member number 2  
 Jack truss--hip-ended roof  
 Span length out to out of supports = 22 feet  
 Roof cross slope = 6 /12  
 Truss spacing = 24 inches  
 Overhang = 2 feet

\*\*\* Wall Structural Data \*\*\*

Spacing of wall studs = 16 inches  
 Total number of plates = 3  
 Wall stud number 1 is 8 feet high out to out of plates

COEFFICIENTS AND PRESSURES  
 Main Wind Force Resisting Systems

Actual pressure = Velocity pressure x Use factor x Coefficient  
 Wind velocity is 100 mph  
 Mean roof height is 11.87268 feet  
 Velocity pressure is 20.4 psf  
 Use factor is 1.0  
 Roof cross slope is 6 on 12, which equals 26.56505 degrees to horizontal  
 End zone width is 6 feet

	Coefficient	Design Pressure (psf)
-----		
End zone		
Windward wall (1E)	.7	14.28
Windward roof (2E)	-1	-20.4
Leeward roof (3E)	-1	-20.4
Leeward wall (4E)	-.95	-19.38
Overhang	-1.5	-30.6
Interior zone		
Windward wall (1)	.4	8.16
Windward roof (2)	-.75	-15.3
Leeward roof (3)	-.75	-15.3
Leeward wall (4)	-.7	-14.28
Overhang	-1.5	-30.6
=====		

ROOF LOADING--Roof Number 1 (pounds per square foot)

Roof cross slope = 6 inches per foot

Fiberglass shingles 240 # per square and 1 layer of 15 # felt	= 2.55
No insulation	
7/16 in. roof sheathing	= 1.31
2 in. x 4 in. wood trusses at 24 in. spacing	= 2.215147
-----	
Total roof unit weight on slope	= 6.075148
Cosine of roof cross slope	= .8944272
-----	
Roof unit weight on horizontal	= 6.792222
1 layer of 1/2 in. gypsum board ceiling--plain	= 2
Ceiling insulation R-30	= .5
Air-conditioning ductwork	= 1
Full lighting	= .3
Miscellaneous	= 0
=====	
Total	= 10.59222

Roof Unit Dead Load = 11 psf

Roof dead load supported generally by wall = 159.7911 plf

ROOF LOADING--Roof Number 2 (pounds per square foot)

Roof cross slope = 6 inches per foot

Fiberglass shingles 240 # per square and 1 layer of 15 # felt	= 2.55
No insulation	
7/16 in. roof sheathing	= 1.31
2 in. x 4 in. wood trusses at 24 in. spacing	= 2.215147
-----	
Total roof unit weight on slope	= 6.075148
Cosine of roof cross slope	= .8944272
-----	
Roof unit weight on horizontal	= 6.792222
1 layer of 1/2 in. gypsum board ceiling--plain	= 2
Ceiling insulation R-30	= .5
Air-conditioning ductwork	= 1
Full lighting	= .3
Miscellaneous	= 0
=====	
Total	= 10.59222

Roof Unit Dead Load = 11 psf

Roof dead load supported generally by wall = 159.7911 plf

ROOF LOADING--Roof Number 3 (pounds per square foot)

Roof cross slope = 6 inches per foot

```
-----
Fiberglass shingles 240 # per square and 1 layer of 15 # felt = 2.55
No insulation
7/16 in. roof sheathing = 1.31
2 in. x 4 in. wood trusses at 24 in. spacing = 2.215147
-----
Total roof unit weight on slope = 6.075148
Cosine of roof cross slope = .8944272
-----
Roof unit weight on horizontal = 6.792222
1 layer of 1/2 in. gypsum board ceiling--plain = 2
Ceiling insulation R-30 = .5
Air-conditioning ductwork = 1
Full lighting = .3
Miscellaneous = 0
=====
Total = 10.59222
```

Roof Unit Dead Load = 11 psf

Roof dead load supported generally by wall = 159.7911 plf

ROOF LOADING--Roof Number 4 (pounds per square foot)

Roof cross slope = 6 inches per foot

```
-----
Fiberglass shingles 240 # per square and 1 layer of 15 # felt = 2.55
No insulation
7/16 in. roof sheathing = 1.31
2 in. x 4 in. wood trusses at 24 in. spacing = 2.215147
-----
Total roof unit weight on slope = 6.075148
Cosine of roof cross slope = .8944272
-----
Roof unit weight on horizontal = 6.792222
1 layer of 1/2 in. gypsum board ceiling--plain = 2
Ceiling insulation R-30 = .5
Air-conditioning ductwork = 1
Full lighting = .3
Miscellaneous = 0
=====
Total = 10.59222
```

Roof Unit Dead Load = 11 psf

Roof dead load supported generally by wall = 159.7911 plf

ROOF MEMBER DEAD LOAD REACTIONS AT BEARINGS

All values are in pounds

Roof member number 1	--Span 28 feet, Slope 6 /12, interior zone----	319
Roof member number 2	--Span 28 feet, Slope 6 /12, end zone-----	319
Roof member number 3	--Span 22 feet, Slope 6 /12, interior zone----	256
Roof member number 4	--Span 22 feet, Slope 6 /12, end zone-----	256

EXTERIOR WALL LOADING (pounds per linear foot)

Wood frame wall-- 8 ft. out to out plates

3--2 in. x 4 in. plates	= 2.865625
2 in. x 4 in. studs at 16 in. spacing	= 5.462598
R-13 Insulation	= 1.90625
3/8 in. Mineral board siding	= 12.1875
1/2 in. Gypsum board--Total 1 layer---	= 16
=====	=====
Total	= 38.42197

Exterior Wall Unit Dead Load = 39 plf



# S U M M A R Y   O F   H U R R I C A N E   A N C H O R   A N A L Y S I S

All values of forces are in pounds. Resistances have been increased for wind.

End zone width = 6 feet

Code: C = Compliance

N = Non-compliance

Simpson hurricane anchors

Member 1 --Hip roof--Span 28 feet, at 24 inches oc--in interior zone:

Uplift = 771 Dead = 319 Net = 452 Model Special, Resistance = 717 C

Model H9--all nails installed per manufacturers catalog

Data supplied by operator--not from EDA database

Member 2 --Hip roof--Span 28 feet, at 24 inches oc--in end zone:

Uplift = 771 Dead = 319 Net = 452 Model Special, Resistance = 717 C

Model H9--all nails installed per manufacturers catalog

Data supplied by operator--not from EDA database

Member 3 --Hip roof--Span 22 feet, at 24 inches oc--in interior zone:

Uplift = 638 Dead = 256 Net = 382 Model Special, Resistance = 717 C

Model H9--all nails installed per manufacturers catalog

Data supplied by operator--not from EDA database

Member 4 --Hip roof--Span 22 feet, at 24 inches oc--in end zone:

Uplift = 638 Dead = 256 Net = 382 Model Special, Resistance = 717 C

Model H9--all nails installed per manufacturers catalog

Data supplied by operator--not from EDA database

\*\*\*\* ANALYSIS OF ROOF SHEATHING AS SHEAR DIAPHRAGM TRANSVERSE \*\*\*\*  
Shear analysis applies along supporting shearwalls.

Roof trusses are Southern Pine lumber, spaced at 24 inches  
Sheathing is Oriented Strand Board, 7/16 inch thick  
Sheathing has no intermediate blocking  
Fasteners on panel ends are 8d nails spaced at 5 inches  
Fasteners in panel interior are 8d nails spaced at 10 inches

Total lateral wind force on building	= 11911 pounds
Total force transferred through diaphragm to shearwalls	= 5955 pounds
Total length of shearwalls	= 56 feet
MINIMUM REQUIRED TOTAL SHEARWALL LENGTH = 23.7 FT.--LOCATE EVENLY THROUGHOUT	

Actual diaphragm force per unit length of shearwall	= 106 plf
Allowable diaphragm force per unit length of shearwall	= 251 plf

-----

\*\*\* Summary of Analysis \*\*\*

Roof sheathing diaphragm satisfies Code requirements.

\*\*\*\* ANALYSIS OF ROOF SHEATHING AS SHEAR DIAPHRAGM LONGITUDINAL \*\*\*\*  
Shear analysis applies along supporting shearwalls.

Roof trusses are Southern Pine lumber, spaced at 24 inches  
Sheathing is Oriented Strand Board, 7/16 inch thick  
Sheathing has no intermediate blocking  
Fasteners on panel ends are 8d nails spaced at 5 inches  
Fasteners in panel interior are 8d nails spaced at 10 inches

Total lateral wind force on building	= 4090 pounds
Total force transferred through diaphragm to shearwalls	= 2045 pounds
Total length of shearwalls	= 132 feet
MINIMUM REQUIRED TOTAL SHEARWALL LENGTH = 7.9 FT.--LOCATE EVENLY THROUGHOUT	

Actual diaphragm force per unit length of shearwall	= 15 plf
Allowable diaphragm force per unit length of shearwall	= 251 plf

-----

\*\*\* Summary of Analysis \*\*\*

Roof sheathing diaphragm satisfies Code requirements.

\*\*\*\* ANALYSIS OF ROOF SHEATHING FOR FASTENER WITHDRAWAL \*\*\*\*

Interior zone (area Ri)

Roof trusses are Southern Pine lumber, spaced at 24 inches  
Sheathing is 7/16 inch with no intermediate blocking  
Size of sheathing is 48 inches by 96 inches  
Fasteners along end trusses are 8d nails spaced at 5 inches  
Fasteners along int. trusses are 8d nails spaced at 10 inches  
Total outward wind force on sheathing = 656 pounds  
Total withdrawal resistance of 40 nails = 3038 pounds (increased for wind)  
Fastening of roof sheathing satisfies Code requirements.

Edge strip (area Si) width = 3 feet

Roof trusses are Southern Pine lumber, spaced at 24 inches  
Sheathing is 7/16 inch with no intermediate blocking  
Size of sheathing is 48 inches by 96 inches  
Fasteners along end trusses are 8d nails spaced at 5 inches  
Fasteners along int. trusses are 8d nails spaced at 10 inches  
Total outward wind force on sheathing = 1024 pounds  
Total withdrawal resistance of 40 nails = 3038 pounds (increased for wind)  
Fastening of roof sheathing satisfies Code requirements.

End zone (areas Se and C) width = 6 feet

Roof trusses are Southern Pine lumber, spaced at 24 inches  
Sheathing is 7/16 inch with no intermediate blocking  
Size of sheathing is 48 inches by 96 inches  
Fasteners along end truss are 8d nails spaced at 5 inches  
Fasteners along end wall are 8d nails spaced at 5 inches  
Fasteners along int. trusses are 8d nails spaced at 10 inches  
Total outward wind force on sheathing = 1417 pounds  
Total withdrawal resistance of 40 nails = 3038 pounds (increased for wind)  
Fastening of roof sheathing satisfies Code requirements.

\*\*\*\* ANALYSIS OF WALL STUDS \*\*\*\*

\*\*\* Analysis of Wall Stud Number 1 \*\*\*

2 in. x 4 in. single studs at 16 in. spacing  
Stud height is 7.625 feet--located in interior zone  
Top of studs is laterally supported by ceiling diaphragm or other method  
Spruce--Pine--Fir lumber---Number 1--Number 2 grade  
Sheathing is inch rated OSB, span rating 24/16

Cross-sectional area = 5.25 sq.in.  
Moment of inertia = 5.359375 in.^4  
Section Modulus = 3.0625 in.^3  
Elastic modulus of wood stud = 1400000 in.^2

Total outward force on stud = 268 pounds  
Stud moment = 255 ft-lb.

Stresses:

Stud bending vert : Actual = 1000 psi Allowable = 2415 psi (adjusted)  
Stud shear : Actual = 35 psi Allowable = 112 psi (adjusted)  
Stud tensile : Actual = 33 psi Allowable = 1020 psi (adjusted)  
Interaction bending and tension actual/allowable stress ratio total = .4464316  
Sheathing bending hor: Actual = 146 psi Allowable = 222 psi (adjusted)

Deflections:

Stud : Actual = .2226 in. Allowable = .5083 in.

-----  
\*\*\* Summary of Analysis \*\*\*

Wall structure satisfies all Code requirements.

\*\*\*\* ANALYSIS OF WALL STUDS \*\*\*\*

\*\*\* Analysis of Wall Stud Number 2 \*\*\*

2 in. x 4 in. single studs at 16 in. spacing  
Stud height is 7.625 feet--located in end zone  
Top of studs is laterally supported by ceiling diaphragm or other method  
Spruce--Pine--Fir lumber----Number 1--Number 2 grade  
Sheathing is inch rated OSB, span rating 24/16

Cross-sectional area = 5.25 sq.in.  
Moment of inertia = 5.359375 in.^4  
Section Modulus = 3.0625 in.^3  
Elastic modulus of wood stud = 1400000 in.^2

Total outward force on stud = 309 pounds  
Stud moment = 294 ft-lb.

Stresses:

Stud bending vert : Actual = 1154 psi Allowable = 2415 psi (adjusted)  
Stud shear : Actual = 40 psi Allowable = 112 psi (adjusted)  
Stud tensile : Actual = 33 psi Allowable = 1020 psi (adjusted)  
Interaction bending and tension actual/allowable stress ratio total = .5101997  
Sheathing bending hor: Actual = 169 psi Allowable = 222 psi (adjusted)

Deflections:

Stud : Actual = .2567 in. Allowable = .5083 in.

-----  
\*\*\* Summary of Analysis \*\*\*

Wall structure satisfies all Code requirements.

\*\*\*\* ALLOWABLE STRESS PROPERTIES \*\*\*\*

Base stresses (psi):

Wood:

Bending = 875  
Tension = 425  
Shear = 70  
Elastic modulus = 1400000

Adjustment factors for wood:

Duration (Du) = 1.6  
Wet service (Wt) = 1  
Temperature (Tm) = 1  
Stability (St) = 1  
Size (Sz) = 1.5  
Volume (Vm) = 1  
Flat use (Fu) = 1  
Repetitive (Rp) = 1.15  
Curvature (Cu) = 1  
Form (Fm) = 1  
Shear stress (Sh) = 1

Allowable stresses (psi):

Wood:

Bending = 2415 (Base x Du x Wt x Tm x St x Sz x Vm x Fu x Rp x Cu x Fm)  
Tension = 1020 (Base x Du x Wt x Tm x Sz)  
Shear = 112 (Base x Du x Wt x Tm x Sh)  
Elastic modulus = 2240000 (Base x Wt x Tm)

Sheathing:

Bending = 222 (Base x 1.33)  
Elastic modulus = 61904.76 (Base)

## TRANSVERSE DRAGSTRUT NAIL ANALYSIS

Wall framing is 2 in. x 4 in. studs

Wall stud framing lumber is Spruce--Pine--Fir

Fasteners are 16d common nails

Approximate nail spacing = 20 inches

Total lateral force on building = 11911 pounds

Force applied at top of walls = 5955 pounds

Total dragstrut length = 56 feet

Shear per unit dragstrut length = 106 pounds per linear foot

Actual shear on each nail = 176 pounds

Allowable shear on each nail = 192 pounds

Dragstrut nailing satisfies Code requirements.

-----

## LONGITUDINAL DRAGSTRUT NAIL ANALYSIS

Wall framing is 2 in. x 4 in. studs

Wall stud framing lumber is Spruce--Pine--Fir

Fasteners are 16d common nails

Approximate nail spacing = 20 inches

Total lateral force on building = 4090 pounds

Force applied at top of walls = 2045 pounds

Total dragstrut length = 132 feet

Shear per unit dragstrut length = 15 pounds per linear foot

Actual shear on each nail = 25 pounds

Allowable shear on each nail = 192 pounds

Dragstrut nailing satisfies Code requirements.

\*\*\*\* T R A N S V E R S E     S H E A R W A L L     A N A L Y S I S \*\*\*\*

Wall framing is 2 in. x 4 in. studs at 16 inch spacing  
Wall stud framing lumber is Spruce--Pine--Fir  
Wall shear siding is Oriented Strand Board -- 7/16 inch thick  
Wall sheathing has all edges nailed  
Fasteners: 8d common nails spaced along edges at 5 inch centers  
Fasteners: 8d common nails spaced in interior at 10 inch centers

Total lateral force on building     = 11911 pounds  
Force applied at top of walls         = 5955 pounds  
Accumulated total shearwall length = 56 feet

Actual unit shear on shearwalls     = 106 pounds per linear foot  
Allowable unit shear on shearwalls = 257 pounds per linear foot

Shearwall satisfies Code requirements.

-----

\*\*\*\* L O N G I T U D I N A L     S H E A R W A L L     A N A L Y S I S \*\*\*\*

Wall framing is 2 in. x 4 in. studs at 16 inch spacing  
Wall stud framing lumber is Spruce--Pine--Fir  
Wall shear siding is Oriented Strand Board -- 7/16 inch thick  
Wall sheathing has all edges nailed  
Fasteners: 8d common nails spaced along edges at 5 inch centers  
Fasteners: 8d common nails spaced in interior at 10 inch centers

Total lateral force on building     = 4090 pounds  
Force applied at top of walls         = 2045 pounds  
Accumulated total shearwall length = 132 feet

Actual unit shear on shearwalls     = 15 pounds per linear foot  
Allowable unit shear on shearwalls = 257 pounds per linear foot

Shearwall satisfies Code requirements.

-----



\*\*\* ANALYSIS OF OUTWARD FORCES ON WALL SHEATHING \*\*\*

Wall number 1 : Total outward wind force on sheathing = 804 pounds  
: Total withdrawal resistance of 76 nails = 4240 pounds

Wall number 2 : Total outward wind force on sheathing = 927 pounds  
: Total withdrawal resistance of 76 nails = 4240 pounds

\*\*\*\* ANALYSIS OF SHEATHING FASTENERS \*\*\*\*

Wall framing is Spruce--Pine--Fir lumber  
Sheathing is 7/16 inch Oriented Strand Board  
Sheathing extends from bottom of bottom plate to top of top plate  
Fasteners are 8d common nails at 5 inch spacing

Total uniform wind uplift in first story at top of wall level = 290 plf  
Uniform dead loads per linear foot:

Roof = 159.7911 plf

-----

Total = 159.7911 plf

Total uniform dead load in first story at top of wall level = 159 plf  
Net wind uplift in first story at top of wall level = 131 plf

Total uplift force on each nail = 54 pounds  
Allowable shear on each nail = 97 pounds (increased for wind)  
Sheathing to plate fastening satisfies all Code requirements.

\*\*\*\* ANALYSIS OF SHEATHING FASTENERS \*\*\*\*

Wall framing is Spruce--Pine--Fir lumber  
Sheathing is 7/16 inch Oriented Strand Board  
Sheathing extends from bottom of bottom plate to top of top plate  
Fasteners are 8d common nails at 5 inch spacing

Total uniform wind uplift in first story at floor level = 290 plf  
Uniform dead loads per linear foot:

Roof = 159.7911 plf

Wall = 38.42197 plf

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Total = 198.2131 plf

Total uniform dead load in first story at floor level = 198 plf  
Net wind uplift in first story at floor level = 92 plf

Total uplift force on each nail = 38 pounds  
allowable shear on each nail = 97 pounds (increased for wind)  
Sheathing to plate fastening satisfies all Code requirements.

\*\*\*\* ANALYSIS OF FOUNDATION ANCHORAGE \*\*\*\*

Anchor bolts are 1/2 inch A307, with 2 inch round washer at 48 inch centers.

Total uniform wind uplift on foundation = 290 pounds per linear foot

Uniform dead loads in pounds per linear foot:

Roof = 159.7911 plf

Wall = 38.42197 plf

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Total = 198.2131 plf

Total uniform dead load times 2/3 = 132 pounds per linear foot

Net uplift force on foundation = 158 pounds per linear foot

Total uplift force on each anchor bolt = 632 pounds

Safe tension value of each anchor bolt = 1634 pounds (increased by 1/3)

Bolt safe tension value is governed by washer failure

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\*\*\* Summary of Analysis \*\*\*

Foundation anchorage satisfies all Code requirements.

\*\*\*\* ANALYSIS OF CORNER HOLD-DOWN REQUIREMENTS \*\*\*\*

Hold-down is one typical anchor bolt with washer, each wall

Normal anchor bolt spacing = 48 inches

Distance from corner to hold-down device = 6 inches

Distance from corner to first interior anchor bolt = 48 inches

Net uplift force on foundation = 158 pounds per linear foot

Tributary distance to corner device = 2.25 feet

Net uplift on corner hold-down device = 355 pounds

Uplift tension due to shearwall action in a transverse shearwall segment:

Distance from corner to hold-down device = 6 inches

Distance from corner to first interior anchor bolt = 48 inches

Total shear from shearwall segment = 319 pounds

Height of wall = 8 feet

Uniform dead load times 2/3 = 25 pounds per linear foot

Shearwall moment at bottom of wall = 2552 foot-pounds

Additional tension at corner device = 1237 pounds

Total uplift tension on corner hold-down devices = 1592 pounds

Allowable tension on corner hold-down devices = 3268 pounds

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\*\*\* Summary of Analysis \*\*\*

Corner hold-down device COMPLIES with Code requirements.

\*\*\*\* ANALYSIS OF FOUNDATION \*\*\*\*

Stemwall is 8 inch concrete masonry, filled with grout, 16 inches high  
Footing is 20 inches wide by 10 inches deep  
Earth cover over top of footing is 4 inches

Total uniform wind uplift on foundation = 290 pounds per linear foot  
Uniform dead loads in pounds per linear foot:

Roof = 159.7911 plf

Wall = 38.42197 plf

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Total = 198.2131 plf

Total uniform dead load times 2/3 = 132 pounds per linear foot  
Net uplift force at top of foundation = 158 pounds per linear foot  
Weight of stemwall footing earth x 2/3 = 261 pounds per linear foot  
Net uplift at bottom of footing = 0 pounds per linear foot  
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\*\*\* Summary of Analysis \*\*\*

Foundation is stable.

\*\*\*\* ANALYSIS OF REINFORCING STEEL \*\*\*\*

Grade 40 reinforcing steel, Number 5 vert. bars at 72 inch centers

Total uniform wind uplift on foundation = 290 pounds per linear feet  
Uniform dead loads in pounds per linear foot:

Roof = 159.7911 plf

Wall = 38.42197 plf

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Total = 198.2131 plf

Total uniform dead load times 2/3 = 132 pounds per linear foot  
Net uplift force on foundation = 158 pounds per linear foot  
Weight of concrete block stemwall x 2/3 = 81 pounds per linear foot  
Net uplift at top of footing = 77 pounds per linear foot

Total uplift force on each re-bar = 462 pounds  
Safe tension value of each re-bar = 8181 pounds (increased by 1/3)  
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\*\*\* Summary of Analysis \*\*\*

Reinforcing steel satisfies all Code requirements.

\*\*\*\* SUMMARY OF REINFORCING DATA \*\*\*\*

Foundation wall data:

Wall is composed of 8 inch concrete masonry, fully grouted.  
Wall reinforcing is Grade 40 steel, Number 5 at 72 inch centers  
Minimum required lap splice for Number 5 bar is 25 inches.  
Minimum required clearance for Number 5 bar is 1.5 inches.  
Wall reinf. in footing has a std. A.C.I. hook, 6 inches below top of footing.

Footing data:

Footing is continuous, 20 inches wide by 10 inches deep.  
Footing concrete is 2500 psi  
Footing reinforcing is Grade 40 steel, 2--#(    ) longitudinal.  
Minimum required splice length = 25 inches  
Reinforcing steel shall have cover as follows:

Top-----6 inches

Sides-----3 inches

Bottom----3 inches