

# ITW Building Components Group, 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: IT7X8228Z0104093834

Truss Fabricator: Anderson Truss Company  
Job Identification: 7-051--Mike Todd Construction KELLY RES. -- , \*\*  
Truss Count: 26  
Model Code: Florida Building Code 2004 and 2006 Supplement  
Truss Criteria: ANSI/TPI-2002(STD)/FBC  
Engineering Software: Alpine Software, Versions 7.36, 7.25.  
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: HCUSR8228

Details: BRCLBSUB-



Seal Date: 06/04/2007

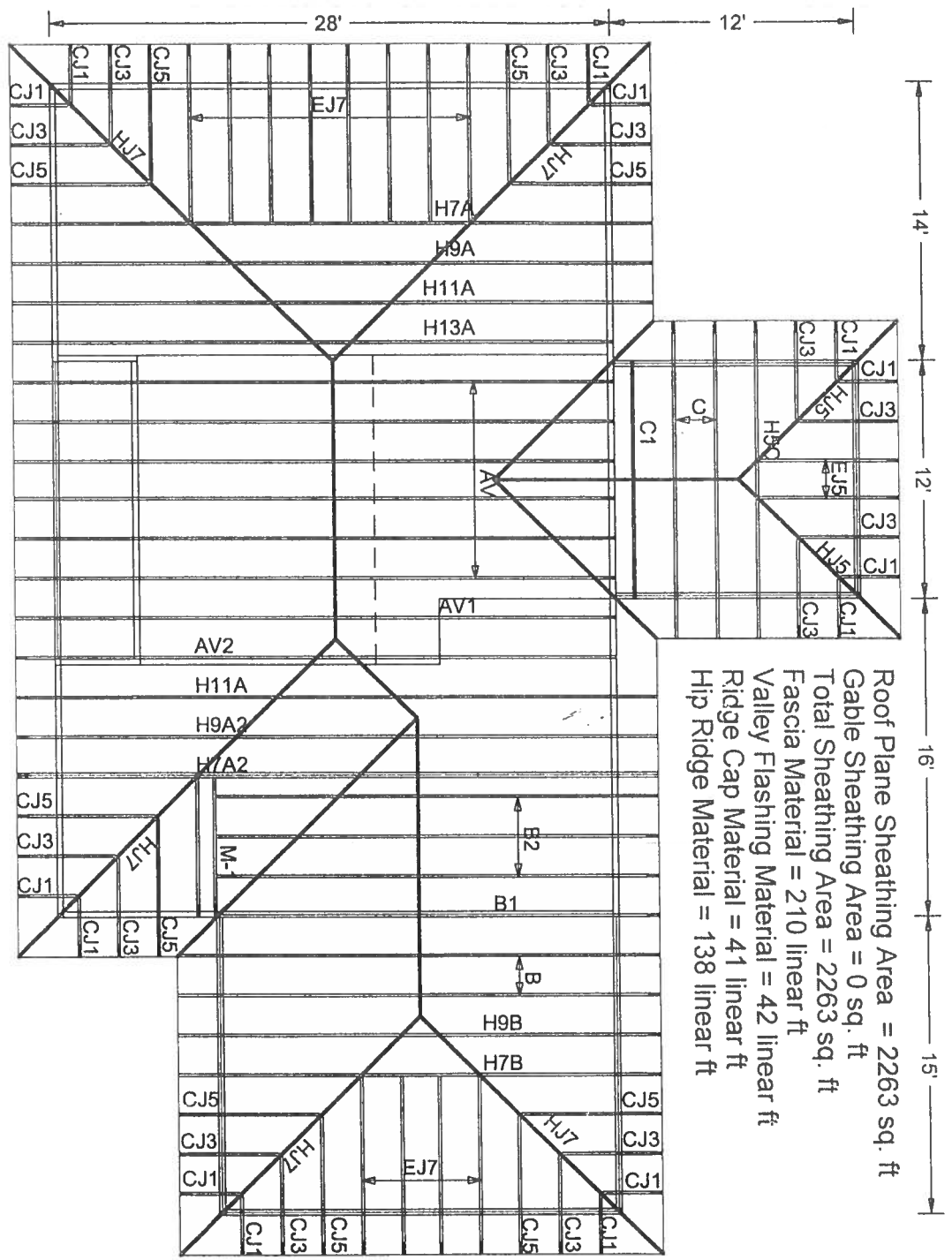
-Truss Design Engineer-  
Arthur R. Fisher

Florida License Number: 59687  
1950 Marley Drive  
Haines City, FL 33844

| #  | Ref     | Description | Drawing# | Date     |
|----|---------|-------------|----------|----------|
| 1  | 26081-- | H7A         | 07155001 | 06/04/07 |
| 2  | 26082-- | H9A2        | 07155002 | 06/04/07 |
| 3  | 26083-- | H11A        | 07155003 | 06/04/07 |
| 4  | 26084-- | H9A         | 07155004 | 06/04/07 |
| 5  | 26085-- | H13A        | 07155005 | 06/04/07 |
| 6  | 26086-- | H7A2        | 07155013 | 06/04/07 |
| 7  | 26087-- | AV          | 07155014 | 06/04/07 |
| 8  | 26088-- | AV1         | 07155015 | 06/04/07 |
| 9  | 26089-- | AV2         | 07155016 | 06/04/07 |
| 10 | 26090-- | H7B         | 07155018 | 06/04/07 |
| 11 | 26091-- | H9B         | 07155019 | 06/04/07 |
| 12 | 26092-- | B           | 07155020 | 06/04/07 |
| 13 | 26093-- | B1          | 07155021 | 06/04/07 |
| 14 | 26094-- | B2          | 07155011 | 06/04/07 |
| 15 | 26095-- | H5C         | 07155026 | 06/04/07 |
| 16 | 26096-- | C           | 07155023 | 06/04/07 |
| 17 | 26097-- | C1          | 07155022 | 06/04/07 |
| 18 | 26098-- | CJ1         | 07155006 | 06/04/07 |
| 19 | 26099-- | HJ7         | 07155010 | 06/04/07 |
| 20 | 26100-- | HJ5         | 07155025 | 06/04/07 |
| 21 | 26101-- | CJ3         | 07155007 | 06/04/07 |
| 22 | 26102-- | EJ5         | 07155024 | 06/04/07 |
| 23 | 26103-- | CJ5         | 07155008 | 06/04/07 |
| 24 | 26104-- | EJ7         | 07155017 | 06/04/07 |
| 25 | 26105-- | M-1         | 07155012 | 06/04/07 |
| 26 | 26106-- | EJ7S        | 07155009 | 06/04/07 |



#7-051 Mike Todd / Candace Kelly  
05/31/07



Roof Plane Sheathing Area = 2263 sq. ft  
Gable Sheathing Area = 0 sq. ft  
Total Sheathing Area = 2263 sq. ft  
Fascia Material = 210 linear ft  
Valley Flashing Material = 42 linear ft  
Ridge Cap Material = 41 linear ft  
Hip Ridge Material = 138 linear ft

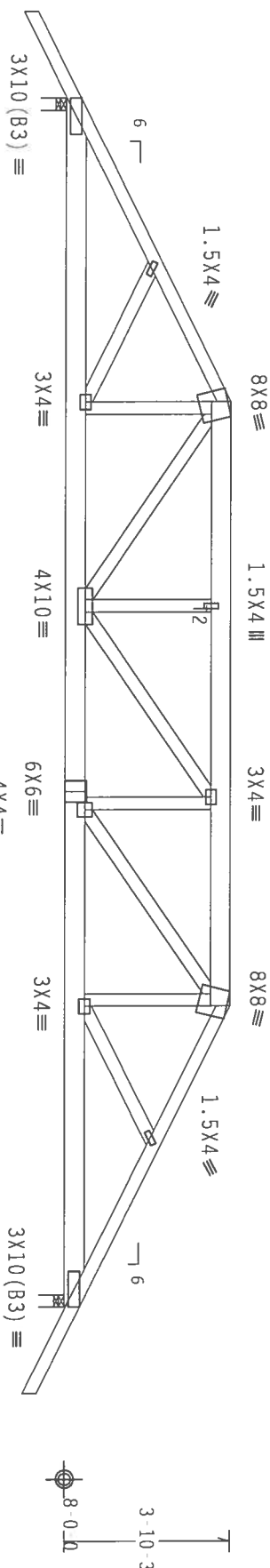
JOB DESCRIPTION:: Mike Todd Construction  
/ : KELLY RES.

JOB NO:  
7-051

PAGE NO  
1 OF 1

Top chord 2x4 SP #2 Dense : T2 2x6 SP #2:  
Bot chord 2x6 SP #2  
Webs 2x4 SP #3

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.  $I_w=1.00$  Gcpi (+/-)=0.18



PLT TYP. Wave

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

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

7.36.04

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

Scale = .25" / Ft.

**WARNING:** THESE RIGID FIBRE CEMENT INFORMATION, INCLUDING THE HELPING, INSTALLING AND PACKING INSTRUCTIONS, ARE THE PROPERTY OF THE MANUFACTURER. REFER TO DC31 (BUILDING COMPONENT SAFETY INFORMATION) FOR THE LEE STREET, SUITE 312, 53179 FOR SAFETY PRACTICES PRIOR TO PERFORMING THESE FUNCTIONS. UNLESS OTHERWISE INDICATED FOR GIBBO SHALL HAVE PROPERLY ATTACHED STRUCTURAL PANELS AND BOTTOM GIBBO SHALL HAVE PROPERLY ATTACHED RIGID CEILING.

**\*\*IMPORTANT\*\***FURNISH A COPY OF THIS DESIGN TO THE INSTALLATION CONTRACTOR. ITM BCG, INC. SHALL NOT

TP1; OR FABRICATING, HANDLING, SHIPPING, INSTALLING & BRACING OF TRUSSES.

CONNECTOR PLATES ARE MADE OF 20/10/16GA (H.H./SS/K) ASTM A653 GRADE 40/60 (H. K/H.SS) GALV. STEEL. APPLY

DRAWING INDICATES ACCEPTANCE OF PROFESSIONAL ENGINEERING RESPONSIBILITY SOLELY FOR THE TRUSS COMPONENT AND INSPECTION OF PLATES FOLLOWED BY (1) SHALL BE PER ANNEX A3 OF IP11 2002 SLCC.3. A SEAL ON THIS

BUILDING DESIGNER PER ANSI/TPI 1 SEC. 2.

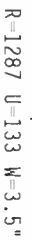
**ITW Building Components Group, Inc.**  
Haines City, FL 33844  
FL Certificate of Authorization # 447

|          |           |        |                    |
|----------|-----------|--------|--------------------|
| TC LL    | 20.0 PSF  | REF    | R8228- 26081       |
| TC DL    | 10.0 PSF  | DATE   | 06/04/07           |
| BC DL    | 10.0 PSF  | DRW    | HCUSR8228 07155001 |
| BC LL    | 0.0 PSF   | HC-ENG | TCE/AF             |
| TOT.LD.  | 40.0 PSF  | SEQN-  | 29319              |
| DUR.FAC. | 1.25      | FROM   | AH                 |
| SPACING  | SEE ABOVE | JREF-  | 17X8228Z01         |

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 Iw=1.00 GCPI(+/-)=0.18

In lieu of structural panels use purlins to brace all flat TC @ 24" OC.

Deflection meets  $L/240$  live and  $L/180$  total load. Creep increase factor for dead load is 1.50.



Scale = .25" / Ft.

STATE OF  
No. 59687  
ARTHUR R. FISHER  
LICENSE

ET BRID A  
NEE



Jun 24, 07

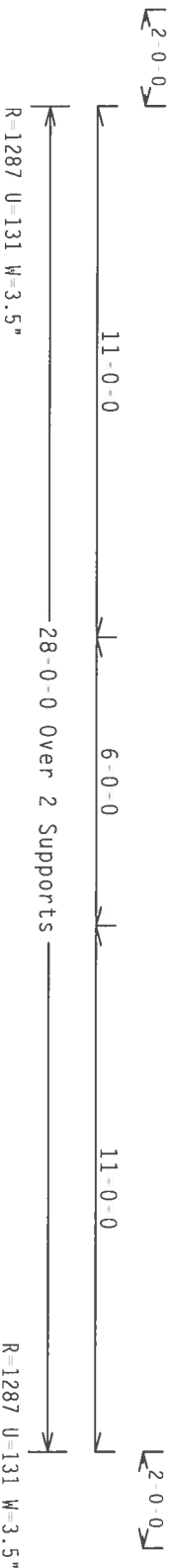
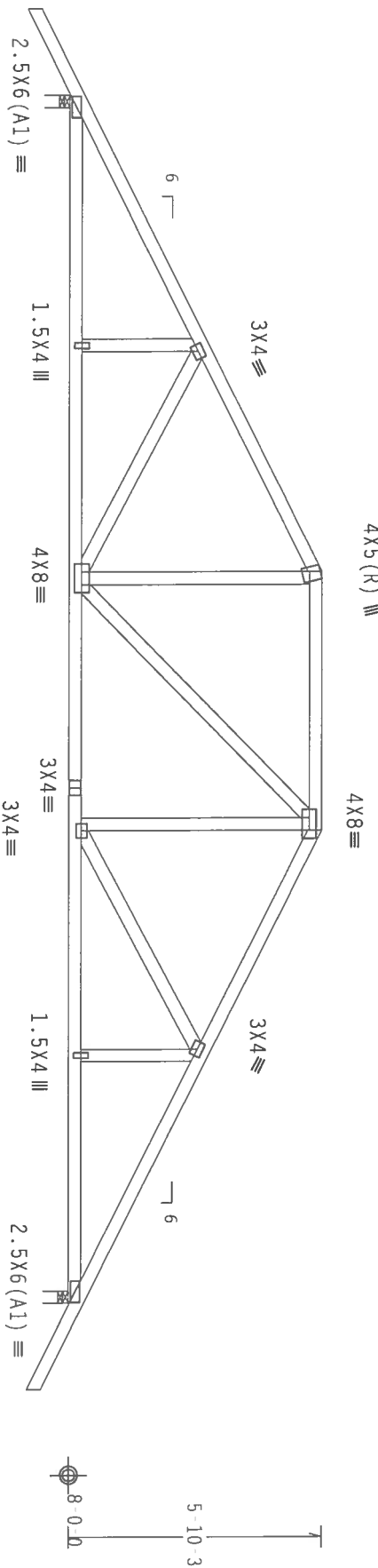
FROM AH  
JREF - 1T7X8228Z01

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

Wind reactions based on MMFRS pressures.

Deflection meets L/240 live and L/180 total load. Creep increase factor for dead load is 1.50.

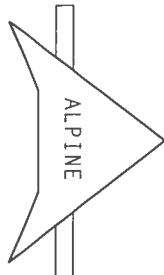
110 mph wind, 15.00 ft mean hgt, ASCE 7-02, CLOSED bldg, not located within 4.50 ft from roof edge, CAT II, EXP B, wind TC DL=5.0 psf, wind BC DL=5.0 psf.  $I_w=1.00$  GCPI(+/-)-0.18  
In lieu of structural panels use purlins to brace all flat TC @ 24" OC.



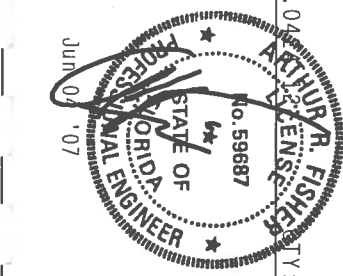
PLT TYP. Wave Design Crit: TPI-2002 (STD) /FBC  $C_q/RT=1.00(1.25)/10(0)$  7.36.04

**\*\*WARNING\*\*** TRUSSES REQUIRE EXTREME CARE IN FABRICATION, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO BCSE (BUILDING COMPONENT SAFETY INFORMATION) - PUBLISHED BY TPI (TRUSS PLATE INSTITUTE, 216 NORTH LEE STREET, SUITE 312, ALEXANDRIA, VA, 22314) AND WCA (WOOD TRUSS COUNCIL OF AMERICA, 6200 ENTERPRISE LANE, 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. THE BCG, 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. CONNECTION PLATES ARE MADE OF 2018/1604 (40/55/75) ASTM A553 GRADE 40/50 (4. K70/55) GALV. STEEL. APPLY TO ALL TRUSSES. TRUSSES ARE TO BE USED IN THE DESIGN POSITION PER DRAWINGS FROM 2. ANY INSPECTION OF PLATES FOLLOWED BY VISUAL INSPECTION SHALL BE REQUIRED AS A CONDITION OF THE TRUSS COMPONENTS DESIGN. THE SUITABILITY AND USE OF THIS COMPONENT FOR ANY BUILDING IS THE RESPONSIBILITY OF THE BUILDING DESIGNER PER ANSI/TPI 1 SEC. 2.



ITW Building Components Group, Inc.  
Haines City, FL 33844  
FL Certificate of Authorization # 547



| TC LL     | 20.0 PSF | REF    | R8228-26083       |
|-----------|----------|--------|-------------------|
| TC DL     | 10.0 PSF | DATE   | 06/04/07          |
| BC DL     | 10.0 PSF | DRW    | HCSR8228 07155003 |
| BC LL     | 0.0 PSF  | HC-ENG | TCE/AF            |
| TOT. LD.  | 40.0 PSF | SEQN-  | 29362             |
| DUR. FAC. | 1.25     | FROM   | AH                |
| SPACING   | 24.0"    | JREF-  | 177X8228Z01       |

Scale = .25"/ft.

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 1w=1.00 GCp(1+/-)=0.18

In lieu of structural panels use purlins to brace all flat TC @ 24" OC.

In lieu of structural panels use purlins to brace all flat TC @ 24" OC.



7.36.041 LICENSE DUTY:1 FL/-/4/-/-/R/-

Scale = .25"/Ft.

STATE OF  
No. 59687  
ARTHUR R. FISHER  
LICENSE

NO.

2

2

Jun

—

1994/1995

|     |       |     |    |    |       |
|-----|-------|-----|----|----|-------|
| Top | chord | 2x4 | SP | #2 | Dense |
| Bot | chord | 2x4 | SP | #2 | Dense |
|     | webs  | 2x4 | SP | #3 |       |

Deflection meets  $L/240$  live and  $L/180$  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 1, EXP B, wind TC DL=5.0 psf, wind BC DL=5.0 psf.  $I_w=1.00$  Gcpl(+/-)=0.18

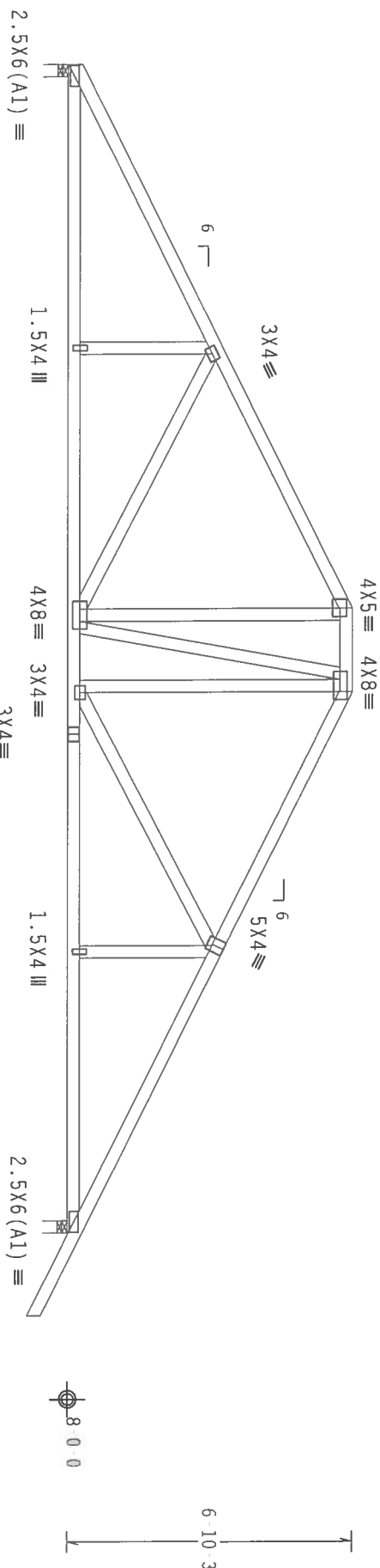


Diagram illustrating the elevation of a bridge structure. The structure consists of two main spans, each labeled "13-0-0". The total length of the bridge is indicated as "28-0-0 Over 2 Supports". The bridge is supported by two piers, with the distance between them labeled "28-0-0 Over 2 Supports". The bridge deck is shown with a slight upward curve. The structure is labeled "R-1148 U-102 W-3.5\" and "R-1292 U-129 W-3.5\".

PLT TYP. Wave

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

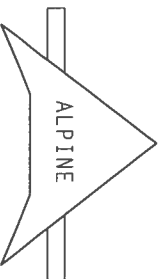
 $Cq/RT=1.00(1.25)/10(0)$ 

7.36.0

QTY:1

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

Scale = .25"/Ft.



**ITW Building Components Group, Inc.**  
Haines City, FL 33844

\* \* \*WARNING\*\*\*\*\* PRIORS RESULTING REQUIRE CASE IN FABRICATION, HANDLING, SHIPPING, INSTALLING AND BRACING REFER TO 8651 (BUILDING COMPONENT SAFETY INFORMATION), PUBLISHED BY IFI (FIBER PAPER INSTITUTE), 218 NORTH LEE STREET, SUITE 312, ALEXANDRIA, VA, 22314 AND WICA (WOOD TRUSS COMPANY) OF AMERICA, 6300 ENTERPRISE LANE, MADISON, MI 47319 FOR SAFETY PRACTICES PERTAINING TO PERFORMING THESE FUNCTIONS. UNLESS OTHERWISE INDICATED TOP CHORD SHALL HAVE PROPERLY ATTACHED STRUCTURAL PAJETS AND BOTTOM CHORD SHALL HAVE PROPERLY ATTACHED RIGID CEILING.

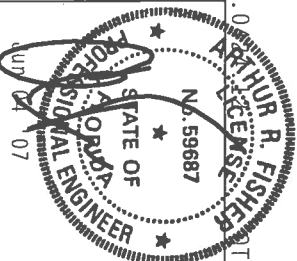
**\*\*IMPORTANT\*\* FURNISH A COPY OF THIS DESIGN TO THE INSTALLATION CONTRACTOR. ITH BCG, INC. SHALL NOT**

TP1: OR FABRICATING, HANDLING, SHIPPING, INSTALLING & BRACING OF TRUSSES.

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

ANY INSPECTION OF PLATES FOLLOWED BY (1) SHALL BE PER ANNEX A3 OF TP11-2002 SEC.3. A SEAL ON THIS

DESIGN SHOWN. THE SUSTAINABILITY AND USE OF THIS COMPONENT FOR ANY BUILDING IS THE RESPONSIBILITY OF THE BUILDING DESIGNER PER ANSI/DP1.1 SEC. 2



|          |          |        |                    |
|----------|----------|--------|--------------------|
| TC LL    | 20.0 PSF | REF    | R8228- 26085       |
| TC DL    | 10.0 PSF | DATE   | 06/04/07           |
| BC DL    | 10.0 PSF | DRW    | HCUSR8228 07155005 |
| BC LL    | 0.0 PSF  | HC-ENG | TCE/AF *           |
| TOT.LD.  | 40.0 PSF | SEQN-  | 29368              |
| DUR.FAC. | 1.25     | FROM   | AH                 |
| SPACING  | 24.0"    | JREF-  | 1T7X8228Z01        |

Top chord 2x4 SP #2 Dense : T2 2x6 SP #2:  
Bot chord 2x6 SP #2  
Webs 2x4 SP #3

SPECIAL LOADS

(LUMBER DUR.FAC.=1.25 / PLATE DUR.FAC.=1.25)  
TC - From 62 PLF at -2.00 to 62 PLF at 30.00  
BC - From 4 PLF at -2.00 to 4 PLF at 0.00  
BC - From 20 PLF at 0.00 to 20 PLF at 28.00  
BC - From 4 PLF at 28.00 to 4 PLF at 30.00  
TC - 446 LB Conc. Load at 7.06  
BC - 440 LB Conc. Load at 7.00  
BC - 1679 LB Conc. Load at 7.94

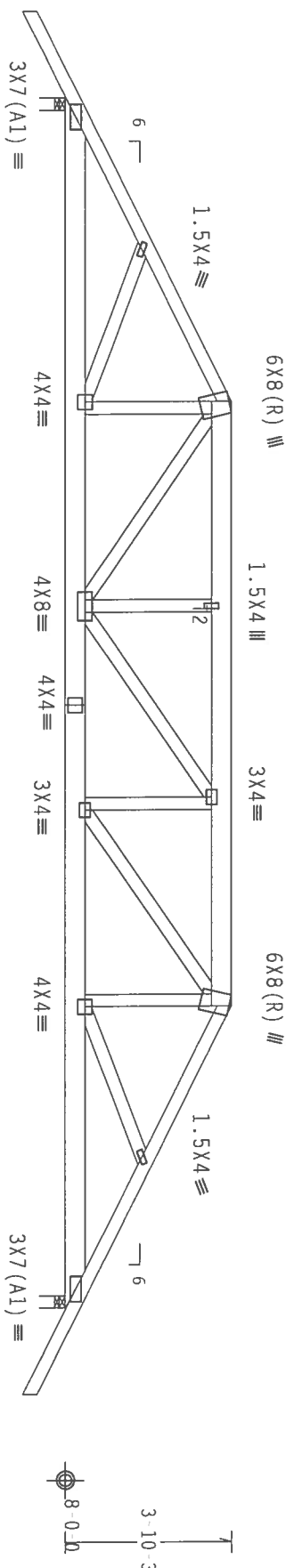
Deflection meets L/240 live and L/180 total load. Creep increase factor for dead load is 1.50.

2 COMPLETE TRUSSES REQUIRED

Nailling Schedule: (12d Common (0.148"x3.25", min.) nails)  
Top Chord: 1 Row @12.00" o.c.  
Bot Chord: 1 Row @12.00" 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 11, EXP B, wind TC DL=5.0 psf, wind BC DL=5.0 psf. Iw=1.00 GCPI(+/-)-0.18

In lieu of structural panels use purlins to brace all flat TC @ 24" OC.



2'-0-0"  
7'-0-0"  
14'-0-0"  
7'-0-0"  
2'-0-0"  
28'-0-0 Over 2 Supports  
R=3160 U-341 W=3.5"  
R=1979 U-214 W=3.5"

PLT TYP. Wave

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

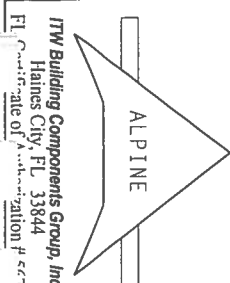
7.25

Scale = .25"/ft.

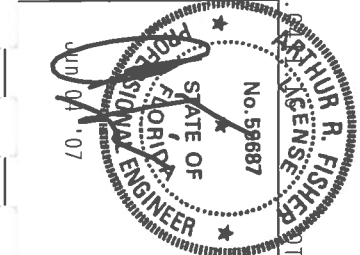
\*\*WARNING\*\* TRUSSES REQUIRE EXHIBIT CASE IN FABRICATION, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO BCST (BUILDING COMPONENT SAFETY INFORMATION), PUBLISHED BY TPI (TRUSS PLATE INSTITUTE, 216 NORTH LEE STREET, SUITE 312, ALEXANDRIA, VA, 22314) AND WICA (WOOD TRUSS COUNCIL OF AMERICA, 6500 ENTERPRISE LANE, 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\*\* TURNISH A COPY OF THIS DESIGN TO THE INSTALLATION CONTRACTOR. THE BCG, 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.

CONTRACTOR PLATES ARE MADE OF 20/11/1064 (W/55/57) ASH K65 GRANT 40/60 (W, K2H-55) GALV. STEEL. APPLY ANY INSPECTION OF PLATES FOR AND BY THE BCG, INC. FOR THE DESIGN. POSITION FOR DRAWINGS (AREA 2, DRAWING INDICATES ACCEPTANCE OF PROFESSIONAL ENGINEERING RESPONSIBILITY FOR THE TRUSS COMPONENT DESIGN SIGN). THE SUITABILITY AND USE OF THIS COMPONENT FOR ANY BUILDING IS THE RESPONSIBILITY OF THE BUILDING DESIGNER PER ANSI/TPI 1 SEC. 2.



FL Certificate of Authorization # 567



| TC LL    | 20.0 PSF  | REF    | R8228- 26086       |
|----------|-----------|--------|--------------------|
| TC DL    | 10.0 PSF  | DATE   | 06/04/07           |
| BC DL    | 10.0 PSF  | DRW    | HCUSR8228 07155013 |
| BC LL    | 0.0 PSF   | HC-ENG | TCE/AF             |
| TOT.LD.  | 40.0 PSF  | SEQN   | 95805 REV          |
| DUR.FAC. | 1.25      | FROM   | AH                 |
| SPACING  | SEE ABOVE | JREF   | 1T7X8228Z01        |

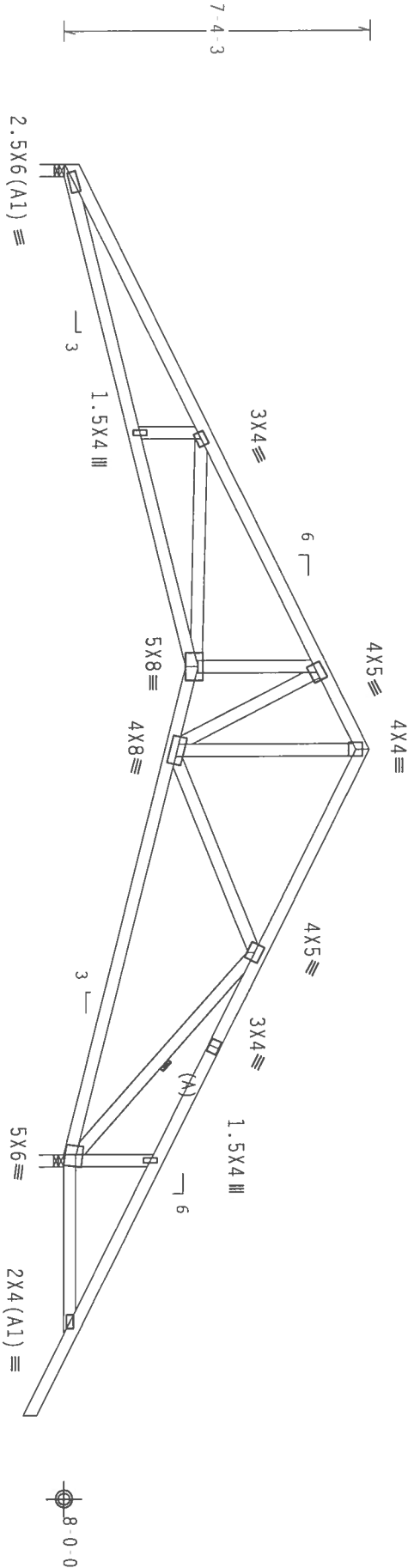


|     |       |     |    |    |       |
|-----|-------|-----|----|----|-------|
| Top | chord | 2x4 | SP | #2 | Dense |
| Bot | chord | 2x4 | SP | #2 | Dense |
|     | Wabs  | 2x4 | SP | #3 |       |

Deflection meets  $L/240$  live and  $L/180$  total load. Creep increase factor for dead load is 1.50.

(A) Continuous lateral bracing equally spaced on member.

(A) Continuous lateral bracing equally spaced on member.



PLT TYP. Wave

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

7.36.0

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

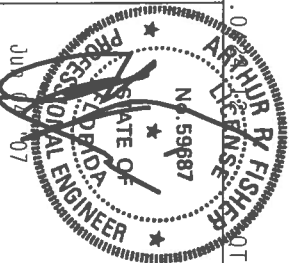
Scale = .25"/Ft.

**\*WARNING\*** \*PRIORS BEING EXERCISED CARE IN FABRICATION, HANDLING, SHIPPING, INSTALLING AND BRACING REFER TO DCST (BUILDING COMPONENT SAFETY INFORMATION) - PUBLISHED BY IPF (TRUSS PANEL INSTITUTE), 218 NORTH LEE STREET, SUITE 312, ALEXANDRIA, VA, 22314 AND WICK (WOOD TRUSS COUNCIL OF AMERICA, 6500 ENTERPRISE LANE, MIDDLEBURY, VT 55759) FOR SAFETY PRECAUTIONS PRIOR TO PERFORMING BUILD OF ACTIONS. UNDESIRABLE INDICATED TOP CHORD SHALL HAVE PROPERLY ATTACHED STRUCTURAL PANELS AND BOTTOM CHORD SHALL HAVE PROPERLY ATTACHED RIGID CEILING.

ALPINE

**ITW Building Components Group, Inc.**  
Haines City, FL 33844

### FL-100: rate of innovation # 177



|          |          |        |                    |
|----------|----------|--------|--------------------|
| TC LL    | 20.0 PSF | REF    | R8228- 26087       |
| TC DL    | 10.0 PSF | DATE   | 06/04/07           |
| BC DL    | 10.0 PSF | DRW    | HCSUR8228 07155014 |
| BC LL    | 0.0 PSF  | HC-ENG | TCE/AF *           |
| TOT.LD.  | 40.0 PSF | SEQN-  | 29373              |
| DUR.FAC. | 1.25     | FROM   | AH                 |
| SPACING  | 24.0"    | JREF-  | 1T7X8228Z01        |

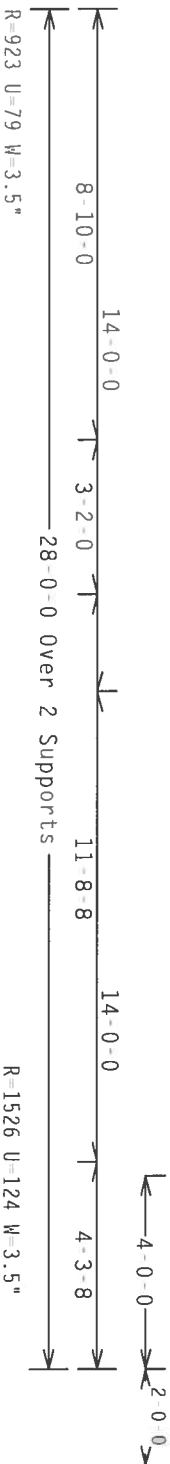
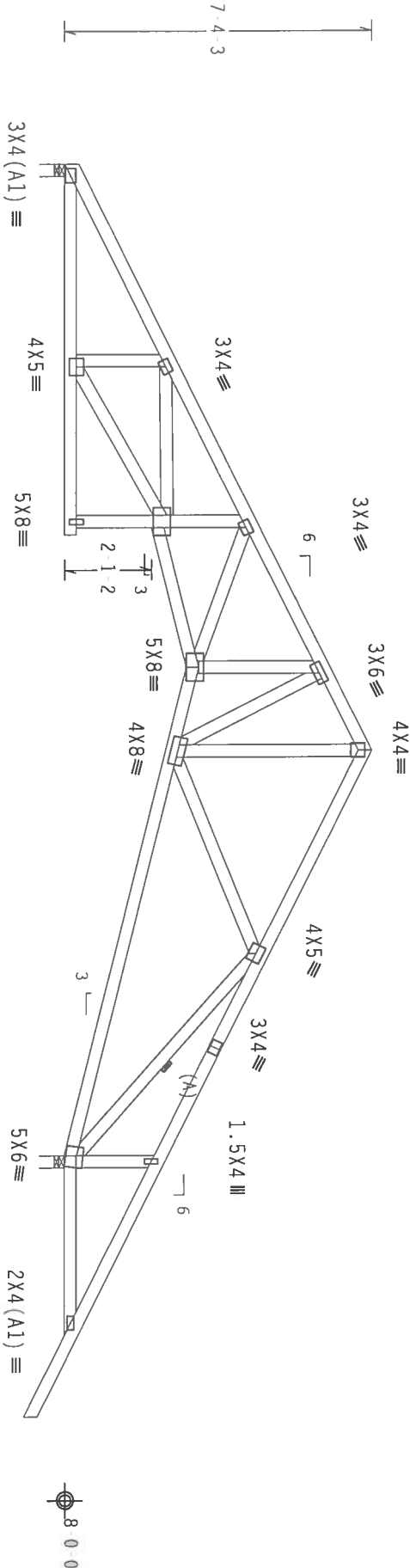
Top chord 2x4 SP #2 Dense  
Bot chord 2x4 SP #2 Dense  
Webs 2x4 SP #3

Wind reactions based on MMFRS pressures.

Deflection meets L/240 live and L/180 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.  $(W=1.00 \text{ GCP} (+/-) = 0.18)$

(A) Continuous lateral bracing equally spaced on member.



PLT TYP. Wave

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

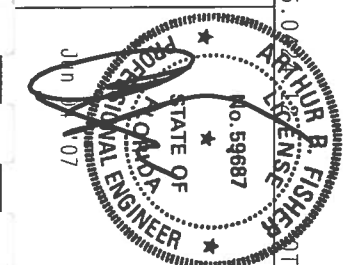
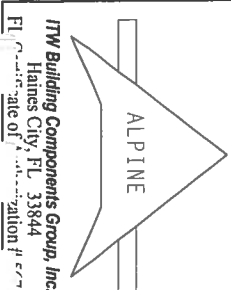
QTY: 1 FL/-/4/-/R/-

Scale = .25"/Ft.

**\*\*WARNING\*\*** TRUSSES REQUIRE EXTREME CARE IN FABRICATING, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO NCST (BUILDING COMPONENT SAFETY INFORMATION) PUBLISHED BY TPI (TRUSS PLATE INSTITUTE, 210 HORN LEE STREET, SUITE 212, ALEXANDRIA, VA, 22304) AND NCA (WOOD TRUSS COUNCIL OF AMERICA, 6300 ENTERPRISE LANE, 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. THE BCG, 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 BCS (NATIONAL DESIGN SPEC. BY AFAP) AND TPI. THE BCG CONNECTION PLATES ARE MADE OF 304/316/316L (W/SS/TP) ASH 6053 GRADE 40/60 (4, 6/11/55) GALV. STEEL. APPLY ANY CONNECTION OR PLATES TO THE TRUSS AND, UNLESS OTHERWISE LOCATED ON THIS DESIGN, POSITION PER DRAWINGS T604.2. ANY CONNECTION OR PLATES TO THE TRUSS SHALL BE PER AMERICAN INSTITUTE OF STEEL CONSTRUCTION, INC. (AISC) DESIGN GUIDE 9, THE STABILITY AND USE OF THIS COMPONENT FOR ANY BUILDING IS THE RESPONSIBILITY OF THE BUILDING DESIGNER PER AISI/TPI 1 SEC. 2.



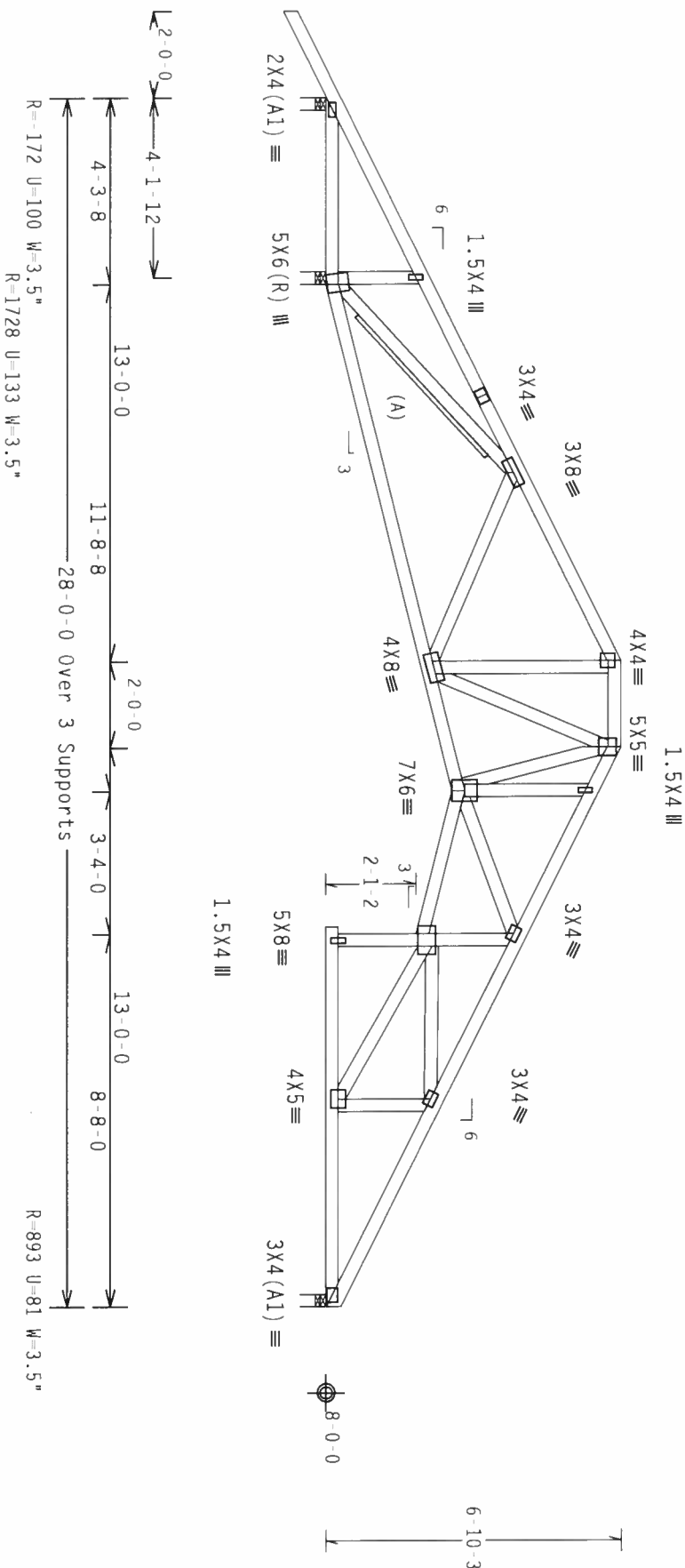
|           |          |        |                   |
|-----------|----------|--------|-------------------|
| TC LL     | 20.0 PSF | REF    | R8228-26088       |
| TC DL     | 10.0 PSF | DATE   | 06/04/07          |
| BC DL     | 10.0 PSF | DRW    | HCSR8228 07155015 |
| BC LL     | 0.0 PSF  | HC-ENG | TCE/AF            |
| TOT. LD.  | 40.0 PSF | SEQN-  | 29376             |
| DUR. FAC. | 1.25     | FROM   | AH                |
| SPACING   | 24.0"    | JREF   | 177X8228Z01       |

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

Wind reactions based on MMFRS pressures.

In lieu of structural panels use purlins to brace all flat TC @ 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. 1w=1.00 GCPI(+/-)=0.18  
(A) 1x4 #3 or better "T" brace. 80% length of web member. Attach with 8d Box or Gun (0.113"x2.5", min.) nails @ 6" OC.  
Deflection meets L/240 live and L/180 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)

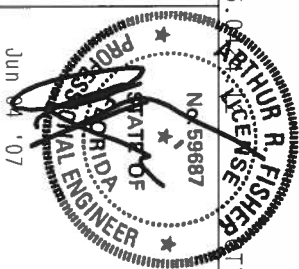
TY:1 FL/-/4/-/-/R/-

Scale = .25"/ft.

\*\*\*WARNING\*\*\* THESE REQUIRE EXTERIOR CARE IN FABRICATING, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO BEST (BUILDING COMPONENT SAFETY INFORMATION) PUBLISHED BY TPI (TRUSS PLATE INSTITUTE, 210 NORTH LEE STREET, SUITE 312, ALEXANDRIA, VA, 22314) AND WCA (WOOD TRUSS COUNCIL OF AMERICA, 6300 ENTERPRISE LANE, 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.

ALPINE

TTW Building Components Group, Inc.  
Haines City, FL 33844  
FL State of Florida License # 00000000



|           |          |        |                    |
|-----------|----------|--------|--------------------|
| TC LL     | 20.0 PSF | REF    | R8228-26089        |
| TC DL     | 10.0 PSF | DATE   | 06/04/07           |
| BC DL     | 10.0 PSF | DRW    | HCUSR8228 07155016 |
| BC LL     | 0.0 PSF  | HC-ENG | TCE/AF             |
| TOT. LD.  | 40.0 PSF | SEQN-  | 29379              |
| DUR. FAC. | 1.25     | FROM   | AH                 |
| SPACING   | 24.0"    | JREF-  | 1T7X8228Z01        |

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

SPECIAL LOADS

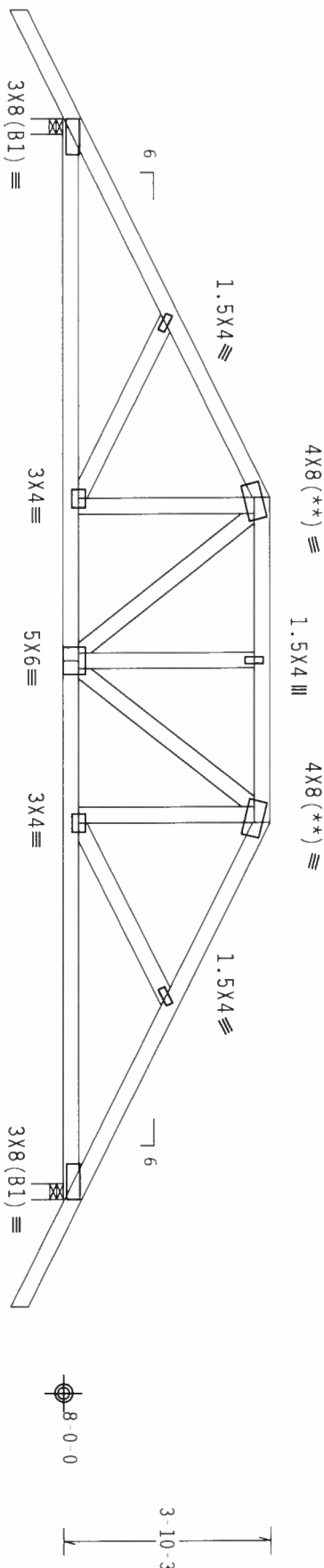
|  |                    |                 |  |
|--|--------------------|-----------------|--|
| (LUMBER DUR.FAC.=1.25 / PLATE DUR.FAC.=1.25) |                    |                 |  |
| TC - From                                    | 62 PLF at -2.00 to | 62 PLF at 7.00  |  |
| TC - From                                    | 31 PLF at 7.00 to  | 31 PLF at 13.00 |  |
| TC - From                                    | 62 PLF at 13.00 to | 62 PLF at 22.00 |  |
| BC - From                                    | 4 PLF at -2.00 to  | 4 PLF at 0.00   |  |
| BC - From                                    | 20 PLF at 0.00 to  | 20 PLF at 7.00  |  |
| BC - From                                    | 10 PLF at 7.00 to  | 10 PLF at 13.00 |  |
| BC - From                                    | 20 PLF at 13.00 to | 20 PLF at 20.00 |  |
| BC - From                                    | 4 PLF at 20.00 to  | 4 PLF at 22.00  |  |
| TC - 434 LB Conc. Load at                    | 7.06,              | 12.94           |  |
| TC - 182 LB Conc. Load at                    | 9.06,              | 10.94           |  |
| BC - 430 LB Conc. Load at                    | 7.00,              | 13.00           |  |
| BC - 77 LB Conc. Load at                     | 9.06,              | 10.94           |  |

(\*\*) 2 plate(s) require special positioning. Refer to scaled plate plot details for special positioning requirements.

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.  $I_w=1.00$   $GCP(+/-)=0.18$

In lieu of structural panels use purlins to brace all flat TC @ 24" OC.

Deflection meets L/240 live and L/180 total load. Creep increase factor for dead load is 1.50.



20'-0" Over 2 Supports  
R=1957 U=212 W=3.5"

PLT TYP. Wave

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

7.25.00

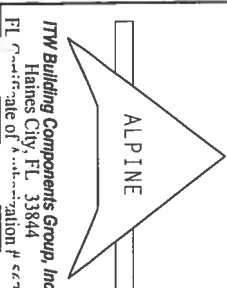
FL/-/4/-/-/R/-

Scale = .3125"/ft.

\*\*\*WARNING\*\*\* TRUSSES REQUIRE EXTREME CARE IN FABRICATING, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO BCGI BUILDING COMPONENT SAFETY INFORMATION PUBLISHED BY THE TRUSS PLATE INSTITUTE, 6300 ENTERPRISE LANE, 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. THE BCGI, 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.

ANY INSPECTION OF TRUSSES FOLLOWED BY (1) SHALL BE PERFORMED AS OF TPI 2002 SEC.3. A SEAL ON THIS DRAWING INDICATES ACCEPTANCE OF PROFESSIONAL ENGINEERING RESPONSIBILITY. A SEAL ON THIS DRAWING INDICATES ACCEPTANCE OF PROFESSIONAL ENGINEERING RESPONSIBILITY. A SEAL ON THIS DRAWING INDICATES ACCEPTANCE OF PROFESSIONAL ENGINEERING RESPONSIBILITY. A SEAL ON THIS DRAWING INDICATES ACCEPTANCE OF PROFESSIONAL ENGINEERING RESPONSIBILITY.



THE BCGI, 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.



|          |           |        |                   |
|----------|-----------|--------|-------------------|
| TC LL    | 20.0 PSF  | REF    | R8228 - 26090     |
| TC DL    | 10.0 PSF  | DATE   | 06/04/07          |
| BC DL    | 10.0 PSF  | DRW    | HCSR8228 07155018 |
| BC LL    | 0.0 PSF   | HC-ENG | TCE/AF            |
| TOT.LD.  | 40.0 PSF  | SEQN-  | 95810 REV         |
| DUR.FAC. | 1.25      | FROM   | AH                |
| SPACING  | SEE ABOVE | JREF-  | 1T7X8228Z01       |

|           |     |    |    |       |
|-----------|-----|----|----|-------|
| Top chord | 2x4 | SP | #2 | Dense |
| Bot chord | 2x4 | SP | #2 | Dense |
| Webbs     | 2x4 | SP | #3 |       |

Deflection meets  $L/240$  live and  $L/180$  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.  $I_w=1.00$   $G_{cpl}(+/-)=0.18$



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

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

7.36.04

Y:1 FL/-/4/-/-/R/-/-

Scale = .3125"/Ft.

• **WARNING:** FIRE RISKS REQUIRE EXTREME CARE IN FABRICATION, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO DCSP (BUILDING COMPONENT SAFETY INFORMATION), PUBLISHED BY THE TRUSS PLATE INSTITUTE, 218 NORTH LEE STREET, SUITE 312, ALEXANDRIA, VA, 22314 AND NRC (GOOD WOOD TRUSS COUNCIL OF AMERICA, 65000 INTERSTATE LAKE, SUITE 519) FOR SAFETY PRACTICES PRIOR TO PERFORMING THESE OPERATIONS. UNDESIGNED, OTHERWISE INDICATED, OR GOOD SHALL HAVE PROPERLY ATTACHED STRUCORAL PANELS AND BOTTOM CHORD SHALL HAVE PROPERLY ATTACHED FIELD CHALLING.

**\*\*IMPORTANT\*\* FURNISH A COPY OF THIS DESIGN TO THE INSTALLATION CONTRACTOR. ITH BCG, INC. SHALL NOT**

DESIGN CONFORMS WITH APPLICABLE PROVISIONS OF MDS (NATIONAL DESIGN SPEC., BY AIAA) AND IP1. THE BCG

PLATES TO EACH FACE OF TRUSS AND, UNLESS OTHERWISE LOCATED ON THIS DESIGN, POSITION PER DRAWINGS 160A-2

DRAWING INDICATES ACCEPTANCE OF PROFESSIONAL ENGINEERING RESPONSIBILITY SOLELY FOR THE TRUSS COMPONENT

**BUILDING DESIGNER PER ANSI/API 1 SEC. 2.**

**ITW Building Components Group, Inc.**  
Haines City, FL 33844  
FL Certificate of Authorization # 667

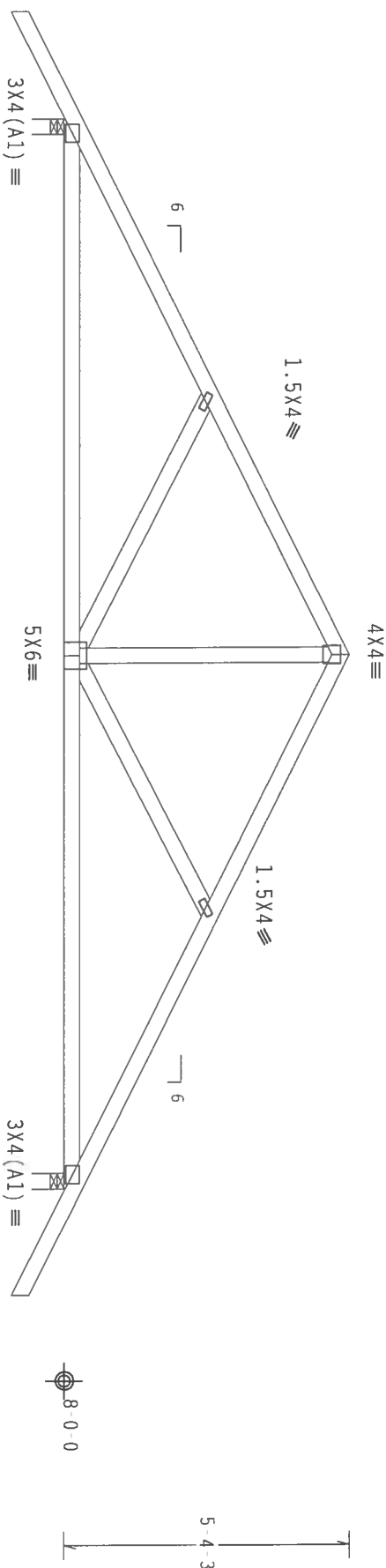
ALPINE

|          |          |        |                    |
|----------|----------|--------|--------------------|
| TC LL    | 20.0 PSF | REF    | R8228- 26091       |
| TC DL    | 10.0 PSF | DATE   | 06/04/07           |
| BC DL    | 10.0 PSF | DRW    | HCUSR8228 07155019 |
| BC LL    | 0.0 PSF  | HC-ENG | TCE/AF *           |
| TOT.LD.  | 40.0 PSF | SEQN-  | 29326              |
| DUR.FAC. | 1.25     | FROM   | AH                 |
| SPACING  | 24.0"    | JREF-  | 1T7X8228Z01        |

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

Wind reactions based on MMFRS pressures.

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. IW=1.00 GCP1(+/-)=0.18 Deflection meets L/240 live and L/180 total load. Creep increase factor for dead load is 1.50.



2'-0-0

10'-0-0

20'-0-0 Over 2 Supports

10'-0-0

2'-0-0

R=957 U=97 W=3.5"

R=957 U=97 W=3.5"

PLT TYP. Wave

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

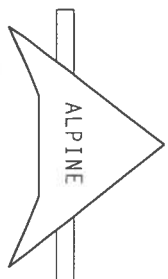
7.36.0

FL/-/4/-/R/-

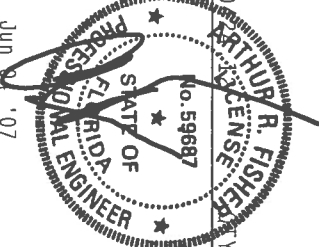
Scale = .3125"/ft.

**\*\*WARNING\*\*** TRUSSES REQUIRE EXTREME CARE IN FABRICATING, HANDLING, SHIPPING, INSTALLING AND BRACING. AFTER TO BESET BUILDING COMPONENT SAFETY INFORMATION, PUBLISHED BY TPI (TRUSS PLATE INSTITUTE, 210 NORTH LEE STREET, SUITE 312, ALEXANDRIA, VA, 22304) AND WICA (WOOD TRUSS COUNCIL OF AMERICA, 6300 ENTERPRISE LANE, 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\*\*** TURNISH A COPY OF THIS DESIGN TO THE INSTALLATION CONTRACTOR. ITW BCG, 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 AOS (NATIONAL DESIGN SPEC. BY AREA) AND TPI. ITW BCG HAS REVIEWED THIS DESIGN AND APPROVED IT FOR CONSTRUCTION. THE DESIGNER SHALL BE RESPONSIBLE FOR THE TRUSS DESIGN. THE SUITABILITY AND USE OF THIS COMPONENT FOR ANY BUILDING IS THE RESPONSIBILITY OF THE BUILDING DESIGNER PER ANSI/TPI 1 SEC. 2.



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FL Certificate of Authorization # 667

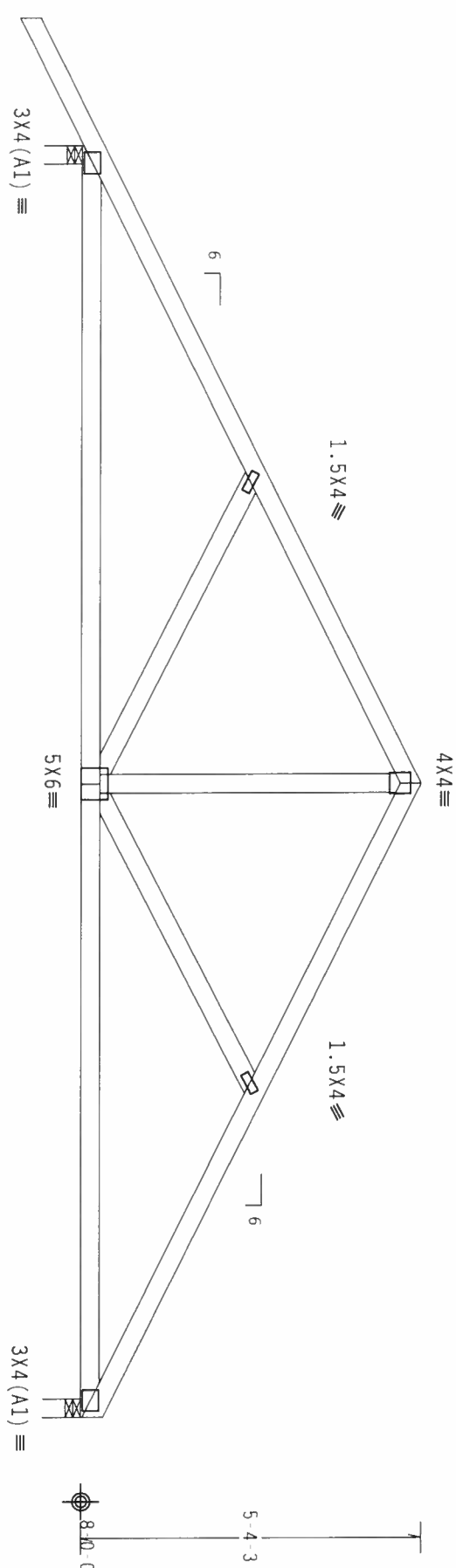


|          |          |        |                   |
|----------|----------|--------|-------------------|
| TC LL    | 20.0 PSF | REF    | R8228- 26092      |
| TC DL    | 10.0 PSF | DATE   | 06/04/07          |
| BC DL    | 10.0 PSF | DRW    | HCSR8228 07155020 |
| BC LL    | 0.0 PSF  | HC-ENG | TCE/AF            |
| TOT.LD.  | 40.0 PSF | SEQN-  | 29329             |
| DUR.FAC. | 1.25     | FROM   | AH                |
| SPACING  | 24.0"    | JREF-  | 1T7X8228Z01       |

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

Wind reactions based on MMFRS pressures.

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.  $I_w=1.00$   $GCP1(+/-)=0.18$   
Deflection meets L/240 live and L/180 total load. Creep increase factor for dead load is 1.50.



2'-0'-0" →  
10'-0'-0"  
20'-0'-0" Over 2 Supports  
10'-0'-0"  
R=965 U=99 W=3.5"  
R=816 U=71 W=3.5"

PLT TYP. Wave

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

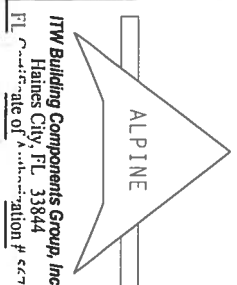
7.36

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

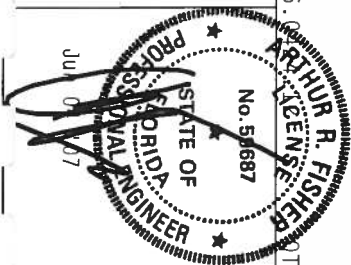
Scale = .375"/ft.

\*\*WARNING\*\* TRUSSES REQUIRE EXTREME CARE IN FABRICATING, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO BCST (BUILDING COMPONENT SAFETY INFORMATION), PUBLISHED BY THE TRUSS PLATE INSTITUTE, 210 NORTH LEE STREET, SUITE 312, ALEXANDRIA, VA, 22314) AND WICA (WOOD TRUSS COUNCIL OF AMERICA, 6300 ENTERPRISE LANE, 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. THE BCG, INC. SHALL NOT BE RESPONSIBLE FOR ANY DEVIATION FROM THIS DESIGN. ANY FAILURE TO BUILD THE TRUSS IN CONFORMANCE WITH THE DESIGN SHALL BE THE RESPONSIBILITY OF THE INSTALLATION CONTRACTOR. THE BCG, INC. SHALL NOT BE RESPONSIBLE FOR ANY DEVIATION FROM THIS DESIGN. ANY FAILURE TO BUILD THE TRUSS IN CONFORMANCE WITH THE DESIGN SHALL BE THE RESPONSIBILITY OF THE INSTALLATION CONTRACTOR.



ITW Building Components Group, Inc.  
Haines City, FL 33844  
FL Certificate of Authorization # 667



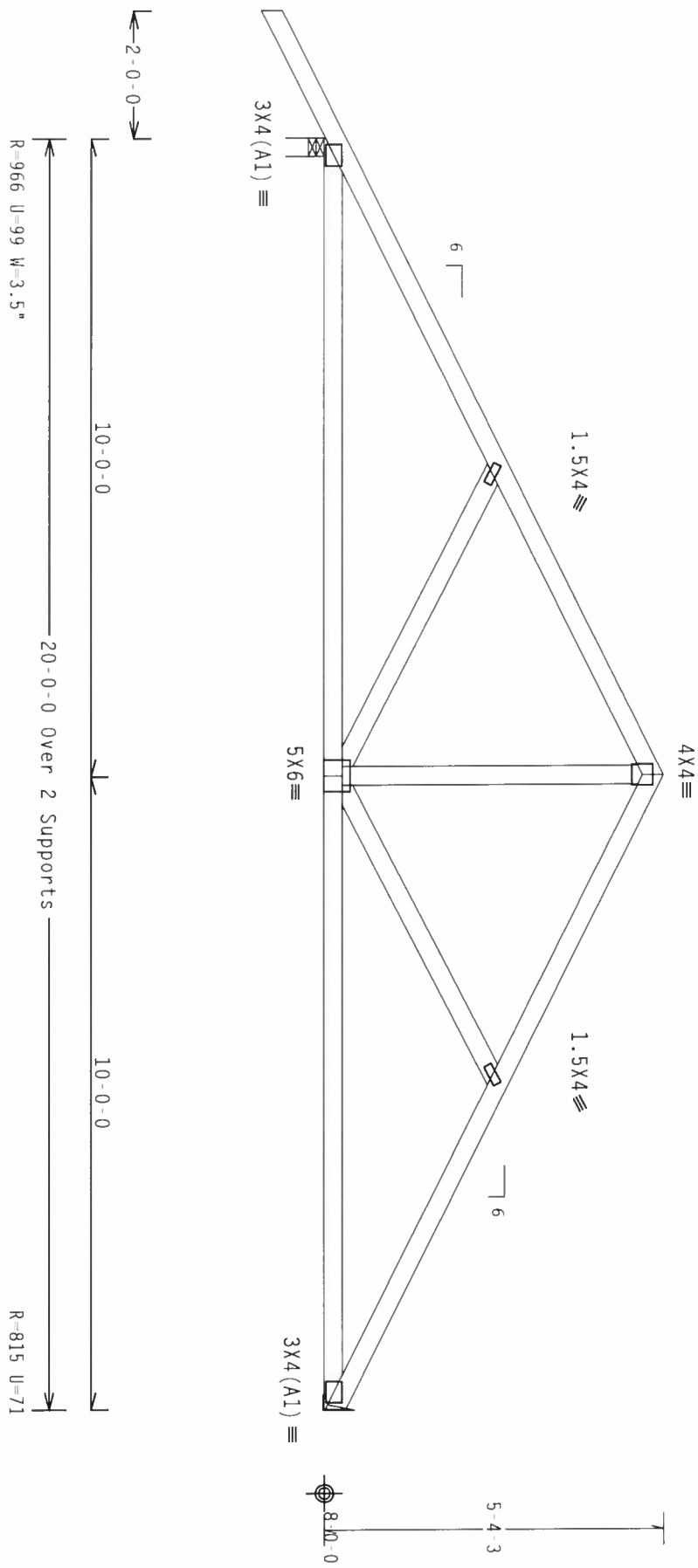
|          |          |        |                    |
|----------|----------|--------|--------------------|
| TC LL    | 20.0 PSF | REF    | R8228 - 26093      |
| TC DL    | 10.0 PSF | DATE   | 06/04/07           |
| BC DL    | 10.0 PSF | DRW    | HCUSR8228 07155021 |
| BC LL    | 0.0 PSF  | HC-ENG | TCE/AF             |
| TOT.LD.  | 40.0 PSF | SEQN-  | 29332              |
| DUR.FAC. | 1.25     | FROM   | AH                 |
| SPACING  | 24.0"    | JREF-  | 1T7X8228Z01        |

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

Wind reactions based on MMFRS pressures.

110 mph wind, 15.00 ft mean hgt, ASCE 7-02, 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. IW=1.00 Gcpi (+/-)=0.18

Deflection meets L/240 live and L/180 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)

7.36.0

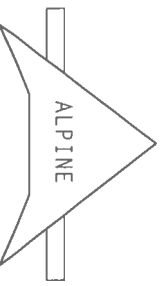
TY:1 FL/-/4/-/-/R/-

Scale = .375"/Ft.

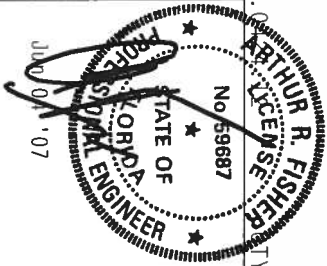
\*\*WARNING\*\* TRUSSES REQUIRE EXTREME CARE IN FABRICATION, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO BCSE (BUILDING COMPONENT SAFETY INFORMATION), PUBLISHED BY TPI (TRUSS PLATE INSTITUTE, 210 NORTH LEE STREET, SUITE 312, ALEXANDRIA, VA, 22304) AND WCA (WOOD TRUSS COUNCIL OF AMERICA, 6500 ENTERPRISE LANE, 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. TPI BCG, 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 NDS (NATIONAL DESIGN SPEC. BY AIA/PA) AND TPI. THE BCG CONNECTION PLATES ARE MADE OF 20/19/16GA (W/35/54) ASTM A653 GRADE 40/60 (W, RHT-55) GALV. STEEL. APPLY TO ALL TRUSS MEMBERS AND CONNECTIONS. THE DESIGNER SHALL BE RESPONSIBLE FOR THE TRUSS COMPONENTS. ANY INSPECTION OF THE TRUSS SHALL BE DONE BY A QUALIFIED PERSONNEL. THE SUITABILITY AND USE OF THIS COMPONENT FOR ANY BUILDING IS THE RESPONSIBILITY OF THE BUILDING DESIGNER PER ANSI/TPI 1 SEC. 2.



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Haines City, FL 33844  
FL Certificate of Authorization # 567



|          |          |        |                    |
|----------|----------|--------|--------------------|
| TC LL    | 20.0 PSF | REF    | R8228 - 26094      |
| TC DL    | 10.0 PSF | DATE   | 06/04/07           |
| BC DL    | 10.0 PSF | DRW    | HCUSR8228 07155011 |
| BC LL    | 0.0 PSF  | HC-ENG | TCE/AF             |
| TOT.LD.  | 40.0 PSF | SEQN   | 29335              |
| DUR.FAC. | 1.25     | FROM   | AH                 |
| SPACING  | 24.0"    | JREF   | 1T7X8228Z01        |



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

Wind reactions based on MMFRS pressures.

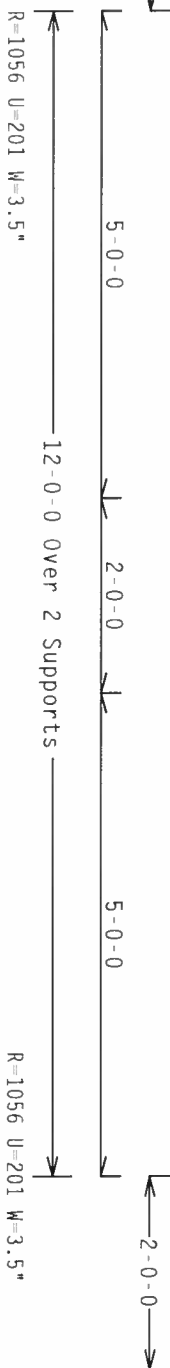
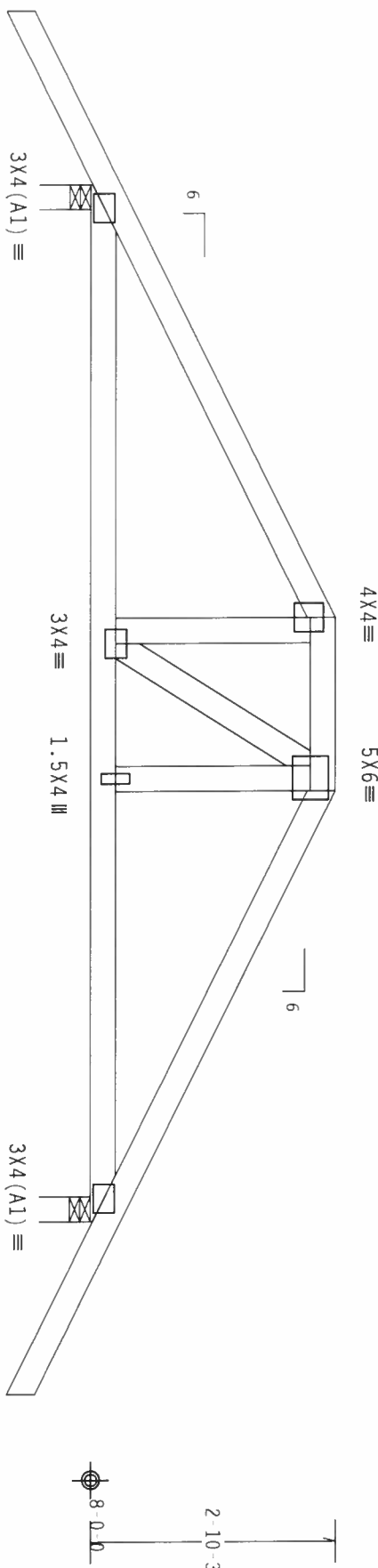
In lieu of structural panels use purlins to brace all flat TC @ 24" OC.

Deflection meets L/240 live and L/180 total load. Creep increase factor for dead load is 1.50.

110 mph wind, 15.00 ft mean hgt, ASCE 7-02, CLOSED bldg, located anywhere in roof, CAT II, EXP 8, wind TC DL=5.0 psf, wind BC DL=5.0 psf.  $I_w=1.00$  GCPI (+/-)=0.18

SPECIAL LOADS

| LUMBER                    |                                   | DUR.FAC.=1.25 / PLATE DUR.FAC.=1.25) |
|---------------------------|-----------------------------------|--------------------------------------|
| TC - From                 | 62 PLF at -2.00 to 62 PLF at 5.00 |                                      |
| TC - From                 | 62 PLF at 5.00 to 62 PLF at 7.00  |                                      |
| TC - From                 | 62 PLF at 7.00 to 62 PLF at 14.00 |                                      |
| BC - From                 | 4 PLF at -2.00 to 4 PLF at 0.00   |                                      |
| BC - From                 | 20 PLF at 0.00 to 20 PLF at 12.00 |                                      |
| BC - From                 | 4 PLF at 12.00 to 4 PLF at 14.00  |                                      |
| TC - 312 LB Conc. Load at | 5.00, 7.00                        |                                      |
| BC - 116 LB Conc. Load at | 5.00, 7.00                        |                                      |



PLT TYP. WAVE

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

7.36.0.0

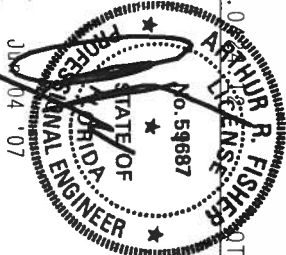
QTY:1 FL/-/4/-/R/-

Scale = .5"/Ft.

**\*\*WARNING\*\*** TRUSSES REQUIRE EXTREME CARE IN FABRICATION, HANDLING, SHIPPING, INSTALLING & BRACING. REFER TO RCSI (BUILDING COMPONENT SAFETY INFORMATION), PUBLISHED BY TPI (TRUSS PLAT INSTITUTE, 210 NORTH LEE STREET, SUITE 312, ALEXANDRIA, VA, 22314) AND WCA (WOOD TRUSS COUNCIL OF AMERICA, 6200 ENTERPRISE LANE, 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.

ALPINE

ITW Building Components Group, Inc.  
Haines City, FL 33844  
FL Certificate of Authorization # 667

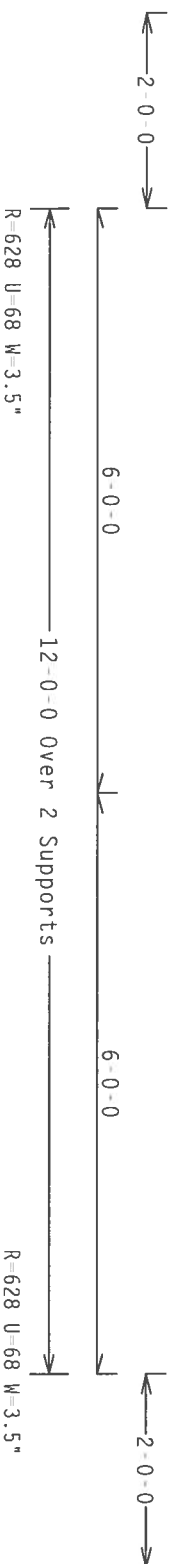
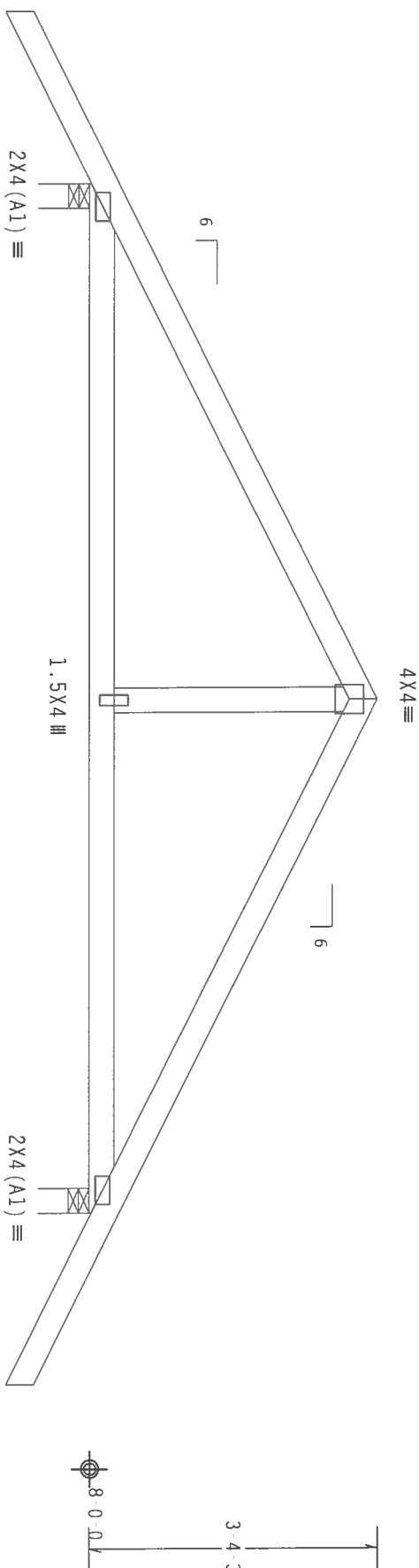


| TC LL    | 20.0 PSF  | REF    | R8228 - 26095      |
|----------|-----------|--------|--------------------|
| TC DL    | 10.0 PSF  | DATE   | 06/04/07           |
| BC DL    | 10.0 PSF  | DRW    | HCUSR8228 07155026 |
| BC LL    | 0.0 PSF   | HC-ENG | TCE/AF             |
| TOT.LD.  | 40.0 PSF  | SEQN-  | 29303              |
| DUR.FAC. | 1.25      | FROM   | AH                 |
| SPACING  | SEE ABOVE | JREF - | 1T7X8228Z01        |

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

Wind reactions based on MMFRS pressures.

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.  $I_w=1.00$  GCPI (+/-)=0.18  
Deflection meets L/240 live and L/180 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)

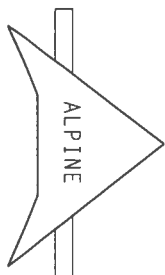
7.36

Scale = .5"/Ft.

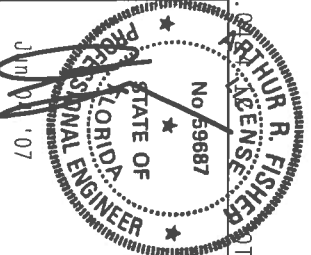
**\*\*WARNING\*\*** TRUSSES REQUIRE EXISTING GABLE FRAMING, HANDLING, SHIPPING, INSTALLING AND BRACING PRIOR TO BEST (INCLUDING COMPONENT SAFETY INFORMATION), PUBLISHED BY TPI (TRUSS PLATE INSTITUTE, 210 NORTH LEE STREET, SUITE 312, ALEXANDRIA, VA, 22304) AND WCA (WOOD TRUSS COUNCIL OF AMERICA, 6300 ENTERPRISE LANE, 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\*\*** PROVIDE A COPY OF THIS DESIGN TO THE INSTALLATION CONTRACTOR. THE BCG, 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 BMS (NATIONAL DESIGN SPEC. BY AISC) AND TPI. THE BCG CONNECTION PLATES ARE MADE OF 70/30/16GA (40/60 (4.4/11.55) GALV. STEEL. APPLY PLATES TO EACH FACE OF TRUSS AND, UNLESS OTHERWISE LOCATED ON THIS DESIGN, POSITION PER DIMENSIONS 160A Z.

INSPECTION OF PLATE FOLLOWED BY (1) SHALL BE PER AMERICAN INSTITUTE OF STEEL CONSTRUCTION, INC. (AISC) 13TH EDITION, 2005. A SEAL OR THIS DRAWING SHALL BE PLACED ON THE DRAWING. THE SUSTAINABILITY AND USE OF THIS COMPONENT FOR ANY BUILDING IS THE RESPONSIBILITY OF THE BUILDING DESIGNER PER ANSI/TPI 1 SEC. 2.



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Haines City, FL 33844  
FL Certificate of Authorization # 667

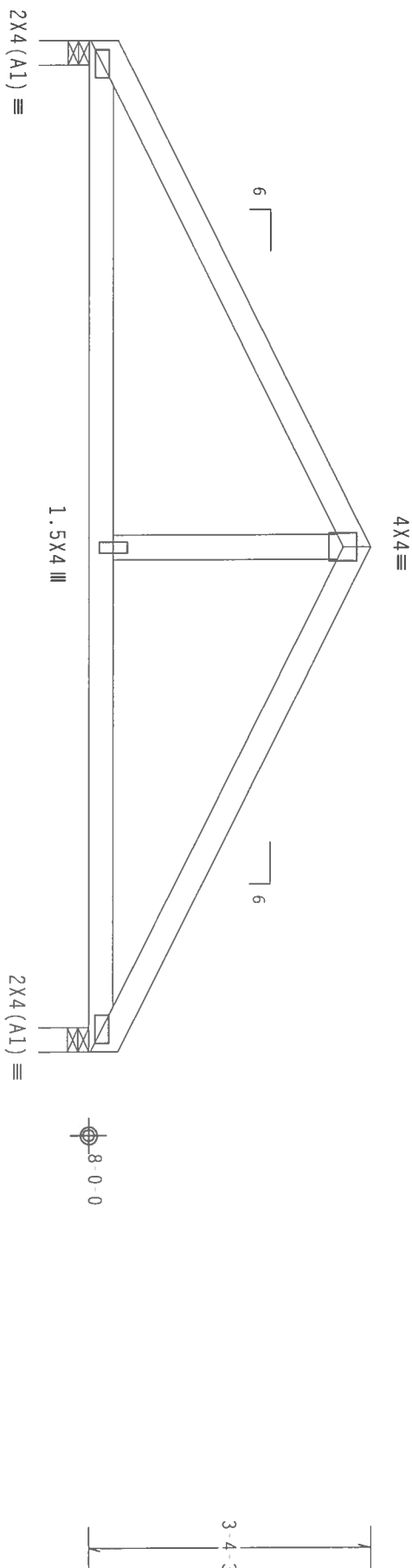


| TC LL     | 20.0 PSF | REF    | R8228 - 26096     |
|-----------|----------|--------|-------------------|
| TC DL     | 10.0 PSF | DATE   | 06/04/07          |
| BC DL     | 10.0 PSF | DRW    | HCSR8228 07155023 |
| BC LL     | 0.0 PSF  | HC-ENG | TCE/AF            |
| TOT. LD.  | 40.0 PSF | SEQN   | 29307             |
| DUR. FAC. | 1.25     | FROM   | J1                |
| SPACING   | 24.0"    | JREF   | 1T7X8228Z01       |

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

Wind reactions based on MMFRS pressures.

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. lw=1.00 Gcpi (1/-)-0.18  
Deflection meets L/240 live and L/180 total load. Creep increase factor for dead load is 1.50.



6'-0-0 6'-0-0 12'-0-0 Over 2 Supports  
R=494 U=43 W=3.5" R=494 U=43 W=3.5"

PLT TYP. Wave

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

7.36.04 R. FISHER  
QTY: 1 FL/-/4/-/R/-

Scale = .5"/ft.

\*\*WARNING\*\* TRUSSES REQUIRING EXTERIOR CASE IN FABRICATION, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO BCSE (BUILDING COMPONENT SAFETY INFORMATION), PUBLISHED BY TPI (TRUSS PLATE INSTITUTE), 218 NORTH LEE STREET, SUITE 312, ALEXANDRIA, VA, 22304 AND WCA (WOOD TRUSS COUNCIL OF AMERICA), 6300 ENTERPRISE LANE, 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 CELLING.

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

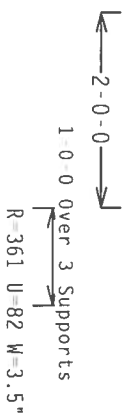
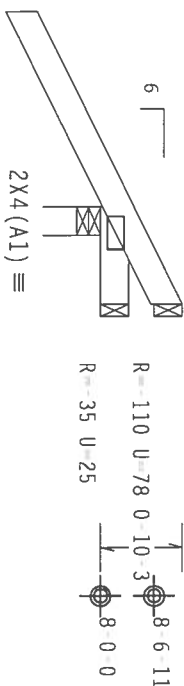
DESIGN FOR PLATES WITH APPLICABLE PROVISIONS OF NDS (NATIONAL DESIGN SPEC. BY ALDER) AND TPI. ITW BCG CONNECTION PLATES ARE MADE OF 2018/19/20/21/22/23/24/25/26/27/28/29/30/31/32/33/34/35/36/37/38/39/40/41/42/43/44/45/46/47/48/49/50/51/52/53/54/55/56/57/58/59/60/61/62/63/64/65/66/67/68/69/70/71/72/73/74/75/76/77/78/79/80/81/82/83/84/85/86/87/88/89/90/91/92/93/94/95/96/97/98/99/100/101/102/103/104/105/106/107/108/109/110/111/112/113/114/115/116/117/118/119/120/121/122/123/124/125/126/127/128/129/130/131/132/133/134/135/136/137/138/139/140/141/142/143/144/145/146/147/148/149/150/151/152/153/154/155/156/157/158/159/160/161/162/163/164/165/166/167/168/169/170/171/172/173/174/175/176/177/178/179/180/181/182/183/184/185/186/187/188/189/190/191/192/193/194/195/196/197/198/199/200/201/202/203/204/205/206/207/208/209/210/211/212/213/214/215/216/217/218/219/220/221/222/223/224/225/226/227/228/229/230/231/232/233/234/235/236/237/238/239/240/241/242/243/244/245/246/247/248/249/250/251/252/253/254/255/256/257/258/259/260/261/262/263/264/265/266/267/268/269/270/271/272/273/274/275/276/277/278/279/280/281/282/283/284/285/286/287/288/289/290/291/292/293/294/295/296/297/298/299/300/301/302/303/304/305/306/307/308/309/310/311/312/313/314/315/316/317/318/319/320/321/322/323/324/325/326/327/328/329/330/331/332/333/334/335/336/337/338/339/340/341/342/343/344/345/346/347/348/349/350/351/352/353/354/355/356/357/358/359/360/361/362/363/364/365/366/367/368/369/370/371/372/373/374/375/376/377/378/379/380/381/382/383/384/385/386/387/388/389/390/391/392/393/394/395/396/397/398/399/400/401/402/403/404/405/406/407/408/409/410/411/412/413/414/415/416/417/418/419/420/421/422/423/424/425/426/427/428/429/430/431/432/433/434/435/436/437/438/439/440/441/442/443/444/445/446/447/448/449/450/451/452/453/454/455/456/457/458/459/460/461/462/463/464/465/466/467/468/469/470/471/472/473/474/475/476/477/478/479/480/481/482/483/484/485/486/487/488/489/490/491/492/493/494/495/496/497/498/499/500/501/502/503/504/505/506/507/508/509/510/511/512/513/514/515/516/517/518/519/520/521/522/523/524/525/526/527/528/529/530/531/532/533/534/535/536/537/538/539/540/541/542/543/544/545/546/547/548/549/550/551/552/553/554/555/556/557/558/559/560/561/562/563/564/565/566/567/568/569/570/571/572/573/574/575/576/577/578/579/580/581/582/583/584/585/586/587/588/589/590/591/592/593/594/595/596/597/598/599/600/601/602/603/604/605/606/607/608/609/610/611/612/613/614/615/616/617/618/619/620/621/622/623/624/625/626/627/628/629/630/631/632/633/634/635/636/637/638/639/640/641/642/643/644/645/646/647/648/649/650/651/652/653/654/655/656/657/658/659/660/661/662/663/664/665/666/667/668/669/670/671/672/673/674/675/676/677/678/679/680/681/682/683/684/685/686/687/688/689/690/691/692/693/694/695/696/697/698/699/700/701/702/703/704/705/706/707/708/709/710/711/712/713/714/715/716/717/718/719/720/721/722/723/724/725/726/727/728/729/730/731/732/733/734/735/736/737/738/739/740/741/742/743/744/745/746/747/748/749/750/751/752/753/754/755/756/757/758/759/760/761/762/763/764/765/766/767/768/769/770/771/772/773/774/775/776/777/778/779/780/781/782/783/784/785/786/787/788/789/790/791/792/793/794/795/796/797/798/799/800/801/802/803/804/805/806/807/808/809/810/811/812/813/814/815/816/817/818/819/820/821/822/823/824/825/826/827/828/829/830/831/832/833/834/835/836/837/838/839/840/841/842/843/844/845/846/847/848/849/850/851/852/853/854/855/856/857/858/859/860/861/862/863/864/865/866/867/868/869/870/871/872/873/874/875/876/877/878/879/880/881/882/883/884/885/886/887/888/889/890/891/892/893/894/895/896/897/898/899/900/901/902/903/904/905/906/907/908/909/910/911/912/913/914/915/916/917/918/919/920/921/922/923/924/925/926/927/928/929/930/931/932/933/934/935/936/937/938/939/940/941/942/943/944/945/946/947/948/949/950/951/952/953/954/955/956/957/958/959/960/961/962/963/964/965/966/967/968/969/970/971/972/973/974/975/976/977/978/979/980/981/982/983/984/985/986/987/988/989/990/991/992/993/994/995/996/997/998/999/1000/1001/1002/1003/1004/1005/1006/1007/1008/1009/1010/1011/1012/1013/1014/1015/1016/1017/1018/1019/1020/1021/1022/1023/1024/1025/1026/1027/1028/1029/1030/1031/1032/1033/1034/1035/1036/1037/1038/1039/1040/1041/1042/1043/1044/1045/1046/1047/1048/1049/1050/1051/1052/1053/1054/1055/1056/1057/1058/1059/1060/1061/1062/1063/1064/1065/1066/1067/1068/1069/1070/1071/1072/1073/1074/1075/1076/1077/1078/1079/1080/1081/1082/1083/1084/1085/1086/1087/1088/1089/1090/1091/1092/1093/1094/1095/1096/1097/1098/1099/1100/1101/1102/1103/1104/1105/1106/1107/1108/1109/1110/1111/1112/1113/1114/1115/1116/1117/1118/1119/1120/1121/1122/1123/1124/1125/1126/1127/1128/1129/1130/1131/1132/1133/1134/1135/1136/1137/1138/1139/1140/1141/1142/1143/1144/1145/1146/1147/1148/1149/1150/1151/1152/1153/1154/1155/1156/1157/1158/1159/1160/1161/1162/1163/1164/1165/1166/1167/1168/1169/1170/1171/1172/1173/1174/1175/1176/1177/1178/1179/1180/1181/1182/1183/1184/1185/1186/1187/1188/1189/1190/1191/1192/1193/1194/1195/1196/1197/1198/1199/1200/1201/1202/1203/1204/1205/1206/1207/1208/1209/1210/1211/1212/1213/1214/1215/1216/1217/1218/1219/1220/1221/1222/1223/1224/1225/1226/1227/1228/1229/12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Top chord 2x4 SP #2 Dense  
Bot chord 2x4 SP #2 Dense

Wind reactions based on MWFERS pressures.

Provide (2) 0.162x3.5" 16d Common toe nails at Top Chord.  
Provide (2) 0.162x3.5" 16d Common toe nails at Bottom Chord.

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.  $1w=1.00 \text{ gcpl}(+/-)=0.18$   
Deflection meets L/240 live and L/180 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)

7.36.0

ACTIVITY: 1 FL/-/4/-/-/R/-

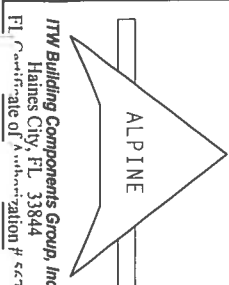
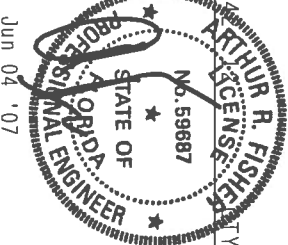
Scale = .5"/ft.

**\*\*WARNING\*\*** TRUSSES REQUIRE EXTREME CARE IN FABRICATING, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO BEST AVAILABLE BUILDING COMPONENT SAFETY INFORMATION, PUBLISHED BY TPI TRUSS PLATE INSTITUTE, 210 NORTH LEE STREET, SUITE 312, ALEXANDRIA, VA, 22304 AND WICA (WOOD TRUSS) COUNCIL OF AMERICA, 6300 ENTERPRISE LANE, MADISON, WI 53719 FOR SAFETY PRACTICES PRIOR TO PERFORMING THESE FUNCTIONS. UNLESS OTHERWISE INDICATED FOR 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. THE BCG, 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 NDS (NATIONAL DESIGN SPEC. BY ALPINE) AND TPI. THE BCG CORRELATION PLATES ARE MADE OF 20/10/1604 (W/J/S/S/R) ASH 4653 GRADE 40/60 (W, K20-55) GALV. STEEL. APPLY PLATES TO EACH FACE OF TRUSS AND, UNLESS OTHERWISE LOCATED ON THIS DESIGN, POSITION PER DRAWINGS 1604.2.

AN INSPECTION OF PLATES FOLLOWED BY (1) SHALL BE THE OWNER AS OF 1/11/2002 SEC.3. A SEAL ON THIS DRAWING INDICATES THE SUFFICIENCY AND USE OF THIS CONFORMS FOR ANY BUILDING IS THE RESPONSIBILITY OF THE BUILDING DESIGNER PER ANSI/TPI 1 SEC. 2



ITW Building Components Group, Inc.  
Haines City, FL 33844  
FL Certificate of Authorization # 567

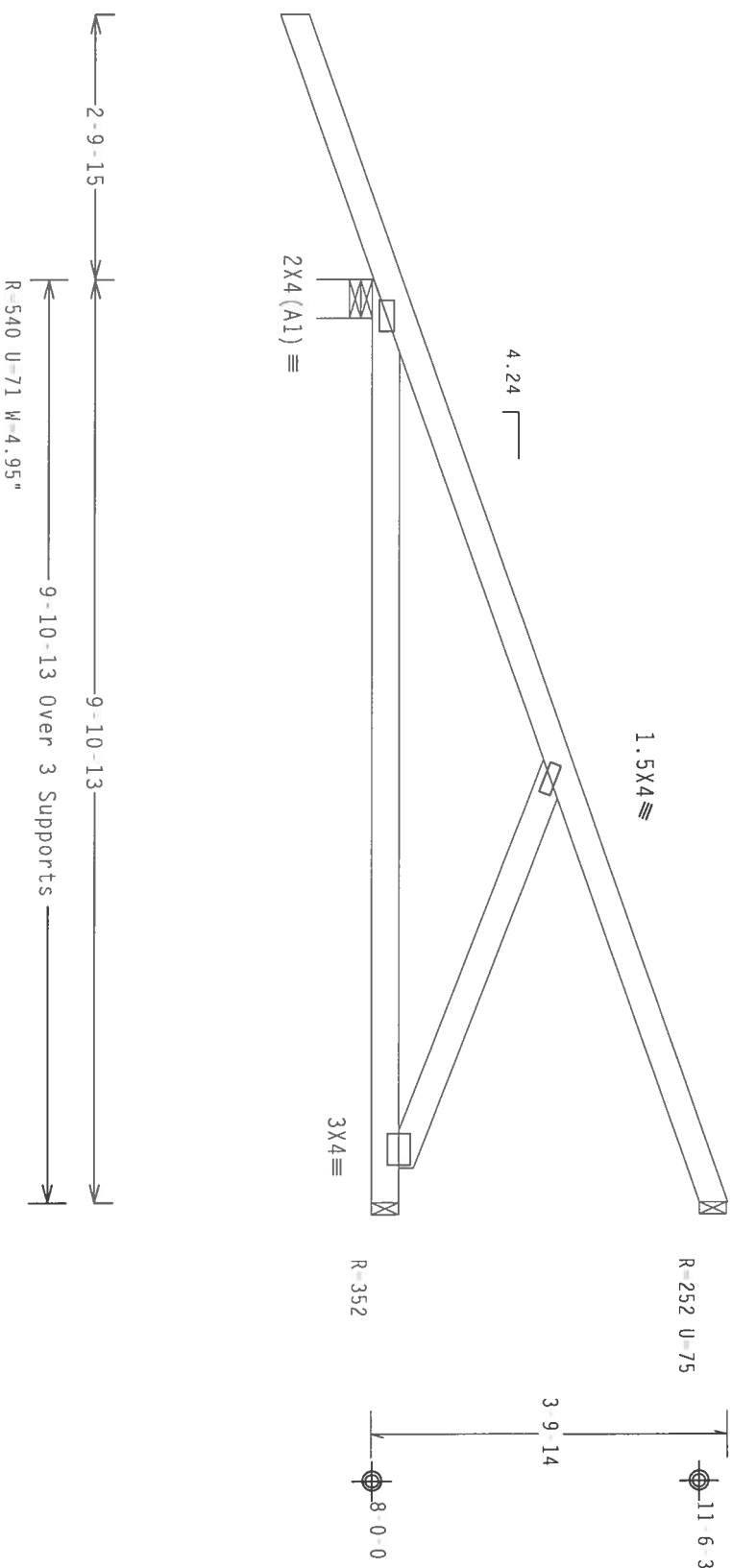
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|----------|----------|--------|--------------------|
| TC LL    | 20.0 PSF | REF    | R8228-26098        |
| TC DL    | 10.0 PSF | DATE   | 06/04/07           |
| BC DL    | 10.0 PSF | DRW    | HCUSR8228 07155006 |
| BC LL    | 0.0 PSF  | HC-ENG | TCE/AF             |
| TOT.LD.  | 40.0 PSF | SEON-  | 29283              |
| DUR.FAC. | 1.25     | FROM   | AH                 |
| SPACING  | 24.0"    | JREF-  | 1T7X8228Z01        |

|     |       |     |    |    |       |
|-----|-------|-----|----|----|-------|
| Top | chord | 2x4 | SP | #2 | Dense |
| Bot | chord | 2x4 | SP | #2 | Dense |
|     | Wabs  | 2x4 | SP | #3 |       |

Deflection meets  $L/240$  live and  $L/180$  total load. Creep increase factor for dead load is 1.50.

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. lw=1.00 gcpi(+/-)=0.18

Provide (2) 0.162x3.5" 16d Common toe-nails at Top Chord.  
Provide (3) 0.162x3.5" 16d Common toe-nails at Bottom Chord.



PLT TYP. Wave

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

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

7.36.0

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

Scale = .5"/Ft.

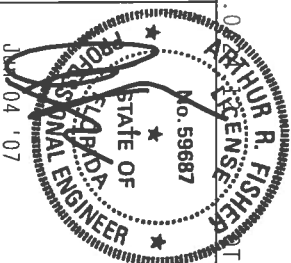
\*WARNING: \*PRACTICES REQUIRING EXTENSIVE CARE IN FABRICATION, HANDLING, SHIPPING, INSTALLING AND DRACING REFER TO RC51 (BUILDING COMPONENT SAFETY INFORMATION), PUBLISHED BY IPI (TRESS PLANT INSTITUTE), 218 NORTH LEE STREET, SUITE 312, ALEXANDRIA, VA, 22314, AND WICA (WOOD TRUSS COMPANY OF AMERICA), 63000 ENTERPRISE LANE, SUITE 1500, WY, 83119 FOR SAFETY PRACTICES PRIOR TO PERFORMING THESE ACTIONS. UNLESS OTHERWISE INDICATED, TOP CHORD SHALL HAVE PROPERLY ATTACHED STRUCTURAL PANELS AND BOTTOM CHORD SHALL HAVE PROPERLY ATTACHED RIGID CEILING.

ALPINE

**ITW Building Components Group, Inc.**

Haines City, FL 33844

FL Certificate of Authorization # 567



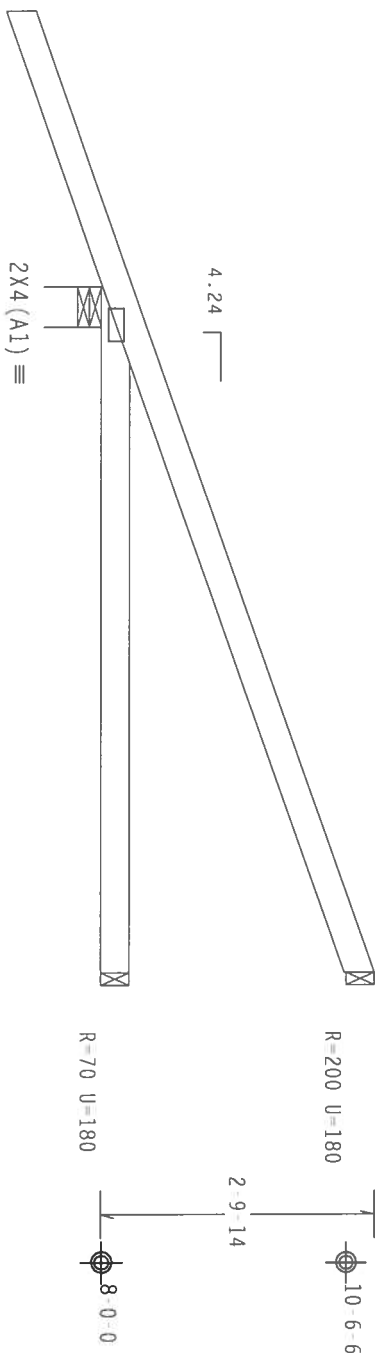
|                |           |                        |
|----------------|-----------|------------------------|
| FL/-/4/-/-/R/- |           | Scale = .5"/Ft.        |
| TC LL          | 20.0 PSF  | REF R8228- 26099       |
| TC DL          | 10.0 PSF  | DATE 06/04/07          |
| BC DL          | 10.0 PSF  | DRW HCU8R8228 07155010 |
| BC LL          | 0.0 PSF   | HC-ENG TCE/AF          |
| TOT.LD.        | 40.0 PSF  | SEQN- 29288            |
| DUR.FAC.       | 1.25      | FROM AH                |
| SPACING        | SEE ABOVE | JREF- 1T7X8228Z01      |

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

Hipjack supports 5'-0" setback jacks with no webs.

Provide (2) 0.162x3.5" 16d Common toe-nails at Top Chord.  
Provide (2) 0.162x3.5" 16d Common toe-nails at Bottom 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.  $I_w=1.00$  GCPI (+/-)=0.18  
Deflection meets L/240 live and L/180 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)

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

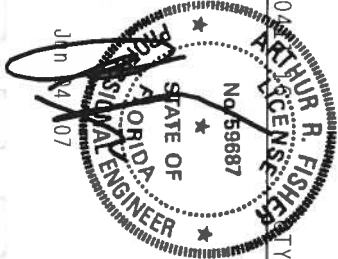
Scale =.5"/Ft.

**\*\*WARNING\*\*** TRUSSES REQUIRE EXISTING CASE IN FABRICATION, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO BCST (BUILDING COMPONENT SAFETY INFORMATION), PUBLISHED BY TPI (TRUSS PLATE INSTITUTE, 210 NORTH LEE STREET, SUITE 312, ALEXANDRIA, VA, 22304) AND WICA (WOOD TRUSS COUNCIL OF AMERICA, 6500 ENTERPRISE LANE, 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. THE BCG, 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 NIPRA) AND TPI. THE BCG CORRELATION PLATES ARE MADE OF 20/10/10GA (W/55/5) ASP 6053 GRADE 40/40 (W, KPH-55) GALV. STEEL. APPLY TO ALL TRUSSES AND UNLESS OTHERWISE SPECIFIED ON THIS DESIGN, POSITION PER DIMENSIONS 160A-2. ANY INSPECTION OF THIS TRUSS SHALL BE CONDUCTED BY A QUALIFIED INSPECTOR. THE TRUSS COMPANY'S DRAWING INDICATES ACCEPTANCE OF PROFESSIONAL ENGINEERING RESPONSIBILITY. THE TRUSS COMPANY'S BUILDING DESIGNER SHALL ACCEPT THE RESPONSIBILITY FOR ANY BUILDING IS THE RESPONSIBILITY OF THE BUILDING DESIGNER PER ANSI/TPI 1 SEC. 2.

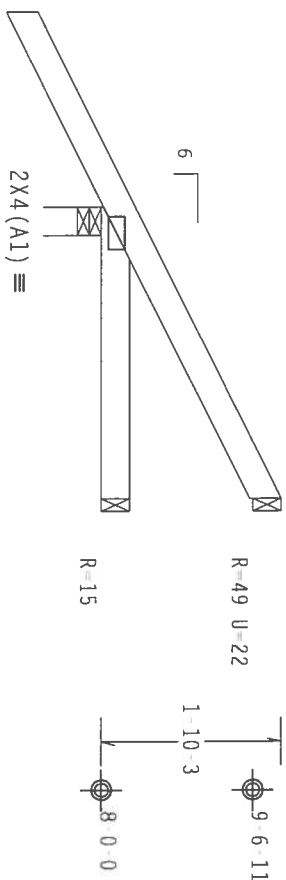
TTW Building Components Group, Inc.  
Haines City, FL 33844  
FL Certificate of Authorization # 567



| TC LL    | 20.0 PSF  | REF    | R8228 - 26100      |
|----------|-----------|--------|--------------------|
| TC DL    | 10.0 PSF  | DATE   | 06/04/07           |
| BC DL    | 10.0 PSF  | DRW    | HCUSR8228 07155025 |
| BC LL    | 0.0 PSF   | HC-ENG | TCE/AF             |
| TOT.LD.  | 40.0 PSF  | SEQN-  | 95814 REV          |
| DUR.FAC. | 1.25      | FROM   | AH                 |
| SPACING  | SEE ABOVE | JREF-  | 1T7X8228Z01        |

Provide (2) 0.162x3.5" 16d Common toe-nails at Top Chord.  
Provide (2) 0.162x3.5" 16d Common toe-nails at Bottom Chord.

110 mph wind, 15.00 ft mean hgt., ASCE 7-02, CLOSED bldg, located anywhere in roof, CAT 11, EXP 6, wind TC DL=5.0 psf, wind BC DL=5.0 psf. 1w=1.00 Gcpl(+/-) -0.18



200

3-0-0 Over 3 Supports  
R=317 U=36 W=3.5"

PLT TYP. Wave

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

7.36

QTY:1 FL/-/4/-/-/R/-

Scale = .5" / Ft.

**\*\*\*WARNING\*\*\*** TRILITE® TRUSSING EXPERTISE CARE IN FABRICATION, HANDLING, SHIPPING, INSTALLING AND BRACING REFER TO BC61 (BUILDING COMPONENT SAFETY INFORMATION) - PUBLISHED BY TPI (TRUSS PLATING INSTITUTE), 210 NORTH LEE STREET, SUITE 312, ALEXANDRIA, VA, 22314 AND (800) TRUSS CONSULT, OR AMERICA, 6300 ENTERPRISE LANE, MADISON, WI, 53719 FOR SAFETY PRACTICES AND PICTORIALS TO PERFORMING THESE FUNCTIONS. UNLESS OTHERWISE INDICATED, TOP CHORD SHALL HAVE PROPERLY ATTACHED STRUCTURAL PANELS AND BOTTOM CHORD SHALL HAVE PROPERLY ATTACHED RIGID CEILING.

ALPINE

**ITW Building Components Group, Inc.**

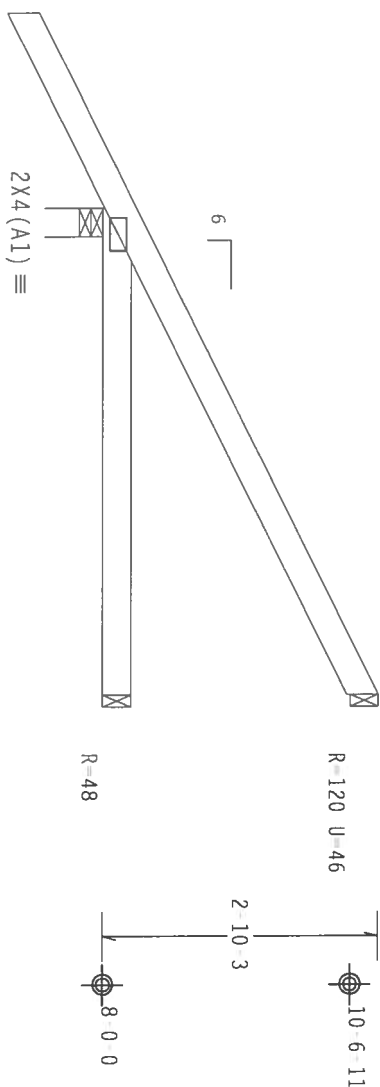
FL 33844  
Haimes City, FL  
ate of  
ation #

|          |          |        |                    |
|----------|----------|--------|--------------------|
| TC LL    | 20.0 PSF | REF    | R8228- 26101       |
| TC DL    | 10.0 PSF | DATE   | 06/04/07           |
| BC DL    | 10.0 PSF | DRW    | HCSUR8228 07155007 |
| BC LL    | 0.0 PSF  | HC-ENG | TCE/AF *           |
| TOT.LD.  | 40.0 PSF | SEQN-  | 29296              |
| DUR.FAC. | 1.25     | FROM   | AH                 |
| SPACING  | 24.0"    | JRFF - | 1TTX8228201        |

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

Provide (2) 0.162x3.5" 16d Common toe nails at Top Chord.  
Provide (2) 0.162x3.5" 16d Common toe nails at Bottom Chord.

110 mph wind, 15.00 ft mean ht, ASCE 7-02 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,  $I_w=1.00$  Gcp1(+/-)=-0.18


$$\begin{array}{c} \leftarrow 2 \rightarrow \\ \leftarrow 0 \rightarrow \\ \leftarrow 0 \rightarrow \\ \leftarrow 0 \rightarrow \end{array}$$

5 - 0 - 0 Over 3 Supports  $\rightarrow$   
 $R=377$   $U=31$   $W=3.5"$

PLT TYP. Wave

Design Crit: TPI-2002(STD)/FBC

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

PROPERTY: 1

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

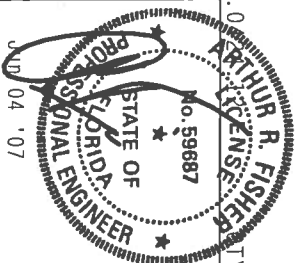
Scale = .5"/Ft.

**WARNING:** THESE PRODUCTS REQUIRE CARE IN FABRICATION, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO BCSI (BUILDING CONSTRUCTION SAFETY INFORMATION), PUBLISHED BY THE (FIRMS PLASTIC INSTITUTE, 218 NORTH LEE STREET, SUITE 312, ALEXANDRIA, VA, 22314) AND NICK (WOOD PRESERVATION COUNCIL OF AMERICA, 65000 CENTRE LANE, MADISON, WI, 53719) FOR SAFETY PRECAUTIONS TO PREVENTING THESE FAILURES. UNLESS OTHERWISE INDICATED, TOP CHORD SHALL HAVE PROPERLY ATTACHED STRUCTURAL PANELS AND BOTTOM CHORD SHALL HAVE PROPERLY ATTACHED RIGID CEILING.

ALPINE

**ITW Building Components Group, Inc.**

Haines City, FL 33844  
FL State of Authorization # 0000



|          |          |        |                   |
|----------|----------|--------|-------------------|
| TC LL    | 20.0 PSF | REF    | R8228- 26102      |
| TC DL    | 10.0 PSF | DATE   | 06/04/07          |
| BC DL    | 10.0 PSF | DRW    | HCUSR8228 0715024 |
| BC LL    | 0.0 PSF  | HC-ENG | TCE/AF *          |
| TOT.LD.  | 40.0 PSF | SEQN-  | 29300             |
| DUR.FAC. | 1.25     | FROM   | AH                |
| SPACING  | 24.0"    | JREF-  | 1T7X8228Z01       |



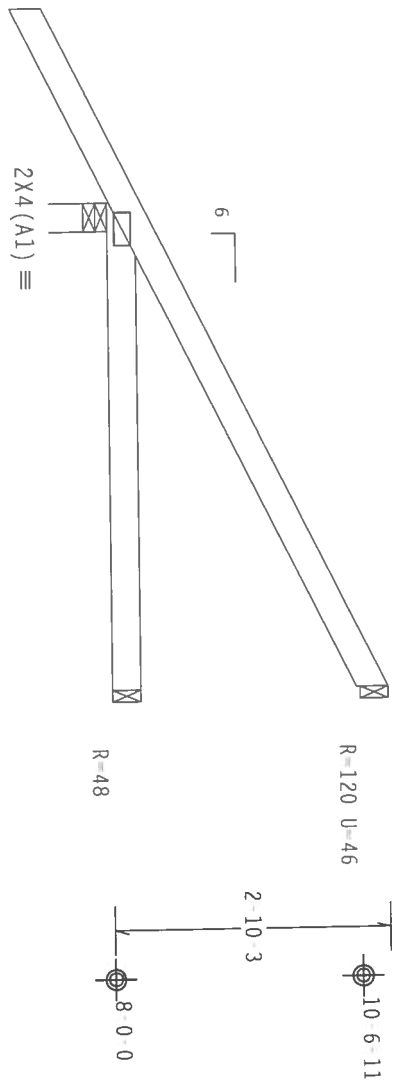
Top chord 2x4 SP #2 Dense  
Bot chord 2x4 SP #2 Dense

Wind reactions based on MMFRS pressures.

Provide (2) 0.162x3.5" 16d Common toe nails at Top Chord.  
Provide (2) 0.162x3.5" 16d Common toe nails at Bottom Chord.

110 mph wind, 15.00 ft mean hgt, ASCE 7-02, CLOSED bldg, not located within 4.50 ft from roof edge, CAT 1, EXP B, wind TC DL=5.0 psf, wind BC DL=5.0 psf.  $1w=1.00 \text{ gcpl}(+/-)=0.18$

Deflection meets L/240 live and L/180 total load. Creep increase factor for dead load is 1.50.



PLT TYP. Wave

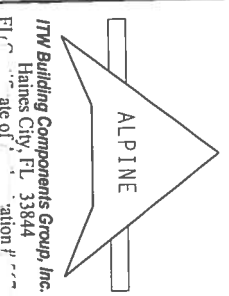
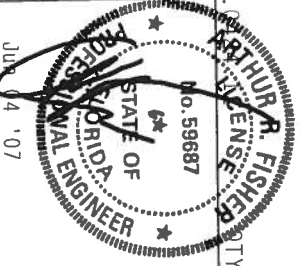
Design Crit: TP1-2002(STD)/FBC  
Cq/RT=1.00(1.25)/10(0)

7.36

Scale = .5" / Ft.

**\*\*WARNING\*\*** TRUSSES REQUIRE EXTREME CARE IN FABRICATION, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO BEST PRACTICES (BUILDING CORRELATION) PUBLISHED BY THE TRUSS PLATE INSTITUTE, 218 NORTH EEE STREET, SUITE 200, ALBANY, VA 22204 AND WICA (WOOD TRUSS COUNCIL OF AMERICA, 6300 EXTENSION DRIVE, SUITE 100, ALBANY, VA 22209) FOR SAFETY PRACTICES PRIOR TO PERFORMING THESE FUNCTIONS. UNLESS OTHERWISE INDICATED FOR 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. ITW BCG, 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 A BRACING OF TRUSSES. ITW BCG DESIGN CONFORMS WITH APPLICABLE PROVISIONS OF NDS (NATIONAL DESIGN SPEC. BY AIA/NA) AND TP1. ITW BCG DESIGN CONFORMS WITH APPLICABLE PROVISIONS OF 2018/16GA (W/US/5X) ASTM A653 GRADE 40/60 (H, K/1/55) GALV. STEEL. ITW BCG PLATES TO EACH FACE OF TRUSS AND, UNLESS OTHERWISE LOCATED ON THIS DESIGN, SECTION PER DRAWING 160A.2. ANY INSPECTION OF PLATES FOLLOWED BY (1) SHALL BE THE OWNER'S RESPONSIBILITY. SECTION PER DRAWING 160A.2. DRAWING INDICATES ACCEPTANCE OF PROFESSIONAL ENGINEER'S RESPONSIBILITY SOLELY FOR THE TRUSS COMPONENT IN DESIGN SHOWN. THE SUSTAINABILITY AND USE OF THIS COMPONENT FOR ANY BUILDING IS THE RESPONSIBILITY OF THE BUILDING DESIGNER PER ANSI/PTI 1 SEC. 2.



FLU... ation #...

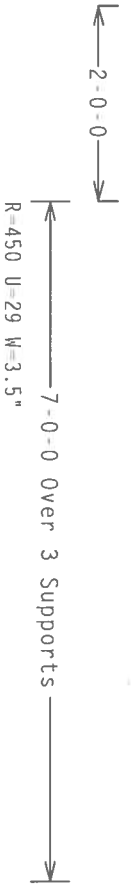
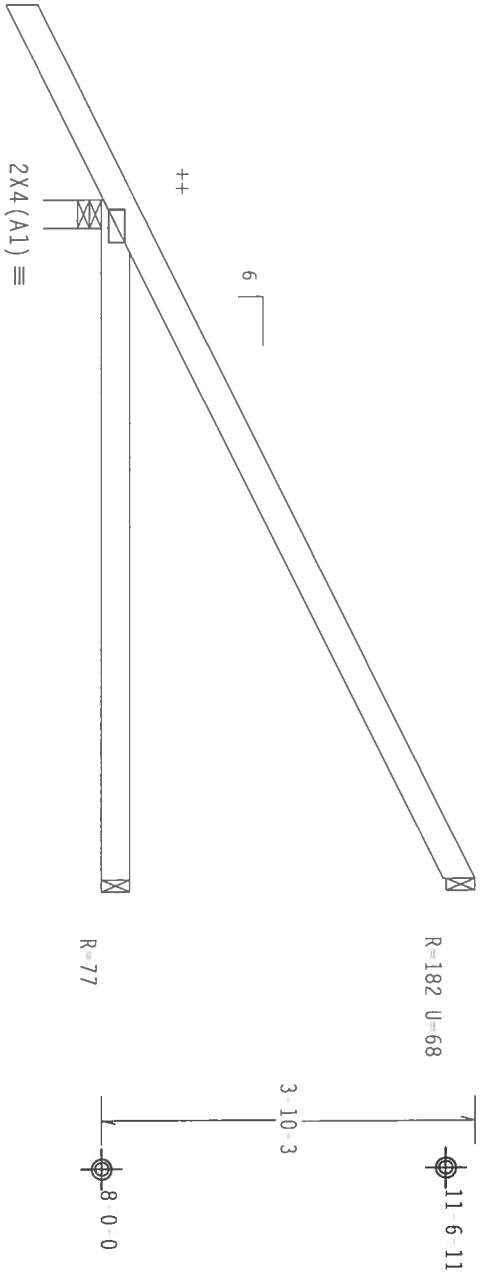
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| TC DL    | 10.0 PSF | DATE   | 06/04/07           |
| BC DL    | 10.0 PSF | DRW    | HCU8R8228 07155008 |
| BC LL    | 0.0 PSF  | HC-ENG | TCE/AF             |
| TOT.LD.  | 40.0 PSF | SEQN-  | 29313              |
| DUR.FAC. | 1.25     | FROM   | AH                 |
| SPACING  | 24.0"    | JREF   | 1T7X8228Z01        |

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

Wind reactions based on MMFRS pressures.

Provide (2) 0.162x3.5" 16d Common toe nails at Top Chord.  
Provide (2) 0.162x3.5" 16d Common toe nails at Bottom Chord.

110 mph wind, 15.00 ft mean hgt, ASCE 7-02, 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.  $I_w=1.00$  GCPI (+/-)=0.18  
Deflection meets L/240 live and L/180 total load. Creep increase factor for dead load is 1.50.



PLT TYP. Wave

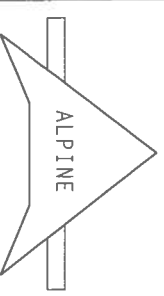
Design Crit: TP1-2002 (STD) / FBC  
Cq/RT=1.00(1.25)/10(0)

FL/-/4/-/R/-

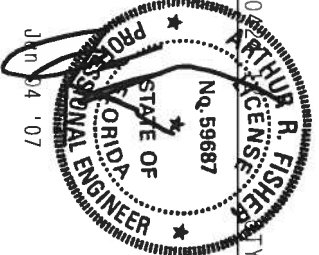
Scale = .5" / Ft.

\*\*\*WARNING\*\*\* TRUSSES REQUIRE EXTERIOR GABLE IN FABRICATION, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO BCST (BUILDING COMPONENT SAFETY INFORMATION), PUBLISHED BY TP1 (TRUSS PLATE INSTITUTE, 218 NORTH LEE STREET, SUITE 312, ALEXANDRIA, VA, 22314) AND WCA (WOOD TRUSS COUNCIL OF AMERICA, 6300 ENTERPRISE LANE, 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. ITW BCG, 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 COMPLIES WITH APPLICABLE PROVISIONS OF 2003 NATIONAL DESIGN SPEC. BY ALPINE (ALP) AND TP1. ITW BCG CONNECTION PLATES ARE MADE OF 20/10/1000 (W/55/73) ASTM A653 GRADE 40/60 (Q, K/11/55) GALV. STEEL. APPLY TO ALL TRUSSES. THE DESIGNER'S RESPONSIBILITY FOR THE DESIGN OF THE TRUSS COMPONENTS SHALL BE THE DESIGNER'S. THE DESIGNER SHALL BE RESPONSIBLE FOR THE DESIGN OF THE TRUSS COMPONENTS. THE DESIGNER SHALL BE RESPONSIBLE FOR THE DESIGN OF THE TRUSS COMPONENTS. THE DESIGNER SHALL BE RESPONSIBLE FOR THE DESIGN OF THE TRUSS COMPONENTS.



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Haines City, FL 33844  
FL Certificate of Registration # 6677

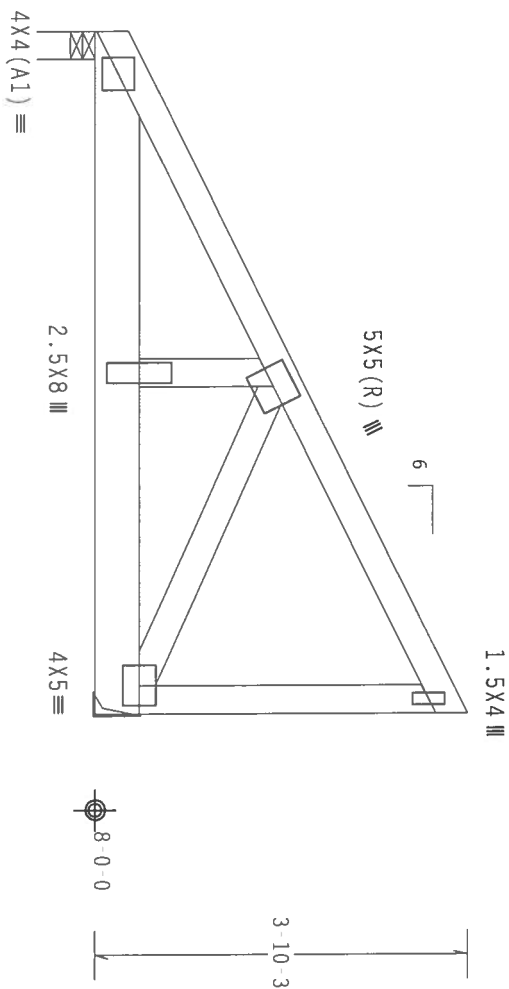


|           |          |        |                   |
|-----------|----------|--------|-------------------|
| TC LL     | 20.0 PSF | REF    | R8228-26104       |
| TC DL     | 10.0 PSF | DATE   | 06/04/07          |
| BC DL     | 10.0 PSF | DRW    | HCSR8228 07155017 |
| BC LL     | 0.0 PSF  | HC-ENG | TCE/AF            |
| TOT. LD.  | 40.0 PSF | SEQN-  | 29316             |
| DUR. FAC. | 1.25     | FROM   | AH                |
| SPACING   | 24.0"    | JREF-  | 1T7X8228Z01       |

|     |       |     |    |    |       |
|-----|-------|-----|----|----|-------|
| Top | chord | 2x4 | SP | #2 | Dense |
| Bot | chord | 2x6 | SP | #2 |       |
|     | webs  | 2x4 | SP | #3 |       |

Deflection meets  $L/240$  live and  $L/180$  total load. Creep increase factor for dead load is 1.50.

SPECIAL LOADS  
(LUMBER DUR.FAC.=1.25 / PLATE DUR.FAC.=1.25)  
TC From 62 PLF at 0.00 to 62 PLF at 7.00  
BC From 20 PLF at 0.00 to 20 PLF at 7.00  
PLB 815 LB Conc. Load at (2.06,8.04), (4.06,8.04), (6.06,8.04)



7-0-0 Over 2 Supports  $\rightarrow$   
 $R = 1342$   $U = 122$   $W = 3.5"$   $R = 1679$   $U = 151$

PLT TYP. Wave

Design Crit: TPI - 2002(STD) / FBC

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

7.36

QTY:1 FL/-/4/-/-/R/-

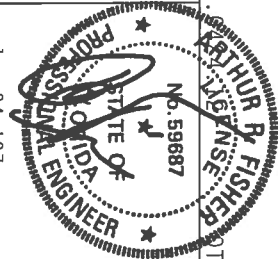
Scale = .5"/Ft.

**WARNING:** THESE BUILDING EXISTENCE CARE IN FABRICATION, HANDLING, SHIPPING, INSTALLING AND BRACING REFER TO ONLY BUILDING COMPONENT SAFETY INFORMATION. PUBLISHED BY IFI (TRUSS PRACTICE INSTITUTE), 218 NORTH LEE STREET, SUITE 312, ALEXANDRIA, VA, 22314 AND AICA (WOOD TRUSS COUNCIL OF AMERICA, 63000 ENTERPRISE LANE, MADISON, WI, 53719) FOR SAFETY PRECAUTIONS PRIOR TO PERFORMING THESE ACTIONS. UNDESIGNED OR MODIFIED TRUSS CHORD SHALL HAVE PROPERLY ATTACHED STRUCTURAL PANELS AND BOTTOM CHORD SHALL HAVE PROPERLY ATTACHED RIGID CEILING.

ALPINE

**ITW Building Components Group, Inc.**

Haines City, FL 33844  
FL Certificate of Registration # 1117



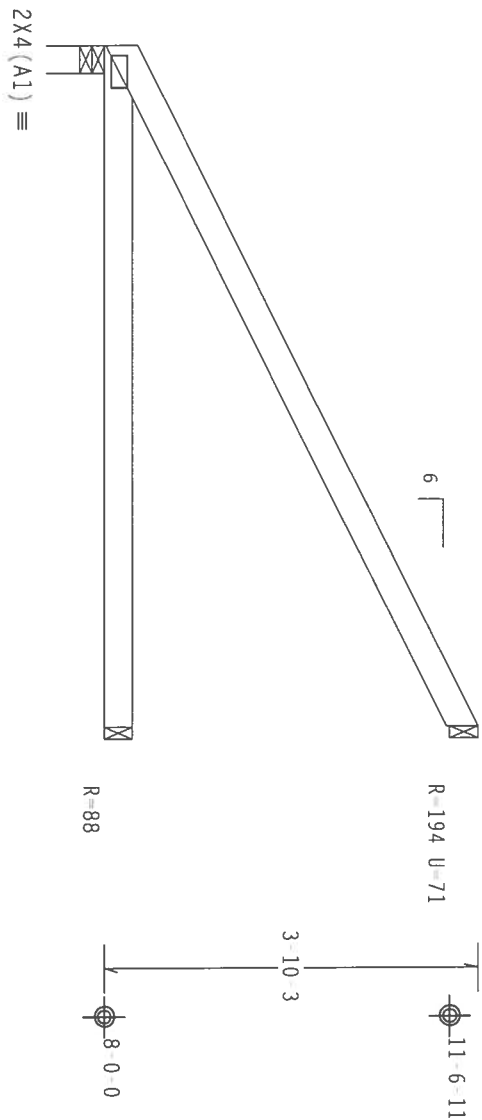
|          |          |        |                    |
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| TC LL    | 20.0 PSF | REF    | R8228- 26105       |
| TC DL    | 10.0 PSF | DATE   | 06/04/07           |
| BC DL    | 10.0 PSF | DRW    | HCUSR8228 07155012 |
| BC LL    | 0.0 PSF  | HC-ENG | TCE/AF             |
| TOT.LD.  | 40.0 PSF | SEQN-  | 29338              |
| DUR.FAC. | 1.25     | FROM   | AH                 |
| SPACING  | 24.0"    | JREF-  | 1T7X8228Z01        |

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

Wind reactions based on MMFRS pressures.

Provide (2) 0.162x3.5" 16d Common toe nails at Top Chord.  
Provide (2) 0.162x3.5" 16d Common toe nails at Bottom 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. 1W=1.00 gcpi (1/-)=0.18  
Deflection meets L/240 live and L/180 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)

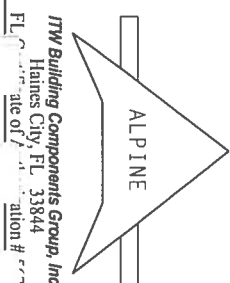
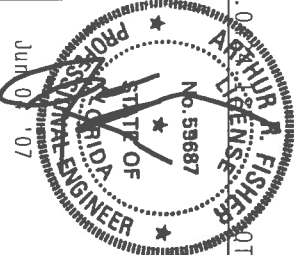
FL/ /4/ /- /R/

Scale = .5"/ft.

**\*\*WARNING\*\*** TRUSSES REQUIRE EXTREME CARE IN FABRICATING, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO BCST BUILDING COMPONENT SAFETY INFORMATION, PUBLISHED BY TPI (TRUSS PLATE INSTITUTE, 218 NORTH LEE STREET, SUITE 312, ALEXANDRIA, VA, 22314) AND NCA (WOOD TRUSS COUNCIL OF AMERICA, 6300 ENTERPRISE LANE, 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\*\*** TURNISH A COPY OF THIS DESIGN TO THE INSTALLATION CONTRACTOR. THE BCG, 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 COMPLIES WITH APPLICABLE PROVISIONS OF BCS (NATIONAL DESIGN SPEC. BY AF&PA) AND TPI. THE BCG CONNECTION PLATES ARE MADE OF 2014-T6 ALUMINUM (4" X 1/2" X 1/4") WITH 4090 ALUMINUM ANGLE (4" X 1/2" X 1/4") GALV. STEEL. APPLY ANY CONNECTION OR PLATE TO THE CHORD OR TRUSS. THE TPI 2002 (STD) SPEC. 3 FOR THE TRUSS CHORD OR TRUSS DESIGN SHOWN. THE SUITABILITY AND USE OF THIS COMPONENT FOR ANY BUILDING IS THE RESPONSIBILITY OF THE BUILDING DESIGNER PER AWS/TPI 1 SEC. 2.



|           |          |        |                    |
|-----------|----------|--------|--------------------|
| TC LL     | 20.0 PSF | REF    | R8228- 26106       |
| TC DL     | 10.0 PSF | DATE   | 06/04/07           |
| BC DL     | 10.0 PSF | DRW    | HCUSR8228 07155009 |
| BC LL     | 0.0 PSF  | HC-ENG | TCE/AF             |
| TOT. LD.  | 40.0 PSF | SEQN-  | 29351              |
| DUR. FAC. | 1.25     | FROM   | AH                 |
| SPACING   | 24.0"    | JREF-  | 1T7X8228Z01        |

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.

THIS DETAIL IS ONLY APPLICABLE FOR CHANGING THE SPECIFIED CLIB 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 | ALTERNATIVE BRACING<br>T OR L-BRACE | SCAB BRACE        |
|--------------------------|-----------------------|-------------------------------------|-------------------|
| 2X3 OR 2X4<br>2X3 OR 2X4 | 1 ROW<br>2 ROWS       | 2X4<br>2X6                          | 1-2X4<br>2-2X4    |
| 2X6<br>2X6               | 1 ROW<br>2 ROWS       | 2X4<br>2X6                          | 1-2X6<br>2-2X4(*) |
| 2X8<br>2X8               | 1 ROW<br>2 ROWS       | 2X6<br>2X6                          | 1-2X8<br>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.

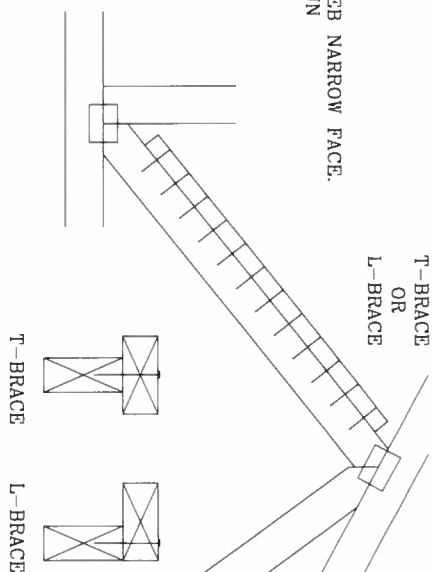
(\*) CENTER SCAB ON WIDE FACE OF WEB. APPLY (1) SCAB TO EACH FACE OF WEB.



**ITW BUILDING COMPONENTS GROUP, INC.**  
**POMPANO BEACH, FLORIDA**

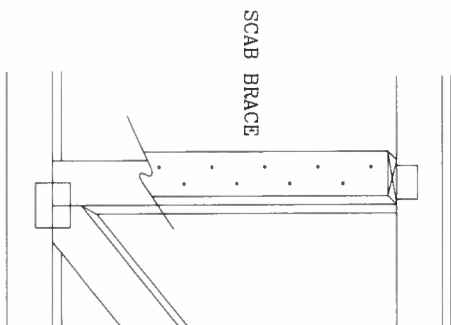
T-BRACING  
OR  
L-BRACING:

APPLY TO EITHER SIDE OF WEB NARROW FACE  
ATTACH WITH 10d BOX OR GUN  
(0.128 x 3. .MIN) NAILS.  
AT 6" O.C. BRACE IS A  
MINIMUM 80% OF WEB  
MEMBER LENGTH



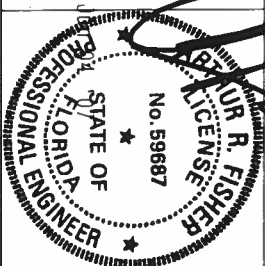
## SCAB BRACING:

APPLY SCAB(S) TO WIDE FACE OF WEB  
NO MORE THAN (1) SCAB PER FACE.  
ATTACH WITH 10d BOX OR GUN  
(0.128"x 3."MIN) NAILS.  
AT 6" O.C. BRACE IS A MINIMUM  
80% OF WEB MEMBER LENGTH

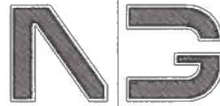


THIS DRAWING REPLACES DRAWING 579,640

ALL VARNISHES REQUIRE EXTREME CARE IN FABRICATING, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO BEST BUILDING COMPONENT SAFETY INFORMATION, PUBLISHED BY THE TRUSS PLATE INSTITUTE, 218 NORTH LEE ST., SUITE 316, EL CAMBRIA, CA 92319 AND VICS GOOD TRUSS COUNCIL, 1 AMERICA 6300 ENTERPRISE LN, MADISON, WI 53719, FOR SAFETY PRACTICES AND TOP CROSSING THESES. UNLESS OTHERWISE INDICATED, TOP CHORD SHALL HAVE PROPERLY ATTACHED STRUCTURAL PANELS AND BOTTOM CHORD SHALL HAVE A PROPERLY ATTACHED RIGID CEILING.

[illegible]

|           |     |      |              |
|-----------|-----|------|--------------|
| TC LL     | PSF | REF  | CLB SUBST.   |
| TC DL     | PSF | DATE | 2/23/07      |
| BC DL     | PSF | DRWG | BRCLBSUB0207 |
| BC LL     | PSF | -ENG | MLH/KAR      |
| TOT. LD.  | PSF |      |              |
| DUR. FAC. |     |      |              |
| SPACING   |     |      |              |



**NICHOLAS  
PAUL  
GEISLER**  
**ARCHITECT**  
N.C.A.R.B. Certified

1758 NW Brown Road  
Lake City, FL 32055  
386/755-9021

## FLORIDA BUILDING CODE SECTION 1609

### COMPLIANCE SUMMARY

**PROJECT:** KELLY RESIDENCE, COLUMBIA COUNTY, FL (100 WIND ZONE)

#### TYPE OF CONSTRUCTION

ROOF: Hip Construction, Wood Trusses @ 24" O.C., SYP  
WALLS: 2x4 Wood Studs @ 16" O.C.  
FLOOR: 4" Thk. Conc. Slab, w/ Fibermesh concrete additive  
FOUNDATION: Continuous Footer/Stemwall  
EDGE STRIP: 3.0 ft.      END ZONE: 6.0 ft.

#### ROOF DECKING

MATERIAL: 7/16" O.S.B.  
SHEET SIZE: 48"x96" Sheets Placed Perpendicular to Roof Framing  
FASTENERS: 8d Common Nails @ 5" O.C. Ends, 10" O.C. Interior

#### SHEAR WALLS

MATERIAL: 7/16" O.S.B. "WindStorm Sheathing"  
SHEET SIZE: 48"x97 1/8" Sheets Placed Vertical  
FASTENERS: 8d Common Nails @ 5" O.C. Edges, 10" O.C. Interior  
DRAGSTRUT: Dbl. Top Plate Nailed w/ 16d Nails @ 16" O.C.  
WALL STUDS: S-P-F Nr. 2 and better, 2x4 Studs @ 16" O.C.

#### HURRICANE UPLIFT CONNECTORS

TRUSS CLIPS: "Simpson" H9  
WALL TENSION: 1/2" CDX plywd. w/ 8d Common Nails @ 4" O.C. Edges,  
8" O.C. Interior for all exterior non-shear walls  
HOLD-DOWN CONNECTORS: A307 Bolts, within 6" of corners  
WALL SILL: 1/2" x 10" A.B., w/ 2" washers @ 48" o.c., 7" embedment  
CORNER HOLD-DOWN DEVICE: "SIMPSON" HTT16, Ea. Corner

#### FOOTINGS AND FOUNDATIONS

HOUSE FOOTINGS: 20"x10" Continuous w/ 2 - #5 Rebars  
HOUSE STEMWALL: 8" CMU w/ #5 Rebar Dowels Gd. 40, @ 72" O.C.  
CONCRETE: Fb = 2500 p.s.i. or greater

#### PREPARER'S CERTIFICATION

I hereby certify that the attached Wind Load Design and Analysis calculations are in compliance with the Florida Building Code, Section 1606, to the best of my knowledge and belief.

  
Nicholas Paul Geisler, Architect AR0007005

Date: 27 Apr 2007

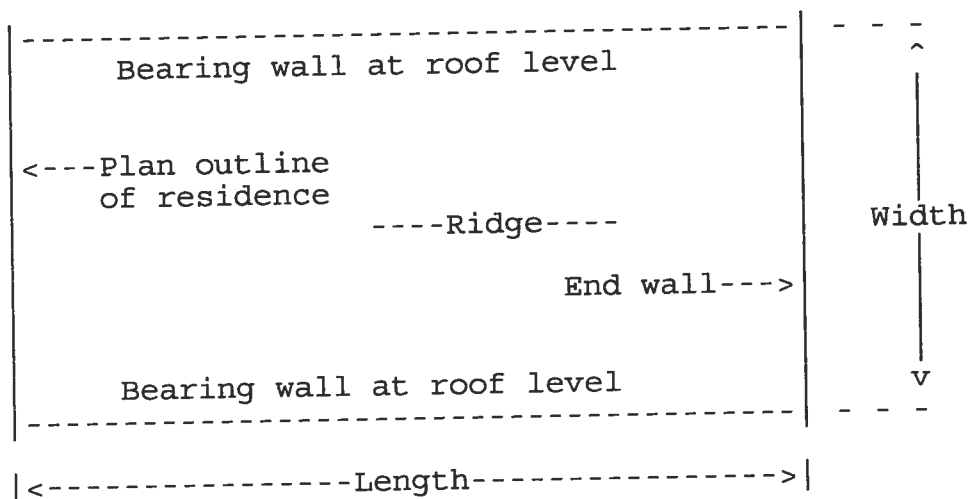
Data entry by: MT      Date: 4 - 20 - 07

Project name: KELLY  
Location : COLUMBIA COUNTY

-----  
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 = 57 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 = 110 mph

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

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

*Handwritten signature and date:*  
27 Apr 2007

\*\*\*\*\* 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 = 20 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 110 mph

Mean roof height is 11.87268 feet

Velocity pressure is 24.7 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          | 17.29                 |
| Windward roof (2E) | -1          | -24.7                 |
| Leeward roof (3E)  | -1          | -24.7                 |
| Leeward wall (4E)  | -.95        | -23.47                |
| Overhang           | -1.5        | -37.06                |
|                    |             |                       |
| Interior zone      |             |                       |
| Windward wall (1)  | .4          | 9.88                  |
| Windward roof (2)  | -.75        | -18.53                |
| Leeward roof (3)   | -.75        | -18.53                |
| Leeward wall (4)   | -.7         | -17.3                 |
| Overhang           | -1.5        | -37.06                |
| =====              |             |                       |

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 20.5 feet, Slope 6 /12, interior zone---- | 240 |
| Roof member number 4 | --Span 20.5 feet, Slope 6 /12, end zone-----     | 240 |

## 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  |
| Brick veneer siding                    | = 373.3333 |
| 1/2 in. Gypsum board--Total 1 layer--- | = 16       |
| =====                                  |            |
| Total                                  | = 399.5678 |

Exterior Wall Unit Dead Load = 400 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 20.5 feet, at 24 inches oc--in interior zone:  
Uplift = 604 Dead = 240 Net = 364 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 20.5 feet, at 24 inches oc--in end zone:  
Uplift = 604 Dead = 240 Net = 364 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 = 10587 pounds  
Total force transferred through diaphragm to shearwalls = 5293 pounds  
Total length of shearwalls = 56 feet  
MINIMUM REQUIRED TOTAL SHEARWALL LENGTH = 21 FT.--LOCATE EVENLY THROUGHOUT

Actual diaphragm force per unit length of shearwall = 94 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 = 4571 pounds  
Total force transferred through diaphragm to shearwalls = 2285.5 pounds  
Total length of shearwalls = 116 feet  
MINIMUM REQUIRED TOTAL SHEARWALL LENGTH = 8.8 FT.--LOCATE EVENLY THROUGHOUT

Actual diaphragm force per unit length of shearwall = 19 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)

## T R A N S V E R S E   D R A G S T R U T   N A I L   A N A L Y S I S

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 = 10587 pounds

Force applied at top of walls = 5293 pounds

Total dragstrut length = 56 feet

Shear per unit dragstrut length = 94 pounds per linear foot

Actual shear on each nail = 156 pounds

Allowable shear on each nail = 192 pounds

Dragstrut nailing satisfies Code requirements.

-----

## L O N G I T U D I N A L   D R A G S T R U T   N A I L   A N A L Y S I S

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 = 4571 pounds

Force applied at top of walls = 2285 pounds

Total dragstrut length = 116 feet

Shear per unit dragstrut length = 19 pounds per linear foot

Actual shear on each nail = 31 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        = 10587 pounds  
Force applied at top of walls           = 5293 pounds  
Accumulated total shearwall length = 56 feet

Actual unit shear on shearwalls        = 94 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        = 4571 pounds  
Force applied at top of walls           = 2285 pounds  
Accumulated total shearwall length = 116 feet

Actual unit shear on shearwalls        = 19 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 = 292 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 = 133 plf

Total uplift force on each nail = 55 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 = 292 plf  
Uniform dead loads per linear foot:  
Roof = 159.7911 plf  
Wall = 399.5678 plf  
-----  
Total = 559.3589 plf  
Total uniform dead load in first story at floor level = 559 plf  
Net wind uplift in first story at floor level = -267 plf

Total uplift force on each nail = -112 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  
-----

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  
-----

\*\*\* 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  
-----

\*\*\* 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

-----

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

-----

\*\*\* 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

-----

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)

-----

\*\*\* 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





Architectural Testing

AAMA/NWWDA 101/I.S.2-97  
TEST REPORT SUMMARY

Rendered to:

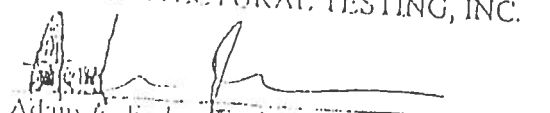
MI HOME PRODUCTS, INC.

SERIES/MODEL: 450  
TYPE: Aluminum Single Hung Window  
RATING: H-C30 54 x 90; H-C45 52 x 72\*

| Title of Test            | Results                  |                  |
|--------------------------|--------------------------|------------------|
|                          | Test Specimen #1         | Test Specimen #2 |
| Overall Design Pressure  | 30 psf                   | 47 psf           |
| Operating Force          | 20 lb max.               | N/A              |
| Air Infiltration         | 0.27 cfm/ft <sup>2</sup> | N/A              |
| Water Resistance         | 5.25 psf                 | 6.0 psf          |
| Structural Test Pressure | ±45.0 psf                | ±70.5 psf        |
| Deglazing                | Passed                   | N/A              |
| Forced Entry Resistance  | Grade 10                 | N/A              |

Reference should be made to Report No. 01-37589.01 for complete test specimen description and data.

For ARCHITECTURAL TESTING, INC.

  
Adam A. Fodor, Technician

AAT:lpj

130 Derry Court  
York, PA 17402-9405  
phone: 717.764.7700  
fax: 717.764.4129  
www.testatl.com



Architectural Testing

AAMA/NWWDA 101/1.S.2-97 TEST REPORT

Rendered to:

MI HOME PRODUCTS, INCORPORATED  
650 West Market Street  
Gratz, Pennsylvania 17030-0370

Report No: 01-37589.01  
Test Date: 06/29/00  
Report Date: 09/11/00  
Expiration Date: 06/29/04

**Project Summary:** Architectural Testing, Inc. (ATI) was contracted to witness tests on a Series/Model 450, aluminum single hung window at the MI Home Products in-plant test facility in Elizabethville, Pennsylvania. The samples tested successfully met the performance requirements for the following ratings: Test Specimen #1 H-C30 54 x 90; Test Specimen #2 H-C40 52 x 72\*. Test specimen descriptions and results are reported herein.

*General Note: An asterisk (\*) next to the performance grade indicates that the size tested for optional performance was smaller than the minimum test size for the product type and class.*

**Test Specification:** The test specimen was evaluated in accordance with AAMA/NWWDA 101/1.S.2-97, *Voluntary Specifications for Aluminum, Vinyl (PVC) and Wood Windows and Glass Doors*.

**Test Specimen Description**

Series/Model: 450

Type: Aluminum Single Hung Window

Test Specimen #1 H-C30 54 x 90

Overall Size: 4' 6-1/2" wide by 7' 6-1/2" high

Sash Size: 4' 4" wide by 3' 9-3/4" high

Fixed Daylight Opening Size: 4' 1-1/2" wide by 3' 6-1/2" high

Screen Size: 4' 2-1/4" wide by 3' 8-1/2" high

130 Derry Court  
York, PA 17402-9405  
phone: 717.764.7700  
fax: 717.764.4129  
www.testati.com



Test Specimen Description: (Continued)

Test Specimen #2: 11-C40 52 x 72\*

Overall Size: 4' 4-1/4" wide by 6' 0" high

Sash Size: 4' 2" wide by 3' 0-1/2" high

Fixed Daylight Opening Size: 3' 11-1/2" wide by 2' 9-1/2" high

Screen Size: 4' 0" wide by 2' 11" high

*The following descriptions apply to all specimens.*

\* Finish: All aluminum was painted.

Glazing Details: The lites utilized 5/8" thick sealed insulating glass units fabricated from two sheets of 3/32" thick clear annealed glass and an Intercept™ spacer system. The sash was channel glazed with a flexible gasket. The fixed lite was interior glazed onto single-sided adhesive foam tape and secured with extruded PVC glazing beads.

Weatherstripping:

| <u>Description</u>   | <u>Quantity</u> | <u>Location</u>         |
|--|-----------------|-------------------------|
| 0.210" high by 0.270"<br>backed polypile with<br>center fin          | Row             | Fixed meeting rail      |
| 0.250" high by 0.187"<br>backed polypile with<br>center fin          | 2 Rows          | Stiles                  |
| 0.300" diameter by 0.187"<br>backed foam-filled vinyl<br>bulb gasket | Row             | Bottom rail             |
| 0.400" high by 1/2" square<br>polypile dust plug                     | 4               | One on each sash corner |

Frame Construction: The main frame was constructed of thermally-broken extruded aluminum members with coped, butted and sealed corners. The fixed meeting rail was constructed of an extruded aluminum member with coped, butted and sealed ends fastened with two screws each.



### Test Specimen Description: (Continued)

**Sash Construction:** The sash members were constructed of thermally-broken extruded aluminum members with coped, butted and sealed corners fastened with one screw each.

**Screen Construction:** The screen was constructed of rolled aluminum members with plastic keyed corners. The fiberglass mesh was secured with a flexible spline.

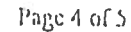
#### Hardware:

| <u>Description</u>              | <u>Quantity</u> | <u>Location</u>                      |
|---------------------------------|-----------------|--------------------------------------|
| Plastic snap latch              | 1               | Midspan of bottom rail               |
| Block and tackle balance system | 2               | One per jamb                         |
| Plastic tilt latch              | 2               | One on each end of sash meeting rail |
| Metal pivot bar                 | 2               | One on each end of bottom rail       |

**Drainage:** Sloped sill

**Reinforcement:** No reinforcement was utilized.

**Installation:** The test unit was installed into the nominal 2" x 8" Spruce-Pine-Fir #2 wood test buck utilizing the integral nailing fin secured with 1" long galvanized roofing nails, 6" from each corner and every 18" on center. The nailing fin was also bedded in polyurethane. The exterior perimeter was blindstopped with wood members and secured with #8 x 3" screws every 24" on center.



|                        |          |          |
|------------------------|----------|----------|
| Lock Manipulation Test | No entry | No entry |
| Test A1 through A5     | No entry | No entry |
| Test A7                | No entry | No entry |
| Lock Manipulation Test | No entry | No entry |



01-37589.01

Page 5 of 5

## Test Results:

| <u>Paragraph</u>                         | <u>Title of Test - Test Method</u>  | <u>Results</u> | <u>Allowed</u>           |
|--|---|----------------|--------------------------|
| <u>Test Specimen #1: (Continued)</u>     |   |                |                          |
| <u>Optional Performance</u>              |   |                |                          |
| 4.1                                      | Water Resistance per ASTM E 547<br>(with and without screen)<br>WTP -- 5.25 psf   | No leakage     | No leakage               |
| <u>Test Specimen #2: 11-C40 52 X 72*</u> |   |                |                          |
| <u>Optional Performance</u>              |   |                |                          |
| 4.1                                      | Water Resistance per ASTM E 547 and 331<br>(with and without screen)<br>WTP -- 6.0 psf  | No leakage     | No leakage               |
| 4.1.2                                    | Uniform Load Structural per ASTM E 330<br>(Measurements reported were taken on the fixed meeting rail)<br>(Loads held for 33 seconds)<br>(a) 47.0 psf (exterior)<br>(b) 47.0 psf (interior) | 0.04"<br>0.03" | N/A<br>N/A               |
|  | (Loads held for 10 seconds)<br>(a) 70.5 psf (exterior)<br>(b) 70.5 psf (interior)   | 0.07"<br>0.04" | 0.21" max.<br>0.21" max. |

Detailed drawings, representative samples of the test specimen, and a copy of this report will be retained by ATI for a period of four years. The above results were secured by using the designated test methods and they indicate compliance with the performance requirements of the above referenced specification. This report does not constitute certification of this product which may only be granted by the certification program administrator.

For ARCHITECTURAL TESTING, INC:

Adam A. Fodor  
Technician

Bruce W. Cronk  
Director -- Product/Physical Testing

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