

**January 29, 2016**  
**BOARD OF COUNTY COMMISSIONERS**  
**ORANGE COUNTY, FLORIDA**  
**IFB Y16-732-CC, Addendum No. 2**  
**BARNETT PARK ADMINISTRATION BUILDING SKYLIGHT REPLACEMENT**

**Bid Opening Date: February 9, 2016**

This addendum is hereby incorporated into the bid documents of the project referenced above. The following items are clarifications, corrections, additions, deletions and/or revisions to, and shall take precedence over, the original documents. Underlining indicates additions, deletions are indicated by ~~strikethrough~~.

- A. The Bid Opening Date remains February 9, 2016 at 2:00 p.m.
- B. In Part D of the IFB, delete page D-2 of the Official Bid Form in its entirety and replace with the attached **REVISED PAGE D-2**. Failure to use the attached revised page D-2 will result in your bid being found non-responsive.
- C. The Following are Questions/Responses/Clarifications:
1. **Question:** The Basis of design calls out for a Major Industries Guardian 275 Skylight system 3-17-2014 (This is a translucent fiberglass panel skylight.) while all other glazing calls for the Kapilux T Okalux Glass?  
**Answer:** The basis of design is a glass system; please see revised spec. section 08632 for “Super Sky Standard Tubular Skylight Glazing System”. Major Industries Guardian 275 is listed as an ALTERNATE fiberglass system.
  2. **Question:** For skylights the inboard lite needs to be laminated, the spec. says laminated outboard with inner lite clear temp?  
**Answer:** The inboard lite is required to be laminated.
  3. **Question:** Basis of design in Major Industries Guardian Translucent Fiberglass Skylight. This design very different and is much less expensive than the metal framed skylight with kapilux glass that is called out later in 08623. Please clarify that you want a glass system not a fiberglass panel system on the project.  
**Answer:** Confirmed – “Super Sky” System is the basis of design for this project. Glass provided shall be in strict compliance with the NOA or Florida Product Approval.
  4. **Question:** A141 shows the narrow ridge at 18 bays long. The bays are therefore 64” wide. The specified Kapilux glazing is only available in 48” widths unless a ‘butt joint’ is used to press two runs of the diffuser together. I am told that it is not very exact or very attractive.

**Answer:** “Super Sky” is the basis of design system, and the glass must be in strict compliance with the NOA or Florida Product Approval.

5. **Question:** Can we re-design the skylight to have 24 each 48” bays?

**Answer:** A re-design should not be required if the glass listed in the NOA/FPA is used.

6. **Question:** Specifications call for a “large missile impact” skylight NOA to be presented. 08623 1.3.B.4 Large missile impact certification is available in both the FRP and the Glass systems. The project is located far from the HVWZ of either coast. Do you require the LM certification or would the PE stamped calcs proving the structures ability to withstand FBC 2014 site specific loading be sufficient?

**Answer:** Per the Florida Building Code, the skylight system must have a valid NOA or Florida Product Approval.

7. **Question:** We provided pricing for the Uni-Sky 7000 series; however they are not listed as an acceptable manufacturer?

**Answer:** “Super Sky” is the basis of design system; please see revised spec. section 08632.

D. Attached with this addendum is revised specification section 08623.

E. All other terms and conditions of the IFB remain the same.

F. The Bidder/Proposer shall acknowledge receipt of this addendum by completing the applicable section in the solicitation or by completion of the acknowledgement information on the addendum. Either form of acknowledgement must be completed and returned not later than the date and time for receipt of the bid or proposal.

**Receipt acknowledged by:**

\_\_\_\_\_  
**Authorized Signature**

\_\_\_\_\_  
**Date Signed**

\_\_\_\_\_  
**Title**

\_\_\_\_\_  
**Name of Firm**

**To the Board of County Commissioners  
Orange County, Florida**

The Undersigned, hereinafter called "Bidder", having visited the site of the proposed project and familiarized himself with the local conditions, nature and extent of the work, and having examined carefully the Contract Form, General Conditions, Supplementary Conditions, Plans and Specifications and other Contract Documents, with the Bond requirements herein, proposes to furnish all labor, materials, equipment and other items, facilities and services for the proper execution and completion of: **BARNETT PARK ADMINISTRATION BUILDING SKYLIGHT REPLACEMENT** in full accordance with the drawings and specifications prepared in accordance with the Contract Documents and, if awarded the Contract, to complete the said work within the time limits specified for the following LUMP SUM.

001 BASE BID: Barnett Park Administration Building using the Glass System for the Skylight Replacement.

\_\_\_\_\_ DOLLARS  
(In Words)

\$ \_\_\_\_\_

002 ALTERNATE BID: Barnett Park Administration Building using the Fiberglass System for the Skylight Replacement.

\_\_\_\_\_ DOLLARS  
(In Words)

\$ \_\_\_\_\_

In the event the Contract is awarded to this Bidder, he/she will enter into a formal written agreement with the County in accordance with the accepted bid within ten (10) calendar days after said Contract is submitted to him/her and will furnish to the County a Contract Payment and Performance Bond with good and sufficient sureties, satisfactory to the County, in the amount of 100% of the accepted bid. The Bidder further agrees that in the event of the Bidder's default or breach of any of the agreements of this proposal, the said bid deposit shall be forfeited as liquidated damages.

**Failure of the Bidder to provide pricing for all unit priced items and/or the Base Bid and ALL requested additive/deductive bid items, or alternate bids shall be cause for rejection of the bid as non-responsive.**

**REVISED D-2**

SECTION 08623 – METAL FRAMED SKYLIGHTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes metal framed skylights and glass.

1.2 PERFORMANCE REQUIREMENTS

- A. Design aluminum door and frame assemblies in accordance with the FBC. Refer to structural drawings for wind and design pressures.
1. Skylight assemblies shall have a Miami Dade NOA.
- B. The deflection of framing members when subjected to the specified loads is not to exceed L/175 or 1 inch for clear spans less than 20 feet, or L/240 of clear spans over 20 feet.
1. Maximum deflection parallel to plane of glazing shall not exceed an amount which would reduce the glass bite below 75 percent of the design dimension.
- C. Thermal Movement: Provide for expansion and contraction of framing members caused by a temperature range of +/- 100 degrees Fahrenheit without causing buckling, performance reduction, or any detrimental effects.
1. Do not transmit thermal movement from skylight components to other building elements.
- D. Lateral Support: Compression flanges of flexural members are laterally braced by cross members with minimum depths equal to 50 percent of flexural member depth and by anchors to the building structure. Glazing material does not provide lateral support.
- E. Structural Performance: Provide metal-framed skylights, including anchorage, capable of withstanding test pressure indicated without material and deflection failures and permanent deformation of structural members exceeding 0.2 percent of span when tested according to ASTM E 330.
1. Test Pressure: 150 percent of positive and negative design pressures.
- F. Thermal Movement: Provide metal-framed skylights that allow for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures by preventing buckling, sealant failure, and other detrimental effects.
1. Temperature Change (Range): 120 deg F, ambient; 180 deg F material surfaces.
- G. Air Infiltration: Limit air leakage through assembly to 0.06 cfm/min/sq ft of wall area, measured at a reference differential pressure across assembly of 6.24 psf as measured in accordance with ASTM E283.
- H. Water Penetration: Provide metal-framed skylights that do not evidence water penetration when tested according to ASTM E 331 at a minimum differential static pressure of 20 percent of positive design wind load, but not less than 15 psf.

- I. Glass Design:
  1. Determine minimum thickness according to ASTM E 1300
    - a. Minimum glass thickness for exterior lites: 6.0 mm
  2. Design windloads to meet performance requirements in applicable sections specifying glazing assemblies.
  3. Minimum glass thicknesses of lites, whether composed of annealed or heat-treated glass, are selected so the worst-case probability of failure does not exceed the following:
    - a. 8 lites per 1000 for lites set vertically or not over 15 degrees off vertical and under wind action.
    - b. 1 lite per 1000 for lites set over 15 degrees off vertical and under action of wind.
  4. Maximum Lateral Deflection: For the following types of glass supported on all 4 edges, provide thickness required that limits center deflection at design wind pressure to 1/50 times the short side length or 1 inch, whichever is less.

### 1.3 SUBMITTALS

- A. Product Data:
  1. Manufacturer's published data for specified system
  2. Maintenance Data to include in maintenance manuals.
- B. Shop Drawings:
  1. Show details and methods of assembling sections, dimensions, shapes of materials, anchorage and fastening methods, wall opening construction details, and weatherstripping.
    - a. Include field verified measurements on final Shop Drawings
  2. Shop drawings shall be signed and sealed by a licensed engineer registered in the State of Florida.
  3. Calculations for wind load design shall be stamped, sealed and signed by a Professional Engineer in the State of Florida verifying compliance with ASCE 7-10.
  4. Submit current Miami-Dade NOA for all exterior storefront systems
- C. Samples: 12-inch-square samples of each type of glass indicated except for clear monolithic glass products. Install sealant or gasket sample between two strips of material representative in color of the adjoining framing system.
- D. Certifications:
  1. Provide test reports from AAMA accredited laboratories certifying the performance as specified.
  2. Test reports shall be accompanied by the storefront manufacturer's letter of certification stating that the tested storefront meets or exceeds the referenced criteria for the appropriate storefront type.
  3. Sample of Approved Product Label and location of attachment to assembly.
  4. Installers qualifications

- E. Color selection materials for type of finish specified
- F. Pre-installation conference minutes
- G. Field quality-control test and inspection reports.
- H. Sample warranties

#### 1.4 QUALITY ASSURANCE

- A. Installer Qualifications: Capable of assuming engineering responsibility and performing work of this Section and who is acceptable to manufacturer.
  - 1. Engineering Responsibility: Preparation of data for aluminum-framed systems including Shop Drawings based on testing and engineering analysis of manufacturer's standard units in assemblies similar to those indicated for this Project and submission of reports of tests performed on manufacturer's standard assemblies.
- B. Glazier Qualifications: An experienced installer who has completed glazing similar in material, design, and extent to that indicated for this Project; whose work has resulted in glazing installations with a record of successful in-service performance; and who employs glazing installers for this Project who are certified under the National Glass Association, Glazier Certification Program as Level 2 (Senior Glaziers) or Level 3 (Master Glaziers).
- C. Testing Agency Qualifications: An independent agency qualified according to ASTM E 699 for testing indicated.
- D. Design Requirements:
  - 1. Drawings are diagrammatic and do not purport to identify nor solve problems of thermal or structural movement, glazing, anchorage, or moisture disposal.
  - 2. Anchors, fasteners and braces shall be structurally stressed not more than 50 percent of allowable stress when maximum loads are applied.
  - 3. Assemblies shall be free from vibration sounds, rattles, wind whistles, and noise due to thermal and structural movement, and wind pressure.
  - 4. Anchorage shall accommodate anticipated movement with no possibility of loosening, weakening, or fracturing connections between adjoining skylight components or between skylight components and building structure.
- E. The skylight is to be installed by factory-trained mechanics.
- F. The manufacturer shall be regularly engaged in custom skylight construction and show proof of successful similar projects completed over the past ten (10) years.
- G. Pre-Installation Conference: Meet at the project site with the installers and Architect prior to beginning installation. Record meeting minutes.

#### 1.5 PROJECT CONDITIONS

- A. Field Measurements: Verify actual locations of structural supports for aluminum-framed systems by field measurements before fabrication and indicate measurements on Shop Drawings.
  - 1. Where field measurements cannot be made without delaying the Work, establish dimensions and proceed with fabricating aluminum-framed

systems without field measurements. Coordinate construction to ensure that actual dimensions correspond to established dimensions.

#### 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Handle Products in accordance with AAMA - Curtain Wall Manual #10.
- B. Deliver glass to Site in suitable containers that will protect glass from the weather and from breakage. Store material in a safe place where breakage can be reduced to a minimum. Deliver sufficient glass to allow for normal breakage. Deliver glazing compounds in unopened, labeled containers.
- C. Protect finished aluminum surfaces with wrapping. Do not use adhesive papers or sprayed coatings that bond when exposed to sunlight or weather.
- D. Store skylight and wall panels on the long edge, several inches above the ground, blocked to prevent warping and under cover.

#### 1.7 WATERTIGHT GUARANTEE

- A. The completed skylight and wall panel systems shall be weather and watertight. If problems arise during the ten (10) years from the Date of Substantial Completion, the Contractor shall correct them at no expense to the Owner.

#### 1.8 WARRANTY

- A. Special Warranty: Written warranty, executed by manufacturer agreeing to repair or replace components of metal-framed skylights that fail in materials or workmanship within specified warranty period. Failures include, but are not limited to, the following:
  - 1. Failures include, but are not limited to, the following:
    - a. Structural failures including, but not limited to, excessive deflection.
    - b. Noise or vibration caused by thermal movements.
    - c. Deterioration of metal finishes and other materials beyond normal weathering.
    - d. Water leakage through fixed glazing and framing areas.
    - e. Failure of operating components to function properly.
- B. Special Finish Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components on which finishes fail within specified warranty period. Warranty does not include normal weathering.
  - 1. Warranty Period: 20 years from date of Substantial Completion.
- C. Manufacturer's Warranty on Insulating Glass: Manufacturer's standard form, made out to Owner and signed by insulating-glass manufacturer agreeing to replace insulating-glass units that deteriorate as defined in "Definitions" Article, f.o.b. the nearest shipping point to Project site, within specified warranty period indicated below.
  - 1. Warranty Period: Manufacturer's standard but not less than 10 years from the Date of Substantial Completion.

### PART 2 - PRODUCTS

#### 2.1 MANUFACTURER

R+B 12002.26

08623-4  
ISSUED FOR PERMIT & CONSTRUCTION

- A. *Basis of Design: Super Sky Standard Tubular Skylight Glazing System ( see attached NOA at end of section )*
- B. Other Acceptable Manufacturers:
  - 1. Bristolite Skylights, Inc.
  - 2. Acurlite Structural Skylights, Inc.
- C. *Alternate: Guardian 275, by Major Industries ( Fiberglass System – see attached NOA at end of section )*

## 2.2 MATERIALS

- A. Framework:
  - 1. Extruded aluminum framing members shall have minimum mechanical properties equal to or greater than 6063-T6 alloy temper.
  - 2. The aluminum framing members shall have an integral drainage system which will collect condensation and infiltration and drain to exterior.
- B. Flashing: Aluminum sheet shall be the required alloy and temper to make compatible with the specified finish, with a minimum thickness of .040”.
- C. Internal Reinforcing:
  - 1. Steel Reinforcement: Structural shapes to comply with ASTM A36
  - 2. Miscellaneous steel anchorage devices, and support brackets to meet Performance Requirements
- D. Fasteners:
  - 1. Weather Exposed Fasteners: ASTM A193 B8 300 series stainless steel.
  - 2. Framing connection fasteners and anchoring of frame to supporting structure: ASTM A307 zinc-plated steel fasteners.
- E. Glass: Kapilux T by Okalux
  - 1. Thickness: 24mm (1 inch) minimum, Insulated (ASTM E774)
  - 2. Outer lite: Laminated, clear, meeting Performance Requirements (ASTM C1172), clear innerlayer, DuPont SentryGlas ionoplast, or as tested.
  - 3. Infill: Capillary structured insulation made of polymethylmetacrylate (PMMA), UV-stable
  - 4. Inner lite: Tempered, clear (Kind FT)
- F. Glazing Gaskets:
  - 1. Interior: EPDM dense
    - a. Hardness: ASTM D2240 Shore “A” 70 +/- 5 Durometer.
    - b. Tensile Strength: ASTM D412 1500-1600 psi.
    - c. Elongation: 250-300%
    - d. Color: Black.
  - 2. Exterior Sponge Neoprene:
    - a. Hardness: ASTM D2240 Shore “O” 70 +/- 5 Durometer.
    - b. Compression Deflection: ASTM D1056 18 psi.



- c. Compression Set: ASTM D395 Method "B" 25% (maximum).
  - d. Water Absorption: ASTM D1056 3%.
  - e. Color: Black
- G. Setting Blocks: Extruded silicone or neoprene block to be compatible with glazing type, Shore Hardness "A" 70 +/- 5 Durometer
- H. Sealant: Per Division 07 Section, Joint Protection

### 2.3 FABRICATION

- A. Factory assembly to the greatest extent possible. Work which cannot be shop assembled shall be properly marked before shipment to the jobsite to assure proper assembly in the field.
- B. All visible welds shall be smooth and continuous.
- C. Steel reinforcements shall be painted with two (2) heavy coats of zinc rich primers in different colors and field touch up coat of matching primer after erection.

### 2.4 ALUMINUM FINISHES

- A. Fluoropolymer Coating: Manufacturer's standard three-coat, thermo-cured, full-strength 70 percent Kynar 500 FSR resin, 1 mil thick with 0.5-mil clear coat and 30 percent reflective gloss when tested in accordance with ASTM D 523. A 20 year limited warranty against failure of the finish shall begin on the Date of Substantial Completion.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine areas for compliance with requirements for installation tolerances and other conditions affecting performance of work.
  - 1. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 INSTALLATION

- A. Erection of the skylight systems shall follow manufacturer's recommendations and be in accordance with final Shop Drawings by specialized mechanics.
  - 1. Manufacturers' technical field representative shall observe and give direction as required at the start of installation of skylights.
- B. General: Comply with manufacturer's written instructions for protecting, handling, and installing skylight components.
  - 1. Fit frame joints to produce hairline joints free of burrs and distortion.
  - 2. Rigidly secure non-movement joints.
  - 3. Accommodate thermal and mechanical movements.
  - 4. Install framing components to drain water passing joints and to drain condensation and moisture occurring or migrating within skylight system to the exterior.
  - 5. Coordinate installation of insulation and flashings at skylight perimeters to maintain continuity of thermal and water barriers.
  - 6. Set continuous curbs and flashings in a full sealant bed, unless otherwise

- indicated. Comply with requirements in Division 07 Section, Joint Protection.
7. Separate dissimilar materials including masonry or concrete surfaces, with protective coating or preformed separators
- C. Erection Tolerances: Install skylight components true in plane, accurately aligned, and without warp or rack. Adjust framing to comply with the following tolerances:
1. Variation from Plane: Limit variation from plane or location shown to 1/8 inch in 10 feet; 1/4 inch over total length.
  2. Alignment: Where surfaces abut in line and at corners and where surfaces are separated by less than 3 inches, limit offset from true alignment to less than 1/32 inch; otherwise, limit offset from true alignment to 1/8 inch.
- D. Field Glazing:
1. Comply with combined recommendations of manufacturers of glass, sealants, gaskets, industry standards, and other glazing materials, except where more stringent requirements are indicated, including those in referenced glazing publications.
  2. Structural Silicone Sealant Glazing: Prepare surfaces that will contact sealant and install sealant according to sealant manufacturer's written instructions. Preparation includes, but is not limited to, cleaning and priming. Mechanically fasten glazing in place until sealant cures. Clean excess sealant from surfaces before sealant cures.
- E. Install secondary-sealant weatherseal according to sealant manufacturer's written instructions to provide weatherproof joints. Install joint fillers behind sealant as recommended by sealant manufacturer.

### 3.3 FIELD QUALITY CONTROL

- A. Sealant Adhesion Tests: Test installed sealant in a minimum of two areas and as follows:
1. Test structural silicone sealant according to field adhesion test method described in AAMA CW 13, "Structural Sealant Glazing Systems (A Design Guide)."
- B. Water-Spray Test: Test skylights for compliance with requirements according to procedures in AAMA 501.2.
- C. Repair or replace Work that does not meet requirements or that is damaged by testing; repair or replace to comply with specifications.

### 3.4 CLEANING

- A. Immediately prior to final inspection and before acceptance, clean surfaces of skylights. Cleaning shall be done by the use of cleaning materials which will not damage the skylights or surrounding materials.
- B. Glass to be cleaned according to:
1. GANA Glass Informational Bulletin GANA 01-0300 – Proper Procedure for Cleaning Architectural Glass Products
  2. GANA Glass Informational Bulletin GANA TD-02-0402 – Heat Treated

BARNETT PARK SKYLIGHTS  
ORANGE COUNTY, FLORIDA

METAL FRAMED SKYLIGHTS  
SECTION 08623

Glass Surfaces are Different

END OF SECTION 08623



DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)  
BOARD AND CODE ADMINISTRATION DIVISION

MIAMI-DADE COUNTY  
PRODUCT CONTROL SECTION

11805 SW 26 Street, Room 208

Miami, Florida 33175-2474

[www.miamidade.gov/economy](http://www.miamidade.gov/economy)

**NOTICE OF ACCEPTANCE (NOA)**

**Super Sky Products Enterprises, LLC**  
**10301 North Enterprise Drive**  
**Mequon, Wisconsin 53092**

**SCOPE:**

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER-Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the High Velocity Hurricane Zone of the Florida Building Code.

**DESCRIPTION: Standard Tubular Aluminum Skylight System with Insulated Glass – L.M.I.**

**APPROVAL DOCUMENT:** Drawing No. 2002-0246, titled “Super Sky’s Standard Tubular Skylight Glazing System”, sheets A1 through A4 of 4 and B1 through B6 of 6, prepared by David S. Barron, P.E., signed and sealed by David S. Barron, P.E on November 15, 2005, bearing the Miami-Dade County Product Control Renewal stamp with the Notice of Acceptance number and the expiration date by the Miami-Dade County Product Control Section.

**MISSILE IMPACT RATING: Large and Small Missile Impact Resistant**

**LABELING:** Each unit shall bear a permanent label with the manufacturer's name or logo, city, state, model/series and the following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

**RENEWAL** of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

**TERMINATION** of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

**ADVERTISEMENT:** The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

**INSPECTION:** A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA **renews** NOA # **11-0811.04** and consists of this page 1, evidence submitted page E-1 as well as approval document mentioned above.

The submitted documentation was reviewed by **Jaime D. Gascon, P.E.**



*J. Gascon*  
*12/14/12*

NOA No. 12-1023.06  
Expiration Date: 11/18/2017  
Approval Date: 12/27/2012  
Page 1

**Super Sky Products Enterprises, LLC**

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

**A. DRAWINGS**

1. *Drawing No. 2002-0246, titled "Super Sky's Standard Tubular Skylight Glazing System", sheets A1 through A4 of 4 and B1 through B6 of 6, prepared by David S. Barron, P.E., signed and sealed by David S. Barron, P.E on November 15, 2005.*

**B. TESTS**

1. *Test report on Large Missile Impact Test, Cyclic Load Test and Uniform Static air Pressure Test on Super Sky's Skylight Systems, prepared by Hurricane Test Laboratory, Inc., Report No. 0161-0207-99, dated 02/16/99, signed and sealed by Timothy S. Marshall, P.E. (Submitted under NOA 99-0610.02.)*
2. *Test report on Large Missile Impact Test, Cyclic Load Test and Uniform Static air Pressure Test on Super Sky's Skylight Systems, prepared by Hurricane Test Laboratory, Inc., Report Nos. 0161-0409-05 & 0161-1023-04, dated September 13, 2005, signed and sealed by Vinu J. Abraham, P.E. (Submitted under NOA 05-1208.05.)*

**C. CALCULATIONS**

1. *Calculation titled "Super Sky Products, Inc. Mock-up-Dade County Product Approval TAS-201, TAS-202, TAS-203, Large Missile Test", dated November 11, 2005, sheets 1 through 21 of 21, prepared by David S. Barron, P.E., signed and sealed by David S. Barron, P.E. (Submitted under NOA 05-1208.05.)*

**D. QUALITY ASSURANCE**

1. *By Miami-Dade County Department of Regulatory and Economic Resources.*

**E. MATERIAL CERTIFICATIONS**

1. *Mill Certified Test Report issued by Viracon, dated 03/10/99, with the glass strength analysis by Jeffrey D. Granato. (Submitted under NOA 99-0610.02.)*
2. *The Die Drawing Numbers D1 through D9 of 9, by Super Sky Products, Inc. (Submitted under NOA 99-0610.02.)*

**F. OTHERS**

1. *Letter of Compliance with the Florida Building Code, 2010 Edition, issued by Mr. David S. Barron, P.E., dated September 27, 2012, signed and sealed by Mr. David S. Barron, P.E.*
2. *Letter of Compliance with the Florida Building Code, 2010 Edition, issued by Mr. David S. Barron, P.E., dated February 10, 2012, signed and sealed by Mr. David S. Barron, P.E. (Submitted under NOA 11-0811.04.)*

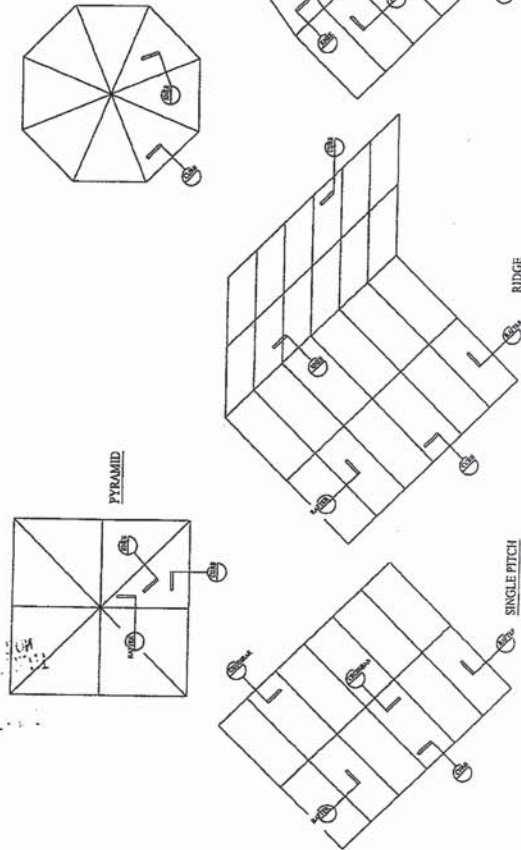


Jaime D. Gascon, P.E.  
Product Control Section Supervisor  
NOA No. 12-1023.06  
Expiration Date: 11/18/2017  
Approval Date: 12/27/2012

SUPER SKY'S STANDARD TUBULAR SKYLIGHT SYSTEM

- 1) **SYSTEM DESCRIPTION:** SUPER SKY'S STANDARD TUBULAR SKYLIGHT GLAZING SYSTEM CONSISTS OF AN EXTRUDED ALUMINUM STRUCTURAL FRAME (6005-T5), CUSTOM ENGINEERED TO SUIT A PARTICULAR PROJECT. THE EXTRUDED FRAME IS CONNECTED TOGETHER USING ALUMINUM CHANNEL CLIPS, ANCHOR PLATES, AND GUSSET PLATES, AS SHOWN ON DRAWINGS A1-A4. THE GLASS IS ATTACHED TO THE FRAME USING ALUMINUM RETAINERS (6005-T5), AND 1/4"-20 STAINLESS STEEL TORX HEAD SCREWS 6" O.C. THE SCREWS ENGAGE THE SERRATIONS IN THE ALUMINUM EXTRUSIONS BELOW. EPDM GASKETS ARE USED ON THE INTERIOR (1/8" X 1/4") AND EXTERIOR (1/4" X 3/8") TO CUSHION THE GLASS, AND A FULL SILICONE WEATHER SEAL AND SNAP-ON CAPS ARE APPLIED TO PREVENT AIR AND WATER INFILTRATION.
- 2) **SKYLIGHT TYPES:** SINCE ALMOST ALL SKYLIGHTS BUILT USING SUPER SKY'S STANDARD TUBULAR GLAZING SYSTEM ARE CUSTOM DESIGNED FOR A PARTICULAR BUILDING, VIRTUALLY NONE OF THEM ARE EXACTLY THE SAME. IN RECOGNITION OF THIS FACT, THE TEST SPECIMENS AS SHOWN ON SHEETS A1-A4 WERE DEVELOPED SO AS TO TEST THE FOUR STANDARD DETAILS USED ON MOST SKYLIGHT PROJECTS (CURB, RAFTER, CROSSBAR, AND KNEE). THE DESIGN PRESSURE, GLASS TYPE, AND GLASS SIZES WERE ALSO SELECTED TO SUIT THE MOST POSSIBLE SKYLIGHT PROJECTS.

EXAMPLES OF THESE SKYLIGHTS ARE SHOWN BELOW.



SUPER SKY'S STANDARD TUBULAR SKYLIGHT GLAZING SYSTEM

**PRODUCT APPROVAL TESTING PER TAS-201, TAS-202, TAS-203**

STANDARD DETAILS TESTED:

1. CURB (SEE DETAIL 1/A3)
2. RAFTER (SEE DETAIL 3/A3)
3. CROSSBAR (SEE DETAIL 1/A3)
4. KNEE [HIP] (SEE DETAIL 2/A3)

PLEASE SEE DRAWINGS A1-A4 FOR COMPLETE SPECIFICATIONS OF THE MOCK-UPS TESTED.

PRODUCT RENEWED as complying with the Florida Building Code, Acceptance No. 12-1023-06  
 Expiration Date: 11/18/2017  
 By: *David B. Barron*  
 Miami Dade Product Control

GENERAL NOTES:

- 1) THIS SYSTEM IS APPROVED FOR DESIGN PRESSURES UP TO +80/-90PSF.
- 2) GLASS TYPE TESTED: 1 1/2" IGU CONSISTING OF:
  - 1/4" CLEAR HEAT STRENGTHENED OUTER LITE,
  - 1/2" AIR SPACE,
  - 3/8" CLEAR LAMINATED INNER LITE, CONSISTING OF:
    - 1/4" CLEAR HEAT STRENGTHENED GLASS,
    - .077" VS-02 PVB INTERLAYER BY SOLLUTIA
    - 1/4" CLEAR HEAT STRENGTHENED GLASS.
- 3) LARGE MISSILE IMPACT TESTED. THIS GLASS PRODUCT IS APPROVED FOR USE FROM GRADE UP TO 30', OR HIGHER IF DESIRED.
- 4) APPROVED UP TO A MAXIMUM LITE SIZE OF 30 SQ. FT.
- 5) THE ALUMINUM EXTRUSIONS TESTED WERE SIZED PER STRUCTURAL CALCULATIONS TO SUIT THE SPANS AND DESIGN PRESSURE TESTED.
- 6) ALUMINUM CONTACTING MATERIALS NOT CONSIDERED COMPATIBLE SHALL BE PROTECTED PER SECTION 2003.8.4.2 OF THE FLORIDA BUILDING CODE.
- 7) THIS APPROVAL IS LIMITED TO THE MAXIMUM AREA OF THE 1 1/2" INSULATED GLASS, THE FULLY ASSEMBLED GLAZING DETAILS SYSTEM TO THE SUPPORTING RAFTERS AND THE MAXIMUM DESIGN PRESSURE SHOWN ON THESE DRAWINGS.
- 8) THE STRUCTURAL ADEQUACY OF THE SUPPORTING STRUCTURAL MEMBERS, (CURBS, RAFTERS, PURLINS, AND ALL OTHER FRAMING MEMBERS) IS NOT PART OF THIS APPROVAL AND IT SHALL BE REVIEWED BY THE STRUCTURAL PLANS EXAMINER OF THE CORRESPONDING BUILDING DEPARTMENT.

PRODUCT REVISED

as complying with the Florida Building Code, Acceptance No. 11-0811-04  
 Expiration Date: 11/18/2017  
 By: *David B. Barron*  
 Miami Dade Product Control

PRODUCT REVISED as complying with the Florida Building Code, Acceptance No. 05-1208-05  
 Expiration Date: 11/18/2017  
 By: *David B. Barron*  
 Miami Dade Product Control

PRODUCT REVISED as complying with the Florida Building Code, Acceptance No. 07-0810-02  
 Expiration Date: 11/18/2017  
 By: *David B. Barron*  
 Miami Dade Product Control

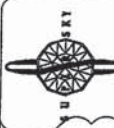
ENGINEER STAMP

DADE COUNTY USE  
 PRODUCT REVISED as complying with the Florida Building Code, Acceptance No. 05-1208-05  
 Expiration Date: 11/18/2017  
 By: *David B. Barron*  
 Miami Dade Product Control

DAVID B. BARRON  
 21 DARTMOUTH DRIVE  
 GREENSBURG, PA 15881  
 LICENSE #A374

27320

2002046A\_1-7-05\_.D1



SUPER SKY PRODUCTS  
 10000 W. WINDYBROOK BLVD.  
 SUITE 1000  
 GREENSBURG, PA 15881  
 PH: 717-838-1111  
 FAX: 717-838-1112  
 WWW.SUPER-SKY.COM

CURRENT NOA # 05-1009-05  
 LARGE MISSILE REVISION

NEW GLASS TYPE # 07/06 JB  
 REVISION TO CURRENT NOA 05-1009-05  
 EXP. 12-24-07

PROJECT: MOCK-UP  
 DADE COUNTY PRODUCT APPROVAL  
 DADE COUNTY, FL  
 ENGINEER: DAVID B. BARRON  
 MIAMI, FL

TEST LABORATORY: HURRICANE TEST LAB  
 RIVERIA BEACH, FL

DATE: 01/07/05  
 JOB: 1 (DP)  
 REVISION: 2002-02/06

**A1**



SUNBELT PRODUCTS  
ENTERPRISES, LLC  
10000 W. BIRCHWOOD DRIVE  
MIRAGE, MISSISSIPPI 39093  
334-690-0000

REVISED

PROJECT: MOCK-UP  
DADE COUNTY  
PRODUCT APPROVAL  
DADE COUNTY, FL  
ENGINEER: DAVID S. BARRON

MEOUON, WI

TEST LABORATORY

RIVIERA BEACH, FL

ELEVATION

END RAFTER SECTION

TITLE

DATE

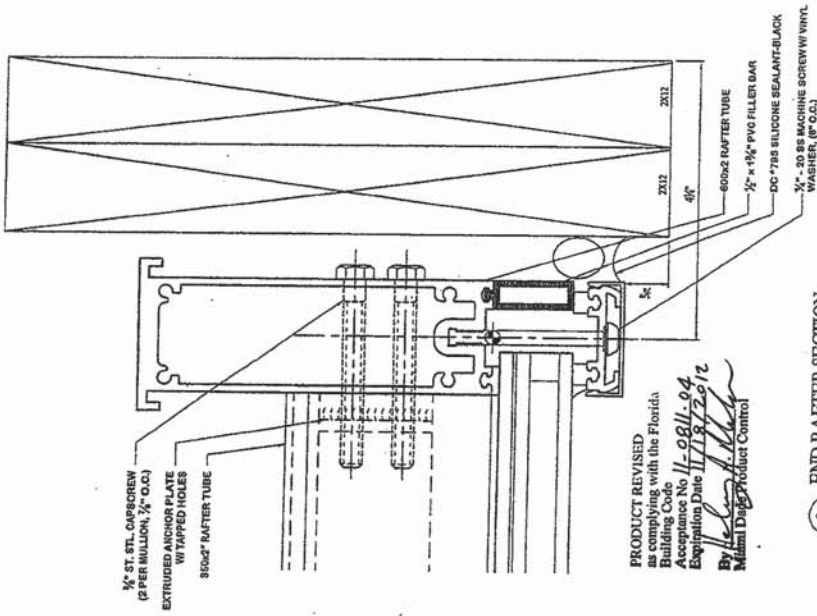
NO. 0107105

AS NOTED 1 (DP)

ISSUE

DATE 2002-02-06

**A2**



PRODUCT REVISED  
as complying with the Florida  
Building Code  
Acceptance No. 11-0811-04  
Expiration Date 11/18/2012  
By David S. Barron  
Miami Dade Product Control

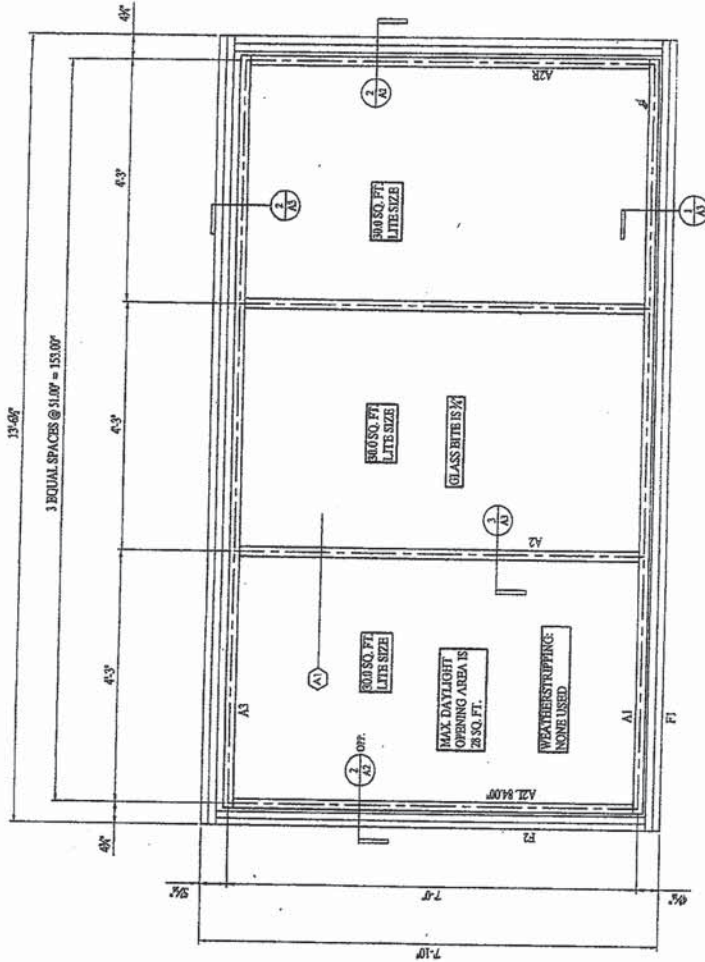
2 END RAFTER SECTION  
SCALE: FULL

DADE COUNTY USE  
PRODUCT REVISED  
as complying with the Florida  
Building Code  
Acceptance No. 05-12-08-05  
Expiration Date 11/18/2007  
By David S. Barron  
Miami Dade Product Control  
Division

ENGINEER STAMP  
David S. Barron  
11-15-05

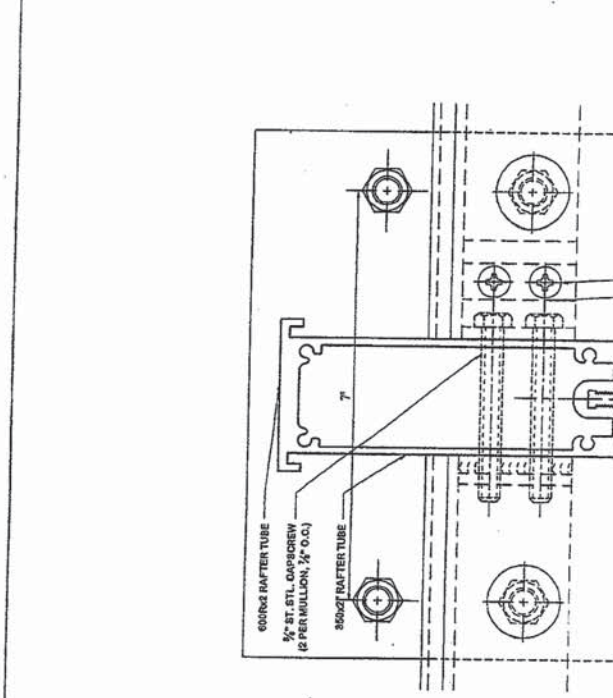
DAVID S. BARRON  
21 DARTMOUTH DRIVE  
GREENSBURG, PA 15601  
LICENSE # 8374

20020206A\_1-7-05\_D1.dwg

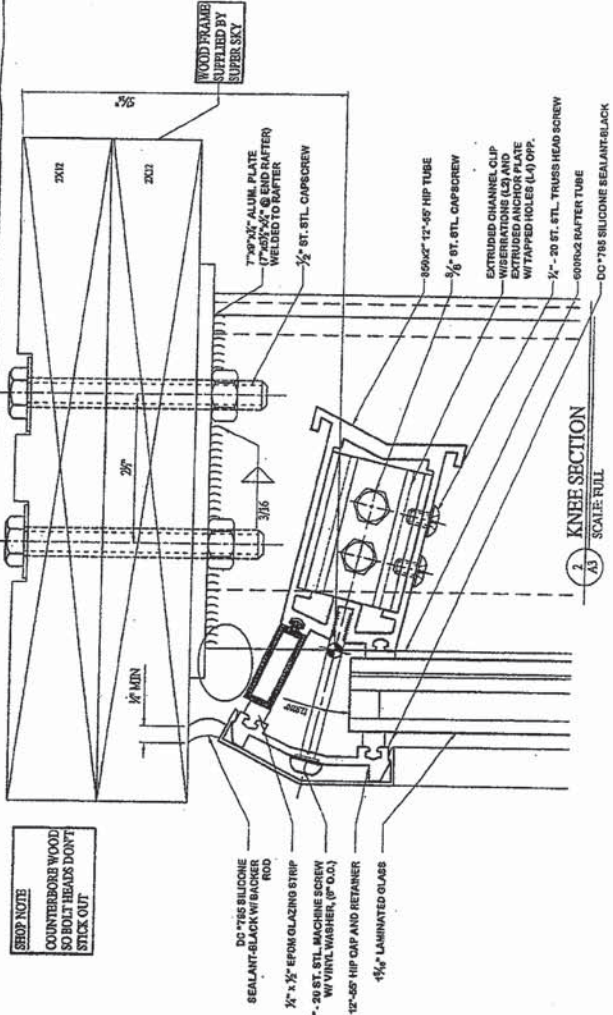


PRODUCT RENEWED  
as complying with the Florida  
Building Code  
Acceptance No. 07-0810-02  
Expiration Date 11/18/2012  
By David S. Barron  
Miami Dade Product Control  
Division

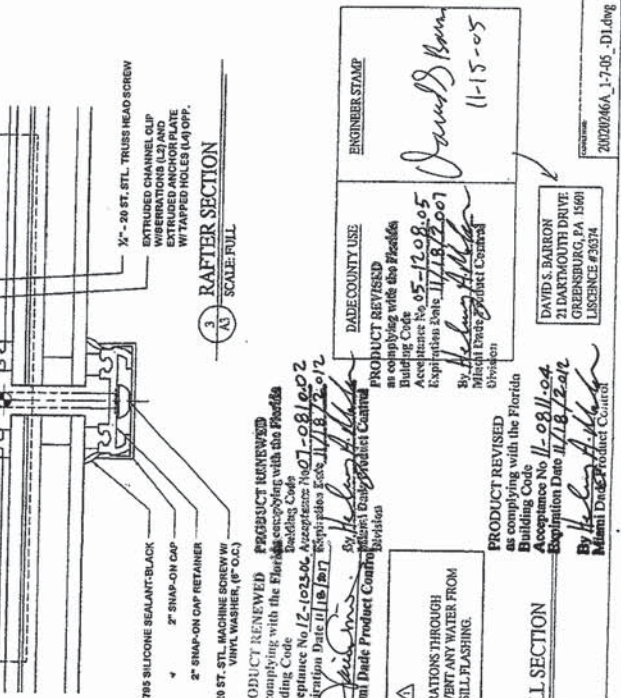
1 ELEVATION (1 REOID)  
SCALE: 1" = 1'-0"



**2 KNEE SECTION**  
 SCALE: FULL



**1 CURB/SILL SECTION**  
 SCALE: FULL



**3 RAFTER SECTION**  
 SCALE: FULL

**SHOP NOTE**  
 COUNTERBORR WOOD SO BOLT HEADS DONT STICK OUT

DO \*785 SILICONE SEALANT-BLACK W/ VINYL WASHER, (P O.C.)  
 1/2\"/>

1/4\"/>

**SHOP NOTE**  
 COUNTERBORR WOOD SO BOLT HEADS DONT STICK OUT

**PRODUCT RENEWED** as complying with the Florida Building Code  
 Acceptance No. 12-1023-06, Acceptance No. 07-081e02  
 Expiration Date 11/18/17  
 By: *Heather H. Allen*  
 Miami Dade Product Control Division

**PRODUCT RENEWED** as complying with the Florida Building Code  
 Acceptance No. 05-1208-05  
 Expiration Date 11/18/17  
 By: *Heather H. Allen*  
 Miami Dade Product Control Division

**ERECTION NOTE:**  
 SEAL BOLT PENETRATIONS THROUGH FLASHING TO PREVENT ANY WATER FROM DRIPPING OUT OF SILL FLASHING.

**DADE COUNTY USE**  
**PRODUCT REVISED** as complying with the Florida Building Code  
 Acceptance No. 05-1208-05  
 Expiration Date 11/18/17  
 By: *Heather H. Allen*  
 Miami Dade Product Control Division

**PRODUCT REVISED** as complying with the Florida Building Code  
 Acceptance No. 11-0811-04  
 Expiration Date 11/18/17  
 By: *Heather H. Allen*  
 Miami Dade Product Control

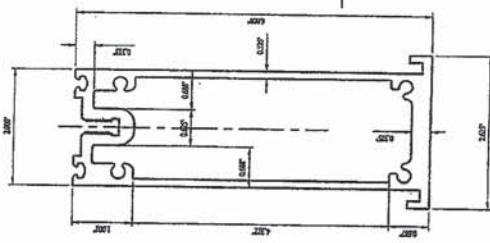
**DAVID S. BARRON**  
 21 DARTMOUTH DRIVE  
 GREENSBURG, PA 15601  
 LICENSE # 3574

**ENGINEER STAMP**  
*David S. Barron*  
 11-15-05





**SUMMARY OF PROPERTIES**  
 CENTRE OF MASS [1.41922, 0.0488, 0]  
 SURFACE AREA 1.1718 INCH<sup>2</sup>  
 MOMENT ABOUT X AXIS 5.8453 INCH<sup>4</sup>  
 MOMENT ABOUT Y AXIS 16.8898 INCH<sup>4</sup>  
 POLAR MOMENT 18.8998 INCH<sup>4</sup>  
 PRINCIPAL AXES ROTATION ANGLE = 90°  
 RADIUS OF GYRATION  
 POLAR 2.40071 INCH  
 X AXIS 0.761089 INCH  
 Y AXIS 2.2787 INCH  
 WEIGHT PER LINEAR FOOT 4.89228 LBS  
 ALUMINUM ALLOY 6062-T5



600 RAFTER TUBE  
SCALE: FULL

PRODUCT RENEWED as complying with the Florida Building Code  
 Approval No. 12-1022-06  
 Expiration Date 11/18/2012  
 By *Heather H. Hilde*  
 Miami Dade Product Control

PRODUCT REVISED as complying with the Florida Building Code  
 Approval No. 11-0811-04  
 Expiration Date 11/18/2012  
 By *Heather H. Hilde*  
 Miami Dade Product Control

PRODUCT RENEWED as complying with the Florida Building Code  
 Approval No. 07-0810-02  
 Expiration Date 11/18/2012  
 By *Heather H. Hilde*  
 Miami Dade Product Control

PROJECT: MOCK-UP, DADE COUNTY PRODUCT APPROVAL  
 ENGINEER: DAVID S. BARRON  
 MIDDLETOWN, WI  
 TEST LABORATORY: RIVERIA BEACH, FL  
 TITLE: EXTRUSIONS  
 DATE: 06/29/04  
 DRAWN BY: PILL  
 SCALE: 1 (DP)  
 PROJECT NO: 2000-0046

A4 OF 4

**SUMMARY OF PROPERTIES**  
 CENTRE OF MASS [-1.8998, 0.80728, 0]  
 SURFACE AREA 0.5324 INCH<sup>2</sup>  
 MOMENT ABOUT X AXIS 10.924 INCH<sup>4</sup>  
 MOMENT ABOUT Y AXIS 10.8898 INCH<sup>4</sup>  
 POLAR MOMENT 18.8998 INCH<sup>4</sup>  
 PRINCIPAL AXES ROTATION ANGLE = 87.28°  
 RADIUS OF GYRATION  
 POLAR 2.5533 INCH  
 X AXIS 0.277084 INCH  
 Y AXIS 2.6427 INCH  
 WEIGHT PER LINEAR FOOT 1.94180 LBS  
 ALUMINUM ALLOY 6062-T5



1/2" x 5/8" x 4" LONG SILICONE SETTING BLOCK  
SCALE: FULL

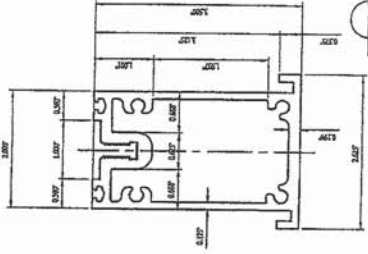
HARDNESS: (SHORE A) 50 ± 5 DUROMETER  
 COLOR: BLACK



1/4" x 1/2" EPDM GLAZING STRIP  
SCALE: FULL

HARDNESS: (SHORE A) 50 ± 5 DUROMETER  
 TENSILE STRENGTH: 200% (MIN)  
 TEAR, DIE 8, PB: 45 (MIN)  
 COLOR: BLACK

**SUMMARY OF PROPERTIES**  
 CENTRE OF MASS [1.41922, 0.0488, 0]  
 SURFACE AREA 1.1718 INCH<sup>2</sup>  
 MOMENT ABOUT X AXIS 5.8453 INCH<sup>4</sup>  
 MOMENT ABOUT Y AXIS 16.8898 INCH<sup>4</sup>  
 POLAR MOMENT 18.8998 INCH<sup>4</sup>  
 PRINCIPAL AXES ROTATION ANGLE = 90°  
 RADIUS OF GYRATION  
 POLAR 2.40071 INCH  
 X AXIS 0.761089 INCH  
 Y AXIS 2.2787 INCH  
 WEIGHT PER LINEAR FOOT 2.494419 LBS  
 ALUMINUM ALLOY 6062-T5

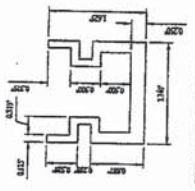


350 RAFTER TUBE  
SCALE: FULL

DAVID S. BARRON  
 21 DARTMOUTH DRIVE  
 GREENSBURG, PA 15601  
 LICENSE # 93374

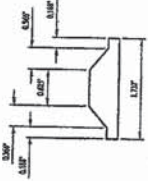
DATE: 06/29/04  
 DRAWN BY: PILL  
 SCALE: 1 (DP)  
 PROJECT NO: 2000-0046

**SUMMARY OF PROPERTIES**  
 CENTRE OF MASS [1.97418, 0.02785, 0]  
 SURFACE AREA 0.4888 INCH<sup>2</sup>  
 MOMENT ABOUT X AXIS 0.4888 INCH<sup>4</sup>  
 MOMENT ABOUT Y AXIS 0.4888 INCH<sup>4</sup>  
 POLAR MOMENT 0.8888 INCH<sup>4</sup>  
 PRINCIPAL AXES ROTATION ANGLE = 90°  
 RADIUS OF GYRATION  
 POLAR 0.9688 INCH  
 X AXIS 0.47468 INCH  
 Y AXIS 0.63072 INCH  
 WEIGHT PER LINEAR FOOT 1.01028 LBS  
 ALUMINUM ALLOY 6062-T5

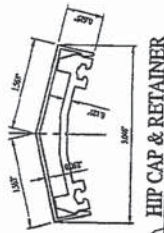


CHANNEL CLIP  
SCALE: FULL

**SUMMARY OF PROPERTIES**  
 CENTRE OF MASS [0.886, 0.80728, 0]  
 SURFACE AREA 0.6418 INCH<sup>2</sup>  
 MOMENT ABOUT X AXIS 0.6418 INCH<sup>4</sup>  
 MOMENT ABOUT Y AXIS 0.11018 INCH<sup>4</sup>  
 POLAR MOMENT 0.12018 INCH<sup>4</sup>  
 PRINCIPAL AXES ROTATION ANGLE = 90°  
 RADIUS OF GYRATION  
 POLAR 0.48824 INCH  
 X AXIS 0.19684 INCH  
 Y AXIS 0.4187 INCH  
 WEIGHT PER LINEAR FOOT 0.74271 LBS  
 ALUMINUM ALLOY 6062-T5

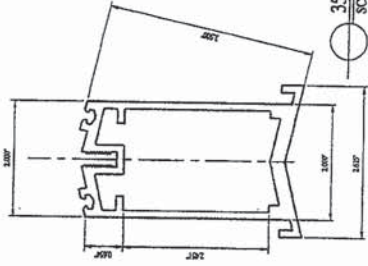


ANCHOR PLATE  
SCALE: FULL



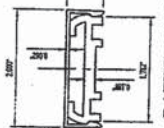
HIP CAP & RETAINER  
SCALE: FULL

**SUMMARY OF PROPERTIES**  
 CENTRE OF MASS [1.31244, 1.62285, 0]  
 SURFACE AREA 2.07786 INCH<sup>2</sup>  
 MOMENT ABOUT X AXIS 3.84653 INCH<sup>4</sup>  
 MOMENT ABOUT Y AXIS 3.84653 INCH<sup>4</sup>  
 POLAR MOMENT 5.44462 INCH<sup>4</sup>  
 PRINCIPAL AXES ROTATION ANGLE = 90°  
 RADIUS OF GYRATION  
 POLAR 1.1718 INCH  
 X AXIS 0.761089 INCH  
 Y AXIS 2.2787 INCH  
 WEIGHT PER LINEAR FOOT 2.494419 LBS  
 ALUMINUM ALLOY 6062-T5



350 HIP TUBE  
SCALE: FULL

600 VARIABLE CURB  
SCALE: FULL



RAFTER CAP & RETAINER  
SCALE: FULL

1/2" x 1 1/8" RIGID PVC FILLER BAR  
SCALE: FULL

RIGID PVC #50 W. .085" MIN WALL

DADE COUNTY USE  
 PRODUCT REVISED as complying with the Florida Building Code  
 Approval No. 05-1208-05  
 Expiration Date 11/18/2007  
 By *Heather H. Hilde*  
 Miami Dade Product Control

ENGINEER STAMP  
*David S. Barron*  
 11-15-05

HARDNESS: (SHORE A) 50 ± 5 DUROMETER  
 TENSILE STRENGTH: 200% (MIN)  
 TEAR, DIE 8, PB: 45 (MIN)  
 COLOR: BLACK

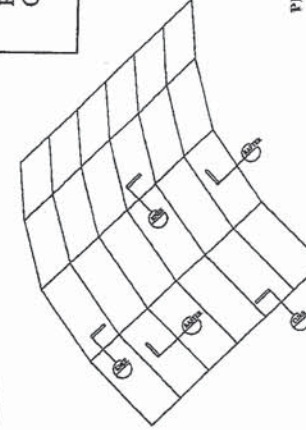
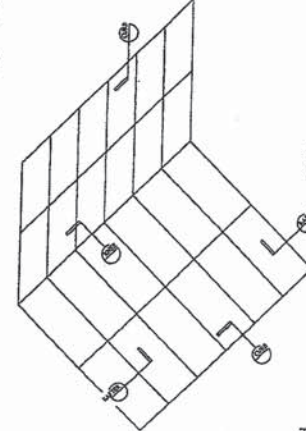
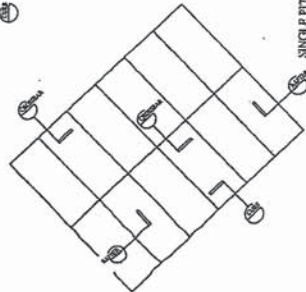
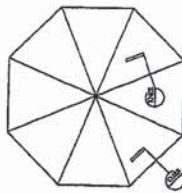
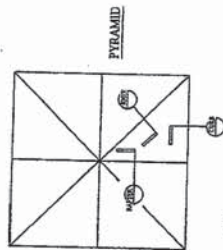
1/4" x 1/2" EPDM GLAZING STRIP  
SCALE: FULL

**SUPER SKY'S STANDARD TUBULAR SKYLIGHT SYSTEM**

1) **SYSTEM DESCRIPTION:** SUPER SKY'S STANDARD TUBULAR SKYLIGHT GLAZING SYSTEM CONSISTS OF AN EXTRUDED ALUMINUM STRUCTURAL FRAME (6005-T5), CUSTOM ENGINEERED TO SUIT A PARTICULAR PROJECT. THE EXTRUDED FRAME IS CONNECTED TOGETHER USING ALUMINUM CHANNEL CLIPS, ANCHOR PLATES, AND GUSSET PLATES, AS SHOWN ON DRAWINGS B1-B5. THE GLASS IS ATTACHED TO THE FRAME USING ALUMINUM RETAINERS (6005-T5), AND 1/4"-20 STAINLESS STEEL TORX HEAD SCREWS 6" O.C. THE SCREWS ENGAGE THE SERRATIONS IN THE ALUMINUM EXTRUSIONS BELOW. EPDM GASKETS ARE USED ON THE INTERIOR (1/2" X 1/2") AND EXTERIOR (1/4" X 3/8") TO CUSHION THE GLASS, AND A FULL SILICONE WEATHER SEAL AND SNAP-ON CAPS ARE APPLIED TO PREVENT AIR AND WATER INFILTRATION.

2) **SKYLIGHT TYPES:** SINCE ALMOST ALL SKYLIGHTS BUILT USING SUPER SKY'S STANDARD TUBULAR GLAZING SYSTEM ARE CUSTOM DESIGNED FOR A PARTICULAR BUILDING, VIRTUALLY NONE OF THEM ARE EXACTLY THE SAME. IN RECOGNITION OF THIS FACT, THE TEST SPECIMENS AS SHOWN ON SHEETS B1-B5 WERE DEVELOPED SO AS TO TEST THE FOUR STANDARD DETAILS USED ON MOST SKYLIGHT PROJECTS (CURB, RAFTER, CROSSBAR, AND KNEE). THE DESIGN PRESSURE, GLASS TYPE, AND GLASS SIZES WERE ALSO SELECTED TO SUIT THE MOST POSSIBLE SKYLIGHT PROJECTS.

EXAMPLES OF THESE SKYLIGHTS ARE SHOWN BELOW.



**SUPER SKY'S STANDARD TUBULAR SKYLIGHT GLAZING SYSTEM**

PRODUCT APPROVAL TESTING PER TAS-201, TAS-202, TAS-203

STANDARD DETAILS TESTED:

1. CURB (SEE DETAIL 1/B5)
2. RAFTER (SEE DETAIL 3/B3)
3. CROSSBAR (SEE DETAIL 2/B3)
4. KNEE [HIP] (SEE DETAIL 1/B4)

PLEASE SEE DRAWINGS B1-B5 FOR COMPLETE SPECIFICATIONS OF THE MOCK-UPS TESTED.

PRODUCT REVISED as complying with the Florida Building Code, Acceptance No. 11-0811-04, Expiration Date 11/18/2012  
By: *Heather H. Hildebrand*  
Miami Dade Product Control

**GENERAL NOTES:**

- 1) THIS SYSTEM IS APPROVED FOR: DESIGN PRESSURES UP TO +/- 80 PSF.
- 2) GLASS TYPE TESTED: 1/2" IGU WITH 1/4" HEAT STRENGTHENED OUTER LITE, 1/4" AIR SPACE, 1/4" CLEAR SENTRY GLASS PLUS LAMINATED INNER LITE BY VIRACON, INC. CONSISTING OF:  
1/4" CLEAR HEAT STRENGTHENED GLASS,  
.090" SENTRY GLASS PLUS INTERLAYER MIAMI DADE COUNTY PRODUCT CONTROL, APPROVAL NO. 98-0608.03  
1/4" CLEAR HEAT STRENGTHENED GLASS.
- 3) LARGE MISSILE IMPACT TESTED. THIS GLASS PRODUCT IS APPROVED FOR USE FROM GRADE UP TO 30', OR HIGHER IF DESIRED.
- 4) APPROVED UP TO A MAXIMUM LITE SIZE OF 30 SQ. FT.
- 5) THE ALUMINUM EXTRUSIONS TESTED WERE SIZED PER STRUCTURAL CALCULATIONS TO SUIT THE SPANS AND DESIGN PRESSURE TESTED.
- 6) ALUMINUM CONTACTING MATERIALS NOT CONSIDERED COMPATIBLE SHALL BE PROTECTED PER SECTION 2003.8.4.2 OF THE FLORIDA BUILDING CODE.

- 7) THIS APPROVAL IS LIMITED TO THE MAXIMUM AREA OF THE 1/4" INSULATED GLASS, THE FULLY ASSEMBLED GLAZING DETAILS SYSTEM TO THE SUPPORTING RAFTERS AND THE MAXIMUM DESIGN PRESSURE SHOWN ON THESE DRAWINGS.
- 8) THE STRUCTURAL ADEQUACY OF THE SUPPORTING STRUCTURAL MEMBERS, (CURBS, RAFTERS, FURLINS, AND ALL OTHER FRAMING MEMBERS) IS NOT PART OF THIS APPROVAL AND IT SHALL BE REVIEWED BY THE STRUCTURAL PLANS EXAMINER OF THE CORRESPONDING BUILDING DEPARTMENT.

DATE COUNTY USE

PRODUCT REVISED as complying with the Florida Building Code

Acceptance No. 05-1208-05  
Expiration Date 11/18/2012  
By: *Heather H. Hildebrand*  
Miami Dade Product Control

PRODUCT RENEWED as complying with the Florida Building Code

Acceptance No. 12-1023-06  
Expiration Date 11/18/2012  
By: *Heather H. Hildebrand*  
Miami Dade Product Control

ENGINEER STAMP

DAVID S. BARRON  
21 DARTMOUTH DRIVE  
GREENSBURG, PA 15601  
LICENSE # 9354

DATE COUNTY USE

PRODUCT REVISED as complying with the Florida Building Code

PRODUCT RENEWED as complying with the Florida Building Code

ENGINEER STAMP

DAVID S. BARRON  
21 DARTMOUTH DRIVE  
GREENSBURG, PA 15601  
LICENSE # 9354

DAVID S. BARRON  
21 DARTMOUTH DRIVE  
GREENSBURG, PA 15601  
LICENSE # 9354

ENGINEER STAMP



ALUMINUM PRODUCTS ENTERPRISES, LLC  
1000 WOODBRIDGE DRIVE  
MARIETTA, GEORGIA 30067  
CURRENT NOA #0-1009.05  
LARGE MISSILE APPROVAL  
EXP. 11-18-07

NEW GLASS TYPE  
REVISION TO CURRENT  
NOA 00-1009.05  
EXP. 11-18-07

PRODUCT MOCK-UP  
DADE COUNTY  
PRODUCT APPROVAL  
DADE COUNTY, FL  
ENGINEER  
DAVID S. BARRON

MERQUON, WI  
TEST LABORATORY  
HURRICANE TEST LAB  
RIVERIA BEACH, FL

DATE COUNTY USE  
TK  
06/29/04  
1 (DP)  
2002-0246

TK  
11-15-05

27232  
20020946B-D1

B1  
OF 6



**PRODUCT RENEWED**  
 as complying with the Florida Building Code  
 Acceptance No. 12-0213-06  
 Expiration Date 11/19/2011  
 By *[Signature]*  
 Miami Trade Product Control

**PRODUCT REVISED**  
 as complying with the Florida Building Code  
 Acceptance No. 11-0811-04  
 Expiration Date 11/18/2012  
 By *[Signature]*  
 Miami Trade Product Control

7" x 7" ANGLE CLIP  
 TOP & BOTTOM  
 1" x 1" x 1/8" W/DR  
 BEAM (6.50 IN)  
 1/2" ST. STL. BOLTS

**PRODUCT RENEWED**  
 as complying with the Florida Building Code  
 Acceptance No. 07-0810-02  
 Expiration Date 11/18/2012  
 By *[Signature]*  
 Miami Trade Product Control

**DADE COUNTY USE**  
**PRODUCT REVISED**  
 as complying with the Florida Building Code  
 Acceptance No. 05-12-08-05  
 Expiration Date 11/18/2011  
 By *[Signature]*  
 Division

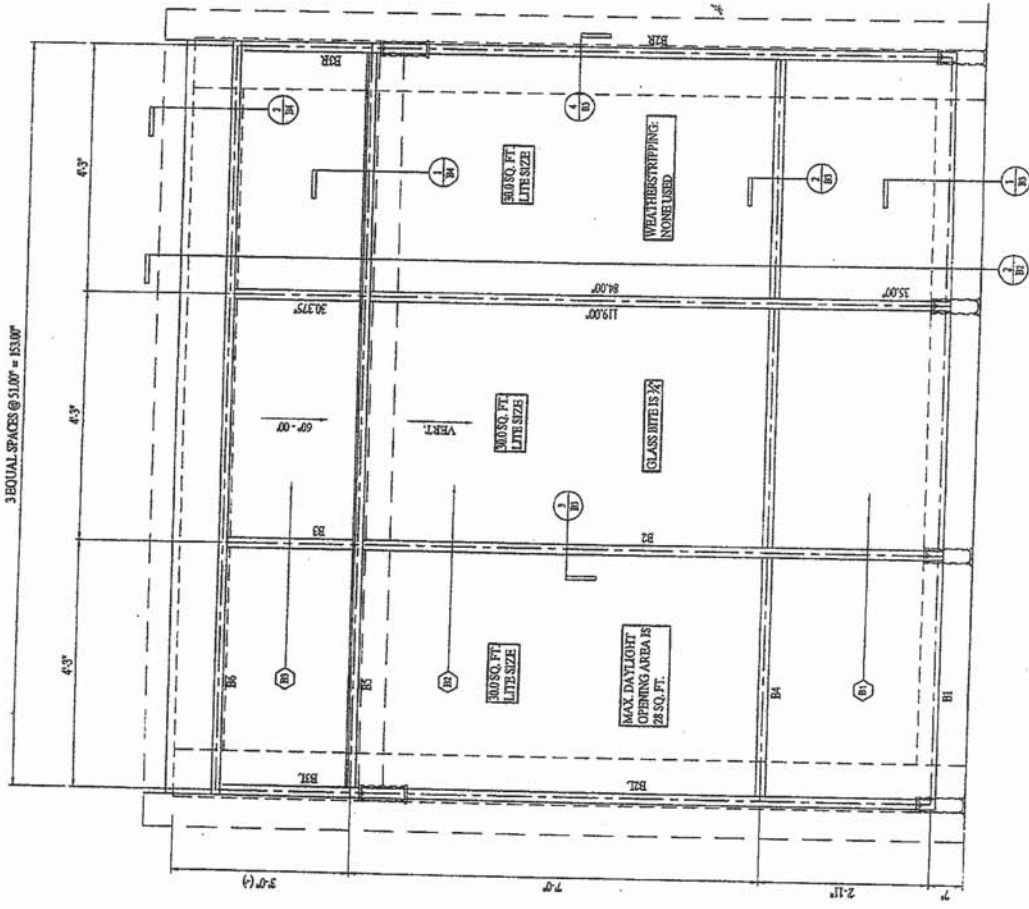
ENGINEER'S STAMP

*[Signature]*  
 11-15-05

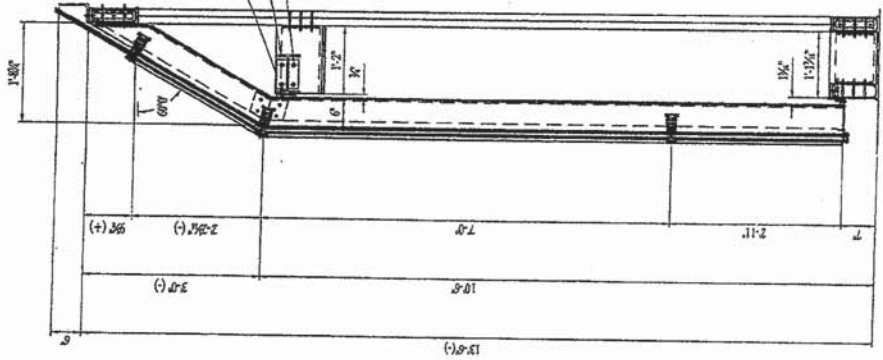
DAVID S. BARRON  
 21 DARTMOUTH DRIVE  
 GREENSBURG, PA 15601  
 LICENSE #38374

20020246B-D1.dwg

**B2**



1 ELEVATION (1 REQD)  
 SCALE: 1" = 1'-0"



2 THRU SECTION  
 SCALE: 1" = 1'-0"

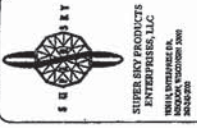
**PROJECT**  
 OCCUPY  
 DARTMOUTH DRIVE  
 GREENSBURG, PA  
**PRODUCT APPROVAL**  
 DADE COUNTY, FL  
**ENGINEER**  
 DAVID S. BARRON  
 MEQUON, WI  
 TEST LABORATORY  
 RIVIERA BEACH, FL  
**TITLE**  
 ELEVATION &  
 THRU SECTION

**DATE**  
 06/29/04  
**SCALE**  
 1" = 1'-0"  
**PROJECT NO.**  
 2002-0246









PROJECT:  PROJECT  MOCKUP  
 BUILDING CODE: DADE COUNTY  
 PRODUCT APPROVAL: DADE COUNTY, FL  
 ENGINEER: DAVID S. BARRON  
 MEQUON, WI  
 TEST LABORATORY: RIVERA BEACH, FL  
 TITLE: SUPPORT FRAME DETAIL  
 SHEET: TK 05/29/04  
 DATE: 11/15/05  
 PROJECT: 2002-0246

**B6**  
 OF 6

Note: Framing on this page  
 not part of Product Approval.

PRODUCT RENEWED  
 as complying with the Florida  
 Building Code  
 Acceptance No. 12-1023-06  
 Expiration Date 11/18/2017  
 By *David Barron*  
 Miami Dade Product Control

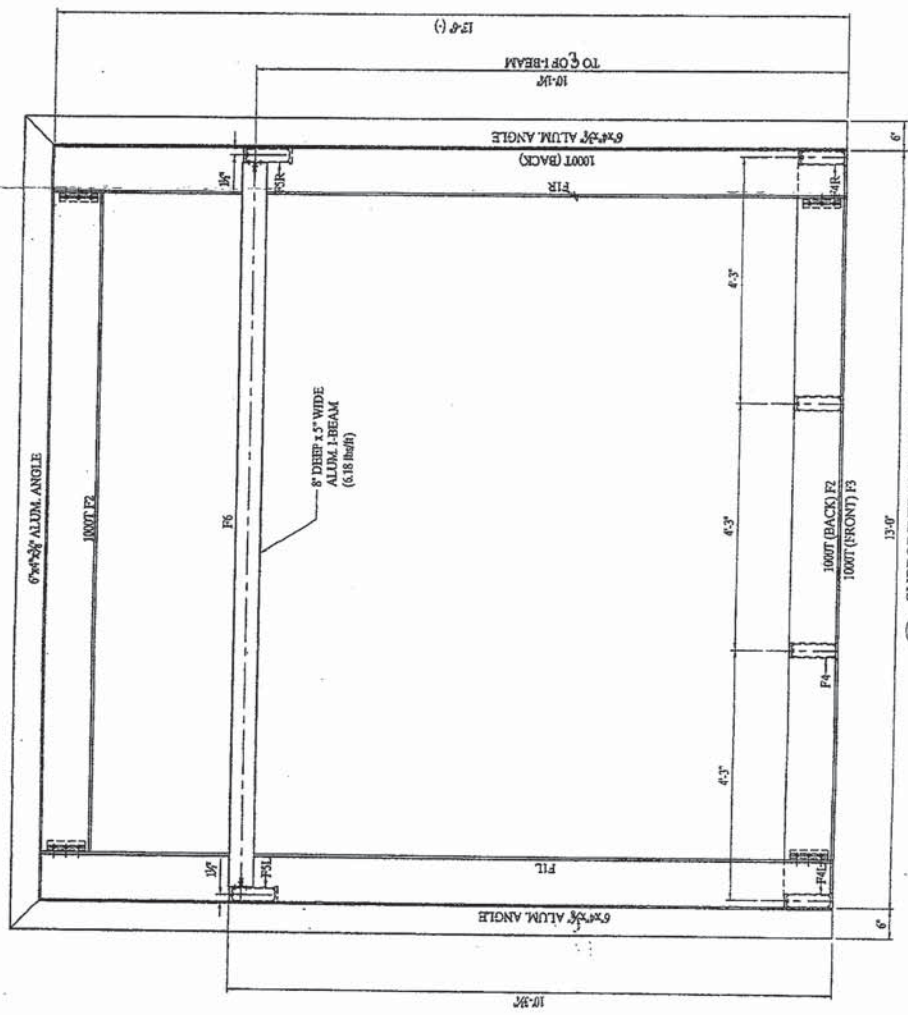
PRODUCT RENEWED  
 as complying with the Florida  
 Building Code  
 Acceptance No. 07-0810-02  
 Expiration Date 11/18/2017  
 By *David Barron*  
 Miami Dade Product Control

DADE COUNTY USE  
 PRODUCT REVISED  
 as complying with the Florida  
 Building Code  
 Acceptance No. 05-1208-05  
 Expiration Date 11/18/2007  
 By *David Barron*  
 Miami Dade Product Control

ENGINEER STAMP  
*David Barron*  
 11-15-05

PRODUCT REVISED  
 as complying with the Florida  
 Building Code  
 Acceptance No. 11-0811-04  
 Expiration Date 11/18/2012  
 By *David Barron*  
 Miami Dade Product Control

DAVID S. BARRON  
 21 DARTMOUTH DRIVE  
 GREENSBURG, PA 15601  
 LICENSE #3834



20020246B-D1.dwg

# GUARDIAN 275

TRANSLUCENT HURRICANE SYSTEMS  
SKYLIGHT / SLOPED GLAZED



APR 06 2015

## GENERAL NOTES: FLORIDA BUILDING CODE 2014

- 1- CODE: THIS PRODUCT HAS BEEN TESTED AND DESIGNED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE 2014 EDITION, NOT APPLICABLE FOR WIND ZONE 4 (V<sub>ult</sub>> 170 MPH) AND THE HIGH VELOCITY HURRICANE ZONES (HVHZ) MIAMI & BROWARD COUNTIES
- 2- DEFINITION: THIS PRODUCT IS A TRANSLUCENT SKYLIGHT COMPOSED OF A PANEL MADE OF FIBERGLASS AND ALUMINUM SECURED BY AN ALUMINUM PERIMETER FRAMING. THE SYSTEM IS LEVEL D IMPACT RESISTANT AND TESTED FOR USE IN ZONES 1, 2 OR 3 OF THE ASTM E 1996.
- 3- POSTING: A PERMANENT LABEL SHALL BE PROVIDED AS PER FBC 2014 SECTION 1703.5.3. IT SHALL BE PLACED ON A READILY VISIBLE LOCATION AND A MINIMUM OF ONE LABEL PER OPENING
- 4- DESIGN LOADS: LOADS MUST BE CALCULATED BY A PROFESSIONAL ARCHITECT OR ENGINEER FOR EACH SPECIFIC PROJECT. THE CALCULATED DESIGNED PRESSURE MUST NOT EXCEED THE ALLOWABLE APPROVED PRESSURE.
- 5- MATERIAL: ALL ALUMINUM PARTS ARE MADE OF 6063-T5 ALLOY AND FIBERGLASS MATERIAL TESTED IN ACCORDANCE WITH FBC CHAPTER 26
- 6- FASTENERS: ASSEMBLY SCREWS AND ANCHORS SHALL BE AS SPECIFIED IN THIS CURRENT SET OF DRAWINGS.
- 7- USE: IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, ARCHITECT OR ENGINEER OF RECORD TO VERIFY THE FOLLOWING:
  - 7.1- THE STABILITY OF THE STRUCTURE WHERE THE UNIT IS TO BE ATTACHED INSURING PROPER ANCHORAGE.
  - 7.2- THE SITE SPECIFIC PROJECT CRITERIA, SUCH AS BUT NOT LIMITED TO, LOCAL CODE REQUIREMENTS.
  - 7.3- THAT THIS APPROVAL IS ADEQUATE TO THE SPECIFIC PROJECT.
- 8- 33 1/3% INCREASE IN ALLOWABLE LOADS HAVE NOT BEEN USED IN THE DESIGN OF THE ANCHORS FOR THIS PRODUCT APPROVAL. LOAD DURATION FACTOR OF 1.6 WAS USED FOR ANCHORS INTO WOOD.
- 9- DISSIMILAR MATERIALS: WHERE ALUMINUM IS IN CONTACT OR FASTENED TO DISSIMILAR MATERIALS, INCLUDING BUT NOT LIMITED TO STEEL, INSTALLATION SHALL MEET THE REQUIREMENTS OF CHAPTER M.7 OF THE ALUMINUM DESIGN MANUAL 2010.
- 10- WOOD CURB TO BE PROVIDED BY OTHERS. THEY MUST BE PROPERLY DESIGNED TO TRANSFER LOADS TO THE STRUCTURE.
- 11- MOUNTING: (FBC SECTION 2405.4) SKYLIGHTS SET AT AN ANGLE OF LESS THAN 45° FROM THE HORIZONTAL PLANE SHALL BE MOUNTED AT LEAST 4" ABOVE THE PLANE OF THE ROOF ON A CURB. IN GROUP R-3 OCCUPANCIES, INSTALLATIONS WITHOUT A CURB SHALL BE PERMITTED ON ROOFS WITH A MINIMUM SLOPE OF 14 DEGREES (3:12 SLOPE) AND FOR SLOPE LESS THAN 14 DEGREES, SKYLIGHT SHALL BE MOUNTED AT LEAST 4" ABOVE ROOF PLANE.

## TABLE OF CONTENTS:

SHEET	DESCRIPTION
1 of 6	GENERAL NOTES & PRODUCT RATING
2 of 6	TYPICAL CONFIGURATIONS
3 of 6	DETAILS 1 AND 2
4 of 6	DETAILS 1, 3 AND 4
5 of 6	FRAMING ANCHORAGE OPTIONS
6 of 6	FRAMING AND PANEL COMPONENTS

## PRODUCT RATING:

- DEAD LOAD: DL= 3 PSF
- ASTM E330:  
DESIGNED RATING: Pd= ±65 PSF  
SAFETY FACTORS: SF=3 POSITIVE / SF=2 NEGATIVE  
TESTED LOAD: Pt= +195, -130 PSF
- ASTM E283: ±6.24 PSF - 0.04 cfm/ft<sup>2</sup>
- ASTM E331: +15 PSF
- ASTM E1996 & ASTM E1886:  
MISSILE IMPACT: LEVEL D - 9 LB 2X4 LUMBER AT 50 f/s  
CYCLIC PRESSURE: ±65 PSF
- LIMITATIONS:
  - 1- NOT FOR USE IN HIGH VELOCITY HURRICANE ZONES (HVHZ), BROWARD & MIAMI-DADE COUNTIES)
  - 2- NOT APPLICABLE FOR WIND ZONE 4 (V<sub>ult</sub>> 170 MPH)
  - 3- MAXIMUM PANEL AREA MUST NOT EXCEED 40 SQF (60'X96')

ENGINEER SEAL  
PEDRO DE FIGUEIREDO  
PT 52609

ENGINEERING  
ENCCO INC. - CAROLINA  
5595 ORANGE DRIVE 201  
DAVE - FLORIDA - 33314  
ENCCO@AOL.COM

PRODUCT: GUARDIAN 275  
TRANSLUCENT HURRICANE SYSTEMS  
SKYLIGHT / SLOPED GLAZED

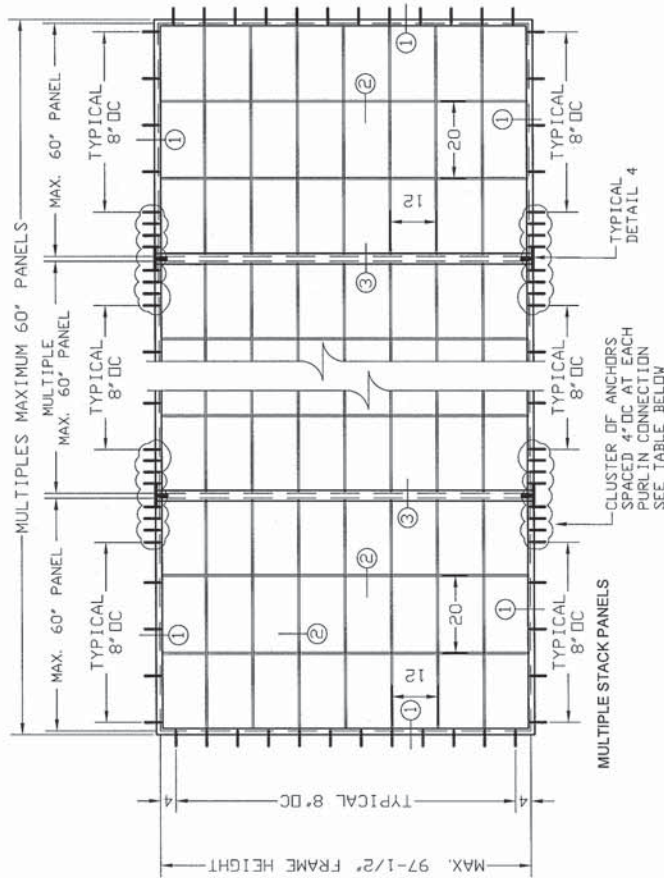
MANUFACTURER: 7120 STWARDT AVENUE  
WAUSAU, WI 54401  
TEL: (715) 842-4616  
FAX: (715) 843-5139



PK  
DRAWING # 15-088  
DATE: 03/26/15  
SCALE: NA  
SHEET 1 OF 6

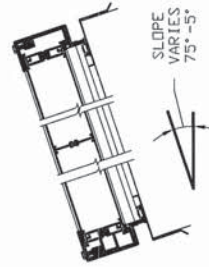


TYPICAL CONFIGURATIONS

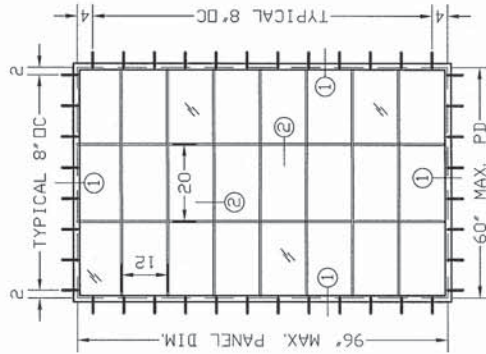


ANCHOR TYPE	A	B	C	D
PANEL WIDTH (IN)	60	60	60	60
PANEL HEIGHT (IN)	96	96	96	96
MINIMUM # OF ANCHORS	10	10	10	10
CLUSTER ANCHORS	10	10	10	10

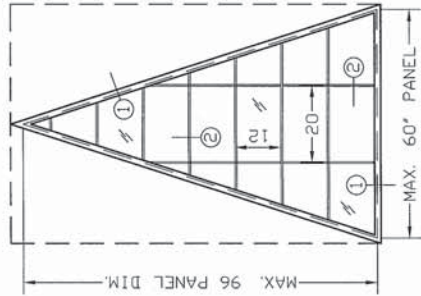
EXAMPLE:  
MODULE 60X96 PANEL  
ANCHOR TYPE B IT WILL  
REQUIRE 10 ANCHORS  
IN CLUSTER OF 4" DC  
AT 65 PSF RATING



THIS PRODUCT CAN BE USED AS A UNIT SKYLIGHT OR  
DESIGNED TO FORM ESSENTIALLY THE ENTIRE ROOF



SINGLE PANEL



SINGLE SHAPED PANEL  
ACCEPTABLE FOR ANY SHAPE THAT  
FITS THE MAXIMUM 60X96 MODULE

ANCHORAGE NOTES:

- 1- PERIMETER FRAMING WITH TYPE A, B, C OR D ANCHORAGE OPTIONS.
- 2- SEE ELEVATIONS FOR ANCHORAGE LAY-OUT AND SPACING.

ANCHOR OPTIONS:

- A- 1/4" SS ITW TAPCON 1-1/4" DIRECTLY INTO 3000 PSI CONCRETE
- B- 1/4" SS ITW TAPCON 1-1/4" DIRECTLY INTO MASONRY
- C- 1/4" SS ITW TAPCON OR 1/4" SS SMS 1 1/2" DIRECTLY INTO MIN 2X PT WOOD CURB (G<sub>F</sub>=0.46)
- D- 1/4" SS SMS DIRECTLY INTO MIN. 1/8" METAL STRUCTURE (6063-T5 ALUM. OR ASTM A36 STEEL)



ENGINEERING  
ENCO INC. - CALIF.  
5595 ORANGE DRIVE 201  
DAVE - FLORIDA - 33314  
ENCO@AOL.COM

PRODUCT: GUARDIAN 275  
TRANSLUCENT HURRICANE SYSTEMS  
SKYLIGHT / SLOPED GLAZED

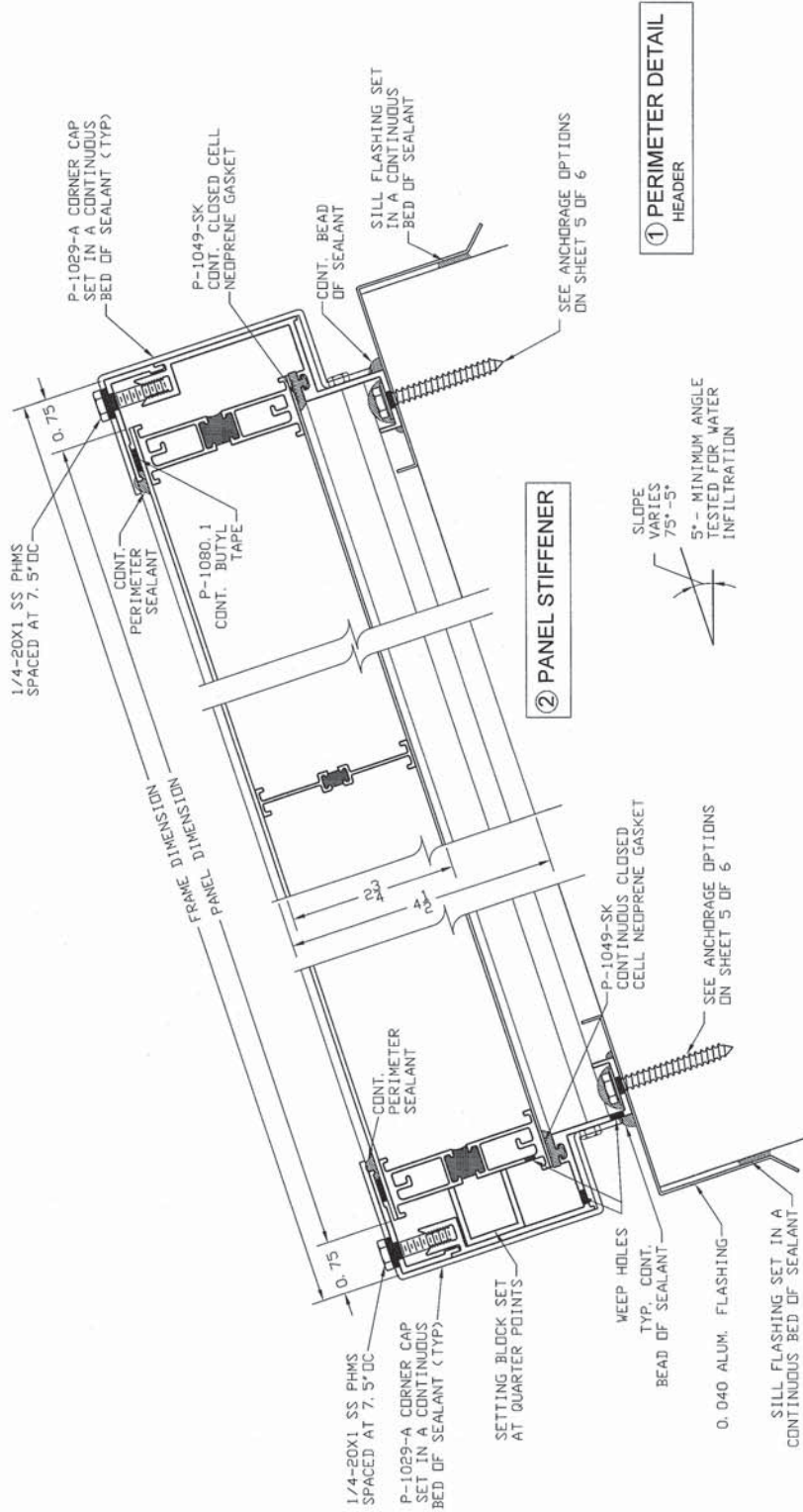
MANUFACTURER: MAJOR INDUSTRIES  
7120 STEWART AVENUE  
WAUSAU, WI 54401  
TEL: (715) 642-4616  
FAX: (715) 643-5139



PK

DRAFTING # MOKE INC.  
SCALE: N/A  
DATE: 03/26/15  
DRAWING # 15-008  
SHEET 2 OF 6

DETAILS



① PERIMETER DETAIL  
HEADER

② PANEL STIFFENER

① PERIMETER DETAIL  
SILL



APR 06 2015

ENGINEER SEAL  
PEDRO DE FIGUEIREDO  
PE 52609

ENGINEERING  
ENCO INC. - CA 811  
5595 FLORIANE DRIVE 201  
DAVE - FLORIDA - 33314  
ENCO@AOL.COM

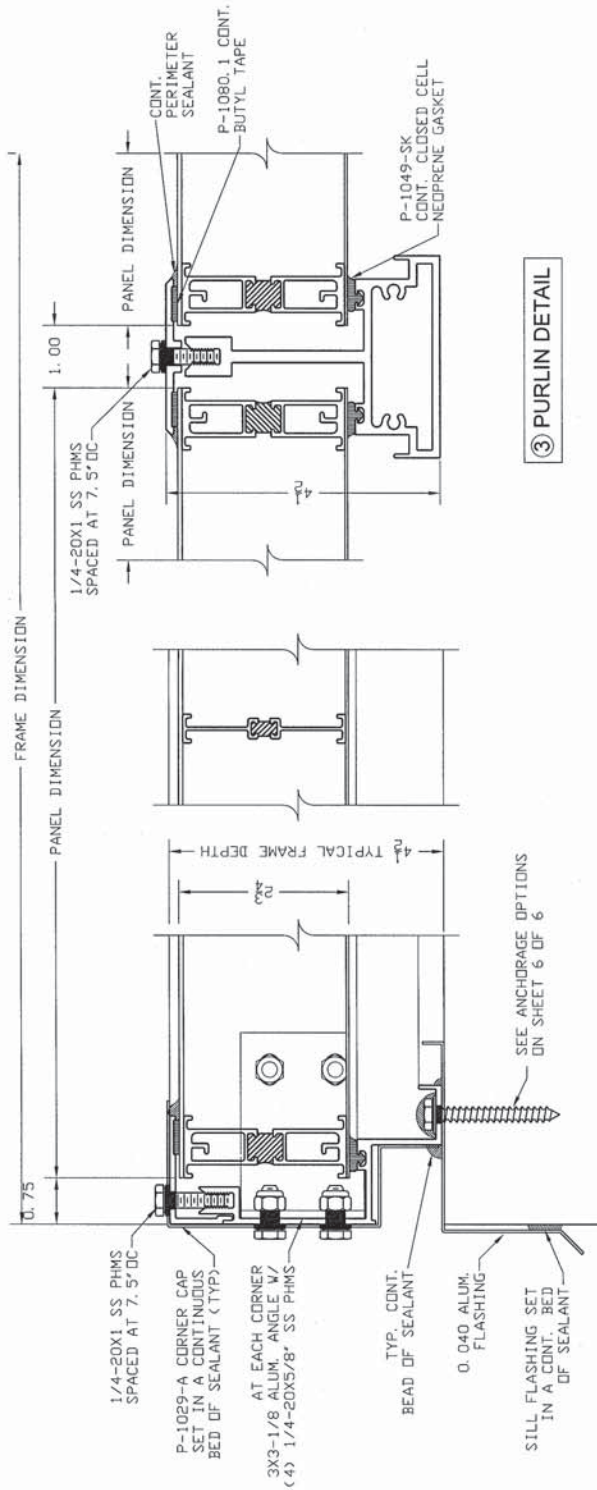
PRODUCT:  
GUARDIAN 275  
TRANSLUCENT HURRICANE SYSTEMS  
SKYLIGHT / SLOPED GLAZED

MANUFACTURER:  
7120 STEWARD AVENUE  
WAUSAU, WI 54401  
TEL: (715) 842-4616  
FAX: (715) 843-5139



SCALE:	PK
DATE:	03/26/15
DRAWING #	15-008
SHEET	3 OF 6

DETAILS



PEDRO M. DE FIGUEIREDO  
 LICENSE  
 No. 52609  
 STATE OF FLORIDA  
 PROFESSIONAL ENGINEER

APR 06 2015

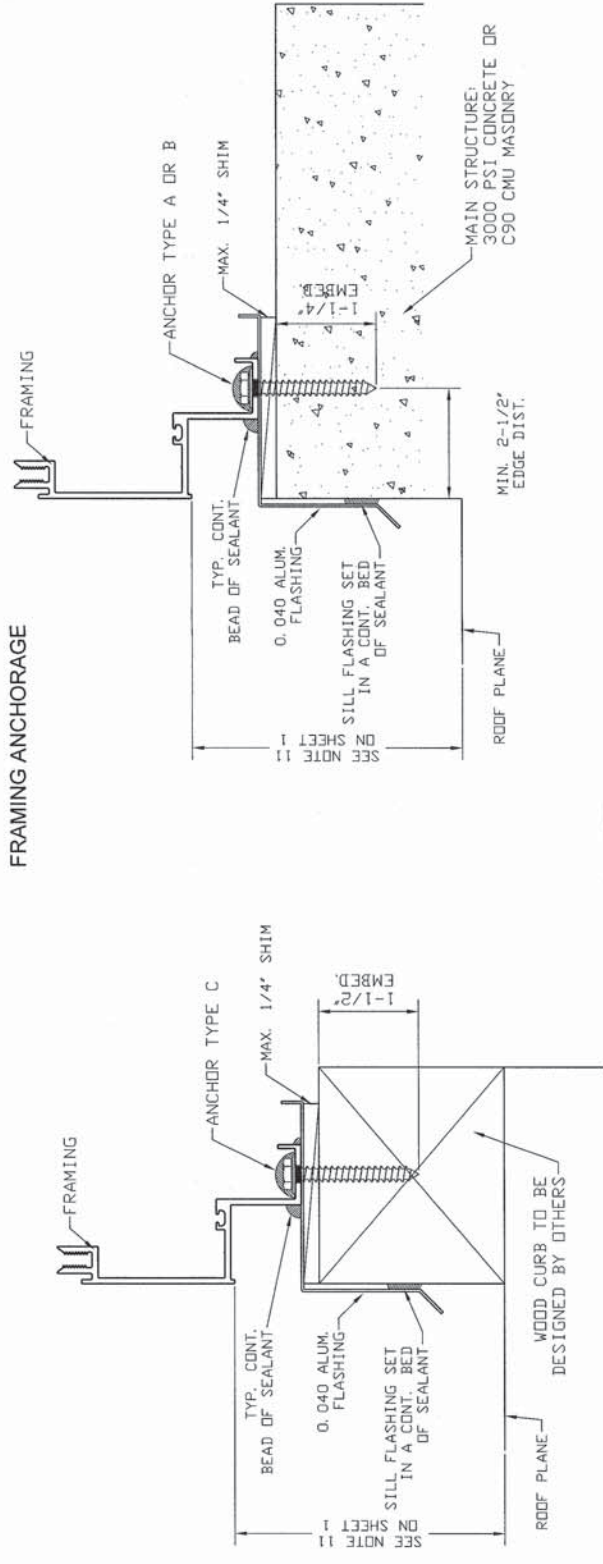
ENGINEERING  
 ENCCO INC. - CA 916  
 5595 ORANGE DRVE 201  
 DAVIS - FLORIDA - 33314  
 ENCCO@AOL.COM

PRODUCT:  
 TRANSLUCENT HURRICANE SYSTEMS  
 SKYLIGHT / SLOPED GLAZED

MANUFACTURER:  
 7120 STEWARD AVENUE  
 WAUSAU, WI 54401  
 TEL: (715) 842-4616  
 FAX: (715) 843-5139

PK  
 DRAFTING & MORE INC.  
 SCALE: N/A  
 DATE: 03/26/15  
 DRAWING #: 15-088  
 SHEET: 4 OF 6

FRAMING ANCHORAGE

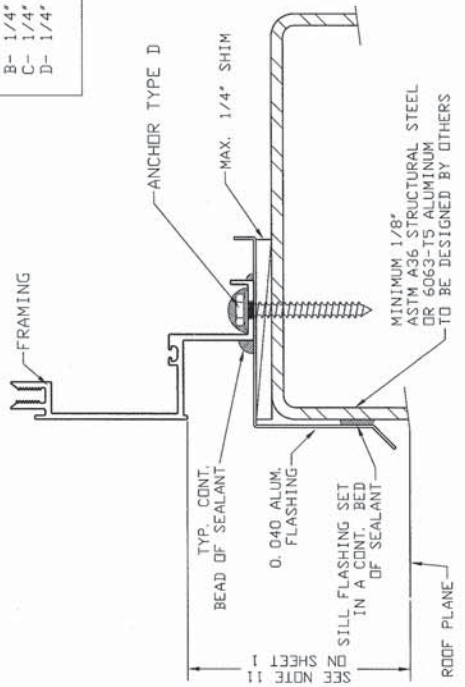


ANCHORAGE NOTES:

- 1- PERIMETER FRAMING WITH TYPE A, B, C OR D ANCHORAGE OPTIONS.
- 2- SEE ELEVATIONS FOR ANCHORAGE LAY-OUT AND SPACING.

ANCHOR OPTIONS:

- A- 1/4" SS ITW TAPCON 1-1/4" DIRECTLY INTO 3000 PSI CONCRETE
- B- 1/4" SS ITW TAPCON 1-1/4" DIRECTLY INTO MASONRY
- C- 1/4" SS ITW TAPCON OR 1/4" SS SMS 1 1/2" DIRECTLY INTO MIN. 2X PT WOOD CURB (G7-046)
- D- 1/4" SS SMS DIRECTLY INTO MIN. 1/8" METAL STRUCTURE (6063-T5 ALUM. OR ASTM A36 STEEL)



**PEDRO M. DE FIGUEROA**  
 No. 152609  
 STATE OF FLORIDA  
 PROFESSIONAL ENGINEER  
 APR 06 2015

ENCO INC. - CA 816  
 5595 ORANGE DRIVE 201  
 DAVIS - FLORIDA - 33314  
 ENCO@AOL.COM  
 FT 52609

PRODUCT: GUARDIAN 275  
 TRANSLUCENT HURRICANE SYSTEMS  
 SKYLIGHT / SLOPED GLAZED

MANUFACTURER: MAJOR INDUSTRIES  
 7120 STEVART AVENUE  
 WAUSAU, WI 54401  
 TEL: (715) 842-4616  
 FAX: (715) 843-5139



PK	SCALE: NA	DATE: 03/26/15	SHEET: 5 OF 6
	DRAFTING # NA	DRAWING # 15-0288	



ENGINEERING  
 ENGGO INC. - CA 91616  
 5595 ORANGE DRIVE 201  
 DAVIS - FLORIDA - 33314  
 ENGGO@AOL.COM  
 PEDRO DE FIGUEIREDO  
 ENGINEER SEAL  
 FT 52609

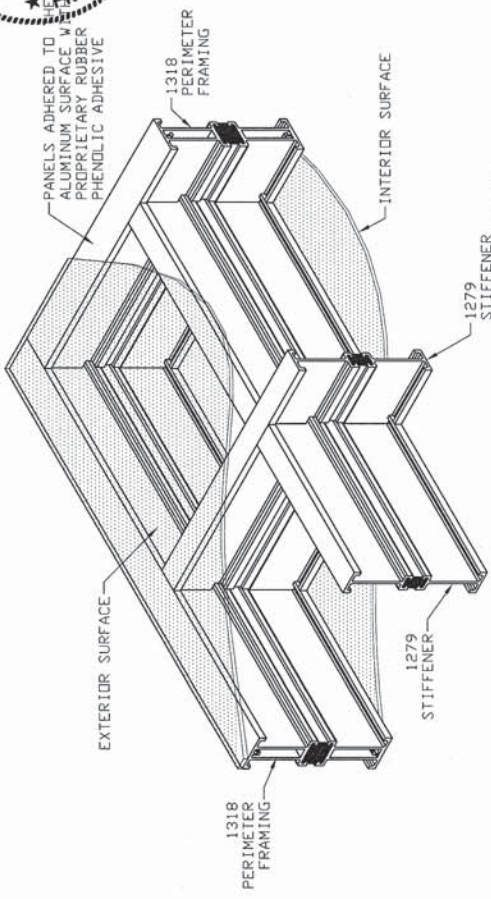
PRODUCT: GUARDIAN 275  
 TRANSLUCENT HURRICANE SYSTEMS  
 SKYLIGHT / SLOPED GLAZED

MANUFACTURER: 7120 STEWARD AVENUE  
 WAUSAU, WI 54401  
 TEL: (715) 842-4616  
 FAX: (715) 843-5139



PK  
 DRAWING # 03/26/15  
 DATE: 03/26/15  
 SCALE: NA  
 SHEET 6 OF 6

PANEL COMPONENTS

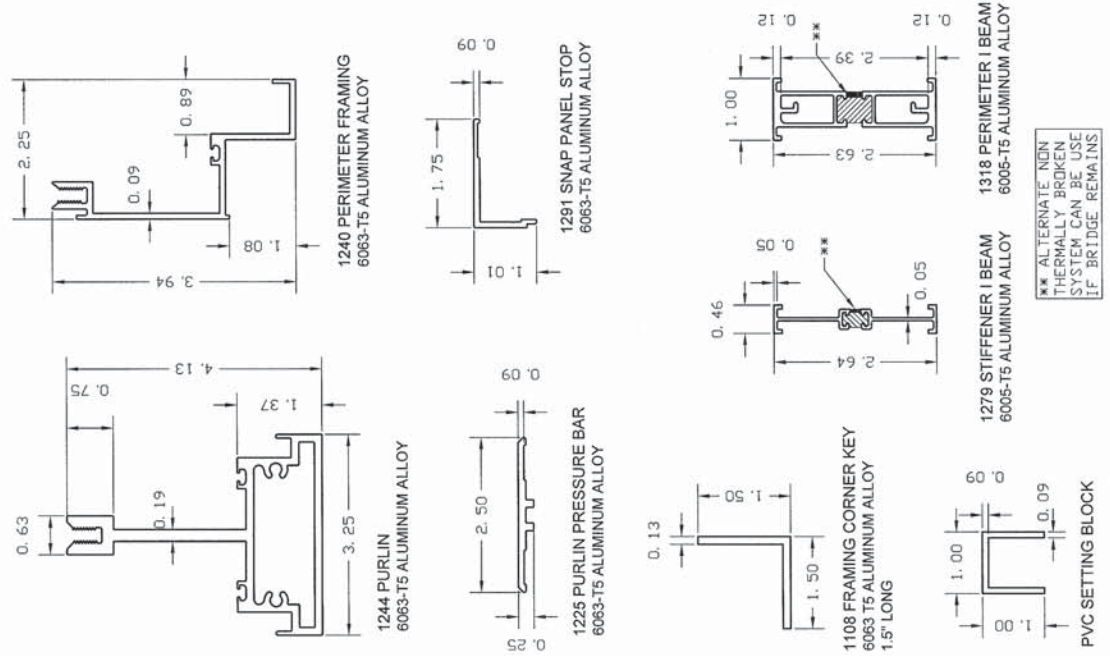


BASIC MODULAR PANEL ASSEMBLY

PANEL CONFIGURATION:  
 EXTERIOR SURFACE: 0.070" FIBERGLASS PANEL  
 INTERIOR SURFACE: 0.045" FIBERGLASS PANEL  
 NOMINAL GRID SIZE: 12" X 20"  
 MAXIMUM 1279 SPAN: 60"

INTERIOR SURFACE PANEL	
0.045 FRCM STANDARD FIRE RATED TRANSLUCENT FIBERGLASS SHEET	
ASTM E84:	FLAME SPREAD INDEX - 20 SMOKE DEVELOPED INDEX - 150 (≤450 FBC 2606.4)
ASTM D1929:	SELF IGNITION - 912 °F (≥650 FBC 2606.4)
ASTM D635:	FLASH IGNITION - 872 °F CLASS CC1
EXTERIOR SURFACE	
0.070 STC/M ULTIMATE SERIES HIGH IMPACT TRANSLUCENT FIBERGLASS SHEET	
ASTM E84:	FLAME SPREAD INDEX - 170 SMOKE DEVELOPED INDEX - 350 (≤450 FBC 2606.4)
ASTM D1929:	SELF IGNITION - 860 °F (≥650 FBC 2606.4)
ASTM D635:	FLASH IGNITION - 752 °F BURNING RATE - 24.8 mm/min. (CLASS CC2)

FRAMING COMPONENTS



\*\* ALTERNATE NON THERMALLY BROKEN SYSTEM CAN BE USE IF BRIDGE REMAINS