

# SPECIFICATIONS 086200

## FM Approved Unit Skylights

### PART I - GENERAL

#### 1.02 Section Includes:

##### Summary:

- A. The work of this Section includes FM approved unit skylights of the following types:
  - 1. Curb-mounted domed commercial unit skylights
  - 2. Self-flashing domed commercial unit skylights.
- B. Related Sections: Other Specification Sections that directly relate to the work of this Section include, but are not limited to the following:
  - 1. Section 07510 - Built-Up Bituminous Roofing.
  - 2. Section 07525 - Modified Sheet Roofing.
  - 3. Section 07530 - Single Ply Membrane Roofing.
  - 4. Section 07600 - Flashing and Sheet Metal.
  - 5. Section 07610 - Sheet Metal Roofing.

#### 1.03 References

- A. Aluminum Association (AA): Specifications for Aluminum Structures.
- B. American Architectural Manufacturers Association (AAMA): 603.8 Voluntary Performance Requirements and Test Procedures for Pigmented Organic Coatings on Extruded Aluminum. 605.2 Voluntary Specification for High Performance Organic Coatings on Architectural Extrusions and Panels. 1605.1 Voluntary Standard Uniform Load Test Procedure for Plastic Glazed Skylights by Uniform Static Air Pressure Difference. AAMA/NWDA 101/I.S.2./NASF, Standard/Specifications for Windows, Doors and Unit Skylights.
- C. American Society for Testing and Materials, ASTM: D4802 Specification for Poly (Methyl Methacrylate) Acrylic Plastic Sheet. E331 Test Method for Water Penetration of Exterior Windows, Curtain Walls and Doors by Uniform Static Air Pressure Difference.
- D. International Code Council (ICC). ICC-ES AC16 Acceptance Criteria for Plastic Glazing, ICC-ES AC17, Acceptance Criteria for Glass Glazing, ICC-ES AC79 Acceptance Criteria for Plastic Frames
- E. International Code Council (ICC). International Building Code (IBC), International Residential Code (IRC)
- E. National Roofing Contractors Association 9NRCA). Roofing and Waterproofing Manual
- F. North American Fenestration Standards (NAFS). NAFS 1600/I.S.7-2000, Voluntary Specifications for Skylights.
- G. Underwriters Laboratories (UL) UL 972 Burglar Resistant Glazing.
- H. FM Global Standard 4431 – Dated September 2006

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### 1.04 Performance Requirements

- A. Plastic unit skylights shall conform to recommendations of the AA Specifications for Aluminum Structures and AAMA Publications as applicable to products specified: AAMA 603.8, 605.2, 606.1, 607.1 and 1605.1, and local building codes.
- B. Plastic unit skylights shall be FM Approved in accordance with FM Standard 4431, and each unit shall bear an FM Label.

### 1.05 Submittals

- A. Product Data: Submit manufacturer's product data, and recommendations for installation of the unit skylights and acceptable methods for the cleaning of the applicable glazing material.
- B. Shop Drawings: Shop drawings shall be submitted for approval prior to fabrication. Include details for framing members, glazing materials, sealant, fasteners, anchors, and thickness' and types of formed flashing and closures.
- C. Samples: Submit a verification sample of plastic glazing material in specified color. For aluminum, if other than mill finish required, submit a verification sample for of finish and color specified.

### 1.06 Quality Assurance

- A. Manufacturer: Unit skylights shall be manufactured by the specified manufacturer designated in Section 2.01 who shall be experienced in the fabrication and installation of the type of unit skylights detailed in this project. Manufacturers proposed for use, which are not named in this Section, shall submit evidence of ability to meet performance and fabrication requirements specified not less than 10 days prior to bid date.
- A. Installer: Plastic unit skylights shall be installed by workmen experienced in the installation of similar units skylights

### 1.07 Delivery, Storage and Handling

- A. Deliver materials and products in labeled packages. Store and handle in strict compliance with manufacturer's instructions and recommendations. Protect from damage from sunlight, weather, excessive temperatures and construction operations.

### 1.08 Project Conditions

- A. Field Measurements: When applicable, take accurate field measurements before fabrication.

### 1.09 Warranty

- A. Skylight Warranty: Provide written warranty by manufacturer, agreeing to repair or replace work which exhibits defects in materials or workmanship and guarantee a weather tight and leak free performance. "Defects" is defined as uncontrolled leakage of water and abnormal aging, yellowing or breakage.

1. Warranty Period: 10 years from date of skylight completion.

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### PART II - PRODUCTS

#### 2.01 Acceptable Manufacturer

- A. Provide FM Approved unit skylights by Skyco Skylights, 2995 Airway Ave, Suite B, Costa Mesa CA 92626, Phone: (949) 629-4090, www.skycoskylights.com
- B. Or Approved Equal
- C. Alternate manufacturers must pre-qualify to bid not less than 10 days prior to bid date and provide a letter confirming that the model submitted is FM Approved and meets all specified performance requirements.

#### 2.02 Materials and Fabrication

- A. Curb Mounted (Model: A-FS-CM) or Self Flashing Skylights (Model A-FS-SF): Factory assembled units consisting of a polycarbonate dome, 0.065" extruded aluminum frame and 0.065" extruded aluminum dome retaining cap. Skylight frame shall have an integral condensate gutter with weep holes. (Self-flashing skylights will have a \_" high (Please specify height) Self-flashing frame with .065 wall thickness, and a 3" roof flange for anchorage.)
  - 1. Type: (Model A-FS-CM or A-FS-SF single dome and double dome). FM Approval Report No. 3057950.  
Outer Dome shape to be: Skywave Arc dome high-performance diffuser featuring 30% more light-collecting surface area over a smooth dome.
  - 2. Glazing: Skypro high-impact resistant polycarbonate with a minimum haze factor of 90% or higher.
  - 3. Outer Dome Color: White Skypro high-impact resistant polycarbonate
  - 4. Inner Dome Color: (If applicable) Clear Colorless Acrylic
  - 5. Glazing Solar Heat Gain Coefficient (SHGC) to be .55 or less.
  - 6. Visible Light Transmittance (VLT) to be a minimum of 70%
  - 7. FM Approved Unit Skylights shall have a 195 PSF wind rating, a Class A Fire Rating, and a Class IV Hail Rating
  - 8. Skylights shall meet an 800 lb Impact Load (provide 3<sup>rd</sup> party test report)
  - 9. Water drainage Control: (Unit shall have sufficient drainage slots to carry all moisture to the outside).
  - 10. Size: (Insert inside curb dimensions here if not indicated on drawings).
  - 11. Curb: Curb Mounted (CM) or Self-Flashing (SF) (Insert \_\_ height if not indicated on drawings) non-insulated curb, Insulated curb (IC), insulated curb with wood nailer (ICN), or double wall insulated curb (IC2)
  - 12. Finish: Standard mill finish

#### 2.03 FABRICATION

- A. Fabricate free of visual distortions and defects. Weld corners and joints
- B. All fasteners and hardware shall be corrosion resistant.
- C. Provide for removal of condensation.
- D. Provide a weather tight assembly.

#### 2.04 DELIVERY, STORAGE AND HANDLING

- A. Handle, deliver and store in manufacturer's original packaging, follow the manufacturer's recommendations. Store in a manner as to prevent damage.
- B. Exercise caution when hoisting units to the roof so as not to scratch, bend or damage.

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### **PART III - EXECUTION**

#### 3.01 Execution

- A. Obtain field dimensions and examine conditions of substrates, supports, and other conditions under which this work is to be performed and notify Contractor, in writing, of circumstances detrimental to the proper completion of the work. Do not proceed with work until unsatisfactory conditions are corrected.

#### 3.02 Installation

- A. Strictly comply with manufacturer's instructions and recommendations. Match profiles, sizes and spacing indicated on approved shop drawings.
- B. Coordinate installation with adjacent work such as roofing, sheet metal and other work to ensure creations of a complete weatherproof assembly. Anchor work securely to supporting structure, but allow for differential and thermal movement.
- C. Isolate between aluminum and dissimilar metals with a protective coating or plastic strip to prevent electrolytic corrosion.

#### 3.03 Adjusting, Cleaning and Protection

- A. After installation, remove shipping labels and part number markings from components. Do not remove "risk of fall" label from units.
- B. Do not store skylights with the protective covering on the domes in the sun. The plastic covering should be removed as soon as possible. Failure to do so will void the warranty.
- C. Clean all exposed surfaces including metal and glazing using non-abrasive materials and methods recommended by manufacturer of material or product being cleaned. Remove and replace work that cannot be successfully cleaned.
- D. Re-clean as necessary to prevent damage. Protect completed work from damage and deterioration and inspect immediately before final acceptance of a project.

**END OF SECTION**