SECTION 08 90 00

LOUVERS, GRILLES AND VENTS

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\*\* NOTE TO SPECIFIER \*\* Airolite Co. (The); louvers, grilles, screens, vents.  
This section is based on the products of Airolite Co. (The), which is located at:P.O. Box 410Schofield, WI 54476Tel: 715-841-8757Fax: 715-841-8773Email: [request info (info@airolite.com)](https://arcat.com/rfi?action=email&company=Airolite%252BCo.%252B(The)&message=RE%253A%2520Spec%2520Question%2520(10210air)%253A%2520&coid=30230&spec=10210air&rep=&fax=715-841-8773)  
Web: <https://www.airolite.com>   
 [ [Click Here](https://arcat.com/company/airolite-co-the-30230) ] for additional information.  
While the Airolite name has been synonymous with high quality architectural louvers since1919, today architects, builders and building owners also associate Airolite with custom grilles, sunscreens and sun controls. In fact, many of the nation's most prominent commercial buildings coast-to-coast feature Airolite's all-welded louvers and other innovative architectural products.

1. GENERAL
   1. SECTION INCLUDES

\*\* NOTE TO SPECIFIER \*\* Delete items below not required for project.

* + 1. Fixed-Blade Extruded-Aluminum Louvers:
       1. Horizontal louver.
       2. Horizontal drainable-blade louver.
       3. Horizontal sightproof inverted-v blade louver.
       4. Vertical sightproof fixed-blade louver.
       5. Storm Class horizontal blade louver.
       6. Storm Class vertical blade louver.
       7. Narrow louver.
    2. Extruded-Aluminum Louvers:
       1. Horizontal adjustable louver.
       2. Horizontal combination louver.
       3. Horizontal adjustable combination louver.
    3. Stationary Hurricane Louvers, Miami-Dade County Approved.
    4. Stationary Hurricane Louvers, Florida State Building Code Approved.
    5. Equipment Screens.
    6. Blank-Off Panels for Louvers.
  1. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Section 05 50 00 - Metal Fabrications.
    2. Section 07 91 23 - Backer Rods.
    3. Section 09 91 23 - Interior Painting.

\*\* NOTE TO SPECIFIER \*\* Delete references from the list below that are not actually required by the text of the edited section.

* 1. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Models noted carry the AMCA seal and comply with the AMCA Listing Label Program. Delete if not required.

* + 1. Air Movement and Control Association International (AMCA):
       1. AMCA 500-L - Laboratory Methods of Testing Louvers for Rating.
       2. AMCA 501 - Application Manual for Air Louvers.
       3. AMCA 511 - Certified Ratings Program - Product Rating Manual for Air Control Devices.

\*\* NOTE TO SPECIFIER \*\* AMCA Certification - Water, Air: Models K609, K6096, K609HP, K6096HP, K638HP, K6744, K6746, K6774, K6776, K6844, K6846, K6856, K601, K601D, K605, T5832, T645, T6784, T6786, T6796, K6772, T6482, K8204, K8206, K8206A, K8206AMD, K8504, K8506. Delete if not required.   
\*\* NOTE TO SPECIFIER \*\* AMCA Certification - Water, Air: Hurricane Models K6744X, K6746X, K6746MD, K605MD. Delete if not required.

* + - 1. AMCA 512 - AMCA Listing Label Program. Water and Air Certification.

\*\* NOTE TO SPECIFIER \*\* AMCA Certification - Water, Air, Wind-Driven Rain: Models SCC550, SCC, SCH201, SCH401, SCH501, SCH601, SCH701, SCV302, SCV501, SCH7, SCV6. Delete if not required.   
\*\* NOTE TO SPECIFIER \*\* AMCA Certification - Water, Air: Wind Hurricane Models SCH501X, SCH602X, SCH601MD with VCD-40, SCV660MD.. Delete if not required.

* + - 1. AMCA 512 - AMCA Listing Label Program. Water, Air, Wind-Driven Rain Certification.

\*\* NOTE TO SPECIFIER \*\* AMCA Certification - Air: Models T6636. Delete if not required.

* + - 1. AMCA 512 - AMCA Listing Label Program. Air Certification.

\*\* NOTE TO SPECIFIER \*\* AMCA Certification - Hurricane louver. Delete if not required.

* + - 1. AMCA 540 - Test Method for Louvers Impacted by Windborne Debris.
         1. K6744X - AMCA 540 Basic Lev D.
         2. K6746X - AMCA 540 Basic Lev D or Enhanced Level E.
         3. K6746MD - AMCA 540 Basic Lev D or Enhanced Level E.
         4. SCH501X - AMCA 540 Enhanced Level E.
         5. K605MD - AMCA 540 Enhanced Level E.
         6. SCH601MD (w VCD-40) - AMCA 540 Enhanced Level E.
         7. SCV660MD - AMCA 540 Enhanced Level E.
         8. SCH601MD - AMCA 540 Enhanced Level E.

\*\* NOTE TO SPECIFIER \*\* AMCA Certification - Hurricane louver. Delete if not required.

* + - 1. AMCA 550 - Test Method for High Velocity Wind Driven Rain Resistant Louvers.
         1. SCV501MD - AMCA 550.
         2. SCC550 - AMCA 550.
         3. SCC550MD - AMCA 550.
         4. SCV302 - AMCA 550.
         5. SCV302MD - AMCA 550.
         6. SCH601MD (w VCD-40) - AMCA 550.
         7. SCV660MD - AMCA 550.
    1. ASTM International (ASTM):
       1. ASTM A 653 - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
       2. ASTM A 666 - Standard Specification for Annealed or Cold Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.
       3. ASTM A 788 - Standard Specification for Steel Forgings, General Requirements.
       4. ASTM B 26 - Standard Specification for Aluminum Alloy Sand Castings.
       5. ASTM B 209 - Standard Specification for Aluminum and Aluminum Alloy Sheet and Plate.
       6. ASTM B 221 - Standard Specification for Aluminum and Aluminum Alloy Rolled or Cold Finished Bar, Rod, and Wire.
       7. ASTM C 578 - Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation.
       8. ASTM C 612 - Standard Specification for Mineral Fiber Block and Board Thermal Insulation.
       9. ASTM D822 - Standard Practice for Filtered Open-Flame Carbon-Arc Exposures of Paint and Related Coatings.
       10. ASTM D 1187 - Standard Specification for Asphalt Base Emulsions for Use as Protective Coatings for Metal.
       11. ASTM D4214 - Standard Test Methods for Evaluating the Degree of Chalking of Exterior Paint Films.
       12. ASTM D2244 - Standard Test Method for Calculation of Color Differences From Instrumentally Measured Color Coordinates.
       13. ASTM E 90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
       14. ASTM E330 - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference.
       15. ASTM E 413 - Classification for Rating Sound Insulation.
    2. American Architectural Manufacturer's Association (AAMA).
       1. AAMA 611 - Voluntary Specification for Anodized Architectural Aluminum.
       2. AAMA 2603 - Voluntary Specification. Performance Requirements and Test Procedures For. Pigmented Organic Coatings on Aluminum Extrusions.
       3. AAMA 2604 - High Performance Organic Coatings on Architectural Extrusions and Panels.
       4. AAMA 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum.
    3. National Association of Architectural Metal Manufacturers (NAAMM): Metal Finishes Manual for Architectural and Metal Products.
    4. Sheet Metal and Air Conditioning Contractors' National Association (SMACNA): Architectural Sheet Metal Manual.

\*\* NOTE TO SPECIFIER \*\* Only applies to louvers T645, T6636, T6784, T6786, T6796, K8204, K8204E, K8206, K8206A, K8206AMD, K8206E, K8504, K8506. Confirm if specifying hurricane louvers. Delete if not required.

* + 1. National Electrical Manufacturers Association (NEMA).
    2. Underwriters Laboratories, Inc. (UL).
  1. DEFINITIONS
     1. Louver Terminology: Definitions of terms for metal louvers contained in AMCA 501 apply to this Section, unless otherwise defined in this Section or in referenced standards.

\*\* NOTE TO SPECIFIER \*\* Delete if air-performance requirements are not retained.

* + 1. Standard Free Area: Free area of a louver 48 inches (1220 mm) wide by 48 inches (1220 mm) high, identical to that provided.

\*\* NOTE TO SPECIFIER \*\* Delete if air-performance requirements are not retained. Below is standard free area multiplied by free-area intake velocity at point of beginning water penetration.

* + 1. Maximum Standard Airflow: Airflow at point of beginning water penetration through a louver 48 inches (1220 mm) wide by 48 inches (1220 mm) high, identical to that provided.

\*\* NOTE TO SPECIFIER \*\* Delete below if drainable-blade louvers are not required.

* + 1. Drainable-Blade Louver: Louver designed to collect and drain water to exterior at sill by means of gutters in front edges of blades and channels in jambs and mullions.
    2. Minimum Weather Louver Effectiveness: Weather louver effectiveness rating shall be based on tests conducted in accordance with:
       1. AMCA Standard 500-L.
  1. SUBMITTALS
     1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
     2. Product Data: Manufacturer's data sheets for each product and assembly specified.
        1. Preparation instructions and recommendations.
        2. Storage and handling requirements and recommendations.
        3. Cleaning methods.

\*\* NOTE TO SPECIFIER \*\* Typical for hurricane louvers only. Delete if not required.

* + 1. Engineering Review: Submit theoretical calculations prepared by a professional engineer specializing in the application of welding technology demonstrating that each fillet weld joining blade and frame members will withstand a minimum of 526 pounds of force in shear.
    2. Shop Drawings: For units and accessories. Include plans; elevations; sections; and details showing profiles, angles, and spacing of elements. Show unit dimensions related to wall openings and adjacent construction; free area for each size indicated for louvers; profiles of frames at jambs, heads, and sills; and anchorage details and locations.
       1. Verify openings by field measurements before fabrication and indicate measurements on Shop Drawings.

\*\* NOTE TO SPECIFIER \*\* Retain below if any products are indicated to withstand specific design loadings. See AIA Document A201, 3.12.11 for Contractor's responsibility for calculations if subparagraph below is retained with "Professional Engineer Qualifications" Paragraph in "Quality Assurance" Article. Delete or modify below if Architect assumes or is required by law to assume design responsibility.

* + - 1. For installed products indicated to comply with design loadings, include structural analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

\*\* NOTE TO SPECIFIER \*\* Only applies to louvers T645, T6636, T6784, T6786, T6796, K8204, K8204E, K8206, K8206A, K8206AMD, K8206E, K8504, K8506. Confirm if specifying hurricane louvers. Delete if not required.

* + - 1. Wiring Diagrams: Detail power, signal, and control systems for motorized adjustable louvers and differentiate between manufacturer-installed and field-installed wiring.

\*\* NOTE TO SPECIFIER \*\* Paragraph below applies only to louvers, delete if only specifying grilles.

* + 1. Product Certificates:
       1. Air Performance: Certificates signed by Air Movement and Control Association International Inc (AMCA) certifying that the manufacturer's stock units are tested in accordance with AMCA Standard 500 and are licensed to bear the AMCA Certified Ratings Seal in accordance with AMCA Standard 511.
       2. Water Penetration: Certificates signed by Air Movement and Control Association International Inc (AMCA) certifying that the manufacturer's stock units are tested in accordance with AMCA Standard 500 and are licensed to bear the AMCA Certified Ratings Seal in accordance with AMCA Standard 511.
       3. Weather Louver Effectiveness: Certificates signed by Air Movement and Control Association International Inc (AMCA) certifying that the manufacturer's stock units are tested in accordance with AMCA Standard 500-L99, Section 8.3.2 - Wind Driven Rain Water Penetration Test, and are licensed to bear the AMCA Certified Ratings Seal in accordance with AMCA Standard 511.

\*\* NOTE TO SPECIFIER \*\* AMCA Certification - Water, Air: Models K609, K6096, K609HP, K6096HP, K638HP, K6744, K6746, K6774, K6776, K6844, K6846, K6856, K601, K601D, K605, T5832, T645, T6784, T6786, T6796, K6772, T6482, K8204, K8206, K8206A, K8206AMD, K8504, K8506. Delete if not required.

* + - 1. Provide AMCA Certification - Water, Air for louvers as scheduled.

\*\* NOTE TO SPECIFIER \*\* AMCA Certification - Water, Air, Wind-Driven Rain: Models SCC550, SCC901, SCH201, SCH401, SCH501, SCH601, SCH701, SCV30, SCV501, SCH7, SCV6

* + - 1. Provide AMCA Certification - Water, Air, Wind-Driven Rain for louvers as scheduled.

\*\* NOTE TO SPECIFIER \*\* AMCA Certification - Air: Models T6636.

* + - 1. Provide AMCA Certification - Air for louvers as scheduled.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. Qualification Data: For firms and persons specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.

\*\* NOTE TO SPECIFIER \*\* Delete selection samples if colors have already been selected.

* + 1. Selection Samples: Two complete color charts showing the full range of colors available for units with factory-applied color finishes.
    2. Samples for Verification: For each finish specified, two samples representing actual finishes specified; prepared on Samples of same thickness and material indicated for final Work. Where finishes involve normal color and texture variations, include Sample sets showing the full range of variations expected.
  1. QUALITY ASSURANCE
     1. Manufacturer Qualifications: Minimum 5 years manufacturing similar products. The manufacturer shall have implemented a program for the management of quality objectives, continual improvement, and monitoring of customer satisfaction to assure that customer needs and expectations are met.

\*\* NOTE TO SPECIFIER \*\* Insert installer qualifications. Delete if not required.

* + 1. Installer Qualifications: Minimum 2 years experience installing similar louvers.

\*\* NOTE TO SPECIFIER \*\* Retain paragraph below if services of a qualified engineer are required in "Submittals" Article.

* + 1. Professional Engineer Qualifications: A professional engineer legally qualified to practice in jurisdiction where Project is located and experienced in providing engineering services of kind indicated. Engineering services are defined as those performed for installations of products that are similar to those indicated for this Project in material, design, and extent.
    2. Source Limitations: Obtain products through one source from a single manufacturer where alike in one or more respects regarding type, design, or factory-applied color finish.

\*\* NOTE TO SPECIFIER \*\* Model mechanically fastened with welded construction available - SCH201, SCH401, SCH501, SCH601, SCH7, SCH701, SCV30, SCV501, SCV6, K609, K6096, K666, K609HP, K6096HP, K638HP, K6744, K6746, K6774, K6776, K6844, K6846, K6856, K601, K605, T5832, K601D, K605D, K6744X, K6746X, SCH501X, T6482, K6772. Delete provision if not required.  
\*\* NOTE TO SPECIFIER \*\* Model welded construction only - K605MD, K6746MD, SCH601MD.

* + 1. Welding Standards: As follows:
       1. Comply with AWS D1.2, "Structural Welding Code - Aluminum."
       2. Comply with AWS D1.3, "Structural Welding Code - Sheet Steel."

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. AMCA Standard 500-L: Air performance, water penetration and air leakage ratings shall be determined in accordance with Air Movement and Control Association International Inc (AMCA) Standard 500, "Laboratory Methods of Testing Louvers for Rating."

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. AMCA Standard 511: Air performance, water penetration and air leakage ratings shall be licensed in accordance with Air Movement and Control Association International Inc. (AMCA) Standard 511, "Certified Ratings Program for Air Control Devices," latest edition.

\*\* NOTE TO SPECIFIER \*\* Applicable only to Miami-Date and Florida approved models. Delete if not required.

* + 1. AMCA Standard 512: Ratings shall be determined in accordance with Air Movement and Control Association International Inc (AMCA) Standard 512, "AMCA Listing Label Program," latest edition.
    2. SMACNA Standard: Comply with SMACNA's "Architectural Sheet Metal Manual" recommendations for fabrication, construction details, and installation procedures.

\*\* NOTE TO SPECIFIER \*\* Only applies to louvers T645, T6636, T6784, T6786, T6796, K8204, K8204E, K8206, K8206A, K8206AMD, K8206E, K8504, K8506. Confirm if specifying hurricane louvers. Delete if not required.

* + 1. UL and NEMA Compliance: Provide motors and related components for motor-operated adjustable louvers that are listed and labeled by UL and comply with applicable NEMA standards.
  1. DELIVERY, STORAGE, AND HANDLING
     1. Deliver, store and handle materials and products in strict compliance with manufacturer's instructions and recommendations and industry standards.
     2. Store products indoors in manufacturer's or fabricator's original containers and packaging, with labels clearly identifying product name and manufacturer. Protect from damage.
     3. Handling: Protect materials and finishes during handling and installation to prevent damage.
  2. SEQUENCING AND SCHEDULING
     1. Field Measurements: Verify openings and adjacent construction by field measurements before fabrication and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
        1. Established Dimensions: Where field measurements cannot be made without delaying the Work, establish opening dimensions and proceed with fabricating products without field measurements. Coordinate construction to ensure that actual opening dimensions correspond to established dimensions.
        2. Coordinate Setting Drawings, diagrams, templates, instructions, and directions for installation of anchorages that are to be embedded in concrete or masonry construction. Coordinate delivery of such items to Project site.
  3. PROJECT CONDITIONS
     1. Maintain environmental conditions (temperature, humidity and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.
  4. WARRANTY
     1. Manufacturer's Warranty: Provide manufacturer's standard limited warranty for louver systems for a period of 1 year from date of installation, no more than 18 months after shipment from manufacturing plant. When notified in writing from the Owner of a manufacturing defect, manufacturer shall promptly correct deficiencies without cost to the Owner.

\*\* NOTE TO SPECIFIER \*\* Warranty is not available for locales within 100 miles of coastal waters. Warranty is not available for some exotic colors. Verify finish warranty with manufacturer. Warranty is available for aluminum substrates only. , 20 year may be available. Delete if not required.

* + 1. Manufacturer's Finish Warranty: Provide manufacturer's limited warranty for 70 percent fluoropolymer-based finish on aluminum substrates.

\*\* NOTE TO SPECIFIER \*\* Delete warranty period not required.

* + - 1. Warranty Period: 10 years.
      2. Warranty Period: 20 years.
      3. Finish coating shall not peel, blister, chip, crack or check.
      4. Chalking, fading or erosion of finish when measured by the following tests:
         1. Finish coating shall not chalk in excess of 8 numerical ratings when measured in accordance with ASTM D4214.
         2. Finish coating shall not change color or fade in excess of 5 NBS units as determined by ASTM D2244 and ASTM D822.
         3. Finish coating shall not erode at a rate in excess of .01 mils per year confirmed by Florida test samples.

\*\* NOTE TO SPECIFIER \*\* Delete if 50 percent fluoropolymer finish not required.

* + 1. Manufacturer shall provide 5 year limited warranty for 50 percent fluoropolymer-based finish on aluminum substrates.
       1. Finish coating shall not peel, blister, chip, crack or check.
       2. Chalking, fading or erosion of finish when measured by the following tests:
          1. Finish coating shall not chalk in excess of 8 numerical ratings when measured in accordance with ASTM D4214.
          2. Finish coating shall not change color or fade in excess of 5 NBS units as determined by ASTM D2244 and ASTM D822.
          3. Finish coating shall not erode at a rate in excess of .01 mils per year confirmed by Florida test samples.

\*\* NOTE TO SPECIFIER \*\* Delete if baked enamel/acrylic finish not required.

* + 1. Manufacturer shall provide 1 year limited warranty for baked enamel /Acrylic Enamel finish on aluminum substrates.
       1. Finish coating shall not peel, blister, chip, crack or check.
       2. Chalking, fading or erosion of finish when measured by the following tests:
          1. Finish coating shall not chalk in excess of 8 numerical ratings when measured in accordance with ASTM D4214.
          2. Finish coating shall not change color or fade in excess of 5 NBS units as determined by ASTM D2244 and ASTM D822.
          3. Finish coating shall not erode at a rate in excess of .01 mils per year confirmed by Florida test samples.

\*\* NOTE TO SPECIFIER \*\* Delete if Class I anodized finish not required.

* + 1. Manufacturer shall provide 5 year limited warranty for Class I anodized finish.

\*\* NOTE TO SPECIFIER \*\* Delete if Class II anodized finish not required.

* + 1. Manufacturer shall provide 1 year limited warranty for Class II anodized finish.

1. PRODUCTS
   1. MANUFACTURERS
      1. Acceptable Manufacturer: Airolite Co. (The), which is located at:P.O. Box 410Schofield, WI 54476Tel: 715-841-8757Fax: 715-841-8773Email: [request info (info@airolite.com)](https://arcat.com/rfi?action=email&company=Airolite%252BCo.%252B(The)&message=RE%253A%2520Spec%2520Question%2520(10210air)%253A%2520&coid=30230&spec=10210air&rep=&fax=715-841-8773);Web: <https://www.airolite.com>

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
    2. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.
  1. LOUVERS, GRILLES AND VENTS - GENERAL.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. Louvers shall be mechanically fastened construction and furnished with bird screen, insect screen, sill pans, supports, installation hardware and finishes as specified or required for a complete installation.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. Louver shall be of welded construction and furnished with bird screen, insect screen, sill pans, supports, installation hardware and finishes as specified or required for a complete installation.
    2. The supporting structure shall be designed to accommodate the point loads transferred by the louvers when subject to the design wind loads.
    3. Performance Requirements:
       1. Structural Performance: Provide products capable of withstanding the effects of loads and stresses from wind and normal thermal movement without evidencing permanent deformation of components including blades, frames, and supports; noise or metal fatigue caused by component rattle or flutter; or permanent damage to fasteners and anchors.

\*\* NOTE TO SPECIFIER \*\* This wind load rating shall be standard for all submittals except for the Miami-Dade and Florida Product approved products. Delete wind load if not required.

* + - * 1. Wind Load: Uniform pressure (velocity pressure) of 25 lbf per sq ft (1200 Pa), acting inward or outward.

\*\* NOTE TO SPECIFIER \*\* Delete subparagraph below if louvers are not large enough to require provision for thermal movement.

* + - * 1. Thermal Movements: Provide products that allow for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures by preventing buckling, opening of joints, overstressing of components, and other detrimental effects:
        2. Temperature Change (Range): 120 degrees F (67 degrees C), ambient; 180 degrees F (100 degrees C), material surfaces.

\*\* NOTE TO SPECIFIER \*\* Three subparagraphs below apply only to louvers, delete if only specifying grilles. Delete paragraph and subparagraphs below and Paragraphs for ' Performance Ratings' if louvers are sufficiently oversized that performance is not critical.

* + - 1. Air-Performance, Water-Penetration, and Air-Leakage Ratings: Provide louvers complying with performance requirements indicated, as demonstrated by testing manufacturer's stock units 48 inches (1220 mm) wide by 48 inches (1220 mm) high. Test units according to AMCA 500.
         1. Perform testing on unpainted, cleaned, degreased units.
         2. Perform water-penetration testing on louvers without screens.

\*\* NOTE TO SPECIFIER \*\* AMCA Certification - Water, Air, Wind-Driven Rain: Models SCC, SCC901, SCH201, SCH401, SCH501, SCH601, SCH701, SCV302, SCV501, SCH7, SCV6. Delete if not required.

* + - 1. Weather Louver Effectiveness: Provide louvers complying with performance requirements indicated, as demonstrated by testing manufacturers stock units in accordance with AMCA Standard 500-L, Section 8.3.2 - Wind Driven Rain Water Penetration Test.

\*\* NOTE TO SPECIFIER \*\* Delete materials below not required for louvers and vents specified.

* + 1. Materials:
       1. Aluminum Extrusions: ASTM B 221 (ASTM B 221M), alloy 6063-T5 or T-52.
       2. Aluminum Sheet: ASTM B 209 (ASTM B 209M), alloy 3003 or 5052 with temper as required for forming, or as otherwise recommended by metal producer for required finish.
       3. Aluminum Castings: ASTM B 26/B 26M, alloy 319.
       4. Galvanized Steel Sheet: ASTM A 653/A 653M, G90 (Z275) zinc coating, mill phosphatized.
       5. Stainless-Steel Sheet: ASTM A 666, Type 304 or 316 with a No. 2 polish.
       6. Fasteners: Of same basic metal and alloy as fastened metal or 300 series stainless steel, unless otherwise indicated. Do not use metals that are incompatible with joined materials.
          1. Use types and sizes to suit unit installation conditions.
       7. Anchors and Inserts: Of type, size, and material required for loading and installation indicated. Use nonferrous metal or hot-dip galvanized anchors and inserts for exterior installations and elsewhere as needed for corrosion resistance. Use toothed steel or expansion bolt devices for drilled-in-place anchors.
       8. Bituminous Paint: Cold-applied asphalt mastic complying with SSPC-Paint 12 but containing no asbestos fibers, or cold-applied asphalt emulsion complying with ASTM D 1187.
    2. Fabrication:
       1. Assemble units in factory to minimize field splicing and assembly. Disassemble units as necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation.

\*\* NOTE TO SPECIFIER \*\* Delete subparagraph below if not applicable.

* + - * 1. Continuous Vertical Assemblies: Where height of units exceeds fabrication and handling limitations, fabricate units to permit field-bolted assembly with close-fitting joints in jambs and mullions, reinforced with splice plates and without interrupting blade-spacing, or grille or screen pattern.
      1. Maintain equal louver blade spacing to produce uniform appearance.
      2. Fabricate frames, including integral sills for louvers, to fit in openings of sizes indicated, with allowances made for fabrication and installation tolerances, adjoining materials' tolerances, and perimeter sealant joints.
      3. Include supports, anchorages, and accessories required for complete assembly.

\*\* NOTE TO SPECIFIER \*\* Model mechanically fastened with welded construction available - SCC901, SCH201, SCH401, SCH501, SCH601, SCH7, SCH701, SCV501, SCV6, K601, K601D, K609, K6096, K666, K609HP, K6096HP, K638HP, K6744, K6746, K6774, K6776, K6844, K6846, K6856, K605, T5832, K605D, T6482, K6772. Delete provision if not required.

* + - 1. Louvers shall be of welded construction.

\*\* NOTE TO SPECIFIER \*\* Model mechanically fastened construction only - SCC550, SCV302, T645, T6636, T6784, T6786, T6796, K8204, K8206, K8206A, K8206AMD, K8206E, K8504, K8506, KN827, KX827, AC420/AC420S, AC460/AC460S.

* + - 1. Louvers shall be of mechanically fastened construction.

\*\* NOTE TO SPECIFIER \*\* Delete this Article if fixed-blade, extruded louvers are not used or if a schedule is used to specify louver types.

* 1. FIXED-BLADE EXTRUDED-ALUMINUM LOUVERS

\*\* NOTE TO SPECIFIER \*\* Verify availability of seal below for louver sizes indicated. Refer to notes list in Part 1. Delete if not required.

* + 1. AMCA Seal: Mark units with AMCA Certified Ratings Seal.

\*\* NOTE TO SPECIFIER \*\* Airolite's Extruded Aluminum Stationary louvers are designed for applications that require intake and exhaust ventilation with moderate protection against water penetration. Extruded Aluminum Stationary louvers are available with visible or concealed vertical mullions and in 4 and 6 inch frame depths. Delete if not required.

* + 1. Fixed-Blade Extruded-Aluminum Louvers: Horizontal Louvers as manufactured by The Airolite Co.

\*\* NOTE TO SPECIFIER \*\* Delete product options not required.

* + - 1. Product: K609:
         1. Depth: 4 inches (102 mm) nominal louver depth.

\*\* NOTE TO SPECIFIER \*\* Delete mullion type not required.

* + - * 1. Mullion Type: Visible.
        2. Mullion Type: Concealed.
        3. Percent Free Area: 49 percent.
        4. Beginning Point of Water Penetration: 562 fpm (2.86 m per sec).
        5. Air Volume Flow Rate at Beginning Point of Water Penetration: 4,446 cfm (2.10 cu m per sec).
        6. Pressure Drop at Beginning Point of Water Penetration: 0.06 inches WC (0.014 kPa).

\*\* NOTE TO SPECIFIER \*\* Delete blade thickness and frame thickness options not required.

* + - * 1. Blade Thickness: 0.081 inches (2 mm)
        2. Blade Thickness: 0.125 inches (3 mm).
        3. Frame Thickness: 0.081 inches (2 mm)
        4. Frame Thickness: 0.125 inches (3 mm)
      1. Product: K666:
         1. Depth: 4 inches (102 mm) nominal louver depth.

\*\* NOTE TO SPECIFIER \*\* Delete mullion type not required.

* + - * 1. Mullion Type: Visible.
        2. Mullion Type: Concealed.
        3. Percent Free Area: 53 percent.
        4. Beginning Point of Water Penetration: 760 fpm (3.85 m per sec).
        5. Air Volume Flow Rate at Beginning Point of Water Penetration: 6,475 cfm (3.04 cu m per sec).
        6. Pressure Drop at Beginning Point of Water Penetration: 0.10 inches WC (0.024 kPa).

\*\* NOTE TO SPECIFIER \*\* Delete blade thickness and frame thickness options not required.

* + - * 1. Blade Thickness: 0.081 inches (2 mm)
        2. Blade Thickness: 0.125 inches (3 mm).
        3. Frame Thickness: 0.081 inches (2 mm)
        4. Frame Thickness: 0.125 inches (3 mm)
      1. Product: K6096:
         1. Depth: 6 inches (152 mm) nominal louver depth.

\*\* NOTE TO SPECIFIER \*\* Delete mullion type not required.

* + - * 1. Mullion Type: Visible.
        2. Mullion Type: Concealed.
        3. Percent Free Area: 52 percent.
        4. Beginning Point of Water Penetration: 817 fpm (4.15 m per sec).
        5. Air Volume Flow Rate at Beginning Point of Water Penetration: 6,396 cfm (3.02 cu m per sec).
        6. Pressure Drop at Beginning Point of Water Penetration: 0.10 inches WC (0.025 kPa).

\*\* NOTE TO SPECIFIER \*\* Delete blade thickness and frame thickness options not required.

* + - * 1. Blade Thickness: 0.081 inches (2 mm)
        2. Blade Thickness: 0.125 inches (3 mm).
        3. Frame Thickness: 0.081 inches (2 mm)
        4. Frame Thickness: 0.125 inches (3 mm)

\*\* NOTE TO SPECIFIER \*\* Airolite's Extruded Aluminum Drainable louvers are high performance louvers designed to minimize water penetration through wall openings with drainable blades or drainable head and blades. Extruded Aluminum Drainable blades are available with visible or concealed vertical mullions in 4 and 6 inch frame depths. Delete if not required.

* + 1. Fixed-Blade Extruded-Aluminum Louvers: Horizontal Drainable-Blade Louvers as manufactured by The Airolite Co.

\*\* NOTE TO SPECIFIER \*\* Delete product options not required.

* + - 1. Product: K609HP:
         1. Depth: 4 inches (102 mm) nominal louver depth.

\*\* NOTE TO SPECIFIER \*\* Delete mullion type not required.

* + - * 1. Mullion Type: Visible.
        2. Mullion Type: Concealed.
        3. Percent Free Area: 52 percent.
        4. Beginning Point of Water Penetration: 963 fpm (4.89 m per sec).
        5. Air Volume Flow Rate at Beginning Point of Water Penetration: 8,012 cfm (3.77 cu m per sec).
        6. Pressure Drop at Beginning Point of Water Penetration: 0.104 inches WC (0.026 kPa).

\*\* NOTE TO SPECIFIER \*\* Delete blade thickness and frame thickness options not required.

* + - * 1. Blade Thickness: 0.081 inches (2 mm)
        2. Blade Thickness: 0.125 inches (3 mm).
        3. Frame Thickness: 0.081 inches (2 mm)
        4. Frame Thickness: 0.125 inches (3 mm)
      1. Product: K638HP:
         1. Depth: 4 inches (102 mm) nominal louver depth.

\*\* NOTE TO SPECIFIER \*\* Delete mullion type not required.

* + - * 1. Mullion Type: Visible.
        2. Mullion Type: Concealed.
        3. Percent Free Area: 53 percent.
        4. Beginning Point of Water Penetration: 934 fpm (4.74 m per sec).
        5. Air Volume Flow Rate at Beginning Point of Water Penetration: 7,930 cfm (3.75 cu m per sec).
        6. Pressure Drop at Beginning Point of Water Penetration: 0.14 inches WC (0.035 kPa).

\*\* NOTE TO SPECIFIER \*\* Delete blade thickness and frame thickness options not required.

* + - * 1. Blade Thickness: 0.081 inches (2 mm)
        2. Blade Thickness: 0.125 inches (3 mm).
        3. Frame Thickness: 0.081 inches (2 mm)
        4. Frame Thickness: 0.125 inches (3 mm)
      1. Product: K6744:
         1. Depth: 4 inches (102 mm) nominal louver depth.

\*\* NOTE TO SPECIFIER \*\* Delete mullion type not required.

* + - * 1. Mullion Type: Visible.
        2. Mullion Type: Concealed.
        3. Percent Free Area: 56 percent.
        4. Beginning Point of Water Penetration: 1,151 fpm (5.85 m per sec).
        5. Air Volume Flow Rate at Beginning Point of Water Penetration: 10,336 cfm (4.89 cu m per sec).
        6. Pressure Drop at Beginning Point of Water Penetration: 0.20 inches WC (0.050 kPa).

\*\* NOTE TO SPECIFIER \*\* Delete blade thickness and frame thickness options not required.

* + - * 1. Blade Thickness: 0.081 inches (2 mm)
        2. Blade Thickness: 0.125 inches (3 mm).
        3. Frame Thickness: 0.081 inches (2 mm)
        4. Frame Thickness: 0.125 inches (3 mm)
      1. Product: K6774:
         1. Depth: 4 inches (102 mm) nominal louver depth.

\*\* NOTE TO SPECIFIER \*\* Delete mullion type not required.

* + - * 1. Mullion Type: Visible.
        2. Mullion Type: Concealed.
        3. Percent Free Area: 52 percent.
        4. Beginning Point of Water Penetration: 961 fpm (4.88 m per sec).
        5. Air Volume Flow Rate at Beginning Point of Water Penetration: 8,024 cfm (3.81 cu m per sec).
        6. Pressure Drop at Beginning Point of Water Penetration: 0.12 inches WC (0.030 kPa).

\*\* NOTE TO SPECIFIER \*\* Delete blade thickness and frame thickness options not required.

* + - * 1. Blade Thickness: 0.081 inches (2 mm)
        2. Blade Thickness: 0.125 inches (3 mm).
        3. Frame Thickness: 0.081 inches (2 mm)
        4. Frame Thickness: 0.125 inches (3 mm)
      1. Product: K6844/CB6844 Dual Drainable:
         1. Depth: 4 inches (102 mm) nominal louver depth.

\*\* NOTE TO SPECIFIER \*\* Delete mullion type not required.

* + - * 1. Mullion Type: Visible.
        2. Mullion Type: Concealed.
        3. Percent Free Area: 51 percent.
        4. Beginning Point of Water Penetration: 992 fpm (5.04 m per sec).
        5. Air Volume Flow Rate at Beginning Point of Water Penetration: 9,140 cfm (4.29 cu m per sec).
        6. Pressure Drop at Beginning Point of Water Penetration: 0.16 inches WC (0.040 kPa).

\*\* NOTE TO SPECIFIER \*\* Delete blade thickness and frame thickness options not required.

* + - * 1. Blade Thickness: 0.081 inches (2 mm)
        2. Blade Thickness: 0.125 inches (3 mm).
        3. Frame Thickness: 0.081 inches (2 mm)
        4. Frame Thickness: 0.125 inches (3 mm)
      1. Product: K6096HP:
         1. Depth: 6 inches (152 mm) nominal louver depth.

\*\* NOTE TO SPECIFIER \*\* Delete mullion type not required.

* + - * 1. Mullion Type: Visible.
        2. Mullion Type: Concealed.
        3. Percent Free Area: 54 percent.
        4. Beginning Point of Water Penetration: 998 fpm (5.07 m per sec).
        5. Air Volume Flow Rate at Beginning Point of Water Penetration: 8,673 cfm (4.11 cu m per sec).
        6. Pressure Drop at Beginning Point of Water Penetration: 0.17 inches WC (0.04 kPa).

\*\* NOTE TO SPECIFIER \*\* Delete blade thickness and frame thickness options not required.

* + - * 1. Blade Thickness: 0.081 inches (2 mm)
        2. Blade Thickness: 0.125 inches (3 mm).
        3. Frame Thickness: 0.081 inches (2 mm)
        4. Frame Thickness: 0.125 inches (3 mm)
      1. Product: K6746:
         1. Depth: 6 inches (152 mm) nominal louver depth.

\*\* NOTE TO SPECIFIER \*\* Delete mullion type not required.

* + - * 1. Mullion Type: Visible.
        2. Mullion Type: Concealed.
        3. Percent Free Area: 59 percent.
        4. Beginning Point of Water Penetration: 1,077 fpm (5.47 m per sec).
        5. Air Volume Flow Rate at Beginning Point of Water Penetration: 10,135 cfm (4.78 cu m per sec).
        6. Pressure Drop at Beginning Point of Water Penetration: 0.15 inches WC (0.037 kPa).

\*\* NOTE TO SPECIFIER \*\* Delete blade thickness and frame thickness options not required.

* + - * 1. Blade Thickness: 0.081 inches (2 mm)
        2. Blade Thickness: 0.125 inches (3 mm).
        3. Frame Thickness: 0.081 inches (2 mm)
        4. Frame Thickness: 0.125 inches (3 mm)
      1. Product: K6776:
         1. Depth: 6 inches (152 mm) nominal louver depth.

\*\* NOTE TO SPECIFIER \*\* Delete mullion type not required.

* + - * 1. Mullion Type: Visible.
        2. Mullion Type: Concealed.
        3. Percent Free Area: 54 percent.
        4. Beginning Point of Water Penetration: 1,250 fpm (6.35 m per sec).
        5. Air Volume Flow Rate at Beginning Point of Water Penetration: 10,700 cfm (5.06 cu m per sec).
        6. Pressure Drop at Beginning Point of Water Penetration: 0.18 inches WC (0.045 kPa).

\*\* NOTE TO SPECIFIER \*\* Delete blade thickness and frame thickness options not required.

* + - * 1. Blade Thickness: 0.081 inches (2 mm)
        2. Blade Thickness: 0.125 inches (3 mm).
        3. Frame Thickness: 0.081 inches (2 mm)
        4. Frame Thickness: 0.125 inches (3 mm)
      1. Product: K6846 Dual Drainable:
         1. Depth: 6 inches (152 mm) nominal louver depth.

\*\* NOTE TO SPECIFIER \*\* Delete mullion type not required.

* + - * 1. Mullion Type: Visible.
        2. Mullion Type: Concealed.
        3. Percent Free Area: 54 percent.
        4. Beginning Point of Water Penetration: 1,201 fpm (6.10 m per sec).
        5. Air Volume Flow Rate at Beginning Point of Water Penetration: 10,305 cfm (4.88 cu m per sec).
        6. Pressure Drop at Beginning Point of Water Penetration: 0.20 inches WC (0.050 kPa).

\*\* NOTE TO SPECIFIER \*\* Delete blade thickness and frame thickness options not required.

* + - * 1. Blade Thickness: 0.081 inches (2 mm)
        2. Blade Thickness: 0.125 inches (3 mm).
        3. Frame Thickness: 0.081 inches (2 mm)
        4. Frame Thickness: 0.125 inches (3 mm)
      1. Product: K6856 Dual Drainable:
         1. Depth: 6 inches (152 mm) nominal louver depth.

\*\* NOTE TO SPECIFIER \*\* Delete mullion type not required.

* + - * 1. Mullion Type: Visible.
        2. Mullion Type: Concealed.
        3. Percent Free Area: 49 percent.
        4. Beginning Point of Water Penetration: 1,065 fpm (5.41 m per sec).
        5. Air Volume Flow Rate at Beginning Point of Water Penetration: 8,424 cfm (3.95 cu m per sec).
        6. Pressure Drop at Beginning Point of Water Penetration: 0.15 inches WC (0.038 kPa).
        7. Blade Thickness: 0.081 inches (2 mm).
        8. Frame Thickness: 0.081 inches (2 mm).

\*\* NOTE TO SPECIFIER \*\* Airolite's Extruded Aluminum Sightproof louvers are designed for applications to prevent visual see through and are not normally chosen for conventional intake or exhaust applications. Extruded Aluminum Sightproof louvers are available in non-drainable, drainable head and drainable blade models and range in frame depths from 2 to 5 inches. Delete if not required.

* + 1. Fixed-Blade Extruded-Aluminum Louvers: Horizontal Sightproof Inverted-V Blade Louvers as manufactured by The Airolite Co.

\*\* NOTE TO SPECIFIER \*\* Delete product options not required.

* + - 1. Product: K601:
         1. Depth: 4 inches (102 mm) nominal louver depth.

\*\* NOTE TO SPECIFIER \*\* Delete mullion type not required.

* + - * 1. Mullion Type: Visible.
        2. Mullion Type: Concealed.
        3. Percent Free Area: 33 percent.
        4. Beginning Point of Water Penetration: 765 fpm (3.89 m per sec).
        5. Air Volume Flow Rate at Beginning Point of Water Penetration: 3,827 cfm (1.81 cu m per sec).
        6. Pressure Drop at Beginning Point of Water Penetration: 0.26 inches WC (0.065 kPa).
        7. Blade Thickness: 0.081 inches (2 mm).

\*\* NOTE TO SPECIFIER \*\* Delete frame thickness option not required.

* + - * 1. Frame Thickness: 0.081 inches (2 mm)
        2. Frame Thickness: 0.125 inches (3 mm)
      1. Product: K601D Drainable:
         1. Depth: 4 inches (102 mm) nominal louver depth.

\*\* NOTE TO SPECIFIER \*\* Delete mullion type not required.

* + - * 1. Mullion Type: Visible.
        2. Mullion Type: Concealed.
        3. Percent Free Area: 32 percent.
        4. Beginning Point of Water Penetration: 747 fpm (3.79 m per sec).
        5. Air Volume Flow Rate at Beginning Point of Water Penetration: 3,855 cfm (1.82 cu m per sec).
        6. Pressure Drop at Beginning Point of Water Penetration: 0.30 inches WC (0.075 kPa).
        7. Blade Thickness: 0.081 inches (2 mm).

\*\* NOTE TO SPECIFIER \*\* Delete frame thickness option not required.

* + - * 1. Frame Thickness: 0.081 inches (2 mm)
        2. Frame Thickness: 0.125 inches (3 mm)
      1. Product: K605:
         1. Depth: 5 inches (127 mm) nominal louver depth.

\*\* NOTE TO SPECIFIER \*\* Delete mullion type not required.

* + - * 1. Mullion Type: Visible.
        2. Mullion Type: Concealed.
        3. Percent Free Area: 51 percent.
        4. Beginning Point of Water Penetration: 1,036 fpm (5.26 m per sec).
        5. Air Volume Flow Rate at Beginning Point of Water Penetration: 8,485 cfm (4.00 cu m per sec).
        6. Pressure Drop at Beginning Point of Water Penetration: 0.25 inches WC (0.06 kPa).
        7. Blade Thickness: 0.081 inches (2 mm).
        8. Frame Thickness: 0.081 inches (2 mm).
      1. Product: K605D Drainable:
         1. Depth: 5 inches (127 mm) nominal louver depth.

\*\* NOTE TO SPECIFIER \*\* Delete mullion type not required.

* + - * 1. Mullion Type: Visible.
        2. Mullion Type: Concealed.
        3. Percent Free Area: 57 percent.
        4. Beginning Point of Water Penetration: 1,134 fpm (5.76 m per sec).
        5. Air Volume Flow Rate at Beginning Point of Water Penetration: 10,331 cfm (4.90 cu m per sec).
        6. Pressure Drop at Beginning Point of Water Penetration: 0.40 inches WC (0.100 kPa).

\*\* NOTE TO SPECIFIER \*\* Delete blade thickness and frame thickness options not required.

* + - * 1. Blade Thickness: 0.081 inches (2 mm)
        2. Blade Thickness: 0.125 inches (3 mm).
        3. Frame Thickness: 0.081 inches (2 mm)
        4. Frame Thickness: 0.125 inches (3 mm)
      1. Product: T5832:
         1. Depth: 2 inches (51 mm) nominal louver depth.

\*\* NOTE TO SPECIFIER \*\* Delete mullion type not required.

* + - * 1. Mullion Type: Visible.
        2. Mullion Type: Concealed.
        3. Blade: 0.063 inch (1.60 mm).
        4. Frame: 0.063 inch (1.60 mm).
        5. Percent Free Area: 23 percent.
        6. Beginning Point of Water Penetration: 516 fpm (2.62 m per sec).
        7. Air Volume Flow Rate at Beginning Point of Water Penetration: 1,935 cfm (0.91 cu m per sec).
        8. Pressure Drop at Beginning Point of Water Penetration: 0.10 inches WC (0.025 kPa).
        9. Blade Thickness: 0.063 inches (1.6 mm).
        10. Frame Thickness: 0.063 inches (1.6 mm).

\*\* NOTE TO SPECIFIER \*\* Airolite Storm Class horizontal louvers are designed and rated to provide high volume intake and exhaust ventilation and prevent water penetration under the most severe wind-driven rain conditions. Storm Class louvers are available with either horizontal or vertical blades . Delete if not required.

* + 1. Fixed-Blade Extruded-Aluminum Louvers: Storm Class Horizontal Blade Louvers as manufactured by The Airolite Co.
       1. Weather Louver Effectiveness Rating: Minimum rating determined under AMCA Standard 500-L and certified under AMCA Standard 511.

\*\* NOTE TO SPECIFIER \*\* The following required data needs to be supplied by the specifier, and communicated to the manufacturer.

* + - * 1. Wind Velocity (mph/m per sec): \_\_\_\_\_\_\_\_.
        2. Rainfall Rate (inches/mm): \_\_\_\_\_\_\_\_ per hour.
        3. Intake Air Volume (cfm/cu m per min): \_\_\_\_\_\_\_\_.
        4. Effectiveness Rating: \_\_\_\_\_\_\_\_

\*\* NOTE TO SPECIFIER \*\* Delete product options not required.

* + - 1. Product: SCC550 Storm Class Louver:
         1. Standards Compliance: AMCA 540 and AMCA 550 Listed.
         2. Depth: 5.5 inches (139.7 mm) nominal louver depth.

\*\* NOTE TO SPECIFIER \*\* Delete mullion type not required.

* + - * 1. Mullion Type: Visible.
        2. Mullion Type: Concealed.
        3. Percent Free Area: 50 percent.
        4. Beginning Point of Water Penetration: 1,083 fpm (5.5 m per sec).
        5. Air Volume Flow Rate at Beginning Point of Water Penetration: 8,686 cfm (4.10 cu m per sec).
        6. Pressure Drop at Beginning Point of Water Penetration: 0.44 inches WC (0.109 kPa).
        7. Wind-Driven Rain Water Penetration Test:

Exterior Wind Velocity: 29 mph (13 m per sec).

Rainfall Rate: 3 inches (75 mm) per hr.

Effectiveness: 100 percent.

Core Ventilation: 980 fpm (5.0 m per sec).

Exterior Wind Velocity: 50 mph (22 m per sec).

Rainfall Rate: 8 inches (200 mm) per hr.

Effectiveness: 99.5 percent.

Core Ventilation: 980 fpm (5.0 m per sec).

* + - * 1. Front Blade Thickness: 0.050 inch (1.27 mm).
        2. Back Blade Thickness: 0.081 inch (2.06 mm).

\*\* NOTE TO SPECIFIER \*\* The design incorporates a drainable head member and horizontal blades to provide maximum resistance to wind-driven rain. Delete if not required.

* + - 1. Product: SCH201 Storm Class Louver:
         1. Depth: 2 inches (51 mm) nominal louver depth.
         2. Mullion Type: Visible.
         3. Percent Free Area: 39 percent.
         4. Beginning Point of Water Penetration: 914 fpm (4.64 m per sec).
         5. Air Volume Flow Rate at Beginning Point of Water Penetration: 5,667 cfm (2.67 cu m per sec).
         6. Pressure Drop at Beginning Point of Water Penetration: 0.198 inches WC (0.049 kPa).
         7. Wind-Driven Rain Water Penetration Test:

Exterior Wind Velocity: 29 mph (13 m per sec).

Rainfall Rate: 3 inches (75 mm) per hr.

Effectiveness: 99.6 percent.

Core Ventilation: 297 fpm (1.5 m per sec).

Exterior Wind Velocity: 50 mph (22 m per sec).

Rainfall Rate: 8 inches (200 mm) per hr.

Effectiveness: 99.1 percent.

Core Ventilation: 0 fpm (0 m per sec).

* + - * 1. Blade: 0.063 inch (1.60 mm).
        2. Frame: 0.063 inch (1.60 mm).
      1. Product: SCH401 Storm Class Louver:
         1. Depth: 4 inches (102 mm) nominal louver depth.
         2. Mullion Type: Visible.
         3. Percent Free Area: 42 percent.
         4. Beginning Point of Water Penetration: 1,250 fpm (6.35 m per sec).
         5. Air Volume Flow Rate at Beginning Point of Water Penetration: 8,400 cfm (3.96 cu m per sec).
         6. Pressure Drop at Beginning Point of Water Penetration: 0.296 inches WC (0.07 kPa).
         7. Wind-Driven Rain Water Penetration Test:

Exterior Wind Velocity: 29 mph (13 m per sec).

Rainfall Rate: 3 inches (75 mm) per hr.

Effectiveness: 99.9 percent.

Core Ventilation: 864 fpm (4.4 m per sec).

Exterior Wind Velocity: 50 mph (22 m per sec).

Rainfall Rate: 8 inches (200 mm) per hr.

Effectiveness: 99.0 percent.

Core Ventilation: 400 fpm (2.0 m per sec).

* + - * 1. Frame Thickness: 0.063 inch (1.60 mm).
        2. Blade Thickness: 0.081 inch (2.06 mm).
      1. Product: SCH501 Storm Class Louver:
         1. Depth: 5 inches (127 mm) nominal louver depth.
         2. Mullion Type: Visible.
         3. Percent Free Area: 43 percent.
         4. Beginning Point of Water Penetration: 1,250 fpm (6.35 m per sec).
         5. Air Volume Flow Rate at Beginning Point of Water Penetration: 9,337 cfm (4.41 cu m per sec).
         6. Pressure Drop at Beginning Point of Water Penetration: 0.18 inches WC (0.045 kPa)
         7. Wind-Driven Rain Water Penetration Test:

Exterior Wind Velocity: 29 mph (13 m per sec).

Rainfall Rate: 3 inches (75 mm) per hr.

Effectiveness: 99.1 percent.

Core Ventilation: 787 fpm (4.0 m per sec).

Exterior Wind Velocity: 50 mph (22 m per sec).

Rainfall Rate: 8 inches (200 mm) per hr.

Effectiveness: 99.2 percent.

Core Ventilation: 689 fpm (3.5 m per sec).

* + - * 1. Frame Thickness: 0.081 inch (2.06 mm).
        2. Blade Thickness: 0.063 inch (1.60 mm).
      1. Product: SCH601 Storm Class Louver:
         1. Depth: 6 inches (152 mm) nominal louver depth.
         2. Mullion Type: Visible.
         3. Percent Free Area: 47 percent.
         4. Beginning Point of Water Penetration: 1,250 fpm (6.35 m per sec).
         5. Air Volume Flow Rate at Beginning Point of Water Penetration: 9,475 cfm (4.47 cu m per sec).
         6. Pressure Drop at Beginning Point of Water Penetration: 0.32 inches WC (0.018 kPa).
         7. Wind-Driven Rain Water Penetration Test:

Exterior Wind Velocity: 29 mph (13 m per sec).

Rainfall Rate: 3 inches (75 mm) per hr.

Effectiveness: 99.8 percent.

Core Ventilation: 763 fpm (3.9 m per sec).

Exterior Wind Velocity: 50 mph (22 m per sec).

Rainfall Rate: 8 inches (200 mm) per hr.

Effectiveness: 99.2 percent.

Core Ventilation: 676 fpm (3.4 m per sec).

* + - * 1. Frame Thickness: 0.081 inch (2.06 mm).
        2. Blade Thickness: 0.081 inch (2.06 mm).
      1. Product: SCH7 Storm Class Louver:
         1. Depth: 7 inches (178 mm) nominal louver depth.

\*\* NOTE TO SPECIFIER \*\* Delete mullion type not required.

* + - * 1. Mullion Type: Visible.
        2. Mullion Type: Concealed.
        3. Percent Free Area: 53 percent.
        4. Beginning Point of Water Penetration: 948 fpm (4.82 m per sec).
        5. Air Volume Flow Rate at Beginning Point of Water Penetration: 7,416 cfm (3.50 cu m per sec).
        6. Pressure Drop at Beginning Point of Water Penetration: 0.32 inches WC (0.08 kPa).
        7. Wind-Driven Rain Water Penetration Test:

Exterior Wind Velocity: 29 mph (13 m per sec).

Rainfall Rate: 3 inches (75 mm) per hr.

Effectiveness: 99.2 percent.

Core Ventilation: 400 fpm (2.0 m per sec).

Exterior Wind Velocity: 50 mph (22 m per sec).

Rainfall Rate: 8 inches (200 mm) per hr.

Effectiveness: 99.6 percent.

Core Ventilation: 0 fpm (0.0 m per sec).

* + - * 1. Frame Thickness: 0.081 inch (2.06 mm).
        2. Front Blade Thickness: 0.081 inch (2.06 mm).
        3. Back Blade Thickness: 0.063 inch (1.60 mm).
      1. Product: SCH701 Storm Class Louver:
         1. Depth: 7 inches (178 mm) nominal louver depth.
         2. Mullion Type: Visible.
         3. Percent Free Area: 45 percent.
         4. Beginning Point of Water Penetration: 1,250 fpm (6.35 m per sec).
         5. Air Volume Flow Rate at Beginning Point of Water Penetration: 8,962 cfm (4.22 cu m per sec).
         6. Pressure Drop at Beginning Point of Water Penetration: 0.49 inches WC (0.122 kPa).
         7. Wind-Driven Rain Water Penetration Test:

Exterior Wind Velocity: 29 mph (13 m per sec).

Rainfall Rate: 3 inches (75 mm) per hr.

Effectiveness: 99.9 percent.

Core Ventilation: 689 fpm (3.5 m per sec).

Exterior Wind Velocity: 50 mph (22 m per sec).

Rainfall Rate: 8 inches (200 mm) per hr.

Effectiveness: 99.1 percent.

Core Ventilation: 394 fpm (2.0 m per sec).

* + - * 1. Frame Thickness: 0.081 inch (2.06 mm).
        2. Blade Thickness: 0.081 inch (2.06 mm).

\*\* NOTE TO SPECIFIER \*\* Airolite Storm Class vertical louvers are designed and rated to provide high volume intake and exhaust ventilation and prevent water penetration under the most severe wind-driven rain conditions. Storm Class louvers are available with either horizontal or vertical. Delete if not required.

* + 1. Fixed-Blade Extruded-Aluminum Louvers: Storm Class Vertical Blade Louvers as manufactured by The Airolite Co.

\*\* NOTE TO SPECIFIER \*\* Delete product options not required.

* + - 1. Product: SCV6 Storm Class Louver:
         1. Depth: 5-3/8 inches (152 mm) nominal louver depth.
         2. Mullion Type: Visible.
         3. Percent Free Area: 55 percent.
         4. Beginning Point of Water Penetration: 1,250 fpm (6.35 m per sec).
         5. Air Volume Flow Rate at Beginning Point of Water Penetration: 10,912 cfm (5.15 cu m per sec).
         6. Pressure Drop at Beginning Point of Water Penetration: 0.20 inches WC (0.050 kPa).
         7. Wind-Driven Rain Water Penetration Test:

Exterior Wind Velocity: 29 mph (13 m per sec).

Rainfall Rate: 3 inches (75 mm) per hr.

Effectiveness: 100.0 percent.

Core Ventilation: 991 fpm (5.0 m per sec)

Exterior Wind Velocity: 50 mph (22 m per sec).

Rainfall Rate: 8 inches (200 mm) per hr.

Effectiveness: 100.0 percent.

Core Ventilation: 984 fpm (5.0 m per sec).

* + - * 1. Blade Thickness: 0.081 inch (2.06 mm).
        2. Frame Thickness: 0.081 inch (2.06 mm).
      1. Product: SCV302 Storm Class Louver:
         1. Depth: 3 inches (76.2 mm) nominal louver depth.
         2. Mullion Type: Visible.
         3. Percent Free Area: 50.8 percent.
         4. Beginning Point of Water Penetration: 1,250 fpm (6.35 m per sec).
         5. Air Volume Flow Rate at Beginning Point of Water Penetration: 10,163 cfm (4.8 cu m per sec).
         6. Pressure Drop at Beginning Point of Water Penetration: 0.276 inches WC (0.0569 kPa).
         7. Wind-Driven Rain Water Penetration Test:

Exterior Wind Velocity: 29 mph (13 m per sec).

Rainfall Rate: 3 inches (75 mm) per hr.

Effectiveness: 100 percent.

Core Ventilation: 788 fpm (4.0 m per sec).

Exterior Wind Velocity: 50 mph (22 m per sec).

Rainfall Rate: 8 inches (200 mm) per hr.

Effectiveness: 99.6 percent.

Core Ventilation: 788 fpm (4.0 m per sec).

* + - * 1. Blade Thickness: 0.053 inch (1.60 mm).
        2. Frame Thickness: 0.063 inch (1.60 mm).
      1. Product: SCV501 Storm Class Louver:
         1. Depth: 5 inches (127 mm) nominal louver depth.
         2. Mullion Type: Visible.
         3. Percent Free Area: 54.4 percent.
         4. Beginning Point of Water Penetration: 1,250 fpm (6.35 m per sec).
         5. Air Volume Flow Rate at Beginning Point of Water Penetration: 10,888 cfm (5.139 cu m per sec).
         6. Pressure Drop at Beginning Point of Water Penetration: 0.27 inches WC (0.067 kPa).
         7. Wind-Driven Rain Water Penetration Test:

Exterior Wind Velocity: 29 mph (13 m per sec).

Rainfall Rate: 3 inches (75 mm) per hr.

Effectiveness: 100 percent.

Core Ventilation: 991 fpm (5.0 m per sec).

Exterior Wind Velocity: 50 mph (22 m per sec).

Rainfall Rate: 8 inches (200 mm) per hr.

Effectiveness: 99.3 percent.

Core Ventilation: 882 fpm (4.5 m per sec).

* + - * 1. Blade Thickness: 0.063 inch (1.60 mm).
        2. Frame Thickness: 0.063 inch (1.60 mm).

\*\* NOTE TO SPECIFIER \*\* Airolite's Narrow Profile louvers are versatile architectural louvers designed for applications that require intake and exhaust ventilation with little concern for water penetration. Narrow Profile louvers are available with visible and concealed vertical mullions, in a frameless. Delete if not required. Indicate fabrication type.

* + 1. Fixed-Blade Extruded-Aluminum Louvers: Narrow Louvers as manufactured by The Airolite Co.

\*\* NOTE TO SPECIFIER \*\* Delete product options not required.

* + - 1. Product: AC420/AC420S:
         1. Depth: 1-1/2 inches (38.1 mm).

\*\* NOTE TO SPECIFIER \*\* Delete mullion type options not required.

* + - * 1. Mullion Type: Visible.
        2. Mullion Type: Concealed.
        3. Mullion Type: Frameless.
        4. Percent Free Area: 46 percent
        5. Material: Extruded Aluminum, Alloy 6063-T5.
        6. Blade Thickness: 0.063 inches (1.60 mm).
        7. Frame Thickness: 0.063 inches (1.60 mm).
        8. Blade Angle: 52 degrees.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + - 1. Product: AC460/AC460S:
         1. Depth: 1-1/2 inches (38.1 mm).

\*\* NOTE TO SPECIFIER \*\* Delete mullion type options not required.

* + - * 1. Mullion Type: Visible.
        2. Mullion Type: Concealed.
        3. Mullion Type: Frameless.
        4. Percent Free Area: 68 percent
        5. Material: Extruded Aluminum, Alloy 6063-T5.
        6. Blade Thickness: 0.063 inches (1.60 mm).
        7. Frame Thickness: 0.063 inches (1.60 mm).
        8. Blade Angle: 30 degrees.
      1. Product: K6772 Drainable.
         1. Depth: 2 inches (51 mm).
         2. Mullion Type: Visible.
         3. Percent Free Area: 57 percent
         4. Material: Extruded Aluminum, Alloy 6063-T5.
         5. Blade Thickness: 0.063 inches (1.60 mm).
         6. Frame Thickness: 0.063 inches (1.60 mm).
         7. Blade Angle: 45 degrees.
         8. Beginning Point of Water Penetration: 886 fpm (4.50 m per sec).
         9. Air Volume Flow Rate at Beginning Point of Water Penetration: 8,009 cfm (3.78 cu m per sec).
         10. Pressure Drop at Beginning Point of Water Penetration: 0.10 inches WC (0.025 kPa).
  1. EXTRUDED ALUMINUM LOUVERS

\*\* NOTE TO SPECIFIER \*\* Verify availability of seal below for louver sizes indicated. Refer to notes list in Part 1. Delete if not required.

* + 1. AMCA Seal: Mark units with AMCA Certified Ratings Seal.
    2. Extruded Aluminum Louvers: Horizontal Adjustable Louvers as manufactured by The Airolite Co.
       1. Description: Adjustable louvers are designed to permit air intake and exhaust ventilation in exterior walls. When closed, Extruded Aluminum Adjustable louver blades may be rotated to resist air leakage and water penetration.
       2. Louvers shall be furnished with bird screen, insect screen, supports and finishes as specified or scheduled for a complete installation.
       3. The blade linkage assembly shall be fully-enclosed within the louver jamb frame and isolated from the active airstream.

\*\* NOTE TO SPECIFIER \*\* Select one operation method below; delete others. Revise to suit specific requirements.

* + - 1. Operation Method: Hand operation with push bars.
      2. Operation Method: Crank operation with removable-crank operator in sill or jamb.
      3. Operation Method: Motor operation, with two-position, spring-return application (with power on, motor opens louver; with power off, spring closes louver); 110-V, 50/60-Hz motor; and limit switch wired for grounding; equipped as follows:

\*\* NOTE TO SPECIFIER \*\* Subparagraph below is an example of pneumatic operators available from one louver manufacturer. Coordinate with Mechanical Engineer and with manufacturers selected.

* + - 1. Operation Method: Pneumatic piston operation for use with 80 to 100 psi (550 to 690 kPa) compressed air.

\*\* NOTE TO SPECIFIER \*\* If retaining subparagraph above, select one of four subparagraphs below.

* + - * 1. Operation: Two position; power open, power close.
        2. Operation: Two position; power open, power close with spring-return fail-safe.
        3. Operation: Modulating; power open, power close.
        4. Operation: Modulating; power open, power close with spring-return fail-safe.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + - 1. Blades shall be fitted with dual-durometer vinyl blade-edge gaskets and compressible jamb seals to resist air leakage and water penetration when the adjustable blades are closed.

\*\* NOTE TO SPECIFIER \*\* Delete product options not required.

* + - 1. Product: T645:
         1. Depth: 4 inches (102 mm) nominal depth.
         2. Mullion Type: Visible.
         3. Free Area: 41 percent free area.
         4. Beginning Point of Water Penetration: 1,023 fpm (5.20 m per sec).
         5. Air Volume Flow Rate at Beginning Point of Water Penetration: 6,629 cfm (3.13 cu m per sec).
         6. Pressure Drop at Beginning Point of Water Penetration: 0.17 inches WC (0.043 kPa).
         7. Blade Thickness: 0.081 inches (2 mm).
         8. Frame Thickness: 0.125 inches (3 mm).
      2. Product: T6784 Drainable Blade:
         1. Depth: 4 inches (102 mm) nominal depth.
         2. Mullion Type: Visible.
         3. Free Area: 41 percent free area.
         4. Beginning Point of Water Penetration: 920 fpm (4.67 m per sec).
         5. Air Volume Flow Rate at Beginning Point of Water Penetration: 6,016 cfm (2.86 cu m per sec).
         6. Pressure Drop at Beginning Point of Water Penetration: 0.18 inches WC (0.045 kPa).
         7. Blade Thickness: 0.081 inches (2 mm).
         8. Frame Thickness: 0.125 inches (3 mm).
      3. Product: T6636:
         1. Depth: 6 inches (152 mm) nominal depth.
         2. Mullion Type: Visible.
         3. Free Area: 40 percent free area.
         4. Beginning Point of Water Penetration: 1,069 fpm (5.43 m per sec).
         5. Air Volume Flow Rate at Beginning Point of Water Penetration: 6,756 cfm (3.19 cu m per sec).
         6. Pressure Drop at Beginning Point of Water Penetration: 0.12 inches WC (0.030 kPa).
         7. Blade Thickness: 0.081 inches (2 mm).
         8. Frame Thickness: 0.125 inches (3 mm).
      4. Product: T6786 Drainable Blade:
         1. Depth: 6 inches (152 mm) nominal depth.
         2. Mullion Type: Visible.
         3. Free Area: 46 percent free area.
         4. Beginning Point of Water Penetration: 1,007 fpm (5.12 m per sec).
         5. Air Volume Flow Rate at Beginning Point of Water Penetration: 7,391 cfm (3.57 cu m per sec).
         6. Pressure Drop at Beginning Point of Water Penetration: 0.12 inches WC (0.030 kPa).
         7. Blade Thickness: 0.081 inches (2 mm).
         8. Frame Thickness: 0.125 inches (3 mm).
      5. Product: T6796 Drainable Adjustable Blade:
         1. Depth: 6 inches (152 mm) nominal depth.
         2. Mullion Type: Visible.
         3. Free Area: 54.6 percent free area.
         4. Beginning Point of Water Penetration: 1,107 fpm (5.624 m per sec).
         5. Air Volume Flow Rate at Beginning Point of Water Penetration: 9,664 cfm (4.561 cu m per sec).
         6. Pressure Drop at Beginning Point of Water Penetration: 0.15 inches WC (0.040 kPa).
         7. Blade Thickness: 0.081 inches (2 mm).
         8. Frame Thickness: 0.125 inches (3 mm).
      6. Accessories: Louvers equipped as follows:
         1. Snap-on, blade-edge gaskets for each louver blade to reduce air leakage at blade edges.

\*\* NOTE TO SPECIFIER \*\* Retain subparagraph below only after verifying suitability with type of actuator specified (not recommended by Airolite with removable crank or concealed motor operator). Revise to suit material standard with manufacturers selected.

* + - * 1. Stainless-steel jamb seals between adjustable-blade ends and jambs to restrict air leakage.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. Extruded Aluminum Louvers: Combination Louvers as manufactured by The Airolite Co.
       1. Description: Combination louvers incorporate stationary and adjustable blades in a single frame. Louvers offer constant exterior appearance with control of intake and exhaust airflow through operation of the adjustable blades. Louvers shall be provided with edge gaskets and jamb seals.
       2. Louvers shall be furnished with bird screen, insect screen, supports and finishes as specified or scheduled for a complete installation.

\*\* NOTE TO SPECIFIER \*\* Subparagraphs 3 through 8 describe adjustable combination louvers. Delete if adjustable louver not required.

* + - 1. The blade linkage assembly shall be fully-enclosed within the louver jamb frame and isolated from the active airstream.

\*\* NOTE TO SPECIFIER \*\* Select one operation method below; delete others. Revise to suit specific requirements.

* + - 1. Operation Method: Hand operation with push bars.
      2. Operation Method: Crank operation with removable-crank operator in sill or jamb.
      3. Operation Method: Motor operation, with two-position, spring-return application (with power on, motor opens louver; with power off, spring closes louver); 110-V, 50/60-Hz motor; and limit switch wired for grounding; equipped as follows:

\*\* NOTE TO SPECIFIER \*\* Subparagraph below is an example of pneumatic operators available from one louver manufacturer. Coordinate with Mechanical Engineer and with manufacturers selected.

* + - 1. Operation Method: Pneumatic piston operation for use with 80- to 100-psi (550- to 690-kPa) compressed air.

\*\* NOTE TO SPECIFIER \*\* If retaining subparagraph above, select one of four subparagraphs below.

* + - * 1. Operation: Two position; power open, power close.
        2. Operation: Two position; power open, power close with spring-return fail-safe.
        3. Operation: Modulating; power open, power close.
        4. Operation: Modulating; power open, power close with spring-return fail-safe.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + - 1. Blades shall be fitted with dual-durometer vinyl blade-edge gaskets and compressible jamb seals to resist air leakage and water penetration when the adjustable blades are closed.

\*\* NOTE TO SPECIFIER \*\* Delete product options not required.

* + - 1. Product: K8204 Drainable Blade:
         1. Depth: 4 inches (102 mm) nominal depth.
         2. Mullion Type: Visible.
         3. Free Area: 40 percent free area.
         4. Beginning Point of Water Penetration: 1,192 fpm (6.06 m per sec).
         5. Air Volume Flow Rate at Beginning Point of Water Penetration: 7,557 cfm (3.59 cu m per sec).
         6. Pressure Drop at Beginning Point of Water Penetration: 0.17 inches WC (0.042 kPa).
         7. Blade Thickness: 0.081 inches (2 mm).
         8. Frame Thickness: 0.125 inches (3 mm).
      2. Product: K8204E Drainable Blade with electric motor actuator enclosed within the sill frame:
         1. Depth: 4 inches (102 mm) nominal depth.
         2. Mullion Type: Visible.
         3. Free Area: 34 percent free area.
         4. Beginning Point of Water Penetration: 1,192 fpm (6.06 m per sec).
         5. Air Volume Flow Rate at Beginning Point of Water Penetration: 6,663 cfm (3.15 cu m per sec).
         6. Pressure Drop at Beginning Point of Water Penetration: 0.17 inches WC (0.042 kPa)
         7. Blade Thickness: 0.081 inches (2 mm).
         8. Frame Thickness: 0.125 inches (3 mm).
      3. Product: K8504 Drainable Blade:
         1. Depth: 4 inches (102 mm) nominal depth.
         2. Mullion Type: Visible.
         3. Free Area: 46 percent free area.
         4. Beginning Point of Water Penetration: 1,018 fpm (5.1 m per sec).
         5. Air Volume Flow Rate at Beginning Point of Water Penetration: 6,118 cfm (2.89 cu m per sec).
         6. Pressure Drop at Beginning Point of Water Penetration: 0.11 inches WC (0.028 kPa).
         7. Front Blade Thickness: 0.081 inches (2 mm).
         8. Back Blade Thickness: 0.125 inches (3 mm).
         9. Frame Thickness: 0.081 inches (2 mm) 0.125 inches (3 mm).
      4. Product: K8206 Drainable Blade:
         1. Depth: 6 inches (152 mm) nominal depth.
         2. Mullion Type: Visible.
         3. Free Area: 46 percent free area.
         4. Beginning Point of Water Penetration: 1,020 fpm (5.16 m per sec).
         5. Air Volume Flow Rate at Beginning Point of Water Penetration: 7,558 cfm (3.56 cu m per sec).
         6. Pressure Drop at Beginning Point of Water Penetration: 0.16 inches WC (0.040 kPa).
         7. Blade Thickness: 0.081 inches (2 mm).
         8. Frame Thickness: 0.125 inches (3 mm).
      5. Product: K8206A Combination louver with drainable stationary and airfoil adjustable blades:
         1. Depth: 6 inches (152 mm) nominal depth.
         2. Mullion Type: Visible.
         3. Free Area: 48 percent free area.
         4. Beginning Point of Water Penetration: 1,221 fpm (6.20 m per sec).
         5. Air Volume Flow Rate at Beginning Point of Water Penetration: 9,377 cfm (4.40 cu m per sec).
         6. Pressure Drop at Beginning Point of Water Penetration: 0.14 inches WC (0.035 kPa).
         7. Blade Thickness: 0.081 inches (2 mm).
         8. Frame Thickness: 0.125 inches (3 mm).
      6. Product: K8206E Drainable blade design with electric motor actuator enclosed within the sill frame:
         1. Depth: 6 inches (152 mm) nominal depth.
         2. Mullion Type: Visible.
         3. Free Area: 39 percent free area.
         4. Beginning Point of Water Penetration: 1,020 fpm (5.18 m per sec).
         5. Air Volume Flow Rate at Beginning Point of Water Penetration: 6,324 cfm (2.98 cu m per sec).
         6. Pressure Drop at Beginning Point of Water Penetration: 0.16 inches WC (0.033 kPa).
         7. Blade Thickness: 0.081 inches (2 mm).
         8. Frame Thickness: 0.125 inches (3 mm).
      7. Product: K8506 Drainable Blade:
         1. Depth: 6 inches (152 mm) nominal depth.
         2. Mullion Type: Visible.
         3. Free Area: 46 percent free area.
         4. Beginning Point of Water Penetration: 1,035 fpm (5.26 m per sec).
         5. Air Volume Flow Rate at Beginning Point of Water Penetration: 7,576 cfm (3.58 cu m per sec).
         6. Pressure Drop at Beginning Point of Water Penetration: 0.14 inches WC (0.035 kPa).
         7. Front Blade Thickness: 0.081 inches (2 mm).
         8. Back Blade Thickness: 0.125 inches (3 mm).
         9. Frame Thickness: 0.081 inches (2 mm) 0.125 inches (3 mm).
      8. Product: KN827 Gravity-operated Intake:
         1. Depth: 4 inches (102 mm) nominal depth.
         2. Mullion Type: Visible.
         3. Free Area: 40 percent free area.
         4. Blade Thickness: 0.063 inches (1.6 mm).
         5. Frame Thickness: 0.081 inches (2 mm).
      9. Product: KX827 Gravity-operated Exhaust:
         1. Depth: 4 inches (102 mm) nominal depth.
         2. Mullion Type: Visible.
         3. Free Area: 40 percent free area.
         4. Blade Thickness: 0.063 inches (1.6 mm).
         5. Frame Thickness: 0.081 inches (2 mm).

\*\* NOTE TO SPECIFIER \*\* Delete article if not required.

* 1. MIAMI-DADE COUNTY APPROVED STATIONARY HURRICANE LOUVER (HVHZ)

\*\* NOTE TO SPECIFIER \*\* K605MD Miami-Dade is a sightproof, horizontal, drainable head louver that serves a number of design requirements. The louver is 100 percent sightproof when viewed from any orientation or perspective, yields high free area, high air volume flow rates at moderate static pressure differential, and provides moderate protection against water infiltration. Delete if not required. Delete if not required.

* + 1. Miami-Dade Sightproof, Horizontal Blade, Drainable Head Louver:
       1. Product: K605MD as designed and manufactured by The Airolite Company LLC.
          1. Miami-Dade Notice of Acceptance Number: 19-0205.07.
       2. Application: Miami-Dade Approved Product for use in open structures or installations where the enclosed space is designed to accommodate water infiltration (wet rooms). Open structure building envelope protection for single unit sizes up to 72 inches wide by 144 inches high (1829 mm by 3658 mm) or 144 inches wide by 72 inches high (3658 mm by 1829 mm) for wet rooms.
       3. Miami-Dade County Protocols Compliance:
          1. PA-201 Large and Small Missile Impact Test.
          2. PA-202 Uniform Static Air Pressure Test.
          3. PA-203 Cyclic Wind Pressure Test - Maximum Design Pressure Rating plus or minus 110 psf (5.28 kPa).
       4. AMCA Listing Label Compliance:
          1. 540 - Test Method for Louvers Impacted by Windborne Debris. - Enhanced Protection
       5. Material: Extruded Aluminum, Alloy 6063-T5.
       6. Louver Depth: 5 inches (127.0 mm).
       7. Blade: 0.081 inch (2.06 mm). Blades shall be horizontal, inverted-V type with a center hook and spaced 2 inches (50.8 mm) on center.
       8. Frame: 0.081 inch (2.06 mm).
       9. Test Standard: AMCA Standard 500-L.
       10. Free Area: 4 by 4 ft (1219 by 1219 mm) unit: 8.31 sq ft (0.77 sq m).
       11. Percent Free Area: 52 percent.
       12. Beginning Point of Water Penetration: 1,057 fpm (5.37 m per sec).
       13. Air Volume Flow Rate at Beginning Point of Water Penetration: 8,780 cfm (4.14 cu m per sec).
       14. Pressure Drop at Beginning Point of Water Penetration: 0.25 inch WC (0.063 kPa).

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. Miami-Dade Sightproof, Dual Module Louver
       1. Product: Storm Class Louver SCC550MD as designed and manufactured by The Airolite Company LLC.
          1. Miami-Dade Notice of Acceptance Number: 19-0430.04.
       2. Application: Louvers shall be tested in accordance with Miami-Dade protocols TAS-201, TAS-202 and TAS-203 and approved for open structure building envelope protection for single unit sizes up to 5 ft wide by 8 ft high (1524 mm by 2438 mm) for wet rooms.
       3. Miami-Dade County Protocols Compliance:
          1. PA-201 Large and Small Missile Impact Test.
          2. PA-202 Uniform Static Air Pressure Test.
          3. PA-203 Cyclic Wind Pressure Test - Maximum Design Pressure Rating plus or minus 100 psf (4.8 kPa).
       4. AMCA Listing Label Compliance:
          1. 540 - Test Method for Louvers Impacted by Windborne Debris - Enhanced Protection.
          2. 550 - Test Method for High Velocity Wind Driven Rain Resistant Louvers.
       5. Material: Extruded Aluminum, Alloy 6005-T5.
       6. Louver Depth: 5.5 inches (139.7 mm).
       7. Front Blade: 0.081 inch (2.06 mm).
       8. Rear Blade:0.050 inch (1.27 mm).
       9. Frame: 0.081 inch (2.06 mm).
       10. Test Standard: Wind Driven Rain.
       11. Free Area: 4 ft by 4 ft unit (1219 mm by 1219 mm): 8.02 sq ft (0.75 sq m).
       12. Percent Free Area: 50.0 percent.
       13. Beginning Point of Water Penetration: 1,083 fpm (5.5 m per sec).
       14. Air Volume Flow Rate at Beginning Point of Water Penetration: 8,686 cfm (4.1 cu m per sec).
       15. Pressure Drop at Beginning Point of Water Penetration: 0.44 inch WC (0.109 kPa).
       16. Wind-Driven Rain Water Penetration Test:
           1. Exterior Wind Velocity: 29 mph (13 m per sec).
           2. Rainfall Rate: 3 inches (75 mm) per hr.
           3. Effectiveness: 100 percent.
           4. Core Ventilation: 980 fpm (5.0 m per sec).
       17. Wind-Driven Rain Water Penetration Test:
           1. Exterior Wind Velocity: 50 mph (22 m per sec).
           2. Rainfall Rate: 8 inches (200 mm) per hr.
           3. Effectiveness: 99.5 percent.
           4. Core Ventilation: 980 fpm (5.0 m per sec).

\*\* NOTE TO SPECIFIER \*\* SCV02MD is a sightproof, vertical blade, drainable louver that complies with the Florida Building Code and is Miami-Dade approved for use in the High Velocity Hurricane Zone for open building structure envelope protection or installations where the enclosed space is designed to accommodate water infiltration (wet rooms). Delete if not required.

* + 1. Miami-Dade Sightproof, Vertical Blade, Drainable Head Louver:
       1. Product: Storm Class Louver SCV302MD as designed and manufactured by The Airolite Company LLC.
          1. Miami-Dade Notice of Acceptance Number: 19-0409.03.
       2. Application: Louvers shall be tested in accordance with Miami-Dade protocols TAS-201, TAS-202 and TAS-203 and approved for open structure building envelope protection for single unit sizes up to 5 ft wide by 8 ft high (1524 mm by 2438 mm) for wet rooms.
       3. Miami-Dade County Protocols Compliance:
          1. PA-201 Large and Small Missile Impact Test.
          2. PA-202 Uniform Static Air Pressure Test.
          3. PA-203 Cyclic Wind Pressure Test - Maximum Design Pressure Rating plus or minus 100 psf (4.8 kPa).
       4. AMCA Listing Label Compliance:
          1. 540 - Test Method for Louvers Impacted by Windborne Debris - Enhanced Protection.
          2. 550 - Test Method for High Velocity Wind Driven Rain Resistant Louvers.
       5. Material: Extruded Aluminum, Alloy 6063-T6.
       6. Louver Depth: 3 inches (76.2 mm).
       7. Blade: 0.050 inch (1.27 mm).
       8. Frame: 0.081 inch (2.06 mm).
       9. Test Standard: Wind Driven Rain.
       10. Free Area: 4 ft by 4 ft unit (1219 mm by 1219 mm): 5.88 sq ft (0.55 sq m).
       11. Percent Free Area: 50.8 percent.
       12. Beginning Point of Water Penetration: 1,250 fpm (6.35 m per sec).
       13. Air Volume Flow Rate at Beginning Point of Water Penetration: 10,163 cfm (4.8 cu m per sec).
       14. Pressure Drop at Beginning Point of Water Penetration: 0.276 inch WC (0.069 kPa).
       15. Wind Driven Rain Water Penetration Test:
           1. Exterior Wind Velocity: 29 mph (13 m per sec).
           2. Rainfall Rate: 3 inches (75 mm) per hr.
           3. Effectiveness: 99.8 percent.
           4. Core Ventilation: 983 fpm (5.0 m per sec)
       16. Wind Driven Rain Water Penetration Test:
           1. Exterior Wind Velocity: 50 mph (22 m per sec).
           2. Rainfall Rate: 8 inches (200 mm) per hr.
           3. Effectiveness: 99.4 percent.
           4. Core Ventilation: 886 fpm (4.5 m per sec).

\*\* NOTE TO SPECIFIER \*\* SCV660MD is a vertical blade louver that is Florida Building Code Approved for use in the High Velocity Hurricane Zone and Miami-Dade approved for open building structure envelope protection or installations where the enclosed space is designed to accommodate water infiltration (wet room). Delete if not required.

* + 1. Miami-Dade Sightproof, Vertical Blade, Visible Mullion:
       1. Product: Storm Class Louver SCV660MD as designed and manufactured by The Airolite Company LLC.
          1. Miami-Dade Notice of Acceptance Number: 17-0807.21.
       2. Application: Louvers shall be tested in accordance with Miami-Dade protocols TAS-201, TAS-202 and TAS-203 and approved for open structure building envelope protection for single unit sizes up to 4 ft wide x 8 ft high for wet rooms.

\*\* NOTE TO SPECIFIER \*\* Option. Delete if not required.

* + - 1. Provide motorized damper Model VCD-40.
      2. Miami-Dade County Protocols Compliance:
         1. PA-201 Large and Small Missile Impact Test.
         2. PA-202 Uniform Static Air Pressure Test.
         3. PA-203 Cyclic Wind Pressure Test - Maximum Design Pressure Rating plus or minus 150 psf (7.2 kPa).
      3. AMCA Listing Label Compliance:
         1. 540 - Test Method for Louvers Impacted by Windborne Debris - Enhanced Protection.
         2. 550 - Test Method for High Velocity Wind Driven Rain Resistant Louvers.
      4. Material: Extruded Aluminum, Alloy 6063-T5.
      5. Louver Depth: 6 inches (152.4 mm).
      6. Blade: 0.063 inch (1.60 mm). Blades shall be vertical, V-type with center hook and spaced 0.75 inch (19 mm) on center.
      7. Frame: 0.095 inch (2.41 mm).
      8. Test Standard: Wind-Driven Rain.
      9. Free Area: 4 by 4 ft (1219 by 1219 mm) unit: 7.29 sq ft (0.68 sq m).
      10. Percent Free Area: 46 percent.
      11. Beginning Point of Water Penetration: 1,250 fpm (6.35 m per sec).
      12. Air Volume Flow Rate at Beginning Point of Water Penetration: 9,112 cfm (4.30 cu m per sec).
      13. Pressure Drop at Beginning Point of Water Penetration: 0.18 inch WC (0.04 kPa).
      14. Tested in accordance with AMCA 540 Test Method for Louvers Impacted by Wind Borne Debris and AMCA 550 Test Method for High Velocity Wind Driven Rain.
      15. Wind Driven Rain Water Penetration Test:
          1. Exterior Wind Velocity: 29 mph (13 m per sec).
          2. Rainfall Rate: 3 inches (75 mm) per hr.
          3. Effectiveness: 100.0 percent.
          4. Core Ventilation: 984 fpm (5.0 m per sec).
      16. Wind Driven Rain Water Penetration Test:
          1. Exterior Wind Velocity: 50 mph (22 m per sec).
          2. Rainfall Rate: 8 inches (200 mm) per hr.
          3. Effectiveness: 100.0 percent.
          4. Core Ventilation: 984 fpm (5.0 m per sec).

\*\* NOTE TO SPECIFIER \*\* SCH601MD is a sightproof, horizontal blade Storm Class Louver that is Florida Building Code approved for use in the High Velocity Hurricane Zone and Miami-Dade approved for installations where the enclosed space is designed to drain or otherwise accommodate water penetration (wet rooms). Delete if not required.

* + 1. Miami-Dade Sightproof, Horizontal Blade Louver:
       1. Product: Storm Class Louver Type SCH601MD as designed and manufactured by The Airolite Company LLC.
          1. Florida Product Approval N.:10093; Miami-Dade NOA No.: 17-0919.07.
       2. Application: Louvers shall be tested in accordance with Miami-Dade protocols TAS-201, TAS-202 and TAS-203 and approved for open structure building envelope protection for single unit sizes up to 6 ft wide by 12 ft high (1829 mm by 3658 mm) for wet room protection.
       3. Miami-Dade County Protocols Compliance:
          1. PA-201 Large and Small Missile Impact Test.
          2. PA-202 Uniform Static Air Pressure Test.
          3. PA-203 Cyclic Wind Pressure Test - Maximum Design Pressure Rating plus or minus 150 psf (7.2 kPa).
       4. AMCA Listing Label Compliance:
          1. 540 - Test Method for Louvers Impacted by Windborne Debris - Enhanced Protection.
          2. 550 - Test Method for High Velocity Wind Driven Rain Resistant Louvers. VCD-40 Damper Required for Rating.
       5. Material: Extruded Aluminum, Alloy 6063-T5.
       6. Louver Depth: 6 inches (152.4 mm).
       7. Blade: 0.081 inch (2.06 mm). Blades shall be horizontal, inverted V-type with center hook and spaced 2 inches on center.
       8. Frame: 0.081 inch (2.06 mm).
       9. Test Standard: AMCA Standard 500-L.
       10. Free Area: 4 by 4 ft (1219 by 1219 mm) unit: 7.58 sq ft (0.704 sq m).
       11. Percent Free Area: 47 percent.
       12. Beginning Point of Water Penetration: 1,250 fpm (6.35 m per sec).
       13. Air Volume Flow Rate at Beginning Point of Water Penetration: 9,475 cfm (4.47 cu m per sec).
       14. Pressure Drop at Beginning Point of Water Penetration: 0.32 inches WC (0.081 kPa).
       15. Wind Driven Water Penetration Test:
           1. Exterior Wind Velocity: 29 mph (13 m per sec).
           2. Rainfall Rate: 3 inches (75 mm) per hr.
           3. Effectiveness: 99.8 percent.
           4. Core Ventilation: 763 fpm (3.9 m per sec).
       16. Wind Driven Rain Water Penetration Test:
           1. Exterior Wind Velocity: 50 mph (22 m per sec).
           2. Rainfall Rate: 8 inches (200 mm) per hr.
           3. Effectiveness: 99.2 percent.
           4. Core Ventilation: 676 fpm (3.4 m per sec).

\*\* NOTE TO SPECIFIER \*\* K6746MD is a drainable louver that is Florida Building Code approved for use in the High Velocity Hurricane Zone and Miami-Dade approved for installations where the enclosed space is designed to drain or otherwise accommodate water penetration (wet rooms). Delete if not required.

* + 1. Miami-Dade, Horizontal Blade, Drainable Head Louver:
       1. Product: Drainable Louver Type K6746MD with visible mullions as designed and manufactured by The Airolite Company LLC.
          1. Miami-Dade Notice of Acceptance Number: Florida Product Approval No.: 10093; Miami-Dade NOA No.: 17-0919.06.
       2. Application: Louvers shall be tested in accordance with Miami-Dade protocols TAS-201, TAS-202 and TAS-203 and approved for open structure building envelope protection for single unit sizes up to 6 ft wide by 12 ft high (1829 mm by 3658 mm) or 12 ft wide by 6 ft high (3658 mm by 1829 mm), for wet room protection.
       3. Miami-Dade County Protocols Compliance:
          1. PA-201 Large and Small Missile Impact Test.
          2. PA-202 Uniform Static Air Pressure Test.
          3. PA-203 Cyclic Wind Pressure Test - Maximum Design Pressure Rating plus or minus 150 psf (7.2 kPa).
       4. AMCA Listing Label Compliance:
          1. 540 - Test Method for Louvers Impacted by Windborne Debris.
       5. Material: Extruded Aluminum, Alloy 6063-T5.
       6. Louver Depth: 6 inches (152.4 mm).
       7. Blade: 0.081 inch (2.06 mm). Blades shall be drainable and spaced approximately 4 inches (102 mm) on center.
       8. Frame: 0.125 inch (3.18 mm).
       9. Test Standard: AMCA Standard 500-L.
       10. Free Area: 4 by 4 ft (1219 by 1219 mm) unit: 9.41 sq ft (0.88 sq m).
       11. Percent Free Area: 59 percent.
       12. Beginning Point of Water Penetration: 1,077 fpm (5.476.35 m per sec).
       13. Air Volume Flow Rate at Beginning Point of Water Penetration: 10,135 cfm (4.78 cu m per sec).
       14. Pressure Drop at Beginning Point of Water Penetration: 0.20 inches WC (0.050 kPa).

\*\* NOTE TO SPECIFIER \*\* K8206AMD is a combination drainable stationary and airfoil adjustable blade louver that is Florida Building Code approved for use in the High Velocity Hurricane Zone and Miami-Dade approved for installations where the enclosed space is designed to drain or otherwise accommodate water penetration (wet rooms). Delete if not required.

* + 1. Miami-Dade, Horizontal Combination Blade Louver:
       1. Product: Combination Drainable Stationary and Airfoil Adjustable Blade Louver Type K8206AMD as designed and manufactured by The Airolite Company LLC.
          1. Miami-Dade Notice of Acceptance Number: Florida Product Approval No.: 16743; Miami-Dade NOA No.: 18-0918.01.
       2. Application: Louvers shall be tested in accordance with Miami-Dade protocols TAS-201, TAS-202 and TAS-203 and approved for open structure building envelope protection for single unit sizes up to 5 ft wide by 10 ft high (1524 mm by 3048 mm), for wet room protection.
       3. Miami-Dade County Protocols Compliance:
          1. PA-201 Large and Small Missile Impact Test.
          2. PA-202 Uniform Static Air Pressure Test.
          3. PA-203 Cyclic Wind Pressure Test - Maximum Design Pressure Rating plus or minus 150 psf (7.2 kPa).
       4. AMCA Listing Label Compliance:
          1. 540 - Test Method for Louvers Impacted by Windborne Debris.
       5. Material: Extruded Aluminum, Alloy 6063-T5.
       6. Louver Depth: 6 inches (152.4 mm).
       7. Stationary Blade: 0.081 inch (2.06 mm).
       8. Adjustable Blade: 0.081 inch (2.06 mm).
       9. Head/Sill Frame: 0.25 inch (3.18 mm).
       10. Jamb Frame: 0.125 inch (6.35 mm).
       11. Test Standard: AMCA Standard 500-L.
       12. Free Area: 4 by 4 ft (1219 by 1219 mm) unit: 7.27 sq ft (0.68 sq m).
       13. Percent Free Area: 45.4 percent.
       14. Beginning Point of Water Penetration: 1,125 fpm (5.72 m per sec).
       15. Air Volume Flow Rate at Beginning Point of Water Penetration: 8,179 cfm (3.86 cu m per sec).
       16. Pressure Drop at Beginning Point of Water Penetration: 0.17 inches WC (0.042 kPa).
  1. FLORIDA STATE CODE APPROVED STATIONARY LOUVER

\*\* NOTE TO SPECIFIER \*\* K6746X is a drainable louver certified by Underwriter's Laboratory under ASTM E 330, Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights, and Curtain Walls by Uniform Static Air Pressure Difference, to comply with the requirements of the Florida Building Code. (Florida Product Approval No.: FL7708.2; UL Classified: R25376). Delete if not required.

* + 1. FL Approved Horizontal Blade, Drainable Louver:
       1. Product: Drainable Louver Type K6746X with visible vertical mullions as designed and manufactured by The Airolite Company LLC.
          1. Florida Product Approval No.: FL7708.2; UL Classified: R25376.
       2. ASTM E330-02, Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights, and Curtain Walls by Uniform Static Air Pressure Difference, to plus or minus 200 psf (9.6 kPA) in compliance with the Florida Building Code.
       3. Material: Extruded Aluminum, Alloy 6063-T5.
       4. Louver Depth: 6 inches (152.4 mm).
       5. Blade: 0.081 inch (2.06 mm). Blades shall be stationary, incorporate drainable gutters, and be spaced 4 inches (101.6 mm) on center. Jamb frames shall incorporate drainable gutters to ensure resistance to water penetration.
       6. Frame: 0.081 inch (2.06 mm).
       7. Blade Angle: 35 degree.
       8. Miami-Dade County Protocols Compliance:
          1. PA-201 Large and Small Missile Impact Test. Welded Construction Required
          2. PA-202 Uniform Static Air Pressure Test.
          3. PA-203 Cyclic Wind Pressure Test - Maximum Design Pressure Rating plus or minus 150 psf (7.2 kPa). Welded Construction Required.
       9. AMCA Listing Label Compliance:
          1. 540 - Test Method for Louvers Impacted by Windborne Debris.
       10. Test Standard: AMCA Standard 500-L.
       11. Free Area: 4 by 4 ft (1219 by 1219 mm) unit: 9.41 sq ft (0.88 sq m).
       12. Percent Free Area: 59 percent.
       13. Beginning Point of Water Penetration: 1,077 fpm (5.47 m per sec).
       14. Air Volume Flow Rate at Beginning Point of Water Penetration: 10,135 cfm (4.78 cu m per sec).
       15. Pressure Drop at Beginning Point of Water Penetration: 0.20 inches WC (0.050 kPa).
       16. Maximum Qualified Wind Design Load plus or minus 200 PSF (9.6 kpa).

\*\* NOTE TO SPECIFIER \*\* SCH501X is a horizontal blade, Storm Class louver certified by Underwriter's Laboratory under ASTM E 330, Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights, and Curtain Walls by Uniform Static Air Pressure Difference, to comply with the requirements of the Florida Building Code. (Florida Product Approval No.: FL7708.3; UL Classified: R25376). Delete if not required.

* + 1. FL Approved Horizontal Blade Louver:
       1. Product: Storm Class Louver Type SCH501X as designed and manufactured by The Airolite Company LLC.
          1. Florida Product Approval No.: FL7708.3; UL Classified: R25376.
       2. ASTM E330-02, Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights, and Curtain Walls by Uniform Static Air Pressure Difference, to plus or minus 200 psf (9.6 kPA) in compliance with the Florida Building Code.
       3. Material: Extruded Aluminum, Alloy 6063-T5.
       4. Louver Depth: 5 inches (127.0 mm).
       5. Blade: 0.081 inch (2.06 mm). Blades shall be horizontal, inverted-V type with a center hook and spaced 2 inches (50.8 mm) on center.
       6. Frame: 0.081 inch (2.06 mm).
       7. Miami-Dade County Protocols Compliance:
          1. PA-201 Large and Small Missile Impact Test. Welded Construction Required.
          2. PA-202 Uniform Static Air Pressure Test.
          3. PA-203 Cyclic Wind Pressure Test - Maximum Design Pressure Rating plus or minus 150 psf (7.2 kPa). Welded Construction Required.
       8. AMCA Listing Label Compliance:
          1. 540 - Test Method for Louvers Impacted by Windborne Debris - Enhanced Protection.
          2. 550 - Test Method for High Velocity Wind Driven Rain Resistant Louvers. VCD-40 Damper Required for rating.
       9. Test Standard: AMCA Standard 500-L.
       10. Water Penetration Test: Wind Driven Rain.
       11. Free Area: 4 by 4 ft (1219 by 1219 mm) unit: 6.80 sq ft (0.632 sq m).
       12. Percent Free Area: 43 percent.
       13. Beginning Point of Water Penetration: 1,250 fpm (6.35 m per sec).
       14. Air Volume Flow Rate at Beginning Point of Water Penetration: 9,337 cfm (4.41 cu m per sec).
       15. Pressure Drop at Beginning Point of Water Penetration: 0.18 inches WC (0.045 kPa).
       16. Wind Driven Water Penetration Test:
           1. Exterior Wind Velocity: 29 mph (13 m per sec).
           2. Rainfall Rate: 3 inches (75 mm) per hr.
           3. Effectiveness: 99.1 percent.
           4. Core Ventilation: 787 fpm (4.0 m per sec).
       17. Wind Driven Rain Water Penetration Test:
           1. Exterior Wind Velocity: 50 mph (22 m per sec).
           2. Rainfall Rate: 8 inches (200 mm) per hr.
           3. Effectiveness: 99.2 percent.
           4. Core Ventilation: 689 fpm (3.5 m per sec).
       18. Maximum Qualified Wind Design Load plus or minus 200 PSF (9.6 kpa).

\*\* NOTE TO SPECIFIER \*\* K6744X is a drainable louver certified by Underwriter's Laboratory under ASTM E 330, Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights, and Curtain Walls by Uniform Static Air Pressure Difference, to comply with the requirements of the Florida Building Code. (Florida Product Approval No.: FL7708.1; UL Classified: R25376). Delete if not required.

* + 1. FL Approved Horizontal Blade, Drainable Louver:
       1. Product: Drainable Louver Type K6744X with Visible Vertical Mullions as designed and manufactured by The Airolite Company LLC.
          1. Florida Product Approval No.: FL7708.1; UL Classified: R25376.
       2. ASTM E330-02, Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights, and Curtain Walls by Uniform Static Air Pressure Difference, to plus or minus 200 psf (9.6 kPA) in compliance with the Florida Building Code.
       3. Material: Extruded Aluminum, Alloy 6063-T5.
       4. Louver Depth: 4 inches (101.6 mm).
       5. Blade: 0.081 inch (2.06 mm). Blades shall be stationary, incorporate drainable gutters, and be spaced 3-1/4 inches (82.5 mm) on center. Jamb frames shall incorporate drainable gutters to ensure resistance to water penetration.
       6. Frame: 0.081 inch (2.06 mm).
       7. Blade Angle: 35 degree.
       8. Miami-Dade County Protocols Compliance:
          1. PA-201 Large and Small Missile Impact Test. Welded Construction Required.
          2. PA-202 Uniform Static Air Pressure Test.
          3. PA-203 Cyclic Wind Pressure Test - Maximum Design Pressure Rating plus or minus 150 psf (7.2 kPa). Welded Construction Required.
       9. AMCA Listing Label Compliance:
          1. 540 - Test Method for Louvers Impacted by Windborne Debris.
       10. Test Standard: AMCA Standard 500 L.
       11. Free Area: 4 by 4 ft (1219 by 1219 mm) unit: 8.98 sq ft (0.84 sq m).
       12. Percent Free Area: 56 percent.
       13. Beginning Point of Water Penetration: 1,151 fpm (5.85 m per sec).
       14. Air Volume Flow Rate at Beginning Point of Water Penetration: 10,336 cfm (4.89 cu m per sec).
       15. Pressure Drop at Beginning Point of Water Penetration: 0.20 inches WC (0.050 kPa).

\*\* NOTE TO SPECIFIER \*\* Delete article if not required.

* 1. EQUIPMENT SCREENS
     1. General: Provide louvers with screens as manufactured by The Airolite Co. at locations indicated on Drawings.

\*\* NOTE TO SPECIFIER \*\* Delete paragraph above or below. If retaining above, indicate locations on Drawings or in schedules. Revise below if screens are also located on interior louvers.

* + 1. General: Provide exterior louvers with equipment screens.

\*\* NOTE TO SPECIFIER \*\* Retain applicable requirements from subparagraphs below to suit louver locations, types, and function.

* + - 1. Screen Location for Fixed Louvers: Interior face.
      2. Screen Location for Adjustable Louvers: Interior face, unless otherwise indicated.

\*\* NOTE TO SPECIFIER \*\* Delete subparagraph above or below.

* + - 1. Screen Location for Adjustable Louvers: Exterior face, unless otherwise indicated.
      2. Screening Type: Bird screening, unless otherwise indicated.

\*\* NOTE TO SPECIFIER \*\* Retain subparagraph above and below if insect screening is required at selected locations. Delete above and revise below if insect screening is required on all exterior louvers.

* + - 1. Screening Type: Insect screening where indicated.
    1. Attachment: Secure screens to louver frames with stainless-steel machine screws, spaced 18 inches (458 mm) o.c.
    2. Equipment Screen Frames: As manufactured by The Airolite Co; to sizes indicated on Drawings.
       1. Fabrication: Mitered corners.
       2. Metal: Roll formed aluminum.

\*\* NOTE TO SPECIFIER \*\* Delete finish not required.

* + - 1. Finish: Same finish as louver frames to which louver screens are attached.
      2. Finish: Mill finish, unless otherwise indicated.

\*\* NOTE TO SPECIFIER \*\* Rewirable allows screen mesh to be replaced without replacing frame, which is desirable for insect screen. Non-rewirable requires frame to be replaced when replacing screen mesh, which is typical for bird screen. Delete type not required.

* + - 1. Type: Rewirable frames with a driven spline or insert for securing screen mesh.
      2. Type: Non-rewirable, U-shaped frames for permanently securing screen mesh.

\*\* NOTE TO SPECIFIER \*\* If more than one screen type is required, coordinate selection with Drawings and with Mechanical Engineer for required percentage of open area. Retain paragraphs below for louver material selected. Delete all three if manufacturer's standard screening is acceptable.

* + 1. Louver Screening for Aluminum Louvers: As manufactured by The Airolite Co.

\*\* NOTE TO SPECIFIER \*\* Delete bird screening and insect screening options not required or insert another mesh or wire size. If both bird screening and insect screening are required, indicate location of each on Drawings or in schedules.

* + - 1. Bird Screening: Flattened, expanded aluminum, 3/4 by 0.050 inch (19 by 1.27 mm) thick.
      2. Bird Screening: Flattened, expanded aluminum, 3/4 inch by 0.125 inch (19 by 3.18 mm) thick.
      3. Bird Screening: Aluminum, 1/2 inch (12.7 mm) square mesh, 0.063 inch (1.6 mm) wire.
      4. Bird Screening: Aluminum, 1/4 inch (6.35 mm) square mesh, 0.047 inch (1.19 mm) wire.
      5. Bird Screening: Aluminum, 1 inch (25.4 mm) square mesh, 0.120 inch (3.05 mm) wire.
      6. Bird Screening: Stainless steel, 1/2 inch (12.7 mm) square mesh, 0.047 inch (1.19 mm) wire.
      7. Bird Screening: Stainless steel, 1 inch (25.4 mm) square mesh, 0.063 inch (1.60 mm) wire.
      8. Insect Screening: Aluminum, 18 by 16 (1.4 by 1.6 mm) mesh, 0.012 inch (0.30 mm) wire.
      9. Insect Screening: Stainless steel, 18 by 18 (1.4 by 1.4 mm) mesh, 0.009 inch (0.23 mm) wire.

\*\* NOTE TO SPECIFIER \*\* Delete paragraph below if no galvanized steel louvers.

* + 1. Louver Screening for Galvanized Steel Louvers: As manufactured by The Airolite Co.

\*\* NOTE TO SPECIFIER \*\* Delete bird screening and insect screening options not required or or insert another mesh or wire size. If both bird screening and insect screening are required, indicate location of each on Drawings or in schedules.

* + - 1. Bird Screening: Galvanized steel, 1/2 inch (12.7 mm) wire cloth, 0.041 inch (1.04 mm) wire.
      2. Bird Screening: Stainless steel, 1/2 inch (12.7 mm) square mesh, 0.047 inch (1.19 mm) wire.
      3. Insect Screening: Stainless steel, 18 by 18 (1.4 by 1.4 mm) mesh, 0.009 inch (0.23 mm) wire.

\*\* NOTE TO SPECIFIER \*\* Delete paragraph below if no stainless-steel louvers.

* + 1. Louver Screening for Stainless-Steel Louvers: As manufactured by The Airolite Co.

\*\* NOTE TO SPECIFIER \*\* Delete bird screening or insect screening options not required, or keep both, or insert another mesh or wire size. If both bird screening and insect screening are required, indicate location of each on Drawings or in schedules.

* + - 1. Bird Screening: Stainless steel, 1/2 inch (12.7 mm) square mesh, 0.047 inch (1.19 mm) wire.
      2. Insect Screening: Stainless steel, 18 by 18 (1.4 by 1.4 mm) mesh, 0.009 inch (0.23 mm) wire.

\*\* NOTE TO SPECIFIER \*\* Delete this Article if blank-off panels are not required.

* 1. BLANK-OFF PANELS
     1. General: Provide blank-off panels as manufactured by The Airolite Co. at locations indicated on Drawings.

\*\* NOTE TO SPECIFIER \*\* Delete attachment not required. Other methods include slide bolts and cam latches with or without hinges.

* + - 1. Attachment: Blank-off panels are not sealed, but fastened to the interior face of the louver.
      2. Attachment: Blank-off panels are silicone wet sealed and fastened to the interior face of the louver.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. Non-Insulating, Blank-off Panels: Metal sheet as manufactured by The Airolite Co.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + - 1. Aluminum Sheet for Aluminum Louvers:

\*\* NOTE TO SPECIFIER \*\* Delete thickness not required.

* + - * 1. 0.050 inch (1.2 mm) thickness, precoat black.
        2. 0.063 inch (1.6 mm) thickness, finished to match exterior and/or interior.
        3. 0.125 inch (3.2 mm) thickness, finished to match exterior and/or interior.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + - 1. Galvanized Steel Sheet for Galvanized Steel Louvers:

\*\* NOTE TO SPECIFIER \*\* Delete thickness not required.

* + - * 1. Thickness: 0.052 inch (1.3 mm), unless otherwise indicated.
        2. Thickness: 0.040 inch (1.0 mm), unless otherwise indicated.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + - 1. Stainless-Steel Sheet for Stainless-Steel Louvers:

\*\* NOTE TO SPECIFIER \*\* Delete thickness not required.

* + - * 1. Thickness: 0.0500 inch (1.3 mm), unless otherwise indicated.
        2. Thickness: 0.0375 inch (0.95 mm), unless otherwise indicated.
      1. Blank-off panel construction: Fabrication method is single sheet. Gasket materials, edge treatments, and sealed edges are not by The Airolite Co.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. Insulating Blank-off Panels: Metal-faced panels consisting of insulating core as manufactured by The Airolite Co.

\*\* NOTE TO SPECIFIER \*\* Delete facing sheet not required.

* + - 1. Metal Facing Sheets: Aluminum sheet, 0.032 inch (0.8 mm) thick, precoat black.
      2. Metal Facing Sheets: Aluminum sheet, 0.063 inch (1.6 mm) thick, finished to match finished to match exterior and/or interior.
      3. Metal Facing Sheets: Aluminum sheet, 0.125 inch (3.2 mm) thick, finished to match finished to match exterior and/or interior

\*\* NOTE TO SPECIFIER \*\* Delete panel thickness not required.

* + - 1. Thickness: 1 inch (25 mm).
      2. Thickness: 2 inch (50 mm).

\*\* NOTE TO SPECIFIER \*\* Delete insulating core not required.

* + - 1. Insulating Core: Mineral Wool.
         1. Semi-rigid, non-combustible, mineral wool thermal insulation board; will comply with ASTM C612, Minimum R-value of 4.2 per 1 inch of thickness at 75 degree F mean temperature, Minimum Density of 4.4 lbs per cu ft.
         2. MEA Approval - New York City (331-97-M) and Los Angeles (RR 25444) approved for compliance and performance.
      2. Insulating Core: Extruded Polystyrene.
         1. Rigid cellular thermal insulation will comply with ASTM C578, Minimum R-value of 5.0 per 1 inch of thickness at 75 degree F mean temperature, Minimum Density of 1.5 lbs per cu ft.
      3. Blank-off Panel Construction: Fabrication method shall be pan-in-pan. Gasket materials, edge treatments, and sealed edges are not by The Airolite Co.

\*\* NOTE TO SPECIFIER \*\* Hurricane louvers only. Delete below if not required.

* + - 1. Seal perimeter joints between panel faces and louver frames.

\*\* NOTE TO SPECIFIER \*\* Insert other accessories for wall vents if required and not furnished as part of another Section. Delete this Article if no wall vents.

* 1. FINISHES, GENERAL
     1. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
     2. Finish units after assembly.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* 1. ALUMINUM FINISHES

\*\* NOTE TO SPECIFIER \*\* Delete this Article if no aluminum louvers and vents. Retain or revise finishes below to suit Project. If retaining more than one, indicate location of each on Drawings or by inserts.

* + 1. Compliance: Finish designations prefixed by AA comply with system established by the Aluminum Association for designating aluminum finishes.

\*\* NOTE TO SPECIFIER \*\* Finish above is standard with many manufacturers; below is a heavy-anodized finish. Verify availability with manufacturers selected.

* + 1. Class I, Clear Anodic Finish: AA-M12C22A41 complying with AAMA 611.
       1. Mechanical Finish: Nonspecular as fabricated.
       2. Chemical Finish: Etched, medium matte.
       3. Anodic Coating: Architectural Class I, clear coating 0.018 mm or thicker.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. Class I, Color Anodic Finish: AA-M12C22A42/A44 complying with AAMA 611.
       1. Mechanical Finish: Nonspecular as fabricated.
       2. Chemical Finish: Etched, medium matte.
       3. Anodic Coating: Architectural Class I, integrally colored or electrolytically deposited color coating 0.018 mm or thicker. Color to fall in standard range for color variation in anodic finishes.

\*\* NOTE TO SPECIFIER \*\* Retain one color requirement below.

* + - 1. Color: Champagne bronze.
      2. Color: Light bronze.
      3. Color: Medium bronze.
      4. Color: Dark bronze.
      5. Color: Extra Dark bronze.
      6. Color: Black.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. Baked-Enamel Finish: AA-C12C42R1x.
       1. Apply baked enamel complying with paint manufacturer's specifications for cleaning, conversion coating, and painting.
       2. Chemical Finishes: Cleaned with inhibited chemicals and acid-chromate-fluoride-phosphate conversion coating.

\*\* NOTE TO SPECIFIER \*\* Subparagraph below references AAMA standard for pigmented organic coating on extrusions.

* + - 1. Organic Coating: Thermosetting, modified-acrylic enamel primer/topcoat system complying with AAMA 2603, except with a minimum dry film thickness of 1.5 mils (0.04 mm), medium gloss.

\*\* NOTE TO SPECIFIER \*\* Retain one color requirement below.

* + - 1. Color: As indicated by manufacturer's color designations.

\*\* NOTE TO SPECIFIER \*\* Subparagraph below can have varying effect on cost.

* + - 1. Color: Match Architect's sample.
      2. Color: As selected by Architect from manufacturer's full range of colors.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. High-Performance Organic Coating Finish: AA-C12C42R1x.
       1. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
       2. Chemical Finishes: Cleaned with inhibited chemicals and acid-chromate-fluoride-phosphate conversion coating.

\*\* NOTE TO SPECIFIER \*\* Subparagraph below references AAMA standard for high-performance organic coating on extrusions and panels. Revise if specific products are required.

* + - 1. Fluoropolymer Two-Coat Coating System: Manufacturer's standard two-coat, thermocured system consisting of specially formulated inhibitive primer and fluoropolymer color topcoat containing not less than 70 percent polyvinylidene fluoride resin by weight; complying with AAMA 2605.

\*\* NOTE TO SPECIFIER \*\* Retain one color requirement below.

* + - * 1. Color: As indicated by manufacturer's color designations.

\*\* NOTE TO SPECIFIER \*\* Subparagraph below can have varying effect on cost.

* + - * 1. Color: Match Architect's sample.
        2. Color: As selected by Architect from manufacturer's full range of colors.

\*\* NOTE TO SPECIFIER \*\* Delete subparagraph above or below; if both are required, indicate location of each system on Drawings, in schedules, or by inserts. Retain applicable color requirement for each from choices following subparagraph below.

* + - 1. Fluoropolymer Three-Coat Coating System: Manufacturer's standard three-coat, thermocured system consisting of specially formulated inhibitive primer, fluoropolymer color coat, and clear fluoropolymer topcoat, with both color coat and clear topcoat containing not less than 70 percent polyvinylidene fluoride resin by weight; complying with AAMA 2605.

\*\* NOTE TO SPECIFIER \*\* Retain one color requirement below.

* + - * 1. Color: As indicated by manufacturer's color designations.

\*\* NOTE TO SPECIFIER \*\* Subparagraph below can have varying effect on cost.

* + - * 1. Color: Match Architect's sample.
        2. Color: As selected by Architect from manufacturer's full range of colors.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. Woodgrain Finish:
       1. Airowood Woodgrain Finish as manufactured by The Airolite Co.
       2. Finish shall comply with AAMA 2604.

\*\* NOTE TO SPECIFIER \*\* Delete wood grain not required.

* + - 1. Wood Grain: AL301 Honey Knotty Pine
      2. Wood Grain: AL302 Golden Knotty Pine
      3. Wood Grain: AL303 Dark Oak
      4. Wood Grain: AL304 Cinnamon Cherry
      5. Wood Grain: AL305 Natural Cherry

\*\* NOTE TO SPECIFIER \*\* To obtain exact finish desired, insert names of coating products and manufacturers. Delete this Article if no galvanized steel, formed-metal louvers.

1. EXECUTION
   1. EXAMINATION AND PREPARATION
      1. Prepare substrates and openings using methods recommended by manufacturer for achieving best result for substrates under project conditions.
      2. Do not proceed with installation until substrates and nailers have been prepared using the methods recommended by the manufacturer and deviations from manufacturer's recommended tolerances are corrected. Commencement of installation constitutes acceptance of conditions.
      3. If preparation is the responsibility of another installer, notify Architect in writing of deviations from manufacturer's recommended installation tolerances and conditions.
   2. INSTALLATION
      1. Install in accordance with manufacturer's instructions.
         1. Locate and place units level, plumb, and at indicated alignment with adjacent work.
         2. Use concealed anchorages where possible. Provide brass or lead washers fitted to screws where required to protect metal surfaces and to make a weathertight connection.
         3. Form closely fitted joints with exposed connections accurately located and secured.
         4. Provide perimeter reveals and openings of uniform width for sealants and joint fillers as indicated on Drawings.
         5. Repair finishes damaged by cutting, welding, soldering, and grinding. Restore finishes so no evidence remains of corrective work. Return items that cannot be refinished in the field to the factory, make required alterations, and refinish entire unit or provide new units.
         6. Protect galvanized and nonferrous-metal surfaces from corrosion or galvanic action by applying a heavy coating of bituminous paint on surfaces that will be in contact with concrete, masonry, or dissimilar metals.

\*\* NOTE TO SPECIFIER \*\* Verify that Section title listed below is correct for this Project's Specifications because Section title may have changed since this Section was updated.

* + 1. Install concealed gaskets, flashings, joint fillers, and insulation, as installation progresses, where weathertight joints are required. Comply with Division 7 Section "Joint Sealants" for sealants applied during installation.
  1. ADJUSTING, CLEANING AND PROTECTION

\*\* NOTE TO SPECIFIER \*\* Paragraph below applies only to louvers, delete if only specifying grilles.

* + 1. Test operation of adjustable louvers and adjust as needed to produce fully functioning units that comply with requirements.
    2. Protect products from damage until completion of project. Use temporary protective coverings where needed and approved by manufacturer. Remove protective covering at the time of Substantial Completion.
    3. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION