SECTION 08 91 00

ARCHITECTURAL LOUVERS

PART 1 – GENERAL

1.1 PURPOSE

A. This guideline is intended to provide useful information to the Professional Service Provider (PSP) to establish a basis of design. PSP is to apply the principles of this section such that the University of Texas at Arlington (UTA) may achieve a level of quality and consistency in the design and construction of their facilities. Deviations from these guidelines must be approved by UTA and may require justification through Life Cycle Cost (LCC) analysis and submitted to UTA for approval.

1.2 LESSONS LEARNED AND DESIGN CONSIDERATIONS

A. X

1.3 SECTION INCLUDES

A. Louvers, frames, and accessories.
B. Fixed louvers at crawl space ventilation opening and other locations noted.
C. Vertical blade, aluminum mechanical screen.

1.4 RELATED REQUIREMENTS

A. Section 07 90 05 – Joint Sealers

1.5 REFERENCE STANDARDS

A. AAMA 2604 - Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels; current edition.
B. AAMA 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels; current edition.
C. AMCA 500-L - Laboratory Methods of Testing Louvers for Rating; current edition.
D. AMCA 511 - Certified Ratings Program for Air Control Devices; current edition.
E. ASTM A666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar; current edition.

1.6 SUBMITTALS

A. See Division 01 for submittal procedures.
B. Product Data: Provide data describing design characteristics, maximum recommended air velocity, design free area, materials and finishes.
C. Shop Drawings: Indicate louver layout plan and elevations, opening and clearance dimensions, tolerances; head, jamb and sill details; blade configuration, screens, blankout areas required, and frames.
D. Samples: Submit two samples 21 x 12 inches in size illustrating finish and color of exterior and interior surfaces.
E. Test Reports: Independent agency reports showing compliance with specified performance criteria.
F. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.

1.7 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing products of the type specified in this section, with minimum ten years of documented experience.

1.8 WARRANTY

A. See Division 01 for additional warranty requirements.
B. Provide ten year manufacturer warranty against distortion, metal degradation, and failure of connections.
   1. Finish: Include coverage against degradation of exterior finish.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

A. Fixed Louver:
   1. Basis of Design: Greenheck.
   2. Other Acceptable Manufacturers"
      a. Construction Specialties, Inc: www.c-sgroup.com.
   3. Substitutions: See Division 01.
B. Vertical Blade, Mechanical Screen:
   1. Basis of Design: Architectural Louvers, Model V4YV - 4 inch deep inverted Y blade.
   2. Substitutions: See Division 01.
C. Horizontal Blade, Mechanical Screen:
   1. Basis of Design: X
   2. Substitutions: See Division 01.

2.2 LOUVERS

A. Louvers: Factory fabricated and assembled, complete with frame, mullions, and accessories; AMCA Certified in accordance with AMCA 511.
   1. Wind Load Resistance: Design to resist positive and negative wind load of 42 psf without damage or permanent deformation.
   2. Intake Louvers: Design to allow maximum of 0.01 oz/sq ft water penetration at calculated intake design velocity based on design air flow and actual free area, when tested in accordance with AMCA 500-L.
   3. Screens: Provide insect screens at intake louvers and bird screens at exhaust louvers.
B. Fixed Louvers: Vertical blade, extruded aluminum construction.
   1. Manufacturers:
      a. Greenheck, EVH-501, Wind-Driven Rain Louver, Vertical Blade.
      b. Substitutions: See Division 01.
   2. Free Area: 50 percent, minimum.
   3. Blades: Vertical rain resistant style, heavy gauge extruded 6063-T5.
   4. Frame: 5 inches deep, channel profile; corner joints butted, with continuous recessed caulking channel each side.
   5. Aluminum Thickness: Frame 12 gage, 0.0808 inch minimum; blades 14 gage, 0.060 inch minimum.
   6. Aluminum Finish: Superior performing organic coatings; finish welded units after fabrication.
   7. Color: PPG Duranar XL. Color: As selected by Architect.
C. Vertical Blade Mechanical Screen Louvers: Vertical blade, extruded aluminum construction.
   1. Manufacturers:
      a. Architectural Louvers, Model V4YV - 4 inch deep inverted Y blade.
      b. Substitutions: See Division 01.
   2. Free Area: 32.5%, minimum.
   3. Blades: Vertical rain resistant style, heavy gauge extruded 6063-T5.
   4. Frame: 4 inches deep, concealed; outside corners boxed.
   5. Aluminum Thickness: Frame 9 gage, 0.125 inch minimum; blades 12 gage, 0.081 inch minimum.
   6. Aluminum Finish: Superior performing organic coatings; finish welded units after fabrication.
   7. Color: PPG Duranar XL. Color: As selected by Architect.
D. Horizontal Blade Mechanical Screen Louvers: Horizontal blade, extruded aluminum construction.
   1. Manufacturers:
      a. Architectural Louvers, Model V4YH - 4 inch deep inverted Y blade.
      b. Substitutions: See Division 01.
   2. Free Area: 32.3%, minimum.
   3. Blades: Horizontal rain resistant style, heavy gauge extruded 6063-T5.
   4. Frame: 4 inches deep, concealed; outside corners boxed.
   5. Aluminum Thickness: Frame 9 gage, 0.125 inch minimum; blades 12 gage, 0.081 inch minimum.
   6. Aluminum Finish: Superior performing organic coatings; finish welded units after fabrication.
   7. Color: PPG Duranar XL. Color: As selected by Architect.

2.3 MATERIALS

A. Extruded Aluminum: ASTM B221 (ASTM B221M).
B. Stainless Steel: ASTM A666 Type 304, soft temper, smooth surface, No. 4 finish.
C. Bird Screen: Interwoven wire mesh of steel, 0.051 inch diameter wire, 3/4 inch open weave, square design.
D. Insect Screen: 18 x 16 size aluminum mesh.

E. Polyvinylidene Fluoride Coating: Minimum 70 percent Kynar 500/Hylar 500 resin, three coat finish, complying with AAMA 2604.

2.4 FINISHES
A. Superior Performing Organic Coatings: AAMA 2605 multiple coat, thermally cured polyvinylidene fluoride system.
   1. Manufacturers:
      a. PPG Metal Coatings; Duranar XL: www.ppgideascapes.com.
B. Color: PPG Duranar XL. Color: As selected by Architect.

2.5 ACCESSORIES
A. Blank-Off Panels: Same material as louver, painted black on exterior side; provide where duct connected to louver is smaller than louver frame, sealing off louver area outside duct.
B. Screens: Frame of same material as louver, with reinforced corners; removable, screw attached; installed on inside face of louver frame.
C. Bird Screen: Interwoven wire mesh of steel, 16 gage, 0.051 inch diameter wire, 1/2 inch open weave, square design.
D. Insect Screen: 18 x 16 size aluminum mesh.
E. Fasteners and Anchors: Stainless steel.
F. Flashings: Of same material as louver frame, formed to required shape, single length in one piece per location.
G. Sealant for Setting Sills and Sill Flashing: Non-curing butyl type.

PART 3 – EXECUTION

3.1 EXAMINATION
A. Verify that prepared openings and flashings are ready to receive work and opening dimensions are as indicated on shop drawings.

3.2 INSTALLATION
A. Install louver assembly in accordance with manufacturer's instructions.
B. Install louvers level and plumb.
C. Set sill members and sill flashing in continuous bead of sealant.
D. Install flashings and align louver assembly to ensure moisture shed from flashings and diversion of moisture to exterior.
E. Secure louver frames in openings with concealed fasteners.
F. Install perimeter sealant and backing rod in accordance with Section 07 90 05.

3.3 CLEANING
A. Strip protective finish coverings.
B. Clean surfaces and components.

END OF SECTION