PART 1 – GENERAL

1.1 SECTION INCLUDES

A. A.Fixed extruded aluminum sightproof stationary louver system, including:

1) Louvers.
2) Accessories and anchoring components.
3) Finishes.

1.2 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.3 REFERENCE STANDARDS

A. AMCA 500-L – Laboratory Methods of Testing Louvers for Rating.
B. AMCA 540 – Enhanced (Level E) Impact resistance (debris).
C. AMCA 550 – High Velocity Wind-driven rain resistant Louvers.
D. AAMA 2603 / 2604 / 2605 – Voluntary Specifications for Performance Requirements for Pigmented Organic Coatings on Aluminum Extrusions and Panels.
E. ASCE/SEI 7 – Minimum Design Loads for Buildings and Other Structures.
F. ASTM E330 – Structural Performance of Exterior Windows, Doors, Skylights, and Curtain Walls.
G. ASTM B221 – Standard Specification for Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.

1.4 SUBMITTALS

A. Product Data: Manufacturer's data sheets including performance characteristics, installation instructions, and finishes.
B. Shop Drawings: Indicate layout, dimensions, construction details, anchorage, and installation methods.
C. Samples: Selection Samples: Color charts showing full range of available finishes.
D. Verification Samples: Two samples of each type, color, and finish.
E. Engineering Calculations: Structural calculations verifying conformance with design wind load.
F. Test Reports: Certified data confirming compliance with specified performance criteria (AMCA 500-L, 540 Level E, and 550 standards if applicable).

1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications: Minimum 5 years of experience in manufacturing louvers. Facility must be ISO 9001 certified.
B. Installer Qualifications: Minimum 3 years of experience in similar louver installations.
C. Mock-Up: Provide a mock-up for verification of appearance and performance as indicated.
D. Pre-Installation Meeting: Conduct meeting to review project conditions, coordination, and installation procedures.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials in original, unopened containers with identification labels.
B. Store materials in a dry, enclosed location away from direct sunlight and extreme temperatures.
C. Handle materials to prevent damage. Avoid dragging components to prevent surface scratching.

1.7 WARRANTY

A. Provide manufacturer's standard limited warranty for a period of five (5) years from date of shipment, covering material defects. Warranty is valid only when materials are fabricated and installed by certified personnel.

PART 2 – PRODUCTS

2.1 MANUFACTURER

A. Basis of Design: ES Metals, Carrera 72A #107-33, Barranquilla, Colombia.
B. Substitutions: Not permitted without prior written approval.

2.2 LOUVER SYSTEM

A. Model: ESM-5LS-V extruded aluminum fixed louver.
B. Louver Size:

- Maximum: 72" x 120" (single section).
- Minimum: 12" x 12".

C. Orientation: Vertical blades.
D. Configuration: Aligned.
E. Components:

1) Bird screen, blank-off panel, back pan, sill pan.
2) Aluminum mullions, brackets, angles.
3) Stainless steel non-corrosive fasteners (mill finish).

2.3 MATERIALS

A. Extrusions: 6063-T6 and 6005-T5 architectural aluminum alloy.
B. Sheet Aluminum: 5052-H32.
C. Fasteners: Stainless steel or corrosion-resistant aluminum.

2.4 PERFORMANCE REQUIREMENTS

A. Wind Load Resistance: 150 PSF design load.
B. AMCA Certified Performance:

- Free Area: 51%.
- Beginning Point of Water Penetration:
  - Free Area Velocity: 1250 fpm (6.35m/s)
  - Max Intake Volume: 10900 cfm (3.911 m3/s)
- Performance at 6,000 CFM (2.832 m3/s).
  - Pressure Drop Intake: 0.096-inch wg (0.024 kPa).
  - Pressure Drop Exhaust: 0.088-inch wg (0.022 kPa).

2.5 FINISHES

A. Coating System: Factory-applied high-performance PPG paint system.
B. Two-coat system: Primer and color top coat.
C. Performance Standards:

- AAMA 2605: Superior exterior durability.
- AAMA 2604 or 2603 as applicable based on project location and exposure.

D. Color: Select from ES Metals standard palette; custom colors available.

PART 3 – EXECUTION

3.1 EXAMINATION

A. Verify that substrate conditions are acceptable for installation.
B. Report unsatisfactory conditions in writing and do not proceed until corrected.

3.2 INSTALLATION

A. Install louvers level, plumb, and true to line in accordance with manufacturer's instructions and approved shop drawings.
B. Secure units to substrate to resist wind loads and accommodate thermal movement.
C. Do not install damaged or defective components.
D. Use manufacturer-approved fasteners and techniques.
E. Do not field-cut or modify components in a way that compromises finish or performance.

3.3 ADJUSTING AND CLEANING

A. Remove protective coverings promptly after installation.
B. Align louvers uniformly; adjust units out of plane to match adjacent components.
C. Repair minor damage; replace components beyond repair.
D. Clean louver surfaces using methods recommended by the manufacturer.

3.4 PROTECTION

Protect installed louvers from damage until project completion.