

097773 Metal Fin / Louver Wall System

PART 1 – GENERAL

'1.1' - SUMMARY

- A. Section Includes:
 - 1. Metal fin wall systems.
- B. Related Requirements:
 - 1. Section 095423 'Linear Metal Ceilings' for metal louvers, fins and suspension systems for interior and exterior ceiling and wall systems.

'1.2' - Coordination

- A. Coordinate layout and installation of metal fin wall systems with adjacent construction.

'1.3' – Pre-installation meetings

- A. Pre-installation conference: Conduct conference at (Project Site) <Insert location>

'1.4' – Action Submittals

- A. Product Data: For each type of metal fin and accessory included within wall system.
- B. Shop Drawings: For metal fin wall systems and accessories. Include plans, elevations, sections, and attachment details. Show fin profiles, angles and spacing.
- C. Samples: For each exposed product and for each type, color, and finish specified, 6" long in size.
- D. Samples for initial selection: For metal fin wall units and accessories with factory applied colors and finishes.
- E. Samples for verification: For the following products:
 - 1. Metal fin wall units: 6" long full width samples of each type, color and finish.
 - 2. End caps: Full size units for each matching metal fin wall unit.
- F. Delegated design submittals: For design of seismic restraints and attachment devices indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

'1.5' – Informational Submittals

- A. Qualification statement: For installer and designated design engineer.

'1.6' – Closeout Submittal

- A. Maintenance data for finishes.

'1.7' – Maintenance materials submittals

- A. Extra stock material: Furnish extra materials from the same production run to owner that match products installed and packaged with protective covering for storage and identified with labels describing contents.

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1. Metal fin wall systems components: Quantity of each metal wall fin unit and accessory equal to <insert number> percent of quantity installed.

'1.8' - Quality Assurance

A. Qualifications:

1. Installers: Authorized representative who is trained and approved by manufacturer.
2. Delegated design engineer: A professional engineer who is legally qualified to practice in jurisdictions where project is located and who is experienced in providing engineering services of the kind indicated.

'1.9' – Mockups

- A. Build mockups to verify selections made under sample submittals to demonstrate aesthetic effects and to set quality standards for materials and execution.
 1. Build mockups for each type of metal fin wall system as indicated on drawings.
 2. Approval of mockups does not constitute approval of deviations from the contract documents contained in mockups unless owner specifically approves such deviations by change order.
 3. Subject to compliance with requirements, approved mockups may become part of the complete work if undisturbed at time of substantial completion.

'1.10' – Delivery, Storage and Handling

- A. Deliver metal fin wall system components and accessories to project site in original, unopened packages and store them in a fully enclosed, conditioned space where they are protected against damage from moisture, humidity, temperature extremes, direct sunlight, surface contaminations, and other causes.
- B. Handle components and accessories in a manner that prevents damage.

'1.11' – Field Conditions

- A. Environmental limitations interior: do not install metal fin wall systems until spaces are enclosed and weather tight, wet work in spaces is complete and dry, and HVAC system is operating and maintaining temperature and relative humidity at levels planned for building occupants during the remainder of the construction period.
- B. Environmental limitations exterior: Before installation make sure all attaching surfaces, brackets and fasteners are dry and clean, free of grease, dust and dirt. Assure that brackets and fasteners are in like new condition.

Part 2 Products

'2.1' – Manufacturers

- A. Basis of design product: Subject to compliance with requirements, provided by Maxxit Group: Protero Wall Louver (Fin) system, model as specified below or comparable by one of the following:
 1. <Protero Wall Fins>

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2. <Protero Wall Fins>
3. <Insert manufacturer's name>

'2.2' Source Limitations

- A. Obtain components and materials specified in this section from a single manufacturer.

'2.3' – Performance Requirements

- A. Delegated design: Engage a qualified professional engineer, as defined in section 014000 "Quality Requirements" to design seismic restraints and attachment devices.
- B. Structural performance: Metal fin wall systems to withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated without permanent deformation of fin components, noise or metal fatigue caused by fin blade rattle or flutter, or permanent damage to fasteners and anchors.
- C. Surface -burning characteristics: For metal fin wall system determined by testing in accordance with ASTM E84 by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
 1. Flame spread index: (10) (25) <insert value> or less.
 2. Smoke develop index: (10) (250) <insert value> or less.
- D. Wind pressures: Winds to be considered to act normal to the face of the building.
 1. Wind loads: determine loads based on pressures as indicated on drawings.
 2. Wind loads: determine loads based on a uniform pressure of ((20 lb/sq. ft.(957 pa)) ((30 lbs/Sq. ft. (1436 Pa)<Insert Value> acting inward or outward.
 3. Wind loads: Determine loads based on pressure indicated below:
 - a. Corner Zone: with in <insert distance> of building corners, uniform pressure of <insert design wind pressure> acting inward and <insert design wind pressure> acting outward.
 - b. Other than corner zone: uniform pressure of < insert design wind pressure> acting inward and <insert design wind pressure> acting outward.
- E. Windborne debris impact resistance: metal fin systems located within 30 ft of grade to pass (basic) (enhanced) protection, when tested in accordance with AMCA 540.
- F. Seismic performance: As indicated on drawings.
- G. Seismic performance: Metal wall fin systems, including attachments to other construction, to withstand the effects of earthquake motions determined in accordance with (ASCE/SEI7) <insert requirement>
 1. Design earthquake spectral response acceleration, short period (Sds) for project is <insert value>
 2. Component importance factor : (1.5) (1.0)
- H. Allow for thermal movements from ambient and surface temperature changes.
 1. Temperature change (120 degree F, ambient: 180 degree material surfaces) <insert temperature range>

'2.4' - Metal Fin Wall Systems

- A. Rectangular metal fin wall system <insert drawing designation>
 1. Basis of design product: subject to compliance with requirements, provide Maxxit Group Protero profile FINS (Louvers) or comparable products.

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2. Standard Fin depth (4") (6") (8") (10") (12"). Standard Fin width (1-3/8") (1-1/2") (2")
- B. Aluminum Sheet ASTM B209, alloy and temper recommended by producer and finisher for type of use and finish indicated.
- C. Aluminum extrusion ASTM B221, alloy and temper recommended by producer and finisher for type of use and finish indicated.
- D. Laminate film finish: provide manufacturers standard PVC free film permanently bonded to metal fin wall units with adhesive. Used on interior applications only.
1. Color and pattern: (as selected by architect from manufacturers full range) (match control sample) (as indicated by manufacturers product designation) <insert requirements>

'2.5' – Accessories

- A. End caps: Manufacturers standard material fabricated to fit and conceal exposed open ends of metal fin wall units. Finished to match fins.
- B. Brackets: Manufacturers standard galvanized steel brackets.
- C. Fasteners: Use types and sizes to suit installation conditions.

'2.6' – Fabrication

- A. Factory assemble metal fin (louver) wall systems to minimize field splicing and assembly. Disassemble units as necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation.

Part 3 – Execution

'3.1' – Examination

- A. Examine substrates and openings with installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

'3.2' – Preparation

- A. Coordinate setting drawings, diagrams, templates, instructions and directions for installation and anchoring of metal fin wall system that are embedded in concrete or masonry construction. Coordinate delivery of such items to project site.

'3.3' – Installation

- A. Install metal fin wall system in accordance with approved shop drawings and manufacturers written instructions.
- B. Locate and place fins level, plumb and at indicated alignment with adjacent work.
- C. Use concealed anchorages where possible.
- D. Install end caps where necessary to conceal edges and ends of fins.
- E. Cut metal fins for accurate fit at interruptions and penetrations by other work.

'3.4' - Cleaning

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- A. Comply with manufacturers written instruction for cleaning: touchup of minor finishing damage.
- B. Remove and replace components that cannot be successfully cleaned and repaired to permanently eliminate evidence of damage, including dented and bent units.

End of section 097773