

SECTION 10 82 13
EXTERIOR GRILLS AND SCREENS

PART 1 GENERAL

PART 1 1 SUMMARY

- A. Section Includes:
1. Exterior perforated aluminum screen wall system with Ombræ™ Optical Tile imaging technology.
 2. Accessories including attachments, clips, sub girts, shims, and fasteners
 3. Factory applied coating system.

***Edit related Sections to those referenced in body of specification section.**

- B. Related Sections:
1. Section 04220 - Concrete Masonry Units
 2. Section 05400 - Cold Formed Metal Framing
 3. Section 07600 - Flashing and Sheet Metal
 4. Section 07900 - Joint Sealants
 5. Section 08520 - Aluminum Windows
 6. Section 08911 - Glazed Aluminum Curtain Wall

PART 1 2 REFERENCES

- A. American Architectural Manufacturers Association (AAMA):
1. AAMA 2605 - Voluntary Specification Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels.
- B. ASTM International (ASTM):
1. ASTM B 209 - Aluminum and Aluminum Alloy Sheet and Plate.

PART 1 3 SYSTEM DESCRIPTION

- A. **Modular perforated aluminum** alloy sheet screen wall system with Ombræ™ Optical Tile imaging technology.
- B. Mounting system, clips and fasteners.

PART 1 4 DESIGN REQUIREMENTS

- A. Wall Panel Deflection: L/40.
- B. Thermal Movement: Design system to accommodate vertical and horizontal thermal movement of components without causing buckling, failure of joint seals, and undue stress on fasteners when subject to seasonal temperature cycling. Systems that accommodate movement with enlarged/slotted attachment holes not accepted.
- C. Tolerance of Substructure: Design system to accommodate up to 1/4 inch in 10 foot variation out of plane. Accommodate tolerances of building structural framing.

PART 1 5 PERFORMANCE REQUIREMENTS

- A. Structural Performance: No permanent deformation at 150 percent of design pressure exceeding L/60 for frame and L/40 for material.

PART 1 6 SUBMITTALS

- A. Submit under provisions of Section 01330.
- B. Shop Drawings: Show thickness and dimensions of panels, panel profile, Ombrae Optical Tile layout, fastening and anchoring methods, details, and locations of joints.
- C. Product Data: Manufacturer's panel profiles, dimensions, characteristics and structural properties.
- D. Design and Performance Data: Fabricator's system including standard drawings, details, and design.
- E. Panel Samples: Minimum 8 inch by 8 inch in specified thickness, including attachment extrusions, clips, subgirts, fasteners, closures, and other panel accessories
- F. Color Samples: Panel material finished to specified color and finish.
- G. Fabricator Instructions:
 - 1. Include installation instructions, technical bulletins, and other product data.
 - 2. Include instructions for substrate requirements, special handling criteria, installation sequence, perimeter conditions, cleaning procedures, and conditions requiring special attention.
- H. Sample Warranty: Meet or exceed provisions specified by this Section.

PART 1 7 QUALITY ASSURANCE

- A. Single Source Responsibility:
 - 1. Provide design and fabrication of wall panel system under responsibility of fabricator including perforated screen wall panel with Ombae Optical Tiles, attachments, clips, girts, fasteners, and other accessories.

PART 1 8 QUALIFICATIONS

- A. Fabricator:
 - 1. Company specializing in designing, engineering, and fabricating work of this Section.
 - 2. Approved by panel manufacturer as qualified to perform work of this Section.
- B. Installer:
 - 1. Company specializing in installing work of this Section.
 - 2. Trained and authorized by perforated screen wall panel system fabricator as qualified to perform work of this Section.

PART 1 9 MOCKUP

- A. Provide under provisions of Section 01450.
- B. Construct mock-up, including outside corner condition showing complete system assembly including joint sealant.
- C. Construct size and type and locate as directed by Architect at owners cost.
- D. Incorporate accepted mock-up into Work.

PART 1 10 PRE-INSTALLATION CONFERENCE

- A. Arrange, in accordance with Section 01312.
- B. Attendance: GC/CM, installer, Owner, Architect, manufacturer's representative, and those requested to attend.

- C. Meeting Time: Minimum 2 weeks prior to beginning work of this Section and work of related Sections affecting work of this Section.
- D. Location: Project Site.

PART 1 11 DELIVERY, STORAGE, AND HANDLING

- A. Conform to provisions of Section 01651 and manufacturer's instructions.
- B. Deliver in manufacturers protective packaging with identifying labels intact.
- C. Store in well ventilated space under cover, off ground, protected from direct sunlight, weather, moisture, soiling, and marring of surface.
 - 1. Protect panels from temperatures exceeding 120 degrees F.
 - 2. Slope stored panels for positive drainage of water and condensation.
- D. Handle to prevent twisting, bending, and abrasion. Prevent contact with materials which may cause discoloration or staining.

PART 1 12 PROJECT CONDITIONS

- A. Field Measurements: Verify actual conditions prior to fabrication and show on Shop Drawings.

PART 1 13 COORDINATION

***Edit sections to include coordination and sequencing as needed for completion of work ***

- A. Conform to Section 01311 for coordination with work of other Sections.
- B. Field dimensions, Shop Drawings, and fabrication with critical path of construction Progress Schedule as necessary to meet lead time and avoid delays.
- C. Section 05400 for backing and support for work of this Section.

PART 1 14 WARRANTY

- A. Conform to Warranty provisions specified Section 01778.
- B. Finish Coating System: Standard 5 year materials Warranty against fading, crazing, and chalking of coating system.
- C. Panel Manufacturer: Standard 2 year materials Warranty against defective materials.
- D. Panel System Fabricator: 2 year fabrication Warranty for conformance to design and performance and requirements.
- E. Installer: 2 year workmanship Warranty for water tightness.

PART 2 PRODUCTS

PART 2 1 FABRICATOR

- A. Perforated Screen Wall System Fabricator:
 - 1. Keith Panel Systems, Tel (604) 987-4499 Fax (604) 987-4742, Email: mail@keithpanel.com. Basis of Design for performance and appearance.
KPS Perforated Screen Wall with Ombrae.

2. No equals or alternates will be accepted.

PART 2 2 ALUMINUM SCREEN WALL PANEL MATERIALS

- A. Aluminum Sheet: 3003 H14 aluminum alloy per ASTM-B209
- B. Thickness: 2mm

PART 2 3 ACCESSORIES

- A. Attachments, Clips, and Girts: As instructed by manufacturer.
- B. Pop Rivets: Stainless steel or aluminum as determined by fabricator to prevent galvanic action.
- C. Screw Fasteners: Type S, self drilling, self tapping framing screws, stainless steel with carbide head, as instructed by manufacturer to suit application.
- D. Shims: As instructed by manufacturer.
- E. Isolation Accessories: Isolation tape, pads, or coatings as necessary to prevent galvanic action between dissimilar metals.

PART 2 4 FABRICATION

- A. Shop fabricate wall panels in sizes and joint configurations to according to shop drawings.
- B. Form panel lines, breaks, and angles free from warp and buckle, and with no displacement of aluminum sheet.
- C. Custom perforate sheet with Ombræ Optical Tiles according to shop drawings.
- D. Form sections true to shape, accurate in size, square, and free from distortion or defects.

PART 2 5 FINISHES

- A. Exposed Aluminum: PPG Duranar, PVDF, minimum 70 percent Kynar 500, or Hylar 5000 resin content, factory applied baked on finish, conforming to AAMA 2605.
- B. Uncoated exposed metal not accepted. Touch up uncoated metal for smooth, finished appearance matching color and gloss level of adjacent finish.
- C. Field Touchup Paint: PPG Corafon ADS, air-dry system, fluorocarbon resin coating matching color and texture of finish coating.
- D. Wall Panel Color: PPG Duranar _____ [Color Name].
- E. Sheen: 30 percent.

PART 3 EXECUTION

PART 3 1 EXAMINATION

- A. Verify conditions ready to receive work of this Section before beginning installation.
- B. Verify substrate framing members suitable for installation ready to receive wall panel system.

PART 3 2 PREPARATION

- A. Shim metal framed framing members and supports as necessary to provide level and plumb substrate for fastening panels.

PART 3 3 INSTALLATION

- A. Install in accordance with manufacturer's instructions and provisions of Contract Documents.
- B. Permanently fasten and anchor composite wall panel system to structural framing system or glazing system using manufacturers anchors, clips, and girts.
- C. Install wall panel aligned, level, and plumb, within specified tolerances.
- D. Use concealed fasteners and clip attachments.
- E. Isolate aluminum from dissimilar metal, as required to prevent galvanic action.

PART 3 4 TOLERANCES

- A. Maximum Offset From Alignment Between Adjacent Wall Panels: 1/8 inch.
- B. Maximum Variation from Horizontal and Vertical Plane: 1/2 inch in 20 foot, non-accumulative.

PART 3 5 FIELD QUALITY CONTROL

- A. Manufacturer's Field Service:
 - 1. Make periodic visits and final inspection by manufacturer's authorized product representative as necessary to verify conformance to manufacturer's instructions and Warranty provisions.
 - 2. Promptly notify Architect of non-conforming work.

PART 3 6 ADJUSTING

- A. Make adjustments to wall panel installations not conforming to specified tolerances.
- B. Field touch-up damaged finishes to match color and finish of factory applied panel finish.
- C. Replace work which cannot be repaired so that repairs are not discernable at distance of 10 foot.

PART 3 7 CLEANING

- A. Dry-wipe panels as work progresses.
- B. Leave installation clean, free from residue and debris resulting from work of this Section.

END OF SECTION