Vision Barriers | Alumatex Madras

Suggested Specifications | Section 10 24 00 and 05 70 10

PART 1 GENERAL

1.01 Summary

A. Furnish screenwall/vision barrier, structural supports and attachment brackets as shown on the drawings, as specified, and as needed for a complete and proper installation.
B. The screenwall/vision barrier to be furnished include the following:
    1. Fixed extruded screenwall/vision barrier.

1.02 References

A. The Aluminum Association Incorporated
    1. Aluminum Standards and Data
    2. Specifications and Guidelines for Aluminum Structures
B. American Society of Civil Engineers
    1. Minimum Design Loads for Buildings and Other Structures
C. American Society for Testing and Materials
    1. ASTM B209
    2. ASTM B211
    3. ASTM B221
    4. ASTM E90-90
D. Architectural Aluminum Manufacturers Association
    1. AAMA 800 Voluntary Specifications and Test Methods for Sealants
    2. AAMA 605.2 Voluntary Specification for High Performance Organic Coatings on Aluminum Extrusions and Panels.
    3. AAMA TIR Metal Curtain Wall Fasteners
    4. AAMA 2605-98 Superior Performing Organic Coatings on Aluminum Extrusions and Panels
E. Canadian Standards Association
    1. CAN3-S157-M83 Strength Design in Aluminum
    2. S136 94 Cold Formed Steel Structural Members

1.03 Submittals

A. Product Data
    1. Material types and thickness.
B. Shop Drawings
    1. Include elevations, sections, and specific details for each louver.
    2. Show anchorage details and connections for all component parts.
    3. Include signed and sealed structural calculations.
C. Samples
D. Submit color chips for approval.

1.04 Quality Assurance

A. Single subcontract responsibility: Subcontract the work to a single firm that has had not less than six years' experience in the design and manufacturing of work similar to that shown and required.
B. Structural Requirements: Design all materials to withstand wind and snow loads as required by the applicable building code. Maximum allowable deflection for the louver structural members to be l/180 or 0.75 inch, whichever is less. Maximum allowable deflection for the louver blades to be l/120 or 0.50 inch across the weak axis, whichever is less.
C. Professional Engineer Requirements: Drawings and structural calculations to be signed and sealed by a professional engineer licensed to practice in the state where the project is located.
D. Warranty: Provide written warranty to the owner that all products will be free of defective materials or workmanship for a period of one year from date of installation.

1.05 Delivery, Storage and Handling

A. Delivery: At the time of delivery all materials shall be visually inspected for damage. Any damaged boxes, crates, louver sections, etc. shall be noted on the receiving ticket and immediately reported to the shipping company and the material manufacturer.
B. Storage:
    1. Material may be stored flat on end or on its side.
    2. Material may be stored either indoors or outdoors.
    3. If stored outdoors the material must be raised sufficiently off the ground to prevent it being flooded.
    4. If stored outdoors the material must be covered with a weatherproof flame-resistant sheeting or tarpaulin.
C. Handling:
    1. Material shall be handled in accordance with sound material handling practices and in such a way as to minimize racking.

PART 2 - PRODUCTS:

2.01 Manufacturers

A. Basis of Design – manufactured by Construction Specialties subject to compliance with requirements listed. The grilles and related materials herein specified and indicated on the drawings shall be manufactured by: Construction Specialties, 3 Werner Way, Lebanon, NJ 08833. Tel: 800.233.8493. Email: cet@c-sgroup.com. No substitutions.

B. Drawings and specifications are based on manufacturer's literature from Construction Specialties, Inc. drawings and specifications unless otherwise indicated. Other manufacturers must be approved equal by Architect/Owner.

2.02 Materials

A. Aluminum Extrusions: ASTM B211, Alloy 6063-T5, 6063-T6 or 6061-T6.
B. Aluminum Sheet: ASTM B3209, Alloy 1100, 3003 or 5005.

2.03 Fabrication, General

A. Provide CS screenwall models, structural supports and accessories as specified and/or shown on the drawings. Materials, sizes, depths, arrangements, and material thickness to be as indicated or as required for optimal performance with respect to strength; durability; and uniform appearance.
B. Screenwall to be mechanically assembled using stainless steel or aluminum fasteners.
C. Include supports, anchorage, and accessories required for complete assembly.

2.04 Screenwall/Vision Barrier Models:

A. Aluminium screen shall be CS Alumatex III Madras as manufactured by Construction Specialties, Inc. Screen pattern shall be a Madras style fabricated from .040-inch-thick smooth aluminum panels shall be 12 inches wide X 5 ½ inches deep and nominally spaced 13 inches on center. Panels to be mechanically secured to continuous extruded aluminum horizontal support angles. Support angles shall be fixed directly to vertical supports or to spandrel beams with extruded aluminum clip angles. All fasteners are to be stainless steel.

B. Madras "Weave" pattern to be set at alternating 4" centers

2.05 Finishes

A. General: Comply with NAAMM "Metal Finishes Manual" for finish designations and application recommendations, except as otherwise indicated. Apply finishes in factory. Protect finishes on exposed surfaces prior to shipment. Remove scratches and blemishes from exposed surfaces that will be visible after completing finishing process. Provide color as indicated or, if not otherwise indicated, as selected by architect.

B. 100% Fluoropolymer Resin Powder Coat System complying with AAMA-2605-5 standards for gloss and color retention. Finish thickness to be 1.5 to 3.0 mils.
   1. Finish to allow zero VOCs to be emitted into facility of application or at job site.
   2. Finish to adhere to a 4H Hardness rating.
   3. Furnish manufacturer's twenty (20) year warranty for finish for gloss and color retention

OR

B.Three Coat Fluorocarbon Coating

1. Sunshades to be finished with a minimum 1.4 mil (0.035mm) thick full strength 70% resin, 3 coat Fluoropolymer system.
2. All aluminum shall be thoroughly cleaned, etched, and given a chromated conversion pre-treatment before application of the Kynar/Hylar coating. The coating shall consist of a primer, a high Metallic color coat and a clear PVF2 topcoat. It shall receive a bake cycle of 17 minutes at 450°F. All finishing procedures shall be one continuous operation in the plant of the manufacturer.
3. Manufacturer to furnish an extended 20 limited warranty for the Kynar/Hylar coating. This limited warranty shall begin on the date of material shipment.

OR

B. Two Coat Fluorocarbon Coating

1. Sunshades to be finished with a minimum 1.0 mil (0.025mm) thick full strength 70% resin, 2 coat Fluoropolymer system.
2. All aluminum shall be thoroughly cleaned, etched, and given a chromated conversion pre-treatment before application of the MICA II coating. The coating shall consist of a primer and a pearlescent pigmented PFV2 topcoat. It shall receive a bake cycle of 17 minutes at 450°F. All finishing procedures shall be one continuous operation in the plant of the manufacturer.
3. Manufacturer to furnish an extended 20 limited warranty for the Kynar/Hylar coating. This limited warranty shall begin on the date of material shipment.

PART 3 EXECUTION

3.01 Examination: Examine openings to receive the work. Do not proceed until any unsatisfactory conditions have been corrected.

3.02 Installation

A. Comply with manufacturer's instructions and recommendations for installation of the work.
B. Verify dimensions of supporting structure at the site by accurate field measurements so that the work will be accurately designed, fabricated, and fitted to the structure.
C. Anchor sunshades to the building substructure as indicated on architectural drawings.
D. Erection Tolerances:
    1. Maximum variation from plane or location shown on the approved shop drawings: 1/8" per 12 feet of length, but not exceeding 1/2" in any total building length or portion thereof (non-cumulative).
    2. Maximum offset from true alignment between two members abutting end to end, edge-to-edge in line or separated by less than 3": 1/16" (shop or field joints). This limiting condition shall prevail under both load and no-load conditions.

E. Cut and trim component parts during erection only with the approval of the manufacturer or fabricator, and in accordance with his recommendations. Restore finish completely. Remove and replace members where cutting and trimming has impaired the strength or appearance of the assembly.
F. Do not erect warped, bowed, deformed, or otherwise damaged or defaced members. Remove and replace any members damaged in the erection process as directed.
G. Set units level, plumb and true to line, with uniform joints.

3.03 Protection

A. Protect installed materials to prevent damage by other trades. Use materials that may be easily removed without leaving residue or permanent stains.

3.04 Adjusting and cleaning

A. Immediately clean exposed surfaces of the louvers to remove fingerprints and dirt accumulation during the installation process. Do not let soiling remain until the final cleaning.
B. Before final inspection, clean exposed surfaces with water and a mild soap or detergent not harmful to the material finishes. Thoroughly rinse surfaces and dry.
C. Restore louvers and accessory components damaged during installation and construction so no evidence remains of corrective work. If results of restoration are unsuccessful, as determined by the Architect, remove damaged materials, and replace with new materials.
    1. Touch up minor abrasions in finishes with a compatible air-dried coating that matches the color and gloss of the factory applied coating.

End of Section