SECTION 10 71 13 - EXTERIOR SUN CONTROL DEVICES

THIS SECTION IS WRITTEN IN CSI 3-PART FORMAT AND IN CSI PAGE FORMAT; THE PROJECT NAME, PROJECT NUMBER, DATE, AND SECTION TITLE IN THE FOOTER ARE OPTIONAL. NOTES TO THE SPECIFIER, SUCH AS THIS, MUST BE DELETED FROM THE FINAL SPECIFICATION.

IT IS ASSUMED THAT THE GENERAL CONDITIONS BEING USED ARE AIA A201.

# PART 1 GENERAL

1.01 SUMMARY

1. Section Includes: Design, fabrication, and installation of welded extruded aluminum sun control assemblies.
2. Products furnished but not installed under this section: anchors.

1.02 REFERENCES

INCLUDE ONLY THOSE REFERENCES THAT ARE CITED IN THIS SECTION.

A. American Architectural Manufacturers Association (AAMA):

1. AAMA 611, Voluntary Specification for Anodized Architectural Aluminum.

2. AAMA 2605, Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels.

B. American Society for Testing and Materials (ASTM):

1. ASTM B 26, Specification for Aluminum-Alloy Sand Castings.

2. ASTM B 209, Specification for Aluminum and Aluminum- Alloy Sheet and Plate.

3. ASTM B 221, Specification for Aluminum and Aluminum- Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.

1. ASTM D 1187, Specification for Asphalt-Base Emulsions for Use as Protective Coatings for Metal.

C. American Welding Society (AWS):

1. ANSI/AWS D1.2, Structural Welding Code - Aluminum.

2. ANSI/AWS D1.3, Structural Welding Code - Aluminum.

D. The Society for Protective Coatings (SSPC):

1. SSPC-Paint 12, Cold-Applied Asphalt Mastic (Extra Thick Film).

1.03 SYSTEM DESCRIPTION

A. Design Requirements: Provide sun control devices capable of withstanding the effects of loads and stresses from dead loads, live loads, snow loads, snow drift loads, wind loads, and normal thermal movement without evidencing permanent deformation of assembly or components including blades, frames, and supports; noise or metal fatigue caused by blade rattle or flutter; or permanent damage to fasteners and anchors. Comply with applicable codes.

1.04 SUBMITTALS

A. Product Data: Manufacturer’s product information, specifications, and installation instructions for sun control devices, anchors, and accessories.

B. Shop Drawings: Include plan dimensions, elevations, and details. Include details showing profiles, angles and spacing of blades, frames and supports. Include unit dimensions related to supporting and adjoining structure. Include anchorage details and locations.

SELECTION SAMPLES ARE READILY AVAILABLE. VERIFICATION SAMPLES MUST COME FROM THE COATER, WILL TAKE SEVERAL WEEKS, AND WILL DELAY FABRICATION.

C. Samples:

1. Selection: Manufacturer’s standard range of colors for the finishes selected.

2. Verification: 3-inch-square samples of each finish selected on the substrate specified.

D. Design Data: Design calculations bearing the seal of a Registered Professional Engineer, licensed in the state where the project is located. Include a comprehensive analysis of design loads, including dead loads, live loads, snow loads, snow drift loads, wind loads, and thermal movement. Identify the moment and shear forces transferred to the structure or supports through the installation connections.

1.05 QUALITY ASSURANCE

A. Manufacturer Qualifications: At least ten years experience in the design, fabrication, and erection of sun control devices.

B. Installer Qualifications: Have sun control devices installed by manufacturer, third party installation is not acceptable.

1.06 PROJECT CONDITIONS

A. Field Measurements: Verify actual supporting and adjoining construction by field measurements before fabrication indicate recorded measurements on Shop Drawings. Coordinate construction to ensure that sun control devices fit properly to supporting and adjoining construction and coordinate schedule with construction progress to avoid delaying the Work.

# PART 2 PRODUCT

2.01 MANUFACTURERS

THE THREE MANUFACTURERS LISTED BELOW ARE COMPARABLE IN QUALITY. ADD OTHER MANUFACTURERS ONLY AFTER CAREFUL REVIEW OF THEIR FABRICATION TECHNIQUES AND WORKMANSHIP.

A. The design is based on products fabricated by: Peachtree Protective Covers, Inc., 3255 South Sweetwater Rd., Lithia Springs, GA 30122, 770-439-2120, fax 770-439-2122.

1. Comparable products by the following manufacturers also will be acceptable:

a. Construction Specialties, Inc.

b. Dittmer Architectural Aluminum.

2. Substitutions: Comparable products of other manufacturers will be considered under standard substitution procedures.

2.02 MATERIALS

A. Aluminum Extrusions: ASTM B 221, 6063 alloy, T5 or T52 temper.

B. Aluminum Sheet: ASTM B 209, 3003 or 5005 alloy, temper as required for forming or as recommended by metal producer for specified finish.

C. Aluminum Castings: ASTM B 26, alloy 319.

D. Fasteners: Same basic metal and alloy as fastened metal or 300 series stainless steel, unless otherwise indicated. Do not use metals that are incompatible with joined materials.

E. Anchors and Inserts: Type, size, and material required for loading and installation indicated. Use ferrous metal or hot-dip galvanized anchors and inserts for exterior installations and elsewhere, as needed, for corrosion resistance.

F. Bituminous Paint: One of the following:

1. Cold-applied asphalt mastic: SSPC-Paint 12, containing non asbestos.

2. Cold-applied asphalt emulsion: ASTM D 1187.

2.03 FABRICATION

A. General:

1. Assemble sun control devices in shop to minimize field splicing and assembly.

2. Assemble sun control devices using mechanical fasteners or welding only. Join components with a minimum of two filet welds, produced with the Pulse Gas Metal Arc Welding (GMAW/MIG) process with a minimum 0.125 inch, throat. Comply with AWS D1.2 and D1.3.

3. Maintain equal sun control blade spacing, including separation between blades and frames to produce uniform appearance.

4. Provide supports, anchorages, and accessories required for complete assembly.

1. Join frame members to one another and to fixed sun control blades with mechanical fasteners, concealed when possible. Bolt connections between frame members only as necessary.

INSERT TYPES, MATERIALS, AND THICKNESSESS BELOW. SEE MANUFACTURER’S CATALOG FOR INFORMATION ON STANDARD COMPONENTS.

1. Components:

1. Blades:

2. Outriggers:

3. Fascia:

SELECT FINISH(ES) FROM BELOW. IF MORE THAN ONE FINISH IS SELECTED, THEN KEY FINISHES TO THE DRAWINGS. IF COLOR SELECTIONS ARE INCLUDED HERE, DELETE SELECTIONS SAMPLES FROM SUBMITTALS ARTICLE.

D. Factory Finishing: Finish designations prefixed by AA comply with system established by the AAMA for designating aluminum finishes.

THE EQUIVALENT ALCOA NUMBER FOR BELOW IS 204 R1.

1. Class II, Clear Anodic Finish: AA-M12C22A31 (Mechanical Finish: nonspecular as fabricated; Chemical Finish: etched, medium matte; Anodic Coating: Architectural Class II, clear coating 0.4 mils to 0.7 mils thick),complying with AAMA 611.

THE EQUIVALENT ALCOA NUMBER FOR BELOW IS 215 R1.

2. Class I, Clear Anodic Finish: AA-M12C22A41 (Mechanical Finish: nonspecular as fabricated; Chemical Finish: etched, medium matted, Anodic Coating: Architectural Class I, clear coating 0.7 mils or thicker),complying with AAMA 611.

3. Class I, Color Anodic Finish: AA-M12C22A42/A44 (Mechanical Finish: nonspecular as fabricated; Chemical Finish: etched, medium matte; Anodic Coating: Architectural Class I, integrally colored or electrolytically deposited color coating 0.7 mils or thicker), complying with AAMA 611.

4. High performance Organic Coating Finish: AA-C12C42R1x (Chemical Finish: cleaned with inhibited chemicals; Chemical Finish: acid-chromate-fluoride-phosphate conversion coating; Organic Coating: as specified below). Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturer’s written instructions.

a. Fluoropolymer Two-Coat Coating System: Manufacturer’s standard two-coat, thermocured system consisting of specially formulated inhibitive primer and fluoropolymer color topcoat containing not less than 70 percent polyvinylidene fluoride resin by weight; complying with AAMA 2605.

b. Fluoropolymer Three-Coat Coating System: Manufacturer’s standard three-coat, thermocured system consisting of specially formulated inhibitive primer, fluoropolymer color coat, and clear fluoropolymer topcoat, with both color coat and clear topcoat containing not less than 70 percent polyvinylidene fluoride resin by weight; complying with AAMA 2605.

## PART 3 EXECUTION

3.01 EXAMINATION

A. Verification of Conditions: Verify that all concrete, masonry, and roofing work in the vicinity is complete and cleaned.

3.02 ERECTION

A. Install sun control devices level, plumb, and in indicated alignment with adjacent work.

B. Conceal anchorages where possible.

C. Repair damaged finishes so that no evidence remains of corrective work. Return items that cannot be refinished in the field to the shop. Make required alterations and refinish entire unit or replace unit.

D. Protect galvanized and nonferrous metal surfaces from corrosion or galvanic action by applying a heavy coating of bituminous paint to surfaces that will be in contact with concrete, masonry, or dissimilar materials.

3.02 CLEANING

A. Clean all protective cover components promptly after installation.

3.04 PROTECTION

A. Protect materials during and after installation.

### END OF SECTION 10 71 13