# SECTION 10 73 00 - ALUMINUM WALKWAY COVERS

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

A. Section Includes: Design, fabrication, and installation of welded extruded aluminum walkway cover systems.

B. Products Furnished but not Installed Under this Section: Column sleeves (styrofoam blockouts) or anchor bolts (if required)

1.02 REFERENCES

INCLUDE ONLY THOSE REFERENCES THAT ARE CITED IN THIS SECTION.

A. The Aluminum Association (AA):

1. The Aluminum Design Manual 2000, Specifications & Guidelines for Aluminum Structures.

B. American Architectural Manufacturers Association (AAMA):

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

2. AAMA 2603, Voluntary Specification, Performance Requirements and Test Procedures for Pigmented Organic Coatings on Aluminum Extrusions and Panels.

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

C. American Society of Civil Engineers (ASCE):

1. ASCE 7, Minimum Design Loads for Buildings and Other Structures.

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

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

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

3. ASTM C 150, Specification for Portland Cement.

4. ASTM C 404, Specification for Aggregates for Masonry Grout.

E. American Welding Society (AWS):

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

1.03 SYSTEM DESCRIPTION

A. Design Requirements:

1. Design Walkways in accordance with The Aluminum Design Manual 2000.

2. Comply with the wind requirements of ASCE 7.

3. Provide an all welded extruded aluminum system complete with internal drainage. Non-welded systems are not acceptable.

4. Provide expansion joints to accommodate temperature changes of 120 degrees F. Provide expansion joints with no metal to metal contact.

B. Performance Requirements:

1. Grout: Compressive strength of 2000 psi, minimum.

1.04 SUBMITTALS

A. Product Data: Manufacturer’s product information, specifications, and installation instructions for walkway cover components and accessories.

B. Shop Drawings: Include plan dimensions, elevations, and details.

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: 2-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. Design calculations shall state that the walkway cover system design complies with the wind requirements of ASCE 7, the stability criteria of applicable building code, and all other governing criteria.

1.05 QUALITY ASSURANCE

A. Manufacturer Qualifications: At least ten years experience in the design, fabrication, and erection of extruded aluminum walkway cover systems.

B. Installer Qualifications: Have walkway covers installed by manufacturer, third party installation is not acceptable.

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. Dittmer Architectural Aluminum

b. Avadek Walkway Cover Systems

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

2.02 MATERIALS

A. Aluminum Members: Extruded aluminum, ASTM B 221, 6063 alloy, T6 temper.

B. Fasteners: Aluminum, 18-8 stainless steel, or 300 series stainless steel.

C. Protective Coating for Aluminum Columns Embedded in Concrete: Clear acrylic.

D. Grout:

1. Portland Cement: ASTM C 150, Type I.

2. Sand: ASTM C 404.

3. Water: Potable.

E. Gaskets: Dry seal santoprene pressure type.

F. Aluminum Flashing: ASTM B 209, Type 3003 H14, 0.040 inch, minimum.

2.03 MIXES

A. Grout: 1 part portland cement to 3 parts sand, add water to produce a pouring consistency.

2.04 FABRICATION

A. General:

1. Shop Assembly: Assemble components in shop to greatest extent possible to minimize field assembly.

2. Welding: In accordance with ANSI/AWS D1.2.

3. Bent Construction: Factory assemble beams to columns to form one-piece rigid bents. Where used make welds smooth and uniform using an inert gas shielded arc. Perform suitable edge preparation to assure 100% penetration. Grind welds only where interfering with adjoining structure to allow for flush connection. Field welding is not permitted. Rigid mechanical joints can be used if supported by engineering calculations and/or testing.

4. Deck Construction: Fabricate from extruded modules that interlock in a self-flashing manner. Positively fasten interlocking joints creating a monolithic structural unit capable of developing the full strength of the sections. The fastenings must have minimum shear strength of 350 pounds each. Assemble deck with sufficient camber to offset dead load deflection.

B. Columns: Provide radius-cornered tubular extrusions with cutout and internal diverter for drainage where indicated. Circular downspout opening in column not acceptable.

C. Beams: Provide open-top tubular extrusion, top edges thickened for strength and designed to receive deck members in self-flashing manner.

1. Deck: Extruded self-flashing sections interlocking into a composite unit. Provide welded plate closures at deck ends.

E. Fascia: Manufacturer’s standard shape. Provide fascia splices where continuous runs of fascia are jointed. Locate splices to be in line with bents and fasten in place on hidden or non-vertical surfaces.

F. Arches: For barrel vault protective covers, provide sharp-cornered tubular extrusions.

SELECT ONE OF THE FINISH(S) 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.

H. 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. Baked-Enamel Finish: AA-C12C42R1x (Chemical Finish: cleaned with inhibited chemicals; Chemical Finish: acid-chromate-fluoride-phosphate conversion coating; Organic Coating: Thermosetting, modified-acrylic enamel primer/topcoat system, except with a minimum dry film thickness of 1.5 mils (0.04 mm), medium gloss), complying with AAMA 2603. Apply baked enamel complying with paint manufacturer’s specifications for cleaning, conversion coating, and painting.

5. 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. Erect protective cover true to line, level, and plumb. Protect aluminum columns embedded in concrete with clear acrylic. Fill downspout columns with grout to the discharge level to prevent standing water. Install weep holes at top of concrete in non-draining columns to remove condensation.

B. Provide hairline miters and fitted joints.

3.03 CLEANING

A. Clean all protective cover components promptly after installation.

3.04 PROTECTION

A. Protect materials during and after installation.

END OF SECTION 10 73 00