Awning Works Inc

Aluminum Decking Walkway Cover Specification

CSI- Division 10

SECTION 10530

PRE-ENGINEERED EXTRUDED ALUMINUM DECKING

WALKWAY COVERS

SPECIFICATION

PART 1 GENERAL

1.01 DESCRIPTION OF WORK SHALL INCLUDE FURNISHING AND INSTALLING THE FOLLOWING:

A. Provide aluminum walkway covers and columns including all necessary accessories in their entirety to achieve configurations and profiles as indicated on the drawings and specified in this section.

B. Work of this section includes design, fabrication, and installation of an extruded aluminum walkway cover system with a protective anodize, kynar or powder coat finish.

1.02 RELATED WORK SPECIFIED AND PERFORMED UNDER OTHER SECTIONS:

A. Paving and surfacing as specified in Section 02511.

B. Concrete sidewalks, Straight Curbs, Curbs, Gutters, and Wheel Stops as specified in Section 02529

C. Concrete as specified in Section 03300.

D. Metal Fabrications as specified in Section 05500.

E. Flashing and sheet metal as specified in Section 07600.

F. Joint Sealers as specified in Section 07900.

1.03 REFERENCES

A. AAMA - American Architectural Manufacturers Association.

B. Aluminum Design Manual 2010, Aluminum Association.

C. ANSI/ASCE 7-10 Wind Loads - Minimum Design Loads for Buildings and Other Structures.

D. ASTM B221-12 - Aluminum-Alloy by Extruded Bar, Rod, Wire, Shape, and Tube.

E. State Requirements for Educational Facilities (SREF) 2007.

Note Per FBC 2010 Handbook, 423.10.2.1 Covered walks.

All buildings in K-12 educational facilities shall be connected by paved walks and accessible under continuous roof cover. New relocatable classroom buildings shall be connected to permanent buildings by paved covered walks where applicable. Roofs for covered walks shall extend 1 foot (305 mm) beyond each side of the designated walkway width. Gutters or other water funneling devices shall prevent storm water from pouring onto or draining across walks.

F. Florida Standard Building Code 2010.

1.04 SUBMITTALS

A. Product Data: Submit manufacturer's product information, specifications and installation instructions for components and accessories.

B. Shop Drawings: Submit complete erection drawings showing attachment system, column and gutter beam framing, cross sections, decking covering and trim details, footers and attachment surfaces and details to clearly indicate proper assembly of components. Detailed shop drawings shall be submitted, sealed by a State Registered Structural Engineer.

C. Certification: Submit written Certification prepared and signed by a State Registered Structural Engineer verifying that framing design will safely resist wind uplift as computed by ANSI A58.1, IV= 150MPH , Exposure C, ASCE 7-10 Importance Factor 1.0 as well as meet indicated loading requirements of the Standard Building Code, latest edition as referenced in State Requirements for Educational Facilities 2010.

1.05 QUALITY ASSURANCE

A. Manufacturer to accept responsibility for structural design and engineering through fabrication finishing, delivery and erection by factory trained and certified mechanics. Manufacturer shall be a specialist with a minimum of TEN years documented experience in manufacturing product.

Installer shall be an employee of manufacturer specialized with a minimum TEN years documented experience in erecting and applying the work, approved and certified by manufacturer.

B. Size of members to be not less than those shown on drawings.

C. Design Loads: Provide walkway cover structure capable of sustaining up to 150 MPH minimum wind load, and capable of supporting up to 40 psf live load on roof.

D. Design each member to withstand stresses resulting from combinations of loads that produce maxim percentage of actual to allowable stress in that member.

1.06 DELIVERY, STORAGE AND HANDLING

A. Deliver, store and protect products as instructed by manufacturer.

B. Promptly inspect shipment to assure the products comply with requirements, quantities are correct, and products are undamaged.

C. Stack materials to prevent twisting, bending, or abrasion, and to provide ventilation.

D. Slope metal sheets to ensure drainage.

E. Prevent contact with materials during storage that may cause discoloration or staining.

1.07 WARRANTY

A. Provide manufactures standard one-year warranty that shall include, but not limited to, coverage for structural, water tightness and finish beginning the day of Substantial Completion of Installation.

PART 2 PRODUCT

2.01 MANUFACTURERS

A. Manufacturer: Subject to compliance with requirement, provide products of the following:

1. Awning Works, Inc.
   10820 US Hwy 19 North
   Clearwater, Florida 33764
   727-524-1118
   www.awningworksinc.com
   awnings@awningworksinc.com

B. Basis of Design: System components from Awning Works, Inc., Clearwater FL 33764.

C. Substitutions are not permitted.

2.02 SYSTEM DESCRIPTION

A. Walkway covers shall be an extruded aluminum system and when specified complete with internal drainage in the canopy configurations as indicated on the Drawings.

2.03 MATERIALS

A. Aluminum Columns, Bean and Tubing: 6061 and 6063 alloy heat treated to a T-5 and T-6 temper, and with not less than the strength and durability properties specified in ASTM B 221 -12 for 6063-T5

B. Deck Fasteners: min. 18-8 stainless steel screws, sealed with neoprene "O" ring beneath stainless steel; trim rivets may be aluminum.

C. Grout: Shall be Sakcrete concrete mix or equivalent with 4000 - psi compressive strength at 28 days.

D. Columns shall be tubular extrusions and when specified with cutout and internal diverter for drainage.

E. Wet beams shall be open-top tubular extrusions; top edges thickened for strength and designed to receive deck members in a self-flashing manner.

F. Deck shall be self-flashing sections interlocking into a composite unit with sufficient camber to offset dead load deflection and cause positive drainage. Welded plates shall be used as closures at deck ends.

G. Fascia shall be manufacture’s standard shape. Size as indicated on drawings.

H. Aluminum column ends embedded in concrete shall be protected with clear acrylic enamel or other acceptable coating to prevent electrolytic reaction with concrete.

I. Material Thickness: Provide minimum thickness of metal as follows:

1. Beams: 0.125 inches on vertical faces and 0.190 inches on horizontal faces.
2. Columns: 0.150 inches.
3. Deck: 0.60 inches.
4. Flashing: 0.032 inches.

2.04 FABRICATION

A. Drainage: When specified water shall drain internally from deck to beams to columns, for discharge out rain diverters at or below ground level as indicated on architectural drawings.

B. Bent Construction: When specified beams and columns shall be heli-arc welded into rigid, one-piece units in the manufacturer's plant. When size of system does not permit shipment, anodizing or painted finish as welded units, mechanical joints shall be employed. Mechanical joints shall be of stainless steel bolts with a minimum of four bolt per fastening. Bolts and nuts shall be installed in a concealed manner utilizing ½” thick by 1-1/2" aluminum bolt bars welded to members.

C. Field welding is permitted.

D. Roof Deck: Extruded, self-flashing deck sections shall interlock into composite unit, spanning double-bays for superior loading.

E. Welded dams shall be fabricated into the roof deck pans at all deck terminations.

2.05 FINISHES

A. Clear Anodized: AA-M-10C-22A31 204-R1, Architectural Class II, comply with AAMA 607.1.

B. TIGER Drylac Series® System 38 is a highly UV and weather resistant powder coating for architectural aluminum, based on TGIC-Free Super Durable Polyester, which meets AAMA 2604-05 GSB and Qualicoat Class 2 Specifications.

PART 3 EXECUTION

3.01 PREPARATION

A. Field verify column and beam location dimensions and elevations as shown on shop drawings prior to fabrication.

B. Perform field modifications as may be required to provide the following:

1. Proper transition from walkway cover to building.
2. Flashing systems and provisions for expansion.

3.02 INSTALLATION

A. Do not proceed with the work of this section until manufacturer obtains approved shop drawings and conditions detrimental to the proper and timely completion of the work have been corrected in an acceptable manner.

B. Erection shall be performed by manufacturer-approved erectors and shall be scheduled for erection after all adjacent roofing and masonry have been completed.

C. The manufacturer when specified shall furnish Styrofoam block outs for the columns. Layout and installation shall be by the General Contractor to the dimension elevations shown on the approved shop drawings.

D. Columns and beams shall b carefully aligned prior to grouting with Sakcrete concrete mix.

E. All deck ends and beam joint shall be capped as required to control drainage.

F. Butt and miter joints shall be executed in a workman like manner.

G. Walkway covers shall be erected true to line, level and plumb free from distortion or defects detrimental to appearance and performance.

H. No exposed interlocking deck joints visible on the underside of the deck.

I. Counter flashing at wall connections shall be installed under this section.

3.03 CLEANING

A. Clean all walkway cover components promptly after completion.

3.04 PROTECTION

A. Extreme care shall be taken to protect the finish from scratches, nicks, gouges, dents, concrete exposure, etc. during assemble and installation.

END OF SECTION