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SECTION 10530
EXTRUDED ALUMINUM WALKWAY COVERS

PART I GENERAL

1.01 RELATED DOCUMENTS

- A. The bidding requirements, general conditions, supplementary conditions, drawings and requirements of division one specification shall apply to work specified in this section.

1.02 DESCRIPTION OF WORK

- A. The extent of aluminum walkway cover is shown on the drawings and as specified herein.
- B. Definition: Extruded Aluminum Walkway Cover shall consist entirely of extruded aluminum sections (roll-formed not acceptable). System shall consist of heli-arc welded, one-piece rigid structural bents (column and beam assemblies), decking, fascia, accessory items and hardware to provide a complete system.
- C. Water shall drain from deck into designated beams and out at grade level of columns through weepholes.

1.03 SUBMITTALS

- A. Project Drawings: Submit detailed drawings, including partial site plan, layout of walkway cover system, bent locations (identify drain columns and wet bents), all mechanical joint locations with complete details, connections, jointing and accessories. Include details of concrete footings and bent anchorage.
- B. Product Data: Submit manufacturer's product data, specifications, component performance data and installation instructions.
- C. Project Drawings: Provide signed and sealed drawings for the proposed project by a professional engineer registered in the State of Florida, who professes his discipline to be structural engineering. Specific project loading criteria shall be clearly indicated on cover page to indicate compliance with codes and standards as well as project specific criteria.

1.04 QUALITY ASSURANCE

- A. Codes and Standards: Comply with provisions of the following except as otherwise indicated:
 - Florida Building Code, 2010 Edition with amendments, if any
 - AWS (American Welding Society) standards for structural aluminum welding
 - Aluminum Design Manual
 - Aluminum Association of Florida Guide to Aluminum Design in High Wind Areas
- B. Manufacturer: Obtain aluminum covered walkway system from only one (1) manufacturer, although several may be indicated as offering products complying with requirements.



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- C. Installer Qualification: Contractor with not less than three (3) years experience in installation of aluminum walkway covers of type, quantity and installation methods similar to work of this section.
- D. Field Measurements: Take field measurements prior to preparation of shop drawings and fabrication where possible, to insure proper fitting of work. However, allow for adjustments within specified tolerations wherever taking of field measurements before fabrication might delay work.
- E. Shop Assembly: Preassemble units in shop to greatest extent possible and disassemble as necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation.
- F. Coordination: Coordinate work of this section with work of other sections which interface with covered walkway system (sidewalks, curbs, building fascias, etc.).

1.05 PERFORMANCE REQUIREMENTS

- A. System Performance: Provide aluminum covered walkway system that has been designed, produced, fabricated and installed to withstand normal temperature changes as well as live loading, dead loading and wind loading in compliance with Florida Building Code requirements for geographic area in which work is located and as follows:

Live Load: 20 PSF minimum

Design Wind Velocity: In accordance with Chapter 26 thru 30 of ASCE 7

Importance Factor: Based upon ASCE 7

Stability Criteria: FBC Section 1604

Industry Guidelines: Aluminum Design Manual

- B. Sizes listed in specifications are to be considered minimum.
- C. Structure shall be capable of sustaining severe icing, hail, hurricane force winds and supporting a concentrated load such as being walked upon.

PART 2 PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- 1. Architectural Metals of SW Florida, Inc.
 - 2. DITT-Deck Extruded Aluminum Walkway Cover System by Dittmer
 - 3. Perfection Architectural Systems, Inc.
- B. Equivalent systems by other manufacturers will be approved by addendum provided the following are submitted ten (10) days prior to bid opening and are complete:
 - 1. Submit evidence of having operated a successful business of manufacturing complete extruded aluminum walkway cover systems.
 - 2. Business must have been in operation under submitted name and ownership for a minimum of ten (10) years.
 - 3. Submit a list of successfully completed projects of similar scope, size and complexity within the State of Florida. List shall include job name, date of completion, architect's firm name, address and phone number, owner's name with representative and phone number.
 - 4. Submit complete shop drawings for above completed jobs.



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5. Submit complete details with structural properties (moment of inertia, section modulus, modulus of elasticity, etc.) for all proposed sections (beams, columns, decking and other structural members).
6. Comply with the requirements pertaining to substitution as set forth in Instruction to Bidders.

2.02 MATERIALS

- A. All aluminum extrusions shall be alloy 6063 heat treated to a T-6 temper.
- B. Standard finish for all components shall be satin anodize 204-R1 meeting Aluminum Association Specification AA-M-10C-22A-21. Refer to shop drawings for project specific finish alternatives.
- C. Fasteners:
 - a. Deck Screws (rivets not permitted): Type 18-8 non-magnetic stainless steel sealed with a neoprene "O" ring beneath 5/8" outside dimension, conical washer.
 - b. Fascia Rivets: Size 3/16" by 1/2" grip range aluminum rivets with aluminum mandrel.
 - c. Bolts: All bolts, nuts and washers to be 18-8 non-magnetic stainless steel.
- D. Warranty:
 - a. Contractor shall warrant the entire system against defects in labor and materials for a period of one (1) year commencing on the date of substantial completion as established in Division One of these specifications.
 - b. Intention of this warranty is the Contractor will come onto the jobsite and do all necessary to effect corrections of any deficiencies.
 - c. Prima Facie Evidence of defects in labor and material may include but is not limited to, one or more of the following:
 - i. Moisture leaks
 - ii. Metal failure including excessive deflection
 - iii. Fastener failure
 - iv. Finish failure

2.03 FABRICATION

- A. Comply with indicated profiles, dimensioned requirements and structural requirements.
- B. Use sections true to details with clean, straight, sharply defined profiles and smooth surfaces of uniform color and texture, free from defects impairing strength and durability.
- C. All welding do be done by heli-arc process.
- D. Bents shall consist of shop welded one piece units. When sizes of bents do not permit shipment as a welded unit, concealed mechanical joints may be used.
- E. Mechanical joints shall consist of stainless steel bolts with a minimum of two (2) bolts per fastening. Bolts and nuts shall be installed in a concealed manner utilizing 1/2" thick by 1 1/2" aluminum bolt bars welded to structural members. All such mechanical joints must be detailed on shop drawings showing all locations.
- F. Roof Deck: Extruded Aluminum shapes, interlocking self-flashing sections. Shop fabricate to lengths and panels widths required for field assembly. Depth of sections to comply with structural requirements. Provide shop induced camber in deck units with spans greater than 16'- 0" to offset dead load deflections. Welded dams are to be used at non-draining ends of deck.
- G. Expansion joints, design structure for thermal expansion and contraction. Provide expansion joints as required.



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- H. Exposed rivets used to fasten bottom of fascia to deck to have finish to match fascia.
- I. Apply a shop applied dip-coat of clear acrylic enamel or PVC protective wrap to each column end terminating in concrete to insulate from electrolytic reaction. Column ends shall be pierced to "key" grout to bent for maximum uplift protection.

PART 3 EXECUTION

3.01 DELIVERY, STORAGE AND HANDLING:

- A. Deliver, store and handle covered walkway system components as recommended by manufacturer. Handle and store in a manner to avoid deforming members and to avoid excessive stresses.

3.02 EXAMINATION

- A. Examine adjacent work for conditions that would prevent quality installation of system.
- B. Do not proceed until defects are corrected.

3.03 CONCRETE FOOTING

- A. Concrete footings are not work of this section. Refer to "concrete work", Section 03310.
- B. Sleeves (styrofoam blockouts) shall be furnished by walkway cover manufacturer and placed by Contractor. Contractor may elect to core holes in concrete in lieu of blockouts.

3.04 FIELD DIMENSIONS

- A. General contractor shall field confirm bent locations, dimensions and elevations shown on shop drawings prior to fabrication.

3.05 INSTALLATION

- A. Erection: Set roof support frames (bents) into pockets provided in top of footings; set to required elevations, align, plumb and level; and grout in place with 2,000 p.s.i. portland cement grout. Assure that grout fills all voids and "keys" to columns. Fill downspout units with grout to bottom of discharge level. Install aluminum deflectors after grouting. Follow manufacturer's instructions. Match to finish and elevation of adjacent sidewalks.
- B. Install roof deck sections, accessories and related flashing in accordance with manufacturer's instructions. Provide roof slope for rain drainage without ponding water. Align and anchor roof deck units to structural support frames.
- C. Assemble all components in a neat, workmanlike manner.

3.06 FLASHING

- A. Flashings: Flashings required between covered walkway system and adjoining structures are work of this section.

3.07 CLEANING AND PROTECTION

- A. Damaged Units: Replace roof deck panels and other components of the work which have been damaged or have deteriorated beyond successful minor repair.



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- B. Cleaning: Remove protective coverings at time in project construction sequence which will afford greatest protection of work. Clean finished surfaces as recommended by manufacturer. Maintain in a clean condition during construction.
- C. Protection: Advise Contractor of protection and surveillance procedures, as required to ensure that work of this section will be without damage or deterioration at time of substantial completion.

END OF SECTION 10530