SECTION 12 4813 - ENTRANCE FLOOR MATS AND FRAMES

PART 1 - GENERAL

1.1 SUMMARY
   A. This section includes the following types of flooring systems:
      1. Mechanically Fabricated Aluminum Floor Tile Assemblies

1.2 REFERENCES
   A. American Society for Testing and Materials (ASTM)
   B. The Aluminum Association
   C. The Carpet and Rug Institute (CRI)

1.3 SUBMITTALS
   A. General: Submit the following in accordance with conditions of contract and Division 1 specification section 013000.
   B. Product data for each type of floor tile specified including manufacturer's specifications and installation instructions.
   C. Shop drawings in sufficient detail showing layout of tile system specified including details indicating construction relative to materials, direction of traffic, spline locations, profiles, anchors and accessories.
   D. Samples for verification purposes: Submit an assembled section of floor tile members with selected tread insert showing each type of color for exposed floor tile and accessories required.
   E. Maintenance data in the form of manufacturer's printed instructions for cleaning and maintaining floor tile system.

1.4 QUALITY ASSURANCE
   A. Flammability in accordance with ASTM E648, Class I, Critical Radiant Flux, minimum 0.45 watts/m2
   B. Slip resistance in accordance with ASTM D-2047-96, Coefficient of Friction, minimum 0.60 for accessible routes. [Specifier note: Slip and fall accidents are a major concern in commercial entranceways. We recommend that approved systems be certified by the manufacturer as meeting a minimum coefficient of friction of 0.60, when tested in wet conditions.]
C. Standard rolling load performance is 300 lb./wheel with larger loading requirements as specified (load applied to a solid 5” x 2” wide polyurethane wheel, 1000 passes without damage). [Specifier note: For entranceways in businesses such as retail outlets, airports, banks, and casinos, rolling load performance is a critical factor. We recommend that units with the highest practical loading capability be specified for such entrances.]

D. Single Source Responsibility: Obtain aluminum floor tile system from one source of a single manufacturer.

E. Utilize superior structural aluminum alloy 5000 series for tile components.

1.5 DELIVERY, STORAGE AND HANDLING

A. Deliver materials to the project site ready for use and fabricated in as large sections and assemblies as practical, in unopened original factory packaging clearly labeled to identify manufacturer.

1.6 PROJECT CONDITIONS

A. Field measurements: Check actual openings for aluminum tile system by accurate field measurements before fabrication. Record actual measurements on final shop drawings. Coordinate fabrication schedule with construction progress to avoid delay of work.

B. Recessed Conditions: IMPORTANT: Coordination with Division 03 0000 Concrete specifications is required. For proper installation, the concrete recess must be flat and smooth throughout. If the recess is formed by a concrete contractor, the pour dimensions may require leveling grout to achieve the proper depth and a smooth finish. The final recess depth will match the specified product and must be field verified. For proper frame installation, the side walls of the concrete recess must also be straight and smooth. Inconsistencies with the recess and side walls must be remediated prior to product installation.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Basis of Design: Drawings and specifications are based on manufacturer's literature from Construction Specialties, Inc. unless otherwise indicated. Other manufacturers must comply with the minimum levels of material and detailing indicated on the drawings and specified herein.

2.2 MATERIALS

A. Aluminum - ASTM B 209, alloy 5000 series for floor tile fabrication.

B. Tread insert options - refer to section 2.05.

C. 3M Dual Lock
2.3 FLOORMATIONS
   A. MODEL AND DESCRIPTION – ¼” depth Pinwheel. Shall be mechanically fabricated from solid 5052-H32 aluminum plate with a minimum thickness of 0.25 inch. Machining will have slots providing free area for fall through of dirt and debris. Machining will also allow for recessed installation of chosen inserts. Fully fabricated modules will be supplied in clear anodized finish.

2.4 FRAMES
   A. RECESSED ALUMINUM FRAME shall be a 1 5/8” (38.1mm) wide 6105-T5 Aluminum alloy Frame color shall be mill finish. Note: Mill finish frames in contact with concrete to be primer coated.

2.5 TREAD INSERT
   A. CARPET: As indicated on the “Finish Product List” on the drawings.

PART 3 - EXECUTION

3.1 EXAMINATION
   A. Verification of conditions: Examine areas and conditions under which work is to be performed and identify conditions detrimental to proper or timely completion.

   1. Do not proceed until unsatisfactory conditions have been corrected.

3.2 PREPARATION
   A. Manufacturer shall offer assistance and guidance to provide a template of irregular shaped mat assemblies to ensure a proper installation.

3.3 INSTALLATION
   A. Install the work of this section in strict accordance with the manufacturer’s recommendations.

   B. Set mat at height recommended by manufacturer for most effective cleaning action.

   C. Coordinate top of mat surface with bottom of doors that swing across to provide ample clearance between door and mat.

3.4 CLEANING
   A. It is important to the life cycle of the entrance mat that a maintenance schedule be developed which includes regular vacuuming and extraction that correctly matches the amount of traffic the mat incurs.
3.5 PROTECTION

A. After completing required frame installation and concrete work, provide temporary filler of plywood or fiberboard in recess, and cover frames with plywood protective flooring. Maintain protection until construction traffic has ended and project is near time of substantial completion.

B. Defer installation of floor mats until time of substantial completion of project.

END OF SECTION 12 4813