**3-Part CSI MasterFormat Specification**

**SECTION 12 4816**

**ENTRANCE GRILLES**

1. PART ONE - GENERAL
2. SUMMARY
	1. Section Includes
		1. Floor Grids and Frame Assemblies
	2. Related Sections
		1. Section 03300 - Cast-In-Place Concrete: For concrete floor slab recess, and grouting frames into recess.
		2. Section 07110 - Damp-proofing.
		3. Section 15150 - Sanitary Waste and Vent Piping: For floor drain if applicable.
3. REFERENCES
	1. American Society for Testing and Materials (ASTM)
		1. ASTM B 221-93 Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Shapes, and Tubes
		2. ASTM B 455-91: Standard Specification for Copper-Zinc-Lead Alloy (Leaded-Brass ) Extruded Shapes
	2. American Architectural Manufacturers Association (AAMA)
		1. AAMA 606.1 Voluntary Guide Specifications and Inspection Methods for Integral Color Anodic Finishes for Architectural Aluminum
		2. AAMA 607.1 Voluntary Guide Specifications and Inspection Methods for Clear Anodic Finishes for Architectural Aluminum.
4. SUBMITTALS
	1. Product Data: Manufacturers product specifications, installation and maintenance instructions.
	2. Shop Drawings: Show layout and types of grills and frames not less than half-scale sections of typical installations, details of patterns or designs, anchors, and accessories, and field measurements of slab recess to receive frames grills (if applicable).
	3. Samples for Selection Purposes: Actual sections of grill and frame material in a convenient but representative size showing full range of colors, textures, finishes and patterns available for each type of floor grill and frame specified.
	4. Samples for Verification Purposes: Not less than 6 inch square sections of grill material and 6 inch (152 mm) length of frame material in selected colors and finishes for each type of grill and frame specified.
	5. Installation, Operations and Maintenance data.
5. QUALITY ASSURANCE
	1. Single Source Responsibility: Obtain floor grills and frames from one source and from a single manufacturer.
	2. Rolling Load of 1500 lbs/wheel
	3. Uniform load of 80,000 lbs/sq ft
6. SUBSTITUTIONS
	1. Proposals for substitution products shall be accepted only from bidding contractors and not less than (10) working days before bid due date. Contractor guarantees that proposed substitution shall meet the performance and quality standards of this specification.
7. PROJECT CONDITIONS
	1. If product is to be recessed, coordinate with concrete work so that products are available for placing integrally with floor slabs.
8. WARRANTY
	1. Floor mats and frames shall be fabricated free of defects in materials and workmanship in accordance with the General Conditions, and the manufacturer shall offer a 2 year warranty against defects in materials and workmanship.
9. PART TWO - PRODUCTS
10. ACCEPTABLE MANUFACTURERS
11. Babcock-Davis

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1. Materials
2. ENTRANCE SYSTEM FLOOR GRILL
	1. Aluminum Rail: ASTM B221, alloy 6063-T6
	2. Rail Finish: Rail finish shall be supplied in mill (standard) or one of 13 optional colors as offered by manufacturer. (Call factory for custom colors).
	3. Rail Spacing: 3/4 inches (19 mm)
	4. Construction: I-Beam rails joined by keylock 3 inches (76.2mm) o.c. Tread cushions spaced 24 inches (610 mm) o.c.
	5. Rolling Load of 1,500 lbs/wheel
	6. Uniform load of 80,000 lbs/sq ft
	7. Fasteners: Non-corrosive screws and anchors for securing frames together and to floors
	8. Treads
		1. **GrateDesign® Rigid Grill** with 3/4 inch serrated aluminum tread:

1. ENTRANCE SYSTEM GRILL FRAME

Specifier to select one below and delete others.

* 1. Aluminum Rail: ASTM B221, alloy 6063-T5
	2. Frame Finish: Finish shall be supplied in mill (standard) or one of 5 optional colors as offered by manufacturer. **(CALL FACTORY FOR CUSTOM COLORS).**
	3. Mounting:
		1. **LBM, Level Bed, mechanically attached angle frame**, shall 1-7/8 inch (47.6 mm) deep with 1/8 inch (3.2mm) exposed surface.
		2. **LBC, Level Bed, cast-in place frame**, shall be shall 1-7/8 inch (47.6 mm) deep with 1/2 inch (12.7mm) exposed surface.
		3. **D3P, Deep Pit, cast-in place frame,** shall be shall 3 inches (76.2 mm) deep with 1/2 inch (12.7mm) exposed surface.
		4. **D4P Deep Pit, cast-in place frame,** shall be shall 4-1/2 inches (114.3 mm) deep with 1/2 inch (12.7mm) exposed surface.
1. PART 3 - EXECUTION
2. EXAMINATION
3. Products must be placed on a flat and level substrate. Substrate shall meet tolerance of 1/8 inch (3.2mm) over 10 feet (3.28M) in accordance with ACI 302.
4. Examine the substrates and conditions under which the work is to be performed, and notify the Contractor in writing of conditions detrimental to the proper and timely completion of the work. Do not proceed with the installation until unsatisfactory conditions have been corrected.
5. INSTALLATION
6. Install products in accordance with manufacturer’s instructions, at locations shown and with top of products level with adjoining finished flooring where applicable.
7. Coordinate top of product surfaces with swinging doors to provide under-door clearance.

1. Provide necessary shims, spacers, and anchorages for proper location and secure attachment of frames to concrete.

2. For installation in terrazzo flooring, contact manufacturer.

1. PROTECTION
2. Upon completion of frame installations, provide temporary filler of plywood or fiberboard in grill recesses, and cover frames with plywood protective flooring. Maintain protection until construction traffic has ended and Project is near time of Substantial Completion.
3. Install product when no further wheeled construction traffic will occur and wet type operations including painting and decorating are complete.

END OF SECTION

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