CS Entrance Floor Mats and Frames

Model: PediGrid® G1
Suggested Specifications | Section 12 48 13

Note: After downloading this spec, the Specifier must choose the correct finish, insert, and frame options and delete all other options to produce an accurate specification.

Part 1 - General

1.01 Summary

A. This section includes the following types of entrance flooring systems:
  1. Floor Grids & Frame Assemblies

B. Related Sections: The following sections contain requirements related to this section:
  1. Grouting frames into recess; refer to sections 03300 “Cast-In-Place Concrete” and section 03600 “Grout”
  2. Special requirements of various flooring types; refer to section 09400 “Terrazzo”

1.02 References

A. American Society for Testing and Materials (ASTM)
B. The Aluminum Association
C. The Carpet and Rug Institute (CRI)
D. The National Floor Safety Institute (NFSI)
E. International Organization for Standardization (ISO)

1.03 Submittals

A. General: Submit the following in accordance with conditions of contract and Division 1 specification section 01300.
B. Product data for each type of floor grid and frame specified, including manufacturer's specifications and installation instructions.
C. Shop drawings in sufficient detail showing layout of grid and frame 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 grid and frame members with selected tread insert showing each type of color for exposed floor grid, frame and accessories required.
  1. PediGrid® G1 13” x 6” standard size sample Mill Finish with Castle Gray Carpet
E. Maintenance data in the form of manufacturer's printed instructions for cleaning and maintaining floor grids.

1.04 Quality Assurance

[Specifier note: To maximize the life cycle of the entrance flooring and its appearance, the following items are critical: i) Most S grids are designed for traffic crossing perpendicular to the rail. ii) When designing an entranceway, it is preferable to minimize the need for turning on the grid. iii) We recommend

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that splices in wider units (above 12') not be positioned in the middle of a door opening wherever possible.]

A. Flammability in accordance with ASTM E648, Class 1, 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 400 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 floor grids and frames from one source of a single manufacturer.

E. Utilize superior structural aluminum alloys 6105-T5 & 6063-T5 & 6016-T6 for rail components.

F. Utilize a manufacturer that is ISO 9001 & 14001 certified.

1.05 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.

1.06 Project Condition

A. Field measurements: Check actual openings for grids 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 00 00 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

2.01 Manufacturer

A. **Construction Specialties**, 3 Werner Way, Lebanon, NJ 08833 USA 800-233-8493.
email cet@c-sgroup.com

B. Drawings and specifications are based on manufacturer’s literature from **Construction Specialties, Inc.** unless otherwise indicated. Other manufacturers must be approved equal by Architect/Owner.

2.02 Materials

A. Aluminum - ASTM B 221, alloy 6105-T5 for rail extrusions and 6005-T5 for key lock bars.

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B. Tread insert options - refer to section 2.05.

2.03 Floor Grids

A. Model and Description - G1 Pedigrid- Shall be extruded 6105-T5 aluminum alloy tread rails joined mechanically by extruded 6005-T5 aluminum alloy key lock bars. (welding or bolting shall not be permitted.) Rail finish to be mill (standard) or one of other optional colors as offered by manufacturer. Choose from anodized or heavy-duty powder coat finish.

2.04 Grid Frames

(*Specifier to select one below and delete others)*

A. LB - Level Base Frame *[Specifier note: Draining the well of entrance grids is often beneficial especially in areas of higher-than-average rainfall. Adding a deep drain pan adds cost and complexity to both the fabrication and performance of the unit. We recommend the use of a trench drain set in a level base frame wherever practical.] S*hall be 6063-T5 aluminum alloy with 1/2"(12.7mm) exposed surface and a depth of 1-13/16" (46.0mm). These assemblies receive 1/4"(6.4mm) thick heavy gauge TPE support cushions 1" (25.4mm) long mounted to each continuous foot at 20" (0.51m) on center. Frame color shall be supplied in mill (standard) or one of other optional colors as offered by manufacturer. Choose from anodized or heavy-duty powder coat finish.

B. NP – Deep Pit Series No Pan Frame shall be 4-3/16" (106.4mm) deep with 1/2" (12.7mm) exposed surfaces in 6063-T5 aluminum alloy. These assemblies shall rest upon a continuous TPE cushion with additional support members 32" (0.81m) on center maximum. At every 24" (0.61m) along the support member, staggered side to side, is a 6063-T5 aluminum alloy adjustable support leg. The base of the framed enclosure shall be formed through the blocking out of the concrete at the time the frames are set. The drains, traps and drain connections shall be furnished under the plumbing contract. Frame color shall be supplied in mill (standard) or one of other optional colors as offered by manufacturer. Choose from anodized or heavy-duty powder coat finish. **Note:** Mill finish frames in contact with wet concrete to be primer coated. Rolling load capacity for this application is 300 lb./wheel.

C. DP – Deep Pit Series w/ Drain Pan Frame shall be 4-3/16" (106.4mm) deep with 1/2" (12.7mm) exposed surfaces in 6063-T5 aluminum alloy. These assemblies shall rest upon a continuous TPE cushion with additional support members 32" (0.81m) on center maximum. At every 24" (0.61m) along the support member, staggered side to side, is a 6063-T5 aluminum alloy adjustable support leg. A 16-gauge aluminum pan complete with a 2" (50.8mm) I.P.S. drain and stainless-steel strainer to be provided by manufacturer. A 2" (50.8mm) pipe and drain trap shall be furnished under the plumbing contract. Frame color shall be supplied in mill (standard) or one of other optional colors as offered by manufacturer. Choose from anodized or heavy-duty powder coat finish. **Note:** Mill finish frames in contact with wet concrete to be primer coated. Rolling load capacity for this application is 300 lb./wheel.

D. LBDP - Level Base Frame with Drain Pan shall be 6063-T5 aluminum alloy with 1/2" (12.7mm) exposed surface and a depth of 1-13/16" (46.0mm). These assemblies receive 1/4" (6.4mm) thick heavy gauge TPE support cushions 1" (25.4mm) long mounted to each continuous foot at 24"(0.61m) on center. These assemblies shall also include a 2" (50.8mm) I.P.S. PVC drain, stainless steel strainer and a 16-gauge aluminum pan provided by manufacturer. Frame color shall be supplied in mill (standard) or one of other optional colors as

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offered by manufacturer. Choose from anodized or heavy-duty powder coat finish.

E. ZF- Z Edge Frame shall be 6105-T5 aluminum alloy with 1 1/16"(27.1mm) exposed surface and an overall depth of 1 7/8" (47.6mm). These assemblies receive 1/4"(6.4mm) thick heavy gauge TPE support cushions 1" (25.4mm) long mounted to each continuous foot at 20" (0.51m) on center. Frame color shall be supplied in mill.

F. ZFDP- Z Edge Frame with Drain Pan shall be 6105-T5 aluminum alloy with 1 1/16"(27.1mm) exposed surface and an overall depth of 1 7/8" (47.6mm). These assemblies receive 1/4"(6.4mm) thick heavy gauge TPE support cushions 1" (25.4mm) long mounted to each continuous foot at 20" (0.51m) on center. These assemblies shall also include a 2" (50.8mm) I.P.S. PVC drain, stainless steel strainer and a 16-gauge aluminum pan provided by manufacturer. Frame color shall be supplied in mill.

2.05 Tread Insert Options (*Specifier to select one below and delete others)*

A. HD – MonoTuft HD™ Carpet shall meet CRI standard for good indoor air quality. Fibers shall include a minimum of 100, 12 mil monofilament fibers per square inch. Available in standard colors as offered by manufacturer. Each carpet fiber and monofilament shall be fusion-bonded to a rigid two-ply backing to prevent fraying and supplied in continuous splice-free lengths. Anti-static carpet fibers shall contain antimicrobial additive and be treated with Scotchgard® to reduce soiling. Carpet weight shall be 33-oz./yd².

B. EC - Exterior Carpet shall be solution dyed polypropylene fibers with 50/50 blend of 600/12-denier multi filament and 595/D1 monofilament, available in standard colors as offered by manufacturer. The texturized fibers have ultraviolet blockers and color as an integral part of the filament. Each carpet fiber and monofilament shall be fusion-bonded to a rigid two-ply backing to prevent fraying and supplied in continuous splice-free lengths. Waterproof fibers do not get soggy, rot, fade, or stain. Carpet weight shall be 32-oz./yd².

C. VA - Abrasive Insert shall include a flexible abrasive grit tape, bonded to a rigid aluminum tread insert. Choose from standard mill or optional clear or black anodized finish complete with available abrasive colors as offered by manufacturer

D. RR- Recycled Rubber - High slip resistant rubber (SC of 90) insert manufactured with recycled rubber and EPDM (26%-90% dependent on color chosen from available options as offered by manufacturer).

E. R - Rubber shall include a flexible TPE tread insert in color Black.

F. L - Logo Option (Designstep carpet inserts only) Each entrance grid specifically detailed shall include a logo or trademark.

1. Identify type signature or logo required [i.e., letterhead].
2. Specify number of colors within the logo.

Part 3 - Execution

3.01 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.

3.02 Preparation

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

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3.03 Installation

A. Install the work of this section in strict accordance with the manufacturer's recommendations.

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

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

3.04 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 flooring system incurs.

3.05 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 flooring systems until time of substantial completion of project.

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