

1 General

1.1 **RELATED SECTIONS**

- .1 Section 01 33 00 - Submittal Procedures.
- .2 Section 01 78 00 - Closeout Submittals.
- .3 Section 09 68 01 – Carpet Tile.

1.2 **DESIGN REQUIREMENTS**

- .1 System description: 610 x 610 mm panels made of lightweight cementitious core encased in metal. Panels to be supported by adjustable steel pedestals. Each panel to be corner bolted to pedestal by means of a screw type fastener. Provide panels accept specified finish. Panels to be welded steel construction, complete with steel top sheet. Exposed concrete construction or laminate construction is unacceptable.
- .2 Design access flooring to withstand live, dead, lateral, and seismic loads imposed.
- .3 Access floor system shall produce a totally accessible underfloor space for the accommodation of conduits, flexible cables, service lines, and similar services.
- .4 Height of underfloor space to be from finished floor slab to top of panels. Height as indicated.
- .5 Ensure floor system is laterally stable in all directions with panels in place or removed, and approved for seismic zone of installation.
- .6 Panel on understructure:
  - .1 Design load: System shall be capable of supporting a safe working load or design load of 1000 lbs.
  - .2 Uniform load: System shall be capable of supporting a uniform load of minimum 1700 kg/m<sup>2</sup> with permanent set of no more than 0.25 mm.
  - .3 Rolling load: System shall be able to withstand 10 passes of 800 lbs on 75 mm diameter wheel and 10,000 passes of 600 lbs on 150 mm diameter wheel anywhere on panel without deformation greater than 1 mm.
  - .4 Safety factor: System shall support 2.0 times its design load anywhere on panel without failure.
- .7 Allowable Tolerances:
  - .1 Surface Dimension: plus or minus 0.38 mm of required size.
  - .2 Squareness: plus or minus 0.50 mm.
- .8 Grounding: Grounding connectors and ground wire provided by Division 26 - Electrical.

### **1.3 SUBMITTALS**

- .1 Submit submittals in accordance with Section 01 33 00.
- .2 Product data: Submit duplicate copies of manufacturer's Product data in accordance with Section 01 33 00 indicating:
  - .1 Performance criteria, compliance with appropriate reference standard(s), characteristics, and limitations.
  - .2 Product transportation, storage, handling and installation requirements.
- .3 Shop drawings: Submit shop drawings in accordance with Sections 01 33 00 and 01 78 00 indicating:
  - .1 Room layout, elevations, sections, details, materials, dimensions, gauges, panel construction, and finishes.
  - .2 Complete electrical wiring diagrams including electrical schematics and sequence of operation.
  - .3 Take measurements from finished area at Site. Indicate where applicable following information:
    - .1 Layout of work.
    - .2 Sizes and details of components.
    - .3 Anchorage methods.
    - .4 Edge and fascia details.
    - .5 Elevation differences.
    - .6 Lateral bracing.
    - .7 Typical cutout details.
    - .8 Floor finishes.
    - .9 Location of connection to building grounding electrode.
- .4 Samples: Submit samples in accordance with Section 01 33 00 of the following:
  - .1 Two floor panels with each type of floor finish.
  - .2 Full size floor panel.
  - .3 Pedestal.
  - .4 Stringer member.
  - .5 Fasteners.
  - .6 All accessories.
- .5 LEED submittals: Submit applicable supporting documentation in accordance with Section 01 33 00.01 for approval of the Departmental Representative.
- .6 Certificates: Submit certification that access flooring system meet specified design requirements.
- .7 Closeout submittals: Provide cleaning and maintenance data for incorporation into Operation and Maintenance Manual specified in Section 01 78 00.

### **1.4 QUALITY ASSURANCE**

- .1 Installers qualifications: Perform Work of this Section by a company that has a minimum of five years proven experience in the installation of access flooring

systems of a similar size and nature and that is approved by manufacturer. Submit to Departmental Representative, applicator's current certificate of approval by the material manufacturer as proof of compliance.

- .2 Mock-up:
  - .1 Construct one 2 sq.m. mock-up of access flooring system in location acceptable to Departmental Representative.
  - .2 Arrange for Departmental Representative's review and acceptance, allow 48 hours after acceptance before proceeding with Work.
  - .3 Mock-up may remain as part of Work if accepted by Departmental Representative. Remove and dispose of mock-ups which do not form part of Work.
  - .4 Upon acceptance, mock-up shall serve as a minimum standard of quality for the balance of the work of this Section.
- .3 Pre-installation meetings: Arrange with manufacturer's representative, installation Subcontractor, and Departmental Representative to inspect substrates, and to review installation procedures 48 hours in advance of installation.

#### 1.5 **EXTENDED WARRANTY**

- .1 Submit a warranty for Work of this Section in accordance with General Conditions, except that warranty period is extended to three (3) years.

#### 1.6 **MAINTENANCE**

- .1 Provide 10 spare floor panels for each type of floor covering, 10 spare pedestals with associate components, and one floor panel lifting device for maintenance use. Store maintenance Products as directed by Departmental Representative.

#### 2 **Products**

##### 2.1 **MATERIALS**

- .1 General: All materials under Work of this Section, including but not limited to, adhesives are to have low VOC content limits in accordance with Section 01 35 21.01.
- .2 Pedestals: Steel assembly with minimum 103 cm<sup>2</sup> bearing area on base plate. Pedestal head formed steel. Threaded supporting rod and vibration-proof lock nut to permit 38 mm adjustment. Manufacturer's standard finish. Corner lock fastener to be self-capturing flathead machine screw.
- .3 Panels: Steel clad, concrete filled panels, consisting of die formed galvanized steel sheet, lightweight concrete filler with steel top sheet bare ready to receive specified finish.
- .4 Panel finish: Carpet tile in accordance with Section 09 68 01.

- .5 Electrical and Communication Service Outlets: CSA approved manufacturer's standard galvanized electrical box complete with hinged lid, 2 duplex receptacles and communication plate to be flush fit in access floor panel.
- .6 Cable cutout protection: Extruded polyvinyl chloride or neoprene edging, self-extinguishing and non-burning.
- .7 Access grommets: textured plastic, sized to suit power and communication outlets.
- .8 Adhesives: Low VOC, waterproof, electrically conductive type as recommended by manufacturer of material to be bonded.
- .9 Panel lifting device: Manufacturer's standard equipment, type recommended for each panel type.

### 3 Execution

#### 3.1 PREPARATION

- .1 Verify substrate surfaces are solid, free from moisture, dust, oil, grease, scaling or laitance, projections and any other foreign matter detrimental to performance.
- .2 Ensure area to receive access flooring is square. If area is out of square, layout work in such a way that perimeter panels are cut to fit and follow configuration of abutting vertical surface. Filling squareness differential with strips of access floor material is not acceptable.
- .3 Ensure subfloor is sufficiently level so finished elevated floor is level within tolerance specified without exceeding adjusting capacity of pedestals.

#### 3.2 INSTALLATION

- .1 Install access flooring in accordance with reviewed shop drawings and manufacturer's written instructions.
- .2 Arrange pedestal assemblies to meet grid spacing and orientation required. Bond pedestals base plate to structural floor with adhesive.
- .3 Install carpet tile panel finish in accordance with Section 09 68 01.
- .4 Install floor panels and floor finish solidly on pedestals, level to maximum variation over entire floor of 1:2000.
- .5 Secure panels to pedestals by fastening corners to pedestal heads.
- .6 Panels to be easily removable by means of a lifting device. Ensure full panels are interchangeable.

- .7 Provide and adequately reinforce cutouts as required for the work. Provide other items specified, shown on drawings or required to make a complete elevated floor installation.
- .8 Seal field cuts with plastic angles or channels. No exposed cut edges permitted.
- .9 Provide floor complete with necessary edge trims, end closures and lateral bracing where pedestal is not braced four ways.
- .10 The complete floor system shall be sturdy, rigid, firm and free of vibration, rocking panels, rattles, squeaks, and other noises. Adjust floor system as required.

### 3.3 **CLEANING AND PROTECTION**

- .1 Clean finished floor free of dust and other surface contaminants. Clean area under floor completely. Remove debris and vacuum clean entire underfloor wall, floor, and supporting structure.
- .2 Prevent traffic over access floor areas, and protect finished floor with kraft paper, sealed at edges to prevent tearing.
- .3 Prior to Contract Completion, remove protection and dispose of same and leave floor in a clean condition, free from defects.

END OF SECTION