Tate Access Floors, Inc.
ConCore® 1500 Access Floor Panel
LFFH PosiLock™ Understructure – Cornerlock System

SECTION 09 69 00
ACCESS FLOORING

PART 1 - GENERAL

1.1 Section Includes

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

B. Work of this section includes, but is not limited to: access floor panels, floor coverings, understructure, and electrical, data and communication accessories.

1.2 Related Sections

A. Concrete sealer shall be compatible with pedestal adhesive, see Division 3.

B. See Division 26 Section "Grounding and Bonding for Electrical Systems" for connection to ground of access flooring understructure. Note: The electrical engineer or contractor shall determine requirements for grounding and the electrical contractor shall provide the necessary labor and materials to electrically connect the access flooring to the building ground if it is required.

1.3 Access Floor Air Plenum Requirements

Specifier's Note: Retain this section if access flooring will be used to form an underfloor air delivery plenum.

A. The access floor contractor is aware that the space beneath the access floor will be used as an air delivery plenum and as such will take the necessary precautions when installing their work so as not to impact the integrity of the plenum space specific to air leakage and cleanliness. Any penetrations or holes in the underfloor plenum created for or resulting from the work performed by the Division 9 access flooring contractor are required to be properly sealed to prevent air leakage.

B. Panel construction shall be die-cut welded steel type which creates a consistent panel-to-panel seam width along the entire edge of the panel when installed in accordance with normal installation procedures.

1.4 Environmental Conditions for Storage and Installation

A. Area to receive and store access floor materials shall be enclosed and maintained at ambient temperatures between 35° to 95° F and a minimum relative humidity level of 20%. All floor panels shall be stored at ambient temperatures between 50° to 90° F for

at least 24 hours before installation begins. All areas of installation shall be enclosed and maintained at ambient temperature between 50° to 90° F and at relative humidity levels between 20% to 80% and shall remain within these environmental limits throughout occupancy.

1.5 References

A. CISCA (Ceilings & Interior Systems Construction Association) - "Recommended Test Procedures for Access Floors" shall be used as a guideline when presenting load performance product information.

1.6 Performance Certification

A. Product tests shall be witnessed and certified by independent engineering and testing laboratory based in the U.S. with a minimum of five years experience testing access floor components in accordance CISCA "Recommended Test Procedures for Access Floors".

1.7 Country-of-Origin and Product Marking

A. Access floor materials shall comply with the provisions outlined in FAR Subpart 25.2 – Buy American Act – Construction Materials.

B. Floor panels shall be permanently marked with manufacturer's name, product identification, manufacturing date and country-of-origin. Removable Product ID stickers are not acceptable.

1.8 Performance Requirements

A. Design Load: Panel supported on actual understructure system capable of supporting a point load of 1500 lbs. applied on a one square inch area at any location on the panel without experiencing permanent set (as defined by CISCA) exceeding 0.010 inch. The loading method used to determine design (allowable) load shall be in conformance with CISCA Concentrated Load test method but with panel tested on actual understructure instead of steel blocks.

B. Safety Factor: Panel supported on actual understructure system capable of withstanding a point load of no less than (2) two times the design load rating on a one square inch area anywhere on the panel without failure when tested in accordance with CISCA A/F, Section 2 "Ultimate Loading". Failure is defined as the point at which the system will no longer accept the load.

C. Ultimate Load: Panel supported on actual understructure system capable of supporting a point load of at least 3000 lbs. applied on a one square inch area at any location on the panel without failure (i.e. minimum safety factor of 2) when tested in accordance with CISCA A/F, Section 2, "Ultimate Loading".

D. Rolling Load: Panel supported on actual understructure system capable of withstanding the following rolling loads at any location on the panel without developing a local and overall surface deformation greater than 0.040 inch when tested

in accordance with CISCA A/F, Section 3, “Rolling Loads”. Note: Wheel 1 and 2 tests are performed on separate panels.

CISCA Wheel 1: (3” dia x 1-13/16” wide): 1250 lbs. Passes: 10

CISCA Wheel 2: (6” dia x 2” wide): 900 lbs. Passes: 10,000

E. Impact Load: Panel supported on actual understructure system capable of supporting an impact load of 150 lbs. dropped from a height of 36 inches onto a one square inch area at any location on the panel when tested in accordance with CISCA A/F Section 8, “Drop Impact Load Test”.

F. Flammability: Panel shall meet *Class A* Flame spread requirements for flame spread and smoke development. Tests shall be performed in accordance with ASTM-E84-1998, Standard Test Method for Surface Burning Characteristics for Building Materials.

G. Recycled Content: Panel and understructure system shall have a minimum post-consumer recycled content of 18% and a minimum total recycled content of 49%.

H. Pedestal Axial Load: Pedestal support assembly to provide a minimum 6000 lb. axial load without permanent deformation when tested in accordance with CISCA A/F, Section 5, “Pedestal Axial Load Test.”.

I. Pedestal Overturning Moment: Pedestal support assembly to provide an average overturning moment of 1000 in-lbs. when glued to a clean, sound, uncoated concrete surface when tested in accordance with CISCA AF, Section 6, “Pedestal Overturning Moment Test”.

1.9 Design Requirements:

A. Access floor system, where indicated on the design documents, shall consist of modular and removable fully encased cementitious filled welded steel panels fastened onto, and supported by, adjustable height pedestal assemblies. Pedestal head and panel corner design must provide a positive location and lateral engagement of the panel to the understructure support system without the use of fasteners.

B. Panel shall be easily removed by one person with a suction cup lifting device and shall be interchangeable except where cut for special conditions.

C. Quantities, finished floor heights (FFH) and location of accessories shall be as specified on the contract drawings.

1.10 Submittals for Review

A. Detail sheets, for each proposed product type, which provide the necessary information to describe the product and its performance.

B. Test reports, certified by an independent testing laboratory with a minimum of five years experience testing access floor components in accordance CISCA Recommended Test Procedures, certifying that component parts perform as specified.

1.11 Submittals for Information

A. Manufacturer's installation instructions and guidelines.

B. Manufacturer's Owner Manual outlining recommended care and maintenance procedures.

PART 2 - PRODUCTS

2.1 Manufacturers

A. Access floor system manufactured by Tate Access Floors, Inc. shall consist of the ConCore® 1500 access floor panel supported by the LFFH PosiLock understructure system.

B. Alternative products shall meet or exceed the feature requirements as indicated herein and the performance requirements outlined in Section 1.8 and must receive prior written approval by the architect or designer.

C. Access floor manufacturer shall be ISO9001:2015 certified demonstrating it has a robust and well documented quality management system with continual improvement goals and strategies.

D. Access floor manufacturer's facilities shall be ISO14001:2015 certified demonstrating that they maintain an environmental management system.

E. Access floor manufacturer's facilities shall be OHSAS 18001:2018 certified demonstrating that they maintain an Occupational Health and Safety Management system.

2.2 Support Components

Pedestals:

A. Pedestal assemblies shall be corrosive resistant, all steel welded construction, and provide an adjustment range of +/- 1/2".

B. Pedestal head shall be designed with locating tabs and integral shape to interface with the panel for positive lateral retention and positioning without fasteners. Note: This allows the floor to be installed during the construction process without screws so that access by other related trades can be accomplished quickly and easily. It also enables the user to have a mixed installation of fastened and unfastened panels within the same installation.

C. Hot dip galvanized steel pedestal head assembly shall consist of die formed steel pedestal head projection welded to a ¾" solid steel threaded rod.

D. Hot dip galvanized pedestal base assembly shall consist of a 1 ½" steel coupling nut projection welded to a formed steel plate with no less than 16 inches of bearing area.

2.3 Floor Panels

A. Panels shall consist of a top steel sheet welded to a formed steel bottom pan filled internally with a lightweight cementitious material. Mechanical or adhesive methods for attachment of the steel top and bottom sheets are unacceptable.

B. Cementitious fill material shall be totally encased within the steel welded shell except where cut for special conditions**.** Note: This greatly reduces the potential for dust in the environment from exposed cement materials.

C. Panel shall have an electrically conductive epoxy paint finish.

D. Corner of panel shall have a locating tab and integral shape design to interface with the pedestal head for positive lateral retention and positioning with or without fasteners.

E. Fastening of panels to pedestal heads shall be accomplished by a machine screw which is specially designed to be self capturing within the body of the panel. Note: This prevents the inadvertent loss of panel fastening screws when accessing the underfloor space and potential damage to objects by screws which extend beyond the depth of the panel.

F. Top surface of the panel shall have an option for four positioning location holes to engage positioning buttons on the PosiTile® carpet tile for precise matching of the carpet tile to the panel.

2.4 **Accessories**

A. Provide manufacturer's standard steps, ramps, fascia plate, perimeter support, and grommets where indicated on the contract drawings.

B. Provide _____ spare floor panels and _____ square feet of understructure systems for each type used in the project for maintenance stock. Deliver to project in manufacturer's standard packaging clearly marked with the contents.

C. Provide _____ panel lifting devices.

D. When applicable provide manufacturer's standard underfloor air systems components (including grilles and diffusers) where indicated on the contract drawings.

2.5 **Finishes**

A. Finish the surface of floor panels with floor covering material as indicated on the contract drawings. Where floor coverings are by the access floor manufacturer, the type, color and pattern shall be selected from manufacturer's standard. All areas to be furnished with laminated floor panels must be maintained at ambient temperature between 50° to 90° F and at humidity level between 20% to 80% relative and shall remain within these ranges through installation and occupancy.

B. Carpet tile: Access floor system shall be designed to accommodate modular carpet tiles (PosiTile®) that precisely match with ConCore® panels in a one-to-one configuration. This is accomplished by four positioning buttons on the carpet tile which engage into button location holes in the floor panel. The carpet tile's backing maintains

dimensional stability and holds the carpet tile flat without field application of adhesive. Adhesives shall not be required on the PosiTile installation except where a carpet tile is cut and more than two positioning buttons are removed.

C. Freelay resilient tile or freelay Luxury Vinyl Tile (LVT) planks: Rigid underlayment (by others) must be installed over the access floor prior to installing freelay tile or planks.

2.6 **Fabrication Tolerances**

A. Floor panel flatness measured on a diagonal: +/- 0.035”

B. Floor panel flatness measured along edges: +/- 0.025”

C. Floor panel width or length of required size: +/- 0.010”

D. Floor panel squareness tolerance: +/- 0.015”

PART 3 - EXECUTION

3.1 **Preparation**

A. Examine structural subfloor for unevenness, irregularities and dampness that would affect the quality and execution of the work. Do not proceed with installation until structural floor surfaces are level, clean, and dry as completed by others.

B. Concrete sealers, if used, shall be identified and proven to be compatible with pedestal adhesive. Verify that adhesive achieves bond to slab before commencing work.

C. Verify dimensions on contract drawings, including level of interfaces including abutting floor, ledges and doorsills.

D. The General Contractor shall provide clear access, dry subfloor area free of construction debris and other trades throughout installation of access floor system.

E. Area to receive and store access floor materials shall be enclosed and maintained at ambient temperatures between 35° to 95° F and relative humidity levels between 20 to 80%. At least 24 hrs. before installation begins, all floor panels shall be stored at ambient temperatures between 50° to 90° F and relative humidity levels between 20% to 80% and shall remain within these environmental limits throughout occupancy.

3.2 **Installation**

A. Pedestal locations shall be established from approved shop drawings so that mechanical and electrical work can be installed without interfering with pedestal installation.

B. Installation of access floor shall be coordinated with other trades to maintain the integrity of the installed system. All traffic on access floor shall be controlled by access floor installer. No traffic but that of access floor installers shall be permitted on any floor area for 24 hours to allow the pedestal adhesive to set. Access floor panels shall not be removed by other trades for 72 hours after their installation.

C. Floor system and accessories shall be installed under the supervision of the manufacturer's authorized representative and according to manufacturer's recommendations.

D. No dust or debris producing operations by other trades shall be allowed in areas where access floor is being installed to ensure proper bonding of pedestals to subfloor.

E. Access floor installer shall keep the subfloor broom clean as installation progresses.

F. Partially complete floors shall be braced against shifting to maintain the integrity of the installed system where required.

G. Additional pedestals as needed shall support panels where floor is disrupted by columns, walls, and perimeter cutouts.

H. Understructure shall be aligned such that all uncut panels are interchangeable and fit snugly but do not bind when placed in alternate positions.

I. Finished floor shall be level, not varying more than 0.062" in 10 feet or 0.125" overall.

J. Inspect system prior to application of floor covering and replace any floor panels that are cracked, broken and structurally damaged and do not comply with specified requirements.

K. Installed panels shall be straight and square and spaced so that the distance from one end to the other of any line of 12 panels is not less than 24 feet and does not exceed 24' 1/8".

L. Acceptance: General contractor shall accept floor in whole or in part prior to allowing use by other trades.

M. All cable and wire openings shall be sealed with manufacturer's removable cable cutout seal or grommets.

End

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