GUIDE SPECIFICATION

Manufacturer:
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SECTION 096452
RESILIENT STUDIO & STAGE FLOORING (EXCELLE)

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This guide specification has been prepared by L'AIR International, in editable format, as an aid to specifiers in preparing written construction documents for modular**,** resilient (suspended or sprung) flooring for dance, theatre, athletics and acoustical isolation. L'AIR International products are designed to provide correct, consistent, and safe suspended flooring while providing acoustic isolation from adjacent spaces.

Refer to Section 096430 – Wood Flooring for wood flooring to be installed over studio and stage substrates.
Refer to Section 096516 – Resilient Sheet Flooring for vinyl flooring to be installed over studio and stage flooring.

L'AIR International manufactures a variety of pre-fabricated, modular sprung floors for various applications, including:

Excelle ™ Suspended (sprung) Flooring for permanent and semi-permanent installations in studios. Designed for use with L'AIR Professional DanceVinyl as performance surface, installed onto Excelle during installation.

Excelle III ™ Suspended (sprung) Flooring for permanent installation in studios. Designed for use with Hardwood as performance surface, or L'AIR Professional DanceVinyl, installed onto Excelle III during installation.

Bravo™ Suspended (sprung) Flooring, for permanent installation in multi-use theatres intended for dance and other theatre performances. Designed for use with L'AIR Professional DanceVInyl, as above noted.

Encore™ Demountable Suspended (sprung) Theatre Flooring, primarily used for touring theatre stage applications. Designed for use with L'AIR Professional DanceVInyl (Marley), as above.

All of the above can be provided either unfinished, or with a sheet vinyl or hardwood surfacing. Refer to Sections

L'AIR International also manufactures a complete line of accessories, including transitions for doorways and open area of suspended flooring, and ventilated cove moldings.

Edit entire master to suit project requirements. Modify or add items as necessary. Delete items which are not applicable. Words and sentences within brackets [_____] reflect a choice to be made regarding inclusion or exclusion of a particular item or statement. Editor notes to guide the specifier are included between lines of asterisks to assist in choices to be made. Remove these notes before final printing of specification.

This guide specification is written around the Construction Specifications Institute (CSI), Section Format standards references to section names and numbers are based on Master Format 2012.

For specification assistance on specific product applications, please contact our offices above.

L'Air International reserves the right to modify these guide specifications at any time. Updates to this guide specification will be posted to the manufacturer's web site and/or in printed matter as they occur. L'AIR International makes no expressed or implied warranties regarding content, errors, or omissions in the information presented.

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PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Modular, interlocking, fully integrated, acoustically rated, permanently, or semi-permanently installed, resilient flooring system which provides a consistent, and progressively resilient surface with controlled rebound over entirety of installed floor surface.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings: Show installation details and locations of the following:

1. Floor patterns.
2. Layout of modules.
3. Locations of floor inserts for equipment installed through flooring.

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If project owner is seeking LEED certification, retain applicable submittals in paragraph below.

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1.4 INFORMATIONAL SUBMITTALS

A. LEED Submittals:

1. Product Data for Credit MR 4: For products having recycled content, documentation indicating percentages by weight of postconsumer and pre-consumer recycled content. Include statement indicating cost for each product having recycled content.
2. Product Data for adhesives, documentation including printed statement of VOC content.
3. Product Data for paint, documentation including printed statement of VOC content.
4. Laboratory Test Reports For adhesives, documentation indicating that products comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
5. Certificates for Credit MR 7: Chain-of-custody certificates certifying that products specified to be made from certified wood comply with forest certification requirements. Include evidence that mill is certified for chain of custody by an FSC-accredited certification body. Include statement indicating cost for each certified wood product.

1.5 CLOSEOUT SUBMITTALS

A. Maintenance Data: For finish flooring to include in maintenance manuals.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials in original packages and containers, with seals unbroken, bearing manufacturer's labels indicating brand name and directions for storing. Store with module separators in place, as shipped from manufacturer.

B. Store materials to prevent deterioration.

1.7 FIELD CONDITIONS

A. Alter installation method per manufacturer’s recommendations; do not allow direct light onto floor surface.

B. If applicable, activate hydronic floor heating at least 12 days prior to installation of flooring system.

C. Facility climate shall be controlled and remain consistent. Temperature during installation and use shall be 70-75 degrees F (21-23 deg C) and shall not fluctuate by more than 10 degrees. Ambient humidity shall not exceed 40 percent moisture content and be not less than 15 percent moisture content.

D. Adhesively Applied Products:

1. Maintain temperatures during installation within range recommended in writing by manufacturer, but not less than 70 deg F (21 deg C) or more than 95 deg F (35 deg C), in spaces to receive flooring 48 hours before installation, during installation, and 48 hours after installation unless longer period is recommended in writing by manufacturer.
2. After post-installation period, maintain temperatures within range recommended in writing by manufacturer, but not less than 70 deg F (21 deg C) or more than 95 deg F (35 deg C).

3. Close spaces to traffic during flooring installation.
4. Close spaces to traffic for 48 hours after flooring installation unless manufacturer recommends longer period in writing.

E. Install flooring after other finishing operations, including painting, have been completed.

1.8 COORDINATION

A. Coordinate layout and installation of flooring with floor inserts.

1.9 WARRANTY

A. Manufacturer warrants products to be free of defects which would affect performance in the field for a period of 3 years from date of substantial completion.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURER AND PRODUCT

A. L'AIR EXCELLE™ Suspended sprung floor system, as designed and manufactured by L'AIR International, 117 Vacek Street, Fort Worth, TX, 76107-1908 USA; 817. 237.9390 x1 voice; 817. 237.9407 facsimile; Email: info@lairfloors.com.

2.2 MATERIALS

A. Suspended Floor Module Sizes: (includes structural panel and attached suspension towers): 47-1/2” wide x 95” long x 1-3/8" thick.
B. Average Weight Per Module: 60 lbs/sq. ft. Module is pre-fabricated and includes all suspension components attached and lapped joints machined, ready for installation.
C. Module Composition: 3/4" (19 mm) thick plywood, with dowelled joints.
D. Suspension Towers: 5/8" thick closed cell Multi-Durometer™ Suspension Towers adhered with non-toxic adhesive. Optional thicknesses are available. Towers are composed of recycled, closed cell, cross linked EVA400 density polyethylene.
E. Transition Ramp-Reducer:
    1. Dimensions: 47" long by 19" wide by 1-3/8" thick at flooring contact.
F. Vented Vinyl Cove Molding: Pre-fabricated vinyl casting, vented, and delivered ready for installation.
    1. Dimensions: 4 inch wide, 3 inch tall x 48 inch lengths. Outside corners are furnished for columns, pilasters, door casings, when indicated on Drawings.
    2. Color: Standard: Black. (special order: Brown).
G. Vapor Barrier: One layer 10 mil polyethylene, with taped edges and joints of same permeance as barrier.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, with Installer present, for compliance with requirements for installation tolerances, moisture content, and other conditions affecting performance of the Work.
    1. Verify that finishes of substrates comply with tolerances and other requirements specified in other Sections and that substrates are free of cracks, ridges, depressions, scale, and foreign deposits that might interfere with adhesion of resilient products.
B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Prepare substrates according to manufacturer's written recommendations to ensure adhesion of flooring.
B. Remove substrate coatings and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, using mechanical methods recommended in writing by manufacturer. Do not use solvents.
C. Use trowelable leveling and patching compound to fill cracks, holes, and depressions in substrates.
D. Move flooring and installation materials into spaces where they will be installed at least 48 hours in advance of installation unless manufacturer recommends a longer period in writing.
    1. Do not install flooring until they are same temperature as space where they are to be installed.
E. Sweep and vacuum clean substrates to be covered by flooring immediately before installation. After cleaning, examine substrates for moisture, alkaline salts, carbonation, and dust.
F. Proceed with installation only after unsatisfactory conditions have been corrected.
G. Flooring must be prepared during installation to accept large, permanent and semi-permanently placed objects. Consult manufacturer prior to installation.

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Verify substrate to which flooring will be installed and include only that substrate in G-I below.
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H. Concrete Substrate:
   1. Allow at least 31 days for new concrete to cure.
   2. Surface concrete shall be dry and free of grease, oil, or contaminating agents.
   3. Eliminate cracks, nails, and other protrusions.
   4. Vacuum and damp mop concrete substrate no less than 12 hours prior to installation.
   5. Concrete Substrate shall be smooth, on same elevation, and exhibit no greater deviation in elevation than 1/4" over a 12 ft. radius. If substrate requires leveling with compound, use only designed leveling compound point load capability of no less than 250 lbs per square foot static load.
   6. Assess moisture content of slab prior to installation based on manufacturer's specifications. Manufacturer is not responsible for site conditions, inclusive of, but not limited to, substrate conditions or assessing substrate moisture levels.
   7. Prepare substrate according to ASTM F 710.
      a. Verify that substrates are dry and free of curing compounds, sealers, and hardeners.
      b. Remove substrate coatings and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, using mechanical methods recommended by resilient sheet flooring manufacturer. Do not use solvents.
      c. Alkalinity and Adhesion Testing: Perform tests recommended by flooring manufacturer. Proceed with installation only after substrate alkalinity falls within range on pH scale recommended by manufacturer in writing, but not less than 5 or more than 9 pH.
      d. Moisture Testing: Proceed with installation only after substrates pass testing according to flooring manufacturer's written recommendations, but not less stringent than the following:
         1) Perform anhydrous calcium chloride test according to ASTM F 1869. Proceed with installation only after substrates have maximum moisture-vapor-emission rate of 3 lb of water/1000 sq. ft. (1.36 kg of water/92.9 sq. m) in 24 hours.
         2) Perform relative humidity test using in situ probes according to ASTM F 2170. Proceed with installation only after substrates have a maximum 75 percent relative humidity level.

I. Wood Substrate:
   1. Surface of wood substrate shall be dry and free of dust, oil, grease, and cracks. Eliminate nails, splinters and other protrusions.
   2. Sub-floor shall be smooth, on same elevation, and exhibit no greater deviation in elevation than 1/4" over a 12 ft. radius. Use hardboard, plywood, or OSB to level sub-floor if necessary.
   3. Moisture content shall not exceed 7-10 percent.
   4. Must be structurally sound with point loading capability of no less than 250 lbs per square foot. Built-up wood flooring shall have beams or sleepers on at least 16" centers, surfaced by no less than 1-1/2" of tongue and grooved composite sheeting such as plywood, ply-core, OSB, or other sheeting products appropriate for conditions. Evidence of shift or instability in existing wood sub-floor, including but not limited to separation of floor boards, excessive or inconsistent spaces between wood sub-floor and walls, buckling or warpage, requires upgrading or replacement of sub-floor prior to installation.

J. Steel Substrate: Surface of steel substrate shall be dry and free of dust, oil, and grease. Eliminate burrs, slag, cracks, and any protrusions prior to installation. Substrate shall be smooth, on same elevation, and exhibit no greater deviation in elevation than ¼ inch over a 12 feet radius. Must be structurally sound with point loading capacity of no less than 250 lbs. per square foot.

3.3 FLOORING INSTALLATION, GENERAL

A. Comply with manufacturer's written installation instructions.
B. Install vapor retarder over substrate and seal all joints and terminations.
C. Scribe, cut, and fit flooring to butt neatly and tightly to vertical surfaces, equipment anchors, floor outlets, and other interruptions of floor surface.
D. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating subfloor markings on flooring. Use nonpermanent, non-staining marking device.

3.4 SUSPENDED FLOOR MODULE INSTALLATION

A. Install in strict compliance with manufacturer's written instructions.
B. Place system and related installation components within installation room and allow to acclimate no less than 72 hours prior to installation. Site conditions shall dictate final acclimating time.

C. Floor System shall be considered finish material. All trowel trades, painting, wall-mounted barres and mirrors, wall and overhead electrical, lighting, and sprinkler systems shall be completed and operational. No overhead work of any type shall be conducted following installation of floor system.
D. Paint system following installation, applied by manufacturer's recommended methods.
E. After installation, protect floor from foot traffic, ladders, carts, tool boxes, etc.
F. Exclusive use of the installation studios or theatres is required and specified for installation of flooring system. No other personnel or contractors, unless approved by installer are to be allowed within the installation studio or theatre during installation of flooring system.

3.5 CLEANING AND PROTECTING

A. Protect flooring from mars, marks, indentations, and other damage from construction operations and placement of equipment and fixtures during remainder of construction period. Use protection methods recommended in writing by manufacturer.
    1. Do not move heavy and sharp objects directly over flooring. Protect flooring with plywood or hardboard panels to prevent damage from storing or moving objects over flooring.

3.6 MAINTENANCE AND STORAGE

A. Pianos or other moveable equipment used on floor systems shall be fitted with neoprene or polyurethane tired casters at least 4" in diameter with a tread width of 2 inch. Using hardboard across flooring seams, or other protective material to create pathway for moving large pianos, technical lifts, or heavy equipment to different locations on the floor. For permanently located pianos or heavy equipment (including but not limited to, permanent risers, telescoping seating, and desks), contact manufacturer for information about special modification options.
B. Use extreme care when handling, transferring or storing floor system modules. Avoid contacting edges or corners of modules with walls, doorways, thresholds, railings, columns, and other objects. Store modules flat with furnished shipping spacers on original pallets or stack carefully on drywall carts.

END OF SECTION