

**SECTION 09 64 00
WOOD FLOORING**

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. The provisions of the General Conditions, Supplementary Conditions, and the Sections included under Division 1, General Requirements, are included as a part of this Section.

1.2 SECTION INCLUDES

- A. Provide all labor, materials, and equipment necessary for the installation of a complete wood flooring system, including finish, painted lines, symbols, and a vented rubber base as specified.
 - 1. Gymnasium wood flooring system
- B. Related Work, sec 03 30 00 – Cast-in-Place Concrete; concrete slabs substrate.

1.3 REFERENCES

- A. MFMA – Maple Flooring Manufacturers Association
- B. NWFA/NOFMA – National Wood Flooring Association – Standards
- C. The Performance Criteria of DIN 18032 Part II

1.4 SYSTEM DESCRIPTION

- A. Design Requirements
 - 1. Provide floor surfaces conforming to the Florida Building Code and Local Regulations.
 - 2. These requirements supersede Technical Specifications in this Section.
- B. Performance Test
 - 1. Provide independent testing and certification that flooring system meets or exceeds the Athletic Performance of the International Standard DIN 18032 Part 2, and the performance criteria listed below.
 - a. Resilient Layer directly below 80% of flooring
 - b. Shock Absorption 63%
 - c. STD Deformation 2.9mm
 - d. Area of Deflection 15%
 - e. Ball Rebound 95.3%
 - f. Uniformity of Shock absorption +/- 2%
 - g. Return 98%

1.5 SUBMITTALS

- A. Provide product data including manufacturer's detailed technical product data and insulation instructions for wood flooring.
 - 1. Include instructions for handling, storage, installation, and sizes of individual components.
 - 2. Provide shop drawings showing profiles, edge details, finishing, protection, and maintenance.
- B. Shop drawings showing layout of wood flooring, including plans, elevations, sections, details of anchorage and attachments to other Work, and reducer strips, baseboard trim, molding, nosing, or other accessories, and expansion provisions and trim details.

1.6 QUALITY ASSURANCE

- A. Installer (Flooring Contractor):
 - 1. Carry out the complete installation of the flooring system described in this specification by an experienced installer specializing in the installation of the specified flooring system with minimum 5-years documented experience.
 - a. Perform the work in per the most recent manufacturer's installation instructions.
 - 2. Installer (Flooring Contractor) is liable for all matters related to installation for a 2-year period after the Owner/Architect accepts the floor system.
- B. Wood Certifications: Use only bundles of hardwood flooring clearly marked with the required NWFA/MFMA grades and each piece indented on its backside with the NWFA/MFMA trademark.
- C. Pre-Installation Conference:
 - 1. Prior to installation of flooring system, conduct a pre-installation site conference.

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1.7 DELIVERY, STORAGE, AND HANDLING

- A. Move wood flooring into the installation space at least 7-days before installation.
 - 1. Contractor shall layout the wood flooring in the installation pattern.
 - 2. Do not leave flooring bundled.
- B. Wood flooring shall not be stored at location if the moisture content of the concrete exceeds 4% or 4-lbs per 1000 sq. ft.
- C. Follow manufacturer's requirements for Storage and handling of the flooring material.

1.8 PROJECT CONDITIONS

- A. Dry sub-floors, free from foreign material and broom clean, are essential.
 - 1. Room temperature and moisture content must meet the Manufacturer's recommendations and Warranty requirements.
- B. Starting wood flooring application constitutes acceptance that the sub-floor surface is in proper condition as required per the Manufacturers recommendations and Warranty requirements.
- C. Verify the concrete sub-floor installation and finish is at the correct elevation, to accommodate the wood floor construction specified and is finished with steel trowel surface to level and flat tolerances specified in Section 03 30 00.

1.9 WARRANTY

- A. Provide a written warranty executed by Manufacturer, Installer, and Contractor agreeing to repair or replace wood flooring that fails in materials or workmanship within the specified warranty period. Failures include but are not limited to:
 - 1. Buckling, warping, squeaking, and loosening
 - 2. Excessive open joints or cracks
 - 3. Deterioration of finishes beyond normal wear
- B. Provide minimum 2-year warranty from date of Substantial Completion.

PART 2 PRODUCTS

2.1 WOOD FLOORING

- A. Wood flooring system shall be "ActionCush II" as manufactured by Action Floor Systems.
 - 1. Flooring shall be 25/32" x 2¼", 2nd & Btr northern hard maple standard strip NWFA/MFMA grade marked and stamped as manufactured by Action Floor Systems, LLC.
 - 2. Architect/Owner will consider products of other manufacturers provided they equal or exceed the material requirements and functional qualities of the specified product.
- B. SUBFLOOR
 - 1. Vapor barrier shall be 6-mil Polyethylene.
 - 2. Sleepers shall be spruce, pine or fir, nominal size 2" x 3" x 4', surfaced to uniform thickness kiln dried to 12% moisture content or less, and Woodlife "F" treated, each with 5-"Airtech" or "Actioncush" natural rubber pads attached as supplied by the manufacturer.
 - 3. Flooring fasteners shall be 2" barbed cleats or 2" 15-ga. coated staples.
 - 4. Perimeter wall base shall be 3" x 4" rubber vented cove base with matching pre-molded outside corners as supplied by the manufacturer.

2.2 ACCESSORIES

- A. Cork Expansion Strip: Composition Cork Expansion Strip; Type I-B, Class 2.

2.3 FINISH MATERIALS

- A. Finish System: Provide and install a complete system with compatible components recommended by flooring manufacturer; approved and tested by NWFA/MFMA.
- B. Game Paint:
 - 1. Color as selected by Architect/Owner.
 - 2. Paint type to be compatible with approved sealer and finish materials

PART 3 EXECUTION

3.1 EXAMINATION

- A. Concrete sub-floor shall be instrument checked by Flooring Contractor and discrepancies reported

to General Contractor for correction.

- B. Do not proceed until corrections are completed and approved.

3.2 PREPARATION

- A. Test the concrete substrate for dryness before proceeding with installation.
- B. Check the concrete substrate levelness, if more than $\frac{1}{8}$ " deviation in any direction when checked with a 10' straight edge, take corrective action.
- C. Grind down high spots or fill in low spots with approved filler to correct improper conditions.

3.3 INSTALLATION, GENERAL

- A. General: Install materials and components in strict accordance with the manufacturer's written instructions, but not less than that recommended in NWFA/NOFMA "Hardwood Flooring Installation Material", where applicable to type flooring required.
- B. Pattern: Lay flooring parallel with the primary playing court.

3.4 WOOD FLOORING

- A. Install vapor barrier over concrete slab, tape and seal seams to provide a continuous membrane.
 - 1. Take care not to puncture or damage the vapor barrier membrane, and lap joints min 6".
- B. Run sheeting up sides of floor depression and seal at top edge with continuous bead of high grade mildew resistant silicone sealant.
- C. Install flooring system in strict accordance to flooring manufacturer's written instructions.
- D. Allow a continuous expansion gap at meetings of flooring system with walls and other permanent vertical obstructions, per manufacturer's requirements.
- E. Install thresholds/expansion joint covers at door openings at edge of wood floor.
- F. Affix vented base to walls with appropriate cement.
 - 1. Use pre-molded outside corners, and neat miter at inside corners.

3.5 SANDING

- A. Allow installed flooring to acclimate to ambient conditions, as required by the Manufacturer's Recommendations and Warranty conditions, before sanding.
- B. Sand the wood flooring in strict accordance with the manufacturer's written instructions.
- C. Vacuum the floor before placing the first coat of finish.
- D. Floor shall present a smooth surface without drum stop marks, gauges, streaks, or shiners.

3.6 FINISHING

- A. Athletic Wood Flooring
 - 1. Apply finishes as required by the Manufacturer's recommendations and Warranty requirements.
 - 2. Seal the floor as soon as possible after final sanding.
 - 3. Mark game lines with game line paint and let dry at least 13 hours.
 - 4. Lay out the game lines in accordance with Drawings and current rules of Athletic Association having jurisdiction.
 - a. Lines shall be straight with sharp edges of colors selected by Architect.
 - 5. Apply a uniform coat of floor finish.
 - a. Let dry at least 12 hours, then scour lightly with #2-steel wool, clean floor thoroughly and allow for proper drying.
 - b. Apply second coat of floor finish, let cure for at least 7-days before using the floor.

3.7 CLEAN-UP

- A. Upon completion of the Work under this Section, remove from the premises unused materials, tools and equipment and see that rubbish is disposed of.

END OF SECTION