

## SECTION 096400 – WOOD FLOOR REFINISHING

## PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract apply to this Section including all documentation provided in RFP#2018-14.

## 1.2 SUMMARY

## A. Section Includes:

1. Complete removal of existing finish at wood gymnasium floor and complete refinishing at locations noted:
2. Wood Floor Sealer as required by floor finish manufacturer.
3. Layout and repainting of game lines with new game line paint.
4. Two (2) coats of water based Wood Floor Finish
5. Removal and reinstallation of floor accessories as required.

B. At bleacher locations the bleachers shall be in their fully retracted position during recoating or refinishing process. Refinishing of floor immediately beneath retracted bleachers is not required.

C. Protect bleachers from products such as solvents used as part of refinishing work that may be detrimental to bleacher components.

## 1.3 SUBMITTALS

## A. Product Data:

1. Detailed technical product data for all products to be installed or applied.
2. Material Safety Data Sheets for all products installed or applied.
3. Submit written statements of compatibility from manufacturers if products by different manufacturers are applied.

## B. Documentation of existing conditions:

1. Field verify and document existing conditions, including all dimensions and layout information of existing game lines for use in reproducing the lines in existence during refinishing work.
2. Provide photo documentation of areas of damage (gouges, mars, split boards, etc.) to

existing floor that the Contractor does not expect would be remedied by refinishing work.

C. Samples:

1. Submit samples for each type of finish or paint, demonstrating full range of variation to be anticipated in finished work.
2. Furnish two pieces per sample, each not less than 12 inches.

Quality Control Submittals:

1. Manufacturer's installation and finishing instructions.
2. Previous project references with contact information.

D. Layout Plans

1. Provide colored dimensioned plans of proposed graphics and striping to be painted on floor.
  - a. Note locations of colors to be used and submit color samples.
  - b. Provide field verified locations of penetrations (including electrical boxes, volleyball standards, etc.) and basketball backstops.
  - c. Allow three days once submittals are issued, to allow Owner time adjust game line layouts and colors.

E. Contract Closeout Submittals:

1. Operations and Maintenance Data:
  - a. Manufacturer's maintenance recommendations.
  - b. List of maintenance products recommended by flooring manufacturer and contact information as necessary for Owner to obtain products.

## 1.4 QUALITY ASSURANCE

A. Qualifications:

1. Contractor shall have not less than 10 years of successful experience in finishing/refinishing wood gymnasium floors.
2. Contractor shall provide not less than 5 references complete with contact information necessary for Owners Representative to verify reference.
3. Contractor shall be an accredited member of the Maple Floor Manufacturers Association (MFMA).

B. Manufacturers Requirements and Recommendations:

1. The requirements and recommendations of specific products applied during the refinishing process are to be followed in all respects.
2. All products are to be applied at coverage rates recommended by the manufacturer.

3. Do not thin or reduce products unless Manufacturer's instructions specifically direct this to be required.
4. Compatibility of all materials for proper adhesion and performance that are applied during the refinishing process must be verified by the Contractor prior to any application. Contractor shall provide written statements from Manufacturers indicating compatibility to Owner upon request. Contractor shall apply test areas to check for proper adhesion of materials and to verify previous coatings are not attacked by subsequent coatings or finishes as required. If poor adhesion or attack of coatings occurs, the Contractor shall be responsible for all necessary remedies at their own expense.

C. Pre-installation Conference:

1. Conduct conference at project site for the purpose of a final review of the contract documents, manufacturer's instructions, and materials to be used. Contractor shall bring copies of instructions and recommendations from manufacturer and distribute to those in attendance.
2. Attendance: The contractor, other trades or manufacturers' representatives as deemed appropriate by the contractor, and the Owners Representative.
3. Examine actual conditions of environment and existing substrates to determine whether it is satisfactory for work to proceed.
4. Examine the contract documents and compare with manufacturer's current printed installation recommendations and instructions.

1.5 DELIVERY, STORAGE AND HANDLING

- A. All materials and products to be applied shall be delivered to the job site unopened in manufacturer's original packaging and containers.
- B. All products delivered to the job site must be within the shelf-life approved by the manufacturer.
- C. Delivery tickets for all materials shall be provided to the Owner's Representative upon request.
- D. Store materials at locations within the building as directed by the Owner's Representative.

1.6 PROJECT CONDITIONS

- A. Environmental Requirements: Owner will maintain ambient temperature between 65 and 70 degrees F during entire refinishing process.
- B. Do not apply any coatings if temperatures or humidity levels are not within limits set by the manufacturer.
- C. Follow all manufacturer recommendations regarding handling of dust and oil-soaked rags. All materials that may pose hazard of spontaneous combustion must be removed from the building and properly disposed of by the Contractor on a daily basis with no exceptions.

## 1.6 WARRANTY

A. Furnish manufacturer's standard warranty. This warranty shall be in addition to, and not a limitation of, other rights the Owner may have against the Contractor under the Contract Documents.

## PART 2 - PRODUCTS

### 2.1 ACCEPTABLE MANUFACTURERS

A. Manufacturers of the products indicated as acceptable in subsequent paragraphs are as follows. Other products or manufacturers will be considered by the Owner/Architect prior to bidding.

1. Sika Corporation (Sika U.S.) – Lyndhurst, NJ
2. BonaKemi USA, Inc. – Aurora, CO
3. Hillyard Industries, Inc. – St. Joseph, MO
4. PoloPlaz, Inc. – Jacksonville, AR

B. Wood Floor Sealer and Wood Floor Finish products selected for use by the Contractor shall be by a single manufacturer. Other products and accessories selected for use by the Contractor must be approved by the manufacturer of the sealer and finish products used on the Project.

### 2.2 WOOD FLOOR SEALER

A. Description: Maple Floor Manufacturers Association approved, low VOC (350 g/L VOC maximum) sanding sealer formulated to seal wood and provide surface for finish coating with water based urethane.

B. Acceptable Products:

1. Sikafloor WP-11.1 Sports Floor Sealer
2. Bona Sport Seal 350
3. Hillyard 350 Wood Seal
4. PoloPlaz Low VOC Sealer

### 2.3 GAME LINE PAINT (SOLVENT BASED)

A. Description: High-solids solvent-based sport floor paint formulated for sport game lines, letters and logos; and manufactured for use with or considered acceptable for use with specified Wood Floor Sealer and Wood Floor Finish by their respective manufacturers. Contractor shall apply test areas as recommended by the manufacturer if necessary to ensure compatibility and/or select another product from the list of acceptable products.

B. Acceptable Products:

1. Sherwin Williams Industrial Enamel HS
2. Bona Courtlines Sport Floor Paint
3. Hillyard Gym Line Marking Paint

4. PoloPlaz Fast Break Game Line Paint
5. Diamond Vogel CoteAll 340 Multi-Purpose Alkyd Enamel

C. Color(s): Provide standard and/or custom colors as necessary to match all colors currently applied to existing floor.

## 2.4 WOOD FLOOR FINISH

A. Description: Maple Floor Manufacturers Association approved, low VOC (350 g/L VOC maximum) water based urethane varnish formulated to provide durable, solid and protective film.

B. Acceptable Products:

1. Basic Coatings, Inc.
2. BonaKemi USA Inc.
3. Dura Seal
4. Hillyard, Inc.
5. PoloPlaz Coatings

## 2.5 VENT COVE BASE

A. Description: Johnsonite 4" (vertical) x 3" (horizontal) vent cove base. Homogenous composition of 100% synthetic rubber, additives and colorant with vertical venting at back side of vertical surface to allow air circulation. Provide prefabricated inside and outside corners. Provide with manufacturers recommended adhesive for existing wall surface.

B. Color: Match color of existing vent cove base.

## 2.6 FINISHING ACCESSORIES

A. As recommended by manufacturer and required by installer for complete installation, including but not limited to:

1. Lambswool and/or synthetic foam applicators.
2. Tack rags with manufacturers recommended cleaner(s).
3. Tapes for game lines masking.
4. Screens and sanding paper in grits as recommended by manufacturer.

## PART 3 – EXECUTION

### 3.1 EXAMINATION

A. Examine environment, substrates and working conditions.

B. Inspect floor with Owners Representative to identify split boards or other damage to floor surface requiring repairs beyond the scope of refinishing.

C. Verify that surfaces and working conditions are in accordance with manufacturer's

recommendations.

- C. Correct unsatisfactory substrates and working conditions before proceeding with applications.

### 3.2 PREPARATION

- A. Remove all miscellaneous debris from floor, including gum and masking tape.
- B. If called for on the Drawings or elsewhere in the Bid Documents remove all vent-cove base material around perimeter of wood floor. If vent-cove base is to be salvaged and reinstalled provide temporary removable tags for reinstallation of coved base sections in same locations, otherwise dispose of the vent-cove material.
- C. Remove coverplates at all floor sleeve locations and thresholds as occur at all doorways and save for reinstallation.
- D. Countersink exposed nail heads as occur.
- E. Close off all ventilation return ducts and grilles to prevent airborne contaminants from being drawn through. Schedule this work with Owners Representative.
- F. Post minimum 11"x17" signs on all doors into gymnasium indicating "Floor Refinishing in Process DO NOT ENTER".

### 3.3 PROTECTION DURING WORK

- A. Protect floor from moisture at all times.
- B. Do not permit traffic on floor after sanding and before completion of finish system, except for installers applying paints or finishes.
- C. Protect sanded floor with heavy kraft paper or other suitable covering to provide access for application of first coats. Do not use materials that might cause condensation beneath cover.
- D. Prohibit nonessential traffic on floors until work is complete. In all cases comply with manufacturers curing requirements prior to allowing foot traffic on floors.
- E. Provide notification to Owners Representative when both light foot traffic is allowed and when regular athletic activities may commence.

### 3.4 COMPLETE REFINISHING PROCESS

- A. Initial Sanding and Finish Removal:

1. Schedule sanding operations such that the first coat of sealer is completely applied on the same day that sanding is completed.

2. Machine-sand existing flooring down to bare wood with 3 grades of sandpaper (course, medium, fine) to remove offsets and non-level conditions, ridges, cups, and sanding machine marks which would be noticeable in any manner after finishing. Screen floor using orbital disc sander with fine grit screen after sanding.
3. Use edge sander for areas of floor that cannot be reached with drum sander. Use hand sanders for areas that cannot be reached with edge sander.
4. Floor shall be completely smooth after initial sanding process. Contractor shall provide additional cuts if floor is not smooth after three (3) cuts.

B. Dust Removal:

1. Thoroughly vacuum entire floor and areas around, including doors, windows, sills and corners to remove dust.
2. Perform final dust removal using a tack rag. Remove all traces of dust from floor, doors, window sills, etc.
3. Inspect floor to ensure that surfaces are free of drum stop marks, gouges, streaks or shiners, are clean and completely free from sanding dust, and are acceptable for finishing.

C. Seal Coats:

1. Do not begin application of seal coating until dust removal is complete.
2. Apply first coat of sealer on the same day that sanding is completed.
  3. Apply coats within the time limits for recoating recommended by manufacturer and at manufacturers recommended rates.
4. Application:
  - a. Apply first coat of sealer to floor per manufacturer's instructions.
  - b. Allow sealer to dry a minimum of 12 hours before proceeding unless manufacturer recommends otherwise. Allow additional dry time if recommended by manufacturer or if ambient conditions require.
  - c. Perform a buffing/sanding operation over entire floor with an orbital buffer and fine grade screen sanding disc.
  - d. Remove dust from floor using vacuum and tack rag as described under Dust Removal.
  - e. Apply Game Lines and Markings after first seal coat.
  - f. Apply second and third coats of sealer to floor per manufacturer's instructions, allowing sealer to dry and performing buffing/sanding operation and dust removal after each seal coat.

D. Painting of Lines and Markings:

1. Do not begin application of marking tape until dust removal is complete.
2. Game lines and markings are to generally match layout and quantity of current game courts. Supplemental lines and markings to match those as may currently exist on floor prior to sanding work are also to be reapplied.
3. Prior to field layout of lines the Contractor shall recommend adjustments to court lines layout, markings and colors as necessary to update courts to meet current rules and recommendations of Association having jurisdiction. Owners Representative is to have final approval of layout, markings and colors.
4. Game lines layouts shall be accurate relative to locations of existing floor sleeve locations.
5. All lines to be straight with sharp edges in colors as selected by Owner.
6. Roll or rub marking tape firmly to floor surface prior to painting. No instances of bleeding or creep of paint at edges will be allowed.
7. Feather paint application as required to provide a smooth appearance.
8. Intermix containers to ensure uniformity of color if more than one container is required. If custom color or colors are required mix custom color in quantity adequate for entire job.
9. Allow paint to dry a minimum of 24 hours before proceeding. Allow additional time if recommended by the finish or paint manufacturer or if ambient conditions require.

E. Finish Coat:

1. Apply coat within the time limits for coating recommended by the manufacturer. If time limits are exceeded provide additional sanding/buffing and dust removal as required by manufacturer.
2. Do not begin application of finish coat until dust removal is complete.
3. Do not allow product to puddle.
4. Typically apply finish coat in direction of wood grain.
5. Apply finish to floor per manufacturer's instructions and rates of application.
6. Allow finish to dry a minimum of 72 hours prior to allowing any foot traffic.

3.5 RECOATING PROCESS

- A. Clean floor surface of dirt, dust and mop treatments using a neutral cleaner and allow the floor to dry thoroughly.
- B. Perform a buffing/sanding operation with an orbital buffer and fine grade screen sanding disc as necessary to remove glossed surface and to allow proper adhesion of new finish coat to existing finish.

- C. Remove dust from floor with tack rag.
- D. Touch up paint markings on floor using water-based game line paint with colors to match existing paint markings.
- E. Lightly sand over areas of new paint markings with sanding pads or steel wool as recommended by paint manufacturer to abrade surface and allow proper adhesion of new finish coat. Remove dust generated with tack rag.
- F. Apply coat of Wood Floor Finish to floor as described under the Complete Refinishing Process portion of this specification and per manufacturer's instructions.

### 3.6 EXISTING MATERIALS REINSTALLATION

- A. Do not reinstall any existing materials that would be in contact with floor finish until finish is considered acceptable for regular athletic activities by the floor finish manufacturer.
- B. Clean existing floor sleeve coverplates and thresholds and reinstall using original fasteners or new fasteners as required. New fasteners are to match original fasteners in material and finish.
- C. Floor sleeve coverplates are to be reinstalled flush to top floor surface. If necessary trim or shave wood beneath coverplates to provide fine adjustments required for flushness.
- D. Reinstall all thresholds at doors.
- E. Clean and reinstall existing vent-cove base material using adhesive recommended by manufacturer if salvage and reinstallation of the existing vent-cove base is called for on the Drawings or elsewhere in the Bid Documents.
- F. Install new vent-cove base material, using adhesive recommended by manufacturer if new vent-cove base material is called for on the Drawings or elsewhere in the Bid Documents.

### 3.7 CLEAN-UP AND FINAL CLEANING

- A. Just prior to substantial completion, remove all protective coverings and tape, remove all traces of dust and dirt, and buff floors to the required sheen.
- B. Remove all unused materials, equipment and rubbish from the property. All materials requiring disposal shall be disposed of by the Contractor in accordance with Federal and State laws and regulations.

### 3.8 DEMONSTRATION

- A. Train Owner's maintenance personnel on proper cleaning and maintenance procedures.

END OF SECTION 096400