

S P E C I F I C A T I O N S



***Oxford - USD 358***  
***SPORTS FLOORING***

***2019***



HANNEY & ASSOCIATES ARCHITECTS

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**SPORTS FLOORING**  
Oxford Elementary and High School  
2019

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**SECTION 00100**

**INVITATION TO BID & INSTRUCTIONS TO BIDDERS**

**1. SCOPE OF PROJECT:**

The Specifications and the accompanying drawings are intended to provide for all materials and labor necessary to complete the Sports Flooring Replacement at both the **Oxford Elementary School and the Old Gym at the Oxford High School.**

1.1 The bid shall include all labor and materials necessary for a complete and operational system. Including work necessary to restore the site, removing debris, after the project is complete.

1.2 Oxford Elementary  
The General Contractor will remove the existing wood floor in the Oxford Elementary School.

1.3 Oxford High School  
This Sports Flooring Contractor shall be responsible for the removal and proper disposal of the existing wood floor in the Old Gym (West side).

**2. CONTRACT DOCUMENTS:**

2.1 The General Contractor may obtain electronic plans and specifications from the office of the Architects, **HANNEY & ASSOCIATES ARCHITECTS**, 1726 South Hillside, Wichita, Kansas 67211, (316) 683-8965 Phone. Plans will be available in a drop box folder. Addenda information will be posted on our website.

2.3 Contract Documents are on file and may be viewed at the office of the Architect, and;  
2.3.1 Kansas Construction News, 230 Laura, Wichita, Kansas

**3. PROPOSAL PROCEDURE:**

**3.1 BID DATE:**

3.1.1 Sealed proposal for this project will be received by the Owner, Oxford Unified School District 358, 319 E. College, Oxford, Kansas, 67119, on **Monday, September 30, 2019, up to and until 2 p.m.**

3.1.2 At which time proposals received will be opened **publicly**. Any proposals received after closing time will be returned unopened.

3.2 Should a proposer find discrepancies in, or omissions from the drawings or documents, or should he be in doubt as to their meaning, he shall at once notify the Architect, who will send written instructions to all proposers. Neither Owner nor Architect will be responsible for any oral instructions.

3.3 Proposals shall be made upon the PROPOSAL FORM or exact copy thereof bound into the specifications.

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- 3.4 Fill in all blanks on the PROPOSAL FORM clearly with ink. Erasures or other changes in a proposal must be explained or noted over the signature of the proposer. Signatures shall be in longhand by a principal duly authorized to sign contracts, and if proposal is by a corporation, the signature shall be accompanied by the corporate seal impression. Proposals shall contain neither alterations nor recapitulation of work to be done.
- 3.5 Should the Contractor fail to complete all of the work required by the Contract Documents on or before the date bid by this contractor for substantial completion, the Contractor shall pay as liquidated damages, the sum of **two hundred dollars (\$200.00)** for each consecutive calendar day thereafter, Sundays and holidays excluded.
- 3.6 Each proposer is required to bid all alternates included in the Proposal Form except that should he desire not to bid an alternate he may insert the words “no bid” in the space provided for prices for such alternate. In such case, if it is determined to use such alternate, the fact that the cost of the type or method bid in the proposal may be lower than that chosen shall not constitute the basis of a claim by the proposer that the contract shall be awarded to him. If an alternate price called for involves no change in price, proposer shall so indicate by writing the words “no change” in the space provided.
- 3.7 No oral or telephonic proposals or modifications will be considered. No telegraphic proposals will be considered, but modification by telegraph of proposals already submitted will be considered if received prior to time set for proposal opening.
- 3.8 Before submitting his proposal, each proposer shall carefully examine all documents pertaining to the work, visit the site of work, and fully inform themselves as to all existing conditions under which the work will be performed. Submission of a proposal will be considered presumptive evidence that the proposer is fully aware of the Contract Documents, pertinent state and markets, and has made allowances in his proposal for all work and all contingencies.
- 3.9 Any addenda issued during the time of preparation of proposals are to be acknowledged in the Proposal Form and in closing a contract, they will become a part thereof.
- 3.10 Enclose the proposal along with the required Proposal Security, in an opaque envelope:  
Proposal For: (State category of the work)

Sports Flooring

**Oxford Unified School District 358**

**319 E. College**

**Oxford, Kansas 67119**

Name of Bidder.

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**4. PROPOSAL SECURITY:**

- 4.1 Proposal Security, consisting of a bid bond, certified check or cashier's check on a solvent bank, must be enclosed with each proposal for at least five percent (5%) of the Base Proposal.
- 4.2 Proposal Security shall be made payable, without condition to **Oxford Unified School District 358** as a guarantee that the bidder, if awarded the contract, will promptly execute the formal contract in accordance with the proposal and as required by the other Contract Documents, and that he will furnish good and sufficient bonds for the faithful performance in each category of work will be retained until the contract is awarded or other disposition is made thereof.
- 4.3 Performance Bond and Statutory Bond will be required in an amount of 100% of the contract amount. Such bonds shall be in such form as indicated in the Revisions in the General Conditions and registered at the **Sumner County District Court**.

**5. PROPOSAL WITHDRAWAL:**

A Proposal may be withdrawn on written or telegraphic request received from proposer prior to time for proposal opening. No proposal may be altered or withdrawn for a period of at least thirty (30) days after opening of proposals.

**6. SUBSTITUTIONS:**

- 6.1.1 The materials, products and equipment described in the bidding documents establish a standard of required function, dimension, appearance and quality to be met by any proposed substitution.
- 6.1.2 No substitution will be considered unless written request for approval has been submitted by the bidder and has been received by the architect at least ten (10) days prior to the date for receipt of bids. Each such request shall include the name of the material or equipment for which it is to be substituted and a completed description of the proposed substitute including drawings, cuts, performance and test data and any other information necessary for an evaluation. A statement setting forth any changed in other materials, equipment or work which incorporation of the substitute would require shall be included. The burden of proof of the merit of the proposed substitute is upon the proposer. The Architect's decision of approval disapproval of a proposed substitute shall be final.
- 6.1.3 If the Architect approves any proposed substitute, such approval will be set fort in an addendum. Bidders shall not rely upon approvals made in any other manner.

**7. AWARD OF CONTRACT:**

Contract will be awarded to the responsible proposer submitting the lowest responsible proposal (i.e. combination of Base Proposal and accepted alternates, with due consideration to unit prices), provided:

- 7.1.1 Evidence of the experience, qualifications and financial responsibility of the bidder and his subcontractors, and the time of completion are all-acceptable to the Owner.
- 7.1.2 Manufacturer's Guarantee, Service Warranty and financial responsibility of manufacturer.
- 7.1.3 The total of acceptable proposals is within the financial budget for the project.

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- 7.1.4 The Owner reserves the right to reject any or all proposals, to accept or reject alternate proposals and unit prices, and to waive all technicalities concerning the proposals received when it may be in his best interest to do so.

**End of Section 00100**

**SECTION 00150**

**GENERAL PROPOSAL**

**SPORTS FLOORING**

Oxford Schools- USD 358 - Oxford  
Oxford, Kansas

The undersigned, in compliance with your invitation for bids for the **Sport Flooring**, for the Oxford Schools, U.S.D. #358, Oxford, Kansas, having examined the site of the work, and being familiar with all the conditions surrounding the work, hereby propose to furnish all labor, materials and supplies and do all work necessary for the project in accordance with the contract documents at the price stated below. These prices are to cover all expenses incurred in performing the required work under the Contract Documents of which this Proposal is a part.

**BASE PROPOSAL: Maple Wood flooring at Oxford High School**

For all the work described in the specifications and shown on the plans for the **Oxford High School** for Maple Wood Flooring for the Unified School District #358, Oxford, Kansas; I or (we) agree to perform all the work and furnish all materials complete for the sum of:

---

Dollars(\$ \_\_\_\_\_ )

**ALTERNATE #1 – Maple Wood Flooring at Oxford Elementary School**

For all the work described in the specifications and shown on the plans for the **Oxford Elementary School** for Maple Wood Flooring for the Unified School District #358, Oxford, Kansas; I or (we) agree to perform all the work and furnish all materials complete for the sum of:

---

Dollars(\$ \_\_\_\_\_ )

**ALTERNATE #2 – Synthetic Rubber Flooring at Oxford Elementary School**

For all the work described in the specifications and shown on the plans for the **Oxford Elementary School** for the Unified School District #358, Oxford, Kansas; I or (we) agree to perform all the work and furnish all materials complete for the sum of:

---

Dollars(\$ \_\_\_\_\_ )

**ALTERNATE #3 – Sheet Vinyl Resilient Athletic Flooring**

For all the work described in the specifications and shown on the plans for the **Oxford Elementary School** for the Unified School District #358, Oxford, Kansas; I or (we) agree to perform all the work and furnish all materials complete for the sum of:

---

Dollars(\$ \_\_\_\_\_ )

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**ALTERNATE #4 – Multi-Part Adhesive at Elementary School**

For all the work described in the specifications and shown on the plans for the **Oxford Elementary School** for the Unified School District #358, Oxford, Kansas; I or (we) agree to perform all the work and furnish all materials complete for the sum of:

\_\_\_\_\_ Dollars(\$ \_\_\_\_\_)

**ALTERNATE #5– Resilient Slip Sheet Membrane – Oxford Elementary School**

For all the work described in the specifications and shown on the plans for the **Oxford Elementary School** for the Unified School District #358, Oxford, Kansas; I or (we) agree to perform all the work and furnish all materials complete for the sum of:

\_\_\_\_\_ Dollars(\$ \_\_\_\_\_)

**TIME OF COMPLETION**

The undersigned agrees, if awarded the Contract; to complete all work by \_\_\_\_\_.  
The undersigned further agrees that, from the compensation otherwise to be paid; the Owner may retain the sum of Two Hundred Dollars (\$200.00) for each day thereafter, Sundays and Holidays excluded, that the Contract remains incomplete, which sum is agreed upon as the proper measure of liquidated damages which the Owner will sustain per diem by the failure of the undersigned to complete the work at the time stipulated, and this amount is not to be construed as in any sense of penalty. All work must coordinate with General Contractor, Owner and Architect.



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**DECLARATION:**

The undersigned declares that he has carefully examined and understands all Bid Documents, including Invitation to Bid, instructions to Bidders, Drawings, Specifications, and Addenda, that he has visited the location of the work and familiarized himself with all conditions under which the work is to be performed, including all pertinent codes and the conditions of labor and material markets, that he has checked quantities and prices, that he has made allowance in his bid for all work and all contingencies, and understands that in signing this bid he waives all right to plead any misunderstanding regarding the same.

The undersigned acknowledges receipt of the following Addenda to the Drawings and/or Specifications.

(Give number and date of each.)

\_\_\_\_\_

\_\_\_\_\_

Respectfully Submitted,

\_\_\_\_\_  
(legal name of bidder)

\_\_\_\_\_  
(address of bidder)

\_\_\_\_\_  
(Seal) (If bid is by a corporation)

\_\_\_\_\_  
(signed by authorized officer)

\_\_\_\_\_  
(title)

**End of Section 00150**

**SECTION 01030**

**ALTERNATES**

**1. GENERAL:**

- 1.1 All work included under this heading shall be subject to the General Conditions of the entire operation. The Sports Flooring Contractor for this portion of the work is required to refer especially thereto.
- 1.2 This work shall be coordinated with the General Contractor, Owner and Architect.
- 1.3 The General Contractor will be responsible for scheduling this the work at the Elementary School.

**2. ALTERNATES:**

- 2.1 ALTERNATE NUMBER ONE:** Maple Wood Flooring at Elementary School  
This alternate considers the additional cost to the Base Bid to replace the wood floor at the Elementary School. The General Contractor will remove the existing wood flooring for this portion of the project. The Sports Flooring Contractor will be responsible for providing and installing the new wood flooring system in the elementary school gym as directed by the General Contractor.
- 2.2 ALTERNATE NUMBER TWO:** Pad and Poured Flooring at Elementary School  
This alternate considers the additional cost to the Base Bid if the Sports Flooring Contractor were to install a Pad and Poured Flooring at Elementary School. The General Contractor will remove the existing wood floor and pour a new concrete topping.
- 2.3 ALTERNATE NUMBER THREE:**  
Sheet vinyl resilient athletic flooring @ Elementary School  
This alternate considers the additional cost to the Base Bid if the Sports Flooring Contractor were to install sheet vinyl resilient athletic flooring. The General Contractor will remove the existing wood floor and pour a new concrete topping.
- 2.4 ALTERNATE NUMBER FOUR:** Multi-Part Adhesive at Elementary School  
This alternate considers the additional cost to the Base Bid if the Flooring Contractor were to install a Multi-Part flooring adhesive – rated for high moisture content and approved by the manufacturer to work with the selected flooring system to be installed at the Elementary School. The price on this alternate will need to be held until the demolition of the existing floor can be completed and the vapor testing completed to see if it will be required. If the vapor transmission exceeds allowable levels, this alternate will be considered for Alternates 2 and 3. Acceptance of this alternate may not occur until 300-days after execution of the Sports Flooring Contract.

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- 2.5 ALTERNATE NUMBER FIVE:** Resilient Slip Sheet Membrane at Elementary School  
This alternate considers the additional cost to the Base Bid if the Flooring Contractor were to install a Resilient Slip Sheet Membrane– rated for high moisture content and approved by the manufacturer to work with the selected flooring system to be installed at the Elementary School. The price on this alternate will need to be held until the demolition of the existing floor can be completed and the vapor testing completed to see if it will be required. If the vapor transmission exceeds allowable levels, this alternate will be considered for Alternates 2 and 3. Acceptance of this alternate may not occur until 300-days after execution of the Sports Flooring Contract.

**End of Section 01030**

**SECTION 09550**

**WOOD FLOORING**

**1. GENERAL:**

- 1.1 All work included under this heading shall be subject to the General Conditions of the entire operation. The Subcontractor for the portion of the work is required to refer especially thereto.
- 1.2 Submit Shop Drawings for colors, layout, dimensions, and type of construction and materials as per Specification Section 01300 - Submittals.
- 1.3 Finger-jointed boards not allowed.
- 1.4 Replacement Wood Floors are being considered for both the Oxford High School and the Oxford Elementary School.

**2. WORK INCLUDED:**

This Contractor shall furnish all labor and materials to complete all work in connection with gymnasium flooring required by drawings and/or herein specified as follows:

- 2.1 Preparatory work. High School – Removal and proper disposal of the existing Wood Floor system at the old High School Gym (West side). Sports Flooring; to be removed and prepped for new wood flooring.
- 2.2 Maple flooring, sub-flooring and vapor barrier.
- 2.3 Vent base, continuous to replace any existing and flush metal expansion joint at sides to again replace any existing.
- 2.4 Floor finish and markings.  
All Court Lines and Markings to have final approval of the School District before proceeding. Generally replace the existing lines on the new floor.
- 2.5 Floor sleeves for volleyball.  
Wood flooring contractor shall reinstall existing cover plates in the new wood floor, routing the wood so the cover plates are flush with the finished wood floor.
- 2.6 Wood flooring contractor to coordinate Electrical Contractor for the re-installation of any existing floor boxes.

**3. The wood flooring contractor**

Refer to Drawings A1.1 of the drawings. Submit for final approval shall paint:

**3.1 High School:**

One basketball court , one volleyball court- centered on the main basketball court and (4) perpendicular basketball courts perpendicular to the main basketball court.

**3.2 Elementary School:**

A basketball court and multiple shapes as shown on A1.1

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4. **DESCRIPTION:**

- 4.1 This specification specifies a wood strip gymnasium floor system consisting in general, of wood sub-flooring, maple flooring, vapor barrier, sanding, sealers, finishes, game lines and wall base.
- 4.2.1 The subfloor is an existing concrete slab. High areas shall be ground down and low areas shall be filled in with approved leveling compounds. Material and labor necessary to complete the approved concrete subfloor shall be the responsibility of the Wood Flooring Contractor.
- 4.2.2 Concrete slab depression is assumed to be 2-1/4" . Once the floor has be removed the actual depth and construction can be verified.

5. **QUALITY ASSURANCE:**

- 5.1 **Supplier Qualifications:**  
Supplier of wood flooring shall be Acer, Conner, Robinson or the approved equal.
- 5.2 **Installer Qualifications:**  
Flooring Contractor shall be a firm experienced in installing Maple Flooring.
- 5.3 Flooring shall be stored on the premises a minimum of seven (7) days before installation commences, or as requires for acclimation.
- 5.4 All flooring bundles should be broken and loosely piled to acclimate the flooring to moisture conditions in the building.

6. **WORKING CONDITIONS:**

- 6.1 The floor system shall not be delivered or installed until all trades are completed and building is enclosed and weathertite. Coordinate with General Contractor for installation date.
- 6.2 Permanent heat, light and ventilation are existing.

7. **MATERIALS:**

- 7.1 **MAPLE FLOORING:**  
Shall be equal to Conner "Laytite" Northern Hard Maple, MFMA grade marked and stamped as manufactured by Connor Forest Industries.
  - 7.1.1 25/32" x 2-1/4" Tongue and grooved, treated, flat grain, second and better grade Maple Flooring (no finger jointed material will be accepted).
  - 7.1.2 Strip Lengths: 1-1/4-feet to 8-feet long, as stock will produce; not over 53% of total footage will be in bundles under 4-foot and not more than 22% of total will be in 1-1/4-foot bundles.
  - 7.1.3 Flooring edges shall be precision tongue and grooved, end matched on sides and ends.  
***No finger jointed lumber will be accepted.***
  - 7.1.4 Treating: All Maple Flooring shall be dip treated with Woodlife F to reduce the effects of moisture absorption and protect against termites and other wood-eating insects.

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- 7.1.5 Vapor Barrier shall be 15-mil, AcerStop, a premium Class I vapor retarder; or approved equal.
- 7.1.6 Fasteners shall be 2" barbed cleats.
- 7.1.7 Finish material shall be approved urethane seal and finish. Game line paint to be compatible with finish.
- 7.1.8 Aluminum Expansion Joint Cover: are existing and shall be reinstalled in a fashion similar to th existing. Replace any covers that are damaged as part of this project.

**8. INSPECTION:**

- 8.1 Inspect concrete slab for proper tolerance and dryness and report any discrepancies to the General Contractor and Archtitect.
- 8.2 The concrete slab shall be cleaned off all debris so flooring contractor will have adequate access to work surface.
- 8.3 Concrete Relative Humidity Test (In-Situ Probe) Test  
Use a prepackaged relative humidity testing kit (must be compliant with the most recent ASTM F2170) and follow the manufacturer's instructions. This test method involves measuring relative humidity levels inside of the concrete slab.
- 8.4 Should the flooring contractor proceed with their installation on a non-compliant sub-slab, they are taking responsibility for correcting deficiencies that then arise with the finished floor (i.e. not aligning with the perimeter slabs/openings).

**9. INSTALLATION:**

- 9.1 Complete installation shall be in strict accordance with Maple Flooring Manufacturers Association (MFMA) instructions and recommendation as set forth in their "Spec-Data" and "Recommendation for Sanding, Sealing, Court Lining and Finishing".
- 9.2 Cover concrete with 15-mil poly lapping joints a minimum of 6" equal to AcerStop or the approved equal.
- 9.3 Install ½" thick asphalt coated insulation board placed the long dimension of the floor. Joints butted.
- 9.4 Place ¾" CDX plywood sheets laid diagonally (45°) across floor leaving a minimum ¼" space between sheets.
- 9.5 Install finish-flooring parallel with the main playing court by power nailing or stapling approximately 12" o/c. Size joints between flooring strips to allow for intermediate expansion in accordance with humidity conditions in the region. Provide 2" expansion joints at perimeter and all vertical obstructions.

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**I. DURACUSHION 1 - FLOOR SYSTEMS**  
**High School Gym – Base Bid**

- 1.1 Complete installation shall be in strict accordance with Maple Flooring Manufacturer's Association (MFMA) instructions and recommendation as set forth in their "Spec-Data" and "Recommendations for Sanding, Sealing, Court Lining and Finishing".
- 1.2 Cover concrete with 15-mil polyethylene sheeting, sealing and lapping joints a minimum of 6".
- 1.3 Install first layer of Subfloor parallel with long dimension of room ¼" spacing all edges and breaking joints 4'. Provide 1-1/2" expansion joints at perimeter and all vertical obstructions. The underside of the first layer shall have 5/8" thick, Rezill-Aire pads per sheet of plywood attached 12" on center and 4" from edges of plywood on all sides.
- 1.4 The second layer of subfloor shall be laid 45 degrees, diagonally over the first layer ¼" spacing all edges and breaking joints 4'. Attach second layer of plywood with nails or staples 12" on center.
- 1.5 Install finish flooring parallel with main playing court by power nailing or stapling approximately 12" on center.
  - a. Size joints between flooring strips to allow for intermediate expansion, in accordance with humidity conditions in the region.
  - b. Provide 2" expansion voids at the perimeter and at all vertical obstructions.

**II. DURACUSHION 1 - FLOOR SYSTEMS**  
**Elementary School – Alternate One**

- 1.1 Complete installation shall be in strict accordance with Maple Flooring Manufacturer's Association (MFMA) instructions and recommendation as set forth in their "Spec-Data" and "Recommendations for Sanding, Sealing, Court Lining and Finishing".
- 1.2 Cover concrete with 15-mil polyethylene sheeting, sealing and lapping joints a minimum of 6".
- 1.3 Install first layer of Subfloor parallel with long dimension of room, ¼" spacing all edges and breaking joints 4'. Provide 1-1/2" -expansion joints at perimeter and all vertical obstructions. The underside of the first layer shall have 3/8" thick, Rezill-Aire pads per sheet of plywood attached 12" on center and 4" from edges of plywood on all sides.
- 1.4 The second layer of subfloor shall be laid 45 degrees, diagonally over the first layer ¼" spacing all edges and breaking joints 4'. Attach second layer of plywood with nails or staples 12" on center.
- 1.5 Install finish flooring parallel with main playing court by power nailing or stapling approximately 12" on center.
  - a. Size joints between flooring strips to allow for intermediate expansion, in accordance with humidity conditions in the region.
  - b. Provide 2" expansion voids at the perimeter and at all vertical obstructions.

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**10. GENERAL FINISH** (applies to both wood flooring systems considered)

**10.1 FLOOR SANDING:**

- a. Machine sand with coarse, medium and fine paper to smooth, even and uniform surface.
- b. Rout edges of wood floor to receive expansion joint.
- c. After sanding, brush sweep floor, then vacuum until surface and cracks are free of sanding dust. Then sweep floor with a dampened Turkish towel.

**10.2 FINISHING:**

- a. Inspect entire area of floor to ensure that surface is acceptable for finishing, completely free from sanding dust and perfectly clean.
- b. After seal is thoroughly dry, burnish with No. 2 steel wool under heavy floor machine. Sweep with Turkish towel.
- c. Apply approved urethane seal and finish per manufacturer's instructions. Apply a liberal application of Valspar Polyurethane, high gloss gym floor finish as manufactured by The Valspar Polyurethane, high gloss gym floor finish as manufactured by The Valspur Corp. or the approved equal. Material shall be applied in a uniform coat using straight even strokes, working first against the grain; then smooth out with the grain. Avoid leaving puddles of seal on the floor.
  1. Apply at least two (2) coats of seal and three (3) coats of finish.
  2. Finish shall be even and uniform without dull places in the finish.

10.3 Buff and clean floor between each coat.

10.4 Paint game lines and graphics as shown on Sheet A1.1 on the drawings, lines shall be as per National Federation of State High School Association regulations. Colors as approved by the Owner. Between seal and first coat of finish in accordance with the manufacturer's directions. Let paint dry overnight. When floor has even coat and shows no dull spots, the floor is properly sealed.

10.5 Clean floor with a Turkish towel and apply two uniform coats of Polyurethane Gym Floor Finish, working first across grain, then feathering out with the grain, in straight even strokes. Inspect carefully to avoid skips and puddles.

10.6 When dry, burnish lightly with No. 2 steel wool, sweep floor with Turkish towel and apply second coat.

10.7 During finishing and drying, the floor shall be kept dust and dirt free. Temperature of the room and materials shall be kept above 70° during the floor finishing, allowing adequate ventilation for proper cur.

10.8 Provide and install Balco or the approved equal continuous expansion joint at each door and continuous vent base in all other areas.



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- 10.9 All materials used in finishing shall be approved and endorsed by MFMA (Maple Flooring Manufacturers Association) and shall be applied in strict accordance with the manufacturers printed instructions.
  - 10.10 Volleyball Floor sleeves and Access Covers are existng. The Wood Flooring contractor remove and save the covers from the existing floor. The Wood Flooring contractor shall reinstall the existing cover in the new floor.
  - 10.11 The Sports floor layout shall be in accordance with the State of Kansas High School requirements. The locations of the sports equipment shall be set by these standards.
  - 10.12 Color lines shall be selected by Owner.
14. **BASE INSTALLATION:**
- 14.1 Install vent cover base anchored to walls with base cement or screws and anchors.
  - 14.2 Use pre-moulded outside corners and mitered inside corners.
15. **MAINTENANCE:**
- Upon completion of floor installation, the Owners, attendants or individuals in charge and responsible for the upkeep of the building are to see that the areas in which wood floors are installed are adequately ventilated. Proper air circulation and humidity controls are to be provided at all times.
16. **WARRANTY:**
- Flooring Manufacturers and Contractor hereby jointly and severally warrant floor construction against defects in materials and workmanship for a period of two (2) years after substantial Completion of the flooring.

**End of Section 09550**

SECTION 09625

**SYNTHETIC SPORTS FLOORING**

**PART 1 – GENERAL**

**1.1 Description**

A. Related work.

1. Concrete Subfloors – Section 03

a. The general contractor shall furnish and install the concrete to receive the synthetic sports flooring. The slab shall be steel troweled and finished smooth to a tolerance of 1/8" in any 10' radius. High spots shall be ground level, and low spots filled in with approved leveling compound. **Do not use any curing or hardening agents on the concrete subfloor.**

2. Membrane Waterproofing

a. Concrete floors on or below grade shall be adequately waterproofed beneath and anywhere else moisture is likely to influence the installation or performance of the synthetic sports flooring. It is the responsibility of the architect to determine the need of the waterproofing.

3. Concrete Moisture Vapor Emission and PH Testing

a. Moisture vapor emission and PH of concrete shall be tested. Moisture vapor emissions must not exceed 4 lbs/1000 SF as verified using calcium chloride test. PH level should be in the range of 7 to 8.5.

**1.2 Quality Assurance**

A. MANUFACTURER: The synthetic sports flooring manufacturer shall be an ISO 9001-2008 firm specializing in manufacturing products specified in this section. Manufacturer must be a recognized sport flooring business with a minimum of five floor installed within the last five years of the same type and complexity.

B. INSTALLER:

1. The installation described in this scope shall be carried out by an experienced synthetic sports flooring installer who is ISO 9001-2008 certified and approved by the manufacturer. The work shall be performed in accordance with the most recent manufacturer instructions.

**1.3 SUBMITTALS**

- A. Submit Champion Flooring L.L.C. specification sheets.
- B. Maintenance – Upon floor installation, send to owner a maintenance letter. These instructions shall be followed without variation to achieve a long floor life and not to void the warranty.

**1.4 WORKING CONDITIONS**

- A. Synthetic athletic flooring shall not be installed until all masonry, painting, plaster, tile, marble, terrazzo work, overhead mechanical trades, and painters have finished in the synthetic floor areas. The building must have all windows and doors installed with no water leaks anywhere.
- B. Permanent heat, light and ventilation shall be installed and operating during and after installation. The general contractor shall provide an area where the stored materials can be maintained at a minimum of 65 degrees and under 50 % relative humidity.
- C. Subfloors shall be clean, dry and free from oil, grease, paint, concrete curing agents, adhesive residue or other foreign materials. Moderate room temperature of 65 degrees or more shall be maintained for a week prior to, during and for 7 days following installation.
- D. The installation area shall be closed to all activity during installation and also during the cure time.
- E. Moisture content of the concrete slab must not exceed 4 pounds per 1,000 square feet in 24 hours when using the calcium chloride test. (A floating, non-adhered version of Monoflex is available if moisture content is an issue.)
- F. Flooring perimeter termination, excluding interior doorways is the responsibility of the general contractor. A 3-4” toe board is recommended on all handrails.
- G. After the synthetic sports floor is fully installed and a walk through with the contractor has occurred, no one is allowed on the floor until fully accepted by the owner.

**1.5 WARRANTY**

Champion Flooring L.L.C. warrants that the materials supplied, and installation will be free from defects for a period of one year. This warranty does not cover floor damage due to but not limited to, water, chemicals, misuse, abuse, negligent, aging, faulty building construction, concrete separation. (Champion Flooring will match any competitors warranty when a substitution request is submitted.)

**PART 2 – PRODUCTS**

**2.1 ACCEPTABLE MANUFACTURERS**

Floor system – Subject to compliance with the requirement listed within this spec sheet. Manufacturing facility must be ISO 9001-2008 certified.

**2.2 MATERIALS**

All polyurethane components shall be non-hazardous and not contain lead, mercury, or heavy metals.

Color as selected by the Architect

Product shall be:

**Monoflex Flooring**

Manufactured by Champion Flooring  
1820 E 27<sup>th</sup> Terrace, Pittsburg, Kansas  
620-232-2671

Or Approved Equal

Shock Absorption: 14-48%

Surface Hardness: 80 +/-3

Tensile Strength: 1100 PSI

Flammability: Class 1 inflammable

Ultra-low VOC paints

Ball Rebound: 99%

Elongation: 200%

Rolling Load: 1500Nm

O VOC Adhesives

- A. Mat adhesive – Two Component urethane. (Single component available)
- B. Basemat – prefabricated rubber mat made of recycled rubber granules and a polyurethane binder of consistent thickness.
  - 1. Basemat thickness – 7mm, also 4, 5, 6, 9, 12, or 14 mm available.
  - 2. Physical properties on request.
- C. Champion Flooring L.L.C. Scratch Coat (mat sealer) – two-component, polyurethane.
- D. Champion Flooring L.L.C. Wear Coat – seamless, pigmented, self-leveling two-component polyurethane. (Full depth color also available.)
  - 1. Total wear thickness – 2mm, also 3mm available.
  - 2. Physical properties on request.

- E. Top Coat (pigmented sealer) – two-component polyurethane, 13 standard colors.
- F. Game Line Paint – three-component polyurethane, 8 standard colors.

### **PART 3 – EXECUTION**

#### **3.1 INSPECTION**

Inspect concrete slab for proper tolerance and dryness. Concrete slab shall be broom cleaned by general contractor.

- A. Champion Flooring will notify the contractor of any unsatisfactory conditions.

#### **3.2 INSTALLATION**

- A. Basemat – Whip the polyurethane adhesive into a smooth consistency and apply directly to the concrete subfloor with a notched trowel at a rate of 373 sq. ft. per unit. Immediately install basemat into adhesive. Do not compression fit any seams. Roll basemat with a 75-100-pound roller and repeat the rolling process on the entire mat continuously until 60 minutes after installation of each roll. Use brick pavers or similar weight to hold any seams or roll ends down in the glue. Allow adhesive 8 to 12 hours to cure before applying scratch coat.
- B. Scratch Coat – Thoroughly mix scratch coat. Apply two layers of scratch coat to basemat with a flat trowel at a combined rate of 350 sq. ft. per unit. Allow each layer to cure a minimum of 8 hours before proceeding to the next application. Inspect for gaps and or ridges in final coat. Apply additional material as needed, sand down any ridges in cured scratch coat.
- C. Wear Coat – Thoroughly mix two-component wear coat. Apply mixed material using a notched squeegee in one layer. The wear coat must be applied, create a seamless surface. Allow wear coat to cure 12 hours before proceeding to the next application. Imperfections in the finished surface should be addressed at this tie with fine sandpaper.
- D. Top Coat – Thoroughly mix water based two-component polyurethane top coat. Top Coat application is to be 225 sq. ft. per gallon from an airless sprayer or 325 roller applied. Allow top coat to cure a minimum of six (6) hours before applying game lines.

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- E. Game Lines – Only use high quality masking tape. Thoroughly mix three-component game line paint. Provide game lines as indicate on drawings with final approval by the District.
  
- F. Clean-up – Remove all excess and waste materials from area of work. Dispose of empty containers in accordance with federal and local statutes.

**End of Section 09625**

**SECTION 09656**

**Sheet Vinyl Resilient Athletic Flooring**

PART 1 - GENERAL

1.1 SUMMARY- work included

- A. Section Includes: Sheet vinyl resilient athletic flooring.
- B. Rubber Base: Provide and install rubber base on walls for the entire project. Material shall be from roll stock in lieu of pre-cut 4' lengths. No pieces less than 24" shall be installed. Inside and outside corners shall be field formed.. Molded rubber cove base shall be ruffed back, vulcanized, 4" high cove as noted, complete with external and internal molded rubber cove base corners, and shall be as manufactured by Roppe, or the approved equal Pinnacle 100% Type TS Vulcanized Rubber Base. In color as selected by the Architect .
- C. All Court Lines and Markings. All to have final approval by the district.

1.2 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
    - a. Suppliers of Private-Label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
    - b. All "manufacturer" requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
  - 2. Provide ISO 9001 certification for the OEM of the specified products.
  - 3. Provide ISO 14001 certification for the OEM of the specified products.
- C. Laboratory Test Results:
  - 1. Provide certification of testing per ASTM F2772-11 and the product being furnished complies with the ASTM Indoor Sport Floor Classification specified for this project. Third-party certification required; sales literature is not sufficient.

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- D. Shop Drawings: Showing installation details and locations of borders, patterns, game lines, locations of floor inserts and seams.
- E. Samples:
  - 1. Manufacturer's color chart for selection of available floors with a minimum of 10 standard colors available, including 2 wood visuals.
  - 2. Color samples:
    - a. Wood visual samples Minimum 24 inches by 36 inches to show that the appearance of wood plank pattern complies with these specifications
    - b. Solid color samples: Minimum 6 inches by 8 inches.

1.3 INFORMATIONAL SUBMITTALS

- A. Qualification Data:
  - 1. For a qualified resilient athletic flooring Manufacturer.
  - 2. For a qualified resilient athletic flooring Installer.

1.4 CLOSEOUT SUBMITTALS

- A. Submit three copies of the following:
  - 3. Manufacturer maintenance instructions.
  - 4. Manufacturer material warranty.
  - 5. Installer installation warranty.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications:
  - 1. ISO 9001 Certified.
  - 2. ISO 14001 Certified.
  - 3. At least ten years active experience in the manufacture and marketing of indoor resilient athletic flooring.
  - 4. A provider of authorized installer training.



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- D. Installer Qualifications:
  - 1. At least five years' experience in the installation of resilient athletic flooring.
  - 2. Experience on at least five projects of similar size, type and complexity as this project.
  - 3. Employer of workers for this Project who are competent in techniques required by manufacturer for resilient athletic flooring installation indicated.
- E. Fire Test Characteristics: As determined by testing identical products according to ASTM E 648, Class 1, by a qualified testing agency acceptable to authorities having jurisdiction.
- F. Athletic Performance Properties: Comply with ASTM F 2772-11 Performance Level Class 4 for force reduction, ball bounce, vertical deformation and surface friction.

**1.3 DELIVERY, STORAGE, AND HANDLING**

- A. Store flooring and installation materials in protected dry spaces, with ambient temperatures maintained within range recommended by manufacturer, but not less than 55 deg F (13 deg C) nor more than 85 deg F (29 deg C).
- B. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to Project.

**1.4 FIELD CONDITIONS**

- A. Product Installation:
  - 1. Maintain temperatures during installation within range recommended by manufacturer, but not less than 65 deg F (18 deg C) in spaces to receive flooring one week before installation, during installation, and one week after installation.
  - 2. After installation, maintain temperatures within range recommended by manufacturer, but not less than 55 deg F (13 deg C) or more than 85 deg F (29 deg C).
  - 3. Prohibit traffic during flooring installation and for at least 48 hours after flooring installation.
- B. Install flooring only after other finishing work, including painting and overhead work, has been completed.

**1.5 WARRANTY**

- A. Special Limited Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace sports flooring that fails within specified warranty period.
  - 1. Material warranty must be direct from the product manufacturer.

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- a. Material warranties from separate or third-party insurance providers are not valid.
  - b. Material warranties from private label distributors are not valid.
  2. Failures include, but are not limited to, the following:
    - a. Material manufacturing defects.
    - b. Surface wear and deterioration to the point of wear-through.
    - c. Failure due to substrate moisture exposure not exceeding 92 percent relative humidity when tested according to ASTM F2170 or 10 pounds moisture vapor emission rate when tested according to ASTM F1869.
  3. Warranty Period:
    - a. For materials: 2 years from date of Substantial Completion.
    - b. For surface wear: 15 years from date of Substantial Completion.
    - c. For moisture vapor tolerance: 1 year from date of Substantial Completion.
- B. Special Limited Warranty: Installer's standard form in which installer agrees to repair or replace sports flooring that fails due to poor workmanship or faulty installation within the specified warranty period.
1. Warranty Period: 2 years from date of Substantial Completion.

**1.6 ENVIRONMENT AND INDOOR AIR QUALITY**

- A. LEED™ Documentation:
1. MR Credits: For products having recycled content, indicate percentage by weight of post-consumer and pre-consumer recycled content.
  2. IEQ Credits: For adhesives and flooring, including a statement of VOC content.
- B. Indoor Air Quality Certification:
1. Flooring products must be FloorScore® Certified.
    - a. FloorScore® certification proves compliance with the volatile organic compound emissions criteria of the California Section 01350 standard.
    - b. FloorScore® certification proves compliance 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.”

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- c. FloorScore® documentation must include certificate number for specified product.
  2. Manufacturer's certification of factory applied permanent Bacteriostatic and Fungicidal Treatment throughout the flooring material, not only on its surface, designed to improve indoor air quality and reduce asthma and allergy risks associated with bacterial and mold growth.
- C. Manufacturer Certification of Environmental Procedures:
1. Original Equipment Manufacturers' (OEM) ISO 14001 Certification

1.7 COORDINATION

- A. Coordinate layout and installation of flooring with other gymnasium equipment.

**PART 2 – PRODUCTS**

2.1 SHEET VINYL ATHLETIC FLOORING

- A. Basis-of-Design Manufacture: Subject to compliance with requirements:  
Approved Materials:  
Gerflor Taraflex Sport M Comfort Sports Flooring  
Tarkett Sports Omnisports 7.1 mm  
or approved equal.
- B. Substitution Limitations:
  1. All other manufacturers: Submit formal substitution request prior to bid in accordance.
  2. Approval by Architect of other manufacturers does not relieve Contractor of responsibility to provide products which comply with all requirements of this specification.
- C. Product Description: Class 4 shock absorption, Triple-durometer foam-backed sheet vinyl flooring.
  1. Overall Thickness: Not less than 0.47 inch (12 mm).
  2. Wear-Layer Thickness: Not less than 0.08 inch (2.1 mm)
  3. Foam Backing: Three layers closed cell foam of varying densities creating a triple durometer foam backing with 46 percent shock absorption.
  4. Fiberglass Grid Layer: A layer of woven fiberglass grid between the foam backing and top wear layer for dimensional stability.
    - a. Basis-of-Design Product: Gerflor D-Max.

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5. Seaming Method: Heat welded.
6. Traffic-Surface Texture: Wood visual shall have wood grain embossed texture for a genuine wood appearance and Solid colors to have “pebbled” embossed texture for an attractive appearance.
7. Bacteriostatic and Fungicidal Treatment: Manufacturer’s factory-applied permanent treatment throughout the flooring material which can improve indoor air quality and reduce asthma and allergy risks associated with bacterial and mold growth.
  - a. Basis-of-Design Product: Gerflor Sanosol
8. Applied Finish: Manufacturer's, factory-applied, permanent and UV-cured.
  - a. No-Wax finish: Published product literature identifying factory applied finish as, “No-Wax-Just clean and rinse”
  - b. Basis-of-Design Product: Gerflor ProtecSol.
9. Field-Applied Finishes: None required and not allowed.
10. Roll Size:
  - a. Roll Width: Rolls to be a minimum width of 59 inches (1.5 m) wide.
  - b. Roll Length:
    - 1) Wood visual rolls to be a minimum length of 86 feet, 6 inches (26.4 m) to minimize the number of end-seams.
    - 2) Solid color rolls to be a minimum length of 67 feet, 3 inches (20.5 m) to minimize the amount of waste if accent colors are selected for boarders, keys or center circle.
  - c. Roll length of wood visual flooring shall be sufficient to cover the full length of a high school main basketball court (84’-0”) without splicing or end-of-roll (butt) seams within main court boundary.
11. Color and Pattern:
  - a. As selected by Architect from manufacturer's standard colors and patterns.
  - b. Wood pattern shall accurately simulate the true visual appearance of natural athletic wood strip flooring.
    - 1) Pattern shall replicate random-length stock by simulating non-uniform board lengths ranging from 18 inches to 48 inches with a maximum board width of 2-1/2 inches.

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- 2) Wood pattern shall not include a dark line simulating edges or ends of individual boards.
- 3) Surface texture shall simulate realistic wood grain and not be raised or "pebbled" embossing.

D. Performance Criteria:

1. ASTM F 2772-11 Indoor Sport Floor Standard:
  - a. Provide certification of compliance for the four ASTM F2772 Indoor Sport Floor Standard performance categories:
    - 1) Shock Absorption/Force Reduction:
      - a) Class C4 (46% to 57%). Pass
    - 2) Ball Bounce:
      - a) Minimum 90%: Pass
    - 3) Surface effect/Coefficient of Friction:
      - a) Between 80-110: Pass
    - 4) Vertical deformation:
      - a) Maximum 3.5mm: Pass
2. Chemical Resistance: ASTM D 543; OK.
3. Abrasion Resistance: EN ISO 5470; Pass.
4. Sound Insulation: EN ISO 717; 18 dB.
5. Gloss/Brightness: EN ISO 2813; Pass.
6. Organic Emission: ASTM D 5116; Pass
7. Fire Performance: ASTM E 648; Greater than 0.45 W/cm<sup>2</sup>, Class 1.
8. Surface Maintenance Requirements: No-wax surface requiring only cleaning and rinsing.
9. Slab Moisture Design Tolerance:
  - a. Maximum relative humidity of 92 percent when tested according to ASTM F 2170.
  - b. Maximum moisture vapor emission rate of 10 pounds of water per 1000 sq. ft. in 24 hours when tested according to ASTM F1869.

## 2.2 ACCESSORIES

- A. Trowelable Leveling and Patching Compound: Latex-modified, hydraulic-cement-based formulation approved by athletic flooring manufacturer.
- B. Adhesives: Water-resistant type recommended by athletic flooring manufacturer for substrate and conditions indicated.
  - 1. Basis-of-Design Product: Gerflor Gerfix TPS.
- C. Heat Welding Rod: As supplied by indoor resilient athletic flooring manufacturer. Color shall blend with resilient athletic flooring color.
- D. Game-Line and Marker Paint: Complete system including primer, compatible with flooring and recommended by flooring and paint manufacturers.

## **PART 3 – EXECUTION**

### 3.1 EXAMINATION

- A. Verify the Following:
  - 1. The area in which the indoor resilient athletic flooring will be installed is dry, weather-tight and in compliance with specified requirements.
  - 2. Permanent heat, lighting and ventilation systems are installed and operable.
  - 3. Other work, including overhead work, that could cause damage, dirt, dust or otherwise interrupt installation has been completed or suspended.
  - 4. No foreign materials or objects are present on the substrate and that it is clean and ready for preparation and installation.
  - 5. Tests to verify that the moisture evaporative rate or substrate relative humidity is within the specified ranges.
  - 6. The concrete slab surface pH level is within the specified range.
  - 7. The concrete slab surface deviation is no greater than 1/8 inch within 10 feet (3.2 mm within 3 m) when measured according to ASTM E 1155.
  - 8. The concrete slab complies with ACI 302.2R for concrete design including use of a low-permeance vapor barrier directly beneath the concrete subfloor with sealed penetrations.

### 3.2 PREPARATION

- A. Prepare substrates according to manufacturer's written recommendations to ensure proper

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adhesion of resilient athletic flooring system.

- B. Concrete Substrates: Prepare according to ASTM F 710.
  - 1. Verify that substrates are dry and free of sealers, curing compounds and other additives. Remove coatings and other substances that are incompatible with adhesives using mechanical methods recommended by manufacturer.
  - 2. Alkalinity Testing: Perform pH testing according to ASTM F 710. Proceed with installation only if pH readings are between 7.0 and 8.5.
- C. Moisture Testing: Perform ASTM F 2170 relative humidity test and proceed with installation only after substrates have maximum relative humidity of 92 percent. Or perform ASTM F 1869 calcium chloride test and proceed with installation only after substrates have maximum moisture-vapor-emission rate of 10 lb of water/1000 sq. ft. in 24 hours.
- D. Use trowelable concrete based leveling and patching compound with the same moisture vapor tolerance as the adhesive to fill depressions, holes, cracks, grooves or other irregularities in substrate.
- E. Place flooring and installation materials into spaces where they will be installed at least 48 hours before installation. Install flooring materials only after they have reached the same temperature as space where they are to be installed.
- F. Sweep and then vacuum substrates immediately before installation. After cleaning, examine substrate for moisture, alkaline salts, grit, dust or other contamination. Proceed with installation only after unsatisfactory conditions have been corrected.

**3.3 SHEET ATHLETIC FLOORING INSTALLATION**

- A. General:
  - 1. Comply with resilient athletic flooring manufacturer's installation instructions.
  - 2. Take necessary precautions to minimize noise, odors, dust and inconvenience during installation.
  - 3. Fit flooring neatly and tightly to vertical surfaces, equipment anchors, floor outlets, and other interruptions of floor surface.
  - 4. Extend flooring into toe spaces, door reveals, closets, and similar openings unless otherwise indicated.
- B. Lay out flooring as follows:
  - 1. Minimize number of seams and place them inconspicuous areas.
  - 2. Locate seams as shown on approved Shop Drawings

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- C. Adhesive Installation: Adhere flooring products to substrates by applying adhesive at seams and entire perimeter using an approved acrylic or pressure sensitive adhesive complying with adhesive and flooring manufacturer instructions.
- D. Vinyl Sheet Flooring Seams: Finish seams to produce surfaces flush with adjoining flooring surfaces. Comply with ASTM F 1516. Rout joints and use heat welding rod to permanently and seamlessly fuse sections together.

**3.4 CLEANING AND PROTECTION**

- A. Perform the following operations after completing resilient athletic flooring installation:
  - 1. Remove marks and blemishes from flooring surfaces.
  - 2. Sweep and then vacuum flooring.
  - 3. Damp-mop flooring to remove soiling.
- B. Protect flooring from abrasions, indentations, and other damage from subsequent operations and placement of equipment, during remainder of construction period.

**End of Section 09656**