HURST-ROSCHE, INC.

**PROJECT:**
NATHAN BEDFORD FORREST STATE PARK
EVA, BENTON COUNTY, TENNESSEE
SBC No. 126/060-01-2022

# ADDENDUM #5 (Date: 10/31/2025)

## CONTENTS

**Clarifications:**

1. An additional acceptable subbase material has been **added** for Section 32 18 16 – Playground Protective Surfacing. Please see article 3.2 sub-article C in the attached Section 32 18 16 – Playground Protective Surfacing.

**Project Manual:**

1. Section 32 18 16 – Playground Protective Surfacing: **Delete** section in its entirety and **Replace** with the attached Section 32 18 16 – Playground Protective Surfacing.

**Drawings:**

None.

**Attachments:**

32 18 16 – Playground Protective Surfacing (7 PAGES)

ADDENDUM DATE: 10/31/2025     LICENSE EXPIRES: 03/31/2027

SECTION 32 18 16 - PLAYGROUND PROTECTIVE SURFACING

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. Unitary, seamless surfacing, poured in place and troweled protective surfacing.

1.3 DEFINITIONS

A. Definitions in ASTM F2223 apply to Work of this Section.

B. Critical Height: Standard measure of shock attenuation according to ASTM F2223; same as "critical fall height" in ASTM F1292. According to ASTM F1292, this approximates "the maximum fall height from which a life-threatening head injury would not be expected to occur."

C. SBR: Styrene-butadiene rubber.

D. Unitary Surfacing: A protective surfacing of one or more material components bound together to form a continuous surface; same as "unitary system" in ASTM F2223.

E. ASTM C-1028: Standard Test Method for Determining the Static Coefficient of Friction of Ceramic Tile and Other Like Surfaces by the Horizontal Dynamometer Pull Meter Method.

F. ASTM D-2859: Standard Test Method of Flammability of Finished Textile Floor Covering Materials.

G. ASTM G-2109: Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi.

1.4 SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings: For each type of protective surfacing.
   1. Include plans, sections, placement, penetration details, and attachment to substrates.
   2. Include accessories and edge terminations.
   3. Include patterns made by varying colors of surfacing and details of graphics.
   4. Include extent of protective surfacing and use zones for equipment.

5. Include fall heights and use zones for equipment and structures, coordinated with the critical heights for protective surfacing.

C. Samples for Initial Selection: For each type of exposed finish.
   1. Include samples of protective surfacing and accessories involving color selection.

D. Samples for Verification: For each type of protective surfacing and exposed finish.
   1. Include Samples of accessories to verify color and finish selection.
   2. Unitary, Seamless Surfacing: Minimum 6 by 6 inches.
   3. Edging: 6 inches long by full width and cross section.

E. Product Schedule: Use same designations indicated on Drawings.

F. Qualification Data: For qualified installer and testing agency.

G. Material Certificates: For each type of protective surfacing, from manufacturer.

H. Material Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for each surface system.

I. Product Certificates: For each type of unitary surfacing product, from manufacturer, including IPEMA.

J. Product Test Reports: Based on evaluation of comprehensive test performed by a qualified testing agency, for each unitary synthetic surface system.

K. Warranty: For manufacturer's special warranty.

L. Maintenance Data: Maintenance manuals to include manufacturer’s data on maintenance of surface system.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: An employer of workers trained and approved by manufacturer. Installer’s Site Superintendent is to have a minimum of five (5) years of experience installing similar materials on similarly scaled projects.

B. Source Limitations: Obtain surface system materials, including primers and binders, form single source from single manufacturer.
   1. Provide secondary materials including adhesives, primers, and geosynthetics, and repair materials of type and from source recommended by manufacturer of surface system materials.

C. Standards and Guidelines: Comply with CPSC No. 325, “Handbook for Public Playground Safety”; IPEMA-certified product, ASTM F-1292; and ASTM F-1487.

D. Color: All colors of surfacing shall be as specified in the Contract Documents. Colors shall be uniform in appearance. In the case of color percentages of material, the mixtures of color shall be uniform and consistent.

## 1.6 PROJECT CONDITIONS

A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit surface system installation to be performed according to manufacturers' written instructions and warranty requirements.

## 1.7 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of protective surfacing that fail in materials or workmanship within specified warranty period.
   1. Failures include, but are not limited to, the following:
      a. Reduction in impact attenuation as measured by reduction of critical fall height.
      b. Deterioration of protective surfacing and other materials beyond normal weathering.
   2. Warranty Period: Must meet Owners' standards.

# PART 2 PRODUCTS

## 2.1 UNITARY SYNTHETIC SEAMLESS SURFACE

A. Protective Surface: Poured-in-place, single-layer system. Provide manufacturers' standard thickness as required for overall thickness indicated, IPEMA-certified product or tested for impact attenuation according to ASTM F-1292 and for accessibility according to ASTM F-1951.
   1. Products: Subject to compliance with requirements, provide one of the following:
      a. PolySoft Surfaces.
      b. Tot Turf by Robertson Industries, Inc.
      c. Duraflex part of The Recreational Group.
      d. AdventureTURF, LLC.
      e. Surface America, Inc.
      f. Or approved equal.
   2. Cushion Course: Manufacturers' standard blend of recycled SBR and EPDM rubber particles forming an integral wearing course and cushion course, site mixed and applied.
   3. Binder: Weather-resistant, UV-stabilized, flexible, nonhardening, aromatic urethane binder.
   4. Overall Thickness: 4 inches.
   5. Primer/Adhesive: Manufacturers' standard primer and weather-resistant, moisture-cured polyurethane adhesive suitable for unit, substrate, and location indicated.
   6. Colors: Color to be chosen by Owner and approved by manufacturer.

B. Leveling and Patching Material for Use on Substrate Below Synthetic Surface: Portland cement-based grout or epoxy- or polyurethane-based formulation suitable for exterior use and approved by surface system manufacturer.

## 2.2 UNITARY SYNTHETIC DUAL-DENSITY SEAMLESS SURFACE

A. Protective Surface: Poured-in-place, two-layer system with wearing course over cushion course. Provide manufacturer's standard thickness for each layer as required for overall thickness indicated, IPEMA- certified product or tested for impact attenuation according to ASTM F-1292 and for accessibility according to ASTM F-1951.
   1. Products: Subject to compliance with requirements, provide one of the following:
      a. PolySoft Surfaces.
      b. Tot Turf by Robertson Industries, Inc.
      c. Duraflex part of The Recreational Group.
      d. AdventureTURF, LLC.
      e. Surface America, Inc.
      f. Or approved equal.
   2. Wearing Course: Formulation of EPDM rubber particles, with minimum of twenty percent (20%) and maximum of twenty six percent (26%) of ethylene propylene-diene-saturated polyethylene main chain along with other organic and inorganic components.
   3. Cushion Course: Manufacturer's standard formulation of recommended SBR particles and polyurethane, site mixed and applied.
   4. Binder: Weather-resistant, UV-stabilized, flexible, nonhardening, aromatic urethane binder.
   5. Overall Thickness: 4 inches.
   6. Primer/Adhesive: Manufacturer's standard primer and weather-resistant, moisture-cured polyurethane adhesive suitable for unit, substrate, and location indicated.
   7. Wearing Course Color(s): Color to be chosen by Owner and approved by manufacturer.

B. Leveling and Patching Material for Use on Concrete Substrate Below Synthetic Surface: Portland cement-based grout or epoxy- or polyurethane-based formulation suitable for exterior use and approved by surface system manufacturer.

# PART 3 EXECUTION

## 3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with installer present, for compliance with requirements for maximum moisture content, subgrade and substrate conditions, drainage, and other conditions affecting performance of the Work. Verify that substrates are sound and without high spots, ridges, holes, and depressions.

B. Surface Substrates: Verify that substrates are satisfactory for unitary, protective surfacing installation and that substrate surfaces are dry, cured, and uniformly level or sloped to drain within recommended tolerances according to protective surfacing manufacturer's written requirements for cross-section profile.
   1. Concrete Substrates: Verify that substrates are dry and free from surface defects, laitance, glaze, efflorescence, curing compounds, form-release agents, hardeners, dust, dirt, loose particles, grease, oil, and other contaminants incompatible with protective surfacing or that may interfere with adhesive bond. Determine

adhesion, dryness, and acidity characteristics by performing procedures recommended in writing by protective surfacing manufacturer.
2. Gravel Substrate: Three quarter-inch (3/4”) angular gravel drainage stone, clean and washed; depth as indicated on Drawings.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

## 3.2 PREPARATION

A. Prepare substrates to receive surfacing products according to protective surfacing manufacturer's written instructions.

B. Finished Grade/Slope: Verify that finished elevations of adjacent areas are as indicated on the Drawings, that the appropriate sub-grade elevation has been established for the particular surface to be installed, and that the subsurface has been installed per equipment plans with meeting accessibility requirements.

C. Subbase options:
1. Concrete slab
2. Compacted granular subbase

D. Subbase: Tolerance of concrete subbase shall be within 1/8 inch in 10 feet.

E. Concrete Subbase is to be minimum of 3”-4” inches thick and 2,500 PSI. Subbase must cure for a minimum of 7 days; 28 days is required if adhesion to concrete is necessary.

F. Confirm that the surface is free of laitance, efflorescence, curing compounds, and other contaminants incompatible with protective surfacing. Surface shall be clean and dry. The contractor shall fill holes and depressions in unsatisfactory surfaces with leveling and patching material.
1. Terminal Edges: Saw cut concrete for terminal edges of protective surfacing.
2. Treat control joints and other nonmoving substrate cracks to prevent telegraphing through protective surfacing.

G. Drainage: Verify that sub surfacing drainage, if required, has been installed to provide positive drainage per Drawings.

H. Surfaces must be clean, free of contaminants such as grease, dirt, and existing unsound coatings.

I. Existing concrete requires shot blast, diamond grind, mechanically abrade, or otherwise prepare concrete substrates according to protective surfacing manufacturer’s written instructions to achieve desired surface quality, adequate roughness, and acid wash prep prior to sealer application. Entire surface to be acid washed prior to material installation.

## 3.3 INSTALLATION, GENERAL

A. General: Comply with protective surfacing manufacturer’s written installation instructions. Install protective surfacing over area and in thickness indicated.

## 3.4 INSTALLATION OF SEAMLESS SURFACING

A. Mix and apply components of seamless surfacing according to manufacturer's written instructions to produce uniform, monolithic wearing surface, and impact-attenuating protective surfacing of total thickness indicated.
   1. Substrate Primer: Apply over prepared substrate at manufacturer's standard spreading rate for type of substrate.
   2. Poured Cushioning Course: Spread evenly over primed substrate to form a uniform layer applied at manufacturer's standard spreading rate in one continuous operation, with a minimum of cold joints.
   3. Wearing Course: Spread over primed base course to form a uniform layer applied at manufacturer's standard spreading rate in one continuous operation and, except where color changes, with a minimum of cold joints. Finish surface to produce manufacturer's standard wearing-surface texture.
      a. Where colored patterns or graphics are indicated or required, place adjacent colored material as soon as previously placed colored material is sufficiently cured, using primer or adhesive if required by manufacturer's written instructions.
   4. Edge Treatment: Fully adhere protective surfacing to edges and substrate with full coverage of substrate. Maintain fully cushioned thickness of protective surfacing to comply with safety performance and accessibility requirements, as indicated on Drawings.

## 3.5 FIELD QUALITY CONTROL

A. Testing Agency: Engage a qualified testing agency to perform tests.

B. Perform the following tests with the assistance of a factory-authorized service representative:
   1. Perform "Installed Surface Performance Test" according to ASTM F1292 for each protective surfacing type and thickness in each playground area.
   2. Perform installed-surface-performance tests at no less than one series of tests for each 1,000 sq. ft. of each type and thickness of in-place protective surfacing or part thereof.

C. Playground protective surfacing will be considered defective if it does not pass tests.

D. Prepare test reports.

## 3.6 CLEANING

A. Perform cleaning during installation of the Work and upon completion of the Work. Remove all excess materials, debris, and equipment from site. Repair any damage resulting from installation of surfacing.

## 3.7 PROTECTION

A. Prevent vehicular traffic in total and pedestrian traffic over the protective surfacing for not less than 48 hours after installation or per manufacturer’s recommendations, whichever is longer.

B. Protect areas from construction debris, including dust, dirt, runoff, trash, and equipment following installation for the duration of construction.

END OF SECTION