BSS 300
Hobart Polyurethane Sandwich
Synthetic Track Surfacing System Specifications

Part 1 – General

1.1 Scope

A. The synthetic surfacing contractor shall furnish all labor, materials, equipment, supervision, and services necessary for the proper completion of the **BSS 300** Synthetic Track Surfacing System with **Hobart** texture and related work indicated on the drawings and specified herein.

B. The synthetic surfacing contractor shall refer to the drawings for the required locations of synthetic track surfacing to be installed. All quantities and dimensions shall be field verified by the synthetic surfacing contractor.

1.2 Specific Scope of Work

A. Install a World Athletics (WA) approved, impermeable polyurethane synthetic track system comprised of a base layer of polyurethane-bound SBR granules, an impermeable layer (seal coat) of a two-component polyurethane and a poured-in-place, two-component U.V. stabilized elastomeric polyurethane wearing layer with a Hobart textured finish.

B. Layout and paint all track lines and event markings as required and specified by current WA, NCAA and NFHS rules.

1.3 Coordination

A. The synthetic surfacing contractor shall coordinate the work specified with an authorized and appointed representative of the owner so as to perform the work during a period and in a manner acceptable to the owner.

Part 2 – Codes and Standards

2.1 Applicable Publications

A. Codes and standards follow the current guidelines set forth by World Athletics (WA) and the National Collegiate Athletic Association (NCAA).

B. State of California Department of Public Health (CDP Standard Method V1.1, Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers Version 1.1, dated February 2010

C. UL-2818 – GREENGUARD Certification Program for Chemical emissions for Building Materials, Finishes and Furnishings; March 29, 2013.

   a. The GREENGUARD Gold Certification standard includes health-based criteria for chemicals and requires low VOC emission levels to help ensure that products are acceptable for use in environments like schools and healthcare facilities.

   b. GREENGUARD Gold Certifications provide evidence of indoor-air-emissions testing according to stringent requirements exceeding the State of California indoor air quality for schools and GSA standards. GREENGUARD Gold certifications fulfill the credit requirements of LEED and other high performance building programs for low-emitting products.

2.2 Performance Standards

The **BSS 300** Synthetic Track Surfacing System shall exhibit the following minimum performance standards as required by WA:

A.	Thickness:	13mm or as specified by WA
B.	Shock Absorption:	35-50%
C.	Vertical Deformation:	0.6 to 2.5mm
D.	Coefficient of Friction:	≥ 0.5 (47 TRRL Scale)
E.	Tensile Strength:	≥ 0.5 MPa
F.	Elongation at Break:	≥ 40%

Part 3 – Quality Assurance

3.1 Contractor and Manufacturer Qualifications

A. The CONTRACTOR and the MANUFACTURER must be the same.

B. The CONTRACTOR must have a minimum of 10 years experience in the installation of poured-in-place, two-component elastomeric polyurethane synthetic track surfacing.

C. The CONTRACTOR shall be able to furnish evidence that they have been in business for a period of not less than 5 years, under the present name, and if required, furnish financial statements for each of the past 5 years.

D. The CONTRACTOR must have installed a minimum of 10 outdoor track facilities in the last 3 years using the exact, WA certified, synthetic track surfacing, as specified herein with the contractor bidding this project.

E. The MANUFACTURER must have a minimum of 10 years of experience with compound two-part polyurethane for athletic surfaces.

F. The CONTRACTOR is required to provide documentation that shows the selected specified and installed product meets current WA Performance Standards for Synthetic Surfaced Athletics Tracks (Outdoor) and is certified in terms of the WA certification system as updated to present day.

G. CONTRACTOR is to provide a list of completed facilities, minimum of 10 which are certified to meet WA/NCAA rules & regulations, utilizing the same product as specified.

H. Specified Surfacing System must be UL Environment **GREENGUARD Gold Certified**.

I. The MANUFACTURER must offer a minimum of nine (9) GreenGuard Gold Certified Synthetic Track Surfacing Systems.

J. The MANUFACTURER must offer a minimum of nine (9) WA Certified Track Systems.

K. All polyurethane components must be MANUFACTURED in the United States in the MANUFACTURERS own **ISO 9001:2015 Certified QMS Facility** to ensure the highest quality materials.

L. The CONTRACTOR must have installed a minimum of five (5) Class I WA Certified outdoor tracks within the United States.

3.2 Submittals

The following submittals must be received with bid submittal:

A. Standard printed specifications of the synthetic track surfacing system to be installed on this project.

B. An affidavit attesting that the synthetic track surfacing material to be installed meets the requirements defined by the manufacturers currently published specifications and any modifications outlined in those technical specifications.

C. A synthetic track surfacing system sample of the same synthetic track surfacing system to be installed on this project.

D. A list of completed facilities, including the installing supervisor, of the exact synthetic track surfacing system.

E. GreenGuard Gold Product Certification.

F. A current WA Certificate proving the product to be installed meets the current WA Performance Standards for Synthetic Surfaced Athletics Tracks (Outdoor).

Part 4 – Materials

4.1 Primer

A. Primers shall be BEYPRIM, a polyurethane-based primer specifically formulated to be compatible with the paved-in-place SBR granules and BEYPUR track surfacing material.

4.2 Black SBR Granules

A. The rubber granules for the base mat shall be recycled SBR rubber, processed and chopped to 1-3mm size, containing less than 1% dust.

4.3 Polyurethane Binder

A. Binder for the black mat shall be BEYPUR, an MDI-based single-component, polyurethane binding agent. The binder shall not have a free TDI monomer level above 0.2% and must be solvent free. The binder must be specially formulated for compatibility with SBR rubber crumb.

4.4 Seal Coat

A. Seal coat shall be BEYPUR 200, a two-component thixotropic elastomeric polyurethane specifically formulated for sealing paved rubber granule mats. The material shall be applied by a squeegee to insure the black mat is sealed. The application of EPDM dust is not allowed.

4.5 Elastomeric Polyurethane

A. BEYPUR, the two-component U.V. stabilized elastomeric polyurethane compounded from polyol and isocyanate components, based on one hundred percent (100%) Methylene Diphenyl Isocyanate (MDI). No Toluene Diisocyanate Isocyanate (TDI) will be allowed.

B. The elastomeric polyurethane shall be the color specified by the owner.

4.6 EPDM Granulate

A. The EPDM granulates shall be 1 to 4mm in size and shall contain a minimum of 20% EPDM polymer.

B. The EPDM rubber shall be the same color as chosen by the owner for the track surface.

4.7 Interlocking Clear Coating

A. Apply two applications of moisture cured aliphatic polyurethane clear coat to encapsulate the embedded EPDM granulates.

B. Coverage shall be 7-8 gallons per 1,000 square feet.

4.8 Pigmented Polyurethane Coating

A. Apply two applications of aliphatic, pigmented waterborne polyurethane coating with a VOC content < 20 g/L.

B. Aliphatic Coating shall be color matched to the EPDM granulate.

C. Coverage shall be 7 gallons per 1,000 square feet.

4.9 Line Marking Paint

A. Manufacturers recommended pigmented line paint.

Part 5 – Installation

5.1 Subbase Requirements

A. Asphalt Compaction

a. The Synthetic Track Surfacing System shall be laid on an approved subbase. The General Contractor shall provide compaction test results of 92-96% for the installed subbase and asphalt surface.

b. For certification the following criteria must be followed. The track surface, i.e. asphalt substrate, shall not vary from planned cross slope by more than +/- 0.2%, with a maximum lateral slope outside to inside of 1% for NCAA and 2% for NFHS, and a maximum slope of 0.1% in any running direction. The finished asphalt shall not vary under a 10' straight edge more than 1/8".

c. It should be the responsibility of the asphalt-paving contractor to flood the surface immediately after the asphalt is capable of handling traffic. If, after 20 minutes of drying time, there are birdbaths evident, it shall be the responsibility of the architect, in conjunction with the surfacing contractor, to determine the method of correction. No cold tar patching, skin patching or sand mix patching will be acceptable.

B. Asphalt Quality

a. No Recycled Asphalt Pavement (RAP) shall be used in the wear course asphalt mix design as the inclusion of RAP as an off-set to virgin asphalt binder results in a brittle hot-mix asphalt (HMA) with significantly lower tensile strength and fatigue resistance. The sports surfacing contractor will not be held responsible for asphalt failures resulting from the inclusion RAP in the HMA mix design of the wear course.

b. Any oil spills (hydraulic, diesel, motor oil, etc.) must be completely removed, either by chipping out or removing and replacing with new, keyed in asphalt. The minimum depth of any asphalt replacement shall be one inch. **The curing time for the asphalt base is 28 days.**

C. Responsibility of Others

a. It shall be the responsibility of the general contractor to determine if the asphalt substrate meets all design specifications, i.e. cross slopes, planarity and specific project criteria. After all the above conditions are met, the synthetic surfacing contractor must, in writing, accept the planarity of the asphalt receiving base before work can commence.

5.2 Thickness

A. The thickness of the **BSS 300** Synthetic Track Surfacing System shall be 13mm or as specified by WA certificate

5.3 Equipment

A. The **BSS 300** Synthetic Track Surfacing System components shall be processed and installed by specially designed machinery and equipment. A mechanically operated paver with variable regulated speed and thermostatically controlled screed shall be used in the installation of the base mat. The wearing course shall be installed using automatic electronic portioning, which provides continuous mixing and feeding for an accurate, quality-controlled installation.

B. No hand mixing is allowed.

5.4 Installation

A. Base Course

a. The SBR granules and BEYPUR moisture cured binder shall be mixed together on site to regulate the ratio/quantity of SBR, not to exceed 82% in the base mat portion of the system. The BEYPUR moisture cured binder shall be mixed with the SBR rubber so that a minimum of 18%, by weight, exists in the final mixture. This mixture is then mechanically installed using the paver.

B. Seal Coat

a. The two BEYPUR 200 components are mixed at the prescribed ratio homogeneously with a suitable mixing device. The coating is squeegee applied to the base mat, making it impermeable.

C. Wearing Course

a. The 1 to 4mm EPDM granules shall be integrated into the elastomeric polyurethane to the full depth of the wearing course. The resilient embedded textured finish shall be a dense matrix of exposed EPDM granules. Excess granules shall be mechanically swept prior to coating.

D. Hobart Coating Process

a. Apply two applications of interlocking aliphatic polyurethane clear coat over embedded EPDM granules. Apply two applications of pigmented waterborne polyurethane coating.

5.5 Site Conditions

A. Installation shall not take place if adjacent or concurrent construction generates excessive dust, abrasives, or any other by-product that, in the opinion of the installer, would be harmful to the track material, until completion of such works.

B. Apply Synthetic Track Surfacing in dry weather when pavement and atmospheric temperatures are fifty (50) degrees Fahrenheit or above.

C. The maximum temperature cannot exceed 105 degrees at any point during a 24 - hour period.

D. Rain cannot be falling. If there is a threat of rain, work shall cease until dry conditions can be re-established on the track pavement. Work is to proceed only when adequate curing can be guaranteed by the manufacturer.

Part 6 – Line Striping and Event Markings

6.1 Layout

A. Line striping and event markings shall be laid out in accordance with current WA, NCAA and NFHS rules.

6.2 Certification

A. Upon completion of the installation, the owner shall be supplied with all necessary computations and drawings as well as a letter of certification attesting to the accuracy of the markings.

Part 7 – Guarantee

A. The **BSS 300** Synthetic Track Surfacing System shall be fully guaranteed against faulty workmanship and material failure for a period of ten (10) years from the date of acceptance.

B. The warranty shall be fully third-party insured; prepaid for the entire ten (10) year term and be non-prorated. The insurance policy must be underwritten by an “AM Best” A rated carrier.

C. Synthetic surfacing material found to be defective as a result of faulty workmanship and/or material failure shall be replaced or repaired at no charge, upon written notification within the guarantee period.

END OF SECTION