SECTION 32 18 16.3 PLAYGROUND GRASS RESILIENT SURFACING:

Playground Grass Ultra
March 9, 2026

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of this contract, including general and supplementary conditions and other division 1 specification sections apply to this section.

1.2 DESCRIPTION OF WORK

A. Playground Grass resilient surface systems for surfaces under and around playground equipment including but not limited to the furnishing and installing of an artificial grass safety surface over a compacted base. Finished products shall be seamed to provide a resilient, continuous surface over the entirety of the project surface. Work includes all labor, materials, tools, equipment, and applicable taxes toperform all work and services for the installation of the surface.

1.3 REFERENCE SPECIFICATIONS AND STANDARDS

A. Materials and methods of construction shall comply with the latest provisions of the following standards:

I. ASTM F 1292-04: "Standard Specification for Impact Attenuation of Surface Systems Under andAround Playground Equipment".

II. ASTM D2859: "Flammability Standard".

III. ASTM F1951-99: "Standard Specification for Determination of Accessibility of Surface Systems Under and Around Playground Equipment."

IV. ANSI/ESD STM97.2-2016: "Standard for the Protection of Electrostatic Discharge Susceptible Items: Footwear/Flooring System-Voltage Measurement in Combination with a Person"

V. ASTM D7968: Standard Test Method for Determination of Polyfluorinated (PFAS) Compounds in Soil by Liquid Chromatography Tandem Mass Spectrometry (LC/MS/MS)

1.4 SUBMITTALS

No alternate product must be submitted without prior approval packages a minimum of ten (10) days prior to bid date. Submittal packages shall include but not be limited to:

A. Laboratory Test Reports: Materials certificates certifying each material item complies with, or exceeds, specified requirements. Certificates of compliance must be signed by materials producer and contractor.

B. Product Verification: Delivery slip for each material shipment, including turf and infill material.

C. Warranties: Product and maintenance warranties must be provided to owner prior to installation.

D. Field test inspection reports and samples for material including Impact Attenuation, Permeability, Flammability, and Electrostatic Discharge.

E. Playground Grass Surface Installer Qualifications: A list of ten (10) playground surfacing projects completed with a similar product within the last five (5) years. List shall include names of project representatives and respective telephone numbers. This list shall also contain projects which require the same level of difficulty, e.g., number of poles and cutouts, transitions, and other special requirements. These ten (10) projects shall have been contracted and installed by the company bidding the job.

F. Product Substitution Submittals: Contractor shall provide the following material for playground grass material substitution.

I. At least one project in excess of 5,000 square feet and completed in the two (2) years.

II. Two 1'x1' product samples.

III. Product warranty and guarantee from manufacturer warranting against all defects for a fifteen (15) year period.

IV. A written guarantee from manufacturer for workmanship.

V. Impact attenuation (per fall height requirements), permeability, and flammability test resultsfrom independent approved and certified testing laboratories.

VI. The artificial grass installer/contractor will provide a maintenance procedure for the installed surface.

VII. Electrostatic testing by a third party consultant or laboratory.

1.5 TESTING OF MATERIALS

A. The following are test results from an independent testing laboratory which must also be submitted:

I. Impact Attenuation: ASTM 1292-04: Impact attenuation test results will be provided. Thesetest results shall be certified and submitted on the letterhead of an independent testing labImpact attenuation test results shall meet or exceed Consumer Product Safety Commission
Guidelines for impact attenuation (G-max and Head Injury Criterion "H.I.C."). Test results must be administered and evaluated under the same test and these results must be shown for three dropsat each required temperature: 32°, 72°, 120°; yield less than 200 G's and less than 1,000 H.I.C. Only test results from ASTM testing approved laboratories, F8 committee will be acceptable.
Approved testing laboratories are TSI and Detroit Testing.

II. Permeability: Product shall meet or exceed a coefficient of permeability of 30" per hour.
NOTE: From a geotechnical standpoint, the permeability of a material is a measure of the velocity at which water will flow through the void spaces or pores under a given hydraulic gradient. The product shall handle a minimum of 20" of rainfall per hour.

III. Flammability (PILL test)
NOTE: To assure compliance with a, b, and c installation shall be provided by an approved installer, who has at least five successful installs.

IV. Electrostatic Discharge: Product must have ANSI/ESD STM97.2 Electrostatic testing indicating that it is 1,000 volts below the 2,000-volt limit for commercial applications with a wide variety offootwear.

V. PFAS Within Specified Limits: ASTM D7968: Standard Test Method for Determination of Polyfluorinated (PFAS) Compounds in Soil by Liquid Chromatography Tandem Mass Spectrometry (LC/MS/MS)

1.6 WORKMANSHIP AND QUALITY ASSURANCE

A. The artificial grass is to be installed per manufacturer's specifications.

B. All artificial grass and components shall be provided by a single source.

1.7 DELIVERY AND STORAGE OF MATERIALS

A. Artificial grass will be delivered in rolls 15' wide, wrapped in plastic. SafetyFoam Pro™ will be delivered on pallets in a separate shipment.

B. Products will be stored out of sight (as much as possible) and secured to prevent tampering.

1.8 GUARANTEE/WARRANTY OF THE MATERIAL AND WORKMANSHIP

A. The artificial grass installed under this contract will be warranted for a period of fifteen (15) years for materials and workmanship and covers the surface for wear through, deterioration and excessive fading/ UV degradation. Vandalism and force majeure will not be covered. Written warranty must be submitted by the installer.

B. When defective material or workmanship is discovered which will require repair or replacement, all such repair work or replacement work shall be done by the contractor at its own expense after written notification is given of such required repairs. However, if the contractor fails to comply with the requirements of the above guarantee within reasonable time after notification is given, the repairs will be made by others at the contractor's expense.

   I. Any unsafe conditions that arise shall be secured and maintained by the installer until all requiredrepairs or replacements have been completed.

   II. All resurfacing will conform in kind and quality to the specifications set forth in the plans and specifications and will be free of defects in workmanship and material.

PART 2 - PRODUCTS

2.1 DESCRIPTION OF SYSTEM

Resilient safety surface shall be Playground Grass Ultra as manufactured by ForeverLawn Inc. Resilient safety surface shall meet all of the following requirements independently and collectively:

A. Blades: Primary blades are a slit film polyethylene with anti-microbial agent AlphaSan® integrated into the primary yarn. A patented anti-static technology must also be integrated into the construction so as to not allow static charge build-up. Secondary blade is a heat textured nylon monofilament. Tufting construction requires dual primaries in the same row.

B. Weight: The product face weight will be 48 ounces. With backing, the total weight of the product will be 103 ounces.

C. Tufting: The tufting gauge will be 3/8", pile height 1 1/2". Tufting configuration – dual yarn same row setup.

D. Backing: The backing shall be a multi-layered, three parts.

   I. First single layer (stabilized primary consisting of polyester, fiberglass, and polyurethane). It is 18 pic construction and 6 ounces.

   II. Second layer is a minimum 40 ounce urethane layer.

   III. Third layer is nonwoven, recycled, geotextile fleece.

E. Seams: Primary seaming system shall be a micromechanical seam, utilizing hook and loop technology.

F. Resilient subsurface padding: SafetyFoam Pad which is a closed cell expanded polypropylene panel.

G. Infill: Rubber options include 0.75-1 lbs. of 10/20 or 14/20 crumb rubber granules per square foot. Sand options include 3.75 - 4 lbs. of 12/20 silica sand, Envirofill®, or T°Cool® per square foot.

PART 3 - EXECUTION

3.1 BASE REQUIREMENTS

A. Playground Grass Systems *with* SafetyFoam Pro: The base shall be angular "down to dust" 3/4" stone, leveled and compacted at a depth of 3" to 4".

B. Playground Grass Systems *without* SafetyFoam Pro: The base shall be angular "down to dust" 3/4" stone, leveled and compacted at a depth of 3" to 4", and capped with 1 inch of 3/8" clean angular stone.

3.2 PREPARATION

A. The perimeter of the area shall be defined with a plastic nailer board, unless an acceptable surface for anchoring the turf currently exists. These nailer boards will be secured into concrete or blacktop, or held in place with rebar spikes.

B. Cleaning: The entire surface shall be clean and free from any foreign and loose material.

3.3 INSTALLATION

A. SafetyFoam Pro resilient subsurface padding will be laid out in 2’x4’ interlocking panels over the base.

B. Artificial Turf: The turf will be rolled out in sections, cut around the poles, and seamed together using the micromechanical seaming system as the primary bond.

C. Securing: The turf will be secured around the perimeter. If using nailer boards, 1” staples will be used to secure the turf to the boards. Staples will be placed every 3”. (See edge details).