Architects Product Specifications for…

PrimoTurf Natural SURFACING: A Unitary Recycled Colored Rubber Buffing Poured-in-Place Playground Safety Surfacing

DESIGN CRITERIA:

a.) The Safety Surface System shall have been marketed in the United States for at least five (10) years.

b.) The installation of the Safety Surfacing specified herein and indicated on the Drawings shall be performed by an organization who can furnish supporting evidence of rubber poured in place installation experience and who has regularly been engaged in this type of work on a full time basis for a period of not less than 10 years.

c.) The installation of the Safety Surfacing shall be performed by Poured in Place applicators who upon request shall furnish evidence of approval by Fry Park and Playground.

d.) The installation of the Safety Surface shall be overseen by a factory authorized representative.

e.) The following specifications, standards and codes shall hereby form a part of this specification:
1.) American Standard for Testing and Materials (ASTM)
2.) Consumer Products Safety Commission (CPSC)
3.) National Bureau of Standards

f.) Material shall be vandal resistant, firmly secured so that it cannot be pulled away from the playground surface.

g.) Installed Safety Surface shall meet or exceed CPSC performance guidelines with respect to the Critical Heights of the proposed in-place play equipment.

h.) Material is used in construction of the Safety Surface System shall be tested for conformance with requirements of ASTM F 1292.

SUBMITTALS:

a.) If a substitute is proposed as an "equal" to an item named in this Section, comply with Division I Subsection 6.01 and submit sufficient

evidence to prove objectivity that the item conforms to this Section and is equal to the named entity.

b.) General: Submit the following in accordance with Conditions of Contract.

c.) Certified Test Data that Safety Surfacing meets or exceeds the following:
1.) Current Consumer Product Safety Commission (CPSC) guidelines issued in "A Handbook for Public Playground Safety" (Latest Edition).
2.) Current Americans with Disabilities Act Guidelines (ADAG).
3.) Current ASTM F-1292 requirements.

d.) Shop Drawings:
1.) The Contractor shall prepare and submit shop drawings and erection Drawings for each area of safety surface, which requires patterns to the Engineer for approval prior to fabrication.
2.) Provide information about the material from which the pattern will be made and details of the installation of pattern and the patterned safety surface.
3.) Provide special details noting penetrations and holes required in the safety surface. Clearly indicate adjacent work, provided by other trades.

e.) Brochures and Certification:
1.) Submit data sheets and installation instructions of all materials.
2.) Installation Instructions for Safety Surface installed in patterns, including the installation and removal of the pattern pieces and the sequence and time frame.

f.) Samples:
1.) Submit Samples of the following for approval by the Engineer.
a.) 12 inch x 12 inch samples of the safety surface in thickness specified.
b.) 4" round sample of actual surfacing material, all colors available for color selection.
c.) 1 foot long pieces of the material to be used for the patterns if patterned work is to be performed.

g.) Manufacturer's Review: Submit written statement, signed by safety surfacing installer stating that Drawings and Specifications have been reviewed by qualified representatives of materials manufacturer, and

that they are in agreement that materials and system to be used for safety surfacing are proper and adequate for applications shown.

h.) Substrate Acceptability: Submit a certified statement issued by manufacturer of Safety Surfacing materials and countersigned by applicator, attesting that areas and surfaced designated to receive safety surfacing have been inspected and found satisfactory for reception of work covered under this Section: and are not in conflict with "Warranty" requirements. Application of materials will be constructed as acceptance of surfaces.

i.) Statement of Supervision: Upon completion of Work, submit a written statement signed by manufacturer stating that field supervision of manufacturer's representative was sufficient to insure proper application of materials, that Work was installed in accordance with Contract Documents, and that installation is acceptable to manufacturer.

j.) Certification: Furnish certificate-accompanying delivery of Safety Surface material indicating compliance with the Contract Documents.

MATERIAL TESTING:

a.) Shock Absorbency: When tested in accordance with ASTM F-1292, Test Method F355, Procedure C (Metal Headform), the surface shall not impart to the headform upon impact, a peak deceleration exceeding 200 times the acceleration due to Gravity (200 G's). Drop heights used in this test shall be the heights relevant to the proposed play structures used in conjunction with the safety surfacing areas indicated on the Drawings.

b.) Weathering: After being subjected to a freeze-thaw cycle the sample shall be retested in compliance with ASTM F-1292 at 72 Degrees F only. A peak deceleration rereading not exceeding 200 G's shall be maintained.

c.) Slip Resistance: Wet dynamic reading shall not be less than 40 when tested in accordance with ASTM E 303, using British Portable Skid Resistance Tester.

d.) Flammability: Minimum Critical radiant flux of 0.22 Watts/CM2 when tested in accordance with ASTM E 648.

WARRANTY:

a.) Provide a written warranty stating that work executed under this Section will be free form defects of materials and workmanship for a period of three years form date of Substantial Completion, and that material breakdown and unraveling will be remedied on written notice at no additional cost to the Owner. The Warranty shall be in writing and shall be signed by the Contractor, the Safety Surface materials manufacturer. Warranty shall include removal and replacement of materials as required to repair safety surfacing, at no cost to the Owner.

SITE CONDITIONS:

a.) Conditions of substrates with respect to structural performance shall be evaluated and approved by the applicator prior to applying the safety surfacing.

b.) Safety Surfacing shall not be placed when the ambient temperature is below 40 Degrees Fahrenheit, when there is frost in the base, when rain or frost is forecasted, or any other time when weather conditions are unsuitable for the type of material being placed.

c.) At the time of application ambient air temperature shall be 40 Degrees Fahrenheit or greater and remain so for at least 7 days after installation is complete.

d.) Adjacent Material and the Safety Surfacing shall be protected during installation, while curing and / or unattended form weather and other damage.

DELIVERY, STORAGE, AND HANDLING:

a.) All materials for the work of this Section shall be delivered, stored and handled so as to preclude damage of any sort. Materials showing evidence of damage shall not be used and shall be removed from the site.

b.) Materials in manufacturer's unopened containers or bundles must be fully identified with brand, type, grade, date of manufacture, class, lot number, and other qualifying information.

c.) Store materials in original tightly sealed containers or unopened packages. Materials shall be stores out of weather, off the ground, in dry area, in compliance with manufacturer's maximum storage temperature range.

JOB CONDITIONS:

a.) Maintain manufacturer's current installation instructions at the job site at all times for safety surface material to be used on the Project.

b.) Maintain material storage area at minimum 60 degrees Fahrenheit, but not above 90 degrees Fahrenheit for 48 hours prior to application.

c.) Proceed with work of this section only after substrate construction and penetrating work have been completed.

d.) Do not proceed with work during inclement weather. Comply with manufacturer's recommendations for application and curing under specific climatic conditions.

e.) Coordinate application of safety surfacing with work of other trades.

PROTECTION:

a.) Protect the safety surface from damage, resulting from spillage, dripping, and dropping of mater. Prevent Materials from entering and clogging drains. Repair, restore or replace work, which is soiled or damaged in connection with the performance of the work.

MATERIALS: GENERAL

a.) Safety Surfacing shall be installed in the presence of a factory trained service representative to insure the highest quality installation.

b.) Installation of Safety Surfacing shall be over bituminous concrete sub-base as per manufacturer's instructions and as detailed. The safety surfacing in itself shall not create new hazards; hence all installations shall be done as carefully as possible in a neat and workmanlike manner.

c.) For Walking Path purposes a 90% Compacted Sub-Straight and a Geo-Textile membrane as a weed-blocker prepared over the sub-straight is required in preparation for laying a Long-Strand Colored Rubber Buffing Poured-in-Place Pathway.

d.) Layout of intended surfacing areas shall be reviewed by the manufacturer's representative to insure that the proper thickness of safety surface being installed.

e.) All work must be protected from vandalism and other damage during the installation and curing of the safety surfaces.

f.) All material components of the safety surfacing shall be obtained from the same source.

MATERIALS: BONDING AGENT

a.) Primer: Single component moisture cured polyurethane primer.
b.) Binder: An elastic polyurethane pre-polymer with minimal odor, excellent weathering and binding characteristics.

The use of Stockmeier PS 106 binder is required.

1.) 100 percent MDI based binder.
c.) Rubber:
d.) Thinner: A thinner, approved by the safety surface manufacturer shall be used for cleaning tools.

MATERIALS: TESTING

1.) Shall have been tested for shock attenuation under ASTM F-1292 and HIC.
2.) Shall have been tested for non-slip characteristics under ASTM E-303.
3.) Shall have been tested for ease of ignition under BS-5696 and ASTM D-2859.
4.) Shall have been tested for fire resistance under UL94.
5.) Shall contain no latex.

MATERIALS: ENGINEERED RECYCLED COLORED RUBBER BUFING MULCH

a) The Recycled Rubber Playground Surfaces must be made of 100% recycled tire-buffing manufactured strictly from a waste stream rubber buffing versus a crumb, chunk, or granulated particle derived from the whole tire recycling process. The loose-fill must not carry any unwanted characteristics of whole tire recycling including that of steel content, polyester, or cotton fibers. Colors shall be dyed upon the rubber buffing or pigmented; no paint or colorant coatings shall be accepted. Rubber particles shall range in size from 3/8" to 2". All products must meet the ASTM F 1292-92 test for safety surfaces in and around playground equipment and the ASTM F 1951-99 test for handicap accessibility. Loose-fill engineered colored rubber buffing material shall meet project fall height requirements.

ENGINEERED RECYCLED COLORED RUBBER BUFING MULCH **MUST MEET OR EXCEED THE FOLLOWING:**

Anti-Fungal
No Steel content
No Polyester or Cotton Fibers
Averts Nesting of Insects
Non-Absorbent
Non-Toxic
Does not deteriorate
Must maintain a fresh appearance
ASTM Tested afore mentioned
Meets CPSC Guidelines as a Resilient Safety Surface
ADA Wheel Chair Accessibility Tested

MIXING AND PREPARATION:

a.) Mixture of binder and Rubber will be determined by the system, which is specified. Verify with manufacturer for specific detailing.
b.) Colors shall be selected by the Engineer from the manufacturer's full line.

INSPECTION:

a.) Examine areas and conditions where safety surfacing is to be installed and curing of the safety surfaces.

INSTALLATION:

a.) Safety Surface shall be installed to thicknesses indicated on the Drawings. Minimum thicknesses indicated on the Drawings are based on the performance standards of Fry & Associates / PrimoTurf Products®.

1.) The use of minimum base executed within Fry & Associates / PrimoTurf Products® playground safety surfacing system is solely for the purpose of setting a performance standard. It does not indicate a proprietary item, nor does it preclude products of other manufactures so long as the requirements of these specifications and all other applicable provisions of the contract documents are met.

2.) Thicknesses of safety surfacing manufactured by others may be different than what has been indicated. Thicknesses of safety surfacing must meet all safety requirements and codes for fall heights of specified play equipment.

b.) Primer shall be applied to the substrate at a rate of 300 square feet per gallon using a short nap roller.

1.) Base mat:

2.) Using trowel, SBR/Binder mix shall be spread in a consistent density to specified thickness. Compact and allow to dry for a minimum of 24 hours (necessary time varies based on temperature and humidity).

CLEANING AND PROTECTION:

a.) Clean, repair or replace work of trades soiled or damaged by safety surface installation work.

b.) The General Contractor shall be responsible for protection of finished surfaces until completion of construction and sign off.