Pour In Place Playground Surfacing

1. **General**
    A. Description of surfacing and general conditions
        i. Surfacing shall be a poured in place, dual density, trowelled material to provide a resilient, seamless rubber surface installed over a specific base. The surfacing manufacturer shall be responsible for the installation of the surface. The surface shall be stable and slip resistant to comply with all requirements set forth in the Americans with Disabilities Act (ADA).
        ii. Color EPDM materials (top cap and wearing surface). All EPDM cap materials will be peroxide cured rubber.
        iii. EPDM Pour In Place with ½ inch cap has been screened for any metallic material
        iv. Impact attenuation (per fall height requirements and depth (per fall height requirements and depth specified), coefficient of friction, permeability, flammability, toxicity and tensile strength test results from independent approved and certified testing laboratories.

2. **Preparation**

    A. The entire surface shall be clean and free from any foreign and/or loose material.

    B. The base shall have the specific minimum slope (2%) and shall vary no more than 1/8" when measured in any direction with a 10' foot straight edge. Asphalt base shall be allowed to cure a minimum of fourteen (14) days and new concrete shall be allowed to cure a minimum of seven (7) days prior to commencement of surfacing. A compacted stone base will not require cure time but will be subject to slope and tolerance specification.

3. **Installation**

    A. Thickness: Total depth of the surface may vary in the highest critical impact course according to fall height. All thickness' shall meet or exceed the fall height requirements for both the equipment and fall zones as indicated on the drawings, or as specified by the equipment manufacturer. The minimum total thickness shall be 2".

    B. Impact Course: The minimum 1-1/2", or thicker as required by fall height, impact course must be composed of recycled rubber and be free of foreign matter. The impact course will be poured in place by means of screening and hand-trowelled to maintain a seamless application. All rubber in the impact course will be of a select quality and

considered blend of recycled rubber sizing's to achieve maximum porosity and minimum residue.

C. Poured Cap: The 1/2" minimum poured cap material shall be composed of EPDM granular rubber only. The cap will have a minimum weight of 2.4 pounds per square foot. The cap will be poured in place by means of screening and hand-trowelled to maintain a seamless application.

D. Installer's Qualifications:
   i. Successful experience in installation of poured-in-place playground safety surfacing of similar type to that specified, with a minimum of 10 projects completed within last 6 months.
   ii. Employ persons trained for installation of poured-in-place
   iii. Playground safety surfacing of similar type to that specified.
   iv. Approved by manufacturer.
   v. Covered by Workers Compensation, Automotive and General Liability insurance

4. Quality Assurance

A. Testing
   i. Impact Attenuation - ASTM F1292-96: impact attenuation test results will be provided to the Owner. These test results shall be certified and submitted on the letterhead of an independent testing lab. Impact attenuation test results shall meet or exceed Consumer Product Safety Commission Guidelines for impact attenuation (G-max and Head Injury Criteria "H.I.C"). Both test results must be administered and evaluated under the same test and these results must be shown for three drops at each required temperatures: 32, 72,120; yield less than 200 G's and less than 1,000 H.I.C. The impact site must be performed on the "worst case scenario" area of the sample tested. Testing laboratory must be certified to meet calibration program requirements of MIL-STD-45662A. Test report must state the base tested for this project.
   ii. Permeability: Product shall meet or exceed a coefficient of permeability of five (5) feet per minute. 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 8" of rainfall per hour.
   iii. Tensile Strength- ASTM D412-87 and Tear Resistance- ASTM D624-86: This test indicates a products ability to stretch, and how far it will stretch before it breaks. Test results must be a minimum of tensile strength = 60 psi, AND % elongation@ break = 40 (140%of original size)

B. Manufacturer Qualifications
   i. Continuously engaged in manufacturing of poured-in-place playground safety surfacing of similar type to that specified.
   ii. Furnished a minimum of 10,000 square feet of poured-in-place playground safety surfacing of similar type to that specified within the past 6 months.

5. Material Storage

A. Storage: Store materials in a dry area at a minimum temperature of 40 degrees F.

6. Protection

A. Owner shall not allow foot traffic on poured-in-place playground safety surfacing until a minimum of 80 percent cure is obtained. (Estimated time to obtain 80 percent cure will range from 6 to 72 hours depending on temperature and humidity.)
B. Owner shall protect completed poured-in-place playground safety surfacing from damage during installation and cure time.
C. Owner shall protect completed poured-in-place playground safety surfacing from damage from subsequent construction activity.

7. Warranty

B. A five (5) year warranty from the date of completion of installation shall be provided against defects in materials and workmanship.