

# 32 18 13 – Synthetic Turf System

## DIVISION 32 – Exterior Improvements



### STATEMENT OF PURPOSE & BACKGROUND

- Scope:
  - Furnishing and installing a synthetic turf system, including acceptance of prepared sub-base and drainage system; turf carpet, infill and shock pad; coordination with related trades.
  
- Statement of goals:
  - Provide a high quality product and system that is functional, aesthetic and:
    - Is durable.
    - Is easily maintained per manufacturer's instructions.
  
- Revision history of section:
  - 04/18/18 (date of adoption)
  - 01/14/21
  
- The installed system shall have the following minimum properties:

### SELECTION AND APPLICATION CRITERIA

| Property                           | Specification               | Standard   |
|------------------------------------|-----------------------------|------------|
| Fiber Denier                       | 9,000+                      | ASTM D1577 |
| Tape Thickness                     | 200 Microns                 | ASTM D3218 |
| <b>Pile Height</b>                 | 2.0"                        | ASTM D5823 |
| Stitch Gauge                       | 3/8" – 3/4"                 | ASTM D5793 |
| Pile Weight                        | 35 oz/square yard           | ASTM D5848 |
| Primary Backing                    | 7 oz/square yard            | ASTM D5848 |
| Secondary Backing                  | 16+ oz/square yard          | ASTM D5848 |
| Total Weight                       | 57 oz/square yard           | ASTM D5848 |
| Tuft Bind (without infill)         | 8+ lbs                      | ASTM D1335 |
| Grab Tear (width and length)       | Min. 200 lbs/force          | ASTM D5034 |
| Impact Attenuation (Gmax)          | Max. 165                    | ASTM F1936 |
| Carpet Permeability                | Min. 40 inches/hour         | ASTM D4491 |
| Infill Material Depth (Sand & TPE) | 1.25 inches                 |            |
| Exposed Blade Height               | .75"                        |            |
| Shock Pad Depth                    | .63" (16 mm)                |            |
| Sand Infill Component              | 4 lbs/square foot (minimum) |            |
| SBR Rubber Infill Component        | Not Allowed                 |            |
| Total Product Weight               | 1,066 oz/square yard        |            |

## OUTLINE SPECIFICATION

- Part 1 General
  - Provide consistent, high quality products that:
    - Conform to all applicable codes and standards for synthetic turf systems.
    - Complies with testing standards specified herein.
  
- Part 2 Products
  - Synthetic Turf System:
    - **Acceptable Manufacturers are limited to the following:**
      - FieldTurf USA; Model: FieldTurf Vertex (3/4 gauge)
      - AstroTurf, LLC; Model: AstroPlay 3D (3/4 gauge)
      - Sprinturf, LLC; Model: Dual Yarn (3/4 gauge)
    - All products above to have 2" long Fibers of Monofilament and Slit Film.
    - No additional manufacturers will be considered.
    - Synthetic Turf System shall consist of:
      - Synthetic grass carpet (turf) of 50% monofilament polyethylene and 50% slit-film fibers tufted into a primary backing with a secondary backing, fully permeable (no exceptions).
      - Infill: Graded silica sand and TPE that partially covers the turf.
      - Technical Layer (Shock pad): Interlocking shock pad under turf, PEX foam, directly on granular sub-grade.
      - Acceptable manufacturers of shock pad:
        - Schmitz Foam Products
        - En-Plast Technology, LLC
        - Brock International
      - Thread, paint, seaming fabric and other materials used to install and mark the turf.
      - Sub-surface granular material and drainage per civil engineer.
      - Infill Material:
        - Infill material shall be Thermoplastic Elastomer (TPE) sourced from North America or Europe. Silica sand component of the infill must be at least 50% of total infill by weight. TPE must not contain any of the following hazardous substances: PFOS, Halogens, PAH, Solvents (VOC). **Sand must not contain SBR (crumb rubber) nor any inorganic elements.**
      - Acceptable manufacturers of infill:
        - SOFTER SPA: Fogrin Infill Solutions, HT-140 TPE
        - Target Technologies International, PRO-Max TPE
    - Field lines and markings: Factory tufted or in-laid. No cutting of turf backing or using seam tape allowed. Painted lines are not acceptable.
    - Field lines, markings, logos, etc. shall be selected and coordinated with Owner input.
    - Lines and markings may include multiple game lines and/or colors.
    - Carpet (turf) rolls to be 15' wide. Rolls to be stitched together in the field, not glued, to create a monolithic system.
    - Backing: 2 layers of polypropylene fabric. Secondary backing: porous heat-activated urethane. Backing to be perforated; turf to be fully permeable.

- Maintenance Equipment Required:
  - A Mechanical Field Groomer and a Sweeper, or an all-in-one unit, shall be included as part of the base bid work.
  - All-in-one unit to be SMG TurfCare TCA1400 tow-behind groomer machine, fully adjustable.
- Part 3 Execution
  - Per Consultant and / or manufacturer specification.

End of Section