### **FACILITY & OPERATIONS**

# New **ASTM** standards for sports turf managers

By James Brosnan and Michael DePew



STM International is one of the world's largest and most recognized standards writing organizations. The "standards" produced by ASTM are reference documents that attempt to limit variability between the products and services of many different industries. ASTM standards exist for a wide variety of products ranging from microprocessors to adhesives, to both natural and synthetic turf athletic fields.

Sports field managers are often unknowingly affected by ASTM standards. Send a soil sample into a testing laboratory and it will be analyzed using test methods that have been standardized by ASTM. Using these standardized procedures ensures meaningful results. Look at any piece of PVC pipe and there will be an "ASTM D-1785" stamp on the side indicating that the pipe meets ASTM specifications. This stamp is a message to the consumer that they will be receiving actual PVC pipe and not a lower quality imitation that may fail in the field.

Athletic field standards primarily fall under the jurisdiction of the F08.64 (natural turfgrass) and F08.65 (synthetic turf) sub-committees within ASTM. These sub-committees consist of engineers, agronomists, architects, consultants, industry representatives, and soil scientists who voluntarily meet twice a year to both edit existing standards and develop new standards for athletic fields. Anyone interested can participate in these committees. The Sports Turf Managers Association sends a technical standards committee member to these meetings to represent the interests of sports field managers.

In early November the F08.64 and F08.65 sub-committees convened in Tampa, FL to work on new athletic field standards. The following sections will describe each particular standard and discuss how it might affect sports field managers.

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#### F-1551-03

This is the Standard Test Method for Comprehensive Characterization of Synthetic Turf Playing Surfaces and Materials.

Explanation: This revised document standardizes the test methods used to characterize the components of synthetic turf playing surfaces. The standard outlines a specific set of material test procedures for laboratories characterizing the rubber infill, carpet backing, gravel sub-grade, and pile fiber of infill systems.

Effect on sports field managers: Standardizing these test methods ensures that each manufacturer's product is characterized using the same procedures; therefore, sports field managers can feel comfortable using manufacturers' "spec sheets" to compare one particular brand to another.

#### F-1936 -07

This is the Standard Specification for Shock Absorbing Properties of North American Football Field Systems as Measured in the Field.

Explanation: This document standardizes the method used to test the hardness of synthetic turf fields (i.e., "Gmax" testing). It was proposed that this standard be expanded to include more sports than just football. Additionally, it was proposed that impact attenuation be measured only in the highest traffic areas of a field (between the hash-marks, goalmouths, corner kick areas) rather than both traffic and non-traffic areas.

Effect on sports field managers: If the proposed changes are accepted, sports field managers will be able to have infill systems used for multiple sports tested for impact attenuation with a new method designed to provide more meaningful data. by the Core Displacement Method.

Explanation: This is a proposed new standard for natural turf athletic fields that outlines a method to measure the bulk density of rootzones mixes, in the field, prior to sodding/seeding. The method, which would be much cheaper and more user-friendly than commonly used nuclear techniques, could be used as an alternative to the sandcone method.

Effect on sports field managers: In most cases, the only way sports field managers determine the bulk density of their rootzone mix is through laboratory testing of stock materials. This standard would provide a simple, cost-effective method sports field managers could use to measure soil bulk density in the field.

A proposed standard for golf course greens/tee construction was also reviewed at the meeting. This standard is similar to "F2396-Standard Guide for the Construction of High Performance Sports Field Rootzones," which provides specific guidance for the selection of materials (soil, sand, gravel, peat) used in designing and constructing sand-based sports turf rootzones.

Similar to what the United States Golf Association has done for the golf industry, ASTM is working hard to produce standards specific to sports turf management. When used effectively, these documents can be valuable tools in a sports turf manager's arsenal.

For more information on ASTM International or to purchase a copy of an ASTM standard, visit http://www.astm.org.

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#### WK1582

These are the Standard Test Methods for Comprehensive Characterization Performance Properties of Synthetic Turf Systems.

Explanation: This is a proposed new standard outlining a set of test methods that can be used to characterize the performance of an infill system. Performance is characterized through measurements of properties like traction, ball bounce, ball roll, and impact attenuation (Gmax).

Effect on sports field managers: This set of methods would provide a more cost-effective alternative for those wishing to have the performance of their field certified in a manner similar to the FIFA certification program conducted throughout Europe.

#### WK1449

This is the Standard Test Method for Density and Unit Weight of Topsoil and Blended Soils In-Place

