

# Buyer's Guide for Synthetic Turf Field Construction

**T**oday more synthetic turf fields being installed than ever before, from the local park to the NFL. Why the boom? One reason is that the cost has come down; there are many more options so that a turf field can be built within the budgets of most organizations and institutions.

Also, the product has been improved. Even some who were adamantly opposed to the older short pile nylon turf products have become advocates for the new long pile, infill turf, which looks and feels more like natural grass.

In some areas of the country, drought and/or water restriction is another force driving the installation of synthetic turf. Unlike natural grass, turf requires no regular irrigation, though for some sports at the highest levels, players may prefer a field that has been watered before play.

But the most attractive characteristic of synthetic turf fields is that they can be used day-in and day-out. In short, the installation of synthetic turf maximizes the productive use of a field, providing many more athletic and recreational opportunities for a school or community.

With turf fields becoming less expensive, more user-friendly and offering greater use at a better cost per hour of use ratio, what's the downside? This is a very new industry and, thus far, largely unregulated. To get the most value from a sizeable investment, an owner must take care in defining needs, exploring available options and making appropriate choices.

American Sports Builders Association (ASBA) put together this Buyer's Guide to provide an overview of the process, along with some basic guidance to aid you in making the decisions necessary in developing a synthetic turf project.

## Define your needs

Early in the project, an owner must decide on its scope. What sports or activities will take place on the field? The specific sports or other activities (e.g., band practice) to be played on the surface may influence the appropriate length of turf, as well as the depth and type of infill.

At what level will these sports be played? The level of competition will determine which governing body and, therefore, which rules will prevail. Governing body rules will specify the necessary field dimensions and surface types, as well as the size of required runover areas.

Will a track surround the field? If so, which field events are planned and which of them may be placed in the infield? Some of the field events traditionally

conducted in the infield, such as the hammer throw, will need to be relocated as they may damage a synthetic field.

Most multi-purpose fields will require some compromise between what is optimal for one program or sport versus the performance characteristics and requirements of another. Carefully defining needs and establishing priorities will go a long way toward insuring that the facility, once built, performs as well as possible.

## Develop a budget

How much can you afford to spend? Developing a budget may be the most difficult step in the construction process. You may have to make some concessions, but in order to make informed choices you need to determine priorities. For example:

- \* Do you need a completed facility now or can you wait a while for fencing, lighting, seating or other aspects of the project?
- \* Have you decided upon a given surface or specific site, or are you willing to consider alternatives?
- \* What site conditions will you be working with? Irrigation and drainage issues? Soil conditions and quality?
- \* Do you have an existing grass field to convert or will you be working with previously undeveloped ground?

Remember that as in most projects, it is easy to spend more than you had in mind. Working within a budget involves considering various options and making informed

choices, but choices don't have to mean compromising the end result. Knowledge of what factors are most important to the facility you are planning and a desire to seek creative solutions can bring the project in at a reasonable cost.

In budget planning, consider not just initial cost but long-term cost. Before committing to a turf project, be certain that you can afford the schedule of maintenance recommended by the supplier of your chosen turf system, as well as a reserve for eventual repair and/or replacement. It may be wise to consider a maintenance contract with the installer or with an expert maintenance company to keep your turf in the best possible condition and to extend its useful life.

## Consider a design professional

It is often desirable to employ a licensed design professional, consultant, or other expert to assist in planning, building, or retrofitting a synthetic turf field. Depending on the scope of the project, employing the services of an expert can actually help control job costs by better translating the needs of the owner into



Courtesy of the Motz Group, Cincinnati, OH



proper direction for construction, and by helping to avoid costly mistakes. A professional architect, engineer or landscape architect, trained and experienced in synthetic turf construction, or an experienced installer, will help you identify your needs and refine that information to the specific requirements of your site.

An expert can assist you in determining the scope of work to be included in the job, in planning the facility, in determining a realistic budget for the project, in evaluating and comparing bids, in overseeing the work in progress and in solving any problems that occur during construction.

However, be sure to choose an expert with specific related experience. Third generation (long pile, infill) turf is relatively new to the marketplace. There are many design professionals, manufacturers, installers and others claiming expertise in this highly specialized field. In fact, anyone can claim to be an expert. It is important to research the credentials of your proposed consultant before choosing an individual or firm.

Perhaps the best way to find a qualified professional is by contacting colleagues who have recently completed similar projects and asking for a recommendation.

In any case, when you contact a prospective consultant, be sure to ask questions about the firm's experience in turf field design. Contact references and visit completed projects. Ask for proposals and compare them carefully. Be sure you understand what is and what is not included in the proposed contract. Finally, once you choose a professional, carefully negotiate fees and services and secure a signed letter of agreement or contract, which clarifies all aspects of your arrangement.

### Choose a site

Where will you build? Before you contemplate new construction, be certain that you have an acceptable site. Whether new construction or replacement of a natural grass field, numerous factors make the design phase critical.

For new construction:

\* How large a site is available? If the field is to be surrounded by a track, a site no less than five acres, a minimum of 600 feet long by 300 feet wide will be required. Additional area must be allowed for grading, drainage, the anchoring detail, player seating and walkways, and for facilities such as bleachers, lighting, walkways, fencing, etc.

\* Does a potential site allow for proper drainage and storm water management? It is best to locate a field on a relatively level site, higher than surrounding areas. Additional filling or drainage work required by a low site may add substantially to construction costs.

\* Is the site reasonably level? While the field and any surrounding track will be sloped slightly for drainage, for all practical purposes, the track must be level in the running direction.

\* What type of soil exists at the site? The best soil is hard, well drained and non-heaving. Locations with peat, clay, topsoil, shear sand or other unsuitable materials should be avoided, if possible. In practice, however, sites available for fields are often sites that have been avoided in previous construction because poor drainage, unsuitable soils, and other problems. Consult with a soils expert before developing a construction plan. Site problems can be overcome with expert design and engineering, but this will add to the cost of the project.

\* Is the site accessible for construction? Field construction requires the use of heavy equipment, which must get to the site. The need to move or to avoid obstructions, such as fences, trees, buildings, grandstands and bleachers, may add to the cost of construction.

\* Where are underground utilities (electricity, water, gas, telephone, sewer, etc.)? While the finished facility will require utility service, the presence of underground utilities in the field area will complicate construction. It is advisable to employ a licensed surveyor and contact specific utility companies for line mark out to locate utility easements. It may be necessary to relocate some or all of these utilities, which will add to the cost of the project.

\* Where is the prevailing wind? Where does the sun rise and set? Most commonly, the preferred orientation for a field is north-south.

Whenever a facility will be used for multiple sports or events, event-by-event design considerations will add to the complexity of the overall project and will have a significant impact on the size of site required and possibly on construction costs.

For retrofitting a synthetic turf field into an existing facility, the primary concern will be protecting existing structures during construction, which requires

heavy equipment, substantial excavation, and the delivery and placement of tons of material. Most vulnerable will be a running track that surrounds the field. If a track is present, the field contractor will need to bridge and protect the track surface and edge, and even with reasonable care, some damage may occur. Your budget should include the funds that may be required to repair the track once the field has been completed. In fact, if possible, it is advisable and cost effective to repair and resurface the track completely at the conclusion of field construction.

If the existing track has no curb, it will be necessary to prepare the inside edge for anchoring the turf. You should consult with both your design professional and turf contractor on the anchoring detail in a retrofit project. Tying together and coordinating track and field drainage also will be critical to the project's success. Accommodating the track, however, is not the only concern in reconstruction projects. Installing an appropriate base for a synthetic turf field may necessitate a change in elevation for the field itself, which, in turn, will require that football goal posts, player benches, and other structures on or near the field be re-set. A licensed design professional or contractor experienced in these projects will help the owner to identify in advance, and plan for, all the impacts of the field reconstruction project.

### Choose a surface and develop specs

Another important choice in planning a field is the specific type/brand of synthetic turf. It is important to research the brands you may be considering. Where is the product made and by whom? What is the relationship between the manufacturer and the installer, if any? Who carries the warranty and how long have they been in business? An experienced design professional may help you sort out and evaluate the advertising claims of various brands.

The important thing to note is that each brand of synthetic turf is a system, made up of similar but variable components, each of which plays a role in producing the physical properties and performance characteristics of that system.

These components include:

Base construction. The first step in constructing a synthetic turf field will be to strip the site, cut, and fill to level, grade and compact the soil. Next, drainage pipes will be installed and connected to a collection system surrounding the field. Generally, a geotextile separation fabric then is installed to separate the subsoil from the base.

The base then will be constructed. The base provides a stable platform for the synthetic turf and aids in drainage. Two types of bases commonly are used for synthetic turf fields:

\* An unbound base consists of loose laid aggregates. The aggregates chosen may be graded (based on highway specifications) or may be a carefully chosen mixture of coarse and fine aggregate, capable of compaction yet allowing free draining. The latter form is known as a "dynamic base." It is important to obtain expert advice on the design of a dynamic base so that the finished base can be compacted and fine graded as necessary, while the drainage is retained. In general, an unbound base promotes drainage.

\* An engineered base consists of an aggregate foundation topped by an asphalt pavement, installed in one or two courses. An engineered base may add stability and enhance planarity.

Either type of base will be designed for specific site conditions and to accommodate the local climate, especially freeze/thaw activity. An owner should not overlook the importance of base design. A well-engineered and well-constructed base contributes importantly to both the performance and durability of a synthetic turf system.

Shockpad. Some, but not all, synthetic turf systems incorporate an elastic layer, or shockpad, between the base and the turf. Various materials are used, including rubber mats and felt pads, as well as rubber granules mixed with polyurethane binder on site and laid with a paving machine.

Carpet (sometimes called fabric). The carpet consists of a yarn or fiber (most commonly polyethylene, polypropylene or a blend of the two) of varying thickness (expressed in microns), which may be straight, twisted, curly or textured. Most commonly, the yarn is produced in sheets, which are split into thin strips or ribbons and then slit with razors to create multiple strands. The ribbons are then twisted together and tufted through a backing cloth to form the carpet. This type of carpet helps to stabilize and prevent excess movement of the infill. Alternatively, some carpets are manufactured from single strands of yarn, known as monofilament.



The quantity of yarn used and the distance between the tufts (or stitch gauge) will vary from system to system. Some systems use more yarn or closer tufts; others use more infill. Yarn quantity is expressed in units of tex, a ratio of mass to length, or in weight (ounces per square foot).

Backing cloths also vary. A good backing cloth is easily tufted, resists fraying, absorbs coatings, is UV and rot-resistant, and has high dimensional stability. This means that the finished product will not creep or stretch, minimizing line movement.

Once the yarn has been tufted into the backing cloth, coatings, including polyurethane and latex coatings, may be applied to the backing to help to hold the tufts in place (called increasing the "tuft bind") and to increase the dimensional stability of the finished carpet. In some brands, the coatings are applied only to the individual tufts, leaving the areas between the tufts uncoated for drainage. In others, the entire backing is coated and the carpet then is perforated for drainage if designed for outdoor use. If perforated, the size, number, and placement of perforations will vary from brand to brand. If carpet is to be used indoors and drainage is unnecessary, it may be ordered without perforations to increase its strength.

Once the carpet has been installed, the fibers may be further fibrillated to give them the look and feel of natural grass.

**Seaming.** Carpets are produced in rolls generally 3.5m to 4.5m wide (15 feet). These normally are laid across the field for its full width and seamed together. Seams may be secured by sewing, by use of adhesives, or both, with or without seam tapes, depending on the system. What is important is that the joints be neat, virtually invisible and durable.

**Infill.** The carpet then is filled with particulate material, the type and depth of which will vary from system to system. This "infill" holds up the long fibers in the carpet and contributes significantly to the performance characteristics of the system.

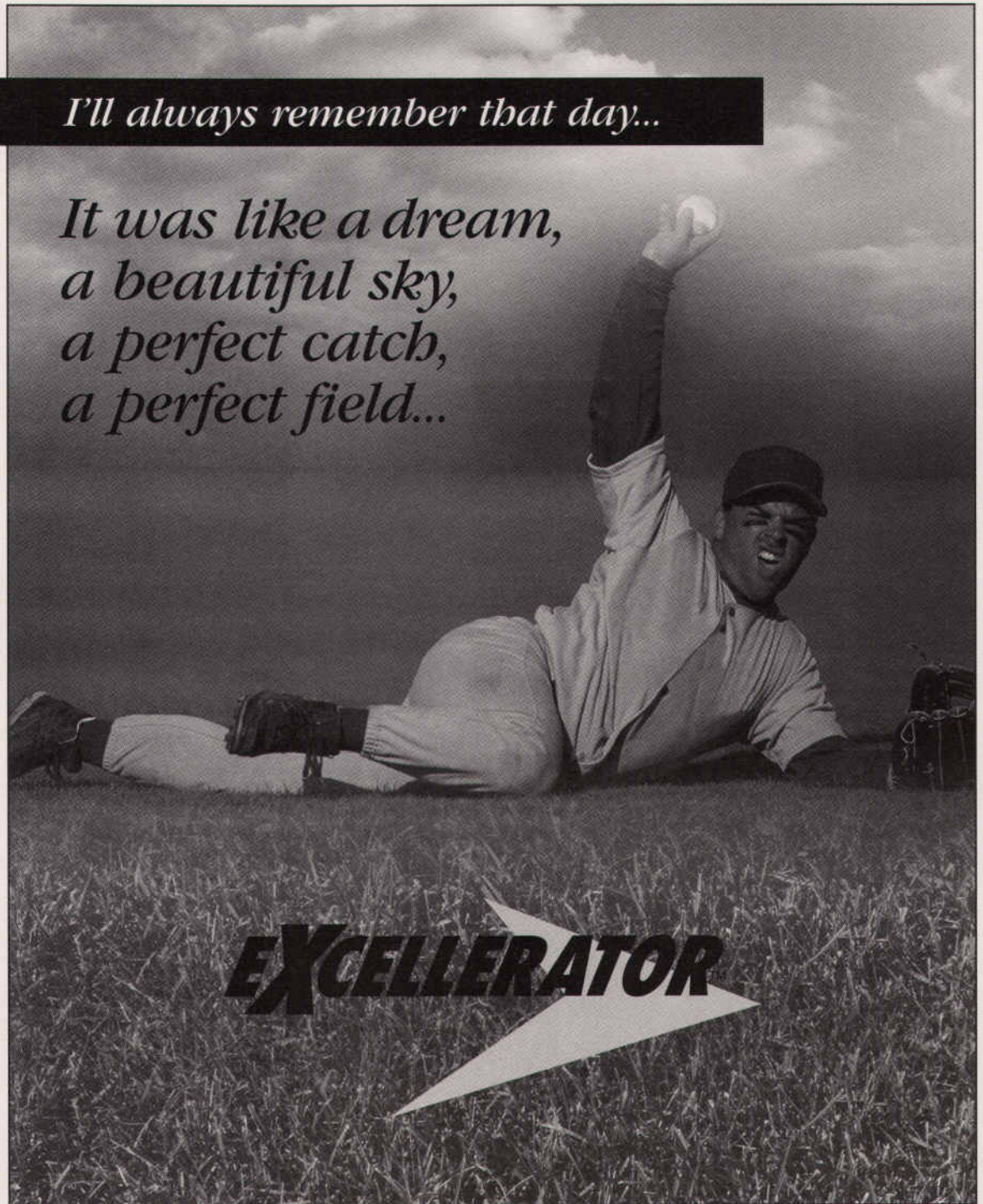
Infill materials most often are granulated rubber or rubber and sand, either layered or mixed. The rubber may be styrene-butadiene rubber (SBR) granules, black in color and produced from re-cycled tires, or ethylene propylene terpolymer (EPDM) granules, specifically produced to be granulated and available in black or in colors. SBR is considerably less expensive, but some have expressed concern because of the possible inclusion of contaminants, such as heavy metals, in recycled tire rubber. It is impor-

tant to inspect the rubber being used on the project for these contaminants and for overall quality and conformity to the published specifications.


Clearly, the components and the construction of synthetic turf systems vary. Depending upon the system, different components may play more or less of a role in the ultimate performance of the system. Some of the components described are incompatible with others. What is important is that you determine priorities and

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carefully query the manufacturer and/or installer regarding the particular components and some or all of the following characteristics of the proposed system:

- Construction
- Slope
- Depth
- Permeability
- Stability
- Suitability for local weather conditions

- Physical Properties
  - Tuft bind
  - Seam strength
  - Dimensional stability
  - UV stability
  - Permeability
  - Wear testing

- Performance/Safety Properties (Preferred performance properties may be sport specific)
  - Shock absorbency
  - Ball roll
  - Ball bounce
  - Traction - Rotational friction and sliding
  - Vertical deformation

Any budget for a synthetic turf field should provide for some testing. For example, a survey of planarity and percolation of the base before installation of the carpet is recommended. Materials delivered to the job should be sampled before they are

installed to insure that they are in compliance with the specifications. And, the completed system should be tested on site to confirm that the performance properties are as promised by the manufacturer or installer. The system should be tested again after the first year, when rain, freeze/thaw and use have settled the materials. It may be necessary to add fill at that time.

Another important area to explore before choosing a system is the recommended maintenance regimen for the systems being proposed. There is no question that some synthetic turf fields have been in place for years with little or no maintenance. It is equally clear that optimum maintenance schedules that enhance performance and extend the useful life of these relatively new systems, still are being developed. However, it is likely that any warranty will depend on adherence to recommended maintenance practices, which may include some or all of:

- \* Dragging or brushing to redistribute infill
- \* Brushing to lift pile
- \* Brushing and/or vacuuming to remove debris
- \* Localized topdressing at heavy wear areas
- \* Grooming to relieve compaction of the infill
- \* Removal of moss, algae and/or weeds.

Once a surface is chosen, you should draft specifications. The more specific and detailed your specifications, the more likely that prospective builders will submit comparable bids. Specifications should outline the scope of work, including subbase and base preparation, materials and accessories to be provided. Be sure to make clear in your specifications whether particular materials are required, or whether substitutions or equivalents are acceptable. Specifications also should outline performance criteria and testing to be conducted at the conclusion of construction. It may be advisable that you utilize a design professional to assist in developing specifications.

With so many systems available, it is important that an owner give a great deal of attention to choosing the best surface for a particular installation. Factors impacting that choice include initial cost, maintenance cost over the expected life of the surface, life expectancy, surface wear, reparability and performance characteristics, along with factors related to the reputation, experience, stability and responsiveness of the manufacturer and installer.

It is important to acknowledge that this product is breaking new ground.

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Because of the many advantages of synthetic turf products, the marketplace is virtually exploding. This growth will enhance research and development. It has and will encourage the entry of new competitors. There are variations in the size, experience and financial stability of companies offering turf products. Competition is fierce and, as in any new field, some problems are inevitable.

For example, what is an appropriate warranty? There simply isn't enough experience with this product to say. Obviously, the useful life of a synthetic turf field will depend on the quality of the products used and the skill of the installer. However, with many new companies entering the field, it also is obvious that the owner should research and question the manufacturer/installer's stability. Any warranty is only as good as the corporate and financial strength of the company that offers it.

#### Make specific choices

Make specific choices regarding additional facilities, amenities, and accessories to be included in your field project.

A fine field begins with a well-built base and a quality surface, but it doesn't end there. Will the construction project include benches, bleachers, fencing, lighting, scoreboards, a new track or track repair and reconstruction, construction or relocation of field events? Most owners want a complete project and, often, it is more economical to construct it all at the same time than piecemeal.

You also should budget funds for equipment such as goals and field markers, as well as for utility vehicles and apparatus for routine maintenance of the field.

#### Hire a qualified contractor

Choosing the right contractor can determine the ultimate success of your facility. A knowledgeable and experienced contractor can help you to make the right

### A SUCCESSFUL PROJECT WILL DEPEND ON:

1. Thorough planning
2. Proper site analysis
3. Professional design and engineering
4. A quality turf product
5. Expert construction including proper drainage, a stable base and a quality surface
6. Proper integration with the surrounding track and/or other site structures
7. Accurate marking

decisions resulting in a quality project. Turf field construction is a highly specialized field within the construction industry. It is vital that the contractor you choose be familiar with the current marketplace, as well as with the type of surface you intend to install.

How do you find a qualified contractor? One way is to contact the ASBA. As the trade association for sports builders, the ASBA can provide a Directory of its members. In addition, the ASBA conducts a certified builder program for track builders, many of whom also build turf fields. The Association also conducts an inquiry program, requesting information on your behalf from contractors and suppliers who have the answers to your questions. (See our online list of Certified Track Builders and our online inquiry form on our website at [www.ustctba.org](http://www.ustctba.org).)

Another way to locate such specialists is by contacting municipal facilities and schools that have recently completed projects. Ask whether or not they would recommend their contractor and, further, ask some specific questions. Was the job completed on time? Did it meet the owner's expectations? Were there any hidden costs? Was the contractor able to solve any problems that arose during construction? If there have been any post-construction problems, was the builder responsive in

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taking care of them? How does the field look? How does it perform? Remember, the experience, skill and reliability of the prospective builder all are important.

Once you have the names of a few builder prospects, consider the following:

\* How many years has the company been in business? If it is a relatively new

company, what is the work experience of its principals? How many fields have they built? Were they responsible for the complete project, just for surfacing, just for site work? Look for individuals or for a company with specific knowledge and experience in turf field construction.

\* Does the company have experience in the type of project you contemplate? Look for a company with experience in projects similar in size and scope to yours.

\* Ask for references and for a complete list of recent projects. If a significant project is omitted from the list of references, there may be a reason for that omission. Call references and ask questions. Determine as much information as you can about a prospective contractor's knowledge, experience, workmanship, ability to meet schedules, financial responsibility, and accountability. If possible, visit completed projects and talk to owners.

\* Get references from design professionals, subcontractors, bankers and bonding companies.

\* Ask about a contractor's insurance; have there been any major accidents or claims against the builder? Consider using ASBA's Contractor Qualification Form to secure necessary information.

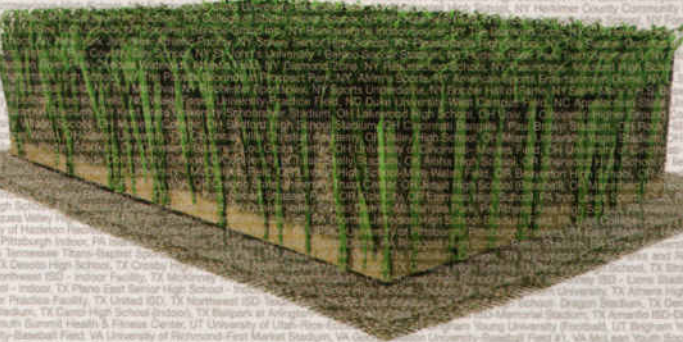
\* Ask about awards and recognition. Has the contractor won any awards for its work? Have the contractor or any of its employees been certified or accredited by any trade organization?

\* Check on lawsuits. If the contractor has been or is currently involved in litigation, find out the details. Check with your local Better Business Bureau, or with any local licensing agency, for consumer complaints.

\* Ask to meet the individuals who will be involved with your project, particularly the job superintendent. Does the contractor/superintendent seem knowledgeable about measurements, orientation, materials, construction, and marking of turf fields? Does he understand grading, drainage, site preparation and base materials? Is he familiar with different turf surfaces? Can he make recommendations regarding specific surfaces for your needs? Is he a Certified Track Builder (CTB) or a member of the ASBA? What is his current workload; can he realistically handle your project within a reasonable time frame?

\* Consider communication. You want a contractor who listens to you and responds to your needs. You want someone with whom you feel comfortable, someone with whom you can establish rapport. You want a contractor who will build the facility you want, not one who will build his standard field and move on. You

## Notice a trend?



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6,551,639; 6,689,447; 6,723,412



want a contractor in whom you have confidence. Don't underestimate the value of a good working relationship.

\* Ask for proposals in writing and compare them carefully. Ensure that the bids, including products to be used and methods of construction, are equivalent to your specifications. What is included and what is not included in the contract price? Who is responsible for such items as permits, site preparation, identification and relocation of utilities, taxes, insurance, removal and replacement of trees and shrubbery? Such items, while essential to the project, may or may not be included in the bid; whether or not they are included can significantly affect the contract price and the overall project cost. Even if construction materials and methods are identical and items included in the contract are consistent, look beyond price when comparing proposals. Compare proposed construction schedules, progress payments, and guarantees and warranties.

\* Be sure that you understand what is included in any guarantee or warranty, e.g., materials, workmanship or both, and for how long. Is the warranty or guarantee backed by a bonding company, or if not, does the contractor have the financial ability and the reputation for backing up his work? Remember that a warranty is not a substitute for a quality installation by a reputable builder.

\* Rank the proposals and then attempt to negotiate a contract with your first choice builder. If the bid of your preferred contractor seems high, question the bidder to determine why. Remember that price is not the only consideration. A project which is initially more expensive but which provides long-term satisfaction and wears well is a good value.

\* Once you have chosen a contractor, confirm your agreement in writing. The contract documents should be as specific as possible and should include, where appropriate, a construction contract, conditions of the contract, drawings and specifications defining the scope of work including labor, materials, equipment and transportation to construct the project.

\* Consider appropriate bonding. You may require a bid bond, a performance bond and/or a payment bond. Also, you should require a certificate of insurance as proof that your chosen contractor has adequate insurance coverage.

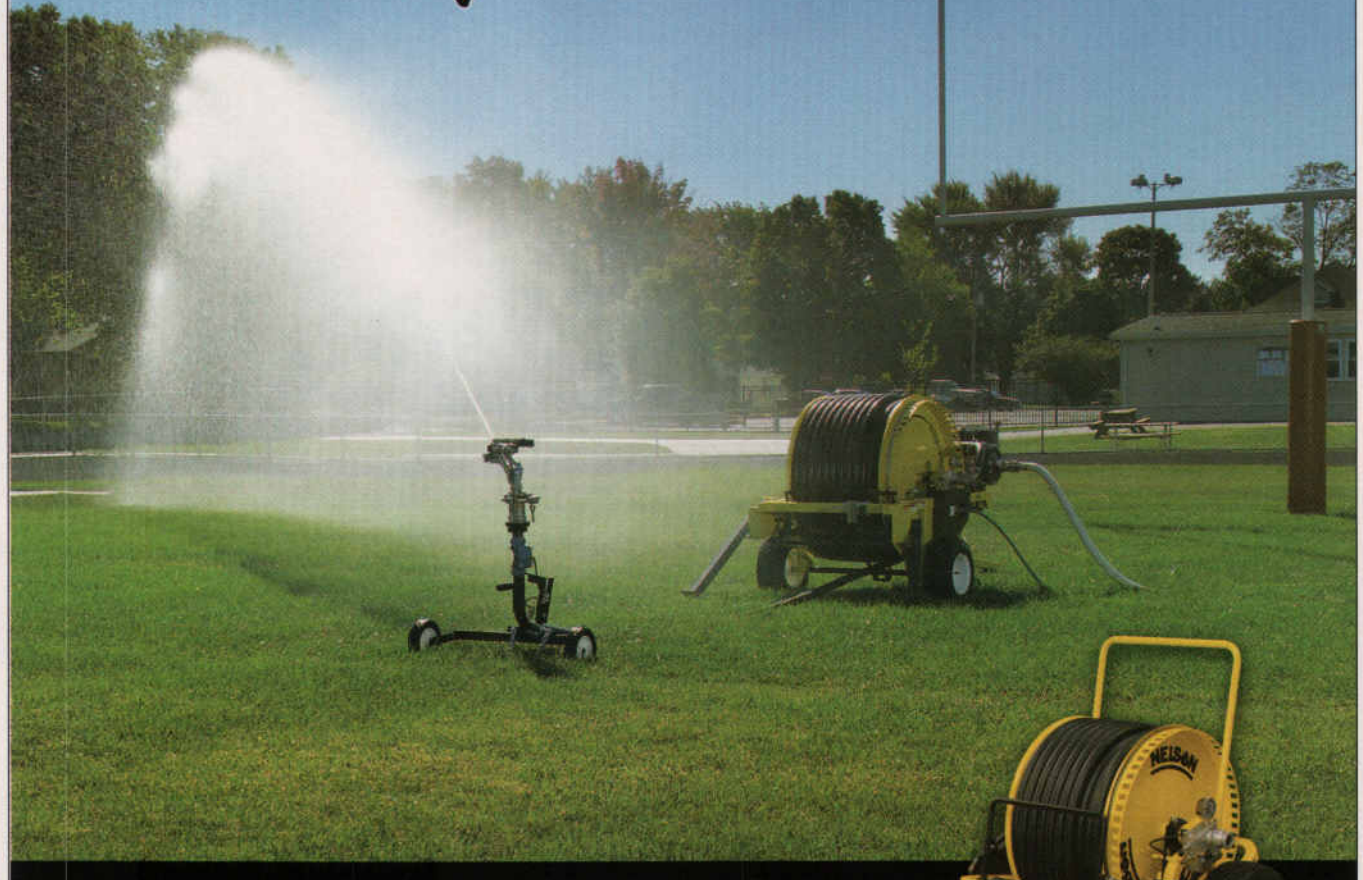
If you, the buyer, are to make the right decisions regarding a field project, becoming a knowledgeable consumer is the first step. Asking questions is not only smart, it is essential. The investment of time and energy now can yield a huge return in the

future, in terms of a quality facility, and in the hours of enjoyment that will be derived from it. **ST**

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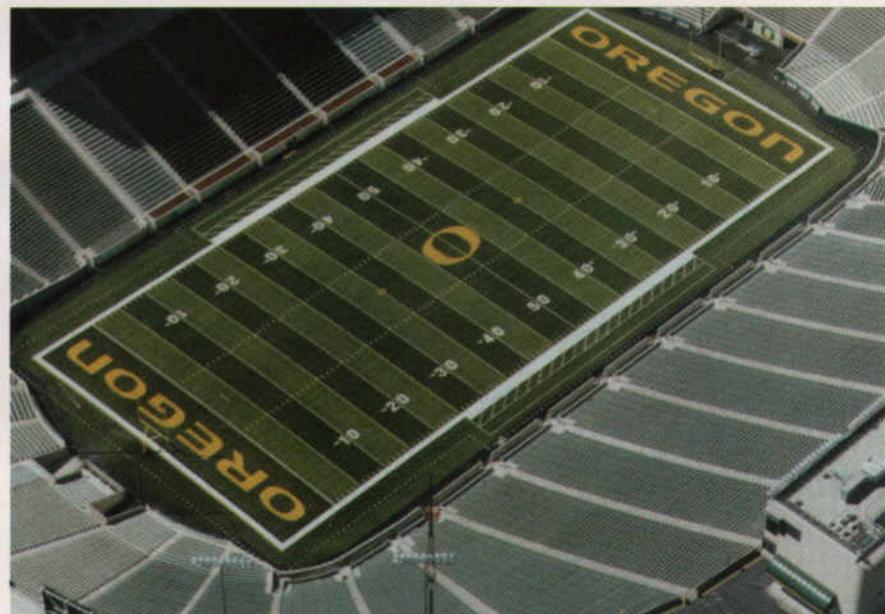
# Synthetic turf systems: Pride and practicality

BY **RON VANGELDEREN**

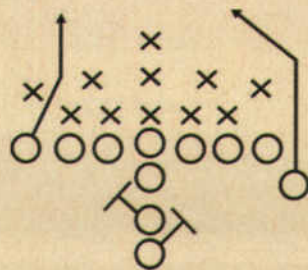
**T**oday all turf surfaces can be state of the art and cost effective. There is no shortage of systems, products, or services. The challenge lies in the process of matching the needs of the customer with the proper system and its provider.

Synthetic turf system providers are able to meet those challenges with a myriad of products that fulfill the specifics of most every end use. Synthetic products/systems now available are significantly better because product development and innovation has resulted in a new generation of systems that are softer, more naturalistic and player friendly. All of the performance characteristics have been addressed such as traction, rotational and slip resistance, impact absorption, surface abrasiveness, and surface stability. Ball bounce and ball roll meet all the sport specific requirements and, of course, appearance and appearance retention is second to none.

Materials used in synthetic systems today are environmentally responsible both in application and use as well as disposal and sustainability. Maintenance tech-



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niques require no regular chemical treatment that makes ground water pollution and human point of contact exposure a non-issue.

In addition to the product evolution are the unique advantages of synthetic applications in terms of water conservation and the reduction of intense maintenance while having an "always ready" playing field.

Life cycle costing and reduced replacement costs have been enhanced while realistic longevity is providing tremendous budget saving opportunities. Of course, great care must be exercised in the process of selecting these systems with the knowledge that the lowest price offered may not always be the most economical or the best performing in the long run. Yet, the savings of synthetics are a given.

It is the process of selection and use of synthetic systems that is critical. In addition to the recommended use of independent professionals, there are now reliable tools, unbiased standards and non-proprietary guidelines available. When used in the selection process, the customer will know what questions to ask and need not be left holding the bag.

#### Raison d'être

The Synthetic Turf Council (STC) was formed to provide reliable selection and use guidelines. The industry recognized the need for an unbiased body that could help the industry rally around good practices in serving the needs of the customer and ultimate user. Now for the first time the industry has a platform comprised of the design community, builders, manufacturers, suppliers, and service entities that are striving to avoid duplication of effort, prevent misunderstandings and attain a better more efficient approach. The STC has become the source for all parties to synthetic turf process and represents more than 80% of the synthetic industries' volume. This is only the beginning. Working groups within the STC are focusing on developing programs that will achieve a better understanding of objective end user selection needs.

A code of ethics adopted by the STC membership and our "Guidelines to the Essential Elements of Synthetic Turf Systems" (available free of charge by logging on to [www.syntheticurf.org](http://www.syntheticurf.org)) have become the basis of a certification program that identify firms who voluntarily adhere to those standards and good industry practices. It is acknowledged that doing what is right for the customer is good for business. The Council slogan says it all: "A Promise to Deliver the Promise," which is supported by a voluntary company-by-company STC Certification Program that backs that promise.

The bottom line is that synthetic systems offer outstanding and highly desirable attributes that make us all proud whether we look at televised activities or in our own neighborhoods knowing that we have made the right decision. **ST**

Ron VanGelderens is executive director of the Synthetic Turf Council, [office@syntheticurf.org](mailto:office@syntheticurf.org)

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### GENERAL SPORTS TURF

Our commitments are to provide our customers with a higher level of service than they could get elsewhere. To constantly see beyond the existing limits of the industry. To build long-term relationships based on our demonstrated reputation for excellence. To combine the world's leading synthetic turf products and the industry's top construction standards with a unique ability to produce custom solutions for our customers.

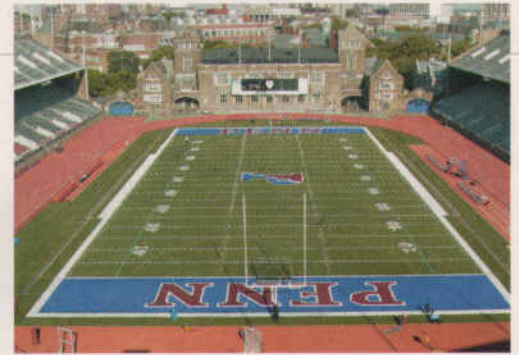
General Sports Turf/248-601-2200

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see <http://www.oners.ims.ca/4572-093>

### SPRINTURF

Sprinturf is the single largest provider of synthetic turf systems in the United States. Their experienced team all have exceptional passion for designing and installing one of the finest synthetic turf systems in the world.



Sprinturf's Ultrablade fiber was introduced just over 18 months ago, although extensive testing of the fiber had been conducted for several years before that. Ultrablade, a unique monofilament-like fiber, is both remarkably soft and pliable, yet amazingly durable, providing a playing surface that holds its integrity longer than any other synthetic turf fiber developed, says the company.

To demonstrate to potential customers just how durable Ultrablade is, Sprinturf simulates years of use by taking a high-powered drill with a wire brush to the fiber, and does the same with a leading competitor. After just 15 seconds of brushing, the competitor's fiber shows profound deterioration and shredding, while even after a full minute of brushing, the Ultrablade fiber emerges unscathed.

To see this demonstration, go to [www.ultrabladedrilltest.com](http://www.ultrabladedrilltest.com).

Purchasing a synthetic turf system can be a very intimidating but it doesn't have to be. Sprinturf advises prospective customers do their homework like they would if they were buying a car or a house. Ask lots of questions and most importantly, check the answers you get. Sprinturf is confident that the closer an owner scrutinizes their purchase, the more confident and excited they will be with a Sprinturf system.

Sprinturf/877-686-8873

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FieldTurf surfaces deliver optimal performance in wet or dry conditions and provide ideal playing conditions all year long. A totally porous system, FieldTurf is specially engineered to provide maximum drainage and leave the turf perfect underfoot, even in the heaviest downpours. Each blade of FieldTurf grass is UV protected and is resistant to the most extreme conditions. You can plow snow on it. You can even cover it with tons of earth. For conventions, concerts, even for motocross and monster truck events, FieldTurf is the ideal sports surface and the perfect solution for multi-use facilities.

Although we are the primary suppliers to major NFL and NCAA stadiums, and have countless FIFA Recommended soccer fields around the world, our reputation was built one field at a time, all 1,300 times. We may be the choice of the pros, but we're proud to see the same FieldTurf we install in world class stadiums being used in schools and city parks around the globe. We are proud to see many children, students and professional athletes playing on our turf.

FieldTurf/800-724-2969

For information, circle 079 or

see <http://www.oners.ims.ca/4572-079>



As THE CREW paints the final lines in a silent stadium, the storm clouds roll in. When the tarps are pulled off, more than just the

# Field

shines through. The pride and hard work of a professional grounds crew is revealed. Soon, millions of viewers across the country will tune in with all eyes on the field. Thousands

# of

dedicated fans enter the stadium with their towels whipping to the sky. Excitement builds in the Steel City. All stand and applaud THE CREW that created this field of

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## A-TURF

A-Turf sets the standard in the synthetic grass industry. Featuring a denser construction of polyethylene fibers than anyone in the business, A-Turf simulates natural grass at its best. A-Turf's fields, like the Premier-RS, are installed with specialized rubber and sand infill to a level that keeps the fiber strands upright, delivering superior playability. The increased fiber weight of A-Turf synthetic grass, along with our commitment to quality in every component, ensures maximum durability. Designed to withstand year-round activity, A-Turf creates the perfect surface for football, soccer, field hockey, and more. The optional Regupol underpad provides unmatched shock absorption.

A-Turf/888-777-6910

For information, circle 080 or

see <http://www.oners.ims.ca/4572-080>





### DD GRASSMASTER

For those who prefer playing on natural turf, Desso DLW Sports Systems (DDSS) offers the DD GrassMaster system, the combination between nature and technology. This patented system consists of a natural turf surface reinforced by 20 million synthetic grass fibers. The system ensures a fast regeneration of the natural grass and provides a highly stable and level playing surface. This system has identical playing characteristics to those of a natural field, while permitting increased use of the grass with reduced wear and tear.

Surface Solutions North America/813-835 0766

For information, circle 082 or see <http://www.oners.ims.ca/4572-082>

## Durability. Reliability. Performance. Ultimate Family Traits.



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Built to withstand the harsh conditions and vandalism often associated with commercial applications, this Rain Bird rotor family has been designed and tested to consistently deliver a level of satisfaction that's unmatched.

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**Performance**—Exclusive Rain Curtain™ Nozzle Technology produces larger water droplets that are far less susceptible to wind, effective close-in watering around the head eliminates dry spots, and even distribution over the entire radius of throw assures superior green grass results.

For additional information see your Rain Bird distributor, or visit [www.rainbird.com](http://www.rainbird.com).



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### CALCIUM SILICATE FERTILIZER

Excell Minerals introduces Excellerator, a custom blended, prilled, calcium silicate specialty fertilizer that includes several key micro-nutrients with high concentrations of calcium, magnesium and soluble silicon. The product adds an extra cell wall layer, in turn creating stronger roots and shoots. Excell Minerals/866-401-5700 For information, circle 087 or see <http://www.oners.ims.ca/4572-087>



### NORDOT ADHESIVE

Pictured here is Nordot adhesive being sprayed by two installers onto a black, water permeable and shock absorbent underlayment for a football field. Next to it is a roll of green synthetic turf ready to be unrolled onto the applied adhesive. Spraying NORDOT adhesive makes it possible to have a total gluedown field that is still water permeable to drain away rainwater and melting snow. Note also how the workers can dress because, even with spraying, there is minimal hazardous airborne aerosol mist and/or negligible adhesive overspray onto the turf or workers or equipment. Synthetic Surfaces, Inc/908-233-6803 For information, circle 081 or see <http://www.oners.ims.ca/4572-081>





### PLAYER PADS

Turf America's synthetic side-lines (Player Pads) are a solution for the one problem that most natural turf facilities face: wet, muddy, and unsightly sidelines. For those field managers who want to keep natural turf on the field, but end up with the coaches and players standing in a mud-puddle most of the season, our Player Pads are the answer. Turf America offers three different turf products (nylon, polypropylene and a nylon/polyethylene blend) depending on your budget and whether you want an "infill" turf or not. All of our turfs should be installed on top of a separate rubber shock pad. By keeping the players from standing in mud during the game, locker rooms, hallways and other areas will also stay much cleaner. Turf America/800-590-3031 For information, circle 084 or see <http://www.oners.ims.ca/4572-084>

### 10-3-10 WITH METH-EX 40

Nature Safe's new fertilizer formulation 10-3-10 with Meth-Ex 40, Fine Grade, is designed for use on closely mowed turf where color response is desired along with manageable and predictable growth. Ammonium sulfate, iron, and manganese sulfate are added for enhanced performance and sustained color. The phosphorus and calcium are derived from meat and bone meal and are naturally chelated, making the nutrients more available.

Nature Safe Natural & Organic Fertilizers/800-252-4727  
For information, circle 100 or see <http://www.oners.ims.ca/4572-100>



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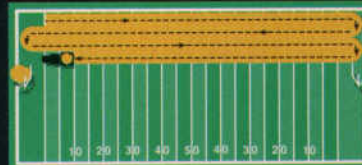


## The Mete-R-Matic XL makes top dressing simple and fast

The new Mete-R-Matic XL, specifically designed for sports turf, features the same technologies that made the Mete-R-Matic III the leading top dresser on turf. The patented Chevron belt allows you to accurately and evenly distribute material, regardless of moisture content. The ground drive system assures that your material will be spread evenly, regardless of vehicle

speed. Plus, the XL features a larger, 2.25 cubic yard hopper so you get the job done fast. For more

information, a demo, or to learn more about top dressing, call 1-800-679-8201.



**METE-R-MATIC XL: FIELD STRATEGY**  
The Mete-R-Matic® XL is specifically designed for sports turf application. The greater capacity hopper allows it to make four full passes (up and down) across a football field, so you end up at the loading end—right where you started. This saves wasted time driving across the field to reload, increasing your efficiency.



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### RUBBER-COATED SAND

Mineral Visions Inc. introduces FlexSand rubber-coated sand. This new technology has been developed as a premium infill material for artificial turf. The rubber coating on the sand allows for better uniformity and eliminates the segregation of the conventional sand/crumb rubber blends. FlexSand is typically offered in a natural sandy off-white color, which significantly reduces the heat generated on the turf. Fairmount Minerals/800-255-7263 For information, circle 083 or see <http://www.oners.ims.ca/4572-083>