

Should We Go Synthetic?

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Athletic Field Construction, Renovation, Design and Maintenance

We don't have a dog in the hunt. We'd love to build your field, either synthetic or natural turf, we do both. So the perspective we offer is from a sports field builder. But to draft this article we also contacted one of our clients, Terry Efird, Chief Operating Officer of Charlotte Christian School (www.charlottechristian.com), and with his permission included the matrix for his decision to go synthetic.

Planning Your Field and Building Your Team

An educated decision will be the best decision. Knowing your options, costs, and variables is only part of the equation. Outlining your primary & secondary considerations is a good way to begin the process. The following questions should be addressed:

1. Needs and expectations for field use – speak with the users and potential users – type of use, number of events, length of seasons, what is an acceptable rain delay, control of the schedule, control of the facility (fences, gates, etc.)
2. Maintenance capabilities – staff & budget
3. Budget – what kind of funding is available for the project?
4. Schedule – when does the field need to be ready for play?
5. Site issues: erosion control, stormwater, land disturbance, water source, parking, trees, egress, and field access

Bringing in an experienced team during the planning phase can really help with identifying the unknowns and reducing surprise costs which lead to change orders. At a minimum your team should include a licensed Sports Field Contractor/Field Designer. One that has experience with all types of field installations can provide help in making the natural vs. synthetic decision.

There are pros and cons to both natural and synthetic fields. Many believe that a well constructed and maintained natural turf field with good quality turf is the best playing surface in terms of player safety and playability. A 2008 survey of over 1500 NFL players done by the NFL Players Association revealed that over 70% prefer a natural grass field. However, in cases where a natural turf field is overused or receives improper or limited maintenance, a synthetic turf surface would be the preferred surface. Many schools install a synthetic turf practice field simply to reduce use of their natural fields when playing conditions are not ideal. This, in turn, increases the quality of their natural turf fields. We often see high schools installing a synthetic turf multi-sport stadium field mainly due to campus space limitations. A synthetic turf field can be an effective tool for sports field management.

Cost by Field Type Comparison

Our experience as a field builder in the southeast has helped us develop the following matrix of cost estimates by type of field construction. Keep in mind that there are many variables, including location, drainage issues, permitting, clearing issues, water supply & irrigation, turf brand selection, etc. that can significantly affect the cost of a project.

Field Type	\$ Cost / Sq. Foot	# Events / Year	Maintenance
Natural - Native Soil	\$1.00 - \$2.00	50 – 100+	Low – Mid
Natural - Modified Soil	\$2.00 - \$3.00	50 – 100+	Mid
Natural - Sand Based	\$4.00 - \$6.00	20 -30	High
Synthetic	\$7.00 - \$10.00	100+	Low - Mid

Another cost that is often overlooked, mainly because we don't have a crystal ball, is the cost of disposal and replacement of the field. Turf warranties typically last 8 years. So you would expect the field, appropriately maintained, to last at least 8 years, maybe more. 8 to 10 years from now, what will be the cost of disposing & replacing the field? Turf recycling technology is in its infancy. Hopefully there will be developments in recycling technologies by then that will help reduce the cost of disposal.

Making the Decision

Mr. Terry Eford noted that Charlotte Christian School looked at both quantifiable and non-quantifiable concerns when making the synthetic vs. natural decision. First, they looked at the initial cost of synthetic vs. natural and broke down the cost over a 10 year period, the expected life of the turf. Included in this was the expected average annual maintenance cost of both field types. They found that the synthetic turf did cost significantly more than the natural turf field, even with the savings in maintenance costs. Their consideration of the non-quantifiable concerns, however, tipped the scales in the favor of the synthetic field. Major concerns for the school were:

- ✓ **Utilization** – synthetic turf would provide more all-weather play and immediate access to the field after rain
- ✓ **Expanded Use** – more teams have access to the field – field usage does not need to be restricted to protect it for “Friday night football”
- ✓ **Aesthetics** – the field always looks good
- ✓ **Rental Revenues** – may attract outside teams to the campus – the Charlotte Eagles, a minor league Christian professional soccer team, plays their games at the field
- ✓ **Marketing & Recruiting** – the field would bring more people on campus for expanded usage and thus more potential students are looking at the school
- ✓ **Campus Space** – a major consideration was dealing with a limited campus area - installation of the synthetic field provided for a more efficient and cost effective use of campus land.

Also helping with the financial decision was the willingness of parents to contribute directly to the project.

Turf Selection & Base Construction

Carolina Green began installing synthetic turf fields in 2004. Our first project was a replacement of the synthetic turf practice field for the Carolina Panthers. Drainage was an issue with the field, so we were asked to redesign and install drainage and rebuild the base. *A synthetic turf field is only as good as the base on which it is installed. The most important advice we can offer is know who is installing your base.* If you contract directly with a turf company, make sure the company that is installing your base is a qualified field builder. Qualified field builders are often certified as a CFB (Certified Field Builders) by the American Sports Builders

Association. Installation of a synthetic turf base requires specialized equipment designed for precision grading and minimal rutting of the base during installation. A good quality base should last through several cycles of turf replacement.

Should you choose to go synthetic, turf selection can be a confusing and daunting task. Once the word is out you are considering a synthetic turf field, expect to be bombarded with turf samples, calls and visits from turf companies. There are many good products out there. ***We offer some basic advice for turf selection:*** First and most important, go look at fields. Talk to coaches. Talk to school administrators about the quality of the installation process, maintenance and warranty issues, etc. Second, seek advice from a field builder not financially associated with a turf company. Their opinion won't be based on their financial benefit from selling you turf. It will, however, most likely be based on their previous experiences with turf companies they know and trust and on which they can stake their reputation. No turf system is perfect for all situations, but with proper and independent evaluation, the school can select a turf that will best serve its intended uses. Warranties will vary from one turf to another and include many variables such as "insured", "third party", "prorated", and use limitations. Bottom line is to include an evaluation of the warranty in your turf selection process.

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