

SYNTHETIC TURF OR NATURAL GRASS SPORTS FIELDS?

WHAT ARE CONSTRUCTION COSTS?

SYNTHETIC TURF

Single-field building costs range from **\$6.00-\$10.25/sq ft.**

NATURAL GRASS

Single-field building costs are dependent on soil used:
On-site native soil: **\$0.60-\$1.50/sq ft**
Native soil: **\$1.50-\$3.00/sq ft**
Sand cap: **\$2.75-\$4.00/sq ft**
Sand: **\$5.50-\$8.00/sq ft**

HOW HOT IS EACH SURFACE?

SYNTHETIC TURF

High surface temperatures are directly related to clear, sunny, and hot conditions. The **maximum surface temperature** recorded is **183°F.**

NATURAL GRASS

Surface temperatures **rarely rise above 85°F**, however, in **dry conditions midsummer, temperatures** have been recorded at **98°F.**

WHAT ARE MAINTENANCE COSTS?

SYNTHETIC TURF

A **K-12 School in Kansas** spends **\$6,800** on maintenance annually. Additionally, the field averages **360 labor hours.**

Michigan State University spends about **\$22,760** on maintenance and labor annually. The field averages **280 hours in labor.**

NATURAL GRASS

A native soil field at a **K-12 School in South Carolina** spends roughly **\$9,450** on maintenance annually. Additionally, the field averages **300 labor hours.**

Duke University spends roughly **\$24,550** annually on maintenance and labor for a sand-based field. The field averages **480 hours in labor.**

WHAT CAUSES FIELD HARDNESS AND WHAT IS THE THRESHOLD?

SYNTHETIC TURF

Areas that lose infill, such as **inlays, painted areas, seams, and high-use areas** can have increased surface hardness. The values of **100 Gmax*** (Clegg Impact Tester, ASTM 1702) and **164 Gmax*** (ASTM F355 missile A) are the upper limits.

NATURAL GRASS

Gmax* of natural grass fields can vary greatly over short periods of time due to **changes in soil water content and the amount of field usage.** The same values of Gmax* apply to natural grass fields.

*Gmax is the value generated when testing surface hardness and provides an indication if a field is safe for play or if steps must be taken to reduce surface hardness. Gmax testing should occur annually, with more frequent testing suggested on heavily-used fields.