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

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 ARE MAINTENANCE COSTS?

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.

HOW HOT IS EACH SURFACE?

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.

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