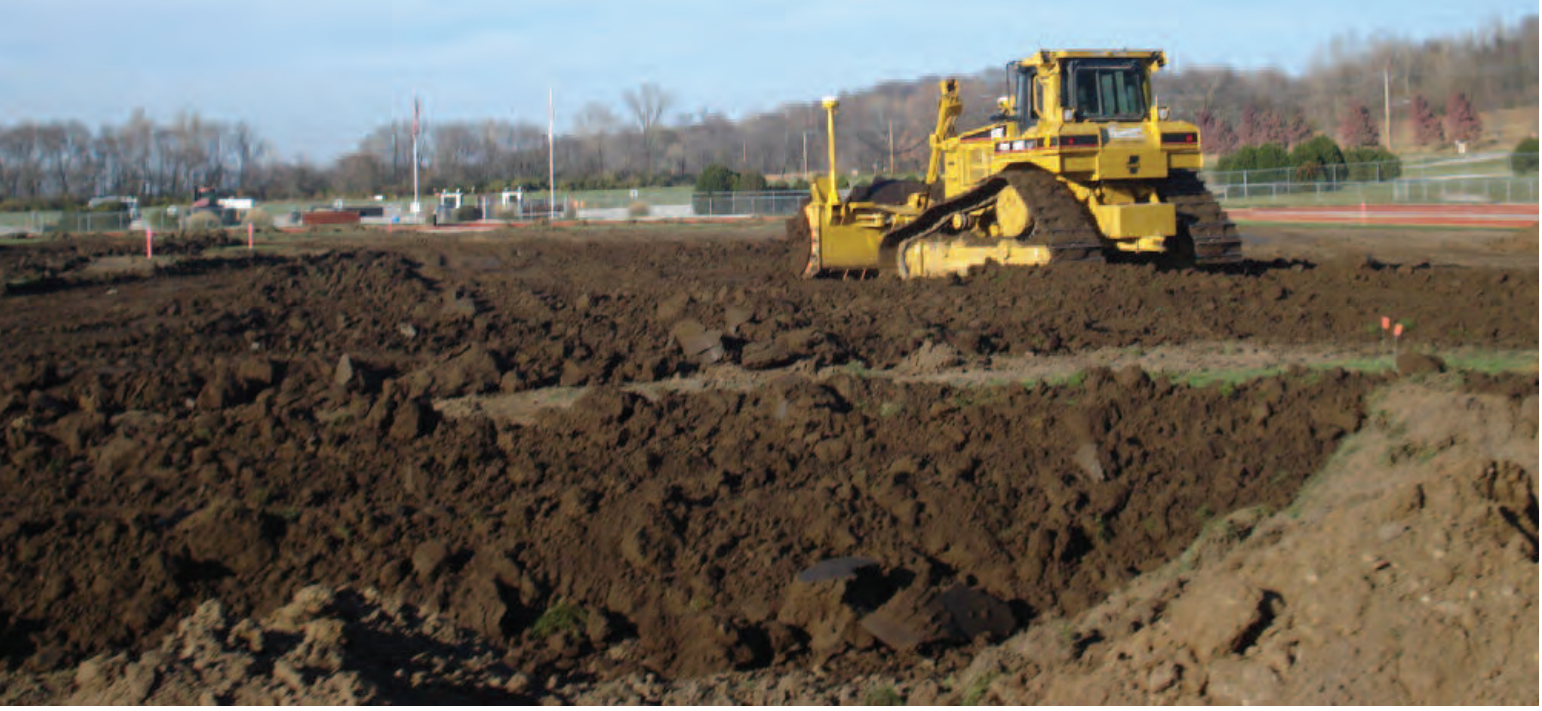
Soil stabilization
important for synthetic fields



BEAUTY CAN BE DECEIVING especially when a new synthetic field is completed. School administrators look at the pristine green surface, take their first steps on it and imagine the thrilling games it will host and the immense value it will provide as recruiting tool. But for many, it can also lead to heartache when imperfections begin to show more and more prominently; a portion of the turf puckering here, a persistent pool of water there, and humps or divots mysteriously materializing. All are generally signs of one thing: an improperly stabilized soil sub-base.

The most common mistake high schools, colleges and other organizations make when planning an artificial surface is failing to realize the importance of the sub-base. How important? It is not only essential to ensuring lasting value over a synthetic turf's 10-year life span, but a properly stabilized sub-base can last three synthetic turf life spans, 30 years. It's one reason why Byrne & Jones Sports recommends allocating $50,000 to $100,000 of a budget to fixing potential soil issues.

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One of the more common missteps in athletic field installations is becoming too enamored with compaction as a "catch all" solution to sub-base issues. Compaction is not a substitute for the stability of soil. You can compact a soil, test it to confirm all the air in the soil has been voided and still wind up with a mud bog. It is one of the more common issues we encounter when contacted to evaluate turf imperfections on surfaces we didn't install.

The ideal soil for synthetic fields is found in the northern states of Midwest farm country and is comprised of silt and top soil. In some areas, like Gary, IN the surface can appear to be the ideal silt/soil combination until you probe deeper and find that it's all sand 8 inches below the surface. Otherwise, clay soils tend to be most common problem. Clay will retain water and impede effective drainage. Water that persistently pools on a

field can be a sign of an improperly treated clay soil base.

Solutions to soil issues will vary as much as the soil itself and include:

• Undercutting the soil and bringing in better dirt or rock. This is one of the more common solutions for clay soils. In most cases, rock will generally compact better to enhance stability.

• Introducing lime to stabilize clay soil and reduce its plasticity and moisture-holding capacity. Using a cement material to improve sand and silt soils. If properly applied, the cement will mesh with the on-site soil to act as a lean concrete slab.

• Using fly-ash material in the same way as cement and lime. In all cases, the intent is to induce a chemical reaction with the soil to improve the compressive and shearing strength. A geotechnical engineer should be consulted to determine the best product given the existing soil condition.

When considering an investment of a $1 million or more in a new athletic field and subsequent replacement surfaces that will be needed every 10 years or so, it makes eminent sense to invest in a good sub-base. A thoughtful approach to stabilizing the soil will support the field and replacement surfaces over generations of use. ■

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