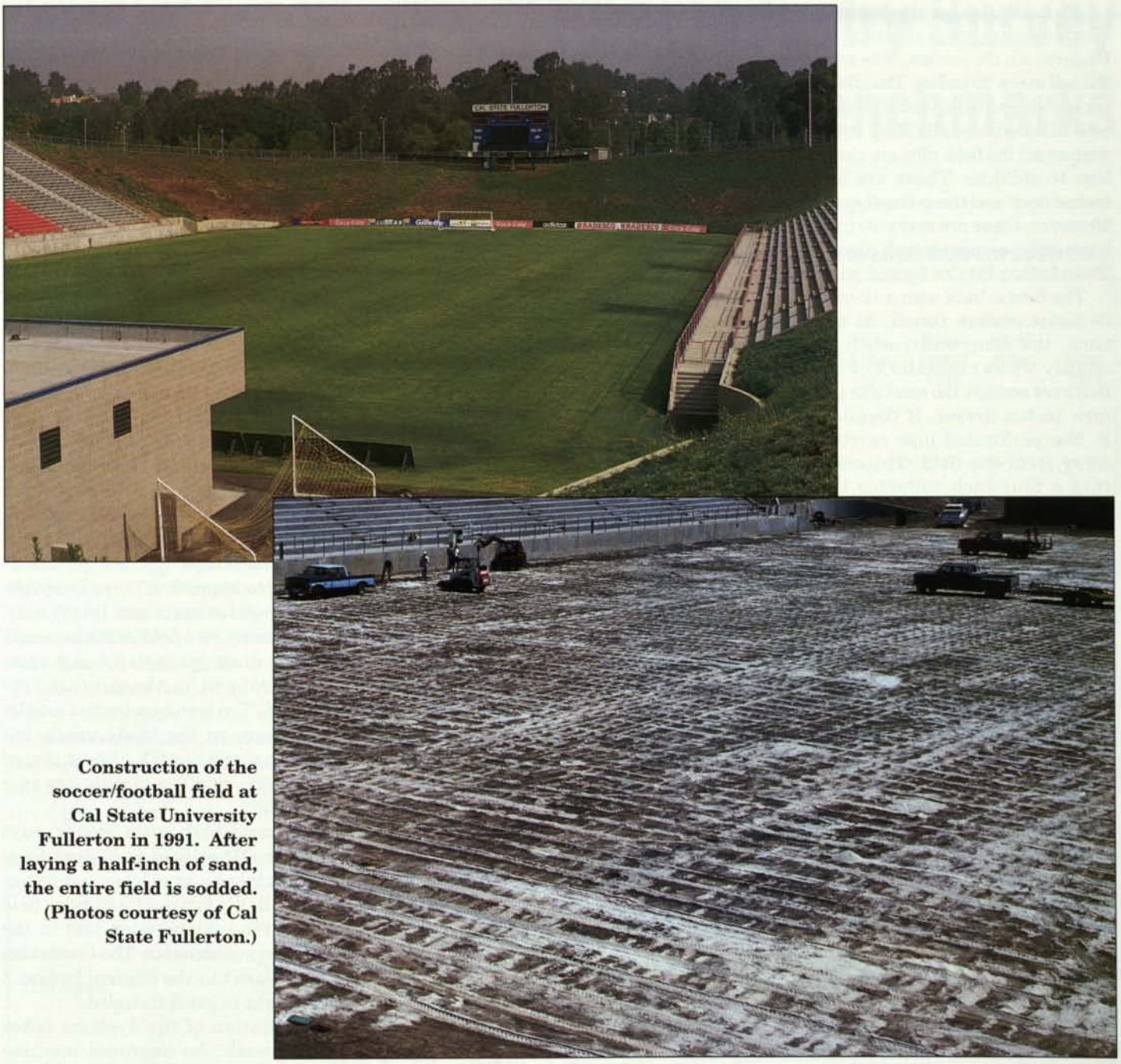
PLAYABILITY EQUALS PROFITS



Construction of the soccer/football field at Cal State University Fullerton in 1991. After laying a half-inch of sand, the entire field is sodded. (Photos courtesy of Cal State Fullerton.)

By Eric McMullin

Playability is critical in today's sports fields, according to Merton Johnson, manager of landscape services at California State University, Fullerton. "Our facility is self-supporting," Johnson explains. "If we can't play on a given day, we're out that day's revenue."

When Fullerton State installed its football/soccer field three years ago, Johnson insisted on two things: irrigation valves situated outside the field's playing area and a state-of-the-art drainage system. Johnson got his wish. The Griswold 2000 valves are set about 10 yards beyond the soccer field's end lines.

"A lot of older systems have valves in the playing field," he says. "So they need to be buried, usually six to 10 inches below the surface. If a valve went bad, you had to dig up the field. By putting our valves outside the field, we don't have to bury them."

With Fullerton's setup, a valve is easily accessed if it goes bad, and the playing surface is not disrupted. Also, no pressure lines are under the playing field. "You're not going to see one rupture underneath the field," Johnson says. "It all comes back to not disrupting the field's use." In addition, Johnson uses Griswold controllers and Toro 640 sprinkler heads.

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Fullerton State

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Sand Drainage

As for drainage, the entire field is sodded on a one-half inch of sand. Underneath the surface, slits are cut into the soil every 20 inches. The slits are nine inches deep, three-fourths inch wide and filled with sand. They run lengthwise under the field. Slits are also cut sideline to sideline. These are also nine inches deep and three-fourths inch wide. However, these are every 40 inches and have a three-quarter inch pipe laid into them before they're topped with sand.

The field is built with a 12-inch crown to assist surface runoff. At the same time, the sand underneath the turf quickly wicks rainwater downward. If that's not enough, the sand slits pull water nine inches deeper. If that doesn't do it, the perforated pipe carries water away from the field. The water goes into a four-inch collector line that is buried outside the playing area. The collector line is connected to the nearest storm drain.

The system, made by Cambridge Sportsturf Drainage in LaSelva, CA, is designed to move large amounts of water off the field, but allow irrigation water and light rainfall to remain and nourish the turf, according to Michael Lansdale, the company's president. "The width between the slits, the size of the pipe—it's all designed to let the soil absorb the water it needs, but to get any excess water away quickly."

Johnson agrees. "I've seen the field playable two hours after a rainstorm," Johnson said. "Most of our rain is between December and April, but I've seen it rain a half-inch or more in the spring and fall. If we didn't have good drainage, it would be a day or so before the field would be playable."

The field is sodded with Tifway II, a warm-season turf. "Some of the pro facilities might overseed with a cool-season turf, but we don't do that," Johnson said.

The field is used by the university's men's and women's soccer teams, plus outside football and soccer programs. It is the home field of the Los Angeles Salsa professional soccer team, and was the training site of the Columbian and Brazilian World Cup teams.

"That field is always in perfect shape," says Mike Fox, a midfielder for the Salsa. "We've played right after a rainstorm, and even during them in a few cases. It drains perfectly."

"On some fields, water puddles up during a storm," says Johnson. "The ball hits a puddle and stops, and the field gets muddy. I saw a field with a runway. A guy slid into it, caught a cleat, and was out for nine months. That wouldn't happen here."

The field's dependability is an asset when renting the field, Johnson adds. "A dry field cuts down on player injuries, so teams are eager to use your field," Johnson explains. "You have more demand for your field. We have the L.A. Salsa here, the Fullerton Community College football team, a local parochial school and others."

Each of those teams pays full-market rates to rent the field—a prime consideration when justifying the cost of the drainage system, notes Johnson.

"Everyone talks about the importance of drainage, but few people do anything to improve it," says Lansdale. "Drainage is underground. It isn't sexy. Raising money for a field is tough enough. Superior drainage systems just seem to get dropped in the process," he continued. "I've seen hundreds of articles on drainage in the trade press, but you'll see a game on TV—being played in the rain—and the players are in a mud bath."

That mud bath costs money, says Lansdale. "That field is history for a month. It takes a lot of labor and money to repair it. We figure a Cambridge field has a three-year payback just in the savings on maintenance. The Cambridge system wasn't in the original budget. I had to fight to get it included."

Installation of the systems takes about a week. An improved machine has eliminated two annoying side effects: "The new machine actually excavates and disposes of the soil," says Lansdale. "The old one vibrated front to back, and cut the slits in a manner that caused a heaving action. It did the job, but it left some scars that took a month or so to grow over. The heaving also created some compaction around the slits. We don't have that anymore." ❑

Editor's Note: Eric McMullin is a full-time freelance writer based in Berkeley, CA.