# **SportsTURF**



Legion's new turf held up extremely well after extensive use this past football season, when 20 games were played on the natural surface. Photos courtesy: Robert Bartels.

# Turf's Up at Legion Field for Olympic Soccer

By Robert J. Bartels

ne of the most recognizable stadium names in the country, Legion Field, has been synonymous over the years with Alabama football at all levels, including the University of Alabama, Auburn University, the University of Alabama-Birmingham (UAB), the Magic City Classic, and small colleges and high schools. Hundreds of games have been and continue to be played in this historic edifice.

Sports fans often label Birmingham the "Football Capital of the South" – American football, that is. However, during the month of July, the eyes of the whole world will focus on the Magic City when football – what we call soccer – invades the city.

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In 1994, Birmingham captured a piece of Olympic gold by securing a bid to hold part of the 1996 soccer matches. Legion Field, along with the Orange Bowl in Miami, the Citrus Bowl in Orlando, and R.F.K. Stadium in Washington, DC, were chosen to host the first and quarter-final Olympic men's and women's soccer matches.

#### A Great Piano

"There's an old saying that if you have a good piano, you will attract good piano players," says Walter Garrett, stadium manager. "The same is true in football stadiums, such as Legion Field."

Great stadium, great coaches, great players. A partial list of coaches includes General Bob Neyland, Frank Thomas, Bobby Dodd, John Vaught, Wally Butts,

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John McKay, Tom Osborne, Gene Stallings and Pat Dye, to name a few. Add to those, from the pro ranks, Tom Landry, Joe Gibbs, Hank Stram, Paul Brown, Curly Lambeau and Jack Pardee, and you begin to get a feel for the history of this site.

The most notable coaches, however, would have to be Paul "Bear" Bryant and Ralph "Shug" Jordan, who for years shared their Alabama and Auburn rivalry here. In fact, the game is still contested at Legion Field on a regular basis, and still creates the same fire and fury as before.

Great players are way too numerous to name; a thumbnail list includes Pat Sullivan, Harry Gilmer, Don Hutson, Joe Namath, John Stallworth and Bo Jackson. The list could go on and on.

Begun in 1926, the stadium opened on November 19, 1927, with an inaugural game featuring Howard College (now Samford University) against Birmingham-Southern College. The stadium was named Legion Field in 1927, in honor of the American Legion, and stands as a memorial to those who gave their lives in the service of their country.

One of the major challenges facing the Birmingham Soccer Organizing Committee was the conversion of Legion Field's artificial grass to a natural grass surface. One of the requirements of the International Olympic Committee was that all soccer matches be played on natural playing surfaces. At the time, the playing surface for Legion Field was artificial turf and had been since 1972. Upon award of the soccer matches, it became necessary for Legion Field's surface to be transformed from a synthetic playing surface to natural grass with a slope of one percent or less, which is required for soccer.

"This is a once-in-a-lifetime opportunity for the city of Birmingham," says Alan Blalock, of Birmingham-based Blalock, Pate Associates, architects of the Legion Field surface. Blalock also designed the playing surface for the 12,000-seat Hoover Metropolitan Stadium, home of the Birmingham Barons, Class AA Southern League farm club of the Chicago White Sox.

"Birmingham is definitely a sports town," says Blalock, "and this is evident from the amount of excitement and



The field's new drain lines, a vast improvement over the previous system, are made of Schedule 40 PVC pipe with solvent weld joints. This technique forms a rigid monolithic drainage system that can pull 80,000 gallons of water per hour off the field.

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Blalock also notes that Birmingham was able to secure the Men's Team USA for two events - which will add to the excitement. "Having 80,000 fans screaming for one team could possibly give them an advantage," he adds.

#### Controlling the Field

The field re-construction was begun in January 1995 and completed in June 1995. Under the direction of Blalock,

Coston Construction Company, the general contractor, used bulldozers to remove the synthetic turf and create a basin for the installation of Warren's Power Drain Athletic Turf System. When the excavation of the old field was complete and 900 truck loads of soil had been removed from the stadium, crews then built a flat sub-grade, approximately 12 inches below what would eventually be ground level. The sub-grade was then covered with a plastic liner, which prevents water from coming up below the sub-grade to interfere with the field's management. The liner also gives the turf management team more control over conditions on the field.

"The next step was the installation of a series of drainage pipes - three miles in all. A series of six-inch, four-inch and two-inch lines were connected to the surface of the sub-grade," Blalock says. The drainage system and the playing surface were installed by STN Sports, a division of Southern Turf Nurseries, a specialist in athletic field construction. Blalock says the drain lines, made of

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Schedule 40 PVC pipe with solvent weld joints, form a rigid monolithic drainage system.

The irrigation system and drain lines were then covered by 8,000 tons of sand to provide a good base and further help drainage. The next step was the incorporation of peat moss to create a four-inch layer on which 110,000 square feet of washed certified Tifway 419 Bermudagrass sod was installed.

"The system will allow the turf management team to control on-field conditions with relative ease," says Blalock.

Water seeps through the ground and is collected in the two-inch pipes. The small pipes drain into the four-inch pipes, which drain into the six-inch pipes. The water is then carried into a concrete chamber, located under the east stands, where it is discharged.

"Under many situations, gravity flow will be enough to handle the drainage.

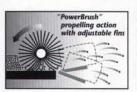


Alan Blalock shows the field's progress one week after 110,000 square feet of washed certified Tifway 419 Bermudagrass was installed.

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Water will naturally flow through the pipes and off the field," Blalock says. "However, under rainy conditions pumps will be used to draw excess water from the soil profile. A series of controls allow additional pulling power to be applied to the field in the presence of excess or standing water. The pumps can pull 80,000 gallons of water off the field per hour. That is equal to more than three acre-inches of water per hour."

The field can be watered by six giant off-field irrigation heads around the perimeter of the field. Each head distributes approximately 440 gallons of water per minute.

#### A Host of Games

"The field held up extremely well this past football season," says Blalock. "After 20 football games, more than double the use most natural (surface) stadiums see, we didn't have any serious turf damage or tears."

After construction, the maintenance team of Coston Construction, Blalock, Pate Associates and STN Sports was employed by the city of Birmingham to perform all maintenance tasks from June 1995 through August 1996.

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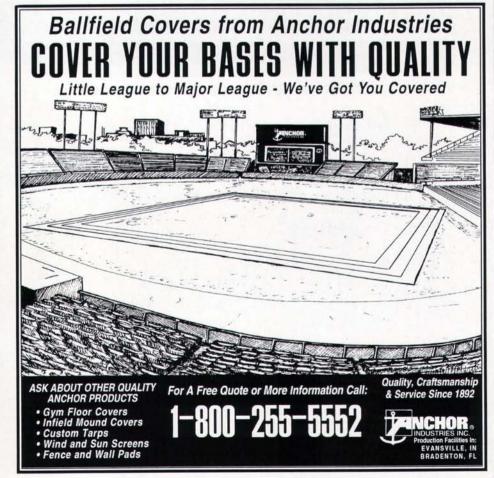
During the 1995 football season, Legion Field's new natural grass surface hosted games for the CFL Birmingham Barracudas, the UAB Blazers, University of Alabama Crimson Tide, the Labor Day Classic, the Magic City Classic and the Alabama Class Six A State High School championship game.

Blalock says the grass field should be strong enough to handle the total of 11 preliminary men's and women's soccer matches over an eight-day period during the Summer Olympics. Since December, the field has been allowed to recover from the busy season.

Blalock says that the winter rye which was planted to give the field color in the late season, as well as to protect the Bermuda through the winter months, was killed with a herbicide in late March. "Around the first of May, we'll start a field renovation project and cut the grass to about 3/8 inch. Over the next 35 days, we'll



The irrigation system and drain lines were covered by 8,000 tons of sand to provide a good base and optimal drainage.



grow the Bermuda back under a very strict regimen," Blalock says. "By mid-June the field will be beautiful."

Blalock says he expects the field will "show stress" near the goals during the soccer matches, but the field will be cut and watered every night at the conclusion of each match. "That puts the grass back in good contact with the soil."

Blalock says there are three ingredients to a good playing surface, "good design, proper construction and good maintenance. Though it took a great amount of time, we were pleased to be involved in the maintenance activities. It is critical to employ proper maintenance techniques, particularly on a sand profile field. Mowing, watering, fertilizing, application of herbicides, iron and turf dyes are all critical elements to an excellent playing surface."

Blalock expects the temperature on the field during the summer months will be 20 to 30 degrees cooler than with the old synthetic surface. In addition, the surface will offer spectators in the stadium cooler summertime temperatures and a pleasing natural green color.