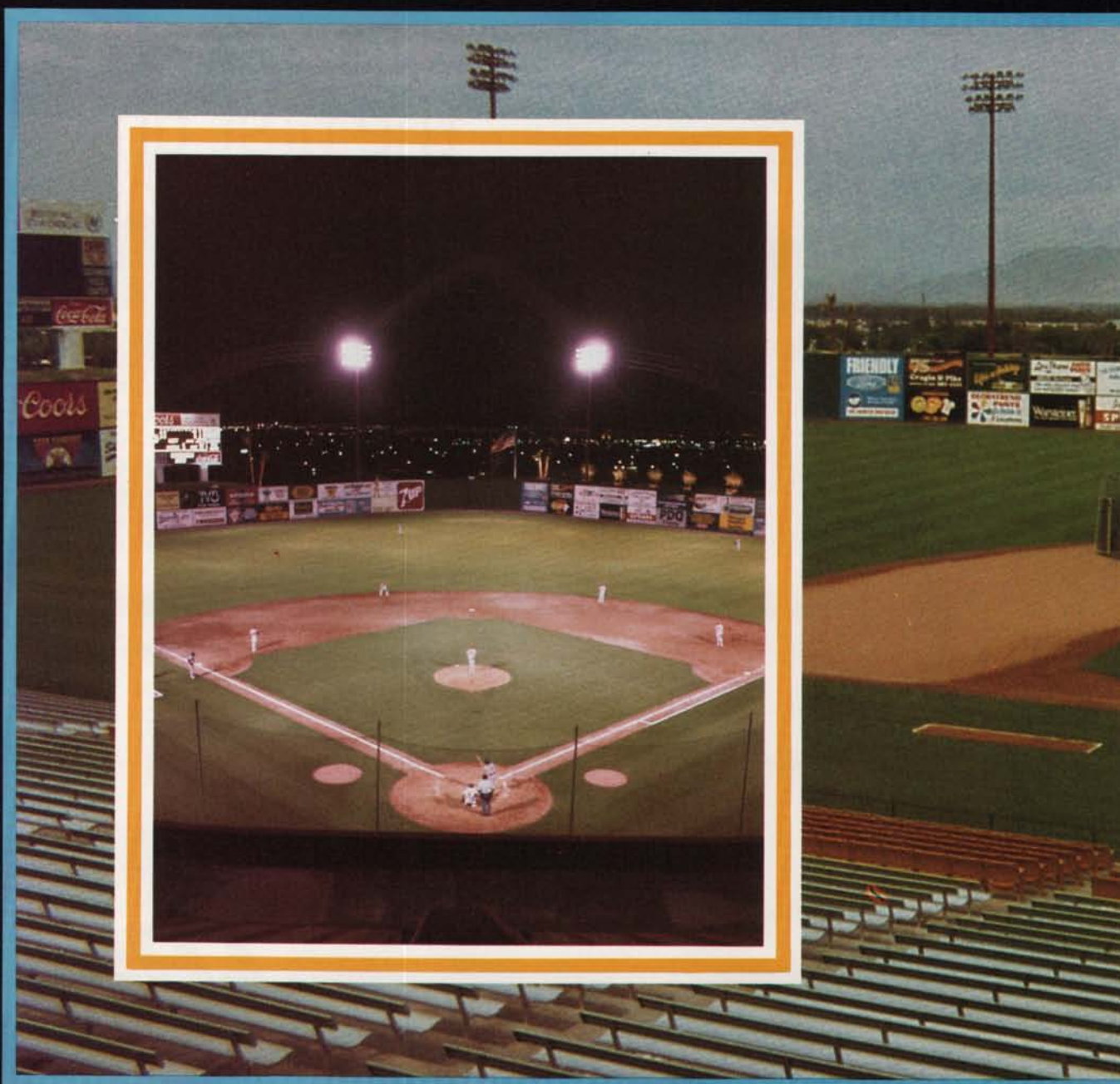


Cashman Field

Matching Technology With



Las Vegas Stars play ball in the cool of the evening. Fans are treated to Las Vegas' neon horizon between innings. Players enjoy a smooth, firm turf surface.

Local Conditions



n's management wasn't sure the bermudagrass sod, laid in the winter, would come
ormancy in time for the April opener. A field cover acted as a greenhouse to help
knit sooner.

In the middle of the seventh inning in most major league ball parks, the fans get up to stretch. Usually the organist will play "Take Me Out to the Ball Game" and the fans sing the verse;

Take me out to the ball game

Take me out to the park

Buy me some peanuts and crack-
erjacks

I don't care if I ever get back

Let me root, root, root for the home
team

If they don't win it's a shame

For it's one, two, three strikes you're
out

At the ole ball game

That is almost what happened to Gene Stephens. Stephens is the director of facilities for the Cashman Field Center in Las Vegas, Nev. With two strikes on him, some folks were expecting Gene to strike out, but as the old saying goes, "The game is not over until the last strike." Gene instead managed to hit the home run and left the home fans ecstatic.

If you were to visit Las Vegas this year and wanted to see a ball game you would go to Cashman Field. As you enter this complex, it would surprise you that the facility is three years old. It still maintains that immaculate look. As you look across the field, you would never believe that it took three attempts to get it right.

Las Vegas is the gaming capital of the country. Its reputation is worldwide. In the middle of the desert, Las Vegas is truly a plush oasis. The city boasts an enthusiasm for sports.

Major boxing matches originate from here. The city is home for the University of Nevada's basketball team and the Stars, a triple-A farm team of the San Diego Padres.

Cashman Field sits just minutes from the downtown area in a complex that also houses a convention center. The facility opened in 1983 and is the home field for the Stars.

Stephens took the first strike in 1982 when a contractor was awarded the contract to install the playing field. The field was sodded with hybrid bermuda and it wasn't until one week prior to the 1983 season opener that "everyone realized there were elevation problems with the playing field as a result of the field installation by the general contractor," remembered Stephens.

"With the opener just a week away, we really didn't have time to make any corrections." It was decided to go through the season and periodically topdress the low spots hoping they would rise to the right elevation.

Needless to say, the topdressing did not cure the ills and when the season was over, the contractor was called back to do the corrective work.

Those in the business of managing high-traffic turf areas can appreciate what it really takes to produce a fine playing

continued on page 14

Cashman Relies on Fertigation



Tanks for liquid fertilizer and injectors in underground vault.

Sand rootzones like Cashman Field require a steady feeding of fertilizer. Also, George Goto, field consultant, wanted as much control of field conditions as possible.

The liquid fertilizer is injected into the Rain Bird irrigation system. The delivery system for the fertilizer is very important. Goto chose Automated Fertilizing Systems Inc. (AFS) to design and install the fertigation system.

AFS selected the Anderson fertilizer injector as being the best suited to the particular needs of landscape sprinkler systems.

Pumps are hydraulic (water driven) up to flows of 160 gpm, which means that no electricity is needed. This reduces costs, allows field installations, and minimizes retrofitting problems. Pumps for flows of 160 to 1200 gpm are available, using electricity or batteries to run electronic metering devices to control pumpheads. The vast majority of installations in Las Vegas, including Cashman Field, use water operated pumpheads.

The injectors are serviced in the field by AFS so there is no need for gaps in the program by having to ship pumps back to the factory. The proportion of fertilizer to water is widely variable with the turn of a knob.

The pumps have a wide range of pumping accuracy. For example, two-inch injectors like the ones at Cashman Field, can accurately meter fertilizer to water at flows as low as five gpm up to 160 gpm. This means these injectors can serve an irrigation system which uses drip irrigation on one valve and a high flow lawn system on the other. No matter what the flow or pressure within the above ranges, the ratio of fertilizer to water will always be the same.

The injectors at Cashman Field are installed in underground precast vaults to protect the equipment from vandalism

and heat. A by-pass is installed to allow for ease of servicing or for periods when non-fertilized water is desired. Two 150 gallon liquid fertilizer storage tanks are installed in the vaults with the injectors. On larger capacity systems, the concentrate tanks can be installed underground near the vaults.

There are currently 24 such systems operating in Las Vegas, the oldest in its fifth year of troublefree service. Most are in commercial or institutional applications. AFS is currently installing its largest system to date at McCarran International Airport in Las Vegas to feed a landscape of more than 40 acres.

In addition to the design, installation and service, AFS offers a turnkey service by providing custom blended liquid fertilizer. Soil testing provides the basis for blending fertilizer to meet the variable conditions of soil type, seasonal changes, and water source.

All major and minor nutrients can be fed through the system as well as pH adjusters.

Cashman Field is currently using a closely managed system of monthly soil analysis. High concentrations of nitrogen and phosphorus, low potassium, and ample trace elements are applied. The current formula is equivalent of 16:11:8 with iron and other trace elements added.

Because of high traffic and wear typical of a baseball field, we are attempting to promote fast growth, which is not a problem due to frequent mowing and excellent drainage. The salinity of the soil has remained favorably low, currently at 1.6 ECe. The pH of the soil is 7.7, about normal for the area.



Editor's Note: The above information was provided by Harold Goldsmith, founder and president of Automated Fertilizer Systems.

Cashman

continued from page 13

field. More importantly, to manage it properly so that it continues to look good and play well. Equally as important we begin to appreciate the skills and knowledge that are required. But like everything else, it takes experience. It should have been obvious that the general contractor who was awarded the contract did not know much about installing sports fields.

When called back to do the corrective work, the contractor brought in more soil, laid it right on top of the hybrid bermuda already there, and resodded the field with a fescue/bluegrass mix that was locally grown.

Those who ran the complex felt pretty good about the appearance of the field after the resodding. But that was in the fall; as they got into spring, the ground crew began to notice spots in the turf. At first they thought that possibly a fungus had developed.

"As the outfield began to develop large spots, we finally identified the problem," Stephens stated. "We realized that the contractor, in doing the corrective work, just put the soil over the bermuda sod. When the field was irrigated and the water percolated down to the level of the original sod, it would send up gases and kill the grass above."

Summer comes early to the desert and by June, Las Vegas reaches high temperatures. In July and August the temperature has been known to climb easily to 115 degrees.

Back in the fall, when the decision was made to use fescue/bluegrass sod, the weather was cooler and maybe the sod made sense. Possibly the contractor felt they would have better luck with this type

Cashman Field grandstand is modern for a minor league team.



of turf. He sold the complex authority on it by stating they would have a year-round grass that would stay green. However, by the time the summer arrived, the field, with its second sod turf, became a disaster all over again.

"We found out later that a fescue/bluegrass field would not survive the heat of the summer," commented George Goto, a consultant hired by the sports complex. "Especially when we had to keep it cut short."

The fans who supported the baseball team became more irate as each week passed and the field continued to deteriorate. The players complained. All in all it was a dismal time.

Strike two.

Stephens realized he had to do something. But this time it had to be right. He felt one more disaster and he would have to look for another job. He hired Goto, who had lived in Las Vegas since 1951 and knew the tricks it takes to keep turf healthy there. He has been involved in the horticultural field in the desert for almost 30 years. He exuded confidence.

"I told them if they gave me a free hand and let me do it, I would guarantee the field," Goto remarked. A budget of \$330,000 was allocated to completely redo the field.

Stephens and Goto flew to the Pacific Sod facility in Camarillo, Calif., to look over some fields and try to find out what not to do this time around. Time was running out; no one could afford any more mistakes.

It was finally decided that Cashman Field would have a new playing turf. This time it would be Santa Ana bermudagrass. It would be grown in sand to avoid any contamination. They also specified the sod would come from a recently fumigated field.

continued on page 47



Stephens (center) looks for seam in sod as Culbertson (standing) and Goto (kneeling) watch.

GROUNDHOG SET THE PACE

Compare with others and see for yourself how quickly these rugged, easy to operate, portable Ground Hog units get the job done!

PORTABLE TRENCHER WITH AUTOMATIC CLUTCH

Powerful, easy to operate, professional-type Model T-4 digs 3-1/2" trench to depth of 12 inches. Only 64" long by 24" wide, for easy accessibility. Pneumatic flotation tires protect turf. 5 HP 4-cycle engine.

ONE-MAN EARTH DRILL

Right-angle drive prevents torque kick-back, allows drilling up close against walls and fences. Can be moved with auger attached. 15" pneumatic tires for safe high speed towing. Model 1M cuts labor cost in half!

TWO-MAN EARTH DRILL WITH MANUALLY OPERATED CLUTCH

Model D-5 auger rotation stops automatically when operator releases lever. Heavy duty gear box for continuous, rough drilling. Easily removable auger and handles allow unit to fit in most car trunks. 5 HP 4-cycle engine.

COMBO AUGER FOR HARD SOIL

Combines best features of standard and Pengo augers for quick penetration to depth of 3 feet in rocky and hard, dry soil. Available in 6" through 12" diameter. Replaceable teeth.



These four ruggedly built Ground Hog products are not only time and money savers for contractors but also proven money makers for rental yards.

Ask for a demonstration.



GROUND HOG INC.

for complete information please write or call . . .
P.O. BOX 290 / SAN BERNARDINO, CA 92402 / (714) 888-2818
Distributed in Canada by Polyquip of Canada

Stephens and Goto flew back to Las Vegas. Time too has a way of flying by.

Under Goto's supervision the entire field was excavated. A new irrigation system was installed. Drainage was given more attention. Pea gravel was put down and then 18 inches of sand was placed over it. Finally, Canadian peat was incorporated into the top three inches of sand.

By December 1984, Cashman Field was ready to receive the new sod. Truckloads of sod were hauled to Las Vegas from Camarillo and installed under the supervision of Goto.

"When I visited the site and saw the installation, I was very impressed," remarked John Culbertson, director of marketing for Pacific Sod. "The tight seams and closeness of the sod rows to each other was tedious work, but it looked great! They certainly installed the sod right." In one day the first 27,000 square feet of sod was laid. The rest, for a total of 39,000 square feet, was installed the following day. Now the job was complete. Time would tell if Stephens would take a third strike.

One problem remained... it haunted all those involved over the winter months. Would the Santa Ana come out of dormancy in time for the opener of the 1985 season? Culbertson assured Goto it would. But, in mid-February, Goto began to panic.

"We didn't realize the Santa Ana was still dormant. The seams had not yet knitted together. Nothing seemed to be happening. In desperation we covered the field to force the turf to grow," Goto revealed. "There was an eight degree difference between the turf under the blanket and the exposed turf. That really made a difference."

Goto exclaimed that one could begin to see the grass grow. As February turned into March and March into April, a new season was upon them.

This time Cashman Field was beginning to look like the professional field everyone had envisioned from the beginning, three years before.

On opening day 1985, those same fans who had booed the field last season were treated to a magnificent-looking playing field. SportsTURF magazine visited the field in mid-July. It should be noted that we were duly impressed.

"Since April, we have verticut the field and aerified," stated Goto. "That really made the bermuda pop."

To make the happy ending of the story happier, Goto spent only \$270,000 of the allotted \$330,000 rebuilding the field. The remaining \$60,000 went back into the treasury. Goto is proud of being part of a team effort that sought the challenge. Stephens now has happy fans and a showcase. As for Las Vegas, it has a field that truly measures up to major league standards. ▶



THE PROFESSIONAL'S CHOICE
... SINCE 1922

BEAM CLAY IS THE RED
BASEBALL MIX USED BY
PROFESSIONAL TEAMS ACROSS
THE U.S.A. AND CANADA.
SPECIAL MIXES FOR PITCHER'S
MOUNDS, HOMEPLATE AREAS
& WARNING TRACKS.

BOTH
AVAILABLE IN
BULK OR BAGS

201-637-4631
201-637-4191

PARTAC PEAT
CORPORATION
KELSEY PARK
GREAT MEADOWS, N.J.
07838

PARTAC
GOLF COURSE
TOP-DRESSING



AMERICA'S PREMIUM
TOP-DRESSING

HEAT TREATED

CONTROL THATCH,
PROMOTE HEALTHY TURF
& SMOOTH PLAYING SURFACES

Circle 165 on Postage Free Card

STEWARTS TURF EQUIPMENT

TURF CARE PRODUCTS IN SO. CALIF. & ARIZ.

AUTHORIZED DEALER FOR:

- BROUWER TURF EQUIPMENT
- WALKER MOWERS
- KUT-MOR
- MITSUBISHI TRACTORS
- AER-WAY AERATORS
- LAWN GENIE

We LOVE to demonstrate!
Call for Information

SOUTHERN CALIFORNIA

ARIZONA

9243 Single Oak Dr. Lakeside, CA 92040 P.O. Box 4791 Yuma, AZ 85364

(619) 443-3565

(602) 782-6567

Circle 130 on Postage Free Card

SOIL SEAL

ARE YOU LOSING GROUND TO EROSION?

The problem with having to "patch up" jobs due to erosion is that you not only risk losing valuable time and money...but your credibility suffers as well.

SOIL SEAL can rid you of persistent erosion problems. Because of its patented formula it is *stronger and more long-lasting* than most other soil stabilizers and tackifiers on the market today. SOIL SEAL is non-toxic: completely safe for use on existing plants and native vegetation.

So if you're looking for gentle, yet rigorous soil control, don't take chances on losing any more ground. Call SOIL SEAL today.

SOIL SEAL CORPORATION 1111 West Sixth Street, Los Angeles, CA 90017
Phone: (213) 481-7185 Telex: 677282 Cable: PACARCHS LSA



LONGER LASTING • ECONOMICAL • SAFE • WATER PERMEABLE
SOIL SEAL CONCENTRATE is manufactured and shipped from California & Texas
Circle 343 on Postage Free Card September/October 1985