

ed as required, with white grubs the most common pest. The perennial ryegrass cultivars "Palmer" and "Prelude," originally chosen for their quick germination under the cooler temperatures of December, have been resistant to diseases.

•Planned Downtime: The once-a-year renovation is a good method for this field because it allows for concentration on repair efforts without the competition of the warm season grasses.

•Total Labor Estimate: Approximately 72 hours of labor are needed for the three crew members to tackle the major renovation. All of the infield detailing also takes place at this time.

### Carlsbad High School

Most field maintenance on this field is performed by volunteers. Ralph Cripe, a teacher in the Carlsbad School District, took interest in the baseball diamond at Carlsbad High in 1978. He has overcome equipment and budget problems with a "can-do" attitude. A personal donation from Cripe funded initial field reconstruction and sodding in November, 1982. He's become "hooked" on maintaining the field and handles the majority of the work himself. Community support grows stronger with each season.

•Renovation Schedule: Only the infield area is renovated. Procedures begin as soon as the regular school year ends in June. This field is located about a mile from the Pacific Ocean and the marine influence allows the hybrid bermudagrass to stay green year-round, eliminating the need for overseeding with perennial ryegrass. Renovation is performed during the active growing season of summer. The field is shut down for approximately four weeks during the renovation and recovery process.

•Dethatching: Once a year, the field is dethatched. The turf is scalped to the bare dirt with a flail mower and all debris is removed. Because of labor restrictions, no other dethatching is done during the year.

•Aeration: No equipment is available for aeration. However, this infield is cross-cut with a walk-behind vertical mower, which is the only aeration the field receives.

•Topdressing: Unfortunately, equipment and funds are not available for topdressing.

•Fertilization: The diamond's soil has not been tested. However, fertility has been maintained by frequent applications of fertilizer at one-half the

recommended rates. Gypsum has been added to lower the soil pH, but the need for this should be verified by soil testing.

•Pest Control: Broadleaf weeds in the common bermudagrass outfield have been controlled with postemergence applications made by professional grounds personnel with the school district.

•Total Labor Estimate: Renovation of the infield area takes approximately 70 labor hours. The need for renovation is lower because of the ability to shut down the field for periods of rest and to control the amount of play the site receives.

### Dedication Works

The common thread running through all these field operations is the desire for more renovation. Labor, even at the

professional level, is always a limiting factor. With each field, flexibility is essential to coordinate the timing of procedures with field-use requirements.

To improve your own site, first start by planning the work you want to accomplish and communicating those goals to the field users. People usually are willing to accept and respect limitations if they lead to better playing conditions. □

*Editor's Note: Chris Bunnell is grounds supervisor for the Escondido Union School District, current president of the Southern California Chapter of the Sports Turf Managers Association, and a member of the national STMA.*

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## Motz Acquires PAT™

Motz Sports Turf, Inc., headquartered in Cincinnati, OH, has purchased Turfgrass Services, Inc., of Pueblo, CO. The purchase entitles Motz to all proprietary rights to the Prescription Athletic Turf™ sand-based athletic field design system, known in the industry as PAT.

"The acquisition of PAT has been a natural progression for our company, which started with sod farming, and now includes lawn care, commercial grounds care, and finally sports turf maintenance and construction," explained Joe Motz, owner and president of Motz Sports Turf. "I've known Laurel Meade [former owner of Turfgrass Services and PAT] and Dr. Bill Daniel [PAT developer] for a long time, and I've always considered PAT the pinnacle of athletic field systems."

PAT's engineering technology is protected by both U.S. and Canadian patents. Its design is based on the use of vacuum to forcibly extract water from the sand-based field. Motz sees the evolution of vacuum drainage as driving the trend in professional and collegiate athletics back to natural turf fields.

"Until we perfected the technology to keep fields playable in virtually any weather conditions, artificial turf was a facility's only answer to rain-outs," said Motz. "Although artificial turf does address surface playability, there are

many downsides, including increased injury rates and excessive summer heat."

PAT uses vacuum pumps connected to a network of buried tubes to such water from the field. The action can be "reversed" to irrigate the field from the base up, allowing the turf to be watered even while it is in play. Subsurface electronic moisture sensors tied into the vacuum and irrigation system allow PAT to function automatically. Heating systems are available to keep the root zone warm and surfaces from freezing well into the winter.

Since its invention at Purdue University in the early 1970s, PAT technology has advanced dramatically. Motz plans to speed that evolution by establishing a series of collaborative university research projects dealing with PAT's agronomics and engineering.

There are two PAT systems, which Motz Sports Turf manages, in Cincinnati: Spinney Field and Galbreath Field. Thirty-four of the systems have been installed nationally, including those at Soldier Field, Joe Robbie Stadium, Camden Yards, Ohio Stadium, and Seminole Stadium.

"There is nothing like PAT anywhere in the world," said Motz, who founded the Motz Corporation in 1977. "The \$600,000-plus price tag puts the system within reach of only the sporting elite."