

Fairfax County Renovation: Success Through Science

The Parks and Recreation Centers of Fairfax County, VA, rank among the finest recreation systems in the country. They encompass numerous playing and practice fields, Olympic-size swimming pools, spas, handball and tennis courts, and indoor horseback riding facilities.

The Fairfax County Park Authority is responsible for maintaining more than 300 athletic fields throughout the county. The job is not an easy one. Intensive use has caused past field renovation efforts to fail because the turfgrass never has a chance to establish itself. To compound matters, many of the fields were built without adequate drainage or

soil modifications to enhance drainage.

Inadequate drainage and heavy textured soils often turned the fields into mud holes in wet weather and concrete-like surfaces in dry weather. Such conditions affected field playability, and turf cover.

Clearly, the FCPA knew something needed to be done. The solution was a massive field renovation program, which began in 1990.

Road To Recovery

The FCPA raised the money to reconstruct the fields. Joseph Sicenavage, of the FCPA Design Division, headed the renovation project.

Sicenavage assembled a team of

experts including engineers, irrigation specialists, and lighting technicians to handle phases of the project.

On that team was Dr. Henry Indyk, from the Greenway Group, a former extension specialist at Cook College of Rutgers University for more than 30 years. Recognized as one of the leading authorities on athletic field construction, Indyk joined Greenway after his retirement from Rutgers to establish a special division of GSI Consultants, Inc., called Turfcon.

Greenway and Turfcon were originally charged with developing plans for the reconstruction of 50 athletic fields located at various parks throughout Fairfax County. Dr. Richard Caton, Coordinator of Consulting Services for Turfcon, and Indyk visited all the fields and made critical observations of existing conditions, noting deficiencies and taking soil samples for laboratory testing. The prepared site-specific recommendations for each field were based on observations made by the laboratory results.

Indyk called for special soil modifications, underground drainage systems, and seed and sod selection. He provid-



One of Fairfax County's many baseball diamonds, before and after reconstruction.

ed specifications for pH adjustment, nutrition supplements, and follow-up maintenance.

"The major challenges confronting us was the soil conditions," says Indyk. "All the fields required major building."

To help ensure the project's success, the consultants met with the Park Authority Board of Directors. They stressed the need to move from *business as usual* field reconstruction to a technically sound approach. During this meeting, they showed slides that graphically depicted existing conditions which convinced the board to move ahead with the project. After receiving the board's endorsement, Indyk and his team developed the specifications to proceed with the project.

Sicenavage was joined by FCPA's Deb Garris, of the construction division, and Doug Guzman, who would be responsible for working with Turfcon on the overall management of the project. W.A. Hazel Construction of Chantilly, VA, was awarded the prime contract for the project.

"We could not have had a better general contractor," Indyk says. "From the top down, we dealt with skilled professionals who performed competently throughout the project. The equipment provided was the best available and was always in good repair."

"We had done ball fields before, but never to this extent," notes Dave Chapman, who was the contractor's field superintendent on the project. "Quite honestly, most people do not put this kind of effort and expense into ball fields. Basically, they were installed just like professional fields."

From Top To Bottom

Construction crews stripped the top soil and stockpiled it.

It took a small fleet of Caterpillars and bulldozers to do the job, with as many as eight fields under reconstruction at one time. Later, the soil would be shredded and blended with sand to make the "root zone" mix. No dirt had to be disposed of and hauled away to landfills.

"We used all the dirt to balance the earth, to make it work out for drainage," says Chapman. "In fact, on one particularly rocky field, we had to truck in material to fill out our top soil."

The sand and sod had to meet the specifications. Laboratory testing at the place of origin and after the material arrived at the construction site verified that the material met expectations. The soil to sand ratios were established through testing and further subjected to laboratory chemical and physical analysis before and after mixing. Sod, from Jade Run Sod in Bethel, DE, was chosen, in part, because it was grown in a soil type that closely matched the mix on the fields.

Twenty-three athletic fields were totally reconstructed with underground drainage. The project used one million square feet of sod, incorporated 63,360 linear feet (or 12 miles) of drainage pipe and included 60,825 linear feet (or 11-1/2 miles) of irrigation lines. In all, 53,000 tons of sand were used and 8,180 cubic yards of soil were stripped and stock piled. Lighting was also installed at some of the fields.

Initial construction began in March 1990 and substantial completion took place in December 1991.

"To me, it was a major accomplishment to get that many fields done in that period of time," notes Indyk. "It takes a team effort, but the bottom line is that the contractor can make or break you. In this case, the contractor involved was really able to perform."

Adds Chapman of W.A. Hazel, "It was definitely a team effort, from top to bottom." □

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