A Tale of Two Sports Complexes

By Bob Tracinski

There are points in many sports field construction or renovation projects when it seems appropriate to borrow a phrase from Charles Dickens, "It was the best of times, it was the worst of times." Sometimes everything runs smoothly, but glitches can and do occur. Thorough initial planning — and the perseverance to stick with the plan rather than cut corners — greatly affect the final quality of the field.

Consider Wayne Klostermann’s tale of two projects in the city of Dubuque, IA.

In early 1993, Klostermann established Klostermann & Associates, offering services as sports complex consultants, designers and construction managers. He works closely with another Dubuque firm, Buesing & Associates, which specializes in construction engineering and land surveying. Owner Ken Buesing says sports field work has been part of their emphasis since the business was established in 1985. "Wayne’s knowledge of the specialized needs of athletic field design and maintenance has brought a new dimension to our sports field projects," says Buesing.

The Dubuque Soccer Complex

In 1984, the Dubuque region of the American Youth Soccer Organization (AYSO) organized with 300 pre-kindergarten through high-school-age participants. By 1993, over 2,300 young people (about 23 percent of the youth in the city) were part of AYSO and playing competitive soccer in the AYSO club program throughout the Midwest. Also starting in 1984, all three city high schools added soccer as a varsity sport for both boys and girls. The Dubuque Steamers Soccer Club provides competitive opportunities for adult players.

With all this soccer activity, the demands for practice and game field access overwhelmed available space. Existing fields deteriorated as heavy use for practices and games took its toll.

In 1992, AYSO, the Steamers, the Dubuque Soccer Club, the Dubuque Community School District, the Leisure Services Department of the City of Dubuque and the Dubuque Area Labor-Management Council formed the Dubuque Soccer Alliance to develop a complex of game-quality soccer fields in the community.

In the spring of 1993, the Alliance leased approximately 55 acres from the Dubuque Community School District with the agreement that development and maintenance of the complex would be the...
responsibility of the Alliance. The Alliance’s fund-raising arm reached out to private organizations, foundations and individual donors.

Once design work for the site began, it became apparent that the Alliance had great enthusiasm, but little knowledge of field construction. At this point, Klostermann, a board member of AYSO, was asked to assist with the project. He opted to donate his services as his contribution to the complex. He met with the Alliance board and provided them with an overview of the requirements for the complex. He then developed detailed plans for proper drainage and the irrigation system, offering several options at various price levels for each. He advised the Alliance on the type of turf needed. He developed a maintenance program and needs list for long-term field care.

The community enthusiastically adopted the project. I.I.W., a local engineering firm, drew up the plans. Buesing & Associates surveyed some of the fields. John Deere and the Navy Seabees both donated the use of equipment and some equipment-operator time. Retired local equipment operators donated their time. Local diesel fuel jobbers donated 2,500 gallons of fuel. All labor was volunteered.

Though wet weather made it tough, soil moving began in the summer of 1993 and continued until the deep freeze of December. One field had been brought to grade; a second field to subgrade. Work resumed in the spring of 1994. The first field was seeded. The Alliance plans to have six more fields completed by the end of 1994.

During this period, the soccer project experienced multiple “changes of plans.” No irrigation was installed; lesser turf seed was used; corners have been cut. The dream remains strong, but the path is still rocky.

Klostermann says, “It’s important for sports turf managers to give something back to the community, but when consulting on a volunteer basis, you lose some of the ‘clout’ you have as a paid adviser. There will be times when your recommendations will be ‘adjusted’ to channel funding to other, more immediately visible, areas of the project.

“Don’t take it personally. Don’t get discouraged. Keep the doors open. Continue to provide advice when they ask for it. You want to do all you can to help achieve a positive outcome for the project. You just have to realize you probably won’t have much control over final decisions, but your input can make a difference.”

The University of Dubuque Football Field

In late March of 1994, the University of Dubuque awarded the design contract for its football field renovation to Buesing & Associates who then subcontracted a portion of the work to Klostermann & Associates. Klostermann and Buesing met with Athletic Director Connie Hodge; Vice President of Finance Tracy Wagner; Football Coach Jim Collins and Track Coach Don Caves to develop a “dream list” for the field. School alumnus, Joe Chlapaty, now President of ADS, Columbus, OH provided $1.5 million for the project. The design team of Terry Koelker, John Hermans, John White, Ken Buesing and Wayne Klostermann worked with the dream list to “turn it into reality.”

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The project was put out for bid on May 5. It was awarded on May 15 with an immediate start date.

Klostermann describes the progress of the project, “Existing vegetation was treated with Glyphosate. Ten days later, this material was stripped from the field and excavation began.

The original native soil, consisting of 62 percent silt, 20 percent clay and 18 percent sand, would be replaced with sand. 1,500 cubic yards of soil were removed with a sidewinder and stockpiled at the outfield area of the University's future baseball field renovation.

“The clay base was rolled to develop a hardpan with a 1/2-percent slope, to channel water in both directions toward the drainage lines. To accommodate the ADS-Advane drainage system, trenches were formed in the hardpan layer in a herringbone pattern on 20-foot centers. A central line runs through the length of the field exiting between each goal post. The ADS material is covered with a Typar sleeve. This is imbedded in the trenches and surrounded by 3/4-inch washed river gravel. The ADS network drains into 8-inch tile collector lines along side of the track surrounding the field. The stadium drainage system is split at the 50-yard line. The north side drains into the north storm sewer system. The south side into the south storm sewer system. A layer of Typar covers the gravel-filled trenches.

“The sand selected was graduated at 90 to 95 percent in the medium range; less than 2 percent in the coarse range. Specifications called for none in the 2 mm to 1 mm range; 50 to 70 percent in the 1 to 0.5 mm range; 20 to 40 percent in the .50 to .25 mm range; less than 4 percent in the .25 to .10 mm range; and none in the .10 to .002 mm range.

“A nine-inch layer of sand was placed over the clay hardpan. A one-inch layer of the vegetative material that had previously been removed was spread over the sand and incorporated with the sidewinder throughout the entire nine inches. Following this, an additional two-inch layer of sand was spread on the field and graded at 0 percent slope.

“On June 12 and 13, a Toro irrigation system was installed using 2001 series heads on swing joints, 250 #22606 valves and a 162603 controller.

“The sod, a combination of bluegrass cultivars on a peat-base, was supplied by Long Island Sod Farms of Marshall, WI. Sod was laid on the last day of June and the first day of July, not exactly ideal timing for the Iowa area. Scotts 16-25-12 Poly S fertilizer was surface-applied at the rate of one pound of nitrogen (N) per 1,000 square feet. The irrigation system was set to apply water for 15 minutes per zone each day for the first week; every other day for the second week.

“A second application of 16-25-12 at the same rate was made 45 days after the first application. A 6-28-16 formula fertilizer is now being applied every two weeks at the rate of one pound of N per 1,000 square feet. The field is irrigated on an as-needed basis.

“The sod was rooted to 1.5 inches by the end of the first week; to 8.5 inches by September 1. The field is mowed in a five-yard pattern with a reel mower to a height of 2 inches.

“The Dubuque Spartans football team played its first home game on Saturday, September 10. The Friday night, pentameter reading was 11.5. The field was watered lightly late Friday night. The pre-game pentameter reading was 11.5. Saturday's temperature shot up to over 90° with a strong wind. The post-game pentameter reading was 10.5. The field was irrigated again following the game, rolled on Sunday with a 105 pound roller and mowed on Monday. It looked great.

“With the exception of Friday afternoon non-contact drills and the daily practice of the field-goal kicker, the field will be reserved for games. Prior to the season opener, two goal-line-to-goal-line scrimmages were held to let the players get the 'feel' of the field.

“The every-two-week fertilization schedule will continue until the frost layer stops turf-nutrient uptake. Late season soil testing will determine the formula and rate of the final fertilization of the year.

“If overseeding is necessary, they will use pre-germinated Manhattan II perennial ryegrass. Topdressing will be with straight sand of the same specifications as the field base.

“The field is located on top of a hill in a windswept, open area. Although that breeze felt great during the opening game, we anticipate it will whip snow in

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